

Farmer's Advocate and Home Journal

WESTERN CANADA'S AGRICULTURAL WEEKLY

REGISTERED IN ACCORDANCE WITH COPYRIGHT ACT 1875

Vol. XLVI

WINNIPEG, CANADA, JUNE 1, 1910

No. 923



OUT OF 259,000 PHONES IN USE IN CANADA, 250,000 ARE MADE BY US

DON'T you think that fact almost speaks for itself? There hardly seems to be much left to say. No better evidence could be demanded—or given—of the absolute perfection of every instrument turned out by us. For a long time past we have had our best engineers at work on the problem of designing a more powerful Farmers' Line Telephone. And now we have it. The work was completed months ago, although it is only now that we are offering it to you. The interval has been devoted to "trying out" these new sets under the most exacting conditions it would be necessary to meet anytime—anywhere.



SEND FOR OUR FREE BOOK

ALL you have to do is to ask for Bulletin No. 1416 and we will mail you FREE, at once, the full story of farm telephones. Asking for the book places you under no obligation—don't hesitate to tell us you want it. We are anxious that you should be posted on the value and economy of farm telephones. A post card will bring it.

Watch for the other advertisements of this series. They have a story to tell you.

OUR NEWLY DESIGNED NO. 1317 TYPE TELEPHONE SET

represents the attainment of perfection in telephone construction. Go over it point by point—prove it for yourself by comparison with any other instrument you like. Take the transmitter—into which you talk—you will find it the standard long-distance type. Then there is the receiver—the earpiece: it is simply perfect—never will you be bothered by local noises to spoil transmission. The result of long and careful study, it is the best possible construction and combination for the purpose. The generator has also been well worked out—so well, in fact that this generator is stronger than any other telephone generator on the market. Observe how easily it turns. It will ring more telephones on a longer line than any other 5-bar generator made today. Thousands of these generators are now operating on lines more than 30 miles long with as many as 40 telephones on the same line.

The ringers and gongs are unusually efficient. Our new type 38 ringer is not only very sensitive, but very strong and operates on from only one-third to one-fourth the current ordinarily required. The extra large brass gongs produce a volume of noise fully half as great again as gongs on other sets. You'll never fail to hear this telephone when it rings. The switch hook makes all contacts on the best grade of platinum points—that makes for efficiency. Taken as a whole Set No. 1317 is an extremely handsome instrument. The woodwork is of quarter-sawn oak of finest quality and handsome finish. And in point of service this telephone is unsurpassed—more than \$10,000 was put into it in engineering expense alone before the first instrument was made. Would you like to know more about it? The space here won't permit us to tell you, but if you will write, we'll gladly give you any information you may desire.

THE Northern Electric

AND MANUFACTURING CO LIMITED

Manufacturers and suppliers of all apparatus and equipment used in the construction, operation and maintenance of Telephone and Power Plants.

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The advertisement features a central image of a sack of flour and a large rose. The sack is labeled 'CALGARY MILLING CO. MANUFACTURED FROM SELECTED HARD WHEAT CALGARY ALBERTA. FANCY PATENT SEAL OF ALBERTA THE FAULTLESS FLOUR 98 LBS.' To the right of the sack is a detailed illustration of a rose. Below the sack and rose, the text reads 'The One Flour IS AS PERFECT AS The Other Flower'.

GOSSIP

BOVINE TUBERCULOSIS

So much has been said and written the last fifteen years or more about bovine tuberculosis, and its relation to disease in man, with still no satisfactory conclusions reached, that it is not possible, without more definite data, to say or write anything not already discussed. At the same time, the subject is of such vital importance that we may be excused for touching it again. That the disease is very common in both cattle and man, is an established fact, but the relation one bears to the other has not yet been satisfactorily determined. The symptoms of bovine tuberculosis are so insidious that the disease may exist, and in very, very many cases does exist, without causing the slightest symptoms that would lead any person to suspect it. As any organ is liable to be the seat of the disease, and as the disease is usually slow in developing, and no clinical symptoms will be shown until the organ or organs involved are diseased to such an extent as to interfere materially with their functions, it can readily be understood that an animal may be extensively diseased without showing any symptoms to cause suspicion. The most common form of the disease in cattle is pulmonary tuberculosis, and this form more quickly causes suspicious symptoms than when other organs are attacked. When the glands of the throat or the lung substance are the seat of the disease, a dry, hacking cough is frequently heard, but in other respects the animal appears to be perfectly healthy. This stage of the disease may exist for months or years, but at any time the progress of the disease

may become more rapid; the frequency and hacking character of the cough become more marked, the animal becomes unthrifty, and gradually pines away, until death occurs. It must not be assumed that every animal that coughs occasionally is tubercular, but we are quite justified in suspecting the disease in an animal that coughs frequently, or, I might say, occasionally, without showing any symptoms of physical derangement. The liver is frequently diseased, but no suspicious symptoms will be noticed until the organ is so extensively diseased that its functions are materially interfered with when digestive derangement will be noticed. Digestion under these circumstances is generally irregular. Periods of semi or acute diarrhea are alternated with periods of semi-constipation; repeated attacks (without apparent cause) of bloating, or impaction of the rumen, are noticed. These attacks will generally yield to treatment, only to reappear, with like or more violent symptoms, which may or may not yield to treatment, until eventually a fatal attack will occur. Any of the digestive glands or any portion of the digestive tract, may be the seat of the disease, but the same remarks apply, viz. "no suspicious symptoms will be noticed until the organ is sufficiently diseased to materially interfere with its functions." The urinary or the genital organs, while probably not so frequently diseased as others, are liable to an attack, and disease of the latter is without doubt the cause of sterility in many females and doubtless, sometimes, also in males.

So far as danger to the human family is concerned, tubercular disease of the udder of the cow is probably the greatest. This organ is, fortunately, not so frequently involved as some others. At the same time, it is not by any means exempt, and in many cases no symptoms are shown to lead a person to suspect

its presence. Repeated attacks of inflammation of one or more quarters of the udder, attacks which usually yield more or less readily to treatment, only to reappear in a variable time, without appreciable cause, must always be looked upon as very suspicious. Usually, after a few attacks, and not infrequently after one, the udder does not regain quite its normal condition, but a portion becomes indurated (enlarged and hardened). This at first does not cause a noticeable alteration in either the amount or quality of the milk, but as the induration increases, the quarter (or quarters) involved becomes more or less inactive, and the supply of milk becomes lessened, and in some cases entirely suspended; while, in other cases, suppuration is set up, pus, instead of milk, is drawn from the teat or teats, and in some cases abscess after abscess, which abscesses often refuse to yield to treatment, are formed. In the meantime, the portions of the udder not involved yield a normal quantity of milk, of apparently normal quality, and the general health of the animal is not apparently much affected. Doubtless, in many cases, tubercular disease of the udder does not cause the above symptoms, or any symptoms, to indicate that such disease exists. It is also supposed to be possible for a cow to have a diseased udder, and at the same time yield non-infected milk, but we are probably justified in assuming that the bacilli of the disease generally are present in the milk of a diseased udder. It is also claimed that the bacilli have been discovered in the milk of a tubercular cow whose udder is healthy, but this seldom occurs. At the same time, the danger exists.

In addition to the organs named, and other organs, as even the brain and spinal cord, in which tubercular deposits are found, we not infrequently observe what is called muscular tuberculosis, in which the nodules are located

in the muscles or in the areolar tissue under the skin. These nodules are often noticed on the legs of cattle, and cause practically no inconvenience. The only method of diagnosing the disease in cases where clinical symptoms are not well marked is by the tuberculin test, details for which have frequently been published, but it may not be unwise to report. Tuberculin is a product of the bacilli of the disease, in which the life of all bacilli has been destroyed. At the same time, when this product gains the circulation of an animal in which tubercular bacilli exist, it causes constitutional disturbance, which produces a marked increase of temperature, called a "reaction." The pure tuberculin is diluted with about 9 parts of a 1 per cent. carbolic acid solution in distilled water before it is ready for use. This, of course, makes a 10 per cent. solution of tuberculin. The cattle to be tested should be treated as usual, so far as ordinary care and feeding, etc., are concerned. Their temperatures should be taken occasionally before the tuberculin is injected, at least three times, say at 2 p. m., 5 p. m. and 8 p. m. Then the seat of injection (usually the loose skin just behind the shoulderblade, but in makes little difference where, except for convenience) is disinfected with, say, a 5 per cent. solution of creolin, and then, with a hypodermic syringe, which has also thoroughly disinfected with a like solution, the dilute tuberculin is injected. For an ordinary sized cow, 60 drops is the dose, the dose to be regulated accordingly, if the animal be young, or small, or above the usual size. At the same time, experienced teachers us that the amount of tuberculin injected has little effect upon the result. A large dose will probably cause an earlier reaction, but a very small dose will just as surely cause the reaction in a diseased animal. After

(Continued on page 823)

Founded 1866



Buy Hosiery Made by the Largest Mills on a 2-for-1 Guarantee

We guarantee the following lines of Pen-Angle Hosiery to fit you perfectly, not to shrink or stretch and the dyes to be absolutely fast. We guarantee them to wear longer than any other cashmere or cotton hosiery sold at the same prices. If, after wearing Pen-Angle Guaranteed Hosiery any length of time, you should ever find a pair that fails to fulfill this guarantee in any particular, return the same to us and we will replace them with TWO new pairs free of charge.

That 2 for 1 guarantee—the most liberal given anywhere—is backed up by the largest hosiery mills in Canada. You can depend upon the guarantee being fulfilled to the last letter.

Buying hosiery on this plan you make doubly sure of satisfaction, for if the hosiery does not fulfill the guarantee the makers have to pay a double penalty.

But after you've worn a pair of Pen-Angle Hosiery you'll understand why we give this 2 for 1 guarantee, for you will have discovered your ideal hosiery—form-knitted, seamless, longest-wearing.

The reason for Pen-Angle superiority is due to the exceptional quality of the cashmere and cotton yarns we use. And because we knit them on Penmans' exclusive machines. We have the sole rights to use these machines in Canada.

Seamless Hosiery

These machines form-knit the hosiery to fit the form of the leg, ankle and foot perfectly, without a single seam anywhere to irritate the feet or rip apart.

They reinforce the feet, heels and toes—the places that get the hardest usage—without you ever being aware of any extra thickness.

Don't be content another day with hosiery which has those horrid seams up the leg and across the foot—with hosiery

less serviceable—but get Pen-Angle 2 for 1 guaranteed hosiery

For Ladies

No. 1760.—"Lady Fair" Black Cashmere hose. Medium weight. Made of fine, soft cashmere yarns. 2-ply leg, 5-ply foot, heel, toe and high splice, giving them strength where strength is needed. Box of 3 pairs, \$1.50; 6 pairs, \$3.00.

No. 1020.—Same quality as 1760, but heavier weight. Black only. Box of 3 pairs, \$1.50; 6 pairs, \$3.00.

No. 1150.—Very fine Cashmere hose. Medium weight. 2-ply leg, 4-ply foot, heel and toe. Black, light and dark tan, leather, champagne, myrtle, pearl gray, oxblood, helio, cardinal. Box of 3 pairs, \$1.50; 6 pairs, \$3.00.

No. 1720.—Fine quality Cotton hose. Made of 2-ply Egyptian yarn, with 3-ply heels and toes. Black, light and dark tan, champagne, myrtle, pearl gray, oxblood, helio, sky, pink, bisque. Box of 4 pairs, \$1.00; 6 pairs, \$1.50.

No. 1175.—Mercerized. Same colors as 1720. Box of 3 pairs, \$1.00; 6 pairs, \$2.00.

For Men

No. 2404.—Medium weight Cashmere half-hose. Made of 2-ply Botany yarn with our special "Everlast" heels and toes, which add to its wearing qualities, while the hosiery still remains soft and comfortable. Black, light and dark

tan, leather, champagne, navy, myrtle, pearl gray, slate, oxblood, helio, cadet blue and bisque. Box of 3 pairs, \$1.50; 6 pairs, \$3.00.

No. 500.—"Black Knight." Winter weight black Cashmere half-hose. 5-ply body, spun from pure Australian wool. 9-ply silk splicing in heels and toes. Soft, comfortable, and a wonder to resist wear. Box of 3 pairs, \$1.50; 6 pairs, \$3.00.

No. 1090.—Cashmere half-hose. Same quality as 500, but lighter weight. Black only. Box of 3 pairs, \$1.00; 6 pairs, \$2.00.

No. 330.—"Everlast" Cotton Socks. Medium weight. Made from four-ply long staple combed Egyptian cotton yarn, with six-ply heels and toes. Soft in finish and very comfortable to the feet. A winner. Black, light and dark tan. Put up in boxes. Box of 3 pairs, \$1.00; 6 pairs, \$2.00.

Instructions

If your dealer cannot supply you, state number, size and color of hosiery desired, and enclose price, and we will fill your order post-paid. If not sure of size of hosiery, send size of shoe worn. Remember, we will fill no order for less than one box and only one size in a box.

Catalog Free

If you want something different than the styles and shades listed, send for handsome free catalog which shows an extensive line in colors.

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THE IMPROVED ROOSE BRUSH CUTTER

A solid steel machine, easily worked with four horses. Takes the place of thirty men cutting by hand. Will clear from five acres a day up. Get the brush off your land. It is no good for any purpose and it's hard to sell brushy land.



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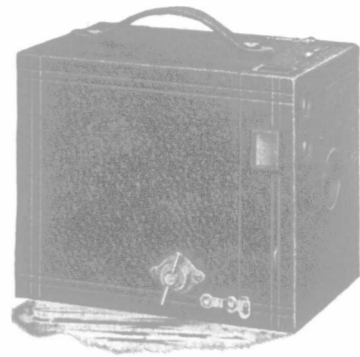
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Large Pictures Small Cost.

In this serviceable little Camera we have simplified picture taking to the last degree. It loads in daylight with Kodak Non-Curling Film Cartridges for four, six or twelve exposures; has a fine meniscus achromatic lens, automatic shutter for snap-shots, or time exposures with set of three stops; has two finders and two tripod sockets. Takes pictures $3\frac{1}{2} \times 4\frac{1}{2}$ inches, and is well made and finished in every detail. Anybody can take good pictures with this camera without previous experience. The price is \$4.00. Ask the dealer to show you the

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"The Book of the Brownies" free at the dealers or by mail.

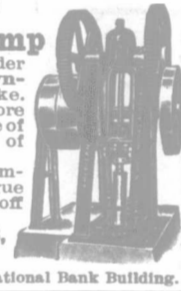
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It delivers full cylinder capacity both on the Down-stroke and the Up-stroke. It requires at no time more power than the up-stroke of a single-acting cylinder of the same displacement. Send for the most complete deep well catalogue ever issued, No. 110 just off the press, mailed free. THE AMERICAN WELL WORKS, General Office and Works, Aurora, Ill., U. S. A. Chicago Office, - - First National Bank Building.



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SIMPLE MACHINES FOR WISE FOLKS

The New Improved De Laval Separator

is so simple that only one tool is required to entirely remove its few parts and re-assemble them—it requires no expert. The neck bearing can be removed and replaced by the merest novice and centres itself automatically. The spindleless bowl cannot be injured in removing it from or replacing it in the frame, and it is impossible to throw it out of balance or cause it to vibrate in ordinary or extraordinary use. Every part of the machine is made as accurately as a watch, and in operation it is practically noiseless. It is the housewife's machine, beautiful in design, perfect in construction and infinitely simpler than her sewing machine. It pays for itself.

Write for catalog and name of nearest agent.

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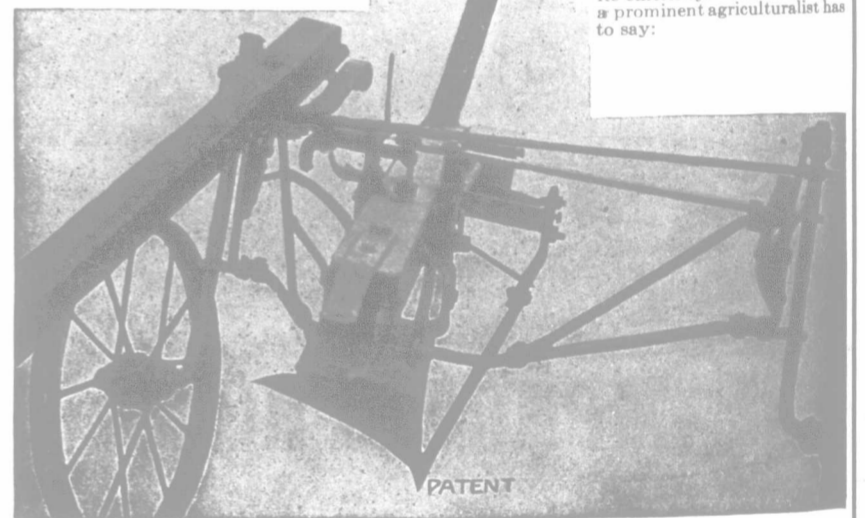
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The Van Slyke Breaking Plow

is especially constructed for Western prairie conditions and its merits are commendable. The important points are patented. These include the left hand coulters at an angle of 30 degrees.

the under-cutting shear from the landside and the unique steering device. Numerous practical farmers testify as to its efficiency. Listen to what a prominent agriculturalist has to say:



Dr. J. W. Rowntree, President Van Slyke Plow Co., Red Deer, Alta.
Dear Sir—

Referring to demonstration which was given by you of your breaking plow, a few days ago, I noted the following conditions which recommended it to me very strongly.

The undercut share or fin on the landside, which prepared the next furrow for turning, would leave no possibility of any portion of the next furrow being turned without being cut loose from the adjacent sod. There seemed to be very little friction on the share and moldboard, it having so small an angle with the landside and the long sweep of the arms or rods back of the moldboard seemed to turn the sod with perfect ease and little friction, although turning the sod 20 inches in width, and a depth of not less than 4 inches, the draft was so light that it would appear one good team could handle it without very great effort. The coulters set at an angle and attached to the point of the share seemed to be a very good device, as it not only stiffened the coulters and kept it in exact position, but also cut the sod at an angle so it could less easily stand on edge. This assisted turning very much.

Owing to the soil which we have in the irrigation block, I believe you will find it to your advantage instead of cutting a furrow 20 inches in width to cut two furrows 12 inches in width. This will have a tendency to join the edges so as to leave flat the surface and where the surface varies as to its toughness, as it does here, it will turn the sod unbroken and leave a surface best suited for cultivating and would require less disking than it would if turned in wider furrows and not laid as regular.

If a few details are worked out I consider you have a plow that will eclipse anything that is now on the market and will work a revolution in breaking sod on this Western prairie.

With these few suggestions permit me to say, that any assistance I can give you in working out this point, I will gladly do at any time, and when a plow turning 12-inch furrows such as can be evolved from the plow shown in the present demonstration, has been made and is on the market, I want you to put me down for one for use on my farm. I understood that this company are going to make such plows. For scrub brush land an 18-inch furrow plow works better than the narrower furrow.

I remain, Yours very truly,
F. W. CRANDELL,
Superintendent of Department of Irrigation and Colonization Dept. Can. Pac. Ry.

Others likewise testify, while hundreds are sending in their orders. We guarantee it to work in all brush or gumbo soils.

WRITE FOR FULL PARTICULARS

THE VAN SLYKE PLOW COMPANY,
RED DEER, ALBERTA.

Amatite ROOFING

A Frank Statement

HOW many manufacturers of ready roofing will tell you frankly how their goods are made?

Mighty few.

They will talk about "secret formulas," "special waterproofing compounds," etc.—all nonsense.

They don't tell you what the goods are made of because they don't dare.

From the start we have never hesitated to tell the buying public just what Amatite is made of and just what it will do.

How Amatite is Made

Amatite is made of two layers of *Coal Tar Pitch—the greatest waterproofing material known.*

Alternating with these two layers of pitch are two layers of coal-tar-saturated wool felt to give it tensile strength.

On top of these four layers is a *real mineral surface—five layers of protection.*

The mineral surface is permanent, fireproof, and *absolutely requires no painting.*

It Needs No Painting

Roofings that require *painting* are a worry and an expense. Every year or two you have to climb up and give them a coating with some special compound sold by the manufacturers, or you are pretty sure to have a leaky roof.

Amatite is Making Good

We are constantly receiving letters from customers telling us how satisfied they are with Amatite—how much better it is than the old-fashioned roofing.

Year after year, in all weather, Amatite will give perfect service without any painting or attention of any kind.

Surely this is the kind of service that wins and keeps customers.

Free Sample

Before you go to your dealer and buy a roofing, we should be very glad to send you a sample, so that you can see for yourself just what we are talking about—what a solid, substantial, reliable roofing we are offering to the public.

Something Back of It

Remember, in this connection, that Amatite is made by the *largest manufacturers of roofing materials* in the world, and that when you buy this roofing there is something behind it. We stand back of every roll. We know we are offering the best and the most economical ready roofing on the market.

For the sample and booklet address our nearest office.

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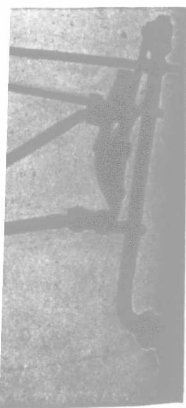
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FARMER'S ADVOCATE AND HOME JOURNAL

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

Vol. XLVI.

Winnipeg, Canada, June 1, 1910

No. 923

FARMER'S ADVOCATE AND HOME JOURNAL

ESTABLISHED 1866

Canada's Foremost Agricultural Journal
Published Every Wednesday.

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EDITORIAL

Cleaning Up

Among the items that need attention in the annual spring clean up about a country home is the water supply. More illness can be credited to impure water than the average citizen dreams of. Objectionable materials conveyed to wells by surface streams, or by soakage, develop germs that frequently harm weaker members of a household and sometimes those who are not so weak.

Therefore, every precaution should be taken to see that well curbing is strong, and that the top is thoroughly banked and so covered that the danger of undesirable materials getting in is reduced to a minimum. Pure water is as essential as clean, pure food, and perhaps more so, because the cooking process is sufficient to destroy germs that may lurk in the food. Absolute cleanliness should be observed in connection with both.

Dairy Special Trains

The dairy industry in Manitoba is receiving some much needed encouragement. Recently short courses for cheesemakers were given at outlying points by the dairy department of Manitoba Agricultural College; authorities in the city of Winnipeg have carried on an educational campaign among those supplying milk and cream for city consumption; large creameries do what they can to induce patrons shipping cream to send only high-grade product.

The latest announcement intimates that during June dairy special trains will be sent out on the two leading railway lines of the province to assist farmers by advice and demonstration. This work will be conducted under the auspices of Manitoba Agricultural College, and along

lines similar to those used to advantage on a similar campaign in 1907. Demonstrations, lectures and discussions should do much to impress upon the farmer the advisability of keeping a few cows and handling them and their product properly.

American Cattle Situation

"So far as the marketable supply of fat steers is concerned there is a decided shortage." This sentence, taken from last week's market report in one of our American contemporaries, is used to sum up the cattle situation in one of the chief beef states of the Central West. Terms very similar have been used to describe the live stock situation in more than one state on the other side. There has been a decided shortage in fat steers in American markets for some time, and the way things have been going this shortage is not soon to be made up. Under the magnetic influence of unprecedented high prices stockmen have been selling close and it would not be a very risky bet that there will be a "decided shortage" of fat steers for a longer time than the consumer with a palate tuned for porterhouse and the other fancy cuts in the steer's back, cares to think about. With feeders selling at six and a half, or better, and stockers being taken out at five and three-quarters, with none too good reports from the grass country, and a strong probability that corn will sell next fall around last season's figures, values for beef cattle are unlikely to show much decline. Farmers in many parts of the Canadian West have made encouraging profits from cattle feeding of recent years. The man who has young stock should hesitate before disposing of them until they are in best market condition.

Good Roads Movement

Good roads enthusiasts always experience great difficulties in arousing the general public to action in supplying what they all agree is very desirable. No man who makes use of rural highways for twelve months doubts the necessity of improved roads. Railways have learned that the more care is taken in providing superior road-bed, the greater is the satisfaction on the road; they also realize that it pays to haul large loads. Farmers agree that the same holds good in regard to vehicle traffic. But they do not stir to action readily. Many dread the lavish expenditure of money and the possibility of increased taxation. They forget that more is lost in time and in broken harness or rigs or in run-down horses than would pay several years' taxes.

In Manitoba the campaign is progressing. Enthusiasm, at one time in evidence only in Winnipeg and a few municipalities through which main roads passed to that city, is

spreading gradually, and now indications are that within a short time the Manitoba Good Roads Association will be a truly provincial organization.

Definite plans and system are essential to satisfactory road construction and maintenance. Uniformity in all parts of the province—and throughout the West for that matter—would be advisable. With a live road commissioner to plan and advise and a live organization to interest the people the next few years will see much needed improvement in rural roads.

Big Frogs in Small Puddles

Every community knows one or more individuals who delight in talking of themselves and what they call theirs. "It is natural for some owners to rate their horses as world-beaters, just because they have nothing really high-class with which to compare them," wrote an American horse editor recently. Yes, and the same principle applies to estimates of many other things—ourselves, for example, our children, our noted relatives, our farms, our methods! We have all seen infatuated schoolboys blowing themselves out like frogs, over some trifling accomplishment in heading their class, as though it were an event of at least county importance. And we have seen older men professing modesty, yet puffed up with a ludicrous sense of their importance, because they have headed the poll in a vote for councillor or school trustee, or have threshed a bigger crop than anyone else in the district. How absurd they appear in their neighbors' eyes!

How many men, too, are slow to learn anything, because they think they know so much already! In agriculture, for instance, this self-satisfied attitude is one of the greatest bars to progress. People follow inferior methods, keep poor stock, grow indifferent varieties, pass splendid opportunities for the adoption of improved methods, because they don't comprehend that there is anything better. They buy bran instead of growing alfalfa, sow oats instead of planting more fodder crops, reverse sound principles of rotation because they exaggerate the importance of some minor convenience in practice, and so on.

The remedy for this impending self-satisfaction is to gain a broader outlook, through travel, reading and personal intercourse with bright men. There are many things outside one's locality near home better than anything of the kind. Endeavor to see or learn of these best things wherever they may be. It is unwise to confine interest to a municipality, a county, a province, or even a single country. Strive to draw knowledge and inspiration as much as possible from the whole world. The

humblest men we meet know something better than we. If we cultivate the tactful, inquiring spirit, we shall be learning something every day. Exchange experiences with the men you meet, but don't boast. Travel as much as time and resources permit, then supplement this by extensive reading. Content yourself not with tolerable examples, but aim to rival or excel the best extant. Measure yourself by large standards; aim high.

Noise About Alfalfa

On another page of this issue a correspondent asks: Why so much noise about alfalfa and so little about red clover and other legumes? This is a matter concerning which attention by farmers of the West will result in profit. All who have considered the question intelligently agree that legumes are a valuable crop. Many still are skeptical as to the success of any of them under prairie conditions. A few years ago strenuous efforts were made to introduce red clover. Fair success attended these efforts. It was at least demonstrated that with good seed and thoroughly prepared soil this excellent hay and pasture legume could be grown on the Canadian prairies. Recent years have seen a gradual increase in attention paid to it.

But alfalfa, another legume, has come to the front. Farmers of other lands claim that it is one of the greatest crops known to the farming industry. It has the nitrogen-gathering power of other legumes, is a deep rooter, produces two or three crops of hay in a season and is a perennial. These are a few of the characteristics that have led enthusiasts in the West to adopt it as part of their product.

In all the enthusiasm that has developed, however, none have dared to intimate that the growing of red clover or other legumes should be discarded. There is a place for all. When ample tests have been made of each, the farming public will be in a position to adopt one or more, according to conditions. There is no reason why the acreage of alfalfa, red clover, alsike, peas, and perhaps other such crops should not double and treble as the years go by. Indications are, particularly in Saskatchewan, that the increase will be most noticeable in alfalfa. However, farmers should accept our correspondents' advice and "grow a little of both."

King Edward the Seventh

(OUR ENGLISH CORRESPONDENCE)

With dramatic suddenness King Edward the Seventh has passed from life into death. It seems incredible that "Edward the Peacemaker" is no longer king, and that another king reigns instead.

King Edward only returned from the continent a few days before his death. In years his reign was short, but in deeds he has left a deep impression on the British Empire and the whole world. His personal popularity was extraordinary among every class of the community, but in no sphere will the King be more missed than at the great agricultural shows. His very presence had much to do with their success. The King was an excellent stock breeder, and regularly attended the exhibitions at the cattle shows.

His Majesty's special interest for the Royal Agricultural Society was the introduction of Scotch sheep to the British Isles. No doubt the King's influence was a powerful one in this connection. The very best of the Scotch sheep were introduced to the British Isles by the King's personal efforts. Knowledge of the

Mecca of the world's agriculturists during the time of the Royal show.

The King was a model landlord, and unlike many landed proprietors was most solicitous of the welfare of his employees, and his laborers were well housed. "Throughout the twenty-six counties of England I have not found its equal," is the tribute of Rider Haggard to the Sandringham farm. The story is told that at Sandringham some years ago a lazy lecher built a wretched shelter on the estate—hardly better than a pigstye. In other words, he was a "squatter." The man would not work, and lived by begging and poaching. Mr. Beck, the agent, wanted to drive the man away, but the Queen intervened and suggested that a cottage be built for the man and his family. Mr. Beck remonstrated, but the King cut short the interview, and said: "Now, Beck, you have heard what the princess desires. There is nothing more to be said." The cottage was built, but the man refused to live in it, and stuck to his old wooden pigstye—so the kindly intervention went for naught.

One of the most notable characteristics of the King was his love of sport, and he was a great lover of horses and of racing. Undoubtedly this love of horses has been a potent factor in the development of the thoroughbred to its present high standard. The King's presence was

HORSE

Observations on Horse Subjects

A few weeks ago we were looking over a bunch of horses in a Manitoba farmer's barnyard and the owner drew our attention to a heavy-crested dappled grey, of which he wished us to take special notice. "There's a horse I brought up from the East a year ago last winter," said the farmer, "and but for an accident to myself I would have made six or eight hundred dollars out of him. Bought him to sell to the Galicians back in the scrub country but broke my leg and couldn't get him back to the settlement to make a sale. Afterwards I bred him to every mare about the place and then not caring to be bothered with a stallion I unsexed him." Two or three wobbly-legged "weed" foals running about the yard and several mares about whose being in foal there could be no question, was ample evidence of the stallion's powers as a foal getter.

That was once the Galicians were running in luck. That they would have bought the stallion had our friend been able to lead him up to the settlement, he had not a single doubt. Only a broken leg was between them and another fake stallion deal, for our friend proposed to make



USEFUL TEAM OF COMMON TYPE, OWNED BY RUPERT WARD, OF "SPRINGHILL"

looked for as a matter of course at all the great race meetings, and nothing pleased His Majesty more than for one of his horses to win a well-contested race.

Three times has the supreme honor of the turf—the winning of the Derby—come to the King, the last time so recently as 1909, when his "Minom" won. Those who saw His Majesty take the bridle, and lead the successful horse back, will never forget the scene. A hundred thousand people roared themselves hoarse, and thousands of hands were extended in congratulation.

On the very day of the King's death his horse, "Witch of the Air," was first for the Spring Two-Year-Old Plate at Kempton Park.

Not so very long ago a British journalist met in Berlin a courier who for many years had been a close friend of King Edward. In conversation he declared: "Your King is the wisest statesman in Europe; he is more than any other because of his long experience, though his ability may not be great. I know Wilhelm is most brilliant in his intellect, and there is only one thing to be said for him, he never used his intellect, and that is why he failed. There is nothing to be said for him."

When King Edward the Seventh was crowned, the British people were fully occupied with the war against Germany, and the King's presence at the coronation was a great help to the British people. The King's presence at the coronation was a great help to the British people.

his terms so liberal and get so many Galicians in on the deal, that even if a few did go broke, die or squirm out of the contract by some means or other, he would have enough parties of the second part remaining to collect from that his profit would be up around the figure indicated.

The less said about the stallion the better. He cost \$175 "down East," was called a French draft, said to have "papers vouching for his pure breeding," weighed about 1,600 pounds, and had legs and feet under him that would make a "quality" Clydesdale man weep. Our friend however, vouchsafed the information that he was just the kind of a stallion the Galicians would warm right up to, part with their cash and sign joint and several promissory notes for. Knowing Galicians and the kind of horses they wanted, our friend had cause to regret the unfortunate incident that prevented him effecting an "unload." We sympathized with him over the loss of the "profit" and the fact that he had such a disreputable specimen of the brute creation on his hands and so many of his get in sight or safely on the way, but were almost convinced that something must have moved the old mare that smashed him one in the leg about the time he jumped on going up to the scrub country to deliver off his "importation" on the unsuspecting sons of Galicia.

There has been too much of this business going

on in this country. We need to have our stallion laws so amended that traffic in this kind of horse would be put a stop to. Of course it may be held that the likes of Galicians would buy any kind of horse anyway, and that if they will buy the poor ones and pay a good long price for them, they offer a good market for pure-bred woods, and that the scrubs might better be with them than in communities that rate themselves of higher intelligence in horse breeding, and so forth and so on. But that is not the point. The use of grade stallions should be restricted and the use of stallions afflicted with the unsoundnesses of this one should be prohibited altogether. We need a stallion law in this country modelled after those that have recently been put on the statute books of Wisconsin, North Dakota, Ohio and other American states. If stallions sold or used for public service were required to be certified to as to soundness by a qualified veterinarian appointed by the state and their breeding vouched for by registration certificates that stated plainly on the face of them what the horse was, whether he was bred pure in any of the recognized breeds or whether he was a grade - and we would have a class, too, called "scrubs" into which category would go such brutes as have been here describ-

ed. Now, the Memnonite may kick on taking oaths, refuse to render military service and hold that there is no original sin, but their faith did not prevent these representatives of the sect from picking up a lot of "rotgut" which the peddler gratuitously provided. In fact, they camped right in the stable, but then it was a local option town. An interpreter was secured to open negotiations and he warmed up to the peddler with astonishing alacrity. However, to make a long story short a deal was struck, the parties of the second part fancying a big, flabby-muscle, crooked-legged brute, actioned like a cow, worth something probably for dog meat, if one had him near a dog food manufactory, or of value perhaps to stuff into sausages, in places where sausages are made and pure food laws not enforced, afflicted with most of the blemishes, unsoundnesses and hereditary diseases that stallions are disqualified for where stallion laws are in effect, but worth nothing at all to the Memnonites so far as we could see. The price was three thousand dollars. Next day the peddler packed his remaining equine possessions into a car and moved on. He had got a fair lump of the price in cash, enough to leave him about five hundred per cent profit if he never got any more, and the Mem-

monite may kick on taking oaths, refuse to render military service and hold that there is no original sin, but their faith did not prevent these representatives of the sect from picking up a lot of "rotgut" which the peddler gratuitously provided. In fact, they camped right in the stable, but then it was a local option town. An interpreter was secured to open negotiations and he warmed up to the peddler with astonishing alacrity. However, to make a long story short a deal was struck, the parties of the second part fancying a big, flabby-muscle, crooked-legged brute, actioned like a cow, worth something probably for dog meat, if one had him near a dog food manufactory, or of value perhaps to stuff into sausages, in places where sausages are made and pure food laws not enforced, afflicted with most of the blemishes, unsoundnesses and hereditary diseases that stallions are disqualified for where stallion laws are in effect, but worth nothing at all to the Memnonites so far as we could see. The price was three thousand dollars. Next day the peddler packed his remaining equine possessions into a car and moved on. He had got a fair lump of the price in cash, enough to leave him about five hundred per cent profit if he never got any more, and the Mem-

Raising an Orphan Foal by Hand

Dr. A. S. Alexander, of the Wisconsin College of Agriculture, in a recent circular on the care of new-born foals, offers the following advice on raising an orphan foal by hand:

In case the mare dies or has no milk the foal may be raised on cows' milk, if the attendant conducts the work patiently and intelligently. Choose the milk of a cow that has recently calved, preferably one which gives milk low in butter fat for mare's milk while rich in sugar, is poor in fat. Sweeten the milk with molasses or sugar and dilute with warm water. Give a little of this prepared milk at short intervals from a scalded nursing bottle and large rubber nipple. Be careful to keep the bottle and nipple scrupulously clean. Add an ounce of lime water to each pint of the prepared milk and allow half a cupful once an hour at first.

As the foal grows, gradually increase the amount of milk fed and lengthen the intervals between meals. In a few days food may be given six times a day and, later, four times daily. The foal will soon learn to drink from a pail, if allowed to suck the attendant's fingers at first.

Until the foals move freely, give rectal injections night and morning. If the foal scours at any time give two to four tablespoonful of a mixture of sweet oil and pure castor oil shaken up in milk and stop feeding milk for two or three days, allowing sweetened warm water and lime-water instead. Let the foal lick oatmeal as soon as it will eat and gradually increase the amount and add wheat bran. In five or six weeks some sweet skim milk may be given and the amount gradually increased daily until, in three months or so, it may be given freely three times a day in place of new milk. The foal at this age also will be eating freely of grass, grain and bran.

At all times supply pure cold drinking water. Let the foal run out in a lot or grass paddock for exercise. Accustom it to be handled daily. Feed small quantities of nutritious food often, keeping all food vessels clean and the foal should thrive and develop well.

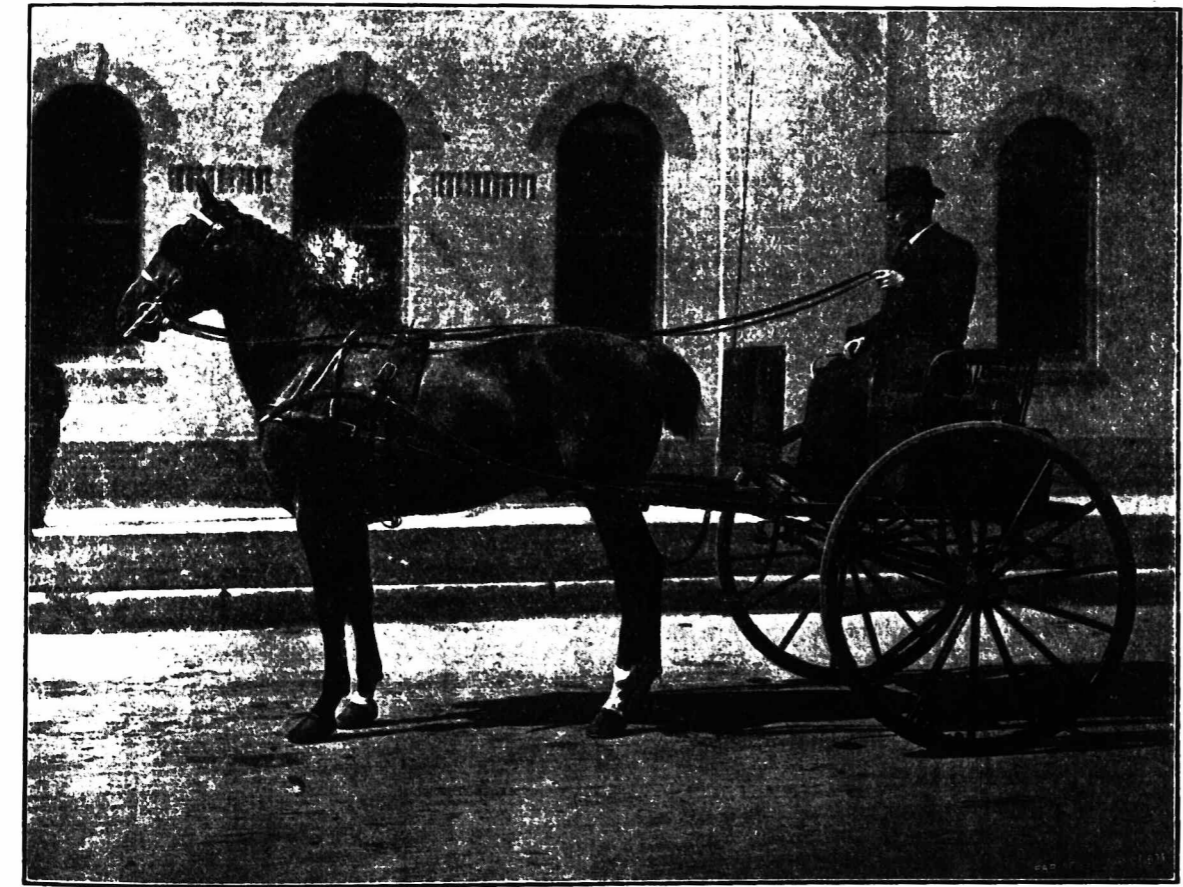
To Prevent Lolling

In reply to an inquirer who wished to know how to prevent a horse lolling - i. e., allowing his tongue to hang out of his mouth - a good many suggestions have been received. Lolling bits of various descriptions are sold by harness dealers. We reproduce diagrams of some of these which have been used with satisfactory results by several of our correspondents. In connection with these drawings, it may be well to point out that what will effectually overcome the habit in one horse, will not always give good results in another. The general principle is to devise a bit that will keep the tongue down in its place. This is most commonly accomplished by some-



thing attached to the center of the bit that will curve slightly upwards and back, preventing the animal from extending the tongue over the bit.

A Middlesex Co. harness maker sends the following: "I remember we had a bit made in something of this way that answered the purpose in our case. The bar is a little heavier than an ordinary bar. The back of the tongue bar is about 1/4 inch from the end of the bit. The height of the bar is about 1 1/2 inches, which is over the tongue of the horse, then 2



THIS TYPE OF HORSE IS FANCIED AT HORSE SHOWS

ed, then the unsophisticated buyer would have less cause for excuse if he got "burnt" on a deal, and something resembling progress would be indicated by those branches of our public service that are supposed to have somewhat at heart the interests of improvement in horse breeding. But of stallion laws, more anon.

Lest anyone should jump to the conclusion that Galicians are the ripest bunch of suckers, when it comes to a horse deal, that ever came out of Europe, we would like to relate a few instances where so-called wide-awake Canadians, Americans and others of Anglo-Saxon descent have tied themselves up to good-for-nothing stallions that somebody sold them while they were drunk or mesmerized, but refrain in case something might be taken to have personal reference somewhere and offend. However, here is one of the Memnonites just to kind of square things.

Two years ago this spring we chanced to be in a Western town that was the nearest "big city" to a Mennonite settlement. A horse dealer with a bunch of "stuff" in the "ivery" had just rounded up an "allow" of the faith of Simons or Prichard, and was doing the groundwork for a deal. We went to see what kind of an artist he

was having nothing further to entertain them in town started off with their prize package, in high glee. The incident was closed. Do we or do we not need stricter stallion laws?

EQUITANT

Potatoes for Horses

EDITOR FARMER'S ADVOCATE:

I have a quantity of potatoes, and as there is no sale for them am feeding them to my horses - a gallon to each horse every morning. Kindly say if this is too many, or if more would be beneficial, and when is the best time to feed them - morning or night?

SUBSCRIBER

Man. One gallon of potatoes per day to each horse is not heavy feeding. It has been demonstrated by experiment that 12 pounds per day of raw, wholesome, unspouted, ripe potatoes may be fed to horses with good results. These results, however, are not always borne out in feeding farm horses. Experience in feeding potatoes is that in a raw state they are not readily digested and may therefore cause colic. For best results they should be cooked. A well known British authority on feeding horses states that raw potatoes should be fed only to horses and old spouted potatoes never used as a horse food.

Subjects
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small rings about $\frac{1}{4}$ inch in diameter are placed in the very ends of the bit; a small jointed-wire bit is fastened in the small rings, joined in the center to a small ring, so that it would not kink, but would hang loose pretty well down over the tongue. A blacksmith made ours."

W. E. Stout, of Halton Co., had a loller, on which he tried several experiments, without avail, until he purchased a lolling bit at a harness shop, since when the horse has not once put out his tongue while the bit was in his mouth. This particular bit is constructed as shown in Fig. 2.

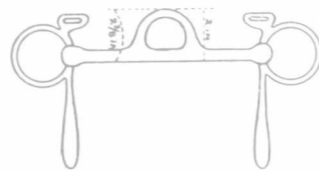


Fig. 3.

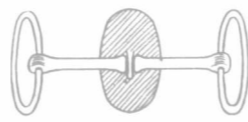


Fig. 4.

Other forms of lolling bits that may be inspected in harness shops are represented by Figs. 3 and 4. Fig. 3 is much like Fig. 2, except for one improvement and one defect. The improvement consists in the bar, which keeps the bit more fixedly in place. The defect is that a horse with a pointed tongue may insert it in the aperture where it becomes fast and swells, producing discomfort, and causing inconvenience in removing the bit. A Middlesex horseman of our acquaintance found this trouble with such a bit. A bar across the opening, such as shown in Fig. 2, would prevent this. Fig. 4 is a device we have known, but not seen tried. The center piece turns on the bit, and is supposed, when in the horse's mouth, to lie flat on the tongue.

Still another device is described by a Lambton Co. subscriber, as follows: "I had a colt that had that habit. I took a small strap and fastened it to the ring of the bit, and brought it over the nose to the other ring of bit, and fastened it tight enough to hold the bit to the roof of his mouth, to prevent getting his tongue over bit. Then run a strap up his face, and fasten to nose-piece of bridle to keep in place. I used this for about three months. It did not seem to interfere with guiding him, and cured him completely."—London *Farmer's Advocate*.

STOCK

The Western Farmer's Cow

EDITOR FARMER'S ADVOCATE:

Your correspondent in the issue of May 4 has seen fit under the caption "Dual Purpose or Special Purpose," to characterize my letter of March 23 last, advising the farmers of our prairies to stay by the Shorthorn, as a little out-of-date and the writer thereof a person of limited experience. Well, as to that I may be pardoned for asking on such a momentous question to be judged by a jury of my peers. While twenty-five years' experience is worth having, it so happens mine is of equal length, yet on the other hand one could question its real value

when at the end of two-thirds of the period it is possible to palm off on a person an imitation for the real thing. Your correspondent, I note, states that only eight years ago he was led away and had an unfortunate experience—not an unusual thing with the newcomer from the British Isles. However, the matter of your correspondent's experience, or lack of it, or mine either is not the question; neither is it worth rehearsing the stock arguments pro and con, of persons with minds made up, irrespective of the facts, of dual purpose versus special purpose. It does seem rather funny to read of a special purpose dairy advocate arguing the possession of dual purpose attributes in dairy-bred steers!

My article, to which exception is taken, was written for the rank and file of our Western farmers as found upon the prairie, not for the specialists in dairying, who are abundantly able to look after themselves, as long as they continue to specialize—by staying in their own field. Sufficient evidence is easily obtainable to warrant the statements put forward in my former letter, and the statistics accumulating day by day are making my side of the case still stronger. Not very long ago the directors of the International Livestock Exposition made a class for the *Farmer's Cow*, and specially described her as being of the dual purpose type. Then more recently I read in the calendar of the University of Saskatchewan, which came to me by mail to-day, that the Agricultural College has planned to have a representative herd of about one dozen cows of the dual purpose or Western farmer's type, so that it would appear that I am both up-to-date and in rattling good company. Any man with an open mind who will just study the records of the London, England, dairy show and note the various Shorthorn cows which have won there, must come to the conclusion that the blood of the milking strains in Shorthornedom is the stream to turn in to the cattle of our Western farmers. We should also note the records of cows of admittedly dual purpose type, Shorthorns, to be found at the Macdonald College, Que., under the management of Prof. Arkell; the splendid record of a similar type of cow, viz., of *Illuminata 3rd* at the C. E. F., under Prof. Grisdale. This cow gave within a few pounds of eleven thousand (11,000) of milk in her last lactation period. Then there are the records of the celebrated Glenside herd in the United States; those also of dual purpose Shorthorns at Ames, Iowa. My observation is this—gained after patient study and thought: That the disbelievers in the dual purpose Shorthorn are to be forgiven and pitied. They have never knowingly seen one; wouldn't know it if they did see; and, further, don't wish to see it—a most unfortunate condition of mind to be in and a great hindrance to the spread of knowledge.

I have no quarrel with your correspondent's contention for more dairy specialists. The more the better. Conditions must be met and considered. However, to attempt to use bulls of the dairy breeds generally on the grade herds of Western farmers would be ridiculous and nonsensical—yea, more, as disastrous as would be the practice of breeding the agricultural type of mares on our farms to roadster stallions. The

lack of real knowledge as to what constitutes the dual purpose type of cow is the basis of the objection by so many worthy people. This lack, however, bids fair in time to be removed by such valuable institutions as the agricultural college of the University of Saskatchewan. Let there be light!

A. G. HOPKINS.

Steady Job for the Sow

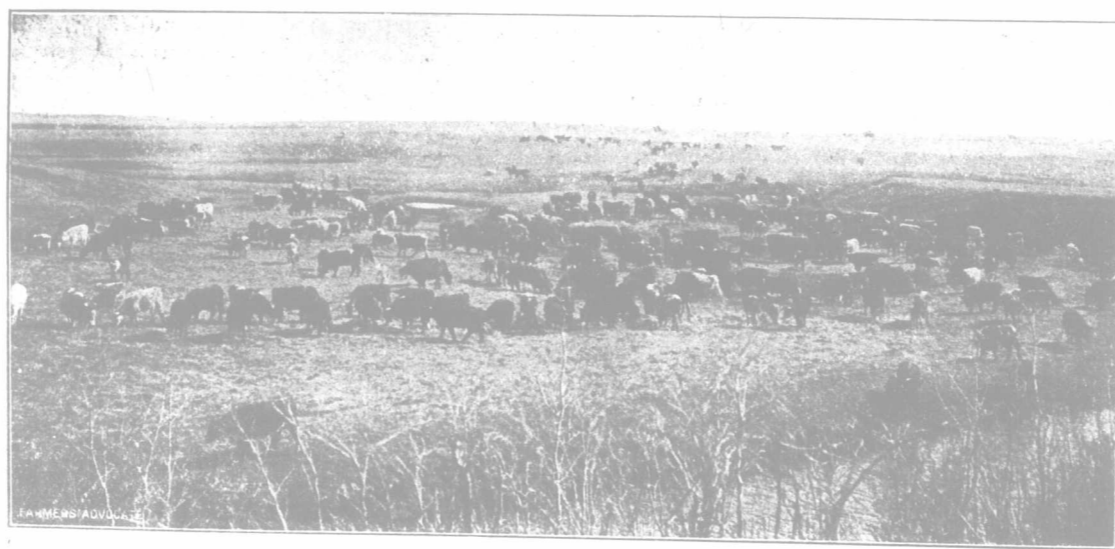
That recent record-breaking hog prices in the United States must have been largely due to failure of production to keep pace with increasing demand, is the conclusion of a well-reasoned article in the "Farmer," of St. Paul, Minnesota. The effect of high prices, up to a certain point, in tempting a sacrifice of breeding stock, thus accentuating scarcity, is also noted, though latterly a disposition is manifested to keep the sows and breed hogs more extensively. From this, it argues wisely, that the present is not a particularly opportune season to embark in commercial pig-raising. "But if you do start," it adjures, "don't sell out the first time that prices go down, and wait for another period of high prices to buy back. Give the old sow a steady job on your farm; feed her and her pigs liberally and she will be one of the best money-makers in your possession."

The Late King as a Stock-Breeder

The passing of His Majesty King Edward VII., after the brief reign of nine years, while mourned by men of all classes who have watched with admiration his benign career as sovereign of the British Empire, will be regretted by none more deeply than by farmers and stockmen, in whose calling he, from his youth, had manifested especial interest. Those who were privileged to see him on the occasion of his visit to Canada, in the year 1860, when in the last of his 'teens, will remember the evident pleasure with which he inspected the exhibits of live stock at the Ontario Provincial Fair held in the city of Hamilton in that year, when, as a bright and handsome young man, he was introduced by the president of the exhibition to the owners of the herds brought before him in the show-ring. The love for and interest in domestic animals evinced by his mother, the good Queen Victoria, and his father, Prince Albert, who established the Royal Farms at Windsor, Sandringham, and other places in England, which have done so much to popularize purebred stock, was inherited and enthusiastically manifested by the son, who, as Prince of Wales, at the age of thirty-four years, began the breeding of pedigreed stock, and competing for honors at the Royal and other leading shows, and never, it is stated, with animals other than of his own breeding. Commencing with Southdown sheep, with which he was eminently successful up to the date of his death, winning at the Smithfield Show, in December last, the reserve championship for the best pen of that breed, he later took up the breeding of Shorthorn, Devon, West Highland, Dexter and Jersey cattle, and Shire, Hackney and Thoroughbred horses, in the latter of which he was deeply interested, having bred the notable Derby-winners, *Persimmon* (1897), and his brother, *Diamond Jubilee* (1900). On the day of his demise one of his latest inquiries was of the success of his filly, *Witch of the Air*, in the Kempton Park race, which he was informed had won.

Animals imported to Canada from His Majesty's herd have taken prominent places in the competition at principal shows in this country, notably the grand Shorthorn cow *Cicely*, imported by W. D. Flatt, of Hamilton, winner of the female championship at Toronto in 1901, and sold at auction in Chicago, for \$5,000; and the bull, *Cicely's Pride*, imported by the late Sir George Drummond, of Montreal, and first in his class at the Canadian National Exhibition, in 1905.

Of the 11,000 acres of land which King Edward acquired at Sandringham, he farmed rather more than 2,000, and he controlled the Shaw, the Flemish and the Frogmore farms at Windsor, keeping the Shorthorns and Shires at Sandringham, and the dairy breeds at Windsor. As an indication of the quality of stock kept on his



WHERE CATTLE THRIVE IN ALBERTA—EAST OF DIDSBURY

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farms, it is only necessary to state that ten years ago, fifty-four of his horses, offered for sale at public auction, brought an average price of \$1,090. The King, before his accession to the throne, gave personal attention to the business of his farms, but since that event the cares of state had so multiplied he had less time to devote to the affairs of the farm, but he seldom failed to attend for one day, at least, the principal live-stock shows, and the gate receipts were always liberal on the day His Majesty favored the show with his presence. And but a few days before his death, he made a motor-car tour of his farms, accompanied by the trusty manager, Mr. Beck.

Dual-Purpose Cattle

(OUR ENGLISH CORRESPONDENCE)

Mr. Duthie, of Collynie, gave an address on dual-purpose cattle at the dinner of the Irish Shorthorn Breeders' Association during the Dublin show. Mr. Duthie claimed: "That if there was a dual-purpose breed of cattle on the face of the earth it was the Shorthorn. They could be made to pay either as milk or beef cattle. Let them not consider the scranky bare beast as a type of animal to give milk."

The dual-purpose cow has been much discussed on this side lately, and while some very good milk records of Shorthorns have been published, no new facts of importance have been adduced. It has not been demonstrated the best beef qualities and supreme dairy qualities can be combined in the same animal. Under English conditions where the milk is sold for direct consumption, apart from its fat test—so long as it is above the legal standard, and where beef also sells well, the dual-purpose cow does prove profitable. But where butter or cheese is the first consideration, as in Wisconsin for instance; or beef, as in many Western sections, the special purpose animal has rather the advantage over the dual-purpose one.

The sale of a portion of G. W. Tyser's Oakfield herd of dairy bred Shorthorns was fairly satisfactory. Bulls and cows sold well, but heifers were not in much demand. Only one outstanding price was reached—100 gs. for the five-year-old cow "Royal Lady" sold to G. Taylor, of Crawford. The fifty-one head sold averaged nearly £30.

SHORTAGE IN ARMY HORSES.

Our "under-horsed" army is the theme of much discussion, and various schemes are recommended to overcome the shortage. The deficiency is said to be something like 120,000 horses, and if it became necessary to mobilize the army at short notice the situation would be a grave one.

At a meeting of the Bridlington Agricultural Club, Mr. Wickham Boynton claimed that no one would enter upon the breeding of army horses at the prices offered at present. What the government ought to do was to make it worth people's while to breed light horses, and they would breed them. The first step would be to increase the price the war office was prepared to give for horses.

The prices should be raised to £50 for good four-year-olds, and to £35 for three-year-olds in autumn, and proportionately higher prices for officers' horses.

It was also suggested that the King's premiums for stallions should be increased, and a scheme of free service to mares be instituted.

Sir Walter Gilbey, in the *National Review*, strongly advises breeders to invest in the breeding of Hackneys, and advice from such an authority carries great weight. In spite of the advent of the motor car he believes that carriage horses of quality and breeding will command high prices for many years to come.

In his own stud Sir Walter adopts the open-air system of rearing, the mare and foal being kept in a large paddock with only a shed for shelter. Hot stables and clothing are entirely out of place in carriage horse breeding—sound and hardy stock should be the aim of the breeder.

The Warwick Agricultural Show at Otley has been unfortunate for years in regard to the weather, and this year's show was no exception—cold, heavy rains being the accompaniment.

Shorthorn cattle are always a leading feature.

and some fine animals were shown. A promising red bull calf, "Riby Swell," owned by Henry Dudding, took the medal for the best male, and the reserve went to the Dublin winner, Mr. Harrison's "Mintmaster." Some grand Shires were entered, but the display of Hackneys was not up to the usual Otley standard.

TAXING LAND VALUES.

Mr. Fels, a prominent American resident in England, has taken considerable interest in the agitation for taxing land values. Certain attacks have been made upon him, and in a most interesting letter to the *Press*, in reply he says: "I own some 2,400 acres in four different counties of England. My experience has convinced me that the land system generally injures the farmer and laborer, the builder and lessees of land. The price of land is generally too high, and so are the rents. The rents are often drawn from the farmer's interest and wages, and even from his capital."

"I don't believe that badly-fed, badly-housed, badly-clothed, and poorly-educated laborers can produce the most that can be produced from the land. I don't believe that farmers with too little capital can produce the most, and if the total production is less than it might be the landowners get less than they might get."

"Let the producing classes have a free hand in producing without the experience of being denied the use of land, and trackrented. The system of taxing improvements, and not taxing unused land is bad in two ways. It hits the man who should be encouraged to improve, and lets off the man who should be hit. I demand as an immediate reform that farm buildings, machinery, and all other improvements in urban and rural districts should be entirely relieved from the burden, and that a tax on all land values should take their place."

"This is a good business proposition, and I invite all improving landowners and capitalists to consider it."

High prices ruled at a recent sale of farm lands in a prosperous part of the county of Chester. In all some 585 acres were sold, with the various farm buildings, for £33,815. Even pasture land averaged £60 an acre, and an 18-acre dairy farm sold for £1,110. By far the largest portion of the land sold was bought by the Cheshire County Council for the purpose of dividing into small holdings.

FRAUD IN CHEESE.

A strong indictment has been made before the Cheshire Chamber of Agriculture on what is said to be the growing practice of selling Dutch cheese as genuine Cheshire. This Dutch cheese is put up the same as Cheshire cheese so far as external appearance goes, and is somewhat similar in internal texture. Such cheese are branded on the cheese cloth, and when this is removed there is nothing to indicate the origin of the cheese, and the claim is made that this cheese is often sold as Cheshire. The substitution is profitable to the retailers, as the Dutch cheese is made in three qualities—which are termed respectively half-meated, three-quarter meated and full-meated. The prices vary according to the class from 35s. to 60s. per cwt. wholesale. The inferior qualities

of Dutch cheese often fail to give satisfaction to customers, but it is the Cheshire cheese which suffers in reputation because such cheese has been bought as Cheshire cheese.

The competition of Canadian and New Zealand cheese is acknowledged to be fair and straight, but there is a strong protest against what is termed a system of fraud and unfair competition of Dutch cheese, of which some are certainly part skims.

FREE COLONIAL WHEAT

Farmers' associations are taking action on the new aspect of the tariff question caused by Mr. Balfour's declaration in favor of free Colonial wheat.

The National Farmers' Union has passed a resolution to the effect that the interests of agriculture in all its branches should be safeguarded in the event of Tariff Reform becoming the law of the land. Farmers want to know what will be their position from a business point of view, not from the political aspect, and they are not enamored of the new proposals. F. DEWHIRST.

F A R M

Topics for Discussion

In recognition of the fact that valuable hints always are obtained from men engaged in actual farm work THE FARMER'S ADVOCATE has adopted the "Topics for Discussion" column, in order that our readers may see an open channel through which they may inform their brother farmers as to practices that are worth adopting and warn them against methods that prove unprofitable. Not only do we wish our readers to discuss the topics announced for the various issues, but also we desire that they suggest practical subjects on which it would be well to have discussion.

This notice appears under the "Farm" department, but the questions dealt with cover all branches of the farming industry. Letters should not exceed 600 words and should reach this office 10 days previous to the date of issue. They are read carefully and a first prize of \$3.00 and a second prize of \$2.00 awarded each week. Other letters used will be paid for at regular rates to contributors.

June 8.—Give your opinion of satisfactory fencing for prairie Canada. Which do you prefer, ready-made rolls or wire stretched and braced as put up? Discuss size of posts, distance apart, bracing of corner posts and other particulars incident to good fencing.

June 15.—Give directions for handling a flock of hens in summer when it is necessary to close them in to avoid damage to crops.

June 22.—Describe how to build an implement shed. Particularize as to dimensions of a building to house the implements on an average sized farm; state where you would locate it, how you would build it, and what would be the probable cost.

June 29.—What do you consider to be the farmer's place in politics? How can he best use his influence for the good of agriculturists in particular and the people in general? Please do not discuss



HOW PIGS WERE WINTERED AT OTTAWA EXPERIMENTAL FARM

the parties now striving for power or the relationships of certain organizations to the policies of either party.

Summerfallow Treatment

Contributions on methods of handling the summerfallow show that a wide difference of opinion is held. Generally speaking, however, the preference is for keeping the soil absolutely black if it is deemed wise to devote an area to summerfallow. Some do not object to allowing weeds to develop to a considerable height before turning them under with the plow, while others again favor early plowing with oats sown as pasture for stock in late summer. When it is considered that the main objects of summerfallowing in the Canadian West are the conservation of moisture and the killing of weeds the preference easily is early plowing to a moderate depth, depending on the nature of the soil, and sufficiently frequent cultivation throughout the summer to kill all weed growth and preserve a loose mulch on top to avoid excessive loss of soil moisture by evaporation.

Our cash awards of \$3.00 and \$2.00 have been made in the order in which the letters appear.

Plow Deep and Cultivate Often

EDITOR FARMER'S ADVOCATE:

The main object in summerfallowing is to conserve moisture and kill weeds, so that all operations should have either of these objects in view just as soon as possible after seeding the work of summerfallowing should begin. The disc harrow should have followed the binder the fall before, or failing that the ground should have been disced early in the spring to break the crust and thus stop excessive evaporation and to cover any weed seeds on the surface and induce them to germinate early. This will have been accomplished by the end of seeding and then the plow should be started before the weeds get any size, for a crop of weeds will pump a soil dry much more quickly than a crop of wheat.

The proper depth to plow will vary with different soils, a deep rich soil standing deeper cultivation than a light sandy one. Personally I always plow at least six inches and find this satisfactory. The deep plowing brings up fresh soil and breaks up any "hard pan" bottom that may have formed from former shallow plowing. The very important feature of this plowing is to do it thoroughly, so that all weeds will be turned completely under and roots of grasses turned up to the sun. All stones should at this time be removed, for apart from the damage done to implements by them it is generally around stones that such weeds as quack grass, get a start and it is impossible to get rid of them until the stone is removed and proper plowing made possible.

The ground should be harrowed as plowed. A good scheme is to have a horse attached to a section of harrow and made to walk on the fresh-turned land beside the horses attached to the plow. If this is not done it is necessary to harrow down well twice a day—before quitting at noon and at night.

Now for the after treatment. A new batch of weed seeds will likely have been turned up, and as these germinate at different times the disc harrow or cultivator will have to be run over the field at short intervals throughout the summer. Double discing is very satisfactory, but the cultivator is a little quicker and exposes the roots of grasses to the sun a little better. The harrow should always follow either implement as well as shortly after a rain to level the ground or break the crust as the case may be.

To insure the following crop standing up well it is necessary to have the land well packed. I have never used a packer, but find the generous use of the harrow very efficient. It is a good plan to allow cattle to range over it and to sow rape, thereby is recommended, but the whole object of keeping down the weeds should not be forgotten.

To start up then: Plow thoroughly and deeply early in the season; follow immediately with harrow, cultivate frequently throughout the summer to keep down weeds and pack.

Sask.

CHAS. N. LINTOTT.

Believes in Plowing Twice

EDITOR FARMER'S ADVOCATE:

A great deal of work is done each year under the name of summerfallowing, which is of little use; much of it perhaps is worse than useless. How many fields are to be seen every season which are left unworked till the weeds are so far advanced that many of the seeds will germinate as soon as the proper conditions are present! These fields are then plowed and harrowed and the "summer fallowing" is completed. What wonder that, under such circumstances, the weed problem should have become one of the most difficult the farmer has to face!

The greater part of the land we have been working up to the present is rather light and perhaps our method of summerfallowing would not be suitable on some soils. However, since the great considerations in summerfallowing are the conserving of moisture and the killing of weeds, perhaps the means to be employed should not differ greatly with the different kinds of soil. The first stage in the killing of weeds is to cause their seeds to germinate, so that any work done towards the conserving of moisture is a great aid in the killing of the weeds.

Soon after seeding or when as many as possible of the weed seeds have had an opportunity of germinating, we plow the land, regulating the depth of plowing to suit the nature of the soil.



HOW ROOTS ARE SOWN QUICKLY

On our lighter land we find it best not to plow too deeply, as it is apt to loosen the soil too much. As each land is plowed, or preferably each day's work as it is finished, it is thoroughly harrowed and the whole field, when done, is packed. This packing serves the purpose of conserving the moisture for the benefit of the future crop, the further germination of seeds and as well, the thorough firming of the soil in preparation for the second plowing, which we believe to be essential to securing the best results. When the second crop of weeds have attained a stage of growth not far enough advanced to cause a great drain on the soil moisture and before harvest, this second plowing is done and is followed by the harrow and packer as in the first case. We have tried discing in place of the second plowing, but having had a good deal of couch grass to contend with, find the plowing better, as it kills out this grass where discing will not. The plowing may take somewhat longer than a double stroke of the disc, but the extra time required is paid for in better results. In this way we manage to grow and kill, three successive crops of weeds during the season, as any growth appearing after the second working of the land is effectively taken care of by the frosts of winter.

We find that we cannot get our soil too hard. For this reason we avoid working the land up too much the following spring, so long as a good seed bed is obtained and the seed can be readily put

in the proper depth, the harder the land the better. This system may be improved by the use of special machinery, or under special circumstances, but as a general method of summerfallowing we believe it will give the best results on soil such as ours.

Man.

DOW BROS.

Oat Pasture on Summerfallow

EDITOR FARMER'S ADVOCATE:

The time to begin summerfallowing, in my opinion, is in the fall. As soon as the stooks are off the ground run the disc harrow over the field, giving it a single stroke; a double stroke will make the ground too loose and cause trouble in getting the plows to clean. As soon as the crops are sown in the spring give the field a good cross-harrowing, as by this time the weeds have had a good chance to start and they are not far enough ahead for the harrow to run over without killing them. The land is left level for the plows.

Some men seed in the spring until it gets too late to seed and then summerfallow what is left, no matter if it takes all summer up to harvest to do the plowing. However, plowing should be done in June and first half of July so as to give time to get it well worked down again. This is the time for doing a thorough job, not forgetting to "root it up," as the saying is. We generally try to plow from five to eight inches deep. Of course conditions vary in different localities.

Try to have the land harrowed as you go along. A good plan is to have a horse tied along side hitched to a section of harrow. One application of the harrow the day the plowing is done is worth three applications a week later, as it pulverizes just as much and also conserves the moisture that would otherwise in a great measure be lost.

I have never used a land packer (so-called). The only packer I have is a good bunch of cattle and young horses, which I turn onto the summerfallow as soon as the weeds and grain start. A good plan, if the land is moist enough to start them, is to sow oats on the field. Close up the holes in the seeder, leaving only every third or fourth one open and set the machine to sow about two bushels per acre. This gives you about half or three parts of a bushel per acre. After these begin to grow, if you have enough stock to keep them eaten down no one need worry about harrowing, packing, cultivating, weeds or anything else, and if you give them choice between good prairie pasture and grain and weeds on a summerfallow I will bet dollars to marbles they will stay on the plowed field at least two-thirds of their time.

SASKATCHEWAN FARMER.

Growing Field Roots

EDITOR FARMER'S ADVOCATE:

In preparing the soil for roots you want to have it worked as fine and smooth as possible. If the land is old it should be manured well and then plowed fairly deep. Harrow it thoroughly to get all the bumps and sticks out of it. When it is worked up fine give it one stroke with the harrow, the opposite way from which you intend to sow the seed. We use a hand drill with a marker on it, which marks for the next row from that which you are sowing. This makes a good mark across the harrow marks. It is well to sow the rows about 20 or 24 inches apart. This gives plenty of room between the rows to cultivate and keep the weeds down.

As soon as the plants are high enough to be seen in the rows start to cultivate. We use a horse cultivator between the rows, thinning the plants out to about 15 inches apart as we hoe. As the plants grow keep the weeds well hoed from them. When the tops die, or if it gets so late in the fall that they are liable to freeze, it is time they were taken up, as if turnips are frozen they do not keep when put in cellar or other storage. We cut the turnip tops off with the hoe and gather them with the horse rake. Then we take the drag harrow and go over the patch three or four times and most of them are pulled out without hurting the turnips any. They are stored in the barn for winter feed.

Sask.

W. POTTER.

More on Clearing Scrub Land

EDITOR FARMER'S ADVOCATE:

As to the "easiest" way of clearing scrub land I do not think there is any. Those who have had even a little experience in that direction need not be told how to appreciate that remark. Were I looking for an "easy" way to get any kind of farm into productive shape I would not undertake to clear out any patch of scrub but would, first and finally, make a very personal "clear out" and never stop till I had landed safe and sound upon the wide and rolling prairies far away and beyond the very sight and smell of the wiry willow and the stubborn oak.

But as it is the kind of land inclined to produce that particularly sinewy and dense kind of vegetation under classification as "scrub," that that contains, more generally and profusely, the peculiar combination of soils incidental to heavy and protracted crop production, I would therefore, I believe, on consideration of many other things, favor the scrub-covered country if making a start for fresh territory.

Now in speaking of scrub land I will say that in our experience we have met with two kinds—and I like to point out the difference—the tough prairie sod, intersert with low, dense growth of willow bordering on the low places, and the true scrub land with its growth—particularly willow, poplar and oak—evenly distributed throughout its whole surface. In making comparisons one would expect that the part prairie land would be the less difficult to manage. That supposition is not correct, as I shall endeavor to show in giving our experiences with both.

For seven different seasons we have tried our powers upon that first proposition, the prairie sod, and each year invariably we have met with what might be termed something of a failure. We have tried various plans and experimented with different ideas gathered from our own and the like experiences of others, but have never met with a good working success, except it be in the early part or during a very wet season. After the usual season and after the usual performance it generally takes about three years to get the land back again into workable condition. Perhaps some wise acre is like to laugh a laugh of glowing wisdom at that confession. Well—firehead—we have had much of that sort of thing and other unrequested and not particularly palatable advice from the knowing ones. But the laugh is quickly removed when they come to know the sort of stuff with which we have to deal.

It is an easy matter to remove the small amount of scrub, which we do by fire and with the scythe. But the roots, having been partly killed by the overrunning of numerous fires each successive year, by renewal of effort, spread forth fresh roots.

Now, breaking that land does not look like a very stiff proposition. But, I forgot to tell you that we have below and above this identical piece of prairie a number of very innocent looking boulders. Why don't you pick the stones, you ask? Very easy. I would like to see anyone go over that field and pick all the stones that lie three-quarters of an inch beneath the surface. He would have to have a better scent than I have.

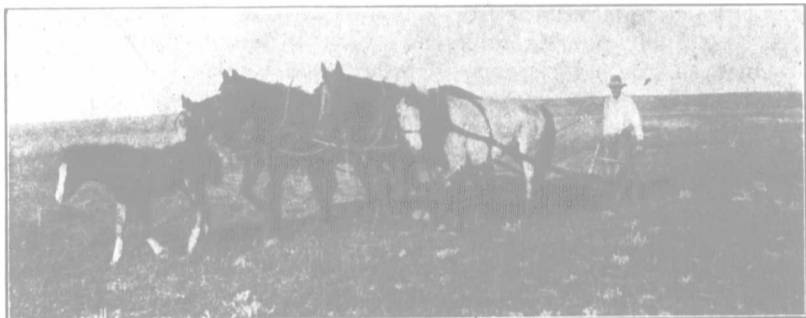
So then, conclusively, the only way to work that field is to jump the roots and break the high spots—unusually tough sod—and if you hurry up and get it done before the drought you may perform, perhaps, a tolerable job; but even then you must go carefully unless you consider your business is to grow whiffletrees instead of grain. And the only way to fix those roots is to make a practical demonstration of the usefulness of a logging chain, an axe and crowbar, supplemented in force by the exertions of a powerful team of horses. That is the method we found most practicable.

Not far removed from this ill-fated stretch of prairie lay another field. It was what the neighbors called "pretty heavy scrub land." And I will admit it took a little extra effort to clear that scrub. The heaviest of it, which was poplar, we upheaved by placing a chain high up in the branches and attaching a team to every separate tree. In this manner we got rid of both tree and root. The more slender growths of willow we removed with the aid of an axe and scythe, piling them into piles and

burning. Willow burns easily if piled snug.

In regular scrub land there is little sod. The bushes grow more separate and do not form into such clumps as are found on prairie land, and so the roots there are more separate, and it is found that they do not take to such an extent, the aggravated form of their more degenerated brothers of the sod; but remain on a level with the surface and, consequently, do not interfere so much with the plow and the tranquility of the operator's temper—two essentials to successful breaking. On this land a steady hand with four good horses has a chance to make for himself a reputation; whereas on the other land we find it takes from five to six horses.

There is some joy in the labor of holding a breaker when you know you are doing a good job. And that result is quite possible on scrub land such as we have. It is first necessary to clear out everything above ground and burn it. It is not good practise to plow under smaller scrub. We have noticed that it keeps them loose and from lying flat. It also interferes with the work of the disc harrow. In striking a land we have a man walk between the two teams, holding the bridles to guide the way. This makes a first straight furrow. And the breaker you will find, curiously, has an adaptability for following a straight line. In fact its tendency for following a given line will lead it a little farther in certain directions than you could wish, that is if you are desirous of diminishing the deviations in your first furrow. When left to itself on a crooked furrow, the breaker will when veered in a certain direction run in that direction till it is past the next turn, and has run "deep," to be brought up like an ill-managed horse in the hands of a careless driver and to strike out again in some other direction to cut the same caper, only with the opposite effect,



BREAKING SOD NEAR BATTLE CREEK, SASK.

gauging deep where it should run shallow and running shallow where it should gauge deep.

Thus, the natural tendency of the breaker is to make a crooked furrow more crooked; and otherwise, by the same tendency, to keep a straight furrow straight. That is the first evidence to favor a straight furrow. Second evidence is this: In trying to straighten a furrow your plow must be lurched first this way and then that way, and is seldom on a level bottom. In considering this, serious disadvantages present themselves, but the greater one is that when you strike a root you do not strike it square with a good ground hold, and so you are pushed aside. That leads me to state that a straight furrow is one of the first principles of successful breaking. In obtaining this end the best furrow horse should be kept in the furrow and the man holding the plow should be continually striving to keep it on a level bottom. Two indispensable accessories to your outfit is an axe to loosen the roots and a good sharp file to keep the shear always in perfect cutting trim.

That is the way we handle the scrub question. In addition to the above, some people plan to burn standing scrub with the help of a little straw. This is successful wherever the fire has been over it before. Again an old mower may be brought into play to cut the smaller bushes. The latest idea, though, seems to be a machine which does the trick after a wholesale fashion, but I have only heard of it and never saw it working or saw anybody who did.

Man. JOHN EDWIN SLATER.

* * *

According to a Japanese official report the area under Indian corn in Japan in 1908 was 128,739 acres, yield 3,258,284 bushels. Cotton was produced on an area of 12,937 acres, yielding 9,246,498 pounds of seed cotton. Tobacco was grown on an area of 73,218 acres, producing 90,740 pounds.

Carrots and Turnips

EDITOR FARMER'S ADVOCATE:

In field root crops carrots and swede turnips are the best feed for cattle, especially turnips, as they are the easiest to grow and keep best in winter. Mangels are all right, but they require rich, well-manured land to give a successful crop. Carrots seem to flavor the turnips, and the cattle eat them more readily when mixed. White turnips are not satisfactory, as they do not keep and cattle don't seem to like them as well as Swedes. White carrots are easy enough to grow without any manure or other preparation. Last winter we had no cellar room, so we put the Swedes in pits, covered with a little hay and earth, and let them freeze. We then chopped them in quarters with an old axe, and left them in the house for an hour and a half before putting them through a pulping machine. We were afraid the cattle might not eat them, but they seemed to like them better than when kept from freezing in the cellar. When fed they were about half-frozen, and though they had a very strong odor they did not taint the milk. In the spring they turned rotten, so we let the cattle onto the garden where they were pitted and they soon did away with all that were left. This winter we intend to put them in some disused building and let them freeze.

The best time for seeding in an ordinary year is the first week in May.

Sask.

A. YOUNG.

Timothy Displaces Summerfallow

EDITOR FARMER'S ADVOCATE:

The question of summerfallowing and how to avoid it is a most important one.

I have been farming here for twenty-two years, and it is only during the last four or five years that I have had my eyes opened to the wasteful practice of summerfallowing. I have now discontinued it and am well pleased with the results. I have three quarter-sections, something a little over 400 acres, under cultivation. The method I have adopted is to seed them to timothy, 50 acres each year. I have now 150 acres seeded down. This gives me 50 acres to break up each year. I

keep it down two years. The first year I cut it for hay, and the second generally pasture it; although if I have plenty of pasture I cut it the second year, as it gives hay of better quality, cleaner and finer.

To avoid getting stubble and dirt the first crop it can be cut with the binder. I have cut it with the binder and had it cured alright, although it has to stay out a little longer. If a person intends to cut it with a mower the stubble should be raked in the spring; the scratching with the rake will also assist in causing the wild oats to germinate. A good plan also is to run the packer over it in the spring. This will squeeze any wild oats that are lying around into the ground and start them to grow.

I consider timothy the best of all the grasses for this Western country, especially if the land is fairly heavy—the heavier the land the better timothy will thrive. My method of sowing is with a nurse crop, either wheat or barley. I do not care for oats, as they are too leafy and the grass does not get a chance. I sow 6 pounds per acre, with a grass seed attachment on the drill. None need despair if they have not a seeder. Some of the best catches I have had were got by mixing the seed with the grain as I pickled, preparing only a few bags at a time. The timothy sticks to the grain and is sown damp. The land should be nicely worked, the seed sown shallow. Of course the drill must be opened wide to sow enough. I consider this the surest method of sowing, although it means a good deal more work than with the seeder attachment.

The grass should be cut earlier than has been the custom in Ontario, as it gets very woody if allowed to stand too long. Another thing to

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POTTER.

be considered is the presence of wild oats in the grass. Cut it as soon as the oats head.

Now, I think I hear someone saying: "How are you going to keep your land clean without fallowing?" My reply is, if you have a piece of land that is dirty plow it in the fall or early in spring, shallow, then plow again or disk thoroughly about the first of June and sow to barley, seeding to timothy.

To sum up the advantages overfallowing: It will produce wheat of better quality; it will not impoverish the land, as it restores humus to the soil; it will stop drifting; the land is producing something all the time, instead of lying idle a year. My experience with summerfallowing has nearly always been too much straw, a very expensive crop to handle, and usually a poor quality wheat. One more important point, and that is to plow the sod early after the hay is off, about six inches deep—try to get it done before July is out. Get it well disked and then sufficient moisture will be stored up for the next crop.

Man.

J. CURTIS.

Handling Flax Crop

An interested reader writes that while writers frequently give advice regarding preparation of land and seeding of flax, little is given to show what are the best methods of handling the crop. We would therefore like to hear from some of our friends, giving particulars about when and how to cut the crop and details about handling it until it is disposed of. Let us know your experience.

Alfalfa or Clovers

EDITOR FARMER'S ADVOCATE:

Why so much noise about alfalfa and so little about such clovers as red or broad clover, cow grass and others? Alfalfa, or Old Country lucerne, has been grown in England for centuries and so have most clovers, but for one acre of alfalfa some thousands of acres are growing red clovers. No farmer would think of seeding down alfalfa for a hay crop or pasture in preference to red clover and mixed grasses, and I have yet to learn that the best clovers cannot be as easily grown in this country as alfalfa. Alfalfa has its place; it is handy for cutting green to use as green feed, but it will never take the place of the best clovers and grasses as hay or pasture. Nor do I believe it is likely to succeed on our heavy Saskatchewan soils as well as red clovers and grasses, when the latter receive the same attention, are better known and form part of the cropping rotation.

I don't want to throw cold water on alfalfa, but I am just wondering if some more important forage crops will not be neglected during the

excitement between now and 1914. Not many years ago brome grass was lauded to the skies. To-day it is a debatable point if it is worth growing at all. But lest some alfalfa or brome grass enthusiasts are inclined to deal harshly with me, kindly let me say, Mr. Editor, that I am still growing a little of both.

FRANK SHEPHERD.

Five Times the Cost

I am a constant reader of THE FARMER'S ADVOCATE and look forward to its arrival every week. I would not be without it for five times its cost.—CHAS. STOVER, Saskatchewan.

* * *

The average yield per acre of winter wheat in the United States in the ten years, 1900-1909, was 14.3 bushels, and in the ten years 1890-1899, 12.9 bushels.

* * *

North Dakota Agricultural College is to carry on some tests in the oiling of roads. Crude oil will be used and about a quarter of a mile of road will be experimented on.

DAIRY

Definite Gains From Cow Testing

A. W. Haine, of Dewdney, B. C., writes as follows: "When we joined the cow-testing association in 1908 we had 21 cows, aged between 4 and 7 years, with an average yield of 6,800 pounds milk. In 1909 our 21 cows averaged 8,360 pounds milk. We have 16 purebreds and 5 grade Holsteins. I would not think of stopping weighing and testing our milk, as I feel satisfied that if a dairyman looks well to the sire of his herd, and weighs and tests, his herd is bound to improve, and the hired men take more interest in their work. We commenced dairying 8 years ago, with the intention of bringing our cows up to the average of 6,000 pounds milk each, which we did in about 5 years."

Such statements as the foregoing should prove inspiring to every dairyman. A fairly high standard of 6,000 pounds milk was reached in 5 years, and an increase of 23 per cent. has been added. Mr. Haine will probably be up to 10,000 pounds per cow soon. That is one particularly interesting feature of cow testing; ideals are realized; then those still higher are sought for again with satisfactory results. What excellent herds could be developed if dairymen all over the Dominion would take up cow testing in real earnest.

C. F. W.

Dairymen at Saskatoon

The dairy association in Saskatchewan had a most successful convention at Saskatoon recently. So encouraging was the outcome that it was decided to hold a similar convention every year. Addresses and discussions were of such nature as goes a long way toward convincing the Westerner that dairying can be placed in a class with grain production as regards profits. Almost all the speakers urged mixed farming instead of exclusive wheat growing. A great part of credit for the success of the convention belongs to W. A. Wilson, the enthusiastic superintendent of dairying for the province.

Hon. W. R. Motherwell, in discussing the government's policy and its bearing on the dairy industry, pointed out that in the early years of the province those farmers who had taken up dairy farming had kept themselves off the street when grain growing farmers had gone to the wall. Referring to the Dominion government's campaign in 1897 and its consequent establishment of creameries in many districts, he asked his hearers not to be severe in their criticism, but to benefit by the mistakes of that campaign. It was conducted with the idea of diverting attention from exclusive grain growing, and to assist the farmers during hard times. The Provincial Dairy Act of 1906 was sound legislation and the policy of the government since then had been to put creameries only where they would be successful. Such a policy of centralization had been all important. Before, there had been a multiplicity of creameries out of all proportion to the cream in sight.

Mr. Motherwell appealed for co-operation on the part of creameries throughout the province, and assured the delegates that their support could be of great value. With the advantage of express rates and the live interest and help generally of the department, now was the time to go forward. Butter could not be made on enthusiasm. It required cream. It was the second 50,000 pounds of butter-making that decreased the cost of production.

They knew all about the past, they knew the present situation, but what about the future? There were the constant difficulties besetting joint stock companies to promote the institution of dairies. Subscribers refused to respond to the subsequent calls. That was why they went to the government, when they were up against it. Mr. Motherwell considered that such joint stock companies might be put on the same basis as telephone companies, with such regulations to suit changing conditions.

If butter had not quality it was but axle grease. It was often a surprise to him that that quality had been kept up to so high a standard in the province. The department was anxious that the quality be maintained and improved. People liked blaming an institution or government with broad shoulders. Mr. Motherwell asked the farmers to give the government inspector a welcome when he went to them. He was there for their benefit, and his visits would have an educative value. It would be a great saving and a matter of considerable advantage to the industry if they could have a cold storage in Saskatchewan.

COWS AND PIGS FOR PROFIT

H. C. Lisle, M.L.A., Lloydminster, said that wheat was too much recognized as the principal agricultural factor of the West, but perhaps dairy farming was of greater moment. With wheat the best of soil in time became depleted. The other industry renovated the land. From a long experience of Western land conditions he knew that the bulk of the land held out conditions of great advantage for mixed farming. The mixed farmer was generally the more successful. In Alberta after several years' experience he had found that the best paying items had been cows and pigs. He had sown 150 acres in wheat year in and year out, and cultivated it according to modern methods, but he could safely say that putting one year against another, he had not made a cent out of wheat.

It was his experience that ranch cows didn't pay for their keep. They required importation



THE MANURE SPREADER MAKES IT POSSIBLE TO GIVE AN EVEN APPLICATION

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of milch cows and bulls of milch strain. He urged on Mr. Motherwell and the department the necessity of considering the matter of assisting the farmer in better stock-raising. It was not charity he desired, but the taking of the matter in hand from a practical standpoint to provide facilities for the introduction of the best strain for the industry. He was confident the pursuit of the industry would lead to prosperity and happiness.

W. C. Paynton, of Tantallon; W. McCorkell, Moosomin, and J. Burton, of Langenburg, took part in the discussion.

DEAN RUTHERFORD SPEAKS

The evening session was opened by Dean Rutherford, who spoke on the manner of feeding milch cows to get the most out of them. The important point in this country was to have good feed the year around. He advocated the sowing of mixtures in the pasture, such as oats, barley and wheat, fall rye and brome grass. There was nothing a cow liked so much as variety. In summer time grasses generally become dry. Farmers should sow at intervals oats and peas and sorghum, or some fodder that keeps coming on. Clover with oats, sorghum and peas, was a mixture recommended. They should try corn, and, if possible, have a small silo.

The ensuing discussion showed that every dairyman has his particular way of feeding.

The chairman, W. A. Wilson, dealt with the effect of the feeding on the make of butter in spring and fall. He quoted statistics to show the great falling off in the make of butter during those months when the price was the best, and said that farmers should aim to prevent this by supplementing the pasture feeds by growing forage crops as suggested, so that they would have plenty of succulent feed for their cows at all times.

Dr. Flatt, of Tantallon, said that it was common to hear this province spoken of as a grain growing province. That was a difficulty in the way of dairying. It was easy to develop the dairy industry in Ontario or in Denmark. Here it would require more effort. The problem of labor was an important one. He urged that the male at the head of a herd should be a Short-horn of the milk-producing strain. They should avoid the beef type for successful dairying.

J. Noddell, of Moosomin, spoke on the grading of butter and said it should be of the first grade to secure ready sale. Turning to calves, he advocated hand feeding three times a day on whole milk for three weeks, after which they should start the grain ration, gradually increasing it and at the end of two years they would have one of the best milk cows obtainable.

Mr. Hartlein expressed his faith in the profitable nature of dairying, and advocated the fall calf. Professor Rutherford approved of this and told the delegates to feed for production at those seasons when the producer could get the highest price for his butter.

QUALITY AND CLEANLINESS

Speaking of the butter market, Mr. Wilson said that there was nothing so objectionable as bad butter, and nothing so sweet as good butter. Everybody eats butter, and the market would certainly continue to grow. Western dairymen were not supplying 40 per cent. of the Western demand. Butter was sometimes brought from Australia to supply British Columbia. Eastern Canadian houses, while looking for export, were also turning their attention to the West. This was the best market, and in order to hold it Saskatchewan dairymen must be ready to produce the best butter and the best only. So far, in order to increase the supply they had dealt leniently with careless patrons. But now he believed they had reached the stage where if the patrons would not follow the directions, they would be better without them. Last year they had made the first shipment of butter from Saskatchewan to the Yukon, and it was a splendid market. It could not be held without quality.

Coming to the patron's responsibility, he said that good butter could not be made without good raw material. A pound of butter is a pound of flavor. If the flavor is lost everything is lost. Cleanliness and keeping the milk cold were two essentials to flavor, and the cold tempera-

ture should be continuous until the cream is delivered at the creamery. Mr. Wilson also advocated a more frequent delivery to the creamery. He recommended the use of a thermometer. The use of the finger was an ancient method and not a reliable one.

Cleanliness was the all-important factor however: clean cows, stables, water and utensils. The cows' udders should be washed before each milking. Dust attaching to animals and the stable was largely contaminated with germ life.

F. E. Whiting, of Qu'Appelle; Wm. Schnell, of Langenburg; J. W. Brown, of Tantallon, and T. Pinson, of Lloydminster, took part in the discussion.

L. A. Zufelt, the newly appointed dairy instructor for the province, then delivered an address on "The cream test from the farmers' point of view; causes of variation; methods of separation." In a technical, yet interesting manner, Mr. Zufelt dealt with the different heads of his subject from departmental and local standpoints, explaining the Babcock test in detail. He explained fully the different component parts of milk and the scientific use of the separator.

The results of analyses of milk in different stages of souring was also gone into, and Mr. Zufelt concluded with an interesting statement of figures showing the great difference between the fertility taken out of the land by ton quantities of wheat, cheese, beef, butter and milk, the last showing a ratio greatly below any other production.

E. J. Elves, T. Ross, Thos. Jones and N. O. Simpson joined in the discussion.

RESOLUTIONS ADOPTED

Following are some important resolutions passed:

That this convention heartily endorse the policy of the department of agriculture in judiciously centralizing the creamery work, and that our energies be concentrated in promoting the same, and further that we do strongly advise against the erection of creameries in close proximity to each other.

In view of the fact that the government is asked to sanction and help the establishment of creameries in districts in the province where sufficient cream is not in sight, be it resolved that such amendment be made to the dairy act that shall prevent danger to the dairy industry, and we recommend the following amendment to the act: That the full stock of any government controlled creamery be fully subscribed, and that 50 per cent. of stock be paid up, and the balance secured by approved promissory notes.

That the management of creameries under government supervision has been such as to warrant commendation, and we do hereby express our appreciation and confidence in their work and methods.

That too great emphasis cannot be placed upon the following: 1, Cleanliness; 2, the use of the covered milk pail; 3, the advisability of skimming a 35 per cent. cream which lessens germ contents and propagation; 4, the uniform adoption of cooling cream in cans placed in ice water; 5, the regular use of a thermometer.

That in order to obtain a still higher standard of excellence in the butter from Saskatchewan creameries, that all patrons carefully peruse bulletin No. 15, issued by the dairy branch of the department of agriculture, explaining the best methods of handling and caring for cream on the farm.

That in the interest of dairying, a system of cold storage should be established within the province, and that this matter be brought to the immediate attention of the government, with a view to the establishment of same at an early date.

That dairymen be urged to give more attention to the improvement of their present herds from the standpoint of milk production, and to provide forage crops to supplement the natural pasturage in the early spring and fall months, as well as succulent foods for the winter production of milk.

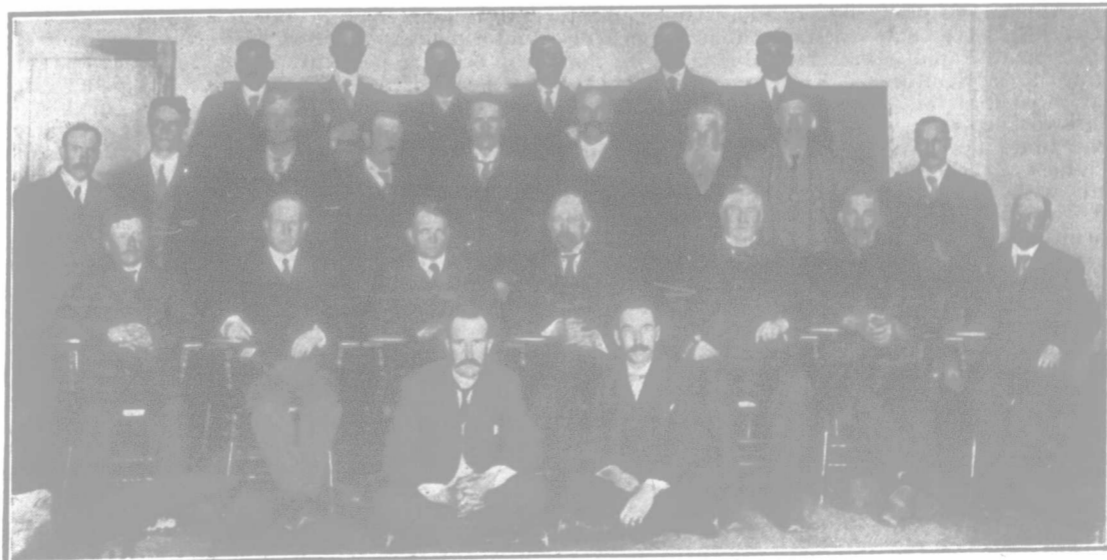
That this convention urges the government to give assistance in the vicinity of creameries to the introduction of dairy stock, and particularly bulls.

That in view of the success of this convention, the delegates from the various creameries under government control, both from the standpoint of education and the strengthening of the hand of the government in the good work they are doing in the development of the important industry of dairying, it would be in the interest of all concerned if the holding of their convention were made an annual affair.

Supt. W. A. Wilson expressed his gratification at the enthusiasm shown throughout the entire proceedings. He begged the delegates to carry that enthusiasm into the various districts. Those most in need of education would not attend such meetings, and it lay with the delegates to take that education to such people. He assured them of the loyalty and anxiety of his department, which would always be at their service.

* * *

Pasteurization is not without its drawbacks, and it is in trying to overcome these that several new methods have been brought to light. The curdling of the cream into larger or smaller lumps during the process of pasteurization has caused considerable trouble and financial loss in many creameries, and in some cases a discontinuance of the process altogether. The factors favoring this trouble appear to be medium acidity of cream (0.3 per cent. to 0.4 per cent.), low fat content (below 25 per cent.), and heating only to medium temperature (140 degrees to 160 degrees F.). Of these, the acidity appears to be the most important, and is, moreover, the factor which is the most easily changed. By the addition of an alkali, the acidity can be so reduced that trouble from curdling is no longer experienced. Viscogen (succrate of lime) has been used for this purpose, sufficient being added to the cream to bring the acidity down to .2 per cent. The cream is then pasteurized, as usual, cooled to ripening temperature, a large starter added, and acid allowed to develop to about .4 per cent., when the cream is cooled for churning.



SOME OF THE ENTHUSIASTS WHO ATTENDED SASKATCHEWAN'S FIRST DAIRY CONVENTION HELD AT SASKATOON RECENTLY

FIELD NOTES

Sheepmen's Proposals

At the annual meeting of the Alberta Sheep Breeders' Association the following resolution was passed: Whereas the flockmasters of Canada have, since the imposition of the Dingley Tariff in the United States, been unable to dispose of their wool at remunerative prices, the average value of raw wool in Canada being generally little more than one-half its selling value on United States farms and ranches, and

Whereas millions of pounds of wool are annually imported into Canada, which could easily under more encouraging economic conditions be produced on the ranges of Alberta and Saskatchewan;

Therefore, be it resolved, that the Alberta Sheep Breeders' Association, in meeting assembled, respectfully beg to impress on the Dominion authorities the necessity which exists for applying the spirit of the Customs Act, by providing a duty on wool entering Canada of classes which are produced in the country and to collect duty on wool as provided by law, which is not being done.

That in the opinion of this meeting, fine wools forthwith should be removed from the free list as such are now produced in large quantities in the West, and

That this meeting would respectfully suggest that wool rags should be subject to an import duty of ten cents per pound and shoddy twenty-five cents per pound, and

That the present faulty and antiquated classification of wools in the Customs Act be revised and made clear.

Roads Kept by Split-log Drag

Contestants in the split-log drag competition have sent to the secretary, G. F. Bentley, detailed descriptions of the stretch of roads to be kept in condition this summer by means of this inexpensive implement. Indications are that a clear demonstration of the merits of drags in keeping clay roads in good condition will be given.

The location of the one-mile roads to be maintained by the drag in each of the four municipalities that have entered the competition for prize money offered by Wm. Harvey and THE FARMER'S ADVOCATE are:

Assiniboia—Ward 1: Lots 69 to 80, St. Charles, both inclusive on River Road (south)

Ward 2: From McCreary Road to the west side of lot 31, St. Charles, on River Road (south).

Ward 3: From lot 97 to 111, St. Charles, both inclusive, on Portage Road.

Ward 4: From lot 96 to lot 91, St. Charles, both inclusive, on Portage Road.

Rosser—On first Meridian, running along west side of section 24, 12, 1 W.

On Oak Point Road, starting from Sec. 1, 12, 1 E., and running one mile northwest.

On Oak Point Road, starting from Rosser Road to J. U. Taylor's east line, on Sec. 32, 11, 2 E.

Between section 4 and 5, 12, 2 E.

Springfield—Ward 1: Main Road, north of sections 15 and 16, 11, 4.

Ward 3: Between sections 36, 11, 5 and 1, 12, 5.

Ward 4: Between sections 9 and 10, 11, 6 E.

Ward 5: Between sections 34, 10, 6 and sections 3, 11, 6.

St. Andrew's—Main highway, lots 1 to 10

Cloverdale road, section 32, 33, 13-4; sections 4, '5

14, 4

Range Line, sections 19, 24, 14-4 14, 5.

Selkirk and Candeboye Road.

Changes at Ottawa

In no department of the Canadian Government, at Ottawa, have new lines of public service developed more rapidly and steadily than in that relating to agriculture. The necessities of the situation require this, if the resources of the country are to keep pace with the tremendous demands of the times upon it, and if live-stock husbandry and a host of special lines of farming are to be prosecuted with the greatest possible success. The Seed Branch, Cold Storage, Live Stock Branch, Agricultural Statistics, Market Division, Pedigree Records, and the new International Institute of Agriculture, organized in Italy, Canada and other leading countries of the world, participating for the trustworthy collection and distribution of facts in relation to the crops and food supplies of the world, as affecting market prices—all these involve the distribution of information in the form of bulletins and reports. So great has this work become that it has been found necessary to create a new branch, having charge of publications in a systematic way, and the work of the International Institute. T. K. Doherty, for some years the capable private secretary to the Minister of Agriculture, Hon. Sydney Fisher, who has been on the International Institute work since 1908, will be chief officer of the new branch, with James B. Spencer as chief editor of publications, a work for which his extended experience in agri-

cultural journalism, as assistant in the Live-stock Branch, and secretary and editor to the Royal Commission on Swine Husbandry, last year, qualifies him in a pre-eminent degree. This change will naturally deprive the Live Stock Branch, under Dr. Rutherford, of Mr. Spencer's services. The immediate needs of this work are very great, and it is understood, in view of the increasing duties of Dr. Rutherford, growing out of the meat-inspection service, the Record Branch, etc., that a call was extended to Prof. H. S. Arkell, of Macdonald College, to assume the immediate direction of live-stock extension work in the department at Ottawa.

Elevator Commission

The commission appointed by the Manitoba government to superintend a line of government-owned elevators have met and plans are under way for action in the immediate future. Offices will be opened in Winnipeg. The intention is to visit various points in different parts of the province in order to ascertain what will best suit the needs of the grain producers. A staff of men, who understand elevators and elevator construction, will be employed to visit all parts of the province as quickly as possible. It is hoped to have this work done before July 1. A series of questions bearing on grain production and marketing at each point will be answered, thus giving the commissioners particulars about conditions all over the province.

Already several requests for petitions have been received. Last Friday's mail brought seven. An attempt will be made to ascertain whether it is best to build, lease or buy.

Motor Competition

Details of the motor contest to be held at the Winnipeg Industrial Exhibition were discussed last week by those in charge of this attractive feature. The judges, Prof. A. R. Greig, of Saskatoon, and Prof. L. J. Smith, of Manitoba Agricultural College, met Manager Bell and Geo. H. Greig, the director in charge, and made arrangements regarding the staff of assistants needed, full requirements, hauling course, area for plowing, and other particulars.

The competition will begin July 12. Plowing will be done on Tuesday and Wednesday, July 19 and 20. Arrangements are being made to take those interested in special trains to the plowing field. Indications are that the contest will be even greater than those formerly held.

Dakota's Special Train

A two weeks' run in a special train to give encouragement to the improvement of agriculture, has been arranged between the Northern Pacific railway and the North Dakota Agricultural College. The circuit extends from June 6 to June 17. The equipment will include flat cars, on which types of farm machinery will be shown, and a baggage car, in which agricultural literature and exhibits of horticultural products will be exhibited. All phases of agricultural and horticultural operations will be discussed by authorities. Special attention will be paid to plant diseases and weeds and approved methods of combating them. One car will be devoted to live stock, including cattle of beef and dairy type, sheep, hogs and poultry. Arrangements also are under way to provide a day coach, in which special lectures in domestic economy will be given to ladies.

Alberta Crop Conditions

Crop Bulletin No. 7, issued by the statistics branch of the department of agriculture of Alberta, dated May 16, contains a digest of reports sent in by correspondents, dated May 1. Spring seeding has been completed early and indications are for a greater acreage of new breaking than has been possible in the past.

It is pointed out that a large percentage of the winter wheat wintered well, the area now under crop being 26 per cent. above that harvested in 1909. Further it is noted that this crop is being extended over the province although the bulk of it is grown south of the main line of the C. P. R. Scanty precipitation last season and a light snowfall resulted in a loss of about 30 per cent. of the area sown last fall. An early spring followed by a number of severe frosts contributed largely to this loss.

Other things being equal, wheat that was sown in July has come through better than that sown later. As this has also been true in past years, an increasing number of farmers acting on this experience are endeavoring to finish their fall seeding at an earlier date than formerly.

The abundant rains that fell from the 9th to the 14th inst., over the country from Red Deer south to the international boundary, will save large areas of winter wheat that were beginning to fail. Doubtless, many fields in that part of the province which to-day are thin, will stool out and with a favorable season give every good results. On this account farmers should not decide hastily to re-seed fields of wheat that have been winter-killed. Experience has shown that in this province under favorable conditions a return of from twenty to twenty-four bushels per acre may be reaped from land on which

the loss during winter has amounted to even fifty per cent.

CONDITION OF SPRING GRAINS

Unlike the spring of 1909, farmers were able to get on their land very early this year. With the opportunity to prepare a large acreage and to sow early it was to be expected that prices being high, there would be a very marked increase in the area devoted to spring wheat. It is not surprising, therefore, to find that a total of 488,183 acres has been seeded, an increase of 51 per cent. over 1909.

The increase in acreage sown to oats is not so marked as in the case of spring and winter wheat, being only 10 per cent. greater than that harvested in 1909. It must be borne in mind, however, that the area of last year was enormous, being 61 per cent. more than in 1908 and 126 per cent. greater than in 1907. The spring of 1909 proving backward, farmers sown to oats much land that had been intended for spring wheat and this area was further unexpectedly increased, by the re-seeding to oats of a proportion of those fields of fall-sown wheat that had been winter-killed. The present low prices of oats and the fact that a part of last year's crop is still in the farmers' hands, have also had an influence in keeping the acreage down.

The amount of land sown to barley shows an increase of 36 per cent. over 1907. The high prices secured for hogs and beef cattle for some time past have doubtless led to the setting aside of so liberal a proportion of land for the production of this useful feed grain.

INCREASE IN TIMOTHY

An increase of 53 per cent. in the acreage of timothy shows a decision on the part of many farmers not to be dependent on the growing of grain alone and also to adopt a healthful rotation of crops. Prices for timothy hay in the larger towns have been good, and with a yield of two tons or more per acre, many farmers find that they get as large returns from timothy as from grain.

Below is a tabulated estimate based upon the returns from correspondents of the acreage in crop to the various grains in the province in 1910, also acreage for timothy, alfalfa and sugar beets.

Winter wheat	128,670
Spring wheat	488,183
Oats	702,460
Barley	147,150
Flax	18,390
Speltz	1,695
Rye	6,385
Timothy	29,025
Alfalfa	600
Sugar beets	415
Total	1,582,973

Events of the Week

Sir Ernest Shackleton, the British Antarctic explorer, is on a lecturing tour of the West.

The King's Plate was run at the Woodbine, Toronto, on May 24. Parmer, owned by Colonel J. S. Hendrie, winner; time, 2:12 2-5; distance, 1 1/4 miles.

It is announced that the Governor-General will start early in July on a trip to Hudson's Bay, following somewhat the line of proposed railway to the bay and coming back via Baffin Straits and the Atlantic.

Tornadoes and hail storms are reported to have done a good deal of damage in the Southwestern States, following frosts that are estimated to have damaged crops to the extent of half a billion dollars.

A permanent commission will be appointed to deal with disputes between Canada and the United States on all matters effecting international waterways. The commission will consist of six members, three from each country.

British Columbia fruit inspectors made a bonfire last week, destroying some thirty thousand insect and disease-laden trees from Ontario, United States, France, Belgium and Holland, part of one million trees shipped to British Columbia last winter.

The government of Alberta resigned last week. Chief Justice Sifton being called upon to form a ministry to succeed that of Hon. A. C. Rutherford. The resignation of the Rutherford government was due to disclosures in connection with the Alberta and Great Waterways Railway deal. It is expected that a new election will be held shortly.

A thorough survey of the forests along the proposed line of the Hudson Bay railway will be made during the present summer. Three parties will be engaged in this work, one beginning at the Pas, Saskatchewan, one going in by the way of Norway House to Split Lake and the other going to Oxford House. The first party will be under the direction of James R. Dickson, the second under the direction of J. T. G. Whyte, and the third under W. Creighton. The two latter will be provisioned for a year and will remain in the field at least until the summer of 1910. It is probable that by that time arrangements will be made to continue the parties in the territory, as it is expected that they will be required there for some years.

OUR WEEKLY MARKET REVIEW

Wheat markets were weak and erratic. The pit at Chicago was the storm center of the wheat world, and a battle of the giants was on there.

CLOSING OPTIONS, WINNIPEG. Table with columns for Wheat, Oats, Flax and CASH PRICES, and rows for various months from May to October.

duction and a reasonable allowance for profit. Too much "she" stock is being sent to the shambles. Slaughtering some of it is a godsend to the country.

GRAIN

Wheat values continued to decline all week. The opening was not strong but no serious slump occurred until Friday.

AMERICAN WHEAT OPTIONS. Table with columns for Chicago, Minneapolis, New York, Duluth, Duluth flax and LIVERPOOL, and rows for various months.

All that has been said of cattle holds for hogs. Despite the most promising outlook ever enjoyed by the hog producer, as many brood sows seem to be coming to market as there ever were.

MARKET QUOTATIONS

Receipts of cattle for the past week were fairly liberal; quality fair to good; market steady this week on all classes of good-killing cattle.

LIVESTOCK

Deliveries at Winnipeg were light. All classes of stock were short, with quality averaging rather lower than the previous week.

Active demand exists for hogs, and while packers are quoting \$10.50 as the average figure a good proportion of those sold went 15 or 25 cents higher.

REPRESENTATIVE PURCHASES. Table with columns for No., Hogs, Ave. Weight, and Price, listing various types of livestock.

VISIBLE SUPPLY

Table with columns for Canadian, American, and WORLD'S SHIPMENTS, and rows for Wheat, Oats, and Barley.

TORONTO

Export steers, \$6.50 to \$7.25; heifers, \$6.40 to \$6.60; cows and bulls, \$5.00 to \$6.00; butcher cattle \$5.25 to \$6.45.

MONTREAL

Export steers, \$6.00 to \$7.25; butcher cattle, \$5.00 to \$7.50; bulls, \$5.50 to \$5.75; sheep, \$6.50.

BRITISH

London: Canadian steers, 15c. to 15 1/4c.; American, 15c. to 15 1/4c.; Liverpool: Canadian steers, 14c. to 15c.;

CHICAGO

Steers, \$6.25 to \$8.60; heifers, \$4.00 to \$7.00; cows, \$4.10 to \$6.65; bulls, \$4.00 to \$6.30; calves, \$4.15 to \$8.35.

Reports generally from Europe are favorable. In the United Kingdom the outlook is more favorably reviewed; weather conditions have improved.

On passage wheat 49,680,000, increased 104,000; year ago 43,560,000, increased 384,000.

Foreign crop conditions

Reports generally from Europe are favorable.

In the United Kingdom the outlook is more favorably reviewed.

Seasonable weather is reported in France.

German outlook is mostly favorably regarded.

In southern European winter wheat and spring crops are in excellent condition.

In southwestern Europe the outlook is not considered as favorable but in no quarter are conditions serious.

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ated to even fifty

RAINS

Wenters were able to harrow. With the opening and to sow early being high, there the area devoted sing, therefore, to has been seeded, 109.

to oats is not so and winter wheat, than that harvested nd, however, that being 61 per cent, at, greater than in g backward, farm- had been intended was further unex- g to oats of a pro- n wheat that had low prices of oats year's crop is still ad an influence in

Wheat markets were weak and erratic.

The pit at Chicago was the storm center of the wheat world.

and a battle of the giants was on there.

The market closed at Chicago on Saturday noon.

with May 11 1/4c. lower than it closed on Monday.

Winnipeg, May closed 3 1/2 cents lower than Monday's prices.

Every factor that could influence prices seemed favorable to lower prices.

The growing crop in America was under almost ideal weather conditions.

Patten, scenting danger ahead, was trying to get from under a long line which he had been quietly accumulating for some time.

and continued large offerings from Russia had a tendency to make European buyers optimistic as to the outlook and indifferent buyers of wheat.

It is difficult to see how wheat can gain any strength just at present.

The crop that will be harvested in 1910 may not be over average proportions.

but the seasonal bear moment is on, and it may be safely predicted that wheat prices will keep on the down grade from this time until something definite is known regarding the crop of this year's sowing.

GRAIN

Wheat values continued to decline all week.

The opening was not strong but no serious slump occurred until Friday.

It was a sort of black Friday for holders of wheat.

Patten's corner crashed down and September prices dropped 4 1/2 cents in Chicago, and 4 cents at Winnipeg in a few hours.

It was one of the most excitable days seen in wheat markets for some time.

COLLAPSE OF THE PATTEN CORNER.

James A. Patten and his associate got in wrong for once and it is probably that the millions' profit made by this speculator last May will be well nigh cleaned out when he squares up from the crash that follows the collapse of his September holdings.

Late in February and early in March of the present year, James A. Patten, after digesting reports he had received from his confidential agents in all parts of the United States, came to the conclusion that the wheat crop of 1910 was bound to be a failure partially.

He began to buy wheat for delivery not later than September 30. He bought everything he could lay his hands on. Patten bought his wheat at prices ranging from \$1.01 1/4 to \$1.07 1/2.

An average price probably would have been about \$1.05 per bushel. Patten bought and bought until his line of September wheat was estimated at 20,000,000 bushels.

Armour, in the meantime, after carefully studying conditions had come to the conclusion that Jas. A. Patten for once had guessed correctly.

He was satisfied in his own mind that the 1910 crop was not going to be a failure and decided upon a bear movement in September wheat.

He sold "short" millions of bushels.

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Home Journal

People and Things the World Over

Woman's suffrage is making steady progress. Last month in Norway municipal suffrage was given to all women over twenty-five years old. Hitherto suffrage was limited to women who paid a considerable personal income tax.

The nest forwarded from Middlemiss, Ont., to Dr. C. F. Hodge, of Hodge University, Worcester, Mass., as a claimant for the \$1,000 reward offered for the first nest found of the wild or passenger pigeon, has turned out to be the nest of a mourning pigeon.

Mrs. Mary Goddard, who is said to be the oldest Quaker preacher in the world, celebrated on March 10th her 100th birthday at her home in Durham, Me. This is the first time in twenty odd years that she has been unable to preach on her birthday in the Friends' meeting house in Durham.

The Egyptian goddess, Neith, was found on the Bowery, New York, where she had been pawned for fifty cents. She disappeared from the Metropolitan Museum of Art the day before, greatly to the agitation of the authorities. The statuette is 9½ inches tall, of great artistic merit, and worth about \$1,500. It dates from the seventh century B. C. It was taken back to the museum, and search started for the culprit who stole it.

The Orleans Farce Museum has just been enriched with a curious relic of the past which some workmen in making excavations in the city came across. It is a stone representing a grinning figure, showing the teeth, the countenance being repellent enough. In this way the loquacious woman, the scandalmonger, was brought to her senses. The stone, suspended by a chain, was placed round her neck, and so accoutred she was compelled to walk round the town in which she lived. The stone is supposed to date about the sixteenth century.

You are the Sufferers

"It is interfering with a man's personal liberty to say that he shall not drink this or that. A man has a right to drink what he pleases." It's an ancient argument—about the same age as the drink traffic itself. It is a high-sounding argument, too; those "personal liberty" words catch us all, and make us feel as if we had been tampering with holy things if we have ranged ourselves on the other side of the dispute. But this morning I don't know. Last night the tenant on the floor above came home about midnight with a large cargo of the draught that inebriates and also cheers more or less. He stamped up the long narrow hall of his domicile with considerable noise; but it didn't satisfy him, and he clog-danced down to the front door again and ran back. Then he sat down on a creaky bed with an emphasis that made all the electric light fixtures in that end of the block loosen in their sockets. He sat down to cry audibly, and rose up a few minutes later to laugh idiotically. Something suppressed music, and he sang "Good-bye, my Blackie!" with drunken pathos and crested himself with humming the Dead March in the style of a tenor, keeping time by beating with large fists on the floor. At half-past three he went to sleep, but silence didn't reign by any

means for he snored rampantly. As a consequence, I had no sleep and have come down to my desk in a disgruntled frame of mind, with only brain power enough to complain in this paragraph. You who are unfortunate enough to read it conscientiously will undoubtedly be bored, and if you are you can lay all the blame upon the liquor traffic and the desire not to interfere with the man-on-the-next-floor's "personal liberty" to make as much noise in the night as he pleases.

Shackleton and the South Pole

The personal element in connection with the close approach to the South Pole is almost absent, and in marked contrast to the North Pole controversy. Interest in Sir Ernest Shackleton is confined purely to what he has accomplished, and there has never been doubt or aspersion cast upon his discovery. The larger towns and cities

The sleds were made of American hickory, 11 ft. long, 18 inches high, and 2½ feet between the runners. Sails were used when the wind favored, which would increase the speed very perceptibly. A novel feature was the fifteen horsepower motor car.

Four men formed the company which made the South polar journey—Shackleton, Adams, Marshall and Wild—four men of unusual stamina and tried endurance. The first unprecedented achievement of the expedition was the beating of all previous southings when it reached latitude 82 degrees 18.5 south. The journey thence was fraught with dangers and hardships which seemed to become greater with each furlong traversed.

Affected by mountain sickness, half-starved, often escaping freezing only by placing their feet in each other's breast, these men endured sufferings truly awful. When they reached 88 degrees, 23 minutes south, 162 degrees east, a storm broke, and further advance became humanly unthinkable through loss of food supplies, the circumstances of which are described below, although there was no break in the dead white snow plains towards the South Pole, ninety-seven miles distant.

The outward journey had been difficult and arduous, but the homeward journey was a race for very life. At times the men fell exhausted in their harness and dysentery added its horrors—through unfit pony meat—to the dangers of broken sledges, sharp-pointed ice, dangerous crevasses where a wrong step meant death, and indescribable blizzards. At one time Shackleton went back over sixty-seven weary miles to ensure the safety of some of his men whom he had outdistanced.

The scientific value of the location of the South magnetic pole is very great. Its approach involved an exhausting and dangerous journey in which Professors David, Mawson and Mackay participated. The pole was located at 72 degrees 25 minutes south latitude, 155 degrees 16 minutes east longitude.

Seventeen days it took them to reach the sea again where they had left their food stores. They found the ocean open and their food gone. Only the seal and penguin they were fortunate enough to find, saved them from starvation and still more fortunate were they to be themselves found and rescued by the Nimrod a few days later.

One incident remains to be recorded before closing this brief sketch, as showing how danger lurked unseen along the path of the adventurous explorer. It was when approaching the southernmost point reached that it happened. Shackleton, Marshall and Adams were making their way a few paces ahead of Wild, who was leading the last Manchurian pony which was carrying the food supply of the party.

Suddenly Wild heard a sound of rushing wind close behind him; the rope by which he was leading the pony, slipped out of his hand; he turned round—there was no pony to be seen. They had passed over a crevasse covered by a layer of snow. This layer had been just thick enough to bear the weight of the men; the moment the pony trod on it, it gave way.

When Wild and the rest looked down into the crevasse, they saw an abysmal depth, but they could not see the bottom.

It was a miraculous escape, especially for Marshall. Had he had a firmer hold on the rope, he must inevitably have been dragged into the crevasse.

With the pony went the food supplies, "and that cost us the pole," concluded Sir Ernest, in telling the story.

THE GOOD GREAT MAN

How seldom, friend, a good great man inherits
Honor and wealth, with all his worth and pains!
It seems a story from the world of spirits
When any man obtains that which he merits,
Or any merits that which he obtains.
For shame, my friend, renounce this idle strain!
What wouldst thou have a good great man obtain?
Wealth, title, dignity, a golden chain,
Or heap of corpses which his sword hath slain?
Goodness and greatness are not means, but ends,
Hath he not always treasures, always friends,
The good great man? Three treasures—
—love and light,
And calm thoughts equable as infant's breath;
And three fast friends, more sure than day or night—
Himself, his Maker and the angel Death.

—COLERIDGE.

of Western Canada are just now having the privilege of hearing the explorer tell in his modest, manly way how the great work was accomplished. The splendid photographs made into lantern slides provide circumstantial evidence of the veracity of his statements.

The preparations for Sir Ernest Shackleton's trip were not received with very much enthusiasm in England, and the "Nimrod" left amid a depressing silence. But orders were received to stop at Cowes, where the late King Edward VII. and the Queen were staying. Both came aboard the little vessel, and wished it good fortune, and Queen Alexandra presented the ship with a flag. The financial crisis of 1907 made money difficult to obtain that year, and Sir Ernest put all his own money into the venture and borrowed where he could.

A departure from the usual procedure of polar exploration was to take no dogs on the trip as the low, drifting snow got into their eyes, but Manchurian ponies were used instead. They dragged 750 pounds a day on ten pounds of food. Later they themselves were food for the party.

SERVANT OF ALL

Whosoever would become great among you, shall be your minister; and whosoever would be first among you, shall be servant of all.—S. Mark x.: 43, 44. (R. V.)

It is the weight of self that overpowers. Take up another's load, it carries ours.—FREDERICK LANGBRIDGE.

The text given above is a strong statement of the foundation of Christianity. The marginal rendering is even stronger: "Whosoever would become great among you, shall be your servant; and whosoever would be first among you shall be bondservant (slave) of all." I say it states the foundation of Christianity, for our Lord and Master proved Himself to be Greatest of all, by serving all. More and more we are learning the strange truth, that to achieve real greatness is not to be served by many, but to pour out life generously and gloriously in service.

This does not mean that we should copy the famous "old man with the ass," and waste precious time in trying to please everybody. He did not succeed in pleasing anyone—you may remember—and the people who make "popularity" their aim are certainly not "great," though they may try to achieve greatness by being servant of all. The motive which inspires any action makes it great or petty, and if the motive be only to win pleasure or profit for one's self, the action is selfish and mean.

Now, I am not trying to please everybody, but still I shall take the advice showered on me lately by many of our readers, who object to having our Corner changed into a correspondence column. Thinking that you might be growing tired of my weekly chats, I have lately given more room to correspondents. But there appears to be a general dissatisfaction, so I shall resume my old habits and keep the floor myself—for the most part—thankings those who have written so many letters on various subjects. It is impossible to answer all of these by personal letters, so silence concerning them is no proof that they have failed to reach me.

But all this is straying from our main point—greatness won through service. In the general upset of housecleaning, the other day, an old number of *Everybody's Magazine* came to light—not very old, December, 1909, to be exact. An article, called "Heroes of the Telegraph Key," attracted my attention, and it is a striking commentary on our text from a modern standpoint.

The telegraph operators described in it were "great," because their faithfulness as servants of the public was magnificent. First is given a description of 800 men sitting shoulder to shoulder, high up in a New York "skyscraper." They worked their telegraph instruments steadily, though a fire was raging overhead, and water was pouring in streams through the ceiling, flooding the floor six inches deep. If water got on the dynamo in a corner of the room, the men would have been instantly electrocuted. "But not for an instant did the jingling keys cease; for to quit at this, the busiest hour of the night, would have snarled the company into a tangle which it would require days to unravel. For an hour the men sat in mackintoshes, or under umbrellas, knowing that between them and sudden death was the thickness of a tarpaulin. Their faces showed the almost superhuman strain of concentrating their minds on the work in hand; but not a man deserted his key. On bared nerves they worked, for the honor of the service wherein it is admitted that man born of woman may blunder, but wherein, too, is an unwritten law that in time of peril no man may desert his post, any more than a captain may desert his ship or an engineer leap from his locomotive before it is needless suicide to remain."

The secret of countless deeds of glorious heroism is simple faithfulness to duty. The highest reward anyone can receive is the Master's commendation: "Well done, good and faithful servant." One of the heroes described in the article before me is Frank Shaley. He was a telegraph lineman and was in the baggage car of a train which was wrecked three years ago, out in the West. He crawled out, clutching his satchel of in-

struments. More than 150 dead or injured people were lying there. The next train would not arrive for five hours—could nothing be done for the sufferers until then? Shaley was dying from his injuries, but he was the only man there who knew how to "cut in on the telegraph." He was hoisted up, made his connections, and sent his message: "Number 17 terribly wrecked forty miles west of Cheyenne. Send hospital train."

Before the train arrived, with doctors and nurses, Shaley had been called to his reward.

Another hero described in this article is Edward V. Wedin. In the South, the awful epidemic called "Yellow Jack" was raging. There was a mad scramble out of the infected district, only the bravest remaining to face almost certain death in nursing the sick and burying the dead. All communication by post was stopped, and eleven out of the fifteen telegraph operators who had been brave enough to remain, were dead. Messages, pleading for help or asking for news, piled up on the four who were left. Would another operator volunteer to go deliberately into that city of death? E. V. Wedin responded to the call for volunteers. When he reached the telegraph office in New Orleans, "he sent more than 500 messages at his first sitting. Food and drink were brought him, and he ate with one hand and worked with the other. . . . worked until his arm was as if paralyzed to the elbow, and he fell forward on his key fast asleep." He worked on, day after day, while other volunteers came and died. He says he is most famed only because he escaped unharmed. But not one of the heroes of that terrible time is forgotten by God.

I should like to tell you more about these, and the other "heroes of the telegraph" described at length in the magazine—but space forbids.

The world is full of heroes—men and women who are doing their duty at all costs. Let us be inspired by their example and work steadily on where God calls us to serve. "Servants of all!" was and is our Master—can we desire a nobler duty than His?

But when we read about heroes, we are impressed with the romance of their doings, and perhaps our own work seems prosaic in contrast with their exciting battles with danger and death. It is that idea of daily duty being "dull and commonplace" which I have been trying for years to contradict. We are servants, with the high privilege of serving the King of Kings. How can any duty be commonplace which is put into our hand by our loved Master? How can we find life dull when He is beside us? How can we be careless and slothful in our service when He has placed us at our post and is watching to see that we are faithful there?

Perhaps He is even better pleased with the quiet, cheerful faithfulness of many who are unnoticed by the world, than with the deeds of dazzling heroism which attract so much attention. Most of us could live very contentedly without these startling acts of courage but should miss the quiet faithfulness which makes life glad and sweet every hour. And perhaps character grows more strong and noble in quiet, everyday service, than in any other way. Think of the glory of growing in beauty of spirit in the sight of God! The joy of loyal servants, working with and for their Master, is a growing joy. Each year is more full of living interest than the last. Each year brings them nearer to Him.

"Oh, happy are His servants! happy they who stand continually before His face. Ready to do His will of wisest grace! My King! is mine such blessedness today?"

DORA FARNCOMB.

Hope's Quiet Hour

PEACE

(Written for THE FARMER'S ADVOCATE.)

If all our lives flowed on in even measure,

If clouds ne'er drew their curtain o'er the blue,

We should be satisfied with earthly treasure.

We should not rise to all the good and true.

If all hope's sea was calm, still, and untroubled,

If every wave came rippling to the strand,

We should not seek for refuge in the harbor—

Breakers of trouble toss us to the land.

If we ne'er wearied of the noise of babel,

The din of strife, that must be here, to cease,

We ne'er should gather more than half the meaning

Of God's best promise, "I will give you Peace."

S. N. DODDS.

PUBLIC SCHOOLS

Which is of most importance to the people of the West, our children, or our cattle and horses?

It often seems as though the children were raised and educated for the sole purpose of raising more and better stock, and more wheat and oats and flax. This may seem like a serious charge to lay against our people, but let us see how it can be sustained.

We have a school law. We have our teachers and our educational department. Nearly all our papers and magazines devote from one column to one page to the discussion of education, or to the rearing of children in the home. The schools themselves are often written about, especially by the women. Once a year teachers hold conventions. In each neighborhood, or school district, one meeting is held each year to discuss the financial side of the school question in that district, and taxes are levied adequate to the supposed needs of the school.

Perhaps the trustees hire a man or a woman to clean the school house once or twice a year.

As for the school grounds, the teacher is allowed to coax some good-natured young man into plowing a garden for her. Perhaps a fence is built to protect the grounds. As the teachers move about from place to place little or no permanent work is done toward beautifying the grounds. Even ordinary sanitation is often shamefully neglected.

It is needless to recount all the attention paid to grain and stock. The farmers hold meetings all the way from local institutes to huge grain growers' meetings. All the papers are full of it. Everybody knows about it; and all this is most excellent; but there are other topics that should receive just as much attention.

Let us first look at the school grounds as they are, and as they might be.

A schoolhouse is built on an open piece of prairie. Often the grounds are only defined by a furrow. Little thought is given to the building site when the land is first secured. Often the school is situated on a low-lying piece of ground that is wet and unhealthy in spring or during heavy rains. Sometimes no attempt is made to dig a well. Sometimes the location is such that good water cannot be obtained if a well was dug.

The law requires that proper privies be built on the school grounds—but here the matter often ends, and I have known a lady teacher to be compelled to ask repeatedly to have broken doors mended, or put back on their hinges, and to have cleaning and disinfecting done. This certainly is not as it should be. The trustees of any school should recognize the need of frequent inspection and repairing of the school privies.

Even the schools that have good fences built about their grounds, are

absolutely without shade trees, unless they happen to be built in a valley. Anyone who has watched the children enjoying the shade of natural groves of trees, should understand how much comfort and pleasure might be given them by trees planted in the grounds.

Single trees, planted here and there along the fence, add to the bareness of the school grounds. They do not grow well, or afford shade or shelter.

Instead of this a strip a rod wide should be plowed and well worked up, all around the school grounds. Quick-growing, hardy trees, mixed with lilacs, caraganas, and Tartarian honeysuckles, should be planted three feet apart all over this strip of ground. The trustees should see that these trees receive cultivation at least twice a year during two summers. No pruning should be done.

The whole cost of the work of plowing, discing, planting and cultivating for two seasons would not amount to more than fifty dollars. After that the trees might safely be left to themselves, as long as they were properly fenced and no horses were allowed near them.

The trees would add much to the appearance of the grounds. They would shelter the school from severe winds, and thus save discomfort and fuel. The children would take untold comfort amongst the trees during play hours, and in the course of time the value of them would be inestimable to the whole neighborhood.

In locating a school care should be taken to have the grounds well drained and well away from any swampy, stagnant lands. If possible the site should be such that good spring water can be easily obtained.

Failing the possibility of a good well on the grounds, some other adequate arrangement for a constant supply of fresh pure water should be made. In some cases no good wells can be found in the school district. I have known trustees to fill an open barrel from a dugout pond every Monday morning, stand this barrel of impure water in a porch where the hot sun beat down on it through a door opening to the south, and expect that water to be fit for thirsty children all that week. Before the summer was out the pond from which the water was taken was covered with a green slime. In August, typhoid fever was prevalent in the district. Not one house escaped a case more or less severe. By a determined refusal to taste anything but boiled water the teacher escaped the fever. She even succeeded in persuading the trustees to have water brought from the only spring well in the district, but she could not accomplish this until the water in the pond became so bitter that bread made with it was not eatable.

In such a district as the above it is hard to tell what to do, but it might be possible to arrange a cistern in which a fairly pure supply of rainwater could be gathered from the roof of the schoolhouse. Such a cistern would need to be carefully looked after, and frequently cleaned and purified.

Another school district placed their school where they thought good water could be obtained easily. When the well was dug the water was there a plenty, but was dark-colored and vile-smelling, no matter how often pumped out. It is now four years since this well was dug. It still remains there. The water is so bad that the children never taste it. They are all accustomed to good water at their homes, and they bring a small supply in bottles or pails, for their lunch. If the teacher finds it necessary to have more she sends some of the scholars to carry a pail of water from the nearest well, which is quite a long distance from the school. It is probable that a well dug in another corner of the grounds would furnish good water; but the trustees have quite neglected to try any such measures. They doubtless think they have done their part. Such a well dug in the barnyard of any one of them, would long ago have been filled up, as being dangerous to the health of the farm animals.

I think school inspectors should insist on a supply of pure water in our schools, if the health of the country is of any importance whatever.

Yours truly,

BRENDA E. NEVILLE.

"Self-reverence, self-knowledge, self-control—these three alone lead life to sovereign power"

NO OCCUPATION

He rose before daylight made crimson
the east
For duties that never diminished,
And never the sun when he sank in the
west
Looked down upon work that was
finished.

She cooked an unending procession of
meals,
Preserving and canning and baking,
She swept and she dusted, she washed
and she scrubbed
With never a rest from it taking.

A family of children she brought in the
world
And raised them and trained them
and taught them,
She made all the clothes, and patched,
mended and darned
Till miracles seemed to have wrought
them.

She watched by the bedside of sickness
and pain,
Her hand cooled the raging of fever,
She carpentered, painted, upholstered
and scraped,
And worked just as hard as a beaver.

And yet as a lady of leisure, it seems,
The government looks on her station;
For now by the rules of the census report
It enters her: "No occupation."
—McLanburgh Wilson, in *New York Sun*.

A GREETING FROM CHRYSANTHEMUM

Dear Dame Durden:—I hope I shall
not be too late to have this letter ap-
pear in June. The weather has been
so nice, only for the very high winds.
My chrysanthemum died after all my
trouble. I think a worm got into the
root.

Could someone please tell me how
to make rhubarb jelly? I will try to
come again before long.

CHRYSANTHEMUM.
(Perhaps some of our members who
have been successful in growing your
favorite flower will be able to give you
some advice about it. Will put rhubarb
recipes in next issue.—D.D.)

"Standing with reluctant feet,
Where the brook and river meet,
Womanhood and childhood fleet!"

A GIRL THAT CAN BAKE BREAD

Dear Dame Durden:—I am afraid
I am tardy to-day, and I did so want
to be there in time to answer to my
name with the other girls. It was a
good monitor that made you think of
giving us a day to ourselves. Just the
young girls alone ought to make a good
day, because they haven't the cares
of families and the worry mothers have.
I wonder if it will be all right if I
tell how I make bread? It's a good
thing to know, don't you think?

First of all, I make a good yeast with
potatoes (using the water they were
boiled in when I can) by adding a dis-
solved yeast cake and about three
tablespoonsful of sugar to about a quart
of the other mixture, mashed potatoes
and water. This I let stand all day
or over night, as the case may be, and
by then it is lovely if I keep it just at
the right temperature.

Another start is made by putting a
pint of lukewarm water in a vessel and
adding enough flour to make it spongy.
To this must be added a teacup of yeast
or a dissolved yeast cake and about the
same amount of sugar as with yeast.
This I let stand over night or seven or
eight hours in the day time in a warm
but by no means hot place. When it
rises to about double the amount it is
ready for use.

I mix very large batches of bread,
but we are such breadeaters. If I use
sponge, I use it all, but if I use yeast I
use a little over a pint at a mixing.
The yeast seems stronger than the
sponge but I have good bread with
either. To the quantity of yeast or
sponge mentioned above, I use a little
more than three pints of lukewarm
water or milk and six quarts of warm
well sifted flour, a handful of salt and
mix thoroughly. I have a regular bread

mixer so I get the big, strong men or
boys to turn it for me when I can. If
this is too dry add a very little more
warm water, and if too wet, just enough
flour to make it desirable to handle
without flow when moulding, and set
over night to rise. When it is up well
I turn it down again and in a few min-
utes I put it on the breadboard and
cut into the desired sized loaves, using
no flour to handle. Then I set the
loaves to come up again for about
twenty to thirty minutes in a warm
place. Then I bake if for a little over
an hour in a hot oven, spreading a little
butter or cream over the tops of the
loaves before baking. The result is
beautiful white bread with golden tops.
It doesn't last long, so I know they like
it. I handle the dough the least I can.
Well, I must close, hoping the ex-
perienced mothers won't make me feel
too uncomfortable, for I just turned
seventeen last month.

A PRAIRIE MAIDEN.

(I think you are fine and brave to
undertake such heavy responsibilities

women writers and all Canadians ex-
cept George Eliot, and I think it does
girls good and makes them more ready
for the full citizenship they are going
to have before many years, to know
what the women of our own land can do.
I'm apt to forget space when I start
talking about books and this reply has
spun out to greater length than your
letter.—D.D.)

"She was good as she was fair,
None—none on earth above her!
As pure in thought as angels are;
To know her was to love her."

AN AUTO TRIP

Dear Dame Durden:—I noticed in
the April 27th number that you were
asking all your girl members to write,
so as I am writing letters to-day, I will
drop you a few lines. I was very much
pleased to see my first letter in print.

I have also gained some nice cor-
respondents through your much-valued
paper, but have not yet received the
poem, "The Silver Cross." Would Dame



ON THE SHORES OF DAUPHIN LAKE

and do it cheerfully. Plenty of girls
would do as you have done but would
make the sacrifice complainingly and
grudgingly. But a good mother is
worth a lot of cheerful giving up, isn't
she? There were very few mistakes to
be corrected in your letter. Come when-
ever you can.—D.D.)

"To thine ownself be true,
And it must follow as the night the day
Thou canst not then be false to any
man."

A BOOK LOVER

Dear Dame Durden:—I see that you
are inviting all the young girls to have
a reunion, so I will try and answer the
roll-call, although I hope the older mem-
bers will not feel offended, as I do like
to read their good, helpful letters.

I suppose most of you have your gar-
dens in. We have most of ours in;
some of it is up, but it is pretty cold
for it to do very well.

I have read a great many books. I
do enjoy reading good books. I would
like to read the rest of the Elsie books.
They are such good ones. The Pansy
Series are fine too. Don't you think
so? I would like to see more of the
older members writing, too, but I sup-
pose they are all busy nowadays.

A WESTERN MAIDEN.
(You will weary of the Elsie and
Pansy books as you grow a little older.
Try, for a change of mental diet, "Sow-
ing Seeds in Danny" and "The Second
Chance," by Nellie L. McClung, "Car-
michael," by Anson North, "Anne of
Green Gables," Anne of Avonlea" and
"Kilmerly of the Orchard," by L. M.
Montgomery, and the books on Western
Canada, by Agnes Laut and Agnes
Deans Cameron. Try some of George
Eliot's books, too. These are all

Durden please be kind enough to send
me a copy? I would be very thankful.

Last week we took a trip up West
in our auto and we had a splendid time.
We went as far as Tilston, passing Find-
lay, Pipestone and Reston.

I do not think I mentioned in my
last letter that my father keeps a large
herd of Shetland ponies. We already
have six little colts, and they are the
cutest things imaginable.

I will close with best wishes to the
Ingle Nook. I am

QUEEN MAB.

(Am sending The Silver Cross, for
which you sent stamped envelope and
hope it will reach you safely.—D.D.)

"She knows it not: O, if she knew it,
To know her beauty might half undo
it."

TWO DISCOURAGING YEARS

Dear Dame Durden:—This is my
first letter to your charmed Nook. I
have had quite a few good hints from
the corner, and to read the letters is
the first thing I do as soon as I receive
the paper. I read Octavia Allen's
letter about dress. No doubt Mrs.
Allen's friend has little or nothing to
do but keep dressed up in white or else
she has servants to do the washing.
For my part, in the morning I wear a
flannelette waist with an old black
skirt; while in the afternoon I wear
a white waist. I think it saves labor,
and the other folks of the family can
stand seeing you like that, because they
know of the dirty work you have to do.

I am beginning to get used to farming
now, though I detested it at first, and
no wonder, for when we came West we
brought a good-sized fortune and lost
it all by staking our money on a farm.
We had the first year's crop frozen and

the second hailed out and expenses ex-
tremely high. We had a crop last year
and it encouraged us to stay a while
longer.

We came from Essex county, Ont-
ario. Are there any of the members
from there? The prairie seemed a
bit devastated after living in such a
beautiful place.

LENORA.

(I only know of one member who came
from Essex county, and as she hasn't
written for some time perhaps your en-
quiry will set her to thinking about us.
I taught in Essex county for three
years myself, and keep very pleasant
and friendly recollections of those
years. I was in a little village on the
M. C. R. called Ruscom. Do you
know it at all? You would miss the
orchards and the woods. Come again,
and bring your friend along next time.
—D. D.)

"And Enid brought sweet cakes to make
them cheer,

And then, because their hall must also
serve

For kitchen, boil'd the flesh, and spread
the board,

And stood behind and waited on the
three.

And seeing her so sweet and service-
able,

Geraint had longing in him evermore
To stoop and kiss the tender little
thumb,

That crosst the trencher as she laid it
down."

WHAT WILL TAKE OUT BUTTER COLOR?

Dear Dame Durden:—As I have been
a silent reader of the Ingle Nook for
nearly two years and enjoy it fine, I
now come for help. Could Dame Dur-
den or any of the members of the Nook
tell me how to remove butter color from
white linen?

How many of the Nooks have their
gardens all in? I have mine nearly all
in, except some of the real tender ones
such as the vines. Gardening isn't
a very pleasant work this spring, as it
is such windy weather. The dust flies
so.

I have learned a lot on turkey-raising
in the Nook the last few weeks. This
is my first year with turkeys. I think
I had better draw to a close as my
letter is getting long. I am sending a
recipe for dressing lettuce, thinking per-
haps someone would like it: One-third
cup vinegar, two-thirds cup water, one-
half cup sugar, one and one-half tea-
spoon mustard. Boil together; take
off and let cool, then beat up two eggs
and add when cold. Stir over fire till
it thickens and when cold add sweet
cream to desired thickness.

A FARMER'S DAUGHTER.

"Fair was she to behold, that maiden of
seventeen summers.

Black were her eyes as the berry that
grows on the thorn by the way-
side.

Black, yet how softly they gleamed
beneath the brown shade of her
tresses.

Sweet was her breath as the breath of
kine when they feed in the
meadows."

INTERESTED IN EVERYTHING

Dear Dame Durden:—I'm sure, Dame
Durden, that you will not mind if my
letter isn't very lengthy this time. I
think I may excuse myself on the plea
of having written you a pretty fair-
sized letter the last time, and you know
I believe girls can run out of chat once
in a while, too. I have no fear that
our page this week will lack any chat,
for once a lot of girls get together they
can chat pretty freely on anything that
interests them.

Dame Durden, I don't know on which
subject I could write I'm sure. I'm
interested in so many things, that I
couldn't write on all of them to-day,
so will leave that to the rest of our girls
to discuss their hobbies. Really I
think we girls have so many hobbies that
it will be quite interesting to-day to
read our page. We have a lot of girl
members, too, and I'm sure we all find
the Ingle Nook very helpful.

This is such a lovely bright morning,

power"

"Her voice was ever soft, gentle and low—an excellent thing in woman"

the little birds are fairly bursting their throats in the trees. Can one feel anything but happy on such a morn? God's presence seems very near, when we look about us and behold the beauties of nature he has so generously bestowed upon us. How thankful we ought to be; it might always be thanksgiving day in our hearts.

I might say a word about our flower gardens, girls. I'm sure that is something every girl will find interesting. I have my seeds planted and am daily to be found searching for a peeping plant. I haven't much patience I'm afraid, but how I do love the flowers. Not every girl can have a garden, but every girl may have flowers. We see them blossoming everywhere by our roadsides in the fields, although probably most of our Manitoba fields are so well tilled as to forbid the flowers there. Yet there are plenty elsewhere we may have them for the plucking. What a nice old world it is!

I think this is all for this time, Dame Durden, hoping the girls will respond to your kind request, I am ever, sincerely yours,

SEVENTEEN.

(It was good of you to write a second letter so promptly in response to my call, but we're sure you wouldn't want to stay out when the girls were rallying. How do you like the look of the page today?—D. D.)

AN OFFER TO A SINGING GIRL

My Dear Dame Durden:—What a number of girls belong to the Ingle Nook! I was indeed surprised to find the list so long. We must be a large family, all told.

Here it is the nineteenth of the month and you requested all letters to be in by the twenty-first—as usual, I am late. Mother says that procrastination is my besetting sin!

Would one of the girls, who is fond of music, care for some songs? I have several, of the popular music of the-day kind, that I should be glad to send to someone. They are sent to me through a music club, and, sad to relate, I do not sing, so they are lying here unused. I am very fond of music, but have neglected mine fearfully—since coming West. The people, who come to our house, do not care for the class of music I was taught, and I have gradually lost all but two or three of the lightest pieces. It is a pity, I know, and I make brave resolutions to pick it up again, but some way I never do it. This winter, while away amongst people who knew and cared for good music I felt greatly ashamed, for my lack of practice was very evident and I came home filled with a wild desire to retrieve myself. So far, however, I have not been able to settle down to scales and finger exercises, but mean to before I go abroad again, that when I am asked to play I may sit down at the piano with confidence.

Every letter, but the first, that I have written you, has been prefaced with an apology, dear Dame Durden, and, although I owe you one, I mean to make this letter conspicuous by its absence. I am indebted to you for your many helpful suggestions regarding my winter duds, and hope you will forgive this very careless chatterer.

MADELEINE.

HELPFUL HEALTH HINTS

Dear Dame Durden and Friends of the Ingle Nook. In answer to the roll-call:—A good thing for weak, or inflamed eyes is boracic acid, dissolved in water, a teaspoonful or more to a small cup of soft water. Put a drop or two in the eye and bathe often with it. Harlem oil is also very good for weak eyes, a little in the eye at bed time. By continuing its use for some time it strengthens the eye.

A good plan for hot fomentations is to have several thicknesses of flannel, wring out of hot water, and put in a steamer. Have two, one warming while the other is in use. They may be used as hot as needed without burning the hands with the wringing. When stopping the use of them have ready a woollen cloth, dry and real hot from the oven, to put on the parts. It feels so good.

For neuralgia and rheumatism, bathe

in very hot water, and rub with oil of wintergreen and alcohol equal parts. Keep warm.

Ingrowing toe nails may be relieved by scraping the nail all along the middle until it is very thin. A better cure is to pour a little boiling tallow from a spoon on the middle of the nail. The latter I did for a friend some years ago and it has never troubled since.

When children's stockings get very thin in the knee, cut off the worn part, put in needles and knit a piece upwards. It is good, too, when the legs grow too short, as they can easily be made a few inches longer.

A good way to salt a small cheese for home use, after it is pressed, is to rub

hard; one generally has a good-sized yard in the country.

Well, I hope to be able to send something next time that will help.

MODEST MEMBER.

(Lack of space is the chief reason for not putting music in our paper. To be any use the notes and print would need to be of good size and only very short selections could be got on a page. But have you noticed the music we are offering as premiums? The offers appear in March 9th, 1910, page 387, and March 23rd, 1910, page 471. A new subscriber or two would provide you with a supply of good music with very little trouble on your part. We will be glad to have you come again.—D.D.)



A BEAUTY SPOT NEAR HIGH RIVER, ALTA.

the salt on outside for a few times when turning it.

Corned beef sliced and soaked for a day or two in skim-milk, is very good if rolled in flour before frying.

With good wishes for one and all.

Dear Dame Durden, please make this shorter, if you wish, or leave it out for another time. I did not mean to say so much.

NORAH KILLEEN.

(Not a bit too long, my dear, for it is all good.—D.D.)

A MUSIC LOVER!

Dear Dame Durden and all the Chatterers:—Seeing such a cordial invitation for all the youngest of those who enjoy the Ingle Nook, I thought I would send you a few words. I enjoy reading the letters from the other chatterers immensely. I am sure that page is a great help to all who read it. I wonder how many of our members are interested in music. Are you, Dame Durden? I could listen for hours to a good player on a piano or almost any musical instrument. Music seems to lift one's thoughts above this earth. It seems to bring out a person's inner soul; the best of him or her is exposed. Then think when playing, how one can express one's feelings, transfer them to the notes and enjoy the company and solace they provide. I can only play the piano a little, but would love to be able to play real good. My mother used to be a music teacher, and I love to listen to her playing when we go and visit uncle out in the country. You see we have not got one at home yet, or of course it is likely I could have been a better player. Dame Durden, don't you think it would be delightful to have some of our good old songs printed with the music in our corner? I think some kind of music ought to be in every home. Don't you think this would help to do so, if space could be made? I always think a home is so much happier when there is music in it, and I feel sure most of the chatterers agree with me.

I have lived on the farm about half my lifetime, so have some idea of country life as well as city, and I believe country life suits me best. I like to see the flowers and birds so well.

Could any of the chatterers help me in fixing a flower bed? I hardly know what would be suitable for a small front yard. In town it seems to me it is so

DECLINING PRISCILLA

Dear Dame Durden and Girls:—Very exclusive, am I not? But, indeed, I do not mean to be, for we always consider our mothers the very dearest of girls, don't we?

What a nice idea of Dame Durden's to ask us all in to-day—and how pleased we are to be here, aren't we, girls?

I suppose most of you girls are, like myself on "the dear old farm," at "home sweet home."

Do you ever sigh for a larger sphere of usefulness, girls, where you might really feel you were advancing in other lines beside "the daily round" of housework? Of course it is splendid work helping to make home a real happy and "homey" place for father and the boys, and it is a high calling, too, if looked at in the right way. It is so full of responsibilities and opportunities. No girl need ever feel that her life does not count for much just at home; for the influence of her life—lived well—goes echoing goodness down "the corridors of time."

But, dear me, I have almost frightened myself. I must pause to get my breath, please!

I suppose most of the girls are interested in music! That happens to be my chief hobby or delight. Little did I think when I was young and foolish, rather despising and neglecting my practice, what a wonderful comfort and help it was going to be to me, and others too—in these my "declining" days.

I thoroughly agree with Dame Durden about using one's music in a practical way. This seems to be greatly needed in the West. Mendelssohn is one of my favorite composers. There is such a depth of feeling in those grand old masters' work, isn't there?

I had hoped to try my intermediate examination this summer, but—dishes and things positively refused to allow of such a thing.

Reading is another one of the many blessings and comforts we have, isn't it? Books are so reasonable nowadays, too, that we can get lots of splendid "silent friends" at a very moderate price.

I like Dickens' books very much when I get nicely into them. I think Dame Durden's nom de plume must come from his Bleak House. Am I

right, Dame Durden? Some of Ralph Connor's books are splendid, I think. I simply love (father would look over his glasses rather sternly at me now) "The Sky Pilot." We had the part about about Gwen read at our Christian Endeavor meeting one week, and it seemed to be greatly enjoyed.

Emerson's essays are fine, too. There is lots of good thinking matter in them, which one enjoys while washing dishes, making beds and doing all those multitudinous little things which can almost be done without thinking of them. Lately I have enjoyed J. R. Miller's little book on "Girls: Faults and Ideals." What high ideals he sets before us! It makes one almost tremble at their responsibility. But it certainly helps you wonderfully to overcome your faults.

I fear I am selfishly taking too much room, and methinks I hear Dame Durden say, "Time's up," so farewell to you all.

PRISCILLA.

(You and Western Maiden and Modest Member seem to have many tastes in common. Yes, "Dame Durden" came from Bleak House. Have you read "A Tale of Two Cities" and "Little Dorritt" yet? They are my Dickens' favorites. Nice girl to write such a plump letter!—D.D.)

THE LITTLE ELF

I met a little Elf-man, once,
Down where the lilies blow.
I asked him why he was so small
And why he didn't grow.

He slightly frowned, and with his eye
He looked me through and through.
"I'm quite as big for me," said he.
"As you are big for you."

—JOHN KENDRICK BANGS.

PRUNE AND PECAN NUT SALAD.

Soak the prunes over night in cold water; let cook on the back of the range until tender (and no longer), when the water should be pretty thoroughly evaporated. When cold cut from the stones in neat lengthwise pieces. Cut the nuts in slices, lengthwise. Mix the oil, lemon juice and salt and pour over the prunes and nuts. Mix and turn upon the lettuce. Serve with roast meats or with bread and butter. Ordinary salad dressing may be used.

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TALKING IN SCHOOL

Dear Cousin Dorothy:—May I enter your club a second time? I wrote quite a while ago and did not receive any button, so I hope I can earn one this time. The hot weather has come again and crops are looking fine. I go to school every day. The teacher has a card hanging on the wall, which she uses for the ones who talk. She gives the ones who do not talk all week a red seal and when the card is filled we get a prize. Our teacher reads to us quite a few books. She reads Alger's; some of them are "The Young Adventurer," "Facing the World," "Paul the Peddler" and "In a New World."

I will close with a riddle: Why is a horse never hungry on a journey?
Ans.—Because it always has a bit in its mouth.

MAGGIE PATON.

FROM FRECKLE FACE

Dear Cousin Dorothy:—Has this club any W. P. B.? I hope not, for I am afraid this letter will reach it if you have one. This is my first letter to the club. I live about one mile from the town of Ponoka, and like it in the country. I go to school in town and am in the fourth grade. I am very fond of reading and my favorite author is M. J. Holmes. I have read nearly all her books. I am the youngest in our family and have three sisters and one brother beside myself. Two of my sisters are married and my other sister is a school teacher. I have a dog called Mike for a pet and my brother has a collie called Roger. I am thirteen years old and will correspond with any of the paposes about my own age. Wishing the club every success.

FRECKLE FACE.

P.S.—How do you admire my pen name?—F. F.

(You and Fizzle-Top should be good friends, according to your pen name. You didn't put full name on your letter, so if anyone should want to correspond I could not tell them where to write.—C. D.)

WREN KEEPS HER EYES OPEN

Dear Cousin Dorothy:—Here I am again! Aren't you glad spring has come? I have found crocuses, buttercups and a strawberry flower. I think nearly all the birds are back. I have seen robins, bluebirds, sparrows, blackbirds, flickers and crows. I saw another little bird, but I don't know what it is. It is red on half its breast and half its back and its head. The rest was a sort of gray color.

I am very fond of books and I have read a few nice ones. I read Little Men, Little Women, Masterman Ready, The Wide, Wide World, Tom Sawyer, Anne of Green Gables and part of Uncle Tom's Cabin. I saw that you advised many members to read Anne of Green Gables. I enjoyed it very much; it is taken so much from natural life.

I am going to school and my studies are literature, arithmetic, composition, grammar, geography and history. My favorite studies are literature and arithmetic. There are about 22 pupils going to our school.

There have been a great many fires around here this spring. The prairies are very dry and they don't be so many fires. I saw a fire burn out the fire burn out the prairie. In the summer we pick up a lot of berries, raspberries, strawberries, and saskas.

WREN KEEPS HER EYES OPEN.

LIVING IN EDEN

Dear Cousin Dorothy:—I am very interested in your club, although my father has not taken THE FARMER'S ADVOCATE very long. I live half a mile from a little village on the eastern side of the Riding Mountains. The village is called Eden. There are three stores, two elevators, a boarding house and a livery stable, two churches, a Methodist and a Presbyterian. There are two flour and feed stables, a blacksmith shop, and there are some residences.

EDEN ROSE.

A MUSICAL FAMILY

Dear Cousin Dorothy:—I enjoy reading the letters of the Wigwam very much, and would like to become a member of your charming club. We age limit.—C. D.)



THE FIRST WARM DAY.

spring flower and put them in a can? I do every spring and I have had buttercups blooming until June. The trees are out in leaf and the country looks beautiful.

Are any of the boys allowed to write to the Wigwam now; or is the Boys' Club only for boys? I think it would be a splendid plan if Cousin Dorothy would have certain topics each month to write upon. I think the "Flowers of May" would make a good topic for a letter. There are such a variety of flowers come out in that month. Don't you?

I see that a number of the members tell about fires. I like reading their letters because I think that it is an interesting subject. I will tell you about a fire we had here this spring. On the quarter-section west of us there is a large bush. The owner wanted it burnt so he plowed a guard between our place and his. When he lit the fire the wind began to blow harder and it crossed the guard into our bush. The boys had to go and plow three furrows to stop it from burning the whole bush. On the third round the fire was right by them and they nearly suffocated with smoke. It burnt about fifty acres of our land.

Well, I must leave room for other letters so I will close. I am sending you a stamp for a button because I wish to become a member of this happy little wigwam. Wishing the club every success.

CANARY.

(The Boys' Club is just for the bigger boys. The big girls can pass on to the Ingle Nook, but there was no place for the boys who had passed the Wigwam We age limit.—C. D.)

A WOODED DISTRICT

Dear Cousin Dorothy:—I have not written to your paper for a long time, but I thought I would write again today. My two brothers and my sister and I go to Hazeldean school. It is a country school and holds about thirty scholars. We have a lady teacher, her name is Miss K—, from Manitoba. We walk two miles to it and our neighbors' boys walk with us. When the snow started to melt it was very hard walking for we could hardly get across the numerous streams. We live about eight miles from Turtle Mountain. In the winter the people go and get wood there. I was in three times last winter for the first time and I liked it fine. Altogether we got out twenty loads of wood and there is a man who travels round the country sawing wood. He has a little gasoline engine and he runs a saw with it, so he sawed ours. We have it all split now, too. Well, as I think my letter is getting long I will close. I hope to receive a button and see my letter in print. I am sending a stamped envelope enclosed.

Wishing the club every success.
Man. BRONCHO BUSTER (11).

OUR OLD FRIEND ORIOLE

Dear Cousin Dorothy:—How long is it since I wrote last? Nearly a year, isn't it?

At the time I wrote there were eleven going to school at Dingle Dell, but two families moved away soon after, leaving only four. Then one little girl took sick and she and her sister were out of school for two or three weeks, so our school dwindled down to two pupils, a boy in standard four and myself, then in the entrance class. I believe that "Canary" mentioned in one of her letters that she and I were classmates. Well, we were both successful at our examinations in the summer, but our school was not opened after holidays and we both went to town to school. About the first of March I left school for the term so I here am at home again. I am longing for the summer to pass, however, so that I can get back to school. We have a splendid school and a splendid teacher so that our opportunities are good.

Our first hatch in the incubator came out on the 28th of April. It is very interesting to watch them coming out of their shells. Besides these several hens have hatched and two hens brought out six fine little turkeys a piece. We still have several settings of turkey eggs, some hen eggs, and another hatch in the incubator to come then think we will stop for this year, as any chickens brought out later would not be very much use.

Gladys Ely thinks the smaller ones would like it better if the club would just stay with the letters, because the little ones could not write stories. I agree with her that we should not write stories to the exclusion of letters, for that would be very unfair, but don't you think that the little ones enjoy reading the stories? Of course, there are stories that the little ones could not understand, but surely none that we can write would come under that head.

Gladiolus says that if the early spring was due to Halley's comet we would not mind having a comet every year. If this disagreeable, wintry weather is owing to the comet I almost think I would rather have a later spring. By the way, has anyone seen the comet yet? A week from yesterday is the day we are to pass through the tail. Surely we should see it by this time. Dear me! How long this letter is getting! I must really close for this time and get at algebra (I am doing a little algebra at home).

With best wishes to yourself and all the Wigs. Your old friend.

ORIOLE (13).
(We have some splendid letters in during the last few days. I think stopping them for two months was a good idea, for the letters have been far more interesting since our rest. Glad to have you and Canary back again.—C. D.)

A SHARP MEMBER

Dear Cousin Dorothy:—My father has taken THE FARMER'S ADVOCATE for some time and I like to read the letters very much. This is my first letter to the club and I hope to receive a button. We live in town in the winter and on the farm in the summer. We have ten horses, three colts, thirty cattle, one pig, three dogs and one cat. I like to read the Henty books best. Have any of the Wigs read "The Young Midshipman"? It is a good book.

Alta.

JACK KNIFE.

A PET COLT

Dear Cousin Dorothy:—I have written to your club before but you did not have the buttons then. I will tell you about my pet. She is a little sorrel colt and her name is Flora. We were carrying oats from the granary to the barn to-day and she was following us. When we would let her have a bite she would take two or three big mouthfuls. We have an old horse who is about 26 years old. I hope to see this in print as I saw my other one in the paper. I read the letters in the Wigwam and think that they are very nice.

Man.

LYDIA CRYDERMAN.

SIXTY-FIVE HENS

Dear Cousin Dorothy:—I wrote once before but I guess it went into the wastebasket, but I will try again. My father has taken THE FARMER'S ADVOCATE for two years and I always look for the Wigs' page. I have four sisters and two brothers. I am nine years old. My two elder sisters and I go to school. Our teacher's name is Miss S—. We have five cows milking. We have three dogs and two cats. We have sixty-five hens.

Sask.

ARTHUR E. DODGE.

TRICT

I have not for a long time, write again to my sister and my school. It is about thirty days from Manitowish to it and our school. When it was very hard to get the streams. We from Turtle Lake the people I was in three first time and her we got out and there is a d the country a little gasoline w with it, so he t all split now, ay letter is get- hope to receive letter in print. d envelope en

ry success. BUSTER (11).

ORIOLE

How long is Nearly a year,

ere were eleven le Dell, but two on after, leaving little girl took ster were out of e weeks, so our to two pupils, and myself, then

I believe that in one of her were classmates. ccessful at our mmer, but our l after holidays town to school. ch I left school n at home again. summer to pass, an get back to end school and that our oppor-

incubator came il. It is very in coming out of ese several hens ens brought out piece. We still of turkey eggs, ther hatch in the n think we will is any chickens id not be very

the smaller ones the club would ers, because the write stories. I should not write n of letters, for unfair, but don't ittle ones enjoy Of course, there le ones could not y none that we under that head. f the early spring net we would not every year. If ntry weather is l almost think I later spring. By seen the comet yesterday is the through the tail. it by this time. ng this letter is ly close for this ra (I am doing a

yourself and all friend. ORIOLE (13). blendid letters in days. I think o months was a ers have been far e our rest. Glad try back again.



THE BOYS' CLUB

A YOUNG COWPUNCHER

Dear Sir:—This is my first letter to the Boys' Club and I hope it will be a success. I live on a ranch eight miles west of town. My father owns 2,240 acres of land. I have ten horses of my own. I have done only a little trapping. I have a Marlin rifle and a 12 shotgun, a 22 rifle, 22 cal. and 32 cal. revolver, and twelve traps. I do a lot of cowpunching. My father has a ranch in the foothills, and every fall I go and gather the beef cows and elks. I break my own horses. I can rope a horse first time. I have a stetson hat, pair of chaps, two pair of spurs, a saddle, two lariats robes, a quirt and a pair of high-heeled riding boots.

I ride to school about two miles away. I love to play hockey, baseball and football. Last winter I played for a junior hockey team.

COWBOY BILL (14).

(When you write again explain some of the ranching terms for the benefit of the boys who live in the wheat country and do not know much about the handling of large bunches of cattle or horses. For instance, what do you mean exactly by cowpunching, roping a horse, stetson hats, lariats and quirts? Glad to put you on our list of members.—Ed.)

ANOTHER WAY MAKE A KITE

Dear Editor:—Here I am back again! THE FARMER'S ADVOCATE is the first paper I look for and the first thing I read in it is the Boys' Club. I see John Davidson wants to know how to make a kite. Well, I tried a good many times before I could get one to fly. There is a piece "How to Make a Kite" in another paper, but I might as well give it here, as everybody does not take that paper.

Procure a nice straight piece of sound cedar or pine. In fact, light wood of any kind will fill the purpose, providing it is straight and free from knots. With a sharp knife cut it to a length of four feet, making it about three-quarters of an inch in width, and one-quarter of an inch thick. With a rule mark off point one foot, four inches from the end. Prepare another strid similar to this one, making it only two feet, eight inches in length. With your rule find the middle point of this stick and mark it plainly. Now take the two sticks and cross them at right angles firmly binding them together at the two points marked, with strong cord. When this is done you should have a perfect cross. Next notch the four ends of the stick. It is as well when notching the ends to cut off the corners so that when you are putting on the paper it won't tear.

At the top tie one end of a fairly long cord and passing over the notched top bring it down to the right arm of the cross. Draw it tightly and tie it. In the same way pass the cord completely round the cross, making it fast and taking care not to pull the cross out of shape. This is the frame work of your kite. Next spread a large sheet of paper on the floor and placing the framework on it, cut your paper much as a dressmaker cuts cloth to a pattern, leaving a margin of about two inches all around. Fold this margin in over the string all round and paste it down solidly. Your kite is now complete; it will be stronger with a double covering of paper.

But your kite will not fly without a "tail." Tear some old newspapers up into pieces about six inches square; fasten these about four inches apart to a long string until the tail is about twice as long as the kite. Tie one end of the tail to the bottom of the kite. Take a ball of stout twine, pierce the paper cover at a point opposite where the sticks cross, and sticking the end of the twine through, tie it firmly around

sticks. Your kite is now ready; bring it out when the wind is steady but not too strong and you will soon learn how it must be handled in order to make it fly. If it "dives" put a longer tail on. Do not use too heavy twine to fly it. I used store cotton—five, ten or fifteen cents worth of this will be plenty. It happened that I could not get paste when I made my last kite, which was the only one I got to fly, so I took a darning needle and some yarn. The paper does not tear near so easy this way. I will have to close now, wishing to hear how anyone who tries to make a kite succeeds.

A SASKATCHEWAN COYOTE.

SOLVING THE CALF PROBLEM

Dear Editor and Boys:—I have been an interested reader of the Boys' Club ever since it was started. I have some questions to ask. Here



MUSIC HATH CHARMS AGAINST LONELINESS.

they are: What makes cattle and sheep wander so much about the fields in spring? Where do king-birds build their nests?

One of our members asked lately if calves could be fed without fingers. Now this is an experiment we tried this spring, as they bite so. It takes three to handle one. Put the calf in a corner. One holds the pail, one the calf in the corner, and the other holds the calf's head in the pail without fingers, holding its head so that it can't get air and it will soon take a mouthful and then some more. Do not hold its head in long enough to choke it. I hope this person will find this useful.

JOHNNY RUNNING-BULL.

RURAL TELEPHONE

Dear Editor and Boys:—I live on a farm seven miles from Moosomin. I go to school in the country and am in the third grade. We live in town in the winter. I skate and play hockey. I have a dog that will pull me on the sleigh and his name is Collie.

We have three-quarters of a section that we farm and a quarter fenced for pasture. We have twenty horses, twenty cattle, ten pigs, seven cats, fourteen chickens. I have three brothers and two sisters, one who is attending the collegiate in town. We have the rural telephone, which is very handy. It has been raining and snowing to-day. I wish it had been clear so I could have seen Halley's comet.

HARRY WILDE.

A PRAIRIE FIRE

Editor Boys' Club:—My father has taken THE FARMER'S ADVOCATE for two years and thinks it is a very nice paper. I go to school every day and have lots of fun with the other boys. We have had very nice weather lately, and hope it will continue so, although it is getting pretty dry on account of it being too early to rain. There was quite a bad

prairie fire close by our place. It burnt over about three miles square. One man lost his horses, house and implements, and my brother and my father fought it until two o'clock in the morning. But they had to backfire to put it out.

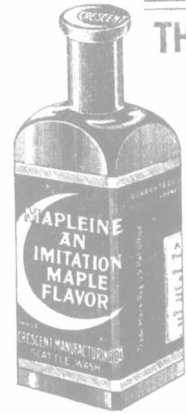
HAROLD WALKER (15).

TRADE NOTES.

HAIL AND CYCLONE INSURANCE

Many districts of the West have concluded that it pays to carry a reasonable hail insurance each year. Though the total damage is comparatively small the uncertainty of absolute freedom from damage has caused farmers to deem it expedient to insure with companies recognized as reliable.

This increased demand for insurance brings new companies into the field. Among the newcomers of 1910 is the Des Moines Mutual Hail and Cyclone Insurance Association. This company has been doing a flourishing business for twelve years. An annual increase in policies issued is the best tribute to fair dealing. The company operates in Iowa, South Dakota, Wyoming, Idaho and other states of the American Union. This season, as indicated in an advertisement on another page, business will be done in Manitoba under a \$10,000 guarantee. Those interested



THE NEW FLAVOR MAPLEINE

A flavor used the same as lemon or vanilla. By dissolving granulated sugar in water and adding Mapleine, a delicious syrup is made and a syrup better than maple. Mapleine is sold by grocers. If not send 50c. for 2 oz. bottle and recipe book. Crescent Mfg. Co., Seattle, Wn.

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Questions & Answers**GENERAL**

Questions of general interest to farmers are answered through our columns without charge to bona-fide subscribers. Details must be clearly stated as briefly as possible, only one side of the paper being written on. Full name and address of the enquirer must accompany each query as an evidence of good faith but not necessarily for publication. When a reply is required by mail one dollar (\$1.00) must be enclosed.

JUDGMENT ON PROPERTY

C bought one-quarter of land from A. The land is registered in the name of C and is subject to the following: Execution to G, mortgage to M, and payment to F. C claims that he will not pay these claims and that he will let the land foreclose. Have we the right to sue him for our claim if the land does not pay them or our mortgage, or could I remove my judgment on some of his property?—T. F. K.

Ans.—If you have a judgment it would be good against any property belonging to C, and you need not wait to make your money out of the land. You should consult a solicitor as to enforcing your claim.

ALFALFA INOCULATION

Give me information as to what is the best method of inoculating ground for alfalfa, and where can the material be procured?—A. B.

Ans.—As has been announced in several issues this spring the most satisfactory method of inoculating for alfalfa is to procure seed from a field in which alfalfa has been grown. Apply at the rate of 100 pounds per acre. The soil can be got at the experimental

farms at Brandon, Man.; Indian Head, Sask., or Lethbridge, Alta., the only cost being for freight. A culture put up in bottles also has been used. The Ontario Agricultural College, Guelph, supplied this in the past at a nominal charge of 25 cents. Full directions for use accompany every bottle.

DISPOSING OF STUBBLE

Which is it most profitable to burn stubble or turn it under with a plow?—L. C. N.

Ans.—Like many other questions this one must be qualified according to the nature of the soil. Generally speaking, the most profitable plan is to plow down all stubble, whether the plowing is done fall or spring. However, in cases where there is already an abundance of fibre or humus the plowing under of stubble might be objectionable. In loose soils, too, it is not advisable to turn under stubble in the spring. The ideal practice on the average soil is to plow down stubble in the fall.

RAPE ON FALLOW

I have about thirty acres summer-fallow not very bad with wild oats, but I would like to pasture it. What would be the best, rape or barley? When should I plow? How much per acre should I sow? Can I sow rape with a drill. I have sowed it broadcast in the Old Country. I was thinking about plowing two days at a time, harrowing as I go, and then sowing it so that it will not all come at once. —P. S.

Ans.—As a late summer and fall pasture for cattle, sheep and hogs, rape is one of the best. It can be sown in drills or broadcast at the rate of four

to six pounds per acre. Some sow it with the grass seeder attachment; others close some of the holes in the grain box; others again mix it with ground barley while a few sow by hand. Experiments indicate heaviest cropping from drill sowing, but on summer-fallow about four or five pounds per acre broadcast with perhaps some barley or oats mixed should give excellent results, if the seed is put in when the soil is moist and in good condition.

ENGINEERING BOOKS

What books are suitable for giving a training in engineering to equip a person to operate a steam engine successfully, and to enable him to pass Alberta requirements for second-class engineers?—T. W. D.

Ans.—"Farm Engines and How to Run Them," by Stevenson, is one of the best books on this subject. It can be secured through THE FARMER'S ADVOCATE, for \$1.10, postage prepaid. You had better consult the Alberta department of agriculture, Edmonton, as to requirements of the engineers' certificate.

PROTECTION FROM LIGHTNING

Do lightning protectors on buildings really protect? Can one erect a cheap and efficient lightning protector himself? Would an iron post, say every hundred yards along a wire fence, run lightning to the ground and thus protect stock that might be near the fence during a storm?—J. H.

Ans.—Yes, lightning protectors properly put on are a protection against lightning damage. It is possible for a farmer to put up his own lightning rods.

Instead of an iron post every hundred yards along a wire fence it is better to place a ground wire. This wire would stand perpendicular from the top wire and extend into the soil to the moisture line or below. If it extends above the wire of the fence so much the better. This would serve as a fair protection to stock in the immediate vicinity of the fence. However, if they were a short distance away and on higher ground or under a tree they would still be in danger.

ALFALFA CULTURE

Do you know of any business handling alfalfa culture in liquid form for inoculation of seed?—R. K.

Ans.—We are not aware of any firm handling alfalfa culture in liquid form. The Agricultural College at Guelph, Ont., prepares a gelatinous culture in a bottle.

SCHOOL LAND AT AUCTION

What are the terms of school land, when buying it at an auction sale?—K. T.

Ans.—One-tenth down and the balance in nine equal annual instalments with interest at 5% per annum.

HARRY LAUDER'S SONGS

Where can I get Harry Lauder's songs and what is the price?—Reader.

Ans.—Almost any music store carries these songs. A book comprising eighteen of Lauder's songs sells at 35 cents. Songs on separate sheets cost 25 cents each.

TESTING METALS

Where can I get a few stones that are supposed to be mixed with metal examined and tested?—A. N.

Ans.—Send them to School of Mining, Kingston, Ont.

LIABLE FOR FIRE DAMAGE

A neighbor's hired man started a fire which got away, burned my haystack, stable and granary. The place is managed by a foreman, and he says he told the man not to put out any fire until they had plowed a guard. Have I a claim against his employer?—T. E.

Ans.—From this statement of the case it would seem that your neighbor is liable for the damage done.

OUTSTANDING ACCOUNTS

I have a number of accounts and notes standing in Manitoba. I gave them to a lawyer to collect last year, with instructions to sue and secure judgment and garnishee their grain at threshing time. I have not set cured any money from him yet. Can a person be sued and judgment secured; then a garnishee put in against his grain? How long does a judgment hold good in Manitoba? Is a note or an account outlawed in six years in Manitoba?—J. M.

Ans.—A writ of garnishment can only be issued where money is owing. If it is desired to secure grain it will be necessary to do so under an execution issued out of the court after a judgment has been obtained. A judgment will hold good in Manitoba for ten years from its date. A note or an account outlaws in six years in Manitoba, unless something is paid on account or an acknowledgment of the debt is given in writing.

GOSSIP**AUCTION SALE OF HORSES**

On June 10, A. Layzell, auctioneer, will dispose of a number of horses weighing 1,100 to 1,500 pounds, at Gledor Ranch, some four miles east of Calgary. This sale has been advertised in these columns and it is intimated that a big percentage of the offering is made up of choice females.

Horses are in big demand all over Canada. Good prices are being paid. Those who want teams of good animals should attend this sale.

NEW FEATURE AT CALGARY

The acre yield competition at the Alberta Provincial Exhibition to be held at Calgary, June 30 to July 7, is a new idea for an exhibition. The following prizes are offered:

Winter					
Wheat	\$100	\$50	\$25	\$15	\$10
Spring					
Wheat	100	50	25	15	10

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Barley	75	40	25	15	10	5
Flax	60	35	20	10	5

The average amount of grain grown on an acre must be shown, and will be judged: 60 per cent. for quality, 20 per cent. for purity, 15 per cent. for quantity, 5 per cent. for acreage. The exhibition company pays all freight charges on exhibits originating in Alberta. It is not likely that anyone in the province has seen the quantity of grain grown on an acre in a pile by itself, and the reader will realize what a great interest will be taken in a building where probably 50 to 100 such exhibits will be on view from all over the province. Some districts are taking a particular interest in this feature, as in the case of Lloydminster agricultural society, who have already secured six exhibits from their district. The other features of the exhibition promise to be of more than ordinary interest, and the excellent music and attractions, low rates and special trains will undoubtedly make the attendance the largest yet. Entries close June 18.

UPPER'S PERCHERONS

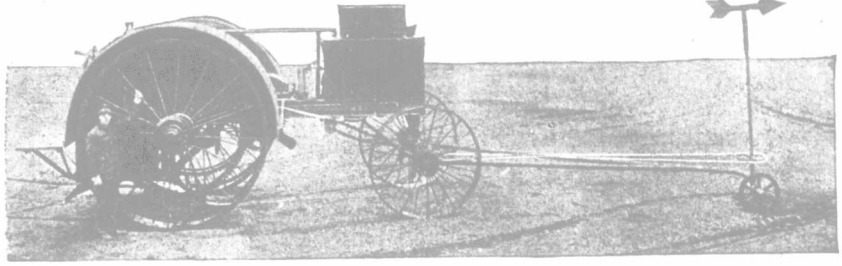
W. E. and R. C. Upper, of the Clear Water Stock Farm, have sold Robosse to W. B. Thompson, of Milestone, Sask. This horse has been the head of their stud for eight years, and has proved very successful, both in the show-ring and in the improvement of stock. The new head of the stud is Bijou, a recent purchase from Colquhoun & Beatty, and is a black of extra good quality and size. This stallion was second at Brandon Spring Show and first at Regina, and has also numerous prizes to his credit won at leading fairs in the United States. Uppers have also sold a four-year-old of good quality to A. Rochemnacher, of Leofeld, Sask., which district required a good horse. They report that a feature of this year's business is that the demand lasts later in the season than usual.

BOVINE TUBERCULOSIS

(Continued from page 802.)

the injection, the cattle are left alone for 8 or 9 hours, and then their temperatures are again taken, and should be taken at least every three hours until 24 hours have elapsed since the injection. In a healthy animal, practically, or, I might say, actually, no results are noticed, but in a diseased animal, a reaction (a rise of temperature) is well marked. If the reaction be 2 degrees or over (some claim anything over 1 degree), we are justified in condemning the animal. If above 1 degree but less than 2, we consider her a suspicious case and keep her for a future test. The degree of reaction, or the period of the test in which the reaction occurs does not in the least indicate the extent to which the animal is diseased. In advanced cases, where the temperature before injection is quite high, we often observe no reaction; hence in such cases, the test indicates nothing. While we do not claim that the test is infallible, we claim that it seldom makes a mistake. We have never known it to condemn a healthy animal, but have reason to believe that it does not always condemn a diseased one. Of course, in order that the test may be valuable, it requires to be properly conducted, and it is generally considered wise to have it conducted by a veterinarian. In some cases an animal may develop disease during the test, which disease causes an increase of temperature, and in such a case a veterinarian would be able to detect this disease, and, as a consequence, place no value on the test, while an inexperienced man would probably not be able to detect the presence of said disease, and possibly condemn a non-tubercular animal. Such occurrences as this tend to make people skeptical about the test. It has been observed that an animal which reacts during a test will in many cases not react again until a certain length of time has elapsed. Some claim that at least 60 days should elapse; others that at least two months. Unscrupulous people have been known to take advantage of this fact, and when they they have had animals that were to be tested for export or for sale, have injected tuberculin a few days before the official test was to be conducted,

"It's Guaranteed to do Something and Does It."



THE moment you put the GAS TRACTION ENGINE to work on your farm you can bet your life that it is going to produce for you quicker, better and more profitable results than you could possibly get through the use of any other all-purpose farm power. The Gas Traction Engine is Guaranteed to do everything that horses can do anywhere—any time. That makes it the only absolutely reliable substitute for horse-flesh. That is what you want. The Gas Traction Engine is the all-purpose power the farmer has been looking for since Noah built the Ark.

The best proof of an engine's worth is the guarantee under which it is sold. If a manufacturer has not sufficient confidence in his engine to absolutely guarantee its every operation on your farm, that is a good enough reason to suspect a "nigger in the woodpile" isn't it? The Gas Traction Engine is sold under a "Golden Rule" guarantee that plainly states the number of breaker and stubble plows the engine will pull on your farm—the amount of fuel it will use in plowing an acre of ground—the size separator it will successfully and continuously drive. And every casting and gear on the machine is guaranteed for ONE YEAR. Furthermore—

The Gas Traction Engine is Sold on Approval

Without the advance payment of one cent, take the engine into your own field on your own farm and test it out thoroughly. We'll even go so far as to send you a man at our expense to demonstrate the engine's worth to you. If it doesn't make good every line—every word of that "Golden Rule" guarantee—no pay to us.

You Should Know

that we originate—never imitate—that the phrase "Gas Traction" was coined by us—that we first gave prominence to the title "The Passing of the Horse," as used in connection with the arrival of the Self-Steering Gas Traction Engine—that our engine is an absolutely original and successful creation—that the "Golden Rule" guarantee under which it is sold is undisputedly in a class by itself, as the most fair and aboveboard guarantee ever given on a farm tractor, either steam, gasoline or kerosene

INVESTIGATE—NOW

Whether you want an engine today or tomorrow—to break prairie—plow stubble—to disc, seed, harrow, harvest or thresh—WRITE TODAY for a free copy of our splendidly illustrated, clearly written book, "The passing of the Horse." A post card will do the trick. DO IT NOW.

Gas Traction Company

"First Builders Multiple Cylinder Farm Tractors"

Grain Exchange, Winnipeg

HAIL! HAIL!

FARMERS, ATTENTION! PROTECT YOUR LABORS

BY

Insuring your crops against loss by hail storms, with
THE "OLD RELIABLE"

Des Moines Mutual Hail and Cyclone Insurance Association
of Des Moines, Iowa, U. S. A.

Organized in 1899 under the stringent insurance laws of Iowa
**LOSSES HAVE ALWAYS BEEN PAID 100 CENTS
ON THE DOLLAR SINCE ORGANIZATION**

We have deposited TEN THOUSAND DOLLARS
with the provincial government of Manitoba.

We are not offering you SOMETHING for
NOTHING, but will charge an ADEQUATE RATE
and give you fair adjustments.

RELIABLE AGENTS WANTED

Write for contract at once, stating amount of business you can
write in the next sixty days. The hail season is now here.

ADDRESS HOME OFFICE

Des Moines Mutual Hail and Cyclone Ins. Assn.

405 Crocker Bldg., Des Moines, U. S. A.

MESSAGE OF WARNING TO ALL FARMERS

TELEGRAM

Minneapolis, Minn., June 1, 1910

Mr. Farmer:

The gophers and squirrels are eating up your crops! Go and see for yourself the serious damage that is being done by these grain destroyers.

MICKELSON KILL-EM-QUICK CO.

YOUNG GOPHERS NOW COMING OUT

Reports are in circulation and are being received daily from parties who have travelled over certain agricultural territories that this season's crop is threatened, and that thousands of bushels of grain will be destroyed if the farmers do not look after their growing grain and take some means at once to protect their crop.

This condition is confined largely to that section which is infested by the gopher and squirrel pest. Not in years have there been so many young gophers and squirrels than are now invading the fields and causing endless damage to the tender shoots of grain.

USE MICKELSON'S KILL-EM-QUICK GOPHER POISON

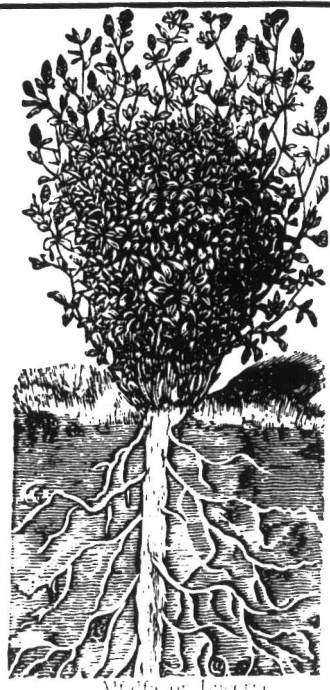
Thousands of farmers have cleared their fields of these grain destroyers by using this patent gopher and squirrel exterminator. "KILL-EM-QUICK" WILL DO AS MUCH FOR YOU. Why tolerate the presence of these pests any longer when you can get rid of them at a very small expense? A \$1.25 size package of "KILL-EM-QUICK" will save many an acre of grain.

KILLS THE GOPHERS OR YOUR MONEY BACK

The faith that this company has in its gopher and squirrel exterminator is substantiated by the hundreds of voluntary testimonials that have been received from satisfied users, and is also evidenced by the CASH REFUND GUARANTEE that is printed on every package. "KILL-EM-QUICK" comes in two sizes, 75 cents and \$1.25 per package. Guaranteed to kill the flicker tail, striped and pocket gophers, field mice, rats, mice, ground hogs, rabbits, badgers, wolves and coyotes. TRY IT, and if you are dissatisfied after you have used same in accordance with the printed directions, we will refund direct to you the purchase price. "KILL-EM-QUICK" ALWAYS KILLS.

YOU CAN BUY "MICKELSON'S KILL-EM-QUICK" GOPHER POISON FROM YOUR DRUG DEALER. Write us for complete information, folders, testimonials, etc.

MICKELSON KILL-EM-QUICK COMPANY
Dept. H., MINNEAPOLIS, MINN.



SEED NOW TO

20th JUNE

the following varieties.

ALFALFA produces from 4 to 7 tons hay to the acre. The nearest to a balanced ration of any crop grown. Montana grown seed \$26.00 per 100 lbs.

SILVER KING BARLEY The great well named early harvest variety.

ORLOFF Barley. Resistant to rust. The best for the purpose of wintering on. It yields well all other grain. May be sown in the fall or in the spring.

FODDER CORN (Longway No. 1) This is the best of all varieties.

MILLETS and HUNGARIAN Western Rye, Bromo, Timothy, Red Clover, White Clover.

Steele, Briggs Seed Co
WINNIPEG, CANADA Limited.

Some of the lines we are constantly printing

STATEMENT, YES, BY BILL HEALS

LEVEL OF THE FISH, ETC.

WAGONS, ETC.

WAGONS, ETC.

and thereby have had diseased cattle pass as sound. Then, again, there are certain drugs the action of which reduces temperature, and thereby counteracts the reaction caused by tuberculin, and the administration of these drugs during the progress of the test renders the test valueless, and causes the passing of diseased cattle. Some dishonest men have, unknown to the person conducting the test, taken advantage of this knowledge, and succeeded in having tubercular cattle pass as sound. Such practices, of course, tend to make people lose confidence in the test, and emphasize the statement that only qualified men should conduct the test, and that where there are any grounds for suspicion that the owners will employ means to nullify the test, great vigilance should be observed during its progress.

The question then arises: "How shall we control the disease?" The wholesale testing of cattle and slaughter of reactors would practically kill the cattle industry of the country. This statement particularly applies to the high-class, purebred cattle that are kept under highly artificial conditions. The disease is much more prevalent in such cattle than in those that are kept in such a less-artificial manner and exposed more in the open air. By what is

bility of danger, it behooves us to observe all possible precautions to see that the milk and flesh of cattle that are used for human consumption are those of non-tubercular animals, and this can be assured only by applying the tuberculin test to milking cows, and by careful official inspection of the carcasses in the slaughter houses of cattle killed for beef. Again, the precautions can and will be observed only after the most rigid legislation. We are of the opinion that the danger of contracting the disease, as stated, is slight, but at the same time exists, hence the advisability of hasty legislation in the matter must rest with those in whom the duty and power of legislation is placed.

Some scientists claim that infection by inhalation is not possible; that infection always occurs through the digestive tract, while others claim that the most common manner of infection is by inhalation. The former claim that milk and its products are the general carriers of the bacilli, not that the milk in general contains the germs when drawn, but becomes infected later on; that most tubercular cattle pass feces largely impregnated with bacilli, and that, during milking small portions of the excrement are introduced into the milk, by splashing



CLEARING THE ROAD AND PREPARING FOR CORDUROY IN ROSEDALE MUNICIPALITY

called the "Bang" system, a healthy herd may in time be reared from diseased parents, both male and female. Science has demonstrated the fact that congenital tuberculosis (by that we mean where a calf is diseased when born) is not unknown, but is very rare. Hence when diseased cattle produce young, and as soon as born the calves are moved to healthy quarters and reared on pure milk, they will continue to be healthy. Periodical tests, of course, must be made, in order to detect any diseased animal that may exist in calves reared, even under these conditions. This system of controlling the disease is, of course, slow, and is not generally practiced, but in the few cases in which it has been carefully carried out, has proved successful.

The danger or possibility of man contracting the disease, either from frequent contact with tubercular cattle, or from the consumption of the flesh of such animals, may be said to be a disputed point among scientists. Some claim that it is not possible, that the bacilli of bovine and human tuberculosis are entirely different organisms, and that one cannot possibly produce the other, while others, and we may say the majority of the latter, are of the opinion that the bacilli are identical, and that one may be converted into the other. While there is a large amount of apparently conclusive arguments to support it.

If we admit the possibility of the transmission of bovine tuberculosis to the human family, the mode of transmission is probably of so much importance as the fact that all possible precautions should be taken to consume either the flesh or milk of diseased animals.

during defecation, whisking of the tail, etc., and thus the milk becomes charged with the virus, hence people or animals drinking the milk introduce the bacilli into the digestive tract; and that butter and cheese manufactured from unpasteurized milk also contain large numbers of the bacilli, hence those consuming these products are subject to the same danger. They claim that the bacilli are capable of being taken up by the blood vessels, and carried to various parts of the body more or less remote from the seat of introduction, and lodging in tissues or organs for which they have an affinity, and that the lungs and other respiratory organs and glands, having an affinity for these bacilli, arrest them, extract them from the circulation through the fine coats of the capillaries, and develop tubercular matter, and that tubercular deposits in other glands or organs are produced in the same way. The latter class of scientists dispute this theory, and while they admit the possibility of the blood stream carrying the bacilli and depositing them in various organs, claim that infection may and very frequently does occur by inhalation, and this mode of infection largely accounts for the frequent attacks of the respiratory organs. These are points that are very hard to determine, and those who favor either theory can produce apparently conclusive arguments to support it.

W.H.P.

WORLD'S RECORD HEIFER

The Holstein-Friesian heifer, Jennie Bongerges Ormsby, owned by D. C. Flatt & Son, has recently completed what is claimed to be a world's record of milk and butter production for a two-year old, in a 365-days' test, made under the supervision of the Dominion Department of Agriculture. This heifer calved as a two-year old, and gave within a year, 16,849 pounds 3 ounces milk, which contained 832.90 pounds butter, which it is claimed heads the world's record by 70 pounds butter. We are not informed on which basis this was calculated. If figured on the 80 per cent. standard, it would mean that the heifer's milk contained an estimated 666.32 pounds of butter fat. If calculated on the basis of adding one-sixth, it would mean that she had given 713.91 pounds of butter fat.

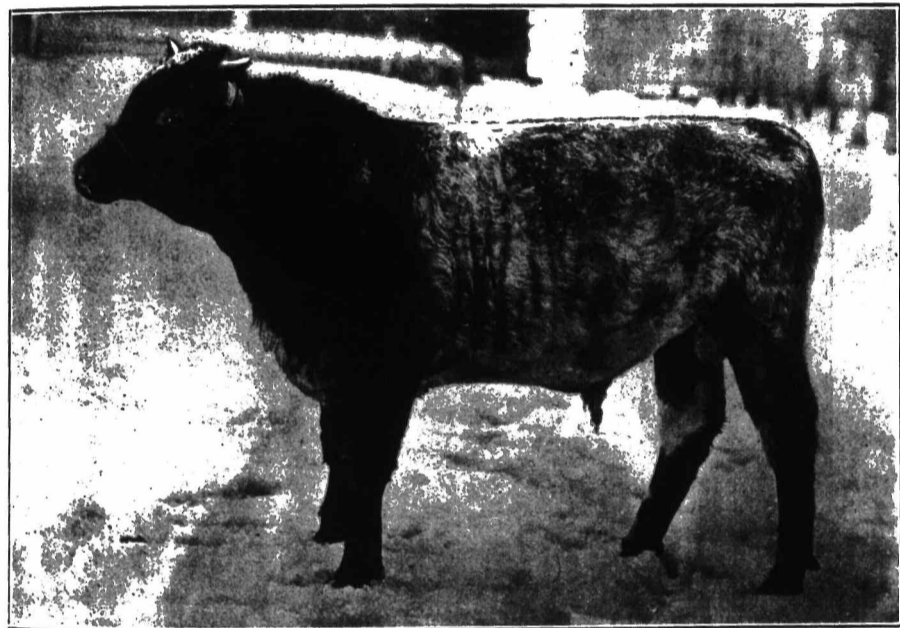
This heifer, ten months after freshening, made 14.39 pounds butter in seven days, which is also a world's record. She will drop two calves in a little over 13 months, which makes her record so much the greater.

THE MEAT PACKERS' DEFENCE

The foundation of the beef-packing business is the packer's ability to sell

On the Chicago market alone there are now over three hundred commission salesmen of this nature and about 1500 hundred individual buyers for local packers, packers of other cities, or for shipment alive abroad. To say that it is possible for any group of men to control this number of individual buyers is foolish. The numbers engaged in the trade show the impossibility of such a thing. Further, one need only look at the live-stock market column in any newspaper and observe the prices that are being paid by various classes of buyers for live stock, to be certain that any attempt to manipulate the market for the purpose of keeping prices at a low level must be a total failure.

As to competition in the selling of packing-house products, the official register of the inspection service of the Bureau of Animal Industry of the Department of Agriculture shows that there are operating under federal supervision 635 slaughtering establishments. In addition to these there are many local packing-houses in the various states doing business strictly within their own state, not coming under federal supervision, and not included in the list. Furthermore, while there are no authentic statistics showing the total amount of business transacted by the packing industry, it is fair to presume that the six large packers do about forty-five per cent. of the business of



CHAMPION YEARLING SHORTHORN AT TORONTO LAST YEAR

the beef steer for considerably less than the steer costs. The greater the measure of ability the less the beef can be sold for. Every beef packer knows that if he cannot rely upon his ability to do this year in and year out his methods are too crude and antiquated to serve the needs of this generation. Furthermore, he must be able to operate on the basis of an average profit of about three cents on a dollar. These facts ought to be known. The business was built upon economies; every effort has been made to minimize waste and to find uses for materials formerly neglected. If packing-house methods are succeeded by something else it will be because some new scheme has been devised which will permit operation on a still smaller margin of profit. Moreover, while the public needs to understand that the business has been equally profitable in distributing among the live stock producers and the meat-consuming public the proceeds of the selling is accomplished.

Perhaps what has the packer, on the one hand, buying his live stock direct from the owner or stockman, and, on the other, selling it in the form of finished meat to the consumer. Look at the conditions as they actually exist in the live-stock raiser, whether a producer of range cattle or of what are known as finished corn-fed steers, that his stock is ready for the market, to a commission merchant at any of the large packing centers. Upon the arrival of his live stock at Chicago, Kansas City, St. Joseph, or which ever point is most convenient, he is contacted by a shipper, a salesman, or a commission man to whom the stock is sold. The shipper takes various levers of

the large packing centers. If it were possible to secure accurate figures of the business transacted by the local packers and butchers in the smaller towns and cities their percentage of the total would be much smaller.

Statements have been made that exorbitant profits are made by the large packers. Swift & Company's profits are about 3 1/2 cents on each dollar's worth of sales. I believe there is not another industry which operates on so small a margin of profit. From this small margin it will be seen that our profit can make very little difference in the ultimate price of meat to the consumer, as in analyzing the profits per head and per pound we find that the packer's net profit on an average of over one million cattle during 1909 was about \$1.24 per head, or less than a quarter of a cent per pound dressed weight. We would like to have the cost of live stock at a rate to make a fair return to the stock raiser, and a small profit for the packer, and meat food products at a price within the reach of all classes of consumers. This would be a fair and equitable situation. Swift & Company's profits on a million dollars' worth of sales are about \$350,000. This is a profit of 35 per cent. on sales. The packer's profit on a million dollars' worth of sales is about \$350,000. This is a profit of 35 per cent. on sales. The packer's profit on a million dollars' worth of sales is about \$350,000. This is a profit of 35 per cent. on sales.

CROP PROTECTION

The Gun for the Farmer

You can protect the acres of corn and oats or whatever you grow from the crows and other pests that are such a nuisance to the farmer. Weasles, Gophers, Hawks, Blue Jays, Rabbits, Woodchucks, etc.

Here's a Repeating Rifle that you can shoot 15 times without re-loading.

LIST Price, \$8.00.



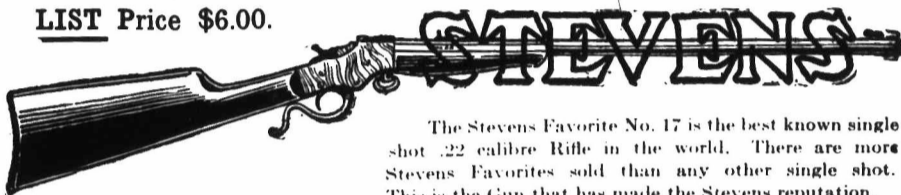
Two models: The first takes fifteen .22 Short cartridges only. The second takes any one of three cartridges: .22 Short, .22 Long and .22 Long Rifle, but the greatest accuracy is obtained in this model by using .22 Long Rifle cartridges.

The Stevens Visible Loading Repeating Rifle is guaranteed to be the most accurate .22 Repeater Made.

It is rifled with the care and precision that has made the name Stevens famous the world over. It shoots straight and it hits hard.

There is no Repeater at the price that has the work and finish which is put into the Number 70

LIST Price \$6.00.



The Stevens Favorite No. 17 is the best known single shot .22 calibre Rifle in the world. There are more Stevens Favorites sold than any other single shot. This is the Gun that has made the Stevens reputation.

If you are looking for a good Shotgun at a moderate price, write us and we will send you full details and price list. We make shotguns (single and double barrel, hammer and hammerless) that you can buy at prices listing from \$7 up to \$60.

Our No. 520 Hammerless Goshot Repeating Shotgun is a marvel at the figure. (List price \$27.00.)

Besides shooting with the very best pattern and penetration, the Stevens No. 520 has a feature which no other repeating shotgun has **IT IS THE ONLY REPEATING SHOTGUN MADE**

THAT CAN BE OPERATED AS FAST AS THE HUMAN HAND CAN MOVE WITHOUT

DANGER OF BALKING. This is because the empty shell and the loaded shell travel by separate routes. They cannot meet.

DO YOU WANT TO BE A BETTER SHOT?

It's the fine points that make the big difference between the expert and the ordinary shot. Experts don't give away these points they spent long years to get. But it's to our advantage that present and future users of Stevens rifles and shotguns become expert shots. We employ some of the world's crack shots. They know all the little kinks, the fine points that get them big scores.

Do you want these short cuts to expert shooting? Then write us what interests you: rifle shooting, the traps or field-shooting. Our answer goes the day your letter comes, giving you practical suggestions on how to improve your style and accuracy.

J. Stevens Arms & Tool Co., Dept 546, Chicopee Falls, Mass.

THE FACTORY OF PRECISION

LIST PRICE OF STEVENS RIFLES

Little Scout No. 14	\$2.25	Favorite No. 17 (The only Boys' Rifle used by Men)	\$6.00
Stevens-Maxnard Jr. No. 15	3.00	Visible Loader No. 70	8.00
Creek Shot No. 16	4.00	Ideal Rifle No. 44	10.00
(For young shooters. Accurate and made for real work.)		(Man's heavy Single Shot Rifle.)	



Hardy Fruits

TREES, SHRUBS AND PLANTS

For Manitoba, Saskatchewan and Alberta Planting

Quick growing Hardy Trees for Wind-breaks and Shelter Belts. Russian Apples, Crabs, Native Plums, Small Fruits, Seed Potatoes, etc.

Varieties tested and recommended by Western Experimental Station

Agents Wanted where we are not represented. Liberal terms and Free Experiment.

Send for circulars of Western Specialties and Testimonials

Stone & Wellington

The Orchard Nurseries

TORONTO ONTARIO

The Advocate is the Best Advertising Medium

WANTS AND FOR SALE

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

FARM HELP of every description supplied. M. MacNeil, 215 Logan Ave., Winnipeg. Phone 7752.

LOCAL AGENTS—We have some very good openings in Saskatchewan and Alberta for good live men, willing to give their whole time or part of same in doing subscription work for the *ADVOCATE*. Good commission paid to reliable people. When writing enclose references as to character, etc. Address *FARMER'S ADVOCATE*, Box 3089, Winnipeg.

SOUTH AFRICAN WARRANTS—I will sell two at bottom price. I will buy any number at market prices, subject to confirmation. E. B. McDermid, Nelson, B. C.

FARMERS—Write me for prices on fence posts in ear lots, delivered at your station. Get the best direct from the bush. Fruit land for sale. J. H. Johnson, Malakwa, B. C.

VANCOUVER ISLAND OFFERS sunshiny, mild climate; good profits for ambitious men with small capital in business, professions, fruit-growing, poultry, farming, manufacturing, lands, timber, mining, railroads, navigation, fisheries, new towns; no thunderstorms, no mosquitoes, no malaria. For authentic information, free booklets, write Vancouver Island Development League, Room A, 34 Broughton St., Victoria, B. C.

WE CAN SELL YOUR PROPERTY. Send description. Northwestern Business Agency, Minneapolis.

FOR SALE—Several good sections of finest wheat land in Sunny Southern Alberta at \$11 to \$18 per acre. Easy terms. Also improved farms. Write at once for full particulars. First class investment. Freeman, MacLeod Company, Dept. 24, Box 679, Lethbridge, Alberta.

ENGINES FOR SALE—We have on hand ready for delivery a number of Portable and Traction Engines, simple and compound, from sixteen to thirty horse-power, rebuilt and in first-class order, which we will sell much below their value. Address P. O. Box 41, or the John Abell Engine and Machine Co., Ltd., 76 Main Street, Winnipeg, Man.

C. McG. SANDEES, Fortier, Man., breeder of Yorkshire hogs and Pekin ducks. Young stock for sale. Eggs, \$1.50 per setting.

GASOLINE ENGINES—1½ horse power \$65.00 complete. 2½, 4½, 6, 8, 12 horse power, at proportionate prices. Pumping and Sawing outfits. Get our catalogue. Bates Motors, Petrolia, Ont.

EXCHANGE OR SALE—Good second-hand traction, steam threshing and plowing outfit, near Winnipeg. Want land or registered cattle or draft mares and a stallion. Address Box 14, Lake Wilson, Murray County, Minnesota.

WANTED—Nation's Custard Powder, now sold by all grocers; 5-cent packets, ¼ lb. and 1 lb. patent measure tins, wholesale. W. H. Escott, Winnipeg.

WESTERN RYE GRASS SEED for sale at 8 cents per lb in bran sacks, f. o. b. Virden. W. Dillon, Box 657, Virden.

Lost, Strayed or Impounded

This department is for the benefit of paid-up subscribers to the *FARMER'S ADVOCATE*, each of whom is entitled to one free insertion of a notice not exceeding five lines. Over this two cents per word.

LOST 4 WEEKS AGO brown mare, 9 years old, hind feet white; also black mare, eight years old. Both had halters on; branded L. K. Good reward. Joseph Zacharias, Wilkie Bay P. O., Sask.

STRAYED about the middle of April, one dark bay mare; age, twelve; broad white stripe on face; branded U over inverted T; weight 1,000 pounds. Reward on information leading to its recovery. G. W. Stewart, Sedley, Sask.

POULTRY AND EGGS

RATES—Two cents per word each insertion; cash with order. No advertisement taken less than fifty cents.

EGGS FROM PUREBRED—1 won 2 firsts, 2 seconds, 1 third at Regina, 1910. Partridge Cochins, \$3.00 per 15. Buff Orpingtons, Buff Rocks and White Leghorns, \$2.00 per 15; \$10.00 per 100. Barred Rock, \$1.50 per 15; \$7.00 per 100. R. Bigworth, Chaplin, Sask.

WHITE PLYMOUTH ROCKS EXCLUSIVELY—Winnipeg at Winnipeg Poultry Show on six entries, five firsts, one second and all specials offered. Birds and eggs for sale. Correspondence solicited. W. J. Currie, Lauder.

S. C. BLACK MINORCA EGGS \$1.50 per 13, \$3.00 per 30. Also Collie Pups and Yorkshire Pigs for sale. R. D. Lang, Stonewall, Man.

PUREBRED S. C. BUFF ORPINGTON eggs \$1.50 for 13; also Bronze turkeys eggs \$1.50 for 12. Mrs. W. H. Read, Nanton, Alta.

E. P. EDWARDS—South Salt Springs, B. C. Now is your time to buy Cockerels for next spring. Buff Rocks, Rhode Island Reds, Black Minorcas, Blue Andalusians, Speckled Hamburgs; also a few early pullets.

ROYAL WHITE WYANDOTTES—The best strain in Western Canada. Eggs, \$2.00 for 15; \$5.00 for 45; \$10.00 for 100. F. W. Goodeve, Stonewall, Man.

BARRED ROCKS—Bred to lay, \$1.50 and \$2.00 for 15 eggs. Mrs. Montague Vialoux, Littlecote Poultry Yards, Sturgeon Creek, Man.

WANTED AT ONCE—A setting of Guinea fowl eggs. Also one young cock guinea fowl. Mrs. G. Spring Rice, Gatesgarth, Pense, Sask.

PUREBRED BUFF AND COLUMBIAN WYANDOTTES, Brown Leghorn and Buff Cochins eggs; equal to most three dollar eggs. Fifteen, \$1.50; thirty, \$2.50. Jas. E. Sinclair, Stonewall, Man.

BREEDERS' DIRECTORY

Breeders' name, post office address and class of stock kept will be inserted under this heading at \$4.00 per line per year. Terms cash, strictly in advance. No card to be less than two lines.

D. SMITH, Gladstone, Man., Shires, Jerseys and Shorthorns, Yorkshire hogs and Pekin ducks.

GUS WIGHT, Evergreen Stock Farm, Napinka, Man., Clydesdales, Shorthorns and Berks. Write for prices.

W. J. TREGILLUS, Calgary, Alta., breeder and importer of Holstein-Friesian cattle.

McKIRDY BROS., Mount Pleasant Stock Farm, Napinka, Man., breeders and importers of Clydesdales and Shorthorns. Stock for sale.

D. P. WOODRUFF, Caldwell, Alta., breeder of Kentucky Saddle horses, young registered stallions of best breeding for sale.

H. C. GRAHAM, Lea Park, Alta., Shorthorns, Scotch Collies and Yorkshires for sale.

CIG BULSTRODE, Mount Farm, South Qu App, Sask. Breeder of Berkshire Swine.

HEREFORDS—Pioneer prize herd of the West. Good for both milk and beef. **SHEPHERD PONIES**, pony vehicles, harness saddles. J. E. Marples, Poplar Park Farm, Hartney, Man.

BROWN BROS., Ellishoro, Sask., breeders of Polled-Angus cattle. Stock for sale.

J. MORRISON BRUCE—Tighnduin Stock Farm, Lashburn, Sask., breeder of Clydesdales and milking Shorthorns.

WALTER JAMES & SONS, ROSSER, MAN.—Young Yorkshire and Berkshire boars and sows ready for shipment about first week in June. Price \$10.00 each, including registered pedigree.

K. McIVER, VIRDEN, MAN.—Shorthorns, a few two and three-year-old heifers for sale at a little over beef price. Three-year-olds in calf or calved. Write for particulars.

H. W. BEVAN Duncans, Vancouver Island, B. C., breeds the best strains of registered Jerseys. Young stock for sale.

JAS. M. EWENS'S SALE

James M. Ewens, of Bethany, reports sales of the following Shire mares and stallions: To Jas. Young, of Newdale, the grey stallion, D'Arcy Hearty, a horse standing 17 hands, with size and immense bone, and one that has proven himself a splendid sire in England. A. Ramgren, of Scandinavia, has taken the low, thick set bay stallion, Holdenby Tom. He is leaving some excellent colts in this neighborhood and will prove a gold mine to that district. Hugh M. Dyer, of Minnedosa, has bought the bay colt, Holdenby Farmer. This horse will make a name for himself, as he is bred along right lines, his dam being a winner and she is by that wonderful sire, Dunsmore Combination. J. Thompson, of Minnedosa, has taken the two mares, Holdenby Rosamond and Holdenby Tidy. They have since been sold to the Manitoba Agricultural College, where Tidy has dropped a good stallion foal. Capt. Woodiwiss, of Binscarth, gets the two mares, Holdenby Peach and Holdenby Valetta. Reg. Woodiwiss, of Binscarth, bought Holdenby Condendum and Holdenby Melody, a splendid team of mares that will be heard of at the shows this summer. They have dropped fine filly and stallion foals. Geo. Wilson, of Clarwilliam, gets a team of three-year-olds, Holdenby Vixen and Holdenby Splash. Jas. Drysdale, of Neepawa, has taken the chestnut three-year-old, Holdenby Debutante. This mare is a little back-

A CITY ON WHEELS

In Detroit, Mich., one million dollars a week is paid in wages by the automobile and accessory industries. This weekly payroll keeps 58,000 people employed in the automobile factories. It is estimated that more than 200,000 persons in the city are dependent upon the automobile industry for a livelihood. The total annual capacity of the plants is 85,000 cars, with a total capitalization of \$30,000,000. All told there are twenty-three factories devoted exclusively to the production of gasoline-propelled vehicles. The total value of Detroit-made cars this year will be \$200,000,000. More than \$10,000,000 is invested in automobile plants in the city. Sixty per cent. of the national output of automobiles is built in Detroit, and the city is enjoying the greatest prosperity in its existence. How long the boom will last is another question. He is a wise man who will know when to get out.

AYRSHIRES AT GLASGOW

At the fifth annual spring show of the Glasgow Agricultural Society, May 3 and 4, Ayrshire cattle, as usual, made a splendid showing. In a strong class of aged cows in milk, John Drennan's noted Hillhouse Queen was an easy first, James Lowrie's Sonsie a good second, and John McAlister's Ardnye Rosie a close third. In the class for three-year-



BEAUTY AND UTILITY IN A HOLSTEIN.

ward, but has the very best under-pinnings and should make a good brood mare.

Mr. Ewens starts for England in a few days and expects to return about July 1st with about 25 young mares and some Shetland ponies.

ANNUAL MEETING AMERICAN JERSEY CATTLE CLUB

The 42nd annual meeting of the American Jersey Cattle Club was held in New York May 4th. The report of President E. A. Darling showed that the total number of animals registered during the year was 18,679, and the number of transfers recorded during the year was 21,930, an increase over the previous year of 24 per cent. in registrations, and of 29 per cent. in transfers. The total receipts for the year were \$68,300, and the expenditures \$49,196, or \$19,334 less than the receipts. The treasurer's report showed assets amounting to \$121,426, and liabilities \$88,938, a net gain March 31st, 1910, of \$22,676, and a net gain to the club fund of \$111,615.

THE AMERICAN FARMER AND RECIPROCITY

An encouraging glimmer of tariff sense emanated from a recent issue of *Wallace's Farmer*, of Iowa. Discussing the prospects of reciprocity with Canada, it remarks, not without a tremor of apprehension, but with some evidence of insight, nevertheless:

"It is only a question of time, however, when the farmer will have to face free trade in farm products. He never has received very much benefit from tariffs, and that largely incidental. So he perhaps will not lose much money, but it will be interesting to know what he will do with tariffs on what he buys."

old cows in milk. Col. G. J. Ferguson Buchanan's Adela, the winner of first in the uncalved class at Ayr, was first here. John McAlister had second honors, with Brown Bess, the first prize three-year-old in milk at Kilmarnock, and Mr. Neil was third, with Hover-a-Blink, which was first in the in-calf class at Kilmarnock. In the class for cows three years and over, bred by exhibitor, Mr. Brennan led easily with Hillhouse Queen, and Mr. Lawrie was second with Sonsie. In the class for cows in calf, four years and over, James Lawrie's Queen II, won first, and Col. Ferguson-Buchanan was second with his grand old tow, Auchentorlie Bloomer. The Derby for three-year-olds was a repetition of she three-years-olds-in-milk class, first to Col. Ferguson-Buchanan for Adela, second to John McAlister, third to James Neil. In the milk-record class, John Drennan had first with Hillhouse Queen, whose record is 780 gallons of natural milk, at 4 per cent., and Mr. McAlister second, with Perfection, whose record is 662 gallons, in six and a half months.

The champion female was Drennan's Hillhouse Queen, and the reserve, Lawrie's Queen II.

In aged bulls, John McAlister's four-year-old Buttercup was the winner. The positions in the two-year-old class were keenly competed for. Andrew Mitchell's Morton Mains Sensier, the Ayr and Kilmarnock winner, was first; James Howie's Sir William second, and Mr. Barr's Hobsland third. In a large class of yearlings, Andrew Mitchell won first with the Morton Mains-bred bull that was second at Ayr, James Howie was second with Special Spice, a son of Spicy Sam, and John Cochrane was third with Caruso, the Kilmarnock male champion.

WHEELS

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GLASGOW

spring show of the
 Society, May 3
 as usual, made a
 a strong class of
 John Drennan's
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The Ross Rifle
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BULLETIN ON IRRIGATION

Large wind movement provides a
 source of free power for lifting under-
 ground water, and the results of some
 investigations by the Irrigation Ser-
 vice of the United States Department
 of Agriculture are embodied in a Farm-
 ers' Bulletin (No. 394), entitled, "The
 Use of Windmills in Irrigation in the
 Semi-arid West," just issued by the de-
 partment. The possibility of this is set

DODD'S KIDNEY PILLS
 CURES ALL KIDNEY DISEASES
 RHEUMATISM
 BRIGHT'S DISEASE
 DIABETES BACKACHE

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out in a simple, comprehensive way, and
 practical suggestions are made to those
 who are now using, or are contem-
 plating the use of windmills for pumping
 water for irrigation. The data given
 for plants on the Great Plains show,
 however, that the windmill is not a
 cheap source of power, that to accom-
 plish the result requires capital, and
 that if the conditions require too great
 outlay, it precludes the possibility of
 such a procedure. The bulletin treats
 on the sources of water supply, the
 quantity of water available, well casing,
 sinking wells, capacity of mills, choice
 of tower, erection of mills, pumps,
 reservoirs, maintenance of mills, crops
 under windmill irrigation, and closes
 with a description of methods and mills
 now in use in Kansas, Nebraska, Colorado
 and California. Copies of the bulletin
 can be secured by applying to the
 secretary of agriculture, Washington,
 D. C., to any senator, representative or
 delegate in Congress, or for 5 cents per
 copy from the superintendent of docu-
 ments, Government Printing Office,
 Washington, D. C.

YEARBOOKS FOR BREED SOCIETIES

The publication of a yearbook, con-
 taining in systematic, tabulated form,
 information as to the show-yard achieve-
 ments of individuals in the breed, is
 suggested by Prof. F. R. Marshall, of
 Ohio, to those registration societies
 which now have nothing of the kind.
 The yearbook of the American Trotting
 Register, and the performance records
 of the dairy-breed societies, are referred
 to in illustration of the advantage of the
 system, under which the public would
 more quickly become conversant with
 the sires of high-class stock. The
 idea has something to commend it,
 though it is a question whether the
 utility of beef cattle, sheep and swine
 can be so accurately gauged by show-
 ing performance as the utility of dairy
 cattle can be by milk scales and Bab-
 cock test. At least, this is true of those
 beef breeds making pretensions to
 milking quality. Thrift, for example,
 is a quality in beef cattle which seldom
 receives due recognition in the show-
 ring, where type, depth of fleshing,
 breed character, handling quality, and
 other like attributes, command chief
 attention, almost to the exclusion of
 growthiness and milking capacity. In-
 deed, milking quality is often discrimi-
 nated against. However, so far as the
 milking function is concerned, there is
 no reason why a record of dairy per-
 formance should not be adopted con-
 jointly with the record of show-yard
 performance. Whatever systematizes
 information concerning merit and heredi-
 tity should prove of service in the cause
 of stock improvement. The American
 Hereford, Shorthorn, Angus, Berkshire,
 and some other associations, already
 publish in connection with their herd-
 books some information such as Prof.
 Marshall suggests.

THE ROYAL DUBLIN SHOW

The annual spring show of the Royal
 Dublin Society was held as usual at
 Ball's Bridge, Dublin, Ireland, on April
 19th to 22nd.

Shorthorns are the prevailing cattle
 breed of Ireland, and in numbers they
 totalled at this show 464 entries. In
 the open class for yearling bulls,
 Donald MacLennan was first with his
 Perth Show purchase, Strowan Arch-
 duke II., looking fresh, and an easy
 victor. F. Miller was second with his
 Birmingham purchase, Prospector, bred
 by Jolliffe, of Darlington.

In the open class for aged bulls, Geo.
 Harrison was first with the light roan,
 Mintmaster (96107), a four-year-old,
 bred at Uppermill, by John Marr, and
 got by Violet Royal (90424). He was
 also awarded the Chalover Plate, as the
 best bull in the show (excluding year-
 lings). The second prize aged bull
 was the dark roan, Good Friday, bred
 by Mr. Hope, and bought at Mr.
 Barne's sale. This is a great, fleshy
 bull, and was a strong favorite for first
 honors.

In the Aberdeen-Angus class the
 breed championship went to John Mc-
 Pherson, Keith, for his noted bull,
 Eclipse of Ballindalloch, by Jeshurun.
 The reserve for this honor was Mr.
 Beaumont-Nesbitt's two-year-old Douro.

W-H-Y

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 tation from country to country till now they

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Col. J. G. Ferguson
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 Ayr, was first here
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 John McAlister's four-
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len manufacturers claim that their industry could not stand the duty asked for. The producers say that without it there would be no revival in sheep breeding in Canada; that wool was the finished product of the sheep-breeder, and as such was as much entitled to protection as the finished article of the manufacturer. Nothing but good should come of this conference, as the government of the day will be in possession of information as to what is best for the two interests particularly affected, in order to deal with them fairly and justly, and at the same time guard those of the consumer.

Members from the Sheep Breeders' Association present at the conference were: Col. McCrae, A. W. Smith, M. P., J. Campbell, and Col. Robert McEwen.



WHEN TO TRIM SPRUCE

What time of year is best to trim spruce? J. A.

Ans.—A very effective time to trim spruce hedges is in June, after the new growth is well advanced. Trimmed at that time, the aftergrowth is less than if trimmed early. But for trees, early spring trimming is, on the whole, most suitable.

ANATOMY OF THE HONEY BEE

The United States department of agriculture's recent publication, on "The Anatomy of the Honey Bee" (Bul. 18, Tech. Series, Bureau of Entomology) embodies the results of detailed studies and should prove of value as bringing to beekeepers reliable information concerning an insect of such great economic importance, and also as furnishing a sound basis in devising new and improved practical manipulations. The subject has been for years the object of study of many careful students; but the popular demand for information has also induced untrained men to write accounts of bee anatomy containing numerous errors, and illustrated by drawings more artistic than accurate.

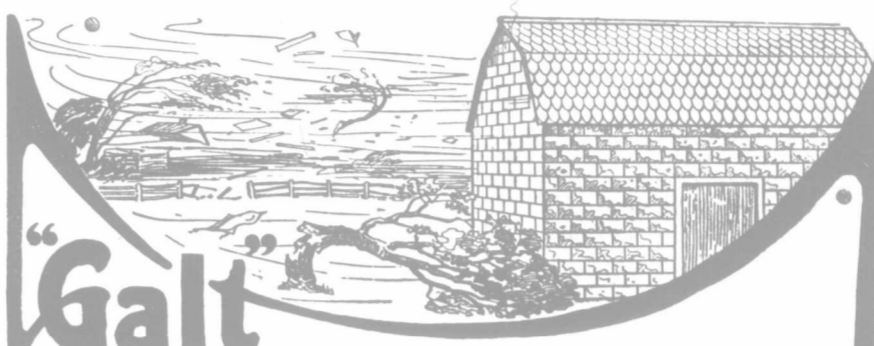
All practical manipulations of bees must depend on an understanding of their behavior and physiology under normal and abnormal circumstances, and this knowledge must rest ultimately on accurate information as to the structure of the adult bee.

Following a brief introduction the author first gives a chapter on the "General External Structure of Insects," and then taking up the honey bee he gives a detailed description of the head of the bee and its appendages; the thorax and its appendages; the abdomen, wax glands, and sting, and alimentary canal and its glands. He discusses the circulatory and respiratory system, the fat body and the oenocytes, the nervous system and compound eyes, and the reproductive system. The text is profusely illustrated, fifty-seven figures, including a full-page median longitudinal section of the body of worker being used, all but three of which are new and original, having been prepared by the author with a thorough realization of the need of more accurate illustrations of the organs of the bee, especially of the internal organs.

This bulletin can be secured only from the superintendent of documents, government printing office, as the department's supply is by law limited to an edition barely sufficient to furnish libraries and the collaborators of the department with copies.

INSECTS ATTACKING POTATOES

Although insect pests found in the potato patches of the Canadian West are not as numerous as in some older countries there are enough to call for attention. Insects are discussed by L. Caesar, of Ontario Agricultural College, as follows:



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| Baker, T. F. F., Winnipeg. | Hinman, W. J., Winnipeg. | Robinson, S., Brandon. |
| Baker, G. P., Togo. | Husband, A. G., Belmont. | Roe, J. S., Neepawa. |
| Barry, W. H., Cartwright. | Irwin, J. J., Stonewall. | Rombough, M. B., Winnipeg. |
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| Bowman, E., Gladstone. | Jamieson, J., Hamiota. | Still, J. B., Winnipeg. |
| Bracken, G. E., Eden. | Kennedy, M. S., Elm Creek. | Stiver, M. B., Elgin. |
| Bradshaw, H., Portage la Prairie. | Lake, W. H., Morden. | Shouls, W. A., Winnipeg. |
| Braund, F. J., Boissevain. | Lawson, R., Shoal Lake. | Smith, H. D., Winnipeg. |
| Broadfoot, J. W., Binscarth. | Lee, W. H. T., Minto. | Smith, W. H., Carman. |
| Bryant, E. W., Dauphin. | Lipsett, J. H., Holland. | Snider, J. H., Moose Jaw. |
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| Cline, J. T., Glenboro. | Little, M., Pilot Mound. | Stevenson, J. A., Gretna. |
| Cook, W. S., Virden. | Little, W., Boissevain. | Sirett, W. F., Minnedosa. |
| Coombs, F. M., Oak River. | McDougall, J., Kenton. | Swanson, J. A., Manitou. |
| Coxe, S. J., Brookdale. | McFadden, D. H., Emerson. | Taylor, W. R., Portage la Prairie. |
| Coxe, S. A., Brandon. | McGillivray, C. D., Winnipeg. | Thompson, H. N., Bannerman. |
| Cruikshank, J. G., Deloraine. | McGillivray, J., Winnipeg. | Thompson, Wm., Minnedosa. |
| Dand, J. M., Deloraine. | McLoughry, R. A., Meosomin. | Todd, J. H. C., Grand View. |
| Dunbar, W. A., Winnipeg. | McMillan, A., Brandon. | Torrance, F., Winnipeg. |
| Fisher, J. F., Brandon. | McIntosh, R. A., Marden. | Walton, T., Killarney. |
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| Golley, J., Treherne. | Mack, J. S., Neepawa. | Westell, E. P., Winnipeg. |
| Graham, N., Indian Head. | Manchester, W., Wawanesa. | Whimster, M. A., Hamiota. |
| Green, E., Birtle. | Marshall, R. J., Oak Lake. | Williamson, A. E., Winnipeg. |
| Hackett, J. A., Hartney. | Martin, W. E., Winnipeg. | Wilson, A. F., Portage la Prairie. |
| Hagman, J. P., Winnipeg. | Martin, S. T., Winnipeg. | Yeung, J. M., Rapid City. |
| Hassard, F. J., Deloraine. | Molloy, J. P., Morris. | |
| Harrison, W., Cypress River. | Munn, J. A., Carman. | |
| Hayter, G. P., Birtle. | Murray, G. P., Winnipeg. | |
| Henderson, W. S., Carberry. | Ovens, Hugh, Swan River. | |
| Hilliard, W. A., Winnipeg. | Part, J. H., Swan River. | |
| | Ponfret, H., Winnipeg. | |

The practice of the veterinary profession in Manitoba by any other person is direct contravention of the statute and renders him liable to prosecution. FREDERICK TORRANCE, Registrar.

LIGHTNING

kills and maims more human beings, destroys more property and stock than all cyclones, tornadoes and floods combined. It causes 75 per cent of all fire losses according to official record.



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SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS

ANY person who is sole head of a family or any male over eighteen years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties.—Six months' residence upon, and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section along side of his homestead. Price \$3.00 per acre. Duties, as must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate his acreage.

A homesteader who has exhausted his homestead right may acquire a quarter-section by taking a purchase agreement in certain districts. Price \$3.00 per acre. Duties, as must reside six months in each of six years from date of purchase and cultivate his acreage. Price a home worth \$300.00.

W. W. CLEGG,
Director of the Ministry of the Interior,
S. P. Building, Winnipeg, Man. (Advertisement will be beneficial)

1. The Colorado Beetle.—The most familiar of all the insects that attack potatoes is the Colorado Beetle, or, as it is commonly called, the "potato bug." So prolific is this pest that from a single pair in the beginning of the season many thousands of offspring may be produced before they are ready to enter the ground for the winter. Consequently, it is no wonder that unsprayed potatoes are often completely stripped of their foliage and killed.

Means of Control.—In controlling these insects it is very important, first, to begin to spray early, as soon as any of the eggs are hatching out; and, second, to cover every leaf, so that the young insects may be killed almost as soon as they appear, and thus never have a chance to do any injury. As the plants grow rapidly, and produce fresh foliage, and as all the eggs do not hatch at the same time, and as the adult beetles, being hard to poison, continue to lay their eggs for some time, it will be necessary to repeat the spray once or twice, until the insects are practically all killed. Either one pound Paris green or three pounds arsenate of lead, should be used with every forty gallons of Bordeaux mixture. Complaints about the failure of arsenate of lead to control these insects can usually be traced either to leaving off spraying until the slugs were well grown, and, therefore, much harder to kill than when quite small, or to not doing thor-

worms are the grub stage of the click beetles that are seen flying and crawling around in large numbers early in the spring, before most insects have made their appearance. These beetles choose old pastures or old sod fields to lay their eggs in, hence the reason for the presence of the wireworms when such fields are broken up. Since the wireworms remain in the soil as grubs for two or, in some cases, three years before changing into beetles, it is not safe to plant potatoes in such soil inside of that length of time.

Means of Control.—There is only one really satisfactory way of keeping a farm free from wireworms, and that is by making a practice of a short rotation of crops, so that fields will not be left in sod longer than two years. If, for any reason, a field has been left thus for several years, and it is desired to break it up, this should be done in the fall of the year, as fall plowing and working the land in the fall destroys many of the pupal-cases or freshly-formed adults. It is a good practice to sow rye the first fall, or barley next spring, and to seed it down with clover; next year take off a crop of clover, and plow down as soon afterwards as possible, and sow rye or some other cereal. When this harvested, plow again in the fall, and next year, as a rule, it is quite safe to plant potatoes or any other crop.



WORK OF FLEA BEETLE ON POTATO.

ough spraying. Sometimes, of course, failure was due to both causes. The writer has himself got excellent results from arsenate of lead, and knows some of the best potato-growers in the country, who use it in preference to any other insecticide. Usually, it seems to be less rapid in killing power than Paris green, but remains on the foliage much longer.

2. Flea Beetles.—The potato flea beetle is a very tiny black beetle, not more than one-twentieth of an inch in length. It has the habit, when disturbed, of leaping from one part of the plant to another. In addition to attacking the potato, it also attacks tomatoes, cucumbers and many kinds of weeds. Its presence can readily be recognized by the numerous little round holes which it eats out of the leaf. These holes not only weaken the plants greatly, but also allow the spores of destructive diseases, like the Late Blight, to get a favorable place to germinate. In some districts the flea beetles are doing as much harm as, or perhaps even more than, the Colorado beetles. In addition to the attacks of the adults on the foliage, their grubs, which are very small and white, attack the tubers, and cause what is known as "pimple potatoes."

Means of Control.—Poisons alone will not control these tiny insects, but if the arsenate of lead or Paris green is added to Bordeaux, as mentioned above, the plants will be satisfactorily protected.

3. Wireworms.—When potatoes are planted in soil that has been broken up from old sod, there will be danger for two, or even three, years of an attack from wireworms—slender, hard grubs, varying from about one-third of an inch to one and one-third inches in length and yellowish-white to brownish-white in color. These bore into the tubers and eat cavities out of them. Wire-

4. White Grubs.—Large white grubs with brownish heads and white, almost transparent bodies, almost always curved into a circle or semi-circle, are the larvæ or grub stage of the well-known June beetle, or bugs that fly into the house through open doors or windows in June. Their life history is very similar to that of the wireworms, and, like the wireworms, they not only attack potato tubers, but many other kinds of plants.

Means of Control.—The same means of control should be used as for wireworms, namely, fall plowing, and a short rotation of crops. If a few furrows are run through an infested field, and hogs are allowed to root in it freely, they will often destroy the pest more rapidly than any other known way.

5. Potato Aphis.—In some parts of Ontario, green aphides attack the leaves and stems of potatoes, and do much damage to the plants by sucking the nourishment out of them.

Means of Control.—As soon as the insects are seen, spray the plants thoroughly, covering the under surface of the leaf, as well as the upper surface. Use whale-oil soap, 1 pound to six gallons of water or common soap, one pound to four gallons, or kerosene emulsion. Use plenty of pressure, so as to drive the spray forcibly against the insects, and thus make it more certain in its results. Repeat, if necessary.

6. A number of other insects of less importance sometimes attack potatoes. Such plants are black blister beetles, leaf-hoppers, potato stalk weevils, four-lined leaf-bugs, and occasionally species of cutworms. It is seldom, however, that very serious loss is caused by any of these insects.

POTATO GROWING

Last winter at Manitoba Agricultural College an interesting talk on potato culture was given by S. R. Henderson, a successful producer of tubers. In part he said, as follows:

Do not grow potatoes too long on the same land, but follow with roots or vegetables, or perhaps with wheat, and it is advisable to put 20 loads of manure to the acre every two or three years. Varieties that give best results for late planting are Late Puritan, Dreer's Standard Freeman, American Wonder. Of these the best results have been with the Puritan, a good cropper and a splendid keeper and in good demand on the market. Early varieties: Bovee, Early Ohio, Moroton Beauty. Of these I give first place to the Bovee. In fact, there is no variety I have tried that gives better satisfaction to customers than the Bovee. It is a good cropper

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For Years Could Get No Relief Until She Tried

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Can Eat Anything Now.

Mrs. Herman Dickenson, Benton, N.B., writes: "I have used Burdock Blood Bitters and find that few medicines can give such relief in dyspepsia and stomach troubles. I was troubled for a number of years with dyspepsia and could get no relief until I tried Burdock Blood Bitters. I took three bottles and became cured and I can now eat anything without it hurting me. I will highly recommend it to all who are troubled with stomach trouble."

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have no disks, yet produce twice the skimming force, skim twice as clean, skim faster and wear longer than common separators. The World's Best. The manufacture of Tubulars is one of Canada's leading industries. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells. Write for Catalogue No. 111.



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At the 1907, 1908 and 1909 LONDON SHOWS of the Shire Horse Society, ALL THE CHAMPIONS WERE Sired BY or trace back to FORSHAW'S SHIRE HORSES.

NOTICE.—DAN PATCH, CHAMPION Shire stallion at 1909 International Exposition, Chicago, also Champion at Illinois State Fair, and Iowa State Fair, 1909.

"CLEVELEY'S HAROLD," CHAMPION Shire Stallion at St. Joseph, M. O., Inter-State Fair, 1909. "Eekham Masterpiece," CHAMPION at the American Royal, Kansas City, 1909, ALL were PURCHASED FROM US.



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Prices reasonable.

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Carlton-on-Trent, Newark,
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and a good keeper. The Early Ohio is also a good variety, but if planted on sandy soil and there comes dry weather they develop rot. The variety that stands first in report from experimental farm, Brandon, for 1909 is Late Puritan, with yield of 521 bushels. This includes results from nineteen varieties. The total acreage for the province of Manitoba for 1909, according to the reports issued by the department of agriculture, was 28,265 acres, with an average yield of 192 bushels per acre. Putting the price at 35 cents per bushel, which is low, for I did not sell any under 40c., and got 45c. for most of the crop, the total value was \$1,907,570.00. I fail to see why this yield per acre cannot be brought to 250 bushels per acre, or half the yield at the Brandon experimental farm, which would mean to the acreage reported for the past year, 7,066,250 bushels at same price, \$565,617.50 in the pockets of the farmers and gardeners of the province.

The labor required in raising potatoes is not so much as in market gardening, for if the harrow is kept going until it is time to start the horse cultivator and then the cultivator is at work, especially in dry weather at least once a week, they will do well. The highest expense will be in the digging, and those near Winnipeg can get Galician women in any number at \$1.00 per day, although the last two seasons when the rustle of the fall work began they had to be given \$1.25 per day.

Success with potatoes depends upon suitable land, good seed and good cultivation. There are many advantages in being near Winnipeg, or any other large city with a good market. But you will have to cater to the markets; give them the best you can produce, and get special prices from special customers. Give attention to quality; give them the right article, and you will be sure of a market at a good price. The value of all foods depends largely upon the perfection of its production and in what condition it is delivered to the customer.

SEED BALLS ON POTATOES

The average farmer has neither time nor inclination to bother with actual seed as occasionally found on the plants in a potato patch. Those who wait to consider plant life, however, will note that it is only from such seed found in what are commonly called potato apples that new varieties can be produced. In the potato line few Westerners are looking forward to a day of renown or notoriety because of the bringing into use a variety that will prove superior to the popular standard sorts now grown. However, for those who have time and inclination it is a laudable work. It is just possible that potatoes developed from seed originally grown on prairie fields of the Canadian West will outyield standard varieties and perhaps mature earlier and prove more satisfactory in many ways.

In the Balmoral district Wm. Hall for the past few years has devoted considerable attention to originating a variety that will be worth placing on the market. In 1905 he collected about a pint of seed from potato apples that were found in his patch. These were carefully sown and about a quart of undersized potatoes came in return. In 1907 unsatisfactory conditions resulted in an increase to only three quarts. The next year he had somewhat over one bushel. They were of various sizes, shapes and colors, but notably smooth. On every occasion great loss was experienced owing to partial neglect or frost. However, the 1908 result was encouraging and in 1909 the crop totalled over 40 bushels. This year Mr. Hall has selected several of similar types and is testing to see which of the many types is most worthy of special attention.

INSTRUCTIONS IN BEEKEEPING—VII

A swarm of bees in May is worth a load of hay.
A swarm of bees in June is worth a silver spoon.
A swarm of bees in July isn't worth a fly.
A buckwheat swarm in August— seems to have been overlooked by the author of this famous little stanza. The fact is, natural swarming at any



Melrose Stock Farm SHORTHORNS CLYDESDALES

Sold out of sheep. Six young bulls, a few heifer calves for sale; five young stallions, from one to three years old.

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Special prices and terms for choice breeding Shorthorns to make room for winter. Come and see them, or write for particulars, also prize-winning Barred Plymouth Rocks. Eggs for sale in season.

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Importation and breeding of High-Class Clydesdales a specialty.

Special importations will be made for breeders at minimum cost. My next importation will arrive about 1st June.

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Holstein-Friesian bull calf, nine months old, sire Duke Varcoe Beryl Wayne (7718), dam Duchess de Kol (7158) and litter of registered Sable Collie puppies.

Glen Bros., Didsbury, Alta.



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in prizewinners in numbers of sales, in dairy quality, in breeding cows, in breeding sires, in importation, in home-bred animals, in breeding results. Jerseys of all ages and both sexes for sale.

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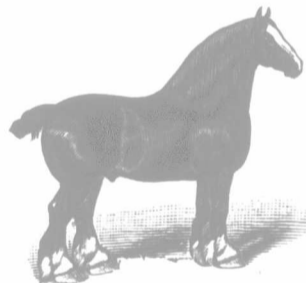
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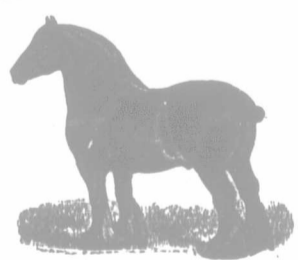


These horses are the property of Patrick O'Sullivan, and they weigh from 1100 to 1500 pounds; besides a big proportion of them are mares.

All must be sold. No reserve. Implements to be disposed of.

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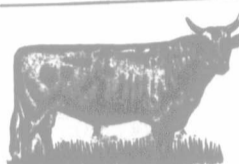
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Yorkshire pigs, both sexes, ready to wean
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of every description. Owing to the rapid increase in business, Mr. L. C. Scruby has been taken into partnership. During the spring months the export of horses of the light and heavy breeds will be a specialty. Write for prices, terms and references.



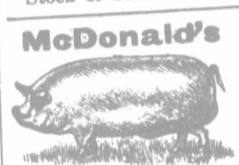
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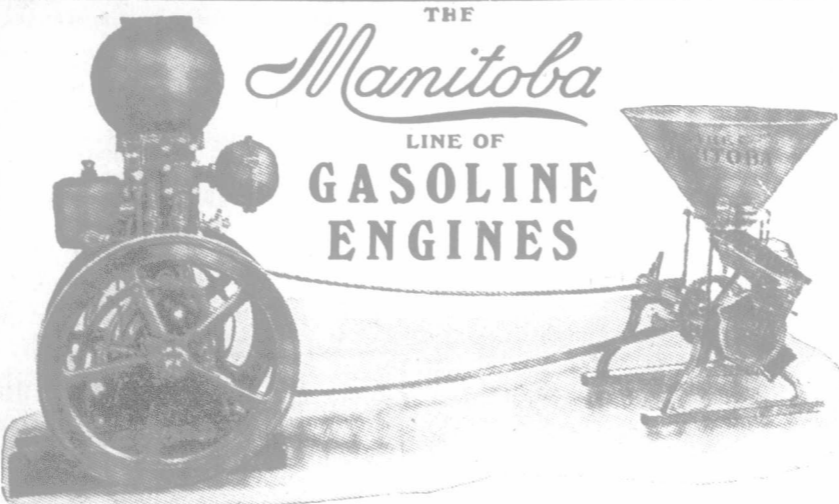


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A few fine long pure-bred Yorkshire boars on hand. Farrowed April from prize-winning stock. Price \$20.00 each.

Also three young Shorthorn bulls. Apply for prices on bulls.
A. D. McDONALD, Napinka, Man.

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are **SIMPLE, RELIABLE** and **ECONOMICAL. FULLY GUARANTEED** and **ALWAYS SATISFY.**
Made in all sizes from 2 to 25 H.P. vertical, horizontal, stationary and portable.
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Gentlemen:
I consider your 7 H.P. gasoline engine the simplest on the market to-day. It will do more work with less gasoline than any other engine I have ever seen, and it requires less water to keep it cool. I have chopped 100 bags with 3½ gals. It is in use every day and is giving good satisfaction. Yours truly, W. JOHNSON.

We also manufacture **WINDMILLS, GRAIN GRINDERS, STEEL SAW FRAMES and WOOD and IRON PUMPS.** Send for catalogue A.

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I have for sale some great, thick, robust, young stock bulls and some grand young heifers ready to breed. I can supply ranchers with bulls of a serviceable age at very reasonable prices. My herd won many prizes at the leading exhibitions in Alberta last season. Imported Baron's Voucher, a champion bull in Scotland, heads my herd. Write me for prices.

C. F. LYALL STROME, ALTA.

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Imported Spanish and mammoth American Jacks, at reasonable prices. I have also on hand some imported Percheron, Belgian and Clydesdale stallions, a number of prize-winners.

NOTICE—A guarantee goes with every stallion sold, the buyer taking no chances. My prices are right and my terms are reasonable. I will take land or any kind of stock in exchange. All Jacks and stallions have first-class pedigrees.

Write me what you want. **L. K. PARE, Stavely, Alta.**

PURE BRED YORKSHIRES FOR SALE



12 November sows, when bred, \$25.00 each; 20 April pigs \$12.00 each. This stock is descended from the sow Snowflake, first at Dominion Exhibition, Winnipeg, 1907, and from an excellent sow bred by D. C. Flatt. These prices are f. o. b. Neepawa. Can ship via C. N. R. or C. P. R. Write for further particulars.

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time is more or less of a disaster. It is more; it is reflection on the progress of this branch of the science of agriculture. The farmer regulates the increase of all other farm stock; why should he be lax here? Lack of swarm control spells heavy loss to the beekeeper, great and small. It is the greatest obstacle to keeping bees as a side line with farming or any other business. It necessitates close watching ten hours daily, seven days in the week by a responsible person for nearly two months in the busiest part of the summer. This alone is too big a price to pay, when it can be avoided, but if the price is not paid by watching, it is by loss of swarms, and hay and spoons go sailing away to parts unknown. When the little lambs die in spring it is considered a loss; but when a swarm absconds, the mother sheep has died, and left a suckling which will not grow into much value for a year, and may perish before reaching maturity.

Experience, and careful weekly examination of each hive will prevent this loss, and make it possible for any systematic person who has a spare hour of daylight daily, or a half day weekly to keep 30 or 40 colonies at a profit of \$100 or more per annum.

To have any animals really do well, we must care for them for their own sake. Show me a sleek, good-natured team, and I will show you a man who puts a lot of time on his horses simply for the love of it. Success in beekeeping comes by having the same love for the busy little denizens of the hive. One who has it will spend his or her spare time studying their actions at the entrance, or wherever they may be seen. The weekly visit to the interior of the hive will be a pleasure. Conditions and treatment, and results, will be watched with much interest, and noted for future reference in similar conditions.

Bees swarm when they have contracted what we call the "swarming impulse." It is a state of mind, or nerves, or something which we do not well understand, which can be prevented, but is not easily cured before running its course. Certain conditions nearly always induce the swarming impulse, and, once under its influence, the bees of the hive make certain preparations before swarming. Before one can learn to keep bees from swarming, one must learn what these conditions are that cause it, and what preparations the bees make when under its influence. Then, when we find causes of swarming present in a hive, but no preparations yet made, we know that swarming may be forestalled by removing the causes. But if the causes have remained long enough to induce the swarming impulse, and preparations have begun, drastic measures are necessary to remove not only the causes, but the "impulse," and it is almost like trying to break up a "sitting hen."

In our next article we shall take up the cause of swarming, and how to prevent it.

HOW TO BEGIN WITH BEES
According to the famous instructions for making "pemmican," "first catch your buffalo."

Get bees near home; have them inspected by a competent, disinterested person. If they are not Italian, buy some queens from a reliable breeder. The former owner of the bees will be able to give the beginner a deal of gratuitous advice on their management.

A better way is to spend a season or two in the apiaries of some successful specialist, or a term at the agricultural college, at the same time getting all the information possible from one's tutor, and from reading standard books and journals.

Catalogues of supply dealers are good reading matter. A small supply of goods can be bought as a first investment, and after that it is best to make the bees pay their way. The following is a good beginner's outfit: Smoker veil, bee-brush, text-book, subscription to bee journal, one colony of bees in 10-frame hive; two extra hives, with queen-excluder and extracting supers for all three; medium brood foundation, and wire embedder.

This is an outfit for the production of extracted honey. I recommend this in preference to a comb-honey outfit, because it is a much easier matter

Kendall's Spavin Cure



The cure that saves horsemen and farmers millions of dollars every year.

It is known the world over as the one certain, reliable remedy for Spavin, Curb, Splint, Ringbone, Bony Growths and any Lameness.

Cases just developing and old, stubborn sores and swellings readily yield to the wonderful curative powers of this famous remedy.

Orangeville, Ont., Dec. 21, '08

"We had a horse which was getting very lame on account of a Spavin. I was anxious about him as we could not work the beast when we most needed him.

Our teamster saw Kendall's Spavin Cure in the store and tried it.

I am pleased to say he had success as the horse has stopped limping and is doing his day's work."


W. A. NICHOLSON.

Don't worry about Spavins, Growths, Swellings or Lameness, but use Kendall's Spavin Cure. It cures every time. The world's best liniment for man and beast.

\$1. a bottle—6 for \$5. Get our book "A Treatise On The Horse," free at dealers or from us.

Dr. B. J. KENDALL CO.
Eosburg Falls, Vt. 52

MIDDLETON'S
Pure Bred Large Yorks and Tamworths



Stock of 800 to choose from. Prices from \$7.50 up. Inquiries given immediate attention.

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H. A. MIDDLETON, BERGEN, MAN., or H. G. MIDDLETON, 154 Princess St., Winnipeg

FOR SALE

The Clyde Stallion, Wawanessa Chief, 3211

a thick, blocky active horse, girth 7 ft. 1 in., bone below knee 11½ inches, 9 years; sire Jubilee Prince, he by Prince Patrick, champion at the World's Fair, dam, Imp. Annie Rooney. A sure and sound stock-getter. Winner first, Winnipeg and Brandon, 4th Calgary, 1910.

Also the Clyde Stallion Autonomy, 4802

6 years, by Matchless, by McQueen; out of Eva Charming. This horse has great quality and action, is sure, sound and broken to harness.

Also the French Coach Stallion Mercier, 3543

by Imp. Menos, out of Gulmare, by Perfection, rising 10 years. Three of his get won 1st at Calgary, 1909, also 1st, 2nd and 3rd for best foal of any light stallion. In 1910 his get again took first in Calgary, and his colts won several prizes in harness and saddle classes, both in Calgary and Vancouver, including the heavyweight Hunter championship. This horse is very sure, stands 16.3 hands high, with great quality and substance.

All the above horses are range broken. Price low, or will exchange for horses.

BOW RIVER HORSE RANGE,
5-8-c. Cochrane.

all's Cure

the cure that horsemen and owners millions of dollars every year.

is known the 1 over as the certain, reliable dy for Spavin, Splint, Ring-bone, Growth, Lameness, etc. just developed old, stubborn sores and ready curative remedy.

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NICHOLSON.

bout Spavins, s or Lameness, Spavin Cure. The world's an and best, r \$5. Get our in "The Horse," om us.

DALL CO. ills, Vt. 52

for a beginner to get honey sized in full-combs than in sections. If the honey is for home use only, or to sell to a few neighbors, it can be cut and used out of the large frames. After some experience has been gained in producing honey in extracting combs, the more difficult matter of producing it in pound sections can be taken up.

The second or third year, if the love for beekeeping holds, a further investment will be necessary for an extractor and uncapping knife, and uncapping can, wax-press, etc.

Ontario. MORLEY PETTIT.



QUANTITIES AND WEIGHTS

Following are the weights of given quantities of food stuffs commonly given to poultry:

One quart of middlings, 1 pound ; one quart shorts, 1 pound; one quart bran, 3-4 pound; one quart alfalfa meal, 3-4 pound; one quart rolled barley, 1 1/2 pounds; one quart wheat, 2 pounds; one quart corn, 2 pounds; one quart beef scraps, 1 1-3 pounds; one quart beef or blood meal, 1 1/2 pounds; one quart oyster shells, crushed, 3 pounds; one quart limestone grit, 3 pounds; one quart millet seed, 1 1/2 pounds; one quart unshelled oats, 1 pound; one quart charcoal, crushed, 1/2 pound; one quart Kafir corn, 1 1/2 pounds.

Nothing equals a grass run when chicks are old enough for freedom. The grass or clover is rich in mineral matter. It has acid to dissolve other foods. Chicks like to scratch its roots apart. That exercise gives amusement and strength. There are bugs hidden in those depths. The ground itself moistens and softens feet. Chicks will eat considerable soil, aside from gravel. It acts like charcoal, as a purifier and sweetener of bowels. Good green food for chickens and hens should constitute one of the main parts of their diet all summer. Fowls like cut greens provided in the shade on hot days, but ordinarily prefer to pick their supplies fresh and crisp.

POULTRY COMMENTS

EDITOR FARMER'S ADVOCATE : Some time ago I noticed an article on "Incubating Turkey Eggs," in THE FARMER'S ADVOCATE, and as we are raising a few turkeys I would like to give our experience. We set a number of eggs under hens and also under turkeys, and found that the turkeys were by far the best sitters, and much better mothers for little turkeys. When the little ones hatched the hens would call them, pick up feed and drop it for them to eat, and this the turkeys did not seem to understand, so that we had to teach them to eat by putting moist bread on the side of the box, in small particles so they would notice it and then they began to pick at it, and thus learned to eat. The turkey hen taught her flock to eat by picking up the food and holding it in her beak at the same time calling them; the little turkeys responded to it immediately. Turkeys hatched under a turkey hen the first of June last year were larger by far in September than those hatched under hens in April. Nature's methods are always the best whether hatching chickens, turkeys, ducks or geese. In reading Mr. Golding's article on the "Open-front Poultry House," with muslin curtains, I concluded it was very good, and in our experience with poultry we have used both kinds of houses and I prefer the medium of both. By this I mean having part glass and

Put Your Feet in a Pair at Our Risk ! STEEL SHOES

Will Surprise and Delight You With Their Lightness, Neatness and Comfort Their Almost Unbelievable Durability

We want you to slip your feet into a pair of Steel Shoes—to FEEL and SEE and KNOW how much LIGHTER, NEATER, STRONGER, MORE COMFORTABLE they are than any other work shoes in existence. Hence we are making this special FREE EXAMINATION OFFER, merely asking a deposit of the price, while you are "sizing up" the shoes. If they fail to convince you IMMEDIATELY you can notify us to send for them at our expense and we will refund your money.

MUST SELL THEMSELVES

We ask no favors for Steel Shoes. Compare them with the best all-leather work shoes you can find. Give them the most rigid inspection inside and out. Let them tell their own story. It's no sale unless, of your own accord, you decide that you must have them.

Better than the Best All-Leather Work Shoes

Steel shoes are the strongest and easiest working shoes made.

There's more good wear in one pair of Steel Shoes than in three to six pairs of the best all-leather work shoes. The leather is waterproof. The Steel Soles are wear-proof and rust-resisting.

They are lighter than all-leather work shoes. Need no breaking in. Comfortable from the first moment you put them on.

Impossible to get out of shape. They keep the feet dry. They retain their flexibility in spite of mud, slush or water. They cure corns and bunions, prevent colds and rheumatism—save doctors' bills and medicines.

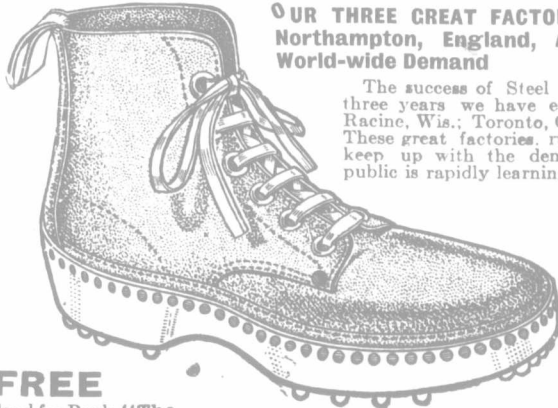
Thousands of Farmers Shout Their Praises

The enthusiasm of users knows no bounds. People can't say enough for their comfort, economy, lightness and astonishing durability. The introduction of Steel Shoes in a neighborhood always arouses such interest that an avalanche of orders follows.

Here is the way Steel Shoes are made: The uppers are made of a superior quality of leather, as waterproof as leather can be tanned.

Wonderfully soft and pliable—never gets stiff. The soles and sides are made out of one piece of special light, thin, springy, rust-resisting Steel. Soles and heels are studded with adjustable Steel Rivets, which prevent the bottoms from wearing out. Rivets easily replaced when partly worn. 50 extra rivets cost only 30 cents and should keep the shoes in good repair for at least two years! No other repairs ever needed! The uppers are tightly joined to the steel by small rivets of rust-resisting metal, so that no water can get between.

The soles are lined with soft, springy, comfortable Hair Cushions which absorb perspiration and odors and add to ease of walking.



FREE

Send for Book "The Sole of Steel," or order Steel Shoes on blank below

Sizes 5 to 12. Black or Tan Color.

6, 9, 12 and 16 Inches High

Steel Shoes, 6 inches high, \$2.50 per pair.

Steel Shoes, 6 inches high, better grade of leather, \$3.00 per pair.

Steel Shoes, 6 inches high, extra grade of leather, black or tan color, \$3.50 per pair.

Steel Shoes, 9 inches high, \$4.00 per pair.

Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$5.00 per pair.

Steel Shoes, 12 inches high, \$5.00 per pair.

Steel Shoes, 12 inches high, extra grade of leather, black or tan color, \$6.00 per pair.

Steel Shoes, 16 inches high, \$6.00 per pair.

Steel Shoes, 16 inches high, extra grade of leather, black or tan color, \$7 per pair.

W. M. RUTHSTEIN Sec. and Treas.

STEEL SHOE CO., Dept. 438, Toronto, Can. Main Factory, Racine, Wis., U. S. A. Great Britain Factory, Northampton, Eng.

OUR THREE GREAT FACTORIES in Racine, Toronto and Northampton, England, Almost Overwhelmed by the World-wide Demand

The success of Steel Shoes is almost startling. Within three years we have established Steel Shoe factories in Racine, Wis.; Toronto, Canada, and Northampton, England. These great factories, running at full capacity, can scarcely keep up with the demand from all over the world. The public is rapidly learning that Steel Shoes are

Good for the Feet!
Good for the Health!
Good for the Bank Account!

These shoes are better for the feet, better for the health, better for the pocketbook than heavy work shoes or rubber boots.

You Actually Save \$5 to \$10 a Year by wearing Steel Shoes. Figure it out for yourself. One pair will outlast 3 to 6 pairs of ordinary work shoes. They save all repair bills and keep your feet in perfect condition.

Free Examination

And Your Money Back Promptly if It Looks Better Than the Shoes

You owe it to yourself to investigate. Get a pair of Steel Shoes for Free Examination by sending the price, which will be returned if you and your own feet are not convinced of their merits.

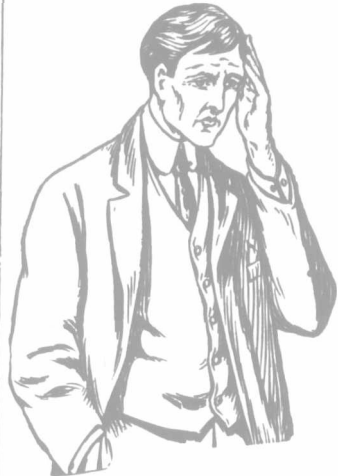
Why Wait? Send Now!

No risk! No bother! No obligation! Don't hesitate! Act while this offer is open! Simply state size of shoe you wear. Enclose the price and get the shoes for Free Examination.

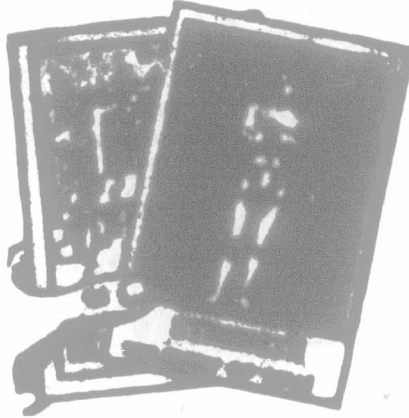
For general field work we strongly recommend our 6-inch high Steel Shoes at \$2.50 per pair, or the 9-inch at \$5.00 per pair. For all classes of use requiring high-out shoes our 12 to 16-inch high Steel Shoes are absolutely indispensable. Shoes can be returned at once if not O. K., and the money will be refunded.

IT IS FAR BETTER TO BE

An Old Man Who Feels Young THAN A Young Man Who Feels Old



HERE IS AN OLD YOUNG MAN



HERE ARE THE BOOKS THAT GIVE THE SECRET OF PERPETUAL YOUTH. LET ME SEND THEM TO YOU FREE.



HERE IS A YOUNG OLD MAN

Years count for nothing if you have the vitality. You can feel young all your life where there is ample nerve force to back your courage. Let me make you a "HEALTH BELT MAN." Let me supply you with that vim, vigor and manly strength which conquers all obstacles. A man at 60 should be in the prime of life; early decline unfits you for the world's work. I have talked with more than 100,000 debilitated men; the lack of vital vigor is responsible for most failures; you can't command the attention and admiration of women or even men if you lack personal vitality. My HEALTH BELT fills you full of vital force; it strengthens weakened parts; it gives you courage to meet squarely any eyes which may look into yours. You become as attractive in your personal influence as the strongest, most full-blooded man you know. Thousands upon thousands have been cured by

my HEALTH BELT. Worn nights for two or three months, it sends the continuous tonic current of electricity into your system all the time you are sleeping. No privations, no medicines, no restrictions, excepting that all dissipations must cease. Cures weak back in one night; benefits from first hour. It has special attachments which carry the current to the weakened parts. Used by both sexes for rheumatism, kidney, liver, stomach, bladder disorders, etc. C. Simpson, Pilot Mound, Man., writes: "Your Health Belt restored me to health and strength. Use my name as you see fit." If in or near this city, call and try the Belt in my office, otherwise send for the free book, which explains all and tells you how, for a few dollars, my Health Belt will give you back your manhood. No charge for advice at office or by mail. Use the coupon if more convenient.

FREE UNTIL CURED

Call or write to me and I will at once arrange to let you have the Belt on trial, not to be paid for until cured. No deposit or advance payment. Send it back if it doesn't do the work. Liberal discount for cash if you prefer to deal that way.

DR. C. F. SANDEN, 140 Yonge St., Toronto, Ont.

Dear Sirs,—Please forward me your Book as advertised, free

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Stock of 800 to choose from. Prices from \$7.50 up. Inquiries given immediate attention.
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horse, girth 7 ft. 1 1/2 inches, 9 years; by Prince Patrick, World's Fair, dam, y. A sure and Winner first, 4th Calgary, 1910.

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horses are range or will exchange
HORSE RANGE,
Cochrane.


How Weather Changes Bring Death to Roofing



The life of Roofing is Saturation and Coating. Yet this vital part is sorely neglected by nearly every Roofing maker. The Basis of most Roofing, except Brantford, is wood pulp, jute or cotton-cloth—all short-fibred. When it passes through "Saturatory Process," it does not become actually saturated—merely coated. This "Coating" is of refuse and quickly evaporates—wears off—exposing foundation to savage weather. It absorbs water and moisture, and becomes brittle, cracks, rots and finally crumbles. Even when new it softens under heat, sagging and dripping. Foundation of Brantford Crystal Roofing is a heavy, evenly condensed sheet of long-fibred pure Wool, saturated with Asphalt, which is forced into every fibre—not merely dipped. It is heavily coated with time-defying, fire-resisting Rock Crystals, which require no painting. This special Coating cannot evaporate and protects insides. Brantford is indestructible, pliable, tight, water, weather, spark, acid, alkali, smoke, fire-proof.

Brantford Roofing

cannot absorb moisture, freeze and crack in cold weather, or become sticky and lifeless in hot weather. Brantford Crystal Roofing is not the kind all manufacturers care to make, because it costs extra money, yet it costs you no more than short-life Roofing. Roofing Book and Brantford Samples are free from dealer or us. Brantford Asphalt Roofing, Nos. 1, 2, 3. Brantford Rubber Roofing, Nos. 1, 2, 3. Brantford Crystal Roofing, one grade (heavy). Mohawk Roofing, one grade only.



BRANTFORD ROOFING COMPANY, LTD., BRANTFORD, CAN.

Winnipeg Agents: General Supply Co., of Canada, Limited
Corner Market and Louise Streets,
Vancouver Agents: Fleck Bros., Limited, Imperial Building, Seymour Street

part cloth, just as Mr Golding has. I have tried the all-muslin front and find that on cold or stormy days, when the frames had to be down, the chickens huddled together to keep warm and did not hustle around as they ought. It was very cold in the coop, and the birds froze their comb in the day time. For best results I prefer as much cloth as glass, making each about one-eighth the front of the coop.

For a temporary coop, lasting two winters and one summer, I built a frame 10 x 30, with posts for corners and in the middle; then 2 x 4 scantlings around the top, and enough across to hold the wire up, and barbed wire all across the top, close enough to keep the straw from falling through; also from one end to the other the back and east end. Then we threshed our straw on it and put a door in one end and window and muslin in front, and we had as good, warm and dry coop as one could wish for. Another cheap temporary coop can be made of baled straw, and the straw sold in the spring.

LEON B. LOSEY.

HOME PRESERVATION OF EGGS

Dealers in eggs, when they wish to hold them for a time, make no use of preservatives, but simply place them in cold storage. This method is not practicable in the home, however. "Many methods of packing and preserving eggs for home use have been tried," to quote from an Ames, Iowa, bulletin on the subject, "such as packing in salt, oats or bran; covering them with paraffine, vaseline, butter, or lard; storing on shelves and in racks in cool places; and immersion in salt brine, salicylic acid, water-glass, or lime-water." Of all those mentioned, only two, the use of water-glass and of lime-water, have been effective in keeping eggs for several months. Water-glass is the better preservative of the two, eggs having been kept in a solution of this chemical for three years.

"Water-glass (soluble silicate of sodium) is a pale yellow, odorless, syrupy liquid, costing usually from 60 to 90 cents per gallon. For use, stir one part of water-glass, by measure, in 11 parts of boiled water, either hot or cold, but must be cool before using."

"Slake three pounds of good quick-lime in a small amount of water, then add the milk lime thus formed to three gallons of water. Keep the mixture well stirred for a day, then allow the lime to settle, and use only the clear liquid."

KIND OF EGGS TO PRESERVE.
No eggs that float, or that are dirty, stale, cracked, or thin-shelled, should be used. Only those that are fresh, clean, unwashed and sound are suitable, infertile eggs being preferred.

Vessels for liquid must not be of metal, or corrosion will take place, but those of either earthenware, glass or wood are suitable. Six-gallon earthenware jars, with covers, holding from 20 to 24 dozen eggs each, are very convenient. Whatever vessels are used should be first carefully scalded and made sweet.

The preferable method is to fill the vessel used half-full of the liquid, and, as eggs are laid, they are carefully placed therein. There should be at least two inches of preservative above the eggs always. Keep in a cool cellar.

The cost is less than one cent per dozen for the water-glass method, and, if lime is used, very much less than that, even. There should be no attempt to keep eggs over year, but until that time, preserved as described above, they can be used for nearly all purposes in place of strictly-fresh eggs.

Prof. Shutt, of Ottawa, differs somewhat from the American experts quoted above. He prefers the lime-water mixture, and uses but 2 pounds of quick-lime to 5 gallons of water. On the other hand, Prof. Graham, O. A. C., Guelph, favors the water-glass method. In co-operative experiments, he says more people succeed with water-glass than with lime-water. He would dilute American water-glass with only seven times its bulk of water, but the English water-glass, which is much thicker, requires about twelve times its bulk of water added.

* * *

In 1904 Canada exported 5,780,316 dozen eggs, of which 5,679,048 dozen went to Great Britain, and the balance to cities near the border. Last year

THROW AWAY ALL YOUR FEARS

Backache, Gravel and Rheumatism Vanish Before Dodd's Kidney Pills.

Proved Once Again in the Case of Mrs. Fred Krieger, Who Suffered From the Worst Forms of Kidney Disease.

PALMER RAPIDS, Ont., May 30 (Special).—The thousands of Canadian who live in daily terror of those terrible forms of Kidney Disease known as Backache, Gravel and Rheumatism, will be deeply interested in the story of Mrs. Fred Krieger, of this place.

"I was for years a great sufferer from Kidney Disease, Gravel, Rheumatism and Backache," Mrs. Krieger states. "It all started through a cold, but I got so my head ached, I was nervous, my limbs were heavy, I had a dragging sensation across my loins, and I was totally unfit to do anything."

"Reading about wonderful cures by Dodd's Kidney Pills led me to buy some. After using a few I found they were doing me good and this encouraged me to continue their use. Eight boxes made me well."

"I have been able to do my own work ever since and to-day I am completely cured. Dodd's Kidney Pills gave me health and I feel like a new woman."

If you keep your Kidneys strong and healthy you can never have Backache, Rheumatism or Gravel. Dodd's Kidney Pills never fail to make the Kidneys strong and well.

the exports were only 558,132 dozen, a decrease of 5,222,184 dozen. Last year Canada imported 1,146,041 dozen eggs from the United States—about 200,000 dozen more than imported in 1904. For the eggs Canada bought in 1904 the United States received \$90,000, and last year \$230,000. The average price paid per dozen last year was almost double that paid in 1904. The changed conditions are due more to an immense increase in the consumption of eggs rather than to a decline in the industry.

Sleep was Impossible

ALMOST DRIVEN TO DESPAIR UNTIL CURED WITH USE OF

DR. CHASE'S NERVE FOOD

No symptom of nervous prostration is more to be dreaded than the inability to sleep. Man can exist for considerable time without food, but without sleep, and the restoration which it brings, he soon becomes a mental and physical wreck.

When you cannot sleep and rest look to the nervous system and remember that lasting cure can only be obtained from such treatment as Dr. Chase's Nerve Food, which naturally and gradually restores the exhausted nerves to health and vigor.

Mr. Wm. Graham, Atwood, Ont., writes:—"My wife had been ill for some time with nervous prostration and we had two of the best doctors we could get, but neither of them did her any good. She gradually became worse and worse, could not sleep and lost energy and interest in life. She was almost giving up in despair when a friend advised the use of Dr. Chase's Nerve Food."

"From the first box my wife used we noticed an improvement and after using six boxes she is completely cured and as well as she ever was, eats well, sleeps well and feels fully restored. I cannot say too much in praise of this valuable medicine for I believe my wife owes her life to its use."

Every dose of Dr. Chase's Nerve Food goes to the formation of so much rich, red blood and is therefore certain to do you good.

50 cts. a box, 6 for \$2.50, all dealers; or Edmanson, Bates & Co., Toronto. Write for free copy of Dr. Chase's Recipes.



Doctor's Book Free

To any man who will mail me this coupon I will send free (closely sealed) my finely illustrated book regarding the cause and cure of diseases. This book is written in plain language, explains many secrets you should know. It tells how you can cure yourself in the privacy of your own home without the use of drugs.

Don't spend another cent on doctors' and worthless medicines. Nature's remedy cures to stay cured. You should know about it.

If you suffer from weakness of any kind, rheumatism, lame back, sciatica, lumbago, debility, drains, loss of power or stomach, kidney, liver or bowel troubles, you must not fail to get this book.

Dear Sir:—I purchased one of your best Belts several years ago for a lame back and I can truthfully say that the first time I wore it my back felt stronger, and in a short time I was completely cured. This was over five years ago, and I have had no return of the trouble since. I have recommended your Belt to others, and will always be pleased to tell anyone the benefit I received from it.—ARTHUR MCKAY, Shoal Lake, Man.

Do you doubt it? If so, any man or woman who will give me reasonable security can have my Belt, with all the necessary attachments suitable for their case, and they can

PAY WHEN CURED

Call out this coupon now and mail it. I'll send the book without delay, absolutely free. Call if you can.

Dr. M. D. McLaughlin, 112 Yonge St., Toronto, Can.

Dear Sir:—Please forward me one of your Books, as advertised.

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Consultation free. Office hours: 9 a. m. to 6 p. m. Wednesday and Saturday till 8.30 p. m.

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OUR FEARS**

and Rheuma-
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the Case of Mrs.
Suffered From
Kidney Disease.

Ont., May 30
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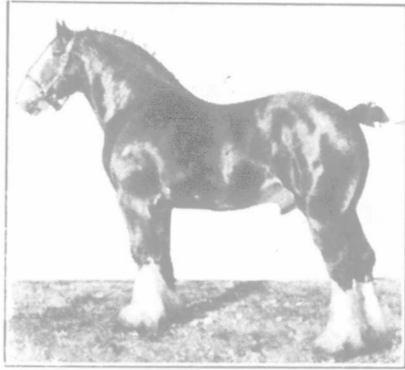
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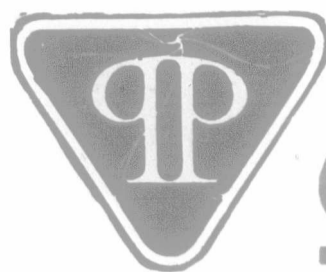
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Every Farmer's Wife in Canada Ought to Read this Advertisement



IF you, Madam, are a farmer's wife, you should use your influence to get your husband to roof the house and barn with Oshawa Galvanized Steel Shingles. For these practical reasons:—

Safe Against Lightning

Every thunderstorm that passes over your place endangers his life and your own, and threatens damage or destruction to the property. But there would be no such danger if the farm buildings were roofed with Oshawa shingles. They protect any building against lightning—far better than any lightning-rod system possibly can.

Safe Against Fire

And, at certain times in the year, the house you live in and the barn nearby is in danger from fire—flying sparks from the threshing machine; sparks from the kitchen chimney; sparks from passing locomotives; sparks from forest fires, perhaps. Farmer's roofs catch fire in many ways—and you are different from most farmer's wives if you do not dread this ever-present danger. You need not dread it at all when the buildings are covered with a seamless steel fireproof Oshawa shingled roof.

Improves Cistern Supply

Probably you depend a good deal on cistern water. An Oshawa-shingled roof keeps your cistern fuller, and the water is cleaner, tasteless, without odor. It never can be from a wood-shingled roof. It always is from an Oshawa-shingled roof.

Costs Very Little

When you speak to your husband about this, ask him to send for the instructive and handsomely-illustrated free book called Roofing Right. He will see, when he reads that, that the actual cost of an Oshawa-shingled roof is less than five cents per year for a hundred square feet of roof surface. He will see that this roofing is guaranteed to satisfy in every sense for twenty-five years, or he gets a new roof for nothing. He will see that it will pay him well to cover his house and barn with a roof that is guaranteed wet-proof, wind-proof, fireproof and lightning-proof for a quarter century, and that will be a good roof in every sense for fully 100 years.

Use Your Influence

Interest yourself in this vital matter. It directly concerns you. Get your husband to inquire into it. Get him to send for the free book—now—to-day. Or send for it in your own name. Do that, anyway. You will be interested in what the book tells you; and it is important that you, as well as himself, should know all about roofing, and about Roofing Right in particular. Send now for the book, please.

OSHAWA STEEL SHINGLES are made of 28 gauge steel, specially toughened and heavily galvanized to make them rust-proof. Thus they weigh about SEVENTY-EIGHT



pounds to the square. With the box about 88 pounds to the square.

When considering metal shingles always learn THE WEIGHT OF METAL per square offered and be sure that the weight is of the METAL ONLY.

Make the weight test yourself. First be sure the scales are accurate. Then unbox a square of Oshawa Shingles and weigh them. Note that the weight averages 78 pounds WITHOUT THE BOX.

Don't go by the box weight. Some boxes weigh fourteen pounds or more.

G. A. Pedlar

DON'T stop when you have Oshawa-shingled your roofs. That is only the first step towards making a house modern, or a barn what a barn should be. Go on and plate your house inside and out with steel. Cover the surface of your barn with steel. In a word, "Pedlarize" every building on your farm. This way:

Make Your House Fireproof

Finish the interior of every room in your house with Pedlar Art Steel Ceilings and Side-Walls. These are made in more than two thousand beautiful designs, the patterns stamped accurately and deeply into the heavy and imperishable metal. They cost less than plaster in the first place; and they will be like new when a plaster ceiling or wall is cracked to the danger point—which doesn't take long as a rule. They are easily put in place. They can easily be painted and decorated.

Make Your House Sanitary

Then, if you surface the exterior of the house with Pedlar Steel Siding—it is made to simulate brick, rough stone, cut stone—these Ceilings and Side-Walls and an Oshawa-shingled roof gives you a residence that is more nearly fireproof than the "skyscrapers" of the great cities. Also, such a house will be much warmer in winter than if it were built of solid brick—and so it will save its cost in fuel-savings. It will be cooler in summer. It will be sanitary inside—you can wash the ceilings and walls clean with soap-and-water. It will be a handsome, substantial, and enduring proof of your judgment in choosing the modern building material—steel—Pedlar-made Steel.

Make Your Barns Safe

With Pedlar Steel Siding you can finish the outside of your barn most economically, and your cattle will thrive better in bitter weather than if they were housed in a solid concrete barn. This heavy-gauge seamless steel finish, keeps out the wind and keeps in the animal heat. It saves in lessened feed-bills enough to pay its cost over and over. It costs but little; it is simple to put on; and it will outlast the building's very timbers. Most important of all, it—with Oshawa Steel Shingles for the roof—makes barns practically proof against fire, entirely free from every kind of dampness, and proof against lightning.

Learn About Pedlarizing

At the same time you send for your free copy of Roofing Right Booklet No. 5, ask us for particulars about these other Pedlar specialties. We will send you samples of any of them; prices; illustrations; and samples of the Oshawa Steel Shingle as well—all just for the asking.

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