

# FARMER'S ADVOCATE

AND HOME JOURNAL

THE ONLY WEEKLY AGRICULTURAL PAPER IN WESTERN CANADA

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

November 11, 1908

WINNIPEG, MANITOBA

Vol. XLIV, No. 842



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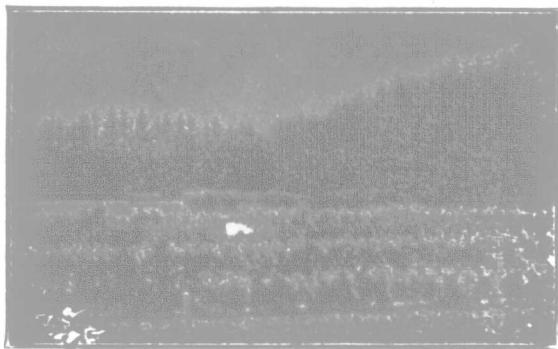
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## SYNOPSIS OF CANADIAN NORTH-WEST

### HOMESTEAD REGULATIONS

Any even numbered section of Dominion Lands in Manitoba, Saskatchewan and Alberta excepting 8 and 26, not reserved, may be homesteaded by any person who is the sole head of a family, or any male over 18 years of age, to the extent of one-quarter section of 160 acres, more or less.

Application for entry must be made in person by the applicant at a Dominion Lands Agency or Sub-agency for the district in which the land is situated. Entry by proxy may, however, be made at an agency on certain conditions by the father, mother, son, daughter, brother or sister of an intending homesteader.

**DUTIES.**—(1) At least six months' residence upon and cultivation of land in each year for three years.

(2) A homesteader may, if he so desires, perform the required residence duties by living on farming land owned solely by him, not less than eighty (80) acres in extent, in the vicinity of his homestead. He may also do so by living with father or mother, on certain conditions. Joint ownership in land will not meet this requirement.

(3) A homesteader intending to perform his residence duties in accordance with the above while living with parents or on farming and owned by himself must notify the Agent for the district of such intention.

W. W. CORY,

Deputy of the Minister of the Interior.  
N. B.—Unauthorized publication of this advertisement will not be paid for.

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# Farmer's Advocate and Home Journal

The Only Weekly Farm Journal in Western Canada



PUBLISHED EVERY WEDNESDAY BY THE  
FARMER'S ADVOCATE OF WINNIPEG, LIMITED

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Branches at London, Ont. and Calgary, Alta.

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Remittances should be made direct to this office, either by Express or P. O. Money Order or Registered letter, which will be at our risk. When made otherwise we will not be responsible.

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We Invite Farmers to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned if accompanied by postage.

Anonymous communications will receive no attention.

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Slocan Park, Gutelius P.O., B.C.,  
Sept. 15, 1908.

N. Wolverton, Esq.,  
President, The Kootenay-Slocan Fruit  
Co., Ltd.  
Nelson, B.C.

Dear Sir—  
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Thanking you for the fair treatment we have received at your hands,

Yours faithfully,  
(Signed) Oldfield and Roberts.

Write for maps and particulars

The Kootenay-Slocan Fruit Co.  
NELSON, B. C.

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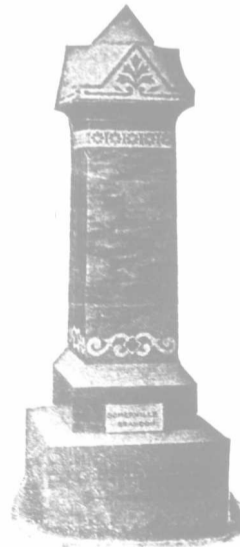
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The Farmer's Advocate of Winnipeg

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Rosser Ave., BRANDON, Man.

FALL, 1908



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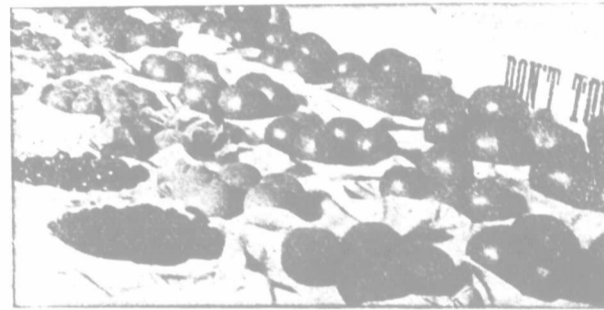
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Sept. 15, 1908.  
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## GOSSIP

### WANTED—AN EMPLOYER

There was a north-bound car temporarily disabled on Broadway, near Fourth Street, and in consequence, as far south as the eye could reach, stood a row of motionless cars. Also, in consequence, along the curb was ranged a fretting, impatient, helpless crowd, among whom the most anxious was probably Edward Billings Henry.

In stature, Edward Billings Henry was briefer than his name would indicate, but to a certain two-room dwelling on Jackson Street he made up in importance what he lacked in height, and it was his overwhelming sense of this importance which made every thin muscle taut and strained every nerve as he stood in the forefront of the crowd, his bare feet planted on the cold asphalt, one hand gripping his remaining stock of papers, the other clutching a nickel.

"I never was in a tearing hurry in my life but what this thing happened!" exploded a man just behind the boy.

Edward Billings Henry turned and looked up. The man was jingling a lot of loose coins in his pocket. The boy glanced down at his one nickel, and said, with conviction, "You can't need to have 'em go like I do."

The big man stared down at the little man in surprise with a gruff "Huh!" but Edward Billings Henry had no time to repeat. His hope had revived. The two men who lay on their backs under the injured car began to crawl out, and the boy rushed forward.

"Will it go now?" he inquired of one of the numerous conductors clustered round.

"Maybe so—in half an hour," replied the conductor carelessly.

"Oh," cried the boy in dismay, "I just can't wait that long."

"Walk, then!" said the conductor, crossly.

"It's too far," replied the boy, "when you've got a stone toe."

"A what?" ejaculated the conductor; but his voice was lost in the honk! honk! of a big white touring car which pushed slowly through the crowd.

In front of the car Edward Billings Henry raced limpingly on his "stone toe" back to the curb and to the man jingling the coins in his pocket. "Just what time is it, please?" he asked.

The man pulled out a watch and showed it to him.

Edward Billings Henry heaved a great sigh. "Half-past ten! It'll likely be filled up before I can get there."

"What will be?"

"The place I'm after."

Skilfully he raised the limping foot, laid it across the other leg, and nursed the stone-bruised big toe, his eyes on the automobile, which had halted almost in front of him.

"Hello, Junius!" a voice in the crowd sang out. "Lucky dog, you, not to have to depend on street cars!"

The driver of the car was a young man. That is, Edward Billings Henry judged him to be young by the only feature visible, a flexible, wide mouth, with clean-shaven lips. His eyes were behind goggles, and a cap covered his forehead and ears, meeting the tip of a high collar, which effectually concealed his chin.

But the mouth smiled as the goggles turned toward the pavement, the owner answering lightly, "Hello, yourself, Dick! Jump in and try my luck."

"Where you going?"

"Up to Congress Square."

"Well, get along, then," returned the other.

"That's no good to me."

"Congress Square! What luck! Exactly where Edward Billings Henry wished to go, and here was a rapid-transit vehicle with room enough for ten such diminutive persons as he. Without loss of time he limped up on his aching stone toe and joggled the arm of the driver.

Junius paused and looked down. Edward Billings Henry removed a man's Derby from his head and looked up out of eyes kindling with hope, as he asked eagerly,

"Do you s'pose you could get me up there inside of twenty-five minutes, mister?"

"What!" Junius stared hard through his goggles.

"To Congress Square," said Edward Billings Henry, impatiently. "It's business, and if I don't get there I'm out of a job that's all." The boy mounted the step and clung to the seat, proffering his nickel. "I'll pay just what I'd pay on the car," he argued, "so you'd be making some money as well's giving me a lift."

The goggled eyes looked at the nickel in the dirty hand, and then travelled up and down the small figure back of the hand. The eyes noticed that while those parts of the boy's anatomy which had been exposed all the morning to the city dirt had collected grime, the rims, as it were, of the exposed parts revealed hidden cleanliness.

"Congress Square is an awful way up," urged Edward Billings Henry, "and we mustn't waste much time, for I would like to get that job."

The small hand extended the nickel enticingly toward the glove. "You'll be earning as much as the street-car by giving me a lift," the boy repeated.

The driver's lips twisted a bit. "That's so," he said.

"Huh," he chuckled, and gracefully extended his hand for the nickel. "Get in, my man, and I'll give you the 'lift'."

Edward Billings Henry drew a deep sigh of relief, dropped the coin into the other's palm, and engulfed himself in the soft front seat.

"To whom have I the honor of giving a lift?" asked Junius, formally, dropping the nickel into a pocket, where it lay alone. After it he sent a curious, lingering smile.

"Edward Billings Henry, Junior," replied the boy, the lips beneath the goggled smiled. "And where am I 'lifting' you to, may I also ask, Edward Billings?"

"To Mr. Florin's office, where they're going to select an office boy this morning 'tween ten and eleven."

The driver busied himself a moment with the steering-gear as the car passed the crowded mail-wagons behind the post-office building. Then he turned and shot a curious glance at his small companion, asking abruptly,

"And you think you'll get the job, do you?"

Edward Billings Henry leaned forward as if he could push the machine into a yet faster pace. "I can try for it," he replied. "Father says you never know what you can do unless you try. He's always wanting me to try."

"Yes," muttered Junius, still more interested. "Fathers seem much alike, whether they live up-town or down-town."

"Can't we go faster?" asked Edward Billings Henry, sitting on the edge of the seat.

Junius shook his head. "Too many bluecoats around. But about that job, now—you'll not be the only boy after it. There will probably be dozens older—"

"I'm eleven, if I am small," said the boy.

"And stronger—"

The boy stretched out a thin arm defiantly, and closed his fist.

"Just feel!" he cried. "I've got a good muscle, and on my legs it's better yet. Just now I've got a stone bruise on my big toe, but I tell you I can get around like lightning just the same. Bet Mr. Florin wouldn't ever be sorry he took me."

"Yes, I'm inclined to believe that myself," mused the man. "But how are you going to make him believe that in the beginning?"

The boy raised his lame foot and gently rubbed the swollen big toe. "Well," he began, "I'm going to talk up big. Father says you have to sometimes when nobody's round to do it for you, and he says it's all right if you do afterwards just as big as you talk."

The driver wagged his head wisely. "That's sound business sense," he agreed, gravely. "You intend to deliver the same goods as you sell. Let's hear what you have to say."

"Well, if you get me there in time to say anything, I'm going to tell Mr. Florin that father went to school a lot when he was young. He went through high school and got all ready to go through college."

Edward Billings Henry emphasized

(Continued on page 489)



# Farmer's Advocate and Home Journal

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November 11, 1908

WINNIPEG, MANITOBA

Vol. XLIV. No. 842

## EDITORIAL

### John Burns on "the Cash Argument."

Mr. John Burns, the labor member of the British parliament, probably did not read what we had to say a few weeks ago under the caption, "A Cash Argument," but he has said substantially the same thing to a British audience. Mr. Burns took occasion to point out that the chief disadvantage under which the British unemployed lay, compared with the unemployed in America, was in the fact that Britons drank more than their trans-Atlantic brothers. Needless to say this opinion was not received with friendly applause, but Mr. Burns might have gone farther and included all British laborers and middle men as well, and in fact, included all who did not attain their desired economic standing while indulging in drink. Any country with the per capita expenditure for drink that Britain can boast of, must necessarily show an economic weakness, a serious breakdown. We do not hear of unemployed in France or Germany, but rather the opposite.

To get people to consider the economic side of the liquor question and its bearing upon poverty and want should be the duty of everyone who has the betterment of social conditions at heart. We have all been too willing to ignore the effect, financially, of the indulgence of the appetite for drink. We have generally been willing to admit that because the "liquor interests" employed a large amount of capital and labor that therefore they were contributing to the sum total of human necessities. But we must learn to distinguish between money and energy expended upon the production of necessities, and money and energy devoted to producing a commodity that neither satisfies hunger, nor protects the body from exposure, but rather renders humanity eventually more destitute. There is a vital difference between the use of potatoes for food and their use for alcohol manufacture, as a crowd of unemployed would soon demonstrate. Commodities may conveniently be classed as essential, desirable, non-essential and undesirable. The former two contribute to the life and happiness of people, while the latter contribute to misery, poverty and death. Liquor belongs undoubtedly in one of the latter two classes, depending upon the condition of the people who use it, and the unemployed are suffering from distress which is a direct result of the employment of non-essential and undesirable commodities.

It should not be a hard lesson to grasp the fact that thrift and the spending of money upon the things which go to sustain life, or add to its usefulness, tends to prevent poverty, yet this fact is ignored, not simply by individuals, but by associations and governments. It is agreed that the most desirable condition of affairs is that where the compensation for labor is more than sufficient to maintain the laborers in their standards of living and where the surplus is judiciously invested in reliable securities such as land or bonds. This is obviously the ideal each citizen should have, but because we have weak-willed and strong passionate people, it becomes the duty of the government to assist both by removing temptations and supplying incentive to all to attain to the ideal. There may be some danger to the man who preaches the economy of liquor being branded as stingy, but there can be no other flaw picked in the argument.

### Forage and Fodder Crops

For the past month or so we have been publishing the experiences and opinions of practical farmers in and on the growing of fodder and other crops not usually grown in this country. The bulk of the correspondence came from Saskatchewan, and the crops particularly discussed were fodder corn and rape. There is a mistaken conception in the minds of many men that in only the cereals ordinarily grown in this country are there money making possibilities. The correspondence referred to indicates pretty clearly, although for that matter it has been demonstrated previously, that soil and climatic conditions here are favorable to the profitable production of a greater diversity of farm products than we now produce. But it indicates more, too. Although much of the opinion given was based upon tests made with small plots of these crops, it shows that men are taking more interest than formerly in other lines of agricultural production than wheat farming and a little stock raising. They must be, else they would not experiment with other grains, forage and fodder crops at all.

Summed up briefly, the result of the past season's work in experimenting with fodder corn and rape in Saskatchewan has been satisfactory. Rape is perhaps a more unusual crop to find on a prairie farm in this country than corn. It is grown essentially for forage, either for pasturing off by stock or for cutting green and feeding inside. For hogs it is a green food of exceptional value and for best results should be cut and fed in the pens. Old stock, mature sows, especially, may be pastured on a patch of rape and require little other food. Where summer swine feeding is followed it is about the best grain saving adjunct to the ration. It is probable that as winter cattle feeding develops in this country, rape will come to be as serviceable a fall forage with feeders as it now is in certain sections of Ontario. There the feeding cattle are turned into rape for several weeks before going into the stables and make, during fall, the most economic gains of the feeding period. For best results as a cattle feed, rape should be used in connection with a good grass pasture and the stock started on it rather carefully at first.

Fodder corn has been sufficiently tested at our Western experiment stations, and as a farm crop in nearly all parts of Manitoba, to demonstrate that it may be successfully grown. We have seen fields of corn in this country that would rival in area and in yield of fodder per acre, anything to be found in the corn belt, the northern boundaries of which are supposed to be somewhere to the south of us. The vicissitudes of our climate will perhaps preclude corn ever being grown as a grain crop, but for fodder purposes, practical experience shows that there are no natural barriers to its production in either the soil or climatic conditions of the prairie provinces. Corn and rape are two crops that are going to play quite a part in stock raising, dairying and the development of mixed farming generally in the West. For these purposes they rank next to the clovers in importance.

### Cease Breeding Tuberculosis

At the recent Tuberculosis Congress held in Washington, D. C., a notable contribution, remarkable for the saneness, breadth of view and grasp of the subject which it betokened on the part of its author, was a paper on the Control of Bovine Tuberculosis, by Dr. J. G. Rutherford, V. S., Dominion Veterinary Director-General and Live-Stock Commissioner, Ottawa. Judging from report, this deliverance, which we reproduce practically in full, excited considerable interest, and must have appealed to the common sense of the more practical element of the delegates present.

Dr. Rutherford quite thoroughly disposes of the idea of compulsory tuberculin-testing and slaughter of all reacting animals. The futility

of this system as a means of eradicating bovine tuberculosis has been demonstrated in states and communities where the agitators have had their way, while the economic cost entailed by the compulsory slaughter of slightly affected animals in unfattened condition, and more particularly of valuable pure-breds, is enormous.

The exterminating of tuberculosis by compulsory testing of herds and the slaughter of infected animals is impracticable. Considering the vagaries of tuberculin, especially on second, third and fourth tests, in the same herds, the necessity of thoroughly conscientious, wide-awake and experienced veterinarians to make reliable diagnosis of the disease; the numerous ingenious methods adopted by owners, especially of pure-bred cattle, in order to defeat the test, the difficulties arising from the period of incubation are sufficient to exclude from the field of action this compulsory, wholesale method of dealing with tuberculosis, except in small and circumscribed areas, in which all, or at least a majority of the owners, are alive to the necessity of stamping out the disease, and willing to co-operate heartily with the authorities in bringing about that result.

Against the policy of voluntary testing, most of the arguments against compulsory testing apply, with the additional one that results in exterminating the disease would be very slow. Dr. Rutherford inclines to favor a combination of systems, which he admits is open to many of the objections urged against other systems. The chief need in the case is for a campaign of education among cattle owners and the public. In this campaign of education the first question to take up is ventilation. Human tuberculosis is now treading with marvellous success by the open-air treatment, and in view of these facts, it is nothing short of disgraceful that we are yearly permitting thousands of animals to become infected, owing to the insanitary conditions under which their owners insist on keeping them. As *The Farmer's Advocate* has long contended, "stockmen are breeding tuberculosis a great deal faster, through neglect of ventilation, than it would ever be possible to stamp it out by the promiscuous use of tuberculin and slaughter of diseased animals."

### What Canals Might Do

Just about the time our political campaign began and before the Americans had begun to sacrifice, with a rare degree of abandon, a considerable amount of spiritual essence in proclaiming the vices of the man they did not stand for in their recent political contest, a convention of men interested in transportation was held in Chicago. The immediate object of the meeting was to further the construction of a canal from Chicago to the Mississippi river but it also interested itself in the improvement of some eight to ten thousand miles of waterway in the heart of the continent. The canal from Chicago to St. Louis is an undertaking of the city of Chicago upon which she has already spent some fifty million dollars, and is ready to spend some thirty millions more. The task of opening up the great stretches of the Mississippi and its tributaries will be laid upon Uncle Sam.

That interest in water transportation should engage the attention of shrewd business men who are otherwise engaged, is significant. It marks the reversion of attention toward the use of ships for carrying freight. For years the railroad has held the interest, fanned the imagination and accepted the money and patronage of the public. This was but natural. Such immense resources, such rapidly increasing values, such weary distances, and such feverish haste, as have been associated with the opening up of America have not only demanded the more rapid means of transportation by rail, but have completely ignored the slower, although incomparably less expensive, method. Now that trade has become better organized and communities



have settled into the production of commodities suited to the designs of nature, it becomes imperative that every semblance of waste in the movement of crops and merchandise be eliminated. It is realized that the cost of moving goods by rail is a heavy tax upon the nation. All over the land where it costs \$7.50 to carry a ton of wheat one thousand miles by rail, one dollar will move it the same distance on water. Doing away with waste is the great problem of the day, and strange as it may seem, the waterways generally move a given bulk of freight in less time than it takes the railway.

All this leads up to our own problem. We haven't yet got the cheapest means of moving our grain from west to east nor our heavy merchandise from east to west. Transshipment at Georgian Bay ports and reloading at Montreal constitutes a tremendous total of expense chargeable against the commodity which in turn comes out of the producer's pocket, if it be farm produce, or out of the consumer's purse if it be merchandise. This is the reason why we want railroads by the shortest possible routes to waterfronts and canals wherever it is possible to cheapen the cost of transportation. Under these heads comes the Hudson's Bay railroad and the Georgian Bay canal. Neither one of these alone is sufficient. The northern route will, no doubt, make European goods much cheaper at western points and should make grain higher in price on local markets, but with continual increase in trade between east and west, the advantage of a longer season and the saving in expense in hauling from upper lake ports to Ontario, Quebec and maritime points there should be a continuous flotilla of vessels on the canal during the season of navigation. To be able to move our wheat from Fort William direct to the Old Country, or to many eastern mills without any additional handling would effect nearly as much saving as we now make by hauling wheat to the railroads in wagons rather than carrying it in bushels. Our agitation for increased railway facilities must shortly be given over, and the necessity of the Georgian Bay canal urged upon the government. It may probably be the next plank that our political parties will seize upon to go to the country, but if the work is delayed until after our next election it will be an expensive delay.

#### High Protection and Wages

It is a favorite argument of high protectionists that the higher the tariff wall which they raise around them the higher will be the returns for labor employed in that country. That is, that protection, in the way of import duties levied against manufactured commodities from without, will stimulate domestic industry, create profitable employment for workmen, especially for skilled artisans, develop a large home market for the farmer for his grain and animal products, and benefit the country all around.

Now, when the manufacturer sought protection from his foreign competitor, he did not suggest any roundabout way by which the industry he was interested in should be protected. He proposed, most practically, to shut out foreign competition by levying an import charge against the foreign commodity. That was the only kind of protection that seemed capable of serving the purposes of "protecting" our manufacturing industries. And it has fulfilled its purpose certainly most satisfactorily to the manufacturer. But more lately we have been told that what results from shutting out foreign competition helps Canadian labor and is profitable to the Canadian farmer. If Canadian labor requires protection as Canadian industries are held to require it, why is labor not protected in the same way as the manufacturing industries have been? Why is labor admitted into the country free? Why do the manufacturers not advocate protection for the laborers they employ as well as protection for the commodities they produce?

A laborer has one commodity—labor—to sell, and with that he has to purchase everything he requires. He sells his one commodity in a market open to the world. He purchases in a market where practically every commodity is taxed for the protection of the manufacturer who produces it. Yet the manufacturers blandly call this protection for the working man. If it is it is a much less direct way of affording the laboring class protection than is the imposition of import duties on foreign commodities a means of protecting the manufacturer. It would be a mistake of course, to believe, much less suggest, that any restrictions whatsoever should be placed upon

the free entry into this country of people from all countries, or at least from such quarters as immigrants come who are not undesirable for reasons of national policy, or because their coming would lower our nationality. But it is a greater mistake to proclaim that that which enables one class of the community to enjoy special advantage at the expense of another class is beneficial to those who are taxed that the other may be protected. That the wages of artisans and mechanics in this country are any greater actually than the wages paid for similar labor in other parts of the world is extremely doubtful. That high protection, with its tax on nearly every necessity of the working class, can ever increase the actual returns of labor, is more than extremely doubtful, it is, in fact, unreasonably absurd.

smallest place in his heart girth, which I am quite prepared to prove. As for him being weighed he has never been on the scales in Canada and I am not certain if he ever was in the Old Country, where they do not gauge a horse's goodness or usefulness by his gross weight, which never concerns a good judge who is quite able to size up and balance an animal and know what he is intended for. When the question is asked as to how much an animal weighs, the thought immediately strikes us as to how much the enquirer really knows about a horse. Although an animal might be the heaviest one in the world, he could be easily entirely useless for any commercial purpose—except for the owner to feed at a big expense to be able to go around and tell the public how much he weighed.

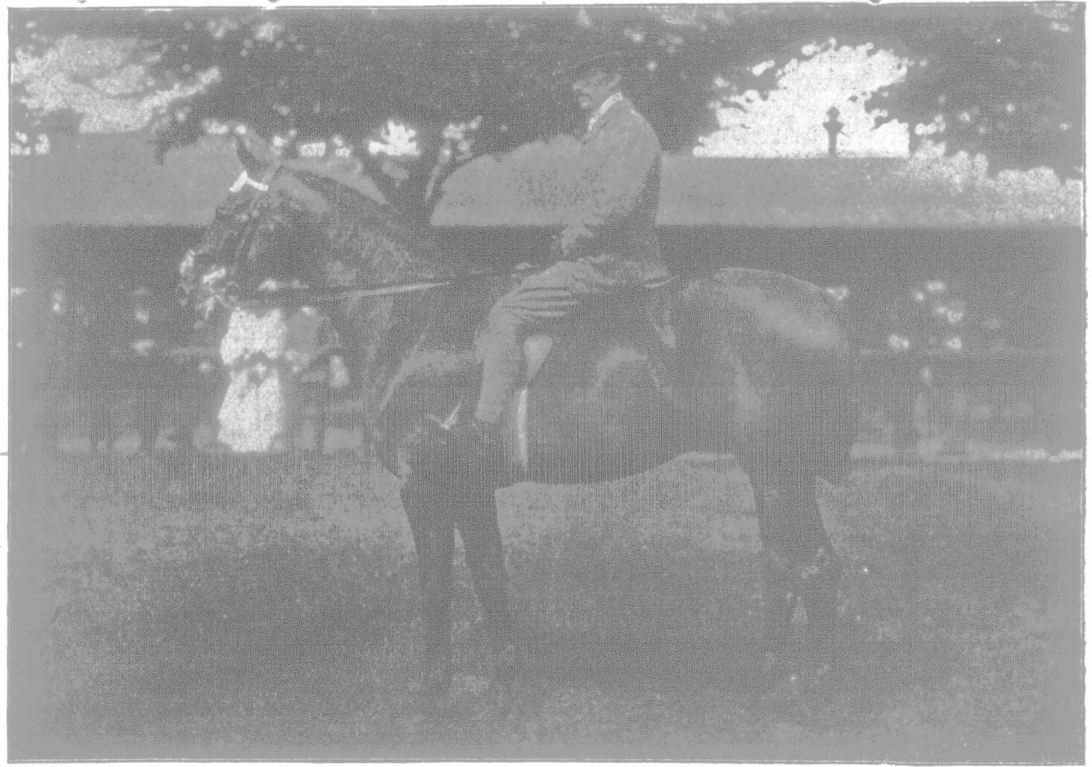
An animal's usefulness is gauged only by his weakest point. Did it ever occur to people like Mr. Jaques that the heaviest and fattest man is the strongest, and would it not be very ridiculous to compare them as such. The main essential point in any draft animal is constitution, ambition, courage, perfect conformation, good, close, true action and flexing every joint in motion, and above all, wearing qualities, which go along with hard, flat bones, firm joints, and not the least the foundation of strong, sloping pasterns set on good, open, deep, large feet. In action all his movements should be in perfect union with every part of his body. Horses of this description

## HORSE

### Size and Weight a Misleading Basis for Comparison

EDITOR FARMER'S ADVOCATE:

In your issue of October 14th an article appears, "The Suffolk Horse" written by Mr. Norman Jaques. I read it with a good deal of amusement



A TYPICAL IRISH HUNTER

and did not think it worthy of a reply, but as a number of draft horse breeders have asked me to comment on it, I will do so now.

"Perhaps it may turn out a song,

"Perhaps a sermon"—as Burns says in his "Epistle to a Young Friend." The tone of Mr. Jaques' letter, and the comparisons he makes with other breeds of horses are odious, and written in a wrong spirit to educate breeders of draft horses to his way of thinking. In the first place he tackles the Clydesdale stallions at the Dominion Fair and strongly emphasizes the superior points, measurements and even weight of his three-year-old Suffolk Punch stallion. That animal was exhibited there, and while going around the ring at the time of the judging of his class or while going through the stables afterwards, I never even heard a comment about him, nor anything wonderful said of him, nor would I have known that there was such an animal exhibited. In fact we would not know now, if it were not for this coming from his owner.

In the first place he states his girth is seven feet four inches (measured by Mr. Jaques himself). Whether around his belly or the smallest place in his heart girth, no one knows.

He also states he measured all the winning Clydesdales at the Dominion Fair. Perhaps he weighed them also. Now if Mr. Jaques was desirous of acting in a fair, gentlemanly way, he might at least have requested the consent of the owners of those animals before taking the trouble to measure them to suit himself and his own desires. Now the first prize aged Clydesdale stallion girthed seven feet, six inches at the time of the Dominion Fair in thin condition at the

will not require any odious comparisons for the purpose of recommending their usefulness to the public, and after all the public are the better judges. If any breeder is desirous of making a financial success of his business he should endeavor to breed the animal the majority of the public demand and not try to influence and educate others to his own narrow way of thinking.

The Clydesdale men and other draft breeders are not worrying the least about the merits or demerits of the Suffolk. I would suggest for Mr. Jaques' benefit that he should widen his knowledge a great deal more before he rushes into print and make such statements that "the Clydesdale is unknown in England save in the Scotch borders." What about the largest breeding establishments in Britain, viz: The Seaham Stud owned by the Marquis of Londonderry? They breed nothing else there in the way of draft horses but Clydesdales, and there are others in England as far South as Kent, too numerous to mention. It will also widen his knowledge that some of the principal brewers in London possess nothing else but Clydesdales for their drays. In Liverpool more than one-third of the draft animals on the streets are either Clydesdales or with Clydesdale breeding in them. Liverpool market is the best one the Clydesdale breeders have for their heavy geldings.

The "Suffolk" as Mr. Jaques states "is unchanging with each generation." Well I would not like to make that statement about any breed of animals. Take our mode of transportation for instance, to keep up with the times we must progress and not stand still. It is the same in breeding. There must be improvement in this



progressive age. One must either advance or go back. The Clydesdale has made such progressive strides in the last thirty years that he has grown in favor more and more with the general public, and any broad minded breeder of horses acknowledges this. I predict that in the future he will still go on improving.

Mr. Jaques recommends the "Punch" for crossing on Western range mares. That cross would only produce the cheapest class of horse on the market today either in Canada or the States, viz: the kind termed in the latter country "chunks." A few breeders in the province of Alberta have bred that cross long before Mr. Jaques was ever heard of and have regretted it ever since, as they would have been better off financially if they hadn't tried the experiment.

"The reason why the two English breeds are not represented in Canada is simply because the English stockman is not represented either." We would infer from this statement of Mr. Jaques that he himself is the only Englishman of any importance that is breeding draft horses in this country. I wonder what my numerous English friends will think of this statement.

At the present time I can sell Mr. Jaques a seven year old Suffolk Punch stallion at a small price that was a winner in England before being imported. He has been used by one of those parties referred to and he is more than anxious to dispose of him and put a Clydesdale stallion in the Suffolk's place.

Calgary.

JOHN A. TURNER.

**Action**

In this country the term action, by universal consent, refers to the trotting gait. It is common knowledge that, however good an animal may be in external conformation, without action he fails to command attention, and is relegated to the drudgery of his kind. The trot is a gait in which the limbs are moved diagonally. The off fore and the near hind limbs reach the ground simultaneously, and this is repeated by the near fore and off hind members.

The relation of the feet when brought to the ground will vary for each individual, or for the same individual under different circumstances. Sometimes the hind feet are brought to the ground behind the fore ones; at others they fall more or less exactly upon the same spot, while in some, again, they extend for some distance in front of them.

I note several varieties of movement are distinguished by the French as the "short trot," "the ordinary trot," and "the long trot."

All these several relations exhibited by the feet while moving may be seen in the same animal at different times, while in some horses one or the other is more or less constant under different circumstances. As to pace, the extent of ground covered in the action of trotting in a given time, or, in other words, the length of the step, differs in different horses. In some it is long and reaching, in others short and choppy.

No doubt it has relation with the age, length of limb, the force and extent of the muscular contractions, and to other points in development and conformation which need not be referred to here. The problem, however, is very difficult of satisfactory solution, owing to the many factors by which it is influenced. It will, however, be remarked that in this respect considerable difference is noticed in different animals. It will be observed that many small horses will outpace animals hands higher than themselves. In these cases explanation will be found in the fact that the rapidity of movement of the limbs in the former is much in excess of those of the latter, and that the long step of the larger horse is equalled or exceeded by the more frequent repetition of the step in the smaller one.

Quite apart from pace, the trot should be marked by symmetry of action; however good the fore action may be, unless the movements behind are in harmony with it, the gait will lack that grace and beauty which go to make up a good horse. It is noticeable in some animals that the knees are freely flexed, the stroke of the limbs is parallel with the long axis of the body, and the step is light and easy, but there is frequently in these cases a marked deficiency of forward propulsion. The hind action in such animals is wanting in that full and complete flexion of the hocks which impels the body forward and gives harmony to the movements of the whole. When this defect exists, the fore action is seldom of that far-reaching character which obtains in animals otherwise constituted.

The converse of this is seen in those cases where the fore limbs are shot out in a more or less straight line, and the contact of the foot with the ground appears to fall upon the heels. There is in these cases only slight flexion of the legs, but the hind limbs are advanced in a vigorous manner, and the body is thus impelled forward. Although an unsightly mode of action, the gait in this instance is decidedly progressive, and the pace much increased.

Horses with high-striding action behind sometimes allow their limbs to dwell momentarily in a state of extreme flexion. This, however, is not a constant condition of the gait, and, being of a temporary character, quickly passes away as the animal cools down and settles into his natural stride. Not the least important point to be considered in this gait is the manner in which the feet are brought into contact with the ground. In some horses, for various reasons, the body falls upon the limbs with great force, and the sound emitted by the feet is strikingly loud, while in other animals it is hardly noticeable. In these horses the touch of the feet upon the soil is light and airy, and in contrast with others there is little loss of time in the movement. Horses with loaded upright shoulders are amongst those of the class referred to, and others in which the axes of the limbs are faulty, the body sways from side to side, and the feet are made to hit the ground with unnatural force.—PROF. WORTLEY AXE. In *English Live-Stock Journal*.

**Suggestions from the National Live-Stock Records re Registration of Imported Clydesdales**

EDITOR FARMER'S ADVOCATE:

As the pedigrees of a number of horses which have been imported during the present season were not eligible for registration in the Canadian Stud Book, we feel that the requirements for registration should again be explained. While importers might be supposed to be able to look after their own interests, the fact remains that pedigrees of some Clydesdales imported recently have been rejected by the National Live Stock Records, and upon which duty has been paid. Some of these may subsequently be qualified for registration through having the necessary ancestors numbered in the Scotch Book, but some will not, and will probably be sold or travelled on their Scotch certificates. Breeders and buyers should therefore be careful not to patronize or purchase stallions which are not recorded in the Canadian Stud Book. No Clydesdale can now be brought into Canada either from the Old Country or the United States unless its pedigree has been recorded in the Canadian Stud Book, or duty paid.

As the registration fee would probably not exceed \$5.00 and the duty be not less than \$100.00, the course the importer would take is obvious, so a Canadian certificate should be insisted upon as a matter of protection.

If an animal has been imported since July 1st, 1908 and has not a Canadian certificate it can be taken for granted that one could not be procured.

Several shipments have been made which were purchased by agents in Scotland and it has for the most part been in these that the ineligible ones have been found. (In one case the steamship Company was ordered by the Consignee to return the shipment), so persons intending to buy in that manner should furnish their definite instructions as to what is required in order to ensure registration in the Canadian Stud Book.

The animal must itself be numbered; its sire and dam must both be numbered and their sires and dams must also be numbered in the Scotch Stud Book. Reference as to Volume and page is not sufficient, in fact in most cases where pedigrees have been rejected it has been for that reason. As it is impossible to tell from examination of the Export certificate which only gives the number, whether the sire is eligible or not, it is necessary to refer to the Stud Books and tabulate the pedigree for two generations.

The following example of a pedigree which is eligible for the Canadian Stud Book, and one which is not, will illustrate the meaning clearly.

**ELIGIBLE**

Haggis (17569)	Baron's Pride (9122)	Sir Everard (5353)
		Forest Queen (7233)
	Porridge (16317)	Mains of Airies (10379)
		Brae (2896)

**NOT ELIGIBLE**

Scots Wha Hae (16489)	Mains of Airies (10379)	Prince of Wales (673)
		Pandora (Vol. 20, p. 42 S)
Parthenia (8999)		Everlasting (17614)
		Eve (7766)

Any pedigree which, when tabulated as far as that of Haggis, will be eligible as all the ancestors have numbers, but one which like Scots Wha Hae has but a reference to volume and page where an ancestor is recorded will not be eligible.

It will be noticed that Mains of Airies appears in both pedigrees, he is sire of Haggis' dam and her pedigree can be accepted as he has a number, however as sire of Scots Wha Hae he renders the pedigree ineligible, and his dam, Pandora has not been and cannot be numbered.

Another point which should be clearly understood is that all pedigrees must conform to the present rule, even if their dams and sires have already been recorded and assigned numbers in the Canadian Stud Book as ancestors of animals previously imported and registered.

Criticism has been made of the action of the Scotch Stud Book authorities in issuing export certificates for animals which they must have known could not comply with the Canadian requirements, but it must be understood that any owner may demand an export certificate for an animal recorded in the Scotch Book upon payment of the necessary fee and that it is not the duty of the Secretary to do more than rake out the pedigree and certify that it has been properly recorded in his Book. He would doubtless give the required information if requested, as he thoroughly understands the Canadian standard, but it would only be an act of courtesy on his part, not his duty.—*National Live-Stock Records, Ottawa*.

**Clydesdale Certificate of Service Now Necessary**

The National Live-Stock Records, Ottawa, forward the following, requesting its insertion.

In the past it has not been necessary when recording pedigrees to have the owner of the sire sign the application form certifying to service. All applications now forwarded to the Record Office must either be signed in the place provided or on a separate service slip.

Rule of entry No. 3 of the revised Constitution adopted by the Clydesdale Horse Association of Canada at the last annual meeting reads:—"After October 15th, 1908, the owner of the sire of an animal, the pedigree of which is offered for entry, shall certify to service, giving date of service, with name and recorded number of sire in the Clydesdale Stud Book of Canada, signature will not be accepted unless ownership appears on the books of the Clydesdale Horse Association of Canada."

Attention is drawn to above rule as few breeders or stallion owners seem to know of its existence, or at least, of its enforcement.

Pedigrees cannot now be recorded unless accompanied by a certificate of service signed by the owner of a sire. An important part of this rule, which if overlooked will cause both trouble and delay, is that the person who signs the service certificate as owner of the sire must appear as such on the books of the Clydesdale Association. In other words if the sire has changed hands since his registration, or subsequent transfers were made, he will have to be transferred to the person signing the certificate before the latter's signature will be recognized.

Stallion owners should procure a supply of the service certificates and give them, properly filled in and signed, to the owners of mares which have been bred to their horses. Perhaps the best time to issue them would be when collections are made for service fees during the winter, when the last date of service is known.

These blanks will be supplied free of charge, upon application to Accountant National Live-Stock Records, Ottawa. The number required should be stated.

In filling in number of stallion the Canadian number should be given as, if he is not recorded in the Canadian Stud Book, the pedigrees of his colts cannot be.

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In 1871 in a population of 3,485,761, there were 5,624 deaths from tuberculosis in this country. In 1901, the last census year, there was a population of 5,371,315, and the total deaths from tuberculosis were 9,709. The total number of deaths from all diseases in 1871 was 46,545. Tuberculosis, therefore, was responsible for a little more than 12 per cent. of the deaths that occurred. In 1901, the same disease caused 11.9 of the total, or nearly the same percentage. About one out of every nine deaths in this country, therefore, is due to tuberculosis. The disease is rather more common in females than in males, 13.8 of the female deaths in 1901 being due to it in comparison to about 10.2 of the males.



## STOCK

*Discussions on Live-Stock subjects welcomed.*

A big string of Canadian raised steers and Canadian grazed Texas steers was marketed last week in Chicago. The company marketing the bunch was the Bloom Cattle Co., with headquarters at Trinidad, Colorado. The Canadian steers sold at \$5.00 to \$6.00, the latter price being the top figure by a good margin for range cattle in Chicago last week. The Texans, Canada grazed, sold at \$4.35 to \$5.35. The \$4.55 lot were old southern cattle, averaging in weight 1,442 lbs., there being some in the lot that would weigh 1,600 to 1,700 lbs. They had been pasturing here for several years, and some were eight or nine years old. The Bloom Company is satisfied with results, and believe in grazing their Texans until the age of five or six, believing that they fatten at cheaper cost and give better returns one time with another than if marketed at four years old.

### Market Classes of Beef Cattle

The man who raises beef cattle in any number needs to be posted on the different classes of stock which he sees quoted in market reports and

thin cattle of all kinds, bulls, steers, stags and heifers, may be as common in the canner class as cows. As a class, canners and cutters are discriminated against more than any other. As a rule, they are cattle that dress low, are large in the paunch, heavy in the bone, and relatively very sparsely fleshed. Canners are not, however, the lowest grade of cattle, but they are within one of it. There is another class of stock, known in cattle markets by various names, the most common of which are "skins" and "bologna bulls," animals of very inferior conformation and condition.

"Stockers and feeders," are a very important class of cattle in some markets. In Chicago they form a very large class at certain seasons, and in all markets for which any considerable feeding is done, they are common. In this country they are not much met with, since few feeders depend on purchasing their feeding stock in any central market. They represent the beginning and the end of the processes of beef production. The class may include calves, yearlings, two-year-olds or older animals. As a rule, however, stockers and feeders range in weight from 900 to 1,000 lbs., and are a year and a half or more in age. They are not cull stock or animals lacking in beef conformation, but simply thin cattle of quality ready to commence the fattening process.

Veal calves are not difficult of classification. They run anywhere from 100 to 300 lbs. in weight, but weight alone is not the basis for determining

needs they are likely to be set back at the age, when for the food consumed they should be gaining most rapidly.

In weaning pigs it is a good scheme sometimes to let them continue running with the sow putting her on rather slim rations and giving the youngsters access by a small gate from her lot into another pen where they may be fed. The pigs will thus be changed from the dam's milk to the next diet gradually, while the decrease in the sow's rations causes a decrease in milk secretion in her glands. The result is that both dam and pigs are separated without either of them worrying very much.

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The Union Stock Yards, Toronto, were sold the other day to an outside buyer whose identity has not been disclosed, but who is believed to be one of the large American packers, rumor connecting with the sale the name of Swift & Co.

### A Hog Cot for Summer or Winter

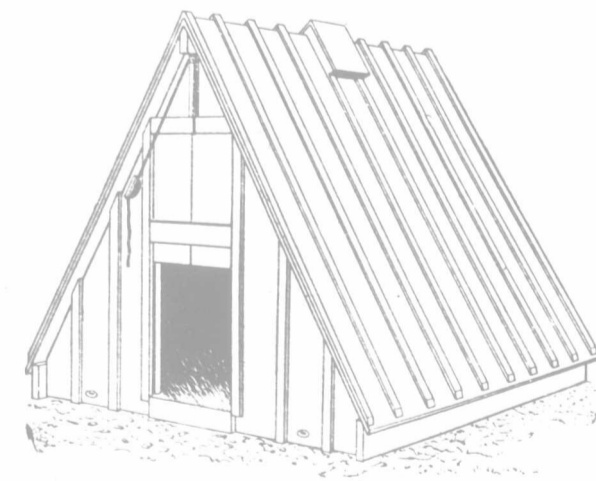
The accompanying illustration shows a hog cot or wigwam as used at the Wisconsin, U. S. Experiment Station. The cot is constructed for either summer or winter use, has a floor and ventilating system and taken all through is the latest improved type of A shaped hog pen.

It is constructed by nailing inch boards on 6 joists 2 by 4 inches by 8 feet long for the floor. Beneath the joists are nailed 3 stringers 2 by 6 inches, 8 feet long, which serve as runners for moving the house. Next is spiked a piece 2 by 8 inches, 9 feet 4 inches long, at the ends of the joists, having the bottom of the 2 by 8 even with the bottom of the joist which will allow it to project above the floor 3 inches. It will also extend out 7 inches at each end. This 2 by 8 forms a plate to which the rafters and floor boards are nailed. The 7-inch extension of the plate at the ends supports the lower corners of the roof which otherwise would be easily split off. These 2 by 8's, besides strengthening the house, raise the rafters and roof boards nailed to them at least 3 inches off the floor and thereby materially increase the floor space and the capacity of the house.

If the house is to be used in extremely cold weather an easily manipulated door is necessary. The cut shows a door 2 feet wide and 2 feet 6 inches high, made to slide up and down and held in place by cleats. It is suspended by a rope which passes through a pulley at the top and is fastened to a cleat at the side near the roof. The cut also shows two iron eyes, bolted into the front joist of the building, to which the hitch is made when the building is moved.

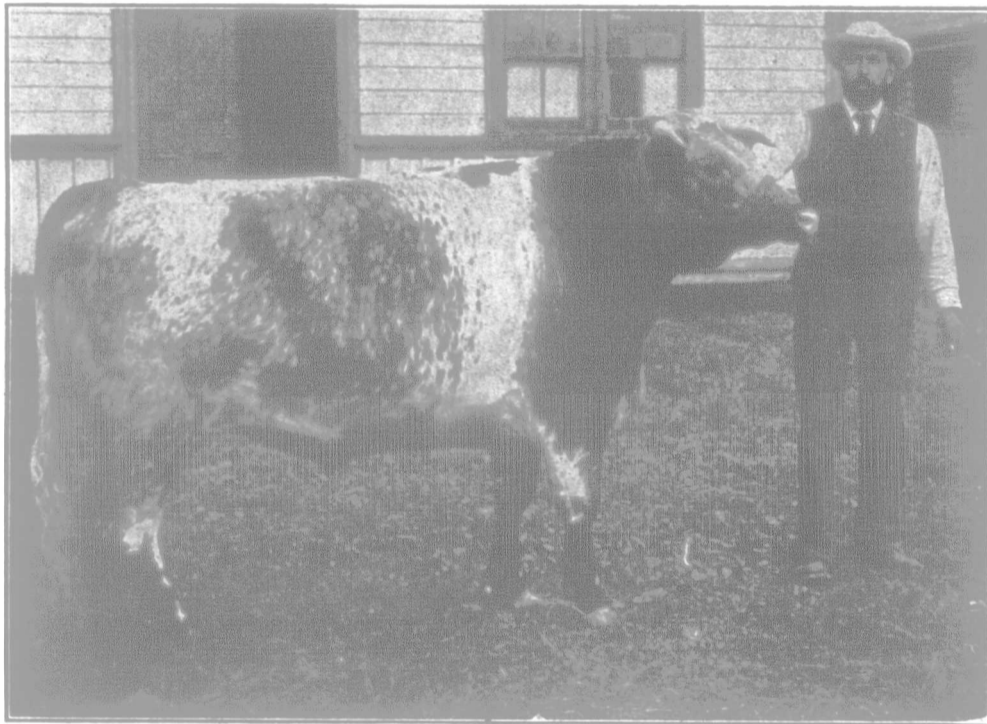
A rear door, identical in size with the front door, is held in place by cleats nailed across it on the inside and by buttons fastened on the outside. This door is not opened regularly, but provides ventilation in summer and aids in handling sows at farrowing time. Above the rear door is a small sliding door, 8 by 12 inches, to admit light and air.

Another important feature of this house is the ventilator, which is a small cap covering a hole at the top and the center of the roof. The hole is made by sawing off opposite ends of two roof boards and covering it with a cap so arranged as to leave openings 3 inches by 12 inches on each side of the roof. This is sufficient ventilation for two or three animals when all the doors are shut, and if more ventilation is desired it can easily be secured by opening the small sliding door in the rear. This simple plan of ventilation avoids any direct drafts upon the animals and proves very efficient.



PORTABLE HOG-HOUSE FOR SUMMER OR WINTER

The following lumber is necessary to construct this portable house as shown in figure 2: Nine pieces 1 by 12 inches, 16 feet long, and 11 O.G. battens 16 ft. long, for roof; 5 pieces 1 by 12 inches, 14 feet long, for ends; 1 piece 2 by 4 inches, 16 ft. long for stringers; and 4 pieces 1 by 12 inches, 16 ft. long, rough, for flooring. All the boards except those used for the roof, should be dressed on one side.



FIRST-PRIZE YEARLING STEER, Sired by SHORTHORN BULL

Canadian National Exhibition, Toronto, 1908. Owned, bred and exhibited by Jas. Leask, Greenbank, Ont.

referred to generally by buyers in such terms as exporters, dressed beef cattle, butchers' stock, canners and cutters, stockers and feeders, or veal calves. Under the general term, beef cattle, all these classes, and in large markets a good many more, are included.

As a rule, export cattle include good and choice grades of steers weighing from 1,200 to 1,500 lbs., well fattened and fit for long shipment alive without undue loss in weight and quality. "Dressed beef cattle" is a term used to describe stock purchased for slaughter and packing. In this class there is a wider range in weight and quality than there is among exporters. They may carry less fleshing and still be fit for packing purposes; they may be lighter in weight, providing they are fairly well finished. Any cattle not too old that will kill out into a fair quality of beef will pass as dressed beef stock.

The term "butchers' stock" covers a larger class of cattle than any other. Butcher cattle may be almost anything is too old for veal. In a way they are the bye products of the cattle feeding industry, the culls, perhaps, from a bunch of exporters, heifers, fat cows, half-fattened farm stock, etc. Into markets where a good class of fed stock is sold, the percentage of butcher stock is not very great, but in markets where there is a very small packing demand, when the stock generally is either for export or local use, there is likely to be a much larger proportion of the receipts classified under the term "butchers'." The western Canadian market is very much of this kind.

"Canners and cutters" are generally supposed to refer to old thin cows only. As a matter of fact,

grades. Quality enters very largely into the classification. A choice veal calf must be fat and fancy, not too young or too old.

### Weaning Pigs.

By the time pigs are three or four weeks old they will have learned to eat soft foods, and the more they can be encouraged to eat the better. They should be given access to a pen adjoining the sow, if it is possible to so arrange it, and fed skim milk and shorts in a small trough of their own. At first the quantity of shorts fed should be small, for a sucking pig's stomach is not adapted to the digestion of solid food. The organs that secrete the juices which bring about the digestion of foods other than milk are not at this age sufficiently developed in function to manage the digestion of grain foods in any quantity. But with use they gradually reach that stage where ordinary food stuff can be handled. In pigs this condition is reached at the age of from six to eight weeks. They are then ready to wean.

Sucking pigs are the better for getting at food as early in life as possible for another reason. They save the sow as well as get the eating habit. A sow with a fair sized litter has to stand a pretty heavy strain on her milk-making resources by the time the pigs have reached the age of a month or so, and unless the youngsters' rations are supplemented from some other source than her own milk supply, she is likely to be pulled down more than is good for her before the litter can be weaned. It is not so good for the pigs either, since their food demands are constantly increasing with age and if the dam cannot supply their



# THE CONTROL OF BOVINE TUBERCULOSIS

(Address by Dr. J. G. Rutherford, V.S. Dominion Veterinary Director-General and Live-Stock Commissioner, before the Tuberculosis Congress, held recently in Washington, D. C.)

**T**HE official programme has the subject assigned me of the "Control of Bovine Tuberculosis in Canada," the last two words having been added to the title originally sent in by me. I have but little to say on the control of bovine tuberculosis in Canada, inasmuch as while in some districts, under municipal and Provincial laws, efforts are being made to control the disease in dairy herds supplying various centers of population, very little is now being done by the Federal Government, through the Health of Animals Branch of the Department of Agriculture, which is in my charge.

### CANADA'S POLICY CONSERVATIVE.

Although for some years, at a period prior to my assuming office, a very considerable amount of testing with tuberculin upon the application of owners was carried on, no appreciable benefit was found to result, and, as a matter of fact, we now confine ourselves to the testing of cattle imported or exported for breeding purposes, those on the Experimental Farms, and a few other herds which have been placed by their owners under the direct control of our officers. We, however, on the request of owners of cattle who desire them tested, supply tuberculin free of charge to any reputable, qualified veterinary surgeon, on condition that he will send to the Department the results of the tests made by him, on charts which we furnish for that purpose.

All cattle reacting to tuberculin in Canada, save those privately tested, are permanently earmarked, by cutting a large T out of the right ear.

I may as well frankly state that the reason for this apparent inertia is that, so far, no satisfactory intelligent method of dealing with bovine tuberculosis has been evolved, and we deem it wiser, before taking action, to await the results of the investigations now being conducted by veterinary scientists in various countries, in the hope that some better way of dealing with the problem may be discovered.

Our knowledge of tuberculosis, the tuberculin test, and of their vagaries, have all along been defective and incomplete, and undoubtedly is so to-day, and when we bear in mind the many legislative mistakes which, owing to this lack of exact knowledge, have been made in the past, it must be admitted that caution is commendable, and that, before taking any definite departmental action involving the large interests which are at stake in such a country as Canada, it is reasonable that we should "look before we leap," and guard, as far as may be, against the possibility of having to recede, more or less ignominiously, from a position once taken.

### UNWISDOM OF COMPULSORY TESTING AND SLAUGHTER.

Many of our medical friends, and some veterinarians whose zeal outruns their discretion, advocate compulsory testing and the slaughter of all reacting animals. At first sight, to men lacking practical experience, and, perhaps, devoid of responsibility, this policy may appear a very simple solution of the problem. That it is very far from being so, however, needs but little demonstration to an audience of this nature. All practical veterinary sanitarians, dealing in large matters, are, even without taking into consideration the painful experience of those communities which in earlier days were rash enough to adopt it, well aware, not only of the great difficulties to be encountered in carrying out such a policy, but of the fact that under ordinary circumstances, in spite of the great economic waste involved, its results are by no means so satisfactory as its advocates would like to have us believe. Most of us can remember the time when the majority of veterinarians, many of whom should have known better, believed that if a herd of cattle were tested, the reactors destroyed and the premises disinfected, the disease was stamped out, and the owner might thereafter be left to follow his own courses.

Intelligent men have, of course, understood from the beginning that there must be, in the very nature of things, a period of latency or incubation between the time of infection and that when an infected animal would react to tuberculin. This period was fixed in 1899 and 1900 by contemporaneous but entirely independent experiments, carried on by the Tuberculin Committee of the Royal Agricultural Society of England, and by Drs. Nocard and Rossignol, under the auspices of the Societe de Medecin Veterinaire Pratique of France. The results in both cases were practically the same, and showed the period of incubation, while depending somewhat upon the mode and degree of infection, to range from eight to fifty days. This fact, affecting vitally as it does both the original herd and any additions or replacements which may be made, is in itself a very serious obstacle to the satisfactory working out of a policy of compulsory testing and slaughter, even with liberal compensation. Taken in conjunction with the vagaries of tuberculin, especially on second, third and fourth tests in the same herds, and the numerous ingenious methods adopted by owners, especially of pure-bred cattle, in order to defeat the test, it is sufficient to

exclude from the field of practical action this method of dealing with tuberculosis, except in small and circumscribed communities, in which all, or at least a majority of the owners, are alive to the necessity of stamping out tuberculosis, and are willing to cooperate heartily with the authorities in bringing about that result.

### LIMITATIONS OF TUBERCULIN AS A DIAGNOSTIC AGENT.

This conclusion on my part has not been rashly arrived at. Ever since tuberculin was first used as a diagnostic agent in bovine tuberculosis, I have been studying its action, and during the whole of that period my opportunities for such study have been considerably greater than fall to the lot of the average veterinarian.

Let us go a little more into detail. A herd of, say, one hundred cattle, kept under ordinary stable conditions, is tested, and twenty-five reactors are found. These twenty-five animals, together with any which, owing to the disease being in an advanced stage, may fail to react, but which are detected by clinical examination, are slaughtered and the premises carefully disinfected. It is not so very long, as I have already said, since many veterinarians were teaching that such a herd was safe and sound, and that provided any animals added were carefully tested before being brought into contact, no further danger need be apprehended. This is, of course, very far from being the case. In the first place, a re-test after three months will, depending to some extent on the virulence of the particular infection—a point of great importance—and the sanitary conditions, reveal, perhaps, from five to ten new re-actors. Even after these have been destroyed and the premises again disinfected the herd is by no means safe. The ten reactors, taking that as the number, have been living in close contact with the remaining sixty-five, and it is quite likely that three months later several of the latter will be found to be affected. Here also comes into play the uncertainty of tuberculin in repeated tests—a most serious consideration. In spite of Professor Valle's important and valuable discovery, which I may say does not by any means apply in all cases, it is quite within the bounds of possibility that a number of animals, affected to a greater or less degree, will fail to react when tested for the third or fourth time. This acquired tolerance to tuberculin is one of its most serious limitations, and constitutes another difficulty somewhat hard to overcome. Let us admit, however, that after the lapse of a longer or shorter period and a number of carefully-conducted retests, the survivors of the original herd are properly pronounced healthy.

We must now take into consideration the question of additions and replacements, one which, from a business standpoint, is in the majority of instances of paramount importance to the owner. It is not enough to have the new animals tested before bringing them on the premises. The same limitations, viz., that of the incubative period, applies to such tests as those with which we have been dealing. New arrivals must be isolated, not only from the original herd, but from each other, and submitted to a re test at the expiry of at least three months before being allowed to come in contact with any other cattle.

Two further points here demand our attention. We have hitherto, presumably, been speaking of tests honestly applied to the cattle of an honest owner, and by a capable, intelligent and experienced veterinarian. We must now first consider some of the nefarious methods employed by dishonest and unprincipled owners to nullify the test and so defeat the end in view.

The old method of dosing beforehand with tuberculin, although still followed in many herds, has largely lost its value through the discovery of Professor Valle, above referred to, and is now, as a rule, only employed when the testing veterinarian is agreeably complacent, or a few years behind his age. It has, among the more astute dealers and breeders, been largely superseded by the practice of administering one or other of the modern antipyretics, combined for the sake of safety with other drugs, to such animals as are known to be tuberculous, or which show any rise of temperature when undergoing the test. This plan is beautiful in its simplicity. Temperatures are quietly taken from half an hour to an hour before the veterinarian makes his rounds, and the febrifuge, mixed with a little sugar and disguised in a handful or two of meal, is licked up by the animal without fuss or trouble. There is no drenching, no handling, no excitement; the temperature drops, and although there may be and often is thermal irregularity, there is no distinct rise, and, above all, no tuberculin arch.

This brings us to the second of my two further points, viz., the veterinarian making the test. While, with all its limitations, I have great confidence in the diagnostic properties of tuberculin, I must confess to a feeling of suspicion with reference to all charts that are in any degree what I may term colorless, unless I know that the man who signs them is an honest, conscientious, wide-awake and experienced veterinarian. Too many men take it for granted that everything is fair

and above board, and depending entirely on their thermometer readings, allow themselves to be hoodwinked by dishonest and unscrupulous owners. I could go into many details, and perhaps furnish some amusement by recounting a few of the artful dodges resorted to in order to keep the veterinarians away from their cattle between temperatures, so as to permit of their being safely manipulated, but time will not permit. One thing, however, should be emphasized, viz., the fact that in the overwhelming majority of cases we have, in addition to the temperature rise, a distinct clinical reaction, some of the most salient features of which may be, and often are, only temporary, while others persist until at least twenty-four hours after injection. Among the temporary signs which may be noticed, as a rule, from six to twelve hours after injection, are, in severe cases, rigors, often accompanied by staring coat, general excitation and frequently diarrhoea. In less well-marked cases we have coldness over the loins, quarters, thighs and tail, sub-acute excitation and general malaise. Even when these symptoms have passed off the animal maintains a standing posture, and is more or less stiffened; there is loss of appetite, rumination is suspended, and in milch cows the flow of milk is diminished.

Close attention to, and observation of, the animals undergoing the test are, in my opinion, indispensable. Even with them it is possible for mistakes to be made, without them the tuberculin test is very apt to be badly discredited. The older veterinarians here will recollect that, prior to the discovery of tuberculin, much attention was paid, both by teachers and practitioners, to the clinical diagnosis of bovine tuberculosis. Of late years this phase of practice has been almost entirely lost sight of, the younger men practically depending on tuberculin as a diagnostic. This state of affairs is regrettable, and should be remedied by cultivating, with regard to cases of tuberculosis, that habit of painstaking observation which alone makes for success in the diagnosis of most of the other maladies to which dumb animals are subject.

### ECONOMIC WASTE OF COMPULSORY SLAUGHTER

I might, perhaps, explain that the foregoing remarks on the necessity of care and exactitude in making tests are intended to emphasize the idea that only skilful and specially-trained men can with safety be employed in this work, no small difficulty in itself, when it comes to undertaking a universal and compulsory testing policy. There is still more to be said against compulsory testing and slaughter. Many reactors are but slightly affected, and while, in the case of beef cattle in good condition, the loss from their slaughter may be insignificant, it is a very different matter when valuable pure-bred herds, or even common grade stock, thin in flesh, are condemned. It is true that with the latter the question of compensation may be more easily settled than with the former, but the matter of economic waste is only one of degree, for while the pure-bred reactors might live out their natural lives and produce much valuable, and, with proper precautions, healthy stock, the thin grades might be fattened and slaughtered under careful supervision for purposes of human food. For the reasons given above I am convinced that, at least on any large scale, the policy of compulsory testing and slaughter is not a practicable one.

### QUESTION OF VOLUNTARY TESTING

Turning to the policy of voluntary testing, or testing in response to applications from owners, now followed in parts of the United States and in several of the countries of Europe I would point out that not only do most of the arguments against compulsory testing apply to it with equal force, but several other factors come up for consideration. Among these, perhaps, the most important is the fact that in testing only those herds in a country that are voluntarily submitted to the authorities, the progress made in the direction of eradicating tuberculosis must, of necessity, be not only very slow, but very uncertain. Professor Bang admits that, under the experience of repeated and often disappointing tests, the patience and courage of our Danish friends not unfrequently fail, and they become weary of well doing and relapse into carelessness. This phase of the matter is one which must be taken into account, and when with it is considered the fact that the last to ask for the test are, as a rule, the breeders of pure-bred stock, whose herds are the principal agents in disseminating disease, the ultimate ineffectiveness of voluntary testing is pretty clearly demonstrated. Owners must obtain fresh blood from time to time, and unless a man is heart and soul with the authorities in their efforts to clean up his herd, and takes every possible and minute precaution accordingly, it is, so long as tuberculosis exists in the country, only a matter of time until his stock relapses into a condition of disease.

(Continued on page 486)

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# FARM

*Comment upon farming operations invited.*

## Alfalfa from the Chemist's Standpoint

With the increasing popularity of alfalfa as a fodder crop comes an increasing desire to know all about this plant, which already has done much for agriculture, and which promises to become a most prominent factor in improving soil, as well as in providing desirable feeding material in large quantities. At an Institute meeting at Fort Atkinson, Wisconsin, Prof. E. B. Hart, in discussing the chemical value of alfalfa, gave figures that place this crop very high in the list of those commonly used in feeding stock. Dealing with economic values, the Professor, touching on useful and non-useful or digestible and non-digestible constituents, showed that proteids in particular were necessary for life, for the building up of the animal, for flesh-forming, and for taking part in all living processes of the animal body. It is a characteristic that most farm crops are low in this material, so low that when fed alone they do not produce normal development, necessitating so often the purchase of large quantities of concentrated materials—such as oil meals and wheat bran—as supplementary feeding materials. There is no trouble on the farm in making plenty of starch, sugar, fat and crude fiber, but it is a selected crop that is rich in protein.

"When a farmer asks of the plant what does it do for me, is it making me an abundance of food material?" says Professor Hart, "he is asking that plant a proper question, but it is only by a proper selection of certain types of plants, whose power to produce protein is a large one, that he has at his command the power of increasing the protein production on his farm.

"Following are the food values of several ordinary farm crops in relation to useful digestible food products:—

	Yield		Total Digestible	
	Lbs. per acre.	Dry matter.	Lbs. matter.	Lbs. protein.
Alfalfa.....	34,100	8,000	5,280	875
Corn.....	30,000	7,500	5,025	360
Red Clover.....	18,000	5,200	3,200	491
Oats and Peas.....	13,000	3,120	2,521	350
Timothy.....	10,000	3,500	2,000	228
Rutabaga.....	31,700	3,400	3,000	278
Mangels.....	25,000	3,500	2,750	213
Sugar Beets.....	17,800	2,500	1,800	213

"Although in several cases the total digestible dry matter may be nearly alike, the alfalfa ranks highest among the forage plants in power to produce digestible protein. Even with red clover, which belongs to the same family as that of alfalfa, the yield is not so great, and, consequently, the amount of protein per acre that will be produced is not so large. Can you understand, then, why we emphasize the growing of some alfalfa? When we follow the table further we find that sugar beets, mangels and rutabagas, under favorable conditions, often yield as much digestible dry matter as alfalfa or corn per acre, but with a comparatively low content of digestible protein. There is nothing in the forage line that equals alfalfa in this respect."

It was claimed that five tons of well-cured alfalfa hay contained about the same amount of protein as forty tons of timothy hay, and also about the same as four and a half tons of bran. When it is considered that bran runs from \$20 to \$25 per ton, the value of alfalfa looms large.

"In the State of Wisconsin," said the speaker, "farmers spend as high as one million dollars for wheat bran every year. This is a conservative estimate, and the fact that you buy wheat bran and other concentrates, like cottonseed meal and linseed meal, for their protein content, emphasizes the importance of the high place alfalfa should take among the feeding material grown on the farm.

"I have emphasized the great productive power of alfalfa. If we should allow, for example, on the basis of their protein content, three dollars per ton for prairie hay, what would be the value of some of our other feeds? On such basis the comparative values for protein would stand:—

Feedstuffs	Value per ton when prairie hay is worth \$3 per ton.
Alfalfa Hay (average).....	\$ 9.08
Red Clover Hay.....	5.82
Timothy Hay.....	2.48
Corn Fodder (stover).....	1.71
Oat Straw.....	1.37
Alfalfa Hay, containing 12.9% digestible protein.....	11.05
Wheat Bran.....	10.53

## CUTTING AND CURING ALFALFA

"Others have told you all about cutting and curing this great crop, but I want to give a few chemical reasons for the procedure that should be followed in the cutting of alfalfa. It rests on a chemical basis. It rests upon this fact, that when the alfalfa is about one-tenth in bloom, or just coming into bloom—the time you are advised to cut it—it is then, everything considered, at its highest feeding value. Its protein content is high, sugar and starch content are very high, and the indigestible food fiber, the material that is of little use to the animal, is relatively low.

"As the plant grows older, the crude fiber increases in amount at the expense of the sugar and starch, until you have, approximately, 2,500 pounds per acre of this indigestible material, while if you had cut it back at the proper time the amount of fiber would have been materially smaller. So this is the point I want to emphasize to you, that there is a chemical reason, and a very good one, for cutting your alfalfa in the early stages of bloom. When one-tenth in bloom, it contains 18.5 per cent. of protein; when one-half in bloom, 17.2; while in full bloom its content of protein is 14.4.

"Another interesting feature about this alfalfa plant is the relation of the stem part to the leaf part. The comparative relation of leaf to stem is greatest in the early part of the plant's history; at that time, for example, for 10 parts by weight of stem there is 73 parts by weight of leaves. In the late stages for every 100 parts by weight of stem there is approximately 49 parts by weight of leaves, and the leaves are the best part of the plant. It is in the early stage of the plant's growth that your cow or your pig will find in this plant its highest nutritive value. As the plants keep growing its stem parts are increasing in greater proportion than is the increase in the leaf content, and in the early history of the plant the proportion of stem to leaf is less than it is in the later history of the plant. The reason I emphasize is this that the leaf is the most nutritive part of the plant, and contains a large portion of the protein.

"For instance, for 100 parts of protein found in the stem, in an equal weight of leaves you will find 250 parts of protein. The very useful nutritive constituents, such as starch, sugar and fats, are likewise in higher proportion in the leaves than in the stems, but when you have 100 parts of crude fiber in the stem, an equal weight of leaves will contain but about 28 parts of fiber. This shows that on a chemical basis the cutting of the alfalfa at the stage when it is coming into bloom is good philosophy, because it is richest then in its most useful constituents, and the proportion of leaf is greatest to the stem—a fact never to be lost sight of because of the high nutritive value of the leaf."

The use of the cap in curing alfalfa hay also was advised by Professor Hart. "This point," he urged "rests upon a chemical basis. When you grow sugar beets and harvest them and take them to the factory, they are ground, placed in water, macerated, and the sugar dissolved out. The sugar has simply been taken into solution by the water. This is also true of other plant tissues. There is not a plant grown that does not suffer some deterioration by water-soaking. The more easily soluble, and, often, consequently, the most useful materials dissolve in the water and run away,

and the more water the greater the proportion that dissolves out. So in making alfalfa hay, it should always be urged that, after all the difficulty of getting the crop to the stage of cutting, the greatest care should be exercised in proper curing. It is a waste of time and money not to do this. Below are some figures that actually show what will happen to alfalfa under the action of rain:—

	Hay not damaged.	Hay damaged.
Ash.....	12.2%	12.7%
Crude Fiber.....	26.5%	38.8%
Ether Extract.....	3.9%	3.8%
Nitrogen Free Extract.....	38.7%	33.6%
Protein.....	18.7%	11.0%

"This table shows how the hay was damaged and the losses it sustained. It shows that the hay that was damaged has practically lost in such things as the sugar and starch; the things that easily pass into solution, and that the protein content has been very materially reduced by the exposure. Under the best conditions of handling your crop, you will probably lose one-fifth of its weight by loss of leaves, so that if you have a five-ton crop, you will probably lose one ton, which is left on the acre of soil. Care, then, in its mechanical handling should be given proper consideration."

## ENRICHING THE SOIL

The question of benefit to the soil in adding nitrogen, and in bringing other plant foods from the deeper soil nearer to the surface also was discussed. In this regard, the Professor said:—

"I have not any data at hand to show exactly what alfalfa will do in adding nitrogen to your soil, but I have some data on clover, a plant belonging to the same family as alfalfa, which will do. Remember this principle, farmers, a plant grows because it gets its food from the soil, and the food materials that are most liable to be lacking in our ordinary soils are nitrogen, phosphoric acid and potash. This class of plants, to which the alfalfa belongs, has the power of taking its nitrogen from the air, and, consequently, builds itself without drawing upon the source of nitrogen in the soil. As a matter of fact, it leaves through its stubble and roots an increased quantity of nitrogen in the soil.

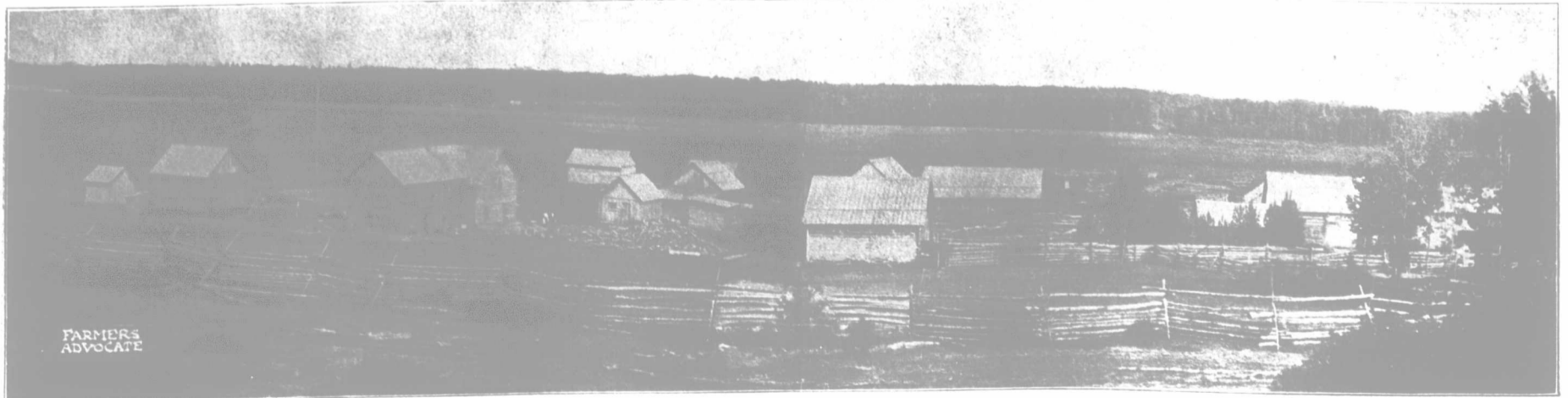
"Here is a table showing what a member of the legume family, one of the clovers, did for a soil at a Canadian Experiment Station:—

	Lbs. per acre.
Before experiment.....	533
After two years.....	708
After four years.....	742
After five years.....	841
Increase in five years.....	308

"The soil content at the beginning of the experiment contained 533 pounds of nitrogen per acre. After growing the crop for five years, and then subjecting the soil to another analysis, it was found that it had actually increased the content of the nitrogen by some 300 pounds per acre. In this same class lies alfalfa, with its power of enriching the soil by adding nitrogen.

"Another point is that by its long root system it feeds deeply and secures its food from the lower soil areas. Consequently, when the leaves and debris from this plant accumulate on the surface of the soil, you are really accumulating material that has been brought from lower depths. The debris contains a certain amount of potash, phosphoric acid and nitrogen, which act in a measure as a top dressing. Consequently, when you break up an alfalfa sod and plant it to wheat, oats, potatoes, or corn, you generally have increased growth, due in part to having increased the upper layers of a soil which the plant food elements brought from the lower depths.

"By this accumulation near the surface, such substances as potash and phosphoric acid are brought from the deeper layers and enrich the upper layers of the soil with those plant food elements necessary for the crops that follow. But I do not want you to believe that alfalfa, or any legume, is a panacea for the restoration of all soil fertility. Alfalfa obtains part of its nutrition from the soil, while a part of it does come from the vast sources of nitrogen in the atmos-



HOMESTEAD OF SHERIDAN LAWRENCE, PEACE RIVER, ALBERTA



phere about us. By growing legumes, there is no question but what we can save ourselves the expensive bills incurred by the purchase of high-grade, nitrogenous fertilizers. But the source of potash and phosphoric acid in this plant, as well as lime and other necessary elements for the plant's growth, has been the soil."

"Following are the important points I wish to emphasize:—

"1.—Alfalfa produces large amounts of protein and saves expense bills for concentrated feeding materials.

"2.—It is richest in useful nutrients for the earliest stage of growth, when it is just coming into bloom.

"3.—Its proportion of leaves to stems is also greater at that time, and consequently, enhances its feeding value.

"4.—Rain dissolves out the useful nutrients.

"5.—It adds fertility to the soil, fifteen to twenty dollars' worth per year per acre in nitrogen, and brings potash and phosphoric acid nearer the surface.

"6.—It removes phosphoric acid, potash, and other essential plant elements from the soil, and for maintaining permanent fertility in the soil these must either be returned in the well-preserved manure, or supplied by the purchase of commercial fertilizers."

### The Functions of Speculation

Speculation is the fly-wheel which imparts to the modern commercial machine a motion so uniform that all of its parts operate continuously and simultaneously. As men produce and consume, as well as exchange, according to comparative prices, it also directs the consumption of commodities into the most advantageous channels. Professional speculators are the men best equipped for securing and interpreting news of variations in supply and demand, and they determine a price that, with slight local variations, prevails throughout the wheat industry of the entire world. Price, in turn, is a sensitive barometer which records the influence of every event which, immediately or mediately affects supply or demand. Speculation anticipates price—determining events to such an extent that it relieves the producer from the risk of growing wheat that he may be obliged to sell below the cost of production on account of an unforeseen change in the market. The directive control exerted through prices "is its service to society in general." The "risk-bearing function is its service to trade as such." That the need of speculation is proportionate to the magnitude of the risk element is axiomatic. Through the speculative market flows a continuously moving stream of business which will carry the risks of merchants, producer, manufacturer and consumer alike, and at any time and place. Speculation alone makes hedging transactions possible. By its anticipations, it lessens price fluctuations. The short seller is the most potent influence in preventing wide fluctuations in price, for he "keeps prices down by short sales and then keeps them strong by his covering purchases." The producer always finds a ready market, and large stocks of wheat can be carried over from a season of abundance to one of scarcity without great risk of loss.

The American is unquestionable the greatest and most typical of all wheat speculators. The stupendous undertakings which he sometimes assumes are characterized with an importance, as well as with a boldness and brilliancy, that excites world-wide interest. He is practically the manager and director of the world's wheat movement. If objection is made to the great scope of his influence, it must be remembered that experience has taught him that he cannot continue long in his position of importance unless he solves the mighty world problem that is ever presenting itself—the problem of providing bread for the non-producers of wheat. Eminently practical and clearheaded, his future vision is as keen and penetrating as was that of the prophets of old. He is necessarily a cosmopolite, and he knows the traits and needs of many races. His facilities for acquiring information are unsurpassed. He knows the progress of harvesting in Australia and Argentina. The transportation companies give him regular quotations of freight rates to all parts of the world. Telegrams and cablegrams give him immediately the change of price in the principal markets. He has an intimate knowledge of the visible supply of wheat that is stored in the world's great terminal elevators, and of the wheat that is being transported in car and vessel. His eye is always on the fine wavering ratio line between supply and demand, and from its movements he determines the form of his price line. The markets make wheat so liquid for him that the banks will advance him money at the lowest rates on elevator certificates in larger proportion to their value than they will on the safest real estate.

### EVILS OF SPECULATION.

The modern speculative system is of such recent origin, and its operations seem so complex to the ordinary layman who is unacquainted with produce exchanges that it was and is little understood. Its evils were more easily recognized than its benefits. Without an understanding of speculation, it was easy to ascribe many evils to it with which it has no connection. "The Modern system of futures" has proved itself a convenient scapegoat for all evils of the grain trade. It is charged with being the cause of low prices and of high prices, with increasing trade

risks, and with diminishing them until there is no chance for profit. A few years ago the farming class clamored for the suppression of the speculative market, while recently the Kansas farmers started a movement to contribute a cent a bushel on all their wheat to a fund for the benefit of the most daring speculator of the Chicago market. As the functions of modern speculation are better understood, its advantages become more apparent, and the speculator is looked upon as something more than a mere gambler. Opposition becomes more rational and less intense.

### GENERAL RESULTS OF SPECULATION.

The speculative grower who held his wheat until it seemed an opportune time to sell was the far-sighted conservative man of the first part of the nineteenth century. Conditions have so changed that, unless there is a lack of transportation facilities, or lack of competition among buyers, he is the greatest and most reckless of all speculators, if the degree of ignorance under which he is operating is the test of recklessness. Even many of the large milling and elevator companies insure themselves regularly by hedging.

Statistics show that since the advent of speculation, fluctuations in the price of grain have been of smaller extent, comparing year by year. Such fluctuations as do remain are changes of a more gradual nature, and the gradations are much finer. For example, wheat was formerly quoted in fourths of a cent a bushel, while now it is quoted in sixteenths of a cent a bushel. A half century ago, traders required a margin of 10 cents a bushel, for carrying wheat, now the margin is two cents. With the minimizing of risks, profits for carrying them fell. In part these changes are doubtless the result of other concomitant developments, but there is no question of their being chiefly due to the development of speculation. As to the agreement of present prices of futures with future cash prices, little, if any, increased accuracy of prediction is shown. While there have been improvements in the methods of speculation, there has also been an increase in the size and complexity of the world's wheat market, a factor which would tend to decrease the accuracy of prediction.

The increasing uniformity of price tends to decrease the amount of business done upon the exchanges, for this business is dependent upon price variations. This tendency of prices to remain more steady will be increased with the further concentration of commercial wheat interests. A similar development has taken place in the case of other commodities, such as oil and pork. In these commodities prices are practically fixed by a small group of men who know and in a measure, control supply and demand, and there are few price fluctuations left to serve as a basis for speculative dealings. Consequently operations no longer have their former magnitude. Local consumption of wheat will increase with the growth of population, and less actual wheat will be bought and sold at the terminal and export markets. The force of these influences is certain to be reflected on the speculative exchanges. The opportunity for men to indulge their gambling proclivities by means of the bucket shop; the growing prosperity of the country; the increasing steadiness of the price of wheat on account of the growing perfection of the speculative machinery and of the knowledge of the conditions of supply and demand; and the increasingly great combinations of commercial wheat interests, already foreshadowed by the large combinations of transportation, elevator and milling interests, will continually reduce the importance of wheat as a commodity in the speculative markets of the world, perhaps to the extent of finally eliminating it entirely.—P. T. DONDLINGER, Ph. D., in *The Book of Wheat*.

### The Farmer's Ten Commandments

1st. Reflect thereon that the parent plant and seed bequeath equally their good points and bad points their virtues and faults, to their offspring, and that it is incumbent on thee, not only for thine own profit, but also for the advancement of farming, to do thy share towards the improvement of plants. Therefore shalt thou do thy best in this matter for "the seed is the beginning of life."

2nd. Thou shalt gather the seed from proper plants as outwardly bear the stamp of being true to their species, for the characteristics are evident to the eye. As a man's breeding can be judged from his features, so can the character of a plant be seen. Grow thy seed separate from the main crop harvest, thresh and store separate.

3rd. It is the plants coming early to early maturity which yield seeds that in their turn produce early crops and so escape the blighting effects of frost. Therefore thou shalt not collect seed from plants which have run to seed before due time or in any other way are not satisfactory, for the faults, no less than the good qualities, are passed on to the third and fourth generations.

4th. See also that thou takest the seed from plants distinguished for fruitfulness and for growing crops of the best quality.

5th. Thou shalt not gather seeds from plants that show evident signs of weakness or which suffer from any disease, or from the insect pests; for the seed may carry the diseases and the pests to the next generation.

6th. Thou shalt not take seed from a plant grown on a soil which is dirty or poorly cultivated; for an exhausted soil cannot produce a plant bearing seed of good germinating power.

7th. Neither shalt thou take seeds from plants grown upon soil which has been too heavily manured or cultivated; for luxuriance is always the parent of vice. Therefore, give thou preference to plants that have grown and done best under natural farm conditions, for such produce the best offspring.

8th. Thou shalt not gather seed from those plants which ripen latest; the first and best fruit yields the best seed. No procedure is more foolish than that of selling the best grain and using the poorer for seed.

9th. Thou shalt not sow any seed until its germinating powers have been tested. Thou shalt see to it that special care is given to testing oats, barley and the grass and clover seeds, lest they fail to grow and thy seeding is in vain.

10th. Gather not seed from late ripening soils, for then the seed does not ripen sufficiently before the beginning of winter, and the seed is feeble. On the other hand, thou shalt not collect the seed too soon nor before it is thoroughly ripened. Its productiveness and quality for seed thou shalt further insure by heavy fanning, thorough treatment with formalin or bluestone and early seeding on carefully prepared land.

Hold thou by these commandments, so shalt thou have pleasure in thy crops and profit in thy work.

Sask.

H. M.

## DAIRY

### Fundamentals in Feeding Dairy Cows

The first requisite in successful feeding, providing the man is all right, is the cow. Given an individual with a good development of the milking function, and with a properly proportioned milk-making equipment, the skill of the feeder is manifested in his ability to supply her wants most perfectly. Skill in feeding a herd of dairy cows consists in so compounding the grain and fodder ration that the cow will be held up to the maximum point in production, and at the same time, all the nutrients supplied be utilized to this end, and to the maintenance of the body without undue loss. The feeder has one other consideration. He should so arrange his feeding ration that the nutrients shall be supplied in the most inexpensive form. That is, he should have such knowledge of the composition of feeding stuffs, of grains particularly, as will enable him to select those that will supply most cheaply the ingredients the cows require for milk production. He needs to know something of the relative value of different feeding stuffs for milk production, and, knowing that, to arrange to use those that will produce the maximum result in milk at the minimum of cost. This all sounds fairly simple, but a full understanding of the relative values of foods, of the purpose served by the various ingredients of feeding stuffs in the animal's body, and of the adaptability of certain feeds for milk production, is acquired only by a thorough study of the whole question of feeds and feeding, and of the physiological requirements of individuals being fed for certain purposes. The whole makes a subject really too large to be treated briefly. It requires a bit of close study on the feeder's part, a knowledge of the individuals he is working with, and the ingredients he is feeding them.

For the economical conversion of food into milk the character of the food, as well as its composition and digestibility, requires consideration. In winter feeding of cows, succulence in the ration is a prime requirement. A feeder can start safely on the assumption that green grass is superior to all other foods for milk production, and that in proportion to his success in compounding a ration approaching grass in succulence and composition, will his success be measured in producing milk from his herd during the winter season. Experience has demonstrated, although no scientific explanation of the reason why such should be the case has yet been given, that grass dried in the sun, while it gives up nothing but the moisture it contains, will not produce the same results when fed in connection with water, as it will when consumed in a green state. Its composition, so far as nutrients go, is very nearly the same when it is made into hay as it is when green. It is probable, however, that the difference in its feeding value is due to lessened palatability and toughened cellular fibre. At any rate, it is less valuable than grass for milk or flesh production. Succulent food of some kind in winter feeding in





RED DEER CREAMERY.

a first necessity. In this country, where silage is hardly used at all in winter feeding, succulence may be gained by feeding roots. Clover and alfalfa hay, also, though no more succulent by nature than ordinary hay or green cut grain, seem to add something to a ration which other roughage does not. What they add is in part due to the large amounts of proteid nutrients they contain, but they seem to add something also in the way of succulence to a ration that is out of proportion to their moisture content. It is probable that some of the value of clovers as a winter fodder comes from their palatableness.

This question of the palatableness of the various grains and fodders in feeding opens up another field of inquiry, a much more difficult one than the mere question of the composition and digestibility of feeding stuffs. Two feeds may compare most favorably in regard to their percentage composition of the necessary ingredients and in regard to the digestibility of those ingredients, but the degree in which they are agreeable to the taste of the animal influences very largely their value to the individual for any certain purpose. Palatableness stimulates the appetite, relish for food is conducive to good digestion. The taste, therefore, of food tends to promote a state of vigorous activity on the part of the digestive organs. The agreeableness of a food's flavor is, without doubt, an important factor in successful feeding.

Balancing a ration does not necessarily mean that it is compounded of the best possible materials, and is in the best possible form for the economical production of milk or other animal products. Standards may be set up for the feeder's guidance, experiments more or less scientific and unrelated to actual feeding may demonstrate certain principle which it would seem proper to follow in the feeding of animals, of dairy cows especially, but, after all, it is the individuality of the animal, its capacity to consume and its ability to produce, the effects of food upon its health and condition, upon its appetite and taste, that are the real vital factors in the problem of feeding.

#### Average Farmer and Dairying

The person who could succeed in getting up some scheme of interesting the average farmer in the dairy business would be entitled to have his name enrolled among the benefactors of the human race.

While this may seem to be an extravagant statement it is not as much so as it might seem before it is examined into more closely.

The average farmer today is a dairyman just because he happens to be. He did not go into it premeditatedly, he just drifted into it. He found himself with a few cows and a little more milk and cream on hand than his family could consume and he sold it, and he probably gave no thought to whether it was a good product or not. He sold it simply because he found out he could, and he probably never took the trouble to look up the price, or the test.

As long as the average farmers are as indifferent as this, we can look for but little difference in the character of the raw material that is coming to the creameries.



CHEESE FACTORY AT ERSKINE.

Extensive farming and dairying don't go together. It takes small farms and intensive farming to make good dairymen. Just as long then as the average farmer wants to own all the land that joins him, and undertakes to farm it all, he isn't going to pay much attention or take much interest in dairying.

Occasionally there will be a farmer who appreciates what dairying means to his soil, to his family, and to his posterity and he will be interested in dairying. He will be a dairyman, and of all the farmers in his community he will be the most successful.

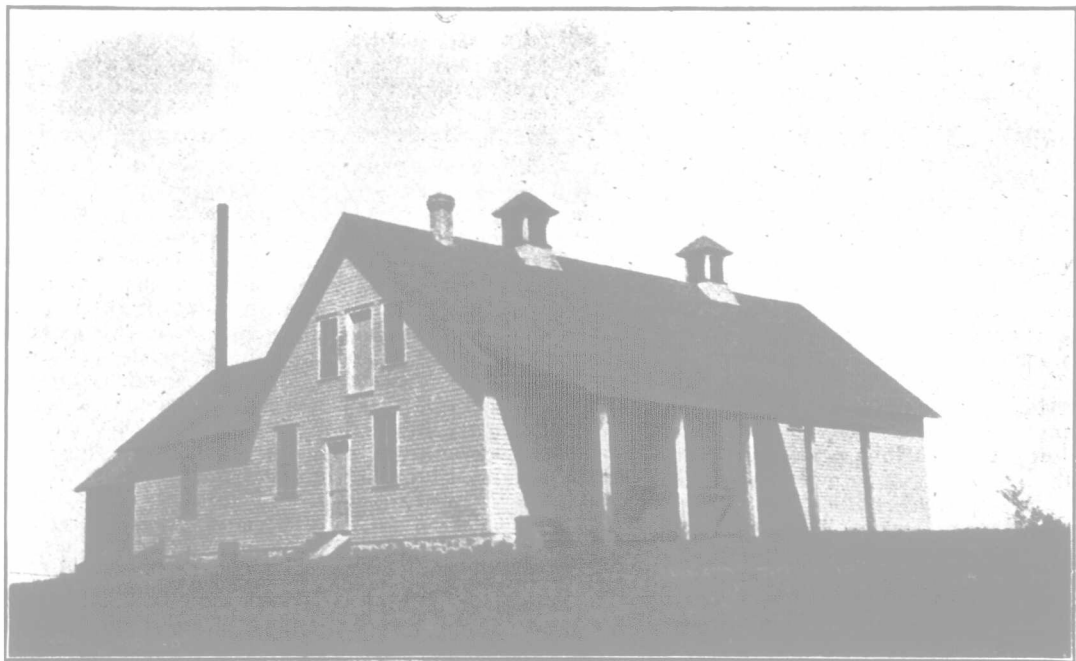
Just what is going to be necessary to interest the average farmer in dairying is pretty hard to tell. One thing is certain, he cannot be driven into it. It also seems that he cannot be persuaded into it.

The example of a successful dairyman neighbor doesn't seem to have any impression upon him.

Just so long as present conditions prevail—that is, so long as the present high prices of grain and meat products continue, he is going to be a hard man to interest in anything but the raising of these products; and if we can believe the economist who studies the future, we are never again to see cheap grains or cheap meat products.

Population, they say, is increasing so fast and is becoming so centered in the cities; our manufacturing enterprises are becoming so great, requiring such a vast army of workmen, all of whom are consumers of these farm products, that the consumption of them has outrun their production to the extent that it will never again catch up; and that the demand for these products will always exceed the supply.

If this should be the case there is but little danger that any person will ever have his name enrolled as a public benefactor for interesting the average farmer in the dairy industry.—*Chicago Dairy Produce.*



CREAMERY AT STETTLER, ALTA.

#### Winter Churning Troubles and how they may be Overcome

There are certain churning troubles peculiar to the winter season. These usually manifest themselves in a lengthening of the time required to bring the butter, and the maker is often a good deal perplexed to know exactly how to deal with them.

As a general rule churning trouble in winter is caused by the fact that the cows have been a long time in milk, the fat globules are consequently smaller in size than they were earlier in the lactation period, making it more difficult for them to coalesce and form the butter granules, and in addition, the fat of cows advanced in milk, or of farrow cows, is harder, and has a higher milking temperature. There may be some trouble in regard to ripening, though ripening troubles are less liable to occur in winter than in summer. It is easier to obtain the cream in good condition to start with, and further the low temperatures of the season are unfavorable for the development of the organisms that cause the most serious trouble in summer. When any reasonable care is exercised in handling the milk and cream, troubles due to improper ripening need not necessarily occur. To the cows and the character of the food from which milk is made, may be attributed most of the churning troubles of the fall and winter seasons.

Cows that are far advanced in lactation and fed on dry fodder give milk the fat of which is hard, relatively speaking. The cream becomes highly viscous, that is, it is sticky, adhesive, and glutinous in character. The natural course to follow is to feed the cows on a more succulent

diet, or something that will cause them to give more milk. Succulence may be added to the feeding ration in the form of roots, but in the majority of the cases where troubles of this kind occur there are no roots to feed. Neither is there much of anything else that will serve the purpose. About all the dairyman can do in the circumstances, is to attend carefully to the ripening of his cream. Of course if he has some roots, clover hay and bran, he can work up a feeding ration that will overcome winter churning difficulties pretty effectually, but if he can't get these feeds there is not much use explaining what might be done if he could.

The viscosity of the milk may be lessened by bringing about a vigorous lactic acid fermentation in the cream, and in extreme cases by diluting the cream with warm water or weak brine. Care must be taken not to carry the dilution too far, else trouble quite as serious may result from going to the extreme in the opposite direction, that is, by making the cream too thin. The cream as it is gathered should be mixed, placed in a can or crock until sufficient has been gathered for a churning, and then raising the temperature to about 70 degrees. It should be held at this point until there is a good acid development—until the cream is sharp and sour to the taste. Then by bringing it to a temperature of about 65 degrees or higher if it seems necessary, the butter should form in the usual time.

The attempt should not be made in winter, especially if the cream is from the milk of farrow

or stripper cows, to churn at the lowest possible temperature. In such cases the butter stops just short of the breaking point and further agitation fails to bring any more of it. If this results, about the best thing to do is to take the cream out of the churn and heat it up ten or fifteen degrees, or if it does not appear too thin, a little water at a temperature of 85 or 90 degrees may be added. Another way to bring butter in cases like this is to add a little dry salt to the churn. Salt seems to lessen the viscosity in some way and facilitates the formation of the butter granules.

## POULTRY

### Poultry Keeping as a Business

A man may have one or several objects in view when he goes into the poultry business. If he is wise and has had any experience in poultry keeping, he will have only one object in going into the business, or at most two. This is the day of specialization in industries, in poultry keeping as well as in other things, and he who keeps his energy and means centered upon one line of work will likely attain better results than if he attempted to spread himself over several lines in the same business. A man going into poultry, if he is going into a commercial enterprise, for the production of eggs and broiler chickens, is well advised if he specializes in one or two specialties of the business, and does not try to keep a few different kinds of poultry stock. There is no room for a general poultry, and some men can



combine a market business with the breeding of fancy stock, but the majority of them cannot.

A man going in for poultry keeping has one of two objects in mind. He is either going into it for profit, making it a business undertaking from which money is to be made, or else he is going to keep a few fowls for pleasure, to supply his family with eggs and meat, or to produce a few fowls for fancy or exhibition purposes. He is not very particular whether or not he makes any profit from his investment and work. When one looks the country over he might be inclined to think that a majority of those keeping poultry are of this latter class. And, as a matter of fact, there are quite a few of this kind. Farmers, in this country particularly, do not keep fowls for the profit made from them, but largely for the poultry products required for family use.

Poultry keeping, if one wishes to go into it as a business, will yield large returns, providing it is managed properly. To handle a large business successfully a man requires to be an expert, to have good business judgment, a natural aptitude for the work, and a willingness to learn from his own experience and the experience of others. He does not need to be an expert at the start, he can pick up the business end fairly easy, but he does need to be a reader, a thinker and a learner. Few of those who are into poultry extensively to-day had much expert knowledge of the business when they embarked in it. They came to a knowledge of the work and learned the business methods necessary for its successful management as their establishment grew. As a rule, too, most poultry men start with limited capital. Probably it was just as well their capital was small for few men are entirely ambitious, and if a man has enough faith in himself and confidence in the business to go into it at all, he might be tempted at the outset, if he could command the means, to embark in the enterprise on a larger scale than his experience and expert knowledge would justify him. It is well to start a little slow. Fortunes can be figured pretty rapidly in the poultry business, but they come far short of realization, unless the man who does the figuring can manage a poultry establishment as well as cipher.

There are several branches of poultry. If a man is going into it as a business undertaking, he wants to combine two or more different lines so as to have a steady source of income during the entire year. If he goes in for pure-bred stock alone, for example, his sales will be limited to about four months of the year. It is the same with the other branches. If a steady return is required, and a living to be made from the business, combination is necessary. In a general way, eggs and meat production make the most practical combination. Eggs are produced during the winter when they are high in price, incubated during the early spring season and the poultry keeper has a steady source of revenue coming in during the greater part of the year, though there will be some months when, if he is into hens alone, his income will not be very much. During the spring and early summer, no return can be expected unless he can supplement his winter egg harvest by the sale of eggs for hatching. If the stock is pure-bred this is readily accomplished. Then, again, poultry keepers in the neighborhood of city markets sometimes run ducks in addition to the regular line of hens, and tide themselves over the slack summer season by selling early hatched ducks. There is always a good demand for this class of poultry near large cities, and in the early season good profits are made.

The best advice that can be offered a beginner in poultry is to go a little slow, master first the details of the work, learn to manage a large business by first demonstrating that a small one can be handled successfully, and never overstep very much the limits of your own experience. The best way is to proceed as if you had no capital other than the profits from the flock.

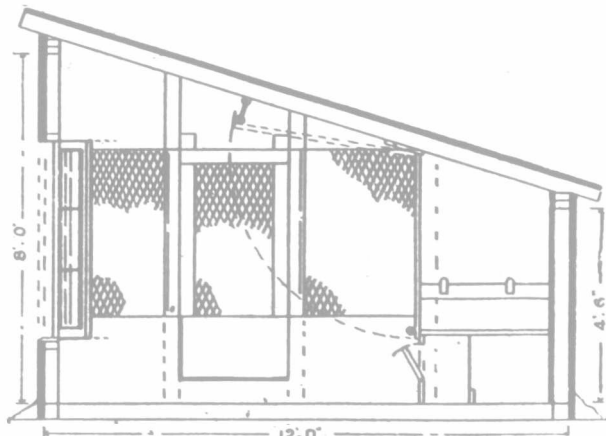
### Building and Equipment for a Two Thousand Bird Plant

EDITOR FARMER'S ADVOCATE:

As I am thinking of going into the poultry and dog business I would be greatly obliged if you would kindly answer me the following questions through the columns of your valuable paper. What would it cost to erect a building 300 feet long and 20 feet wide? What height should such a building be? I intend running a litter and food carrier track down through the building in the highest part. I estimate that the building will accommodate 1000 birds, having 200 birds partitioned off with poultry netting, so

as to prevent crowding. House (no floor) to be built of best quality shiplap, \$30.00 per thousand feet, and covered all over outside with some good roofing paper. What size of a run would be required divided in the same manner as interior? Give rough estimate of the grain that would be required for one year, fed two-thirds wheat and one-third oats. Give list of things required for a 2,000 bird plant—incubators, brooders and size suitable to use. What size of incubator house? Describe size and shape of kennels for 20 dogs, collies and Newfoundlands. Where shall I apply for a sample of free government farm grain. SASK. A WOULD-BE POULTRYMAN.

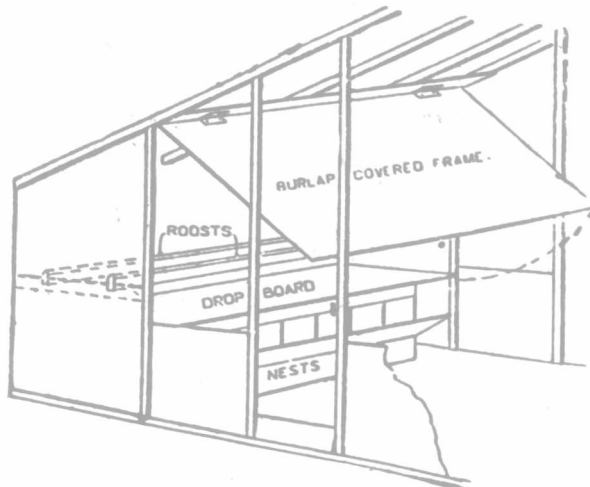
In reply to the enquiries of your correspondent who is going into the poultry business I might say that with reference to the cost of a poultry house 300 feet by 20 feet, that I would think it decidedly unwise to give such plan of house any consideration from the fact that a poultry house 20 feet wide is not practical. The essential consideration in constructing a poultry house is to so arrange it as to allow the rays of sunshine to penetrate, if possible, to the roosts and drop boards which are located at the rear of the pens. I take it that your correspondent proposes going into the poultry business in a practical way for commercial purposes, combining convenience and the most satisfactory conditions for the birds. For a purpose of this kind I would recommend a practical and economical poultry house, one recognized by poultrymen in general under the name of "the single style of poultry house." This style can be constructed as cheaply as any and has all the essentials of a first class poultry house. The general specifications of this style of house are 8 feet studding at the front,



CROSS SECTION OF SINGLE STYLE OF POULTRY HOUSE.

4 feet 6 inches studding at the rear, the width of the house 12 feet. The pen partitions are usually placed 12 feet apart, each pen having a capacity of from 25 to 30 birds. The partitions are solid board to the roof where the roosts and drop boards are located with 2 feet of board at the bottom and 4 or 5 feet wire above for the balance of the partition. The doorways in the partitions are placed two feet from the front of the pen in which the litter and food carrier, suggested by your inquirer, could be successfully operated.

I am afraid, however, that one thickness of shiplap and covering with roofing paper would not be a sufficient protection for the average Canadian climate. I would suggest that the inside of the studding on the ends and rear walls be sided up with shiplap, and on the outside of the studding throughout the building shiplap, paper and some suitable drop siding be used. This I think would make a much more satisfactory poultry house particularly for the securing of winter eggs which should be an important factor.



INTERIOR VIEW OF SINGLE STYLE OF POULTRY HOUSE. SHOWING POSITION OF NEST, DROP BOARD, AND BURLAP CURTAIN.

The estimate cost of such a building I would place at from \$3.50 to \$5.00 per running foot depending on the varying price of lumber and labour in the district where the building is to be constructed.

In running the birds in colonies of 200 as suggested, this style of house might be used by making it with partitions every 90 feet. In figuring accom-

modation for poultry from 5 to 6 square feet of floor space should be allowed for each bird. I would, however, advise the dividing of the house and not allowing more than 100 fowl to run in a colony, as I think better results would follow from this plan.

The runs in front of the house should extend for from 100 to 150 feet to the front and should be fenced with 2 foot board at the bottom and 4 or 5 foot netting above. The runs should be seeded to alfalfa clover or other succulent foods. The cost of feed per bird per year is usually estimated at from \$1.00 to \$1.25 per bird, depending on the varying cost of grain from season to season. I would not recommend wheat and oats alone as food rations, as grit, oyster shell, animal meat and other foods are necessary as a part of the rations in order to secure satisfactory results.

To give a list of things required for a 2000 bird plant is perhaps a large undertaking, and I think any person attempting to undertake poultry farming on such a large scale should have a pretty thorough knowledge of the requisites of a plant of this capacity, or the chances are that disaster and financial failure will follow.

To equip a practical up-to-date commercial poultry plant of 2000 bird capacity one can safely estimate that the land, houses, and general equipment will cost in the neighborhood of from \$6.00 to \$7.00 per head. Too often the poultry business is disgraced by failures resulting in persons undertaking it with the idea that a few dollars is all that is necessary with which to go into it. It is an industry by itself and to be made a success of requires capital and a thorough practical knowledge of poultry keeping. My advice to your correspondent, or any other person going into the poultry business without this practical knowledge, is to undertake it in a small way and extend his business with increased experience.

Edmonton, Alta.

A. W. FOLEY,

Poultry Superintendent.

For information in regard to the housing and breeding of dogs, we would advise our correspondent to write to Mr. H. B. Donovan, Editor of the Kennel Gazette, Toronto, who is one of the best authorities in this country on such matters. Our inquirer should also procure the latest government bulletins on poultry-keeping, particularly Poultry Bulletin No. 1, published by the Alberta department of agriculture. It is sent free on request.

For free government farm seed apply to the Dominion Experimental farm in your province, or to the Central Experimental Farm, Ottawa.

## HORTICULTURE

Great Britain last year imported £29,000,000 worth of timber. About one-fourth of this came from British possessions abroad.

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The area of land in Canada fit for tobacco growing is capable of producing twenty-five million pounds of leaf per year. Home consumption supplied entirely with domestic tobacco would absorb about one-third of this, leaving a large surplus for export. Soil and climatic conditions in this country is favorable for the production of tobacco equal in quality to that grown in the United States, but because the industry is in its infancy here, while the Americans have perfected their growing and manufacturing systems by generations of experience, this country is handicapped in competing with the States in foreign markets.

It is only recently that tobacco growing has been taken up as an agricultural industry in Canada. Certain sections of the country, particularly the Lake Erie counties in Ontario and parts of southern Quebec, are well adapted climatically and in soil conditions for tobacco culture. The quality of the leaf produced is not inferior to that grown in more favored sections in the south. The higher grades of cigar tobacco cannot be grown in northern latitudes, but leaf adapted for ordinary use may be readily grown. The Canadian Manufacturers' Association is proposing that the industry should be stimulated by government assistance in the way of instructing farmers in the best methods of curing and packing for home consumption and export, and by establishing farms in charge of experts, in the tobacco growing sections of the country.



### Suggestions for B. C. Forest Management

That the Province of British Columbia should have a forestry commission, that fire protection should be put in the hands of a force of men trained as well as the Northwest Mounted Police and altogether free from political influence, and that the first faculty of the British Columbia provincial university to be established should be a faculty of forestry—these are some of the suggestions made some time ago in an address by Mr. G. O. Buchanan, a well-known British Columbia lumberman, to the Nelson (B. C.) University Club. Other suggestions were the prohibition of the cutting of immature timber, the substitution of sawn ties for hewn ones, the discouragement of the manufacture of lumber in advance of requirements and the reservation of all land above 3,000 feet in altitude in the coast districts and 4,000 feet in the interior. He would also have the remainder of the timber on provincial lands held for a long time to come, liberal terms offered for the surrender of existing licenses and the withdrawal of the largest possible amount of timber from the market.

### Ripe Tomatoes in Saskatchewan

EDITOR FARMER'S ADVOCATE:

In your issue of October 14th, I noticed a letter signed "Frost Conqueror," on raising ripe tomatoes in New Ontario. What "Frost Conqueror" says about tomatoes in New Ontario is also true about the same fruit in Saskatchewan. As a rule it is necessary to start the plants very early. If it can be done, it is not too early to sow the seed in February, quite early in the month.

The earliest tomatoes we have grown here were started in boxes in the house in February. These were potted singly when they were four or five inches high. By the second week in May they had small flower-buds on them. They were then set into a deep hotbed, removing the pots, and setting the plants a couple of inches deeper in the soil than they had been. By watering well, and shading from the sun for several days, the plants were not injured. We did not set the plants out in the open till the third week in June. There was quite a heavy frost on the night of June 12th. We kept the branches nipped back allowing only three clusters of flowers on each one. I think it would be better to allow only two, or perhaps but one, as "Frost Conqueror" suggests. No doubt the fruit would be larger, and would ripen earlier.

This year I planted tomatoes in the above manner. We had no severe frost in August, and we had quite a lot of fine large ripe tomatoes. But we also had ripe tomatoes on plants the seed of which was sown in the open garden on the fifteenth of May. The plants were thinned to about four inches apart in the row, and were only hoed enough to keep the weeds down. The weather was rather dry and hot, so I supposed that hastened the ripening. The fruit that ripened was small, but of very good shape and quality. I intend trying them again in that way, and giving them more care. This year I did not prune them, but just let them grow as they pleased. I got the idea from a gentleman who told me the best crop of tomatoes he ever grew was from seed sown in the open field near Montreal, where I understand ripe tomatoes are difficult to raise in quantities.

Sask.

BRENDA E. NEVILLE.

## APIARY

### Wintering Bees

Nearly every spring, when the bee keepers take their colonies out of winter quarters, extensive losses are reported. As a general rule, the losses are due to carelessness or neglect on the owner's part, or to ignorance of the bees' requirements in the way of food. The critical time with bees coming out of winter quarters is the period just before new honey is brought into the hive. At this time breeding is proceeding actively, and the stores are being more rapidly diminished than in winter, when the food consumption of a strong and well-protected colony is comparatively light. Just at that critical season there is an ever increasing number of hungry grubs to be provided for, and with no honey coming into the hive, there is more danger of a colony starving to death during spring time, or of being weakened seriously by scarcity of food, than at any other season of the year.

Bees often starve in the midst of plenty. They winter in lots called "seams" between the combs, and may be seen packed like slates upon a house roof, the top row removing the food from the cells above them to feed themselves, and by passing it down, feed those below. While the weather remains mild the bees are able to move about from comb to comb in search of food, or with the object of bringing to the center combs food stored in the outer frames; but this activity ceases as soon as really cold weather sets in, and they then pack themselves close together for mutual warmth. Then, as the food around them is consumed, they die simply on account of the cold air by which they are surrounded; and they cannot pass around or under the frames to a probable abundant supply close by.

It is seldom that more than seven or eight frames are necessary for an ordinary colony, and the removal of superfluous frames should be the first step to successful wintering, so that the space in which cold air can circulate may be reduced as much as possible, with a view to lessening the activity of the bees, and the consequent consumption of the stores. It is from all points of view better to allow each to stand and take its chance without a lot of coddling, unless it is to preserve valuable queens.

No colony should be considered safe unless it has stored in the combs at least 25 pounds of honey or syrup and sealed most of it over. If the combs are arranged by the bee keeper, the center ones should have sealed stores about half way down, the amount of stores increasing to the outside of the brood nest. During the winter, bees cluster below quite a portion of the stores; therefore, by keeping the honey warm, and of easy access, the most compact form and normal cluster can be maintained.

The bees should be taken into the cellar some time in November. The covers of the hives will be all sealed down tight, and it will not be necessary to disturb them, but the hives should all be loosened from the bottom boards, so that there will be no jar when they are picked up.

Great care should be taken not to arouse the bees or they are likely to fill themselves with honey and it will be probably five or six months before they will have a cleansing flight. Lay on the cellar floor two joists, and place the hives on them, six or eight inches apart. The next tier is placed on top of the first, each hive resting on two under. This will give ample ventilation.

### National Beekeeper's Meeting

A very full programme of the National Beekeepers' Association was carried out October 13th to 15th, at Detroit, Mich. A session to which the citizens of Detroit were invited, and to which there was a goodly turn-out, was the first evening. At this meeting E. R. Root, Medina, Ohio, gave a demonstration of the handling of bees. Mr. Root removed his coat, vest, collar and necktie; put his trouser-leg bottoms inside his socks to prevent the bees from mistaking them for a hollow log, and then entered a wire cage with smoker. The cage contained a colony of bees. These he smoked in the usual manner, and then proceeded to manipulate the hive. He not only removed from the hive the combs with adhering bees, but shook the bees from the combs into a pan, and then scooped the bees up in his hands, after having shaken them about in the pan. Mr. Root also shook bees upon his head, surprising his audience, many of whom, no doubt, thought that the main object of a bee in life was to find someone to sting. Mr. Root explained that he was careful not to pinch a bee, and also gave a talk on the life history of the bee, and made a very interesting session for his audience.

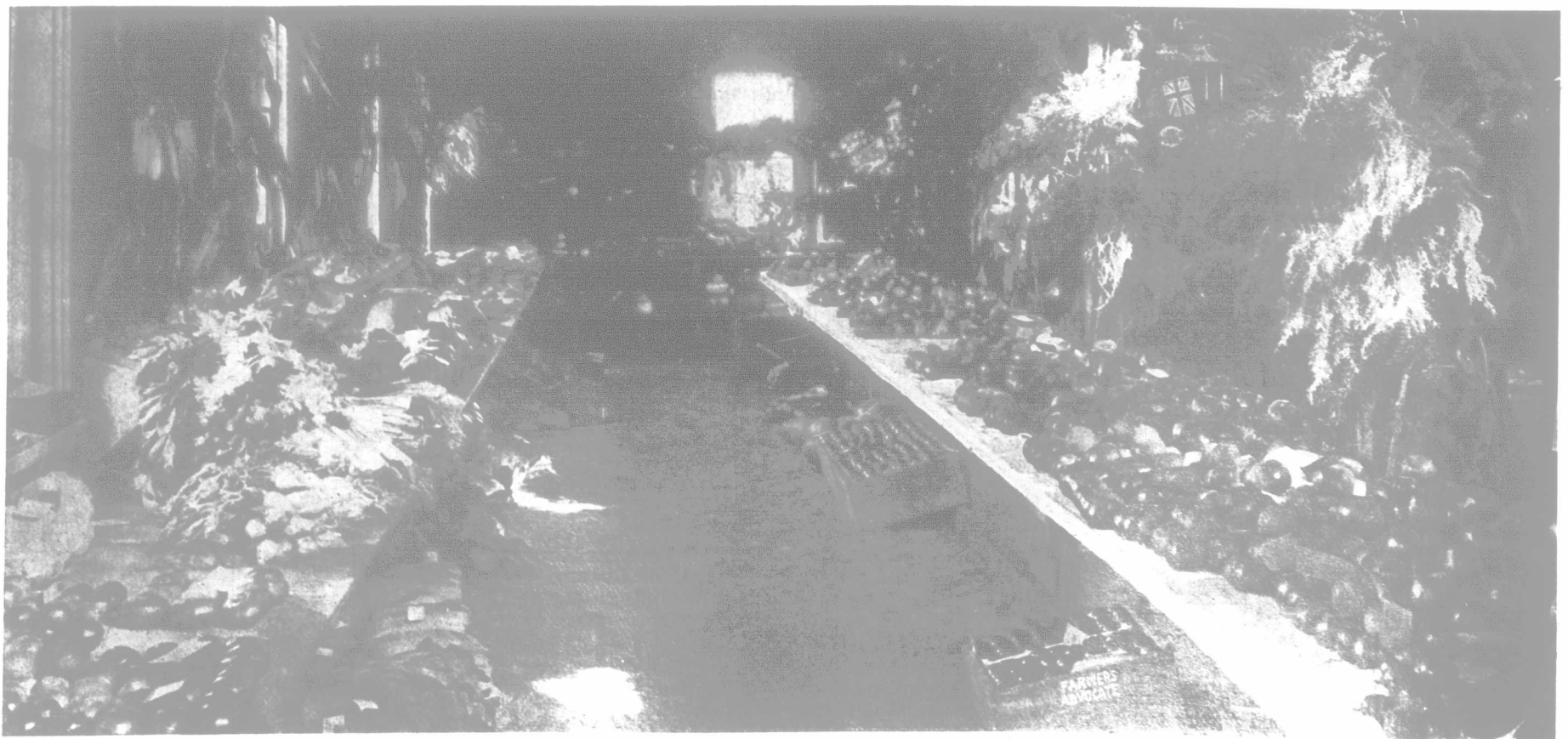
### BEEKEEPING IN HAWAII.

Prof. E. F. Phillips, of the Bureau of Apiculture, Washington, D. C., gave a lecture, with stereopticon views, on "Beekeeping in Hawaii." Prof. Phillips had been sent there by the Department of Agriculture, Washington. He found that colonies yielded a large amount of honey per colony, and that a large number of colonies could be kept in one apiary. The sweet the bees gathered was, however, mostly an excretion from an insect which worked upon the sugar-cane, the "leaf hopper." The opinion of some was that the bees worked on the troughs of molasses set out for cattle. The "honey" was of about the same taste as molasses, but he never saw a bee working at the troughs, and, as a result of his investigations, he was quite satisfied that the surplus the bees gathered was from the source already indicated.

The morning session opened with an address by President Geo. E. Hilton, Fremont, Mich. President Hilton spoke of the advancement the industry had made, and gave Canadians, in particular, credit for the assistance they had been to the industry, and the help they had been in conventions.

### BACTERIA OF BEE DISEASES.

This was followed by an address by Dr. G. F. White, of the Bureau of Apiculture, Washington, "The Bacteria of Bee Diseases" being his subject. Dr. White dealt with it in a masterly manner, stating that disease was a state of not rest, an abnormal condition. The predisposing causes varied—it might be age, sex,



LOCAL FRUIT EXHIBIT KELOWNA, B. C.



race, heredity or pre-existing diseases. Under exciting causes we found food and micro-organisms. The diseases due to bacteria were to bees the most dangerous, among them being American and European foul brood. The American disease was due to bacillus larvæ.

#### EUROPEAN FOUL BROOD.

The cause of European foul brood had not yet been found, and it should be treated the same as American foul brood. The disease attacked the larvæ at an earlier stage than with the American.

In the discussion which followed, J. L. Byers, one of the inspectors for Ontario, stated that foul brood of the European kind was now in one section of Ontario—it was very virulent, and was now in an area less than ten miles square. Dr. Phillips stated that this European foul brood was first noticed in New York State in 1897; it had now spread over sixteen States of the Union, and he felt that radical steps should be taken for its extermination. Conditions were developing so that only those carefully looking after their bees would be able to keep them, and that there should be greater effort in the direction of wax production.

R. F. Holtermann, Brantford, Ont., stated that from what he had heard of European foul brood in New York State, and also in the small area in Ontario, the Department of Agriculture for Ontario and the Department of Agriculture for the Dominion, should exterminate every colony in that section, to try to prevent further spread of the disease, and that the Government or Governments should compensate the owners of the colonies destroyed.

W. D. Wright, Almont, N. Y., one of the State inspectors, described the disease foul brood as follows: Scattering capped cells, a large number fail to mature, and are never capped. In health the unsealed larvæ are pearly white and glistening; in disease they are a dull color—some are spotted, yellow, becoming darker as the disease advances, until they become nearly black. Most of the dead brood is uncapped, the disease attacking the larvæ at an earlier stage than is the case with American foul brood.

Quite a discussion took place as to the advisability of keeping combs not brooded in, but which had been on diseased colonies.

John Newton, another inspector, said he thought there had been too much leniency; it was better to render such combs.

N. E. France, General Manager of the National, and also Bee Inspector for Wisconsin, said: We try to save too much; these combs are only worth the wax they contain; render them.

Those posted in public and private discussion appeared to think that disease among bees was becoming more prevalent, and that it was going to have the same effect in beekeeping that the San Jose scale was expected to have among fruitmen—wipe out those who did not watch continually, which means practically all but those making beekeeping a business proposition.

R. L. Taylor, Mich. State Inspector, said: In this "Eternal vigilance is the price of freedom from the disease." Mr. Taylor, in dealing with the subject of "Getting rid of foul brood with the least financial loss," stated:

1st.—Destroy the bees in colonies badly affected; in these the bees are old anyway, and valueless.

2nd.—If colonies are good, shake them on starters; if many colonies are diseased, do not shake all at one time, and put the brood from those shaken on top of colonies not shaken to hatch. After about three weeks shake these last colonies, and render all old comb, saving the wax, and being very careful that the bees do not rob any of the refuse left after rendering.

It was pointed out that the general and as some thought, better practice, was to shake the bees after two days a second time, to make sure the new colony did not go on with any germs transmitted from the other colony.

#### THE SIZE OF HIVE.

Almost the entire afternoon of the second day was taken up in discussing the size of hive. S. D. Chapman, Mancelona, Mich., championed the cause of the eight-frame hive. R. F. Holtermann, Brantford, that of a larger, particularly the 12-frame hive. After half an hour had been given to each speaker, the public took a part.

Mr. W. K. Morrison, who has travelled almost over the entire apicultural world, stated that fifteen years ago such a discussion would have been impossible, then it was all 8-frame; now public opinion was vastly in the majority for 10-frame hive, and he would not be at all surprised if soon it would go so far as a 12-frame Langstroth hive.

Mr. Chapman even wanted to give a portion of the first super for brood combs, and it developed that the officers of the association could not get anyone to champion straight an 8-frame Langstroth brood chamber.

Dr. G. Bohrer, Lyons, Kansas, stated he had watched a queen through an observatory hive, and found she could lay six eggs in a minute.

Mr. Morrison stated that it was now beyond doubt, in fact had been proven, that a queen could lay 6,000 eggs in a day.

The President had to declare the discussion closed before all desiring to speak had been heard, showing the intense interest in the subject by the apicultural world.

Mr. Holtermann declared that the small hive, with the limited area for brood rearing and storing honey, had been the destruction of countless colonies of bees which had starved during the winter.

A nice display of comb and extracted honey and apicultural supplies was made, which was the center of interest between sessions.

The convention, which is international, embracing Canada, was very largely attended; there were in the neighborhood of forty-five Canadians in attendance. Mr. Holtermann, who has been on the programme for four years running, invited the association to meet in Toronto next year. Invitations were also received from Buffalo, Minneapolis, and St. Louis.

## FIELD NOTES

### A Personal Word

November, December, and January are the three months during which most of the readers of the FARMER'S ADVOCATE AND HOME JOURNAL send us the price of the year's subscription. By the end of November we can tell fairly closely how many papers we will have to print during the next year. But this year for different reasons we had begun to receive a large number of renewals and new subscribers before the beginning of November. This is the kind of thing that if it keeps up is going to do a lot of good to very many people. We have been surprised at the number of people who have interested themselves in their paper by getting neighbors to subscribe. A farm paper is an article which farmers themselves make or break. A little unselfish boosting at odd times gives us a growing circulation and our readers an improving paper.

We have been sending out a lot of premiums of late. The FARMER'S ADVOCATE farmer's knife is not only full value Rodger's steel but is something of a novelty. We have never known a man or boy to see one but what he wanted it. There has been a big run on the knives. Our premium watches are not "peddler's junk." Money can't buy better goods. They can be had for four names and upwards; ten names get a dandy, fifteen names still better. Push a good thing along.

### Pit-Grown Wheat

An experiment in wheat growing, of great originality and much promise, is being made in Russia. Some very astounding results are said to have already been secured, and Russian experimenters believe not only that the yield will be immensely increased, but that certain corn crops may be made perennial.

The experiment consists solely in the manner of cultivation. The author of the new method is General Levitsky, who began his experiments last August in a little model farm adjoining his barracks. His plan is simple. He sows single grains of wheat at the bottom of conical pits a foot to a foot and a half deep.

As the grain, thus sown in the apex of the pit, begins to appear above the surface, it is earthed over, and each time the leaf appears more earth is filled in, till after, say, five or six earthings, the pit is full and level with the surface.

The result of this treatment is that the plant, which has a "branching knot" at the base of the original stem and of each new stem, sends out a number of new shoots at each earthing. It is asserted in a letter to the *Novoe Vremya* that one grain treated in this way sent up 19,683 shoots. The straw seems to be unusually stout, the yield enormous, and General Levitsky believes that the plant will be perennial.

Apart from this, General Levitsky has done enough to show that the small farmer, at any rate, may benefit enormously by getting the wheat to tiller out in this way instead of preventing this natural process by close sowing; and it is worth notice that Prince Kropotkin, the pioneer of intensive cultivation in England, years ago prophesied that the present methods of growing wheat would be given up; and he published photographs of wheat plants showing many 100 stems from a single grain.

### New Type of Car Door

A Port Arthur man has invented an improved type of door for box cars, and the invention was tested recently, first with a load of coal and then with wheat. It is known as Stone's improved sectional grain door, and if it proves as efficient as its inventor claims it is, and as convenient, it should quickly come into general use. The door is just a plain wooden one, made of boards six inches wide, fitting closely and fastened together with hinges. There is a tight-fitting metal flange at the bottom and the edges fit closely into metal grooves. At the top these carriers or runs are curved inward, extending along the roof of the car. As it is raised the top disappears like the cover of a roll-top desk until it is all out of the way, and there it remains until required to be closed, when it is simply and easily made to slide back into its place. When the door is to be opened with the pressure of the load of wheat or coal against it, a cable can be attached to the

lifting apparatus and worked by hand. This apparatus for hoisting has a power of three tons, while the pressure from the inside against the door is estimated at one ton.

One great advantage claimed for this door is that it is absolutely grain tight. A walk along the railway track shows quantities of wheat, barley or oats scattered along in many places and the quantities are often not inconsiderable. This often means loss for which farmers find it difficult to recover anything, and in any event it is in the aggregate a great loss to somebody. The door cannot work open in transit, and it requires no nailing up, in fact cannot be nailed.

The custom or necessity of smashing doors to get them open, the door falling outwards followed by an avalanche of wheat will, with this invention, be a thing of the past. The quantity of waste lumber from broken doors which are left behind, will disappear. The door when open is out of the way, where it cannot be lost or stolen, and it is always on hand when wanted.

The inventor claims that his car door will effect a saving of eight men at elevator B, Fort William, including those required to smash doors open, one door on each side of a car, and those engaged in removing, replacing, and placing them back in position, as it requires three men to lift them. The cost of buying many new doors constantly will also be saved.

The first cost of one of these doors with the apparatus for working it is placed at \$15. For a hundred thousand cars this would, of course, amount to no small sum, but the inventor is confident that saving in the several ways indicated will in a short time much more than cover such expense.

### Change in Sask. Seed Branch

Mr. Harris McFayden, who for the past two years has been the representative of the Dominion Seed Branch at Regina, has resigned to accept a position with the Garton Seed Co., the well-known firm of English seedsmen who are now opening a business in Canada. He will be succeeded in Saskatchewan by Mr. F. H. Reed, Lindsay, Ontario. To the untiring energy of Mr. McFayden is due much of the success that has attended the work of the Seed Branch in Saskatchewan. The seed fair has become popularized in the province as in none other in the Dominion; the other branches of the department's work carried on in a way equally as satisfactory. Mr. McFayden, in severing his connection with the Dominion seed service, will still be in close touch with the farmers of Saskatchewan and Alberta as the representative in these two provinces of one of the largest seed houses in the world.

Mr. F. H. Reed is a graduate of the Ontario Agricultural College of the class of 1907. Since graduation he has been in charge of the agricultural department of the Lindsay High School. He has had considerable western experience, having been connected at one time with the staff of this journal.

### The Late Mr. Agnew

Manitoba has been called upon to mourn the loss of another of her most esteemed public servants. Hon. J. H. Agnew, after eight days of heroic struggle against the debilitating effect of appendicitis, stepped out into the undiscovered future at 4 o'clock on Monday morning. The late Mr. Agnew was born at Whitby, Ontario, in October 18th, 1863, and came with his family to Winnipeg in 1879. Law was his choice of professions, and 1891 he was called to the bar, two years later proceeding to Virden to practice. In 1903 the electoral district of Virden elected him to the Provincial Legislature as a conservative member, and a little over a year later he was called to the cabinet to succeed Hon. J. A. Davidson, deceased, as provincial treasurer. In addition to managing the finances of the province, the late Mr. Agnew made a careful and extensive study of the hail insurance problem, arriving at the conclusion that the government should provide some scheme of insurance against loss from this source. His speech in introducing a hail insurance bill before the house last January was one of the most exhaustive presentations of the hail insurance problem, while since that time he had given further study to the subject.

In private and public life, Mr. Agnew's courtesy and nobility of character endeared him to all with whom he came in contact. Never acrimonious in political debate, always with the main subject uppermost, and charitable to a virtue of the opinions of others, such a character could not fail to command the respect and even affection of his political antagonists.

A widow and four children mourn the loss of a beloved husband and father, while throughout the province there is universal grief at the sudden termination of a most useful career.



### The Late Dr. Fletcher

Although it was known to his friends that Dr. James Fletcher, Dominion Entomologist and Botanist, was not enjoying robust health, the news of his death, on the 8th instant, came as a sudden shock. The late Dr. Fletcher had been a member of the Central Experimental Farm staff, at Ottawa, since the inception of the farm in 1887, and in the absence of the Director, Dr. Saunders, acted as Director. Immediately upon assuming his work, Dr. Fletcher applied himself energetically to the task of familiarizing all classes of citizens with the life histories of insects and plant pests. Twenty years ago the weeds flourished and insect pests ravished with but little check, the general impression apparently being that they were a visitation of Providence, but since that time, due very largely to Dr. Fletcher's interesting talks and descriptions, farmers have come to know their enemies and how to defeat them. In the early agricultural history of Manitoba and the older parts of Saskatchewan, Dr. Fletcher played an active part. The first weed bulletins published under the auspices of the Manitoba government were largely prepared by him, while in the early campaigns against weeds by the Farmers' Institutes, he was a constant speaker. The insect and plant life of the Dominion was an open book to the Doctor, and he was in constant watch for the introduction of new forms. He was a frequent contributor to the agricultural press, favoring "THE FARMER'S ADVOCATE" particularly with his observations and suggestions. He was a genial, kindly, personal, friend, and a faithful, industrious public servant. Canada has sore cause to mourn his demise.

Recent experiment by the chemists of the Bureau of Forestry and Plant Industry of the Department of Agriculture indicate that the cornstalk may soon be regarded as a substitute for wood pulp. It has been found that fine grades of paper can be manufactured from cornstalks at a cost almost as low as the present cost of making wood paper pulp. In the experiments, the chemists used the "soda-cooked" process. The preparation of the pulp from the corn stalks was completed in from two to two and a half hours, whereas the preparation of wood pulp requires from twelve to fourteen hours. Any variety of cornstalk can be used. The cost of wood paper pulp is \$13 a ton, and the Government chemists' figures are not over \$14 a ton for the cornstalk during the very early stages of the development of its manufacture. As the industry develops the cost will eventually be reduced to 50 per cent. of that for wood paper pulp.

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A balloonist named Myers, at Utica, N.Y., professes to be able to produce rain at will by sending up big balloons filled with gases and exploding them by electricity. It is reported that Prof. Myers has been engaged by several paper companies of northern New York whose forest lands are being destroyed by fire. The first balloon will be exploded within a few days between Utica and Frankfort.

### Wheat Production in Foreign Lands

Outside America the three greatest wheat producing states on the globe are Russia, India and the Argentine. Viewed from the standpoint of its natural resources and economic aspects, Russia is by all means the most important of these three. What we call European Russia is one of the most fertile stretches of land appearing on the globe. Naturally it is divided into two parts, the northwest and the southeast, in both of which are vast areas of black soil, vast both in extent and in fertility, the result of centuries of decomposition of the Steppe grasses. There are eighteen provinces lying in this so-called black soil zone and they produce two-thirds of the wheat of the empire. Russia, so far as natural resources go, possesses everything required for the pursuit by her people of agriculture in the most successful degree. But the Slav does not possess the Anglo Saxon's proud institutional heritage. The people lack sadly in nearly everything that makes for material advancement, they lack in institutions that are fundamental for progress and prosperity. They have never been able to rise above their ignorance, poverty and misery. Everything in the Empire is poor except the soil in which the wheat is to be grown, but by ignorance on the part of the degraded peasants who farm it, is rapidly becoming depleted of what virgin fertility it possessed.

In the future development of wheat growing in Russia a good deal will depend upon the social, economic and political progress which the country makes. Just now the political situation

seems to be improving. Government, as nearly representative as popular government can be among people removed but one degree from serfdom, is being instituted in the country. The social condition is improving, in agriculture improved machinery is being introduced and the peasants being instructed in the rotation of their crops and other fundamental practices of successful farming.

Of late years the possibilities of wheat growing in Asiatic Russia have been a more interesting subject of speculation in the world's markets than has the possibilities of the older parts of the Empire. Siberia, it is being demonstrated by settlement, is not the land of polar night, eternal snow and dreary wastes of shimmering sands we used to think it was. Although the country has not developed into all that was expected of it when the Siberian Railway went through, enough has already been seen of it and its possibilities to forecast its future with some degree of accuracy. Russia in Asia is twice as large as the United States of America, with a wheat growing area equal to, if not greater than, the American Republic. But Russian development will be very gradual. There will be nothing spectacular, nothing resembling the rapidity with which the American west was brought under the plow and turned from a great buffalo stamping ground to the granary of the world. In time Russian production will be one of the most permanent factors in the wheat industry. But it won't be this year or next, nor for some few decades of years yet. The progress of Russian agriculture depends solely upon social, economic and institutional evolution. The country needs educating first of all. Then it needs better government.

While British India ranks quite large in wheat growing, the country has never been a very important factor in the world's market for the cereal. Indian wheat is a very uncertain element in the world's trade, domestic consumption being a very variable quantity. Some years the country consumes all she produces and the next because the crop is scarce practically the whole harvest is exported. As the crop varies widely year by year the Indian wheat growing provinces never enter much into the world's wheat affairs. The area sown yearly is estimated at 28,000,000 acres.

Argentina conditions in regard to wheat production are very similar to those of Russia. The country is much smaller in extent and resources than the empire of the Slav, but its land, climate and railway extensions are potentials for an enormously expanded wheat production. It will be years yet before the full wheat growing possibilities of the country will be fully appreciated. There are vast arable plains of great fertility, but on account of the poor methods of farming much of the land that might be put to grain growing or mixed farming is not under cultivation. Because in this country the cattle business first developed and the land was parcelled out to large cattle owners, it has been difficult for those desiring land for agriculture to procure what they required.

Wheat growing, however, despite these drawbacks is attaining to large dimensions in the Republic. A quarter of a century since all the wheat or flour for domestic use had to be imported. Now exports amount to a good many millions annually. It is estimated that the Argentine contains 60,000,000 acres of wheat growing land. One great advantage of the country is that the land can be worked at any season of the year for the climate is comparatively moderate. It is probable that the development of wheat growing in this quarter will be more rapid than in Russia.

### Agricultural Banks in West Australia

In the Agricultural Bank, instituted by the State of West Australia under "The Agricultural Bank Act, 1906," settlers possess most liberal means for assisting the development of their lands and effecting improvements promptly. Advances are made for:—(a) Ringbarking, clearing, fencing, draining, or water conservation; (b) Discharging any mortgage already existing on holding; or (c) The purchase of stock for breeding purposes, on the security of Holdings under Special Occupation Lease or Conditional Purchase from the Crown, or Homestead Farms; or (d) Such other real or leasehold property as the Trustees may think fit.

Advances may be made of an amount not exceeding £300 to the full value of the improvements proposed to be made. Further advances may be made of an amount not exceeding £200 to one-half the

value of the additional improvements proposed to be made.

Advances are made to any one person (or number of persons, if borrowing conjointly) not exceeding the sum of £500, and no sum exceeding £100 shall be advanced to any one person for the purchase of breeding stock.

Persons under 21 years of age, being unable to legally mortgage, are debarred from borrowing from the Bank.

Applications may be made for sums of £25 or any multiple thereof not exceeding £500. Each application must be accompanied by a valuation fee of 1 per cent. of the amount applied for. No refund of fee is allowed after an inspection of the security has been made.

Mortgages are prepared free of charge, but borrowers are required to pay the statutory charges in connection with their registration. These are:—(a) Stamp Duty of 2s. 6d. for each £50 of the amount of mortgage up to £300; and (b) a registration fee of 5s. for each conditional purchase or Homestead Farm Block mortgaged.

The leases of Occupation Certificate, as the case may be, together with the above fees, must be in the possession of the Bank before the mortgage can be prepared.

Notices of Approval are insufficient for this purpose.

Intending borrowers are requested to note that no advances, except for the specific purposes of discharging liabilities or for purchasing breeding stock, are made against improvements effected prior to date of application. Applications, should in every instance, be lodged prior to commencement of work, and moneys are then paid over in progress payments as the work proceeds.

Repayments of loans extend over a period of 30 years, except in the case of stock advances, which have a currency of 7 years only. Interest is charged at the rate of 5 per cent. per annum, payable half-yearly.

A few data illustrating the progress made by the Agricultural Bank will carry conviction with them that the institution is successfully accomplishing the national purpose for which it was created by the State. It will be seen that the Bank has already fulfilled a most important part in aiding the development of the primary industries of this young country, and that its area of operations is extending with the State's advancement and will assume large proportions in the near future.

Since the Bank was established in 1895, over 5,400 settlers have been assisted under its provisions. Of these over 400 have repaid the advance made and now enjoy their freeholds unencumbered; others are passing through the easy stages of redemption, freeing themselves yearly in the gradual manner laid down in the statutes. Up to the end of last year, over 417,000 acres had been cleared under the Bank's clauses, for which work the sum of £680,958 had been advanced to farmers. During last year alone, 141,061 acres were cleared, for which the Bank advanced \$168,487. This has been the means of bringing nearly 150,000 acres under the plough in one year, or one-third of the total area cleared under the Act, during its 13 years of existence. In other directions the same gratifying progress is being made. The total area ringbarked amounts to 533,400 acres, and during the past year 253,157 acres, or nearly half the total, were so dealt with. The fencing erected for the year ending June 30, 1907, presents a still more striking instance of the activity of local development. The total number of chains of fencing so erected amounts to 485,560, of which 332,963 were put up last year, or twice as much as was carried out for the previous 12 years. Up to June last, the amount advanced to settlers reached the sum of £1,059,659, and further advances have been authorised to the amount of £309,355.

Money is lent by the Agricultural Bank at 5 per cent. per annum and unusually long terms for the repayment of the principal. The borrower is called upon to pay interest only for the first five years his loan is in existence. At the expiration of that time he starts to pay the principal and interest at the rate of 7 per cent. per annum, payable half-yearly. The loan thus extends over thirty years, a much longer term than is allowed by the ordinary mortgages. Having to pay interest only for the first five years, the borrower is able to surmount the worst part of his difficulties, and get his property into a reproductive condition by the time the redemption period of his loan falls due. He is then usually in a position to pay his half-yearly instalments of loan without difficulty.

The scope of the Bank's utility has been widened by the present Government, especially in the direction of assisting the farmer to stock his land. During the past two years, the sums of £80,490, £5,641, and £39,588 respectively have been advanced for the purchase of horses, cows and ewes.

It is proposed to extend the limit of advance to the individual to £1,000, instead of £500, and it is probable Parliament will consider this question during the next session. In addition to the above, £100 may be advanced to the settler for the purchase of breeding stock. It is a significant commentary upon the success of West Australia farming that the Bank, with such a liberal lending system, business ramifications and necessary to be held outside inspection, has been completed with only one trifling loss of a few pounds. —The West Australian Sunday Times.



Events of the Week

CANADIAN.

Pembroke, Ont., was damaged by fire to the extent of half a million dollars on Nov. 4th.

A creamery is being organized at Swan River, Manitoba.

Ten laborers were killed by dynamite explosions on the National Transcontinental in the vicinity of Kenora, Ont., last week.

W. L. Mackenzie King, M. P. will represent Canada at the international quinquennial conference in Peking, China, next January on the suppression of the opium traffic.

The Baptist Church of Canada in conference at Ottawa formed last week a federal administrative body with a constitution and with certain well defined subjects to come under its purview.

Arrangements have been made for the building of another big elevator at Port Arthur. It will have a capacity of 1,500,000 bushels, will cost approximately \$500,000, and will be ready to handle next year's crop.

A company with a capitalization of two and a half millions has been formed in North Dakota with the avowed intention of colonizing five hundred thousand acres of land in the northwest in the neighborhood of Vermilion, Alta. It is proposed to work the land entirely with English labor and as a single enterprise.

An English immigrant at St. John, N. B. guilty of theft will be sent back to England on the first steamer. The judge refused to sentence him on conviction stating that it would be cheaper to ship the prisoner back than to pay \$150 a year for his maintenance in the penitentiary.

Among the birthday honors announced in honor of the King's birthday are the following to Canadians: E. S. Clouston, of Montreal, baronetcy; General P. H. N. Lake, Ottawa, knight commander of St. Michael and St. George; Brig.-Gen. D. A. Macdonald, of Ottawa, commander of St. Michael and St. George; Hugh Graham, Montreal, knight bachelor.

The heaviest fall business on record is being done this year at Port Arthur and Fort William. September and October of this year both far exceeded in tonnage unloaded the corresponding months of 1907. By October 20 of this year the tonnage was equal to the whole of October, 1907, while the total for the month exceeded the total for the month last year by 3,700 tons. Work this year in freight handling will be found by the close of navigation to have surpassed all former years by thousands of tons.

The receipts of grain over the C. P. R. from Sept. to Oct. 31 inclusive were as follows: Wheat 11,552,883.10 bushels; oats, 1,589,200.00 bushels; barley, 397,182.05 bushels; flax, 195,568.09 bushels. Total 13,734,833.54 bushels.

Receipts over the C. N. R. for the same time at Port Arthur; Wheat, 7,113,712 bushels; oats, 828,184.14 bushels; barley, 597,739.19 bushels. Total, 8,553,984.83 bushels.

Shipments from Port Arthur and Fort William from Sept. 1 to Oct. 31 inclusive were: Wheat, 13,649,084.40 bushels; barley, 388,687.20 bushels; flax, 86,323.

During the last few days about eighty cars of wheat have been shipped from the local yards all rail to West St. John in addition to the ordinary shipment.

The customs revenue of the Dominion for October shows a considerably smaller falling off as compared with last year than has been in the case for six or seven months past indicating that the expected revival in trade is beginning to be felt in the increasing orders for imported goods.

For the month the customs revenue was \$4,316,473 as compared with \$4,930,031 for October of last year a decrease of \$613,558. For the first seven months of the present fiscal year the customs revenue has totalled \$27,179,191, a decrease of \$9,163,57.

BRITISH AND FOREIGN.

William Howard Taft of Ohio, was elected President of the United States on Nov. 3rd by a majority of eighty electoral votes over W. J. Bryan, his Democratic opponent.

Serious rioting has occurred at Hong Kong resulting from an attempt of those involved to force local Chinese merchants to boycott Japanese goods. Merchants who refuse to boycott are being branded as traitors by having their ears slit.

It is believed that the Bond government in Newfoundland has been defeated in the elections held on the Island last week. While complete returns are not yet in it would seem that the result at best is a tie. The campaign was one of the keenest fought out for some years.

While plowing at Monteleone, Calabria, a peasant found recently a Grecian gold coin weighing two grammes. On one side of the coin is a female head. It is said to be the rarest and best preserved specimen known.

An antique sword, said to have been worn by Oliver Cromwell, will be put up at auction in New York, and sold to the highest bidder, unless John D. Rockefeller, to whom the weapon was sent, will come forward and pay the duty on it.

The employees of Sir Christopher Furness, Hartlepool, England, who four weeks ago were given to understand that unless they could work without further trouble in the way of strikes, the iron and shipbuilding plants in which they were employed would be closed down, have reached an agreement among themselves and with their employers by which for one year a profit sharing scheme will be tried. The men will receive a share of the profits from the business instead of their regular wages. This is one of the most extensive profit sharing schemes ever tried.

Kentucky tobacco growers who succeeded in protecting their crops from the "night riders," raised tobacco, housed and cured it under guard are receiving the highest price for their product ever paid for tobacco in the state. The "night riders" as they are called, are the field force of the tobacco growers' association which is an organization formed to break up the tobacco trust. Independent growers who remained outside the organization had their crops destroyed, barns burned and even in some cases were shot down when they resisted the gangs going about destroying property.

A serious state of affairs has developed between France and Germany out of the Casablanca matter which will require delicate handling to be satisfactorily settled. While there is little danger of hostilities resulting from the strained relations of the two countries the position of both countries is rather delicate. France has refused to release some German deserters who are the cause of the trouble or express regret for the occurrence. It is believed that Germany is endeavoring to make the most of this affair which is of small importance to divert attention from the embarrassing position she was placed in by the Kaiser's now famous interview re his attitude during the Boer war, an interview that created something of a sensation in official Europe.

Scottish Commissioners Express Their Views

The London Times in an article published in its columns recently gives what it claims to be an epitome of the report which the Scottish Agricultural Commission will prepare when they are able to get at it. The Commission only arrived home last week but already seems to be exuding information about this country. One point of interest in the report is the importance given by the London journal to the find of the commissioners that modern scientific methods have been found in Canada and that in every province there are men even among the small farmers, who use all sorts of labor-saving machinery, and who have already imbibed much of the scientific knowledge diffused from the agricultural colleges and experimental farms. It is interesting further to note that "investigations of Canadian climate generally resolves itself into an inquiry into the length and effects of winter." The same old story, you see. The British public has labored so long in the delusion that this is the land of polar night and eternal snow, that there is not much use in trying to get them away from the idea, but that a party of intelligent agriculturists should be looking for winter in the middle of August seems scarcely believable. Yet the Times speaks very much as though they were.

Among other industries the commissioners were impressed with the possibilities of horse and sheep raising. "There is a fortune in horses" one commissioner remarked, "especially to the man who takes advantage of the present stage of Western development. Sheep raising is an industry which the commissioner regards as worthy of encouragement. Considerable areas in the Maritime provinces and other parts of Canada, of little use for other kinds of farming, are admirably adapted for this. The meat is first-rate, and there is no lack of markets; but the commissioners were astonished to find the dog nuisance so severe as effectively to discourage the keeping of flocks.

There is a general impression among the commissioners that Canada offers plenty of opportunities to the small farmer who finds it hard to pay rent and keep his head above water in the old country; though the particular province to be recommended according to the taste as well as the means of the individual. The western homestead system is not an ideal one, in the opinion of, at any rate, some of the commissioners, who are inclined to consider 160 acres rather too small an area; but that, after all, is larger than the average farm in the eastern provinces, and many a homesteader buys additional land adjoining his free grant. If a man can command £200, or still better £300, he can make a very good start as a

prairie wheat-grower, or—and this would appeal more strongly to the average old countrymen—as a mixed farmer in the beautiful park lands. The commissioners, however, emphatically agree with the advice given by all who have investigated this subject, that an intending purchaser should spend some time in the country before carrying out his intention.

The position of a good Scottish farm laborer, earning about £40 a year, with meal and milk and other privileges, including perhaps that of free lodging in a tenement, is not contemptible, and there are men of that class who contrive to save the greater part of their wages; but their future is not brilliant, and they will doubtless continue to emigrate in large numbers to Canada, where they can go on saving money and presently start as small farmers on their own account. There is, however, a feeling that Canadian farmers in general will need, if they are to lessen the difficulty of obtaining an efficient and sufficient supply, to follow the example of the minority of their colleagues who give 12 months (instead of seasonal) agreements and provide cottages for married employees.

The Diminishing Rainfall of the Earth

Man since the earliest ages has loved to speculate on how the earth was going to end. One of the earliest theories was that it was going to be burnt up. Then there was the theory that cold temperatures, not intense heat, would blot out life on the planet. This theory was based upon the fact that the polar regions had at one time a tropical climate as indicated by animal and vegetable remains found in that quarter, and that at one time it was the most habitable region on the globe. Other theories have been that the air would all disappear from around the planet, that carbon-dioxide gas in the atmosphere would increase to such an extent that life would be impossible for the more highly organized animals, and there were other theories as well. But now comes a French meteorologist, G. Guilbert, who tells us that decreasing annual rainfall, year by year, or cycle by cycle, will ultimately bring about such a condition of affairs that vegetables and animals will be unable to live upon the planet. He writes:

The progressive diminution of rainfall is a fact that is becoming better established, and even universally known. As meteorological observations are perfected and prolonged, the phenomenon is more and more certain and forces it upon our notice.

Besides the Calvados commission which noted it in 1894, and many others since, the Meteorological Commission of Meurthe-et-Moselle has just made an important contribution to the study of this question which is so important for the future of the whole globe.

The learned secretary of this commission, Mr. Millot, professor of meteorology in the Faculty of Sciences at Nancy, has analyzed the results of 30 years of observation and gives the following as the average rainfalls for five-year periods at Nancy:

Table with 4 columns: Years, Millimetres, Years, Millimetres. Data rows: 1878-1882 (896.1), 1893-1897 (680.5), 1883-1887 (794.0), 1898-1902 (688.9), 1888-1892 (760.4), 1903-1907 (628.1)

This diminution of rain at Nancy is truly impressive; it is even more rapid than that at Calvados. While the rainfall passes here from an average of 896.1 to 628.1, or a diminution of 268 millimeters, the corresponding years at St. Honorine-du-Fay show only a decrease of 157.3. The extraordinary importance of the figures noted at Nancy causes Mr. Millot to say that "if the rainfall should continue to decrease in the same proportion, before the end of the century France would become another Sahara, without its heat," but he adds: "Is the dryness going to increase indefinitely? We may reassure ourselves on this point. We have to do here only with oscillations of somewhat long periods which appear in all natural phenomena. In nature everything vibrates, everything oscillates, the molecule as well as the ocean, and the more the rainfall decreases the nearer will come the time when it will begin to increase. Perhaps this is not far distant."

Nothing could be truer. The rainfall cannot go on decreasing constantly at this speed. It is certain that a natural law should bring about a rainy period after a dry period. Without this oscillatory phenomenon, as Professor Millot well says, France would be a Sahara before another century. But even admitting this periodic oscillation, we may nevertheless affirm, basing our statement on both the universality and continuation of the observations, that the diminution of rainfall is a persistent and progressive phenomenon, which nothing has checked since the origin of rain on the globe, at least since the glacial period, and which nothing will modify in the future.

More rain certainly may fall in the next 30 years than is falling during the present period, but the following period will be drier yet. Thus, even with oscillations, be they of 30 year or of 100 year periods, the rain will continue to diminish century by century as it has always done over the whole globe since prehistoric times.

Perhaps the development of civilization has contributed to this diminution of rain, but only in very slight degree. In an equally small degree is it within the power of men to delay the progressive drying up of our planet. Reforestation, especially on hills, is al-



ways a palliative whose efficiency admits of no doubt and which should not be neglected. The urgency of this proceeding is shown by the rapidity of the decrease of rainfall. Trees, as everyone knows, do not grow in a day. A half century is necessary to grow a forest, and if we do not wish to grow rapidly drier and drier, quick reforestation is necessary. This is the practical conclusion from climatological investigations under the auspices of various meteorological commissions, and such a result shows well, whatever we may say, their utility from an agricultural standpoint and their scientific value.

**The Ideal Home Exhibition at the Olympia**

At Olympia, one of London's largest entertainment resorts, a great newspaper is running one of the most unique and laudable of exhibition features. It is a huge and comprehensive display of what goes to form an ideal home. The *Daily Mail* is back of this enterprising and remarkable undertaking, and it is receiving splendid and enthusiastic response from exhibitors in all parts of England from the British public generally. It is freely conceded by all thoughtful people that, when every possible allowance has been made for the influence which legislation, education, or other similar agencies are capable of exerting on behalf of the happiness and advancement of our people, the most potent factor in the whole problem is after all the condition of the home. Nothing has a more demoralising and depressing effect than an untidy dwelling, where even the smallest task becomes a burdensome drudgery; while, on the other hand, nothing so genuinely inspires contentment, happiness and an adequate sense of the joy of living as a home which, though it may be humble in its station, is nevertheless thriftily managed on hygienic principles, and is benefiting in some degree from the adaptations and improvements which ingenious people have been discovering from time to time. This may seem to some a very callous line of thought, and many might be inclined to repudiate such a materialistic method of coolly calculating the atmosphere of an abode by its mere inanimate equipments: but there will be none so shortsighted as to deny that the surroundings and fitting up of a house very largely enter into determining domestic felicity, and potently influence the moulding of character and the development of disposition. People as a rule reflect their environment, and in the highest interests of the nation therefore no more worthy effort could be made than to render our homes brighter and better equipped.

In the ideal home exhibition at Olympia there are four distinct departments: Home equipment, Garden, Babyland and Arts and Crafts.

The first of these covered every part of home-making. Prize designs were exhibited of three classes of houses costing £500, £750, and £1,000, the object aimed at being to combine convenience and comfort of plan, economy of building, and the best architectural expression. The newest and best methods of home equipment were displayed in great variety and detail. No one could glance at this section, even casually, without being impressed with the striking degree to which modern invention has succeeded in reducing the domestic labors of the housewife. The old style dwelling of thirty or forty years ago was high, narrow, and ill-arranged. There were many flights of stairs; the kitchen was far from the dining-room, and no thought was apparently given to lessening work. The amazing contrast between that and the best of today could be seen by glancing at the new designs for modern homes, and the varied and exhaustive display of the branches of home equipment. To stimulate interest in this section seventy-eight prizes were offered by the promoters to visitors, the first being £100 for a detailed scheme for the best equipment of an ideal home. Starting with the building of the home, we go on to its drainage, ventilation, furnishing, heating, and cleaning. The great advance in the beautification of the home could not fail to be noted. Furniture is simpler, designed on broader lines, and better. More is demanded in a modern house, and improvement does not always mean great expenditure. The new systems of electric and gas lighting gives double the light at about half the cost.

"No home can be 'ideal' without the garden," is the trite saying of Mr. Edward White, the well-known landscape architect. Hundreds of loads of mould and thousands of square yards of turf were required and eventually the skill and art of the gardeners were well expressed in the disposition of the paths, lawns and shrubbery.

In "Babyland" there were two very prominent features. One was a creche, with living infants, representing those most deserving institutions where mothers who are forced by circumstances to earn their own livelihood can have their youngsters properly taken care of, washed, fed and amused during the daytime. The equipment of this exhibit, under the auspices of the National Society of Day Nurseries, was admirable, consisting of a receiving office, specially fitted bath-room and lavatories, together with combined dormitory and play-room. Demonstrations of how to wash and clothe a baby were given at intervals, and every effort was made to circulate up-to-date information about the best methods of treating young children. In the same section was a specimen corner of a surgical ward of a hospital and a baby incubator. The section for cottage in-

dustries was one of exceptional interest, a large number of distinguished leaders in reviving home industries having co-operated with the authorities. The quality of the articles produced and their varied nature, ranking from tapestry work and weaving to the most delicate and artistic metal work, was worth attention.

Everything considered, the efforts of the *Daily Mail* and those interested in the betterment of conditions of the British working classes seem to have been highly successful and much appreciated. The feature was a new one at British exhibitions and from the results of it, it seems likely that ideal home exhibitors will become an important part of British industrial exhibitions. While the cost of such features as this is greater proportionately than simple exhibitions of manufactured commodities or products, its results are infinitely more far reaching, it is educational in the highest sense of the term.

**MARKETS**

The wheat market for the week just closed was strong with a good demand for cash grain. Option trading was a little dull for the reason that nothing serious developed in any quarter of the world to influence trading in futures.

The situation in the Argentine, which was the strong feature of the option market the week previous did not become a very prominent factor during the past six days trading period. There is a general feeling in the market that estimates of frost damages in that quarter have been wildly exaggerated. Advances from Buenos Ayres indicate that the crop is expected to be very nearly an average one, possibly ten or fifteen per cent less than last year's. From other quarters of the world there is nothing new, favorable or unfavorable to the present situation of the wheat market. Russia has fallen seriously off in export but this is not regarded as of much significance in the trade.

Receipts at Winnipeg for the week have been unusually large. The daily run was over five hundred cars on the average. On Nov. 4th, 768 cars were received. American deliveries are beginning to fall off.

The Northwest Grain Dealer's Association estimates the grain returns of Western Canada for the year as follows:

Wheat—6,055,600 acres, at 16.4 bushels per acre, 99,311,840 bushels.  
Oats—2,607,000 acres, at 34.6 bushels per acre, 90,202,200 bushels.  
Barley—855,650 acres, at 24.4 bushels per acre, 20,877,860 bushels.  
Flax—123,420 acres, at 9.3 bushels per acre, 1,147,806 bushels.

**WHEAT SITUATION, NOV. 1.**

Inspected to date, 24,241 cars	25,453,000
In store at country points	14,160,000
In transit, not inspected	1,400,000
Allow for country mills	8,000,000
Allow for seed and feed	12,000,000
<b>Total</b>	<b>61,013,000</b>
Balance in farmers' hands to market	38,298,840

Twenty-two per cent. of the wheat grades No. 4 and under.

A feature of the week was the advance of seven cents in flax.

Closing prices day by day for the week for cash wheat, were as follows:

WHEAT—	2	3	4	5	6	7
No. 1 North-ern	99	99½	100	99½	99½	100½
No. 2 North-ern	95½	96½	97	96½	96½	97½
No. 3 North-ern	93½	93½	94½	94½	94½	95½
No. 4	90½	90½	91½	91½	91½	92½
No. 5	87	87	87½	87½	88½	89
No. 6	80½	80½	81½	81½	82½	83
Feed	71	71	71½	71½	71½	72
No. 1 Alber-ta Red	98½	99	99½	99½	99½	100½
No. 2 Alber-ta Red	95½	96	96½	96½	96½	97½
<b>OATS—</b>						
No. 2 White	38	38	38	38½	38½	38½
No. 3 White	36½	36	36	36	36½	36½
Feed	36	35½	35½	35½	36	35½
Feed 2	34½	35	35	35	35	35
<b>BARLEY—</b>						
No. 3	51	70	50	50	50	50
No. 4	47½	47½	47½	47½	47½	47
Feed	44	43½	43½	43	43	43½
<b>FLAX—</b>						
No. 1XW	118	118½	118½	117	125	121½
No. 1M	116	116½	116½	117	121	119½

**Winnipeg options for the week in Wheat:**

	Open	High	Low	Close
<b>Monday—</b>				
Nov.	98	98½	98½	98½
Dec.	94½	94½	94½	94½
May.	99½	99½	99½	99½
<b>Tuesday—</b>				
Nov.	98½	98½	98½	98½
Dec.	95½	95½	95	95½
May.	99½	100	99½	99½
<b>Wednesday—</b>				
Nov.	100	100	99½	99½
Dec.	96	96½	95½	94½
May.	101	99½	99½	99½
<b>Thursday—</b>				
Nov.	99	99	98½	99
Dec.	95	95½	94½	95½
May.	99½	99½	99½	99½
<b>Friday—</b>				
Nov.	99	99½	99½	99½
Dec.	95½	95½	95½	95½
May.	99½	100	99½	99½
<b>Saturday—</b>				
Nov.	99½	100	99½	99½
Dec.	95½	95½	95½	95½
May.	100½	100½	100½	100½

**PRODUCE AND MILL FEED.**

These are wholesale prices at Winnipeg:—

Net per ton—	
Bran.	\$20.00
Shorts.	22.00
Chopped Feeds—	
Barley and oats.	26.50
Barley.	25.50
Oats.	27.50
Oatmeal and millfeed.	11.00
Wheat chop.	22.00

**BUTTER, CHEESE AND EGGS.**

Fancy fresh made creamery bricks	27	@	28
Boxes, 14 to 28 lbs.	25	@	26
<b>DAIRY BUTTER—</b>			
Extra fancy prints.	24	@	25
Dairy, in tubs.	20	@	23
<b>CHEESE—</b>			
Manitoba cheese at Winnipeg.	13½	@	13½
Eastern cheese.	14	@	14½
<b>EGGS—</b>			
Manitoba, fresh-gathered, f.o.b. Win-nipeg.	22	@	23

**HAY.**

Prices are on the track in carload lots at Winnipeg.  
Prairie hay, baled. \$ 6.50 @ \$ 7.00  
Timothy. 10.00 @ 12.00  
Red Top. 7.50 @ 9.00  
Baled Straw. 5.00

**VEGETABLES.**

Potatoes, per bushel.	30	@	40
Carrots, per cwt.	50		
Beets.	50		
Turnips, per cwt.	40		
Man. celery, per doz.	25		
Cabbage, per cwt.	55	@	60

**HIDES (Delivered in Winnipeg).**

Packer hides, No. 1.	7	@	8
Branded steer hides.	7½		
Country hides.	6½	@	7
Calf skins.	9	@	10½
Kip.	7	@	8½

**MISCELLANEOUS.**

Manitoba wool.	6	@	8
Territory wool.	8	@	9
Seneca root.	20	@	29
Beeswax.	20	@	25

**LIVESTOCK, WINNIPEG.**

There was an exceptionally heavy run of stock at the local yards during the past week, deliveries more than taxed the yard accommodations and in many cases carloads of stock stood for eight, ten or twelve hours, waiting an opportunity to unload. It is doubtful if there has ever been a heavier run at the yards in years. The bulk of the stock was butcher with however a very fair proportion of exporters. Shippers in the country are evidently cleaning up before the close of the season which accounts for the unusually large receipts. Export steers are not quoted quite so high as a week ago. A slight easing up is noticeable in export demand. The bulk of the shippers going east are being handled at \$3.75. Hogs are unchanged. Prices for the various grades are as follows:

Export steers, \$3.50 to \$4.00; export cows, \$3.25; butcher cattle, \$2.50 to \$3.00; medium grade butchers, \$2.25 to \$3.00. Hogs, \$5.75; heavy hogs, \$5.00 to \$5.25.

**TORONTO.**

There was a steady decline in the price of live stock during the past week, but not so much as other light anything, a factor in the decline was the heavy receipts. The quality of the stock was not high, common grades were in a large proportion of deliveries. Steers, \$3.75 to \$4.00; cows, \$3.50 to \$4.00; good butchers, \$3.00 to \$3.50; medium butchers, \$2.50 to \$3.00; sheep, \$3.25 to \$3.50.



# HOME JOURNAL

## A Department for the Family

### PEOPLE AND THINGS THE WORLD OVER

Mrs. Julia Carney, author of "Little Drops of Water," translated into many languages, and "Think of the Erring," found in many church hymnals, died at Galesburg, Ill., aged 85 years.

For the first time in the history of the university a blind boy has entered Cornell. His name is William H. Moore, and his home is in Brooklyn. He came to Ithaca with his mother, who guided him around the hill and to the classrooms. He has entered as a freshman in the College of Arts and Sciences, and hopes to be able to take the A.B. degree.

For hugging his wife in a dramatic fashion on a street car to the disgust of other passengers, Dennis Burns was summoned before a magistrate under an old blue law of the state and fined \$2. Burns said, "I love my wife dearly and have a right to kiss her, law or no law."

The Legislature of Louisiana has passed a law prohibiting the slaughter of robins in their temporary sojourn in that State. The pot hunters of Louisiana have in the past killed as many as a million robins in a single winter, and a law was sorely needed to put an end to the needless slaughter of an excellent bird—excellent because it destroys injurious insects and is withal a cheerful songster.

The trustees of a South Dakota church have offered to expend \$125 for the installation of a hat rack and mirror on condition that the women of the congregation remove their large and fashionable hats during the service. The women have agreed to do so, and furthermore have signed a pledge to this effect.

Mr. Barrie is a lucky man. According to the Bystander, he has a fascinating wife, much wealth (accumulated from "royalties") a pretty house at Leinster Corner opposite Kensington Gardens, and one prettier still in Surrey. And not only this. He boasts the "freedom of Kensington Gardens," which was bestowed upon him by the authorities after he had written "The Little White Bird," the foster-father of "Peter-Pan." The curious may ask, what does the freedom of Kensington Gardens bring with it? Simply the key of the gate of the Broad Walk. Mr. Barrie may stalk o'night in the gardens if so it pleases him.

The Black Prince was one of the finest characters ever produced by the English race. A daring and wonderfully successful military commander, he was yet humble, and pious and gentle as a woman. This is the picture of him which Dean Stanley has rescued from tradition for us. His helmet and sword and saddle still hang high above his tomb in Canterbury Cathedral, and his motto, "I Serve," is worthy of adoption by every Canadian who would be loyal to his country, the Empire and mankind. Originally displayed by the first Prince of Wales, it is presented to the University of Toronto by the wife of the present wearer of that title.

Queen Alexandra, who to her intimate friends has been known as an amateur photographer of talent, has decided, in the interests of charity, to become an author. Not merely that, but she breaks through the traditions of court custom and has written what is modestly known as "Imperialism" to some one hundred and thirty photographs of an intimate and personal character taken by Her Majesty. All England is interested in the publication of the work, and in no way may it be accepted as a memoir of the Queen's experiences, it already has aroused the interest.

From cover to cover the work will be exclusively one of charity. *The London Daily Telegraph* is publishing the book and 100,000 copies already have been ordered. It will not exceed the hopes of all concerned if the sale reaches 500,000, so that the charitable enterprise of the Queen already is well assured. The book will bear the signature of Her Majesty and all the pictures produced will be those taken by herself and hitherto unpublished. Heretofore there have been books published by authorization of England's queens, and, in isolated instances, some printed for private circulation, but this is the first instance in which a series of photographs taken by the Queen, with comments by herself, have been put upon the market.

At the late meeting in New York of the American Playground Congress, the purpose of which is to provide opportunities for decent and healthy exercise and play for children and youth, one of the speakers offered a sharp and just criticism of the comic sections of our Sunday newspapers. Of all their evils, perhaps this is the greatest. They are the portion first picked up by children, and the lessons taught are deceit, cunning and disrespect for gray hairs. The stories told in coarse pictures are of rudeness and indecent tricks played on the old and the helpless. If the morals of these pictures were better, yet the art is usually insufferably vulgar. If the papers that offer such sections are admitted into a house where are children—or older folks for that matter—the comic section ought immediately to be committed to the flames. They fitly combine shocking art with corrupting morals. —*The New York Independent.*

### THE NEW SPIRIT ON THE FARM

In the course of an article on "The New Spirit of the Farm," in the *Outing Magazine* for September, Miss Agnes C. Laut, who has written many interesting articles on agricultural progress in Canada's West, says:

"When you consider that the boll weevil has caused a loss of as much as fifteen million dollars in a single year in a single state, and the potato bug ten million dollars in all the United States, and the Rocky Mountain locust a loss of one hundred million dollars in a single year—need one ask what bearing bird-life has on the farm? The birds are sent to do what we can't do—destroy the multitudinous pests. It brings you back to that old idea, the focus and center of gravity with the whole New Spirit of the Farm—the idea of the law; law, which science is trying to find out and reveal. I say *reveal* advisedly; for what helps us into harmony instead of antagonism toward the great underlying laws of existence, what helps us to success instead of failure, what makes the moral man the efficient man, is surely as much a revelation as if it came in a blaze of light.

It is a fearfully keen-edged test of our old-fashioned ideas of morality, too, this pivotal idea of law that underlies the New Spirit of the Farm. It explains why men, who ranked as "good" and didn't break the Ten Commandments—at least, didn't break them so you could hear them crack—often proved most inefficient and the most dismal of life's failures—not by the Will of God, no, not by a long shot, but because they turned a bad furrow, let the weeds multiply, farmed slither-fashion—in a word, didn't obey Nature's Ten Commandments. It explains why the thoughtless and cruel killing of birds may be an *immoral* act, though the birds are to decorate the hat of a woman who would blush at the word *immoral*.

"There are just two things in this God Almighty's earth, Right and Wrong, and that applies clear down to the way you spade your garden," an old acquaintance used to say.

I didn't know what he meant. In the light of the New Spirit of the Farm, I know now. "When you think of the New Spirit of the Farm, don't forget the *moral* side of it, without which all you say will be so much waste," wrote Prof. James Robertson, the dairy expert of Canada, who raised Canada's expert products to as many hundreds of thousands as they were formerly hundreds. I wondered what he meant. Knowing he was of Scotch Presbyterian ancestry, I wondered if this were just that Scotch Presbyterian habit of dragging religion in by the scruff of the neck. Then I read his lectures as head of the famous MacDonald Training Schools and found the same pivotal idea—to make the good man a successful man by all-round observance of law, to make the farmer an intelligent farmer, without which he could not be moral in the deepest sense of the word. In other words, failure on the farm is immoral because unnecessary and the result of ignorance.

### A ROYAL ADVERTISER

There is legitimate advertising, but of late years advertisers have gone beyond all bounds in their desire to get their goods before the public. They have defaced nature with the crudest, most glaring inventions of form and color and profit by it in dollars. How many grassy meadows are adorned (?) with a huge billboard recommending Jones' Shoes or Smith's Corn Cure against a background of noble trees? Mountain slopes, fertile valleys and murmuring streams no longer speak of the beauties of nature and the skill of her creator; instead they tell a tale of Brown's Pills or Somebody's Cigarettes. Houses and barns are paid for with shrieking advertisements on wall and roof. One of the finest specimens of church architecture in Winnipeg is surrounded on two sides with billboards at least twelve feet high impartially proclaiming the excellencies of sauce, whisky, stoves, opera companies, cigars and real estate.

The pity of allowing natural and artistic beauty to be so marred has been stirring in the hearts and intellects of thoughtful people lately, and influence is at work to check the evil. But the good movement has received a jolt and wild and indiscriminate advertising has gained prestige in an unexpected direction. North Cape, that magnificent pile of rock of which Norway and Norsemen are so proud is now nothing but a huge billboard. The most northerly point in Europe, massive and majestic in the gloom and storm of the long winter or radiant in the light of the midnight sun, it was the pride of the country and a sight regarded with admiration and awe by every tourist. But the glory is departed. The stranger now has the doubtful satisfaction of gazing on "Hohenzollern" in painted letters fifteen feet in height on the face of the mighty rock. A little souvenir left by his Imperial Majesty of Germany on a recent visit! The name of his yacht! The name of his family! Could he not have felt, gazing on that scene of grandeur, the smallness of his yacht, himself and all his family?

His example has been followed as one would expect. Shipping firms sending excursion steamers to Northern Norway have painted the names of their vessels on North Cape. These were followed by a chocolate maker who was smart enough to see his opportunity and now a firm has taken space to tell forth the virtues of their shoe blacking. Why not? The only difference between the first desecrator and the last is that the Kaiser got space for nothing and the blacking man pays a big sum.



## FELLOWSHIP

If we walk in the light, as He is in the light, we have fellowship one with another.—I. S. John, 1:7.

"Lord, where Thou art our holy dead must be,  
Unpierced, as yet, the Sacramental mist;

But we are nearest them and nearest Thee  
At solemn Eucharist.

"O Lord, we crave for those gone home to Thee,  
For those who made the earthly home so fair;

How little we may know, how little see,  
Only—that Thou art there.

"Dear hands unclasped from ours are clasping Thee;  
Thou holdest us for ever in Thy Heart;  
So close the One Communion—are we  
In very truth, apart?

"Lord, where Thou art our happy dead must be;  
And if with Thee, what then their boundless bliss!  
Till Faith be sight; and Hope, reality;  
Love's Anchorage is this."

Christians may differ very greatly about the custom of observing saints' days, but surely we should all join hands on "All Saints' Day," the day when we are especially reminded that we are one body, joined together in a glorious communion and fellowship. Plenty of people, who never think of observing a saint's day, will join together sociably on the eve of All Saints' and celebrate Hallowe'en. If they keep the eve of that festival, why should they forget the festival itself?

Fellowship is a vital matter to us all. Solitary imprisonment is, perhaps, the most terrible of all punishments, for we are all social beings, children of the Triune God. Those who find it hard to accept the doctrine of the Trinity should try to conceive the impossibility of a God whose grandest name is LOVE existing for endless ages—from an eternity without beginning—and yet having no one to love before the creation of the angels. We know that from all eternity the Father, Son and Holy Spirit have lived in a perfect fellowship, giving and receiving a perfect love. And God's passion for fellowship seems to be inexhaustible. When I find myself in a busy city crowd, I often wonder how much longer God will go on creating fresh objects of His love. It seems as though His desire for fellowship would never be satisfied. Is it not wonderful to think that He wants to give Himself, in all the perfection of His glorious Godhead, to each one of the myriad souls He has created! Life without fellowship would be very poor. The mere presence of one we love fills us with gladness. We look back to some occasions of deepest fellowship, some moments when we have looked deep down into the depths of a kindred soul, as the bright spots of our lives. But we have a rich treasure of human fellowship always within reach, and yet too often go bare and hungry. The communion of saints is a glorious reality—God's great gift to a social race. In these days we ought to be able to believe in it. We can enter into fellowship with another at a distance, through the ordinary mode of conversation. But of course there must be a connecting wire, visibly uniting the two who are conversing. But in wireless telegraphy the message goes straight to its goal without any visible connection. Why should we think the soul is entirely dependent on its servant the body? Some people say that they can force others to turn and look at them simply by staring at them from behind. I have often heard people say that if they think unexpectedly of absent friends letters are pretty sure to arrive from them. We can't explain how moths can attract others miles away, nor how a whale struck by a harpoon can instantly warn a spouting school of whales a mile away and cause them to disappear. Neither can we explain why, at the point of death, so many have spoken as though they saw absent friends. We see in more than one way, not only with our eyes. We have all had vivid dreams sometimes, when we have seen with perfect dis-

## The Quiet Hour

tinctness scenes far away, though our eyes were shut. We have heard in dreams words distinctly spoken, and yet they were not heard with our ears. The powers of the soul are being studied nowadays with scientific care. But we don't need to wait for scientists to explain the soul's capacity for fellowship with other souls who appear to be far away. We know well enough that it is possible to be separated by a terrible separation from another soul whose body inhabits the same house with ours. We know also that we can keep in holiest, happiest touch with a kindred soul, though the outside world may fancy death or the ocean keeps us apart. If we claim our right of constant fellowship, the pain of loneliness will change to the joy of walking always heart to heart with our best beloved. A touch of Christ's hand, a word in His listening ear, and the connection is made.

"Thou with Christ and Christ with me,  
And so together still are we."

welcome. He may come to us in the person of a little child, or a visiting neighbor; or it may be He is waiting with a helpful or cheering message within the pages of our unopened Bible, or some other book written by one of His saints. He does not wish to interrupt any work that is really necessary, but it is a pity to let unnecessary work keep us from communion with Him. One of the invited guests in the parable refused the King's invitation because he was more interested in his farm; another allowed his devotion to his wife to crowd out devotion to his God.

God invites us to enjoy fellowship with Him and with each other. If we never take time for this social intercourse, we starve our own souls, and lose many opportunities of helping others. As a friend of mine once said: "It is a great thing to write a book that has some of the life of God in it; but it is far greater to live a loyal, consistent Christian life, touching with the hand



FLEMISH LACE MAKER.

This work is somewhat similar to the "pillow work" which may be seen in process of making each year at Toronto Exhibition.

By fellowship we are gradually assimilated with another person, becoming one with him and he with us. We think his thoughts after him, look at life more and more from his point of view, even grow to look like him—as married people, who are really one in spirit, often grow to resemble each other. So it is in fellowship with Christ. We speak to Him, look often into His face, read His words and acts, are filled with a growing love and reverent admiration, and so are changed into the same image, from glory to glory.

What a strange thing it is that we should fill our days with the absorbing pursuit of transitory things, letting this quickening, inspiring opportunity of fellowship slip past unheeded. We are apt to feel that it is waste of time to read, and that we are working usefully if we are very busy about things which perish in the using. And, yet, by reading we can assimilate the natures of good and wise men, and grow more and more like them. It will matter very little, ten years hence, whether we had every spare moment filled with sewing or crochet this month; but one hour a day spent in earnest, conscious fellowship with Christ and His saints will pour lasting riches into our souls. It is possible to be working so persistently as to have fellowship crowd itself out of our lives. Christ comes to us every day, and we should never be too busy to bid Him

of power the common folk walking near one on life's common paths." This latter is within the reach of each of us. Let us treasure our opportunities of fellowship with God and our neighbors. "No one could tell me where my soul might be.

I searched for God, but God eluded me.  
I sought my Brother out, and found all three."

HOPE.

## FATHER AND SON

Thrice I summoned him, for he would not own his fault, nor break His proud dumbness, facing me  
Like a stone, for Courage sake.  
Once again he came, and lo!  
Inspiration from on high  
Whispered: "Fool, do ye not know  
He is only scared and shy?"  
Fell a silence in the room  
There he stood, removed, estranged,  
Prisoner to hear his charge.  
Suddenly it all was changed,  
Tenderly I drew him near,  
Held him as men hold their own;  
Melted all his frozen fear.  
In love's warmth of touch and tone,  
So, the father-soul he owned,  
We no longer were apart,  
And the son his sin confessed.  
I solved it out at last the hour.  
—RICHARD BURTON in *Harper's Magazine*.

## A PRAYER

O Lord God, let come what will, sunshine or shower, few days or many, the pinching of poverty; whether the head be bowed or upright; whether we rise to highest glory or sink in deepest sorrow; whether we keep our souls clean or defile them with sin; whatsoever we do, even at our worst state, we are near unto Thee. And at whatever time in our lives we turn to Thee, this we know:—Thou wilt do what is best for the spirit that is within us; and wherever we go, we know it will be to our true destination. Into Thy hands, whether we are saintly or sinful, sad or glad, O God, we fall. Make our will Thine; then shall we say, "Not unto us, but unto Thy name be the glory."—Amen.

## HINTS ON BIBLE STUDY

Mark your Bibles. If you can afford it, try to spoil at least one Bible every year. Put your own poor, common little thoughts right alongside all the great inspired revelations; and in after years when you are old and grey-haired, among your most precious treasures will be your collection of Bibles.

When you have read a chapter through, write the subject at the head of it.

Where several verses go together, enclose them with a bracket, and write the subject at the side.

In reading verse by verse, consider which is the most important word in the verse, and underline it.

Take a Bible character, as Moses, Peter; find out all you can about him, and write it down.

Write a subject, as "peace," "temptations," "courage," at the top of a sheet of foolscap, and set down underneath all the verses you can find bearing on it.

In reading Paul's epistles, refer frequently to the book of Acts.

Whenever you hear a sermon, underline the text, and write opposite the name of the preacher, the place, and the date.

See how many verses you can find that are as suitable for the angels as for us. Hunt up the texts that you can carry to heaven with you. Compile an angel's Bible.

Do not read as a punishment or a penance, but as a pleasure and a privilege. Don't say "Duty before pleasure," and then pick up your Bible.

Do not go to it merely for proof texts to throw at the heads of those who don't agree with you.

Don't consider yourself bound to read every part of it alike; read most that which helps you most.

Don't try to see how many times you can read it through; that's the Mohammedan plan.

Do not make your capacity the measure of its truth. The Bible is like a day; there is noonday, dusk and midnight in it. Some of it will never be understood in our day, but the Christian who shall read it a thousand years hence will see the meaning plainly. The Bible is graded for the centuries.—H. N. CASSON.

## INGLE NOOK

## SIMPLE EYELET WORK FOR CHRISTMAS

Dear Chatterers: To-day the cuts show some very simple things in the line of Christmas presents; yet with a little skill in adaptation they can be put to various uses. It does not require much skill to draw any of these patterns enlarged on a piece of white paper. Then all you need to buy is a sheet of card on paper, which you can get at any book store or stationer's, the material upon which you want to put the pattern and knit with silk or pearl lustre thread to do the work. I generally use size C in my needle, and D or E for the eyelet work unless it is to be very fine, and then F is a good size.



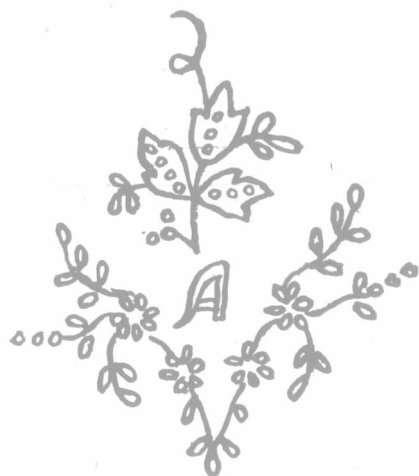


Figure 1 shows an embroidered corner for a linen handkerchief. As shown here, it would require very fine pearl lustre and skilful fingers. But one who has not done much eyelet work can simplify it by leaving out the spray above the initial, and making the other two in larger proportions.



Figure 2 can easily be used for a variety of articles. As the four corners are exactly the same, only one needs to be drawn when the transfer paper is used. Made square with a button-holed or hemstitched edge it would make a pretty centerpiece. Done on an oblong piece of linen, 18 by 12 inches, it would do for a tray cloth, while on a large square, say 24 inches to the side, it could be worked into a tea table cover. Made in much smaller proportions in either square or oblong shape, it would make a pretty cover for a photo frame, especially if put over a silk lining of some pretty hue.



Figure 3 is the design for button-holing the ends of a towel in preference to fringing or hemstitching. Using good huckaback linen towelling you can produce a pair of very handsome towels in this way. The initial, of course, will go only once on each towel. The cut shows a design and a half, and each design should be not more than five inches across.

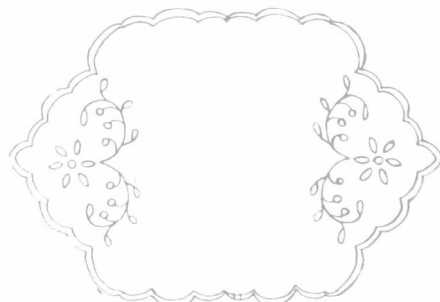


Figure 4 shows one of the simplest and prettiest of all. It is a design for one of the new bow ties so much worn just now. It is 6½ by 4½ inches, and is done in eyelet embroidery on white linen. To make it ready for wear just pleat it or gather it across the middle and fasten on with a fancy pin, or cover the stitches with a tiny strap of the linen. One of its great virtues is the ease with which it is laundered. A quarter of a yard of linen will easily make half a dozen.

Be sure some of the rest of you have some ideas that are workable. Won't you send them in, with drawings, if possible? Don't delay if you can help.

DAME DURDEN.

BOOK ENQUIRIES

Dear Dame Durden:—I am writing to tell you that I appreciate Ingle Nook very much. My husband and I reside in the country, although we are not farming. Could you tell me where I could get a good botany book with colored illustrations? At home in the north of England my mother used to use burdock and other wild herbs for various uses, but I, myself, have but a vague knowledge of wild herbs. Do you think, DAME DURDEN, I could learn to read French books correctly if I bought the necessary books and taught myself? While attending school, my parents were often informed by teachers that I did much better when left to myself with a book than when instructed. I should be glad to correspond with any of the lonely Ingle Nookers if they will say so when writing to the Nook. I should also be obliged if you would forward enclosed to Minnehaha.

NORTHUMBERLAND LASS.  
(Thanks for your words of appreciation. I forwarded the card to Minnehaha and she, no doubt, has written you since receiving it. You are not so far from Winnipeg that you will never be visiting the city. Can't you spare time to make a call on the Ingle Nook some time when you are in?)

The only books that I can find that would be of use to you are "The Story of Plant Life," 50 cents; "Studies of Plant Life in Canada," colored plates, \$2.25; Spotton's Botany, Manitoba edition, 90 cents.

Undertaking to learn French without a teacher is pretty brave, though with your ability for self-teaching you will doubtless be able to get grammar points and easy reading. If you had someone near to correct your exercises sometimes, and to give you some little idea of the pronunciation, it would be an immense help. Here are some good books for you to choose from:—High School French Grammar, 90 cents; Cassell's French-English Dictionary, 90 cents; French Irregular Verbs, Fully Conjugated, 25 cents; Beginner's French, 65 cents; French Readings for Children, 35 cents; First Course French Composition with Key, \$2.10; Introductory French Prose Composition, 25 cents.

I do not suppose you can use all of these, but they are all good and you can take your choice. You will need a grammar and dictionary to start with, anyway. You can order any of these through this office except Spotton's Botany, and the French grammar and dictionary, and those can be got at Eaton's for 90 cents each.

A POPULAR DISH

Dear Dame Durden:—I found out that you can get beautiful cut oatmeal—standard oats—at Eaton's for 50 cents per stone. I use the medium, but finer could possibly be obtained; and it would

be much better for the sick room. I made Yorkshire parkin with this meal after the following recipe, and intended to send Dame Durden a little sample, but it got eaten up too quickly. I cannot get the pure cane syrup here, and corn syrup is too light and molasses too dark, and spoiled the taste. I wonder if maple syrup would do if I could get it pure. For my parkin I took 2 lbs. fine oatmeal, 1 lb. flour, 3 lbs. treacle, 9 ounces lard and dripping, 2 teaspoons baking powder, ¾ lb. sugar, 1 ounce ground ginger. Put the shortening and treacle together on the stove till melted and warm. Mix all the other ingredients well together, then stir in the warm liquid with a cup of sour milk added. Stir well, but stand till next day, bake in flat tins in a moderate oven. Remove from pan before letting it cool.

WISHFUL-TO-LEARN.

(I think you could change your name to Able-to-Teach very appropriately, and the members will agree with me, for you always bring along a grist of good recipes and ideas. I'm sorry I missed the parkin. It was a compliment to its goodness that it disappeared so rapidly, and that makes me all the more regretful. Write us on Mothers and Daughters, won't you?—D.D.)

LITERARY SOCIETY

PATIENT'S ADDRESS TO DOCTORS

According to Rudyard Kipling, there are only two classes of mankind—doctors and patients. He made this classification at the Middlesex Medical School when he distributed the prizes. Mr. Kipling, who spoke in a fluent conversational style, got the warmest of receptions. He remarked that he had experienced a certain delicacy in confessing that he belonged to the patient class ever since a doctor told him that all patients were phenomenal liars where their symptoms were concerned. He would very much like to talk about his own symptoms on this occasion, but he had been instructed to talk not about patients, but about doctors.

"Speaking as a patient," Mr. Kipling continued, "I should say that the average patient looks upon the average doctor very much as a non-combatant looks on the troops which are fighting on his behalf; and the more trained men there are between him and the enemy, the better he is pleased.

"I have had the good fortune this afternoon to meet a number of trained men who in due time will be drafted into the permanently mobilized army which is always in action, always under fire against Death. Of course, it is a little unfortunate that Death, as the senior practitioner, is bound to win in the long

run. But we non-combatants console ourselves with the reflection that it is your business to make the best terms you can with Death on our behalf, and to see how best his attacks may be diverted and delayed, and that when he insists on driving the attack home to see that he does it according to the rules of civilized warfare.

"Every sane human being is agreed that this long-drawn fight for time that we call life is one of the most important things in the world. It follows, therefore, that you who control and oversee this fight, and you who will reinforce the lines, are among the most important people.

"Certainly the world treats you on that basis. It long ago decided that you have no working hours that anyone is bound to respect, and nothing but your extreme bodily illness will excuse you, in its eyes, from refusing to help a man who wishes to call you up at any hour of the day or night, whether you are in your bed or your bath or on your holiday. If any of the children of men have pain or hurt you are bound to succor them, and what little vitality you have accumulated in your leisure will be dragged out of you again.

"In all times of flood, famine, plague, pestilence, battle, murder and sudden death, it will be required of you that you report for duty at once, that you go on duty at once, and that you stay on duty until your strength fails or your conscience relieves you.

"These are some of your obligations, and I don't think that they will grow any lighter. There is no eight-hour working day for doctors. Does there exist any change in opinion which allows a doctor not to attend a patient when he knows the man never means to pay the bill? Is there anything to prevent a man of means from taking all the advantages of a free hospital, where he can get the best treatment and cork legs and glass eyes for nothing?

"It seems to be required of you that you should save others. It is nowhere laid down that you must save yourselves. That is to say, you belong to the privileged classes. Let me remind you of some of your privileges. You and kings are the only people whose explanation a policeman will accept if you exceed the legal limit in your car. On presentation of your card you can go amongst the most riotous crowds unmolested.

"If you fly the yellow flag over a centre of population you can turn it into a desert. If you fly the Red Cross flag over a desert you can turn it into a centre of population towards which men will crawl upon their hands and knees. You can stop a ship from entering any port in the world; you can stop a 20,000 ton liner with the mails

Fat is Out of Style

To paraphrase Caesar's remark, the directoire gown came—was seen—and has conquered. So fat ladies are reduced, so to speak, to the necessity of either reducing at a very rapid rate or eliminating themselves from public view until the fashion dies out. Otherwise they risk being ridiculous.

Since many fat ladies will not eliminate themselves, however, but, per contra, will insist on wearing the curveless gown, no course is open to this well-meaning scribe other than to tell them how they may eliminate the fat.

What is there, then, that reduces fat safely? What pleasant inexpensive article is there on druggists' shelves that can reduce a pound a day without causing wrinkles or stomach ache? What can the pharmacists offer as an improvenet over scanty victuals or ten mile walks without breakfast? Is there anything pleasant to take and inexpensive to buy that will reduce one uniformly, quickly and innocently thirty pounds a month? Here is the answer: Either write the Marmola Company, Detroit, Mich., or ask your local druggist for Marmola Prescription Tablets, and for 75 cents they or he will give you one large case of these safe fat reducers, containing so generous a quantity of tablets that sometimes one case only is needed to produce the desired results. Can you match that for a simple solution of your problem?

"Farmer's Advocate" Fashions



6107 Child's Coat, 2 to 8 years.

6104 Misses' Nine Gored Skirt, 14 and 16 years.

6106 Boy's Russian Suit, 2, 4 and 6 years.

6103 Surplice Over Waist, Small 32 or 34, Medium 36 or 38, Large 40 or 42 bust.

The above patterns will be sent to any subscriber at the very low price of ten cents per pattern. Be careful to give Correct Number and Size of Patterns Wanted. When the Pattern is Bust Measure, you need only mark 32, 34, 36, or whatever it may be. When Waist Measure, 22, 24, 26, or whatever it may be. When Misses' or Child's pattern, write

only the figure representing the age. Allow from ten days to two weeks in which to fill order, and where two numbers appear, as for waist and skirt, enclose ten cents for each number. If only one number appears, ten cents will be sufficient.

Address: "Fashion Department," "The Farmer's Advocate," Winnipeg, Man.



## STUDY AT HOME

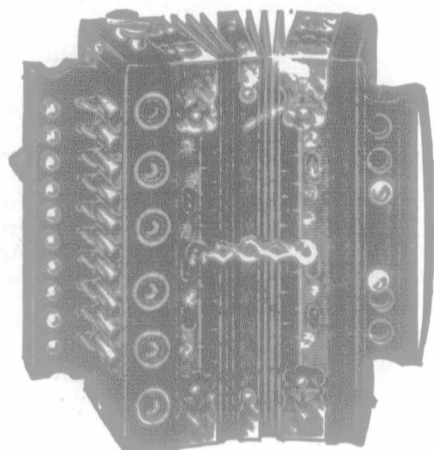
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A Splendid Instrument, just like the picture. Ebonized case, nickel trimmings, 6-fold double bellows, open action, 10 nickel keys, 2 stops, 2 sets of reeds. Concert size, strong, sweet tone. Given for selling \$4.00 worth of Lovely Christmas Postcards; 25 designs, all gems of art; many richly embossed on solid backgrounds of gold; all brilliantly colored. They are worth 5c. At 6 for 10c you have only to hand them out and take the money. Just say you will do your best to sell the cards, and write your name and address plainly. The Gold Medal Premium Co., Xmas Card Dept. F 15 Toronto.

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**POPULAR CANADIAN PARCEL**  
6 pairs Choice Lace Curtains \$8.40 Half Parcel \$4.30  
Contains:—2 pairs effective Diningroom Curtains, 3 yds. long, 60 ins. wide.  
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2 pairs choice Bedroom Curtains, 3 yds. long, 43 ins. wide. (White or Ecru) postage paid, Marvellous Value. Reliable Goods. Quite Distinct. DIRECT FROM THE LOOMS. DIRECT TO YOU.

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**SAML. PEACH & SONS, The Looms,**  
Box 665 NOTTINGHAM, Eng. (Est. 1857).

## FREE MAP OF BRITISH COLUMBIA FRUIT DISTRICTS

Together with valuable information about soils, climate, prices of products, best locations, homestead regulations, etc. Sent FREE to those who send name and address at once to

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## RAW FURS AND HIDES

We are always in the market for furs and hides. Large or small shipments receive the same attention. Will pay highest market prices and give liberal assortment.

Will hold large lots separate, of well handled goods five to seven days, if advised to do so at time of shipment. Write for our price list. Agents wanted. Having big demand for all kinds of furs and hides.

**LA CROSSE WOOL & FUR CO.**  
Exporters of Raw Furs.  
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**VETERAN'S SCRIP**  
Not desiring to perform homestead duties, veteran desires to sell to any farmer desiring to get more land and get it cheap. Apply Box M, Farmer's Advocate, Winnipeg.

**320-Acres-320**

on board in mid-ocean until an operation is concluded. You can cause streets to be pulled up or houses to be burned down, and you can count on the warm co-operation of the nearest troops to see your prescription properly carried out.

"Well, you have been exposed, and you always will be exposed, to the contempt of the gifted amateur, the gentleman who knows by 'instinct' everything that it has taken you years to learn. But the work goes on, and will go on. You remain, perhaps, the only class that dares to tell the world that we can get no more out of a machine than we put into it, and that if the father has eaten of forbidden fruit the children's teeth are likely to be affected. You are going to join a profession in which it pays, not only to tell the truth, but in which you are paid to tell the truth. Its responsibilities and death rate are high, and I sincerely hope that you will have enough work to do and enough strength to do it."

### WHAT OF OUR MANNERS?

We often hear wails from those antediluvian meanderers who are always croaking about lost arts, and the good old times, which, together with being hackneyed, are erroneous to the extreme.

Why regret lost arts when we have a tolerable abundance at the present day to satisfy all immediate demands? It is like a man regretting the loss of a nickel while he has a five dollar bill aboard. Our present day arts and manners are, no doubt, of more avail than the fossilised paleolithics would be, and no doubt, the manners of a hustling community like that which is found on this side of the Atlantic are more serviceable than the minut species; in fact, the latter would be ludicrous if displayed by a suburbanite trying to obtain a seat with the aid of ju-jitsu on the home-going car.

Manners are not easily cultivated, but a kind of counterfeit can be acquired. The former are more or less bred in the bone; in fact, the individual who possesses *savoir vivre* is really not aware that he or she has good manners, so spontaneous is it. It is those who have doubt as to their ability to behave who are always on tenterhooks; these, as a rule, become obsequious, and often servile. It is not an essential of good behaviour to acquiesce on every subject propounded by your host, for it will give him an erroneous idea that he is an oracle. Some hosts relish an argument, but on the other hand, if they dislike controversy, there is no need to make any pointed remark showing that you think either way.

We have heard of people who at functions committed errors in etiquette, transgressed in such a way that it was hardly looked upon as a blunder; also we have known cases in which the defaulter has made the mistake ludicrous by self-consciousness and an overdose of so-called manners.

Is it not natural that human beings, if they can be described by that adjective, would appreciate an artless feeling in manners such as would appeal more to the heart than to the god or goddess Convention? Behaviour is more or less like many other customs and theories surrounded by an indiscreet uselessness, and amended till they would be irreparable by their originators. In the beginning there was a certain instilled code of behaviour which was more instinctive than distinctive, and with the aid of exaggerators we have managed to successfully obliterate all the true naturalness therein.

It is not exactly polite to give your entertainer the impression that you think him a bore whilst enduring his entertainments, neither is it necessary to give exaggerated expressions of enjoyment when being handed an album containing the portraits of people in whom you are in no wise interested. A person possessing manners in their natural form would have sufficient knowledge of the world to know how both catastrophes should be met, and would, by the appropriate and not effusive, know how each case should be dealt with.

We have always brought up to believe that "manners make a gentleman." Now, as a true gentleman

is not built by manners, but is a natural product, as is an artist or author. He assimilates certain conventionalities which we have made a necessity, in the same way that the artist has to go through his elementary education in blending colors. The gentleman has also, like the artist, learned how to apply what he acquires, and most effectively applies it when necessary. We still find gentlemen where convention does not exist, and here their personality is quite as effective.

We may have a system of perpetual motion in hat-raising, and yet not be in any way well-mannered. In fact, courtesy is one of the most poignant weapons in the hands of a blackguard. He may, under its cover, use all his malignant sarcasm, and still be irreproachable for a moral whipping; however, courtesy, handled by one who possesses it as a natural asset, can do wonders. Its effect is most pronounced at social gatherings, for there it is the means of making everyone enjoy themselves, it brings out the reserved members, and by judicious questioning can make the foolish wise, by sagacious banter it quells the boastful, leading the conversation into channels that are available to all present. It does not take an abundance of imagination to see that the spirit of *savoir vivre* is beyond the pale of education, and is a natural acquisition only given to a chosen few.

VICTOR P. CARTER.

## The Western Wigwam

### A DISAPPOINTMENT

Dear Phila Delphia—I was sorry indeed to miss you when you came through Winnipeg. The letter announcing your coming did not reach me until Monday morning. I at once called up the hotel and they told me no one of your name had registered there. In your letter you did not say which Sunday, so I waited a week and then called up the hotel again with no better results. Then your card came from the States and I had to give in to the disappointment. Perhaps some day there will be another opportunity. Hope to hear from you that you are quite recovered in health.

With best wishes,  
COUSIN DOROTHY.

### THE ONLY BOY IN SCHOOL

Dear Cousin Dorothy,—This is my first letter to your Corner. Our house is in a beautiful bluff; there is an opening on the south side. We have a nice flower garden, and a vegetable garden, too, and most of the vegetables escaped the frost.

Papa has taken the FARMER'S ADVOCATE for a number of years. I like to read the letters in the Children's Corner. I have been puzzled how to earn a watch. I wish Cousin Dorothy would tell me.

We have about twenty head of fine, pure-bred cattle, eight horses, and three colts, a dog, and five cats.

I am ten years old, and am in the third reader. Did you ever hear of a school with only one boy in it? I go to the school. I have one brother and two sisters. I will close wishing your Corner every success.

Man. (a) WILLIE IVERACH (10)

(You can earn a boy's watch by getting three new subscriptions to the FARMER'S ADVOCATE for a year at \$1.50 each. That doesn't seem very hard work, does it? The new subscribers you get can have the paper from now until the end of December, 1909, for \$1.50, so it would pay them if you get busy right away and persuade them to subscribe.

No, I never heard of a school before that had only one boy in it. But once I taught for three weeks in a school that had just four boys in it, and they were all called Willie. If I had been going to stay there, I'd have called them William, Willie, Will and Will, but as the time was so short, the problem of distinguishing them was solved by putting a box in each corner of the room.

I hope you will write me again, and that you will earn a watch. I would like a fine Christmas present to give yourself.—

## MORE THAN GRATEFUL

Is Mrs. William Noxon, King St., Picton, Ontario, who was cured of Eczema by D.D.D. Prescription

"I have used the D.D.D. Prescription and I feel safe in recommending it to all skin sufferers as a fine medicine. I suffered so much from Eczema before I knew of D.D.D. that I feel more than grateful for what it has done for me."

There are thousands of people throughout Canada and the United States who feel just as grateful as Mrs. Noxon to D.D.D.—because it has cured them after doctors and drugs failed.

D.D.D. Prescription is a clean, mild vegetable compound that cures all forms of skin diseases—Eczema, Scab Head, Salt Rheum, Pimples, Blisters, Barber's Itch—by killing the germs in the skin that cause the disease.

The very first application stops that awful torturing itch as if by magic. Very soon the eruption disappears as well—the skin becomes white and smooth again—the disease is cured.

### TRIAL BOTTLE FREE

If you have never tried D.D.D. Prescription write us to-day, enclosing only 10c. to help pay postage and packing and we will send you free a trial bottle of this wonderful remedy. Let us prove its merits to you—SEND RIGHT NOW FOR THE FREE TRIAL BOTTLE.

**D.D.D. COMPANY,**

23 Jordan Street, Dept. J 13, Toronto, Ont.

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10 to 50% more money for you to ship Raw Furs, Horse and Cattle Hides to us than to sell at home. Write for Price List, market report, shipping tags \$10,000 Book Hunters' and Trappers' Guide Best thing on the subject ever written. Illustrating all Fur Animals. Leather bound, 40 pages. Price \$2.00. To Hide and Fur Shippers, \$1.25. Write today. **ANDERSCH BROS., Dept. 55 Minneapolis, Minn.** No duty on raw furs, calf skins or horse hides.

## FINE FUR SCARF

Six Feet Long.



Given for Selling Colored Xmas Postcards, 6 for 10c.

While visiting the Franco-British Fair in London, Eng., last summer, we arranged with one of the biggest and best furriers there for a supply of the finest Fur Scarfs ever given as premiums. The picture shows exactly what this scarf is like. It is the fashionable fur now, 6 feet long, and can be worn in many different ways. It is made of the New Marjua fur, a warm brown, a shade lighter than mink, soft and fluffy, well made and lined with brown satin. Comfortable, warm and the best of fashion—a fur that will give years of wear and always look well. You can get it easily by sending me \$1.00 of Lovely Christmas Postcards; all kinds of gems of art; many richly embossed and brilliantly colored. At 6 for 10c you have only to hand them out and take the money. Just say you will do your best to sell the cards and write your name and address plainly. The Gold Medal Premium Co., Card Dept. 17F, Toronto.



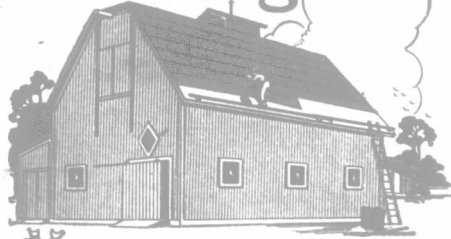
## Initial Watch

**GIVEN FOR SELLING COLORED XMAS POSTCARDS 6 FOR 10c.**

Gunmetal case, open-face fancy dial, stem wind and set, guaranteed works. **Your own initial in a fancy gold letter on the back case.** Man's size given for selling \$3.00 worth, or Lady's size for selling \$4.80 worth of **Lovely Christmas Postcards; 25 designs, all gems of art; many richly embossed on solid backgrounds of gold; all brilliantly colored.** They are worth 5c. At 6 for 10c you have only to hand them out and take the money. Just say you will do your best to sell the cards and write your name and address plainly. The Gold Medal Premium Co., Xmas Card Dept., P. 17 Toronto.



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## Repairing?

If you are, don't forget that a good roofing means dry feed, healthy cattle and poultry, and properly protected farm implements. It means dry buildings, and *dry buildings* save money.

Let us write you a personal letter and tell you why

## PAROID THE MONEY BACK ROOFING

is the best roofing and siding for you.

PAROID is not an experiment; it has been used for years; it is time tested; it is the easiest roofing to lay. Comes in handy rolls with rust-proof caps and nails, and complete directions for laying inside.

Used on Government, Railroad, Manufacturing, and Farm Buildings everywhere. Sold by all dealers.

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Send for it. It's yours for 2c. to pay the postage.



Write us and let our special building expert write you a personal letter and give name of nearest dealer.

F. W. BIRD & SON,  
(EST. 1817)

HAMILTON, ONT.

## A FLOCK OF "WHYS"

Dear Cousin Dorothy:—I have been silent for quite a while, but have not neglected to read the Corner. I like the pen names and hope we may change the Corner's name soon. What do you think of this for a name for our corner, "Wild Rose Bush?" I see some of the members are saying they do not like pen names, but I think that if they did not want them they should have said so long ago. As we have started in to change the corner we might as well make a good job of it.

Now I guess I will ask some questions,—I think they all begin with "Why" for I am rather inquisitive.

Why not, when we write our second and third letters, instead of telling all about the stock, and the health of the folks at home, tell a story taking for our topic an adventure that we, or someone else, have had?

Now that we have pen-names, why not have the addresses printed, also the dates the letters were written? And if the cousins that write would kindly tell what kind of weather they were having where they lived, we might establish a kind of weather bureau. I may have made a mistake in saying, "If the cousins that write," but I know quite a few people in this country that take the *Advocate*, and lots of children read the corner but do not write, and I think that whoever reads it and takes an interest in it is a sort of member. Is my statement correct, Cousin Dorothy?

Why are not the ages all given? Why do you leave off grading some of the letters?

Why not, if we decide in taking, "Duck Pond," or, "Wild Rose Bush," for a name for the Corner, have a duck in the position of flying on either side of the name, or for the name that I suggested a bunch of wild roses on either side would be nice. What do the rest of the Cousins think about it?

I see a few of the members say they are sending drawings, but I haven't seen any of them published. Were they not good enough or what?

This has been a very dry summer out in this country and hardly anyone will have a good crop. The prairie fires have been something terrible, but it has been raining a few days now at last, and I hope the fires are all out.

I am afraid my letter is getting rather long, but I'll soon be so old you won't allow me to write, so please excuse me this time.

Sask. (b) DEW DROP. (15)

(I'm going to leave some of your questions to be answered by the members, but will answer one or two for you now. The ages are not all printed in the paper simply because the writers forget to put them on their letters, and it would never do for me to guess at them, would it?)

No one in the office cared to do the grading on the letters that came while I was away.

When the new name is finally decided upon, an appropriate heading will decorate our page. I am not altogether satisfied with any name that has come in yet.

I've answered three questions, now I'm going to ask one:—Why do not members who use pen-names send their real names, too, and so obey the rules? (C. D.)

### FROM UNCLE SAM'S SIDE

Dear Cousin Dorothy:—I will try again to get acquainted with the Corner, as my first attempt proved a failure. I am from Uncle Sam's side. We have been here nearly three years and my papa has taken the *FARMER'S ADVOCATE* during that time. I enjoy reading the letters in the Corner very much; I think the idea of having pen-names a very nice one. My papa owns four sections of land in a beautiful valley between the Rocky Mountains and the Porcupine Hills. Our nearest town Lundbreck, is seven miles south of our ranch. There are three coal mines in the town. I do not go to school as the school is five miles from us, and the winters are too cold for my sister and I to go, so we study at home and mamma is our teacher. We also

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FIRST CLASS FARMING LAND IN THE most FERTILE District of this PROVINCE

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The land is rich, black, alluvial soil, practically cleared, free from timber and easily placed under cultivation, when it yields very heavy crops of all farming and market garden produce.

It is the nearest land of its class to Westminster and Vancouver on the new Electric Railway to Chilliwack, which lines runs direct to the property. In addition, the V. V. & E. Railway and the Serpentine River both traverse the estate and are available for transportation.

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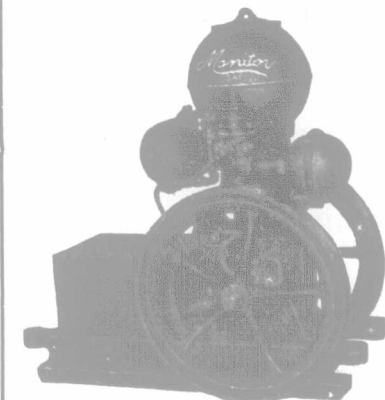
are present in marked and unusual combination, making these farms ideal propositions for new settlers.

We can show samples of fruit grown on the land.

We will send plans and full particulars on application.

## The Dominion Trust Company

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7 Horse-Power Vertical

## THE MANITOBA LINE

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## GASOLINE ENGINES

COMBINES

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Made in all sizes from 2 to 25 horse-power, Vertical and Horizontal, Stationary and Portable, and Combination Wood Sawing Outfits.

Every engine undergoes a thorough test for two weeks in our factory before shipment is made, No experimenting at the expense of the purchaser.

Made in the West.

Send for Catalog.

## The Manitoba Windmill & Pump Co.

Box 301

BRANDON, MAN.

## LOVELY DRESSED DOLL

Given for selling Colored Picture Postcards, 6 for 10c.



This Charming Fairy Princess has flown thousands of miles over land and sea from the far-away famous Black Forest of Germany, the homeland, of all the fairies, and is now here in Toronto stopping with us till some nice little girl invites her to her home. Like all fairies, she is as pretty as a picture, and, being a Princess, she is the prettiest of all the fairies. She is 20 inches tall, and is beautifully dressed from top to toe. Has a straw hat, edged with white lace and trimmed with a pink rose and pink ribbons; curly hair; a sweet, little face with a peach-bloom complexion; laughing eyes, and lips just parted, showing a row of pearly teeth. Her dress is made in the latest fashion from a delicate pink material, with an overdress of sparkling, gauzy silver veiling, trimmed with pink satin ribbons and bows and pink roses and she has white stockings and dainty white slippers, with little silver buckles. She is exactly like her picture which was drawn by a fine artist. She will come to you on one simple condition, which is that you sell for us only \$3.00 worth of Lovely Christmas Postcards; 25 designs, all gems of art; many richly embossed on solid backgrounds of gold; all brilliantly colored. They are worth 5c each. At 6 for 10c you have only to hand them out and take the money. Here is your chance to have a Fairy Princess of your very own, to live with you all the time, to play with you, sleep with you closing her eyes just as you do. She will make you happy and contented all day long. You may never get another chance like this, so don't miss it. Send to us for the cards right away. Write your name and address plainly. The Gold Medal Premium Co., Card Dept., Toronto.

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take music lessons. We have a room we call our school room.

The snow storm this September did not damage the grain like last year, as the farmers had their grain all cut. Well, this is a long letter for the first one, so I will close hoping this letter will find a place as I would like to be a member of the Children's Corner.

Alta. (a) IDAHO (9).

**THIRTY-SEVEN PRIZES**

Dear Cousin Dorothy:—It is a long time since I have written a letter to the C. C. and I am going to intrude once more. I am twelve years old now, and think I am a better writer than when I last wrote you. I am in grade six, and my sisters, Mildred and Olive, are studying for their third. We have a very fine school and always good teachers. I like going to school very much.

Well, Cousin Dorothy, I must tell you how many prizes we took at our fair, which occurred on August the 4th and 5th. I took first on doll, and mamma took three firsts on buns, first on mushroom catsup, three firsts on barred Rock fowl, one first on ducks. Then we got first on Yorkshire pigs, two prizes on cultivated grass, also sixteen firsts on vegetables, also first on collection of vegetables. In fact we took thirty-seven prizes altogether, and we have for several years taken about the same amount. My papa understands gardening well, and he uses Steele Briggs' seeds which, he claims, are the best to be obtained, he having tried a few from most houses, but now he only uses the one kind. We had corn fine for the table on the 28th of July, and I did not hear of anyone else having it fit till about the 15th of August. You will think it strange when I tell you I sell vegetables after school hours. I sell from one to three dollars worth every day, sometimes four and five dollars. Of course I have a pony and buggy and take orders first, then deliver later on. I really like it, but my sisters would not do it for anything. I had a very fine dog that will do almost anything.—Go on the prairie and get our cows from herd, bring them home and drive them in pen and is also a splendid bird dog; no matter how many ducks are shot in a slough, she will get every one, this was my own dog, a school mate gave it to me when a pup, now my brother owns it. He gave me an even trade for a pony, so now I own the pony and he owns the dog.

Well, Cousin Dorothy, we are having very poor weather for threshing, have had so much rain and cloudy weather that the grain in stook will not get dry. I suppose we are not the only ones, likely other countries are just as bad or worse, of course, I do not know much about other places as I was born in Manitoba in the same house we live in now, also both my sisters, but my papa was born in Cirencester, England; my mamma in Parkhill, Ont., and my brother in the U. S. A., but he was very young when he came here with papa that he claims to be a Canadian now, which I think is quite right. I will not write a long letter this time.

BLANCHE CLIFFORD.

Lemon biscuits.—2 cups sugar, 1 cup lard, 2 eggs, 1 cup milk, 5c worth ammonia, 5c worth oil of lemon, flour to stiffen. Knead twenty minutes, cut with square cake-cutter.

**Write Us**

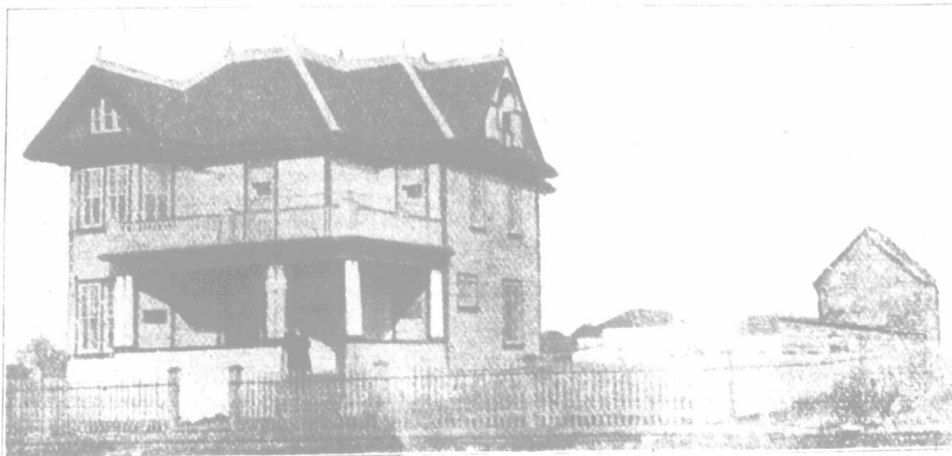
For our new Fall and Winter **Catalogue** of Ladies' and Men's **Furs**, and Men's and Boys' **Clothing**.

It will pay you to do so. You will be enabled to sit quietly at home, select your goods and buy without trouble or worry just as cheaply as if you came to the city.

You can safely do this, for you are assured of fair, honest treatment by our guarantee. If goods prove unsatisfactory we refund you your money cheerfully.

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Exchange your improved farm for this splendid City Home. This is a photo of a ten roomed fully modern house. It has electric light, hot air heating, hot water connections, cistern, only built two years. Centrally located in Winnipeg. Corner lot 63 x 120 ft. fine stable, carriage sheds. One of the best residential sections of the city. As owner, I am desirous for improved farm land.

Will exchange any time and for any price. Make making revenue of your property on the City land.

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**BABY'S**  
The Best Thing in the Home  
—except the baby.  
"BABY'S OWN" is the nicest, purest and safest soap you can use. Best for Baby—Best for You.  
Albert Soaps, Ltd.  
MONTREAL

**OWN SOAP**

**EE A MOTHER'S EE**  
**HAPPY THOUGHT.**

A lady writing from Ireland says:—"I went to see my sister's baby, who was very ill indeed. She had been up for nights with him without undressing; he was crying all the time as with some internal pain. The doctor told her he could do nothing except put him in a warm bath, which gave him a little ease for the time being."  
"I thought of STEEDMAN'S SOOTHING POWDERS which I used for my own children; and next day I sent some to my sister, when she gave the child half a powder according to directions. For the first time for a fortnight she and the baby, and, in fact, all the household, had a good night's sleep, and the little fellow has continued to improve ever since."  
These powders do not contain poison, nor are they a narcotic; but they act gently on the bowels, thus relieving feverish heat and preventing fits, convulsions, etc.  
Please notice that the name STEEDMAN is always spoken with EE.

Don't Throw it Away **MENDIT**  
Does your granite dish or hot water boiler leak?  
USE COLLETTE'S PATENT PATCHES mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. No solder, cement or rivets. Anyone can use them; fit any surface. Send for sample pkg. 10c. Complete pkg. assorted sizes, 25c. postpaid. Agents wanted.  
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That's why we want them to get particulars about our big **Business Training School**

All Commercial Subjects taught. Write us a post card now for Catalog. No trouble to answer questions.

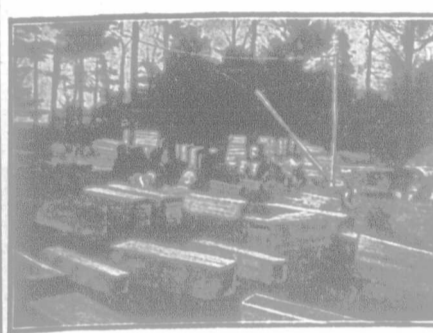
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FISH BRAND  
**SLICKERS, SUITS AND HATS**



are the men who have put them to the hardest tests in the roughest weather.  
Get the original  
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CATALOG FREE FOR THE ASKING  
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**Reliable Agents Wanted**

Now to sell Fruit Trees, Forest Seedlings, Berry Bushes, Flowering Shrubs. **Good pay weekly.** Outfit free. Exclusive territory.  
**600 ACRES UNDER CULTIVATION**  
We grow exclusively for our Western trade varieties we guarantee hardy and recommended by Indian Head and Brandon experimental farms.  
We supply large and well developed trees and plants which will withstand severe cold.  
Write for terms. State whether you can work whole or part time.  
Address—Promotion Dept.  
**PELHAM NURSERY CO.**  
Gooderham Building TORONTO, ONT.

**WE TAN**  
ALL KINDS OF  
**HIDES & FURS**  
FOR  
**RUGS, ROBES OR COATS**



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COW-HIDE ROBES, COATS, ETC.**  
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IT WILL PAY YOU TO SEND TODAY FOR OUR BARN BOOKLET  
"SHOULD LAST FIFTY YEARS"  
says Mr. R. Nagle, of Mount Brydges, Ont. about our Corrugated Sheet Roofing. He adds: "I think it is as near perfection as anything I ever saw."  
Our "Acorn Quality" Corrugated Sheet Roofing and Siding makes an absolutely lightning-proof barn construction, besides being quickly put on. Our Galvanized Sheets show no signs of wear, even on our earliest work years ago. Such Roofing prevents all moisture or dampness.  
**Hare & Brockest, Winnipeg**  
DEALERS to the FARMERS OF CANADA

**Questions and Answers**

**NAMES AND ADDRESSES NOT GIVEN**

In the course of a year quite a few queries addressed to this department are tossed over the end of the editor's desk into the waste-paper basket, because the persons sending them in have failed to comply with our rules, which require, in every case, that the name and address of the sender must be given. We require this as a pledge of reliability on the inquirer's part. We do not maintain this department for the answering of any kind of questions which anybody in the country cares to send in. We maintain it for the purpose of answering inquiries of bona fide subscribers. If any reader has ever sent an inquiry in to us, and, after a reasonable time, has failed to find his question answered in this or some other department of the paper, he may conclude that he has failed to comply with our requirements. There are no hard rules hedging anybody out from the columns of the "FARMER'S ADVOCATE AND HOME JOURNAL." Any subscriber or member of a subscriber's household may write us on any question at any time, and if his letter is signed it will receive the attention of the editor. An answer will be printed if it is a query, or if it is an article on some subject intended for publication it will be printed in due time, providing the matter discussed is of sufficient general interest. Every department of this paper, except the editorial, belongs to our readers. They may write in them on any question they wish, but the name and address of the writer must accompany every contribution. Not for publication unless the writer desires, merely that the editor may know who you are and where you live. This rule is never departed from. Unsigned letters never receive any consideration.

**COLLECTING A NOTE**

I sold some machinery to a party that lived in Saskatchewan till May 1st, 1907, then he came to British Columbia. I took a lien note, due 1st December, 1907 (now nearly a year over due). I sold this note to another party in Saskatchewan. How will he proceed to collect this note? Can his stock and implements be seized here? What are the exemptions in B. C.?  
J. W. S.  
Ans.—From the reading of your question we assume that you took the lien note in Saskatchewan. We also assume from your question that the party making the note took the goods out to B. C. with your consent, at any rate with your knowledge. You could not take the goods from B. C. with the security as you have it. We have not a copy of the exemptions in B. C. You could get a copy of this by writing to the Deputy Attorney-General, Victoria, B. C.

**HORSE HAS GENERAL DEBILITY**

I have a horse, seven years old, which is in very poor condition. He seems to have no strength at all, eats well, but the food seems to do him no good. He didn't shed his hair last spring, and seems hide-bound. Have seen no signs of any worms passing. Just now, too, his stifle is swollen at the lower extremity. Please diagnose and prescribe.  
E. P. H.  
Alta.  
Ans.—In the first place have his mouth carefully examined for any irregularity of the teeth, if they are found to be at fault, have them attended to. As he did not shed his coat last spring, we would advise you to clip him. This would give the skin an opportunity to perform its functions. You must then use a blanket on him or he will suffer from the cold. Give him in about three quarts of drinking water three times a day, a tablespoonful of Fowler's solution of arsenic, continue this medi-

cine for two weeks, then rest for a week, and commence again for another two weeks. Feed an occasional bran mash, with carrots or a turnip every day. Boiled flaxseed once a day mixed with his grain, or bran mash, would benefit him. The swelling below the stifle is the result of his debilitated condition, and will disappear as he improves.  
Give gentle exercise every day.

**DEATH FROM MECHANICAL PNEUMONIA**

About two weeks ago I noticed one of my last year's colts to be very bad with diarrhoea, and we had great difficulty to get her into the stable. On examination I found a puffy swelling between the front legs, also half way under the belly. I consulted the veterinary and described the symptoms. He gave me some powders to stop the diarrhoea and restore the appetite, but did not think the swelling accounted for anything. I kept her in a loose place by herself, where she stood almost in the same position and never lay down for over a week. She drank very little water and would eat no soft food, but picked away at hay and dry oats. The powders did not appear to help her so I drenched her very often with flour in cow's milk. The diarrhoea stopped and her bowels became quite natural and she seemed to get brighter and more eager for food. I bathed her under the belly and chest with hot water, which took away the swelling but she was always moist in these places with an exudation. Two days ago she lay down, and though she often tried, was never able to get up—not even with our help. She showed no signs of uneasiness or pain until last night, when she began to breathe faster and tried to cough now and then. This morning I could hear the heart beat a long way off and by noon she was dead. What was her trouble? She was running in a good pasture along with seventeen horses and colts, and all the others seem perfectly well.  
J. T.  
Sask.

Ans.—Your colt became much weakened by the severe attack of diarrhoea. The puffy swelling (Oedema) between the fore legs was the result of a weak heart, and the system being depleted by the diarrhoea. But we think the actual cause of death was mechanical pneumonia, brought about by some portion of the flour and milk drench accidentally finding its way into the lungs, instead of the stomach. Accidents of this nature frequently occur in cases where the animal is drenched with viscid substances, such as flour gruel, and often linseed oil. When it is necessary to administer a liquid containing flour, it is better to make it of such a consistency that the animal will drink it from a pail voluntarily, this they will do if water is withheld.

**DRAINAGE FROM A DITCH**

I own 800 acres of land. A ravine runs through it. I cut not less than 50 tons of good wild hay off it annually. My neighbors are draining land miles to the south of me and are at present just about to continue this "Zoot Ditch" right through the centre of my ravine. I am told I cannot stop it. The excavated earth thrown on each side of the ditch spoils all my hay. Have I no recompense? If my cattle get into this wet hole and are mired and lost have I no recompense?  
Man. SUBSCRIBER.  
Ans.—If the work referred to is being done under the "Drainage Act" there are proper remedies provided in that Act, and you had better consult your solicitor. If it is being done by private parties you can obtain damages.

**FORMULA FOR CARBOLIC OIL**

What per cent. carbolic acid should be used in making carbolic oil?  
Sask. T. G.  
Ans.—Carbolic oil is made by simply mixing carbolic acid and either raw linseed oil or olive oil, in varying proportions, according to the use it is to be put to. For instance, carbolic acid one part, oil eight parts, make a stimulating mixture to be used on old sores that heal very slowly. For ordinary uses it is made at a strength of one part of the acid to twenty of oil.

**Clothes Made To Your Measure at the Price of "Ready-Mades"**

No matter what part of Canada you live in, you can have your suits and overcoats made to your own measure by our city tailors—in the latest styles—of the newest weaves and patterns—and your money back if they are not entirely satisfactory. Prices, \$12 to \$25.



**Send for Our Catalogue**

—showing styles and fabrics—and self-measuring outfit. It's full of information on good dressing, and is sent free on request.  
Reference—Bank of Montreal.  
**MEN'S WEAR LIMITED**  
475 St. Catherine St. East, Montreal.

**GASOLINE "Stover" ENGINES For Service**

It leads them all. Don't buy till you know all about it. Write for catalog to  
**STOVER ENGINE WORKS**  
63 River Street Freeport, Illinois  
General Agents for Canada:  
**THE CHAPIN COMPANY**  
63 River Street Calgary, Alberta  
**THE CANADIAN STOVER GASOLINE ENGINE CO.**  
94 Ocean Street Brandon, Manitoba

**ZAM-BUK SAVES A FARMER'S ARM**

**Some Sensational Proofs of Its Healing Power.**

Every day brings interesting instances to light of the wonderful healing power of Zam-Buk, the herbal balm. Mr. Wm. Snell, a Langenburg (Sask.), farmer, says:—"I saved my arm by using Zam-Buk. I had a terrible scalding accident and the arm after the injury 'took the wrong way.' When I started to use Zam-Buk it was all swollen up and discolored, and I feared it would have to come off. In a few days Zam-Buk killed the poison, reduced the swelling, and finally healed the arm completely."

**ECZEMA CURED.** Mr. J. E. Cusick, of 249 Wilson St., Hamilton, says:—"Every winter I used to have eczema on the back of my hands. Last winter I was especially bad—so bad that I had to be off work for three weeks. While suffering acutely I was advised to try Zam-Buk, and did so. I could not have believed anything could have healed so quickly! It just seemed to dry up and clear away the sores, and in a wonderfully short time my hands were quite cured."

**PILES CURED.** Mr. Neil Devon, of Webbwood (Ont.), says:—"For eight years I tried all kinds of things for piles, but I got nothing to do me any good until I struck Zam-Buk! That quickly worked a complete cure."

Zam-Buk heals all skin diseases, cuts and bruises, eczema, scalp sores, ulcers, chapped places, scrofulous ailments, poisoned wounds, swollen glands, boils. As an embrocation it cures rheumatism, sciatica, etc. All druggists and stores sell at 50c a box, or from Zam-Buk Co., Toronto. 3 boxes for \$1.25. Send 1c stamp for dainty trial box.



## 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.

**FOR SALE**—We have a number of rebuilt Threshing Engines, Portable and Tractor, in first class order, various sizes. We can sell much below their value. Write for particulars. The John Abell Eng. & Mach. Works Co., Limited, 760 Main St., Winnipeg, P. O. Box 481.

**WANTED**—Stockmen and others to get their printing done by The Farmer's Advocate Mail Order Job Printing Department. Prices Quoted. Sample sent on application. Address Mail Order Dept. The Farmer's Advocate, Winnipeg.

**MEN WANTED**, good vision, under 30, over 145 pounds, for brakemen and firemen on all railroads. Experience unnecessary; pay \$75 to \$100 monthly; promoted to conductor or engineer; \$150 to \$200. Railway Association, Room 163-227 Monroe Street, Brooklyn, N. Y. Distance is no bar. Position guaranteed competent men.

**PARTNER WANTED**—Active or silent, in high class enterprise. One who is willing and able to assist capable experienced woman (widow) in a business that has been built up to a point that requires enlarged capital and credit. Commercial "Farmer's Advocate" Winnipeg, Man.

**WANTED**—Land in Canada (Alberta or Saskatchewan). A U.S. Syndicate wishes to correspond with Syndicates, Ranchers or Homesteaders, who are holding lands and wish to sell at bargain prices. Land must be close to railroad or proposed railroad, and price must be right or will not be considered. State location, township and range, quantity, kind of land, price & terms. Address, U.S. Syndicate, Farmer's Advocate.

**FOR SALE**—Scrip for 640 acres and for 22 detached quarter sections, East of the Rockies at \$4.50 per acre. Apply E. A. Harris, Fort Street, Victoria, B. C.

**FOR SALE**—An A 1 half section, under fine cultivation, with stock and implements, two miles from elevators on C. P. R. and three from elevator on C. N. Price and terms most favorable. N. Wolverton, Nelson, B. C.

**JERSEY CATTLE**—A few registered cows for sale, coming in, and I shall have young things to express from prize winners. W. Bellhouse, Galiano Island, B. C.

**IF YOU WANT** to buy or sell property, any kind, anywhere, write the Northwestern Business Agency, Minneapolis, Minn.

**EVER HEAR** of the famous Fraser River Valley, the fruit growers' and dairymen's paradise. Mild climate, electric railways building everywhere. Send post-card for free booklet. Publicity Association, New Westminster, B. C.

### 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. Notices exceeding five lines will be charged two cents per word for each additional word, payable in advance.

**STRAYED**—On June 17th, 1908, one bay colored mare colt, 2 years old, white star in forehead, rather slender, halter on, no brand. One bay colored mare colt, 1 year old, white star in forehead, some white on hind legs, rather chunky build, rope around neck, no brand, last heard of near Kirkpatrick Lake, Alta. \$25.00 reward for information leading to recovery. Address, O. S. Ostgaard, Provost P. O., Alta.

## POULTRY AND EGGS

**Rates**—Two cents per word each insertion. Cash with order. No advertisement taken under fifty cents.

**COME** to the Littlecote Poultry Yards, St. Charles, Man., for choice Banded Rock Cockerels. First prize 1908 "County Fair." Mrs. M. Vialoux.

**PURE BRED BARRED ROCKS**—A fine lot of choice early-hatched cockerels at attractive prices. Order early and get the best. Mrs. A. Cooper, Treesbank, Man.

**FOR SALE**—Large bronze gobbler, fine Pekin ducks, also some pure-bred B.P. Rock cockerels, cheap now, to make room for winter. R. H. Richardson, Melita, Man.

**RHODE ISLAND REDS** and Mammoth Buff Rocks, nine entries, eight prizes Manitoba's largest shows, 1908. Eggs \$1.00 up. Fine Red Cockerels, \$1.50. J. Buchanan, Oakville, Man. T. P.

## BREEDERS' DIRECTORY

Breeder's 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.

**A. & J. MORRISON**, Glen Ross Farm, Homewood, Man., Clydesdales and Shorthorns. 13-11

**A. D. McDONALD**, Sunnyside Farm, Napinka, Man. Berkshires and Yorkshires from prize winning stock; all ages; write for particulars.

**A. J. MACKAY**, Wa-Wa-Dell Farm, MacDonald Man., breeder of Shorthorn cattle and Leicester sheep.

**BANTING STOCK FARM**—Clydesdales, Shorthorns, Tamworths. T. E. M. Banting, proprietor, Wawanesa, Man. Phone 85.

**BERKSHIRES**—Gold Medal Herd, Neepawa, Manitoba. Address J. A. McGill. 24-4

**BEN MORE**, reg. Jersey herd—P. W. Reid, proprietor, Enquiries solicited. Hill P. O. Vancouver Is., B. C.

**BROWNE BROS.**, Ellisboro, Assa.—Breeders of Polled Angus cattle and Berkshire swine. Stock of both for sale. 13-3

**CLYDESDALES**—A choice collection of breeding stock always available. Jas. Burnett, Napinka, Man. 30-1

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

**DUROC-JERSEY HOGS**—Limited number of the famous registered Duroc Jersey Hogs for sale. J. T. McFee, Headingly, Man.

**FOSTER AND LYLE**, Lyleton, Man.—Imported and homebred Clydesdales and Shorthorns. Correspondence solicited.

**GEO. SWALES**, Holmfild, Man., breeder of Red Polled cattle. Young stock for sale.

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

**GEORGE LITTLE**, Neepawa, Man.—Shorthorns of best Scotch type. 24-4

**H. C. GRAHAM**, Kitscoty, Alta.—Shorthorns—Scotch Collies and Yorkshires, for sale. 1-4-09

**JAMES WILSON**, Grand View Stock Farm, Innisfail, Alta.—Breeder of Shorthorns. 13-6

**JAS. BRAY**, Portage la Prairie. Choice Hereford cattle and Berkshire swine for sale. 20-t

**JAMES A. COLVIN**, Willow Dell Farm, Sedgewick, Alta., Breeder of Shorthorns and Berkshires.

**JOHN GARDHOUSE & SONS**, Highfield, P. O. Ont.—Breeder of Scotch and Scotch-topped Shorthorns, Lincoln and Leicester sheep and horses. T. P.

**MERRYFIELD FARM**, Fairview, Thos. Brooks, breeder of Clydesdales and Shorthorns. Box 134, Pense, Sask. 30-10

**W. J. TREGILLUS**, Calgary, Alta. Breeder of Holstein cattle and Yorkshire swine.

**POLAND CHINA PIGS**. Young stock for sale. Stringency prices. W. J. Boughen, Valley River, Man. 1bn

**POPLAR PARK HEREFORDS**. A number of young cows, heifers, and bulls now for sale from this famous herd at low prices. Berkshire pigs. J. E. Marples, Deleau, Man. tf

**R. A. & J. A. WATT**, Salem, Elora Station, G. T. and C. N. R.—Champion herd of Toronto and New York State Fairs, 1905, also Grand Champion females, including both senior and junior honors at both fairs. Write your wants. 13-12

**STRONSA STOCK FARM**—Well-bred and carefully selected Shorthorns and Berkshires. David Allison, Roland, Man. 13-11

**SHETLAND PONIES** and Hereford cattle, finest in Canada, also Berkshire pigs. J. E. Marples Poplar Park Farm, Deleau, Man. tf

**T. E. WALLACE**, Portage la Prairie, Man. Breeding Shorthorns of various ages for sale.

**WOODMERE FARM**—Clydesdales, Shorthorns and Yorkshires. Pigs at 8 weeks, f. o. b. Neepawa, \$8 apiece. S. Benson. 24-4

**RAILROADING** WANTED FIREMEN AND BRAKEMEN for all Railroads. Experience unnecessary. Firemen \$100, become Engineers and earn \$200 monthly. Brakemen \$75, become Conductors and earn \$150. Positions awaiting strong, competent young men. State age. Name position preferred. RAILWAY ASSOCIATION, Room 163, 227 Monroe St., Brooklyn, N. Y. Distance no bar. Positions guaranteed competent men.

## CATALOGUES AND BOOKLETS

MUST HAVE STYLE AND DRESS

You may want something of this nature. Let us build it for you. You will find our prices as reasonable as our service is excellent.

Farmer's Advocate of Winnipeg, Limited

### TANNING CALF SKINS

Would you please inform me, through the Advocate how to prepare a calf's hide so the hair will not come off? I intend to have a waist-coat made from it.

Ans.—We would advise you not to try to prepare this hide yourself. There are certain home methods of tanning hides and skins, but as a general rule a man inexperienced in the work will get mighty poor results. A firm of reputable tanners are advertising in this journal, and you will get much better satisfaction by sending your calf skin to them than in attempting to prepare it yourself. You will find that it is cheaper in the end, too, for while you will be charged something for the tanning, you will have a calf hide fit for use when it is done, while if you try tanning it at home you will be out the time and materials required for the job, and very likely you will be minus a calf pelt as well.

### CATTLE DAMAGING GRAIN—BOG SPAVIN ON A TWO YEAR-OLD COLT

1. How much damage can I claim if fifty head of my neighbor's cattle got into my wheat stooks and fed all night?

2. Two-year-old colt has a bog spavin. Is it too young to blister, or what would be best to do for it? Man.

#### SUBSCRIBER.

Ans.—1. It is impossible for us to estimate the damage that fifty cattle might do in a night in a field of wheat. Your best course would be to call in the man whose cattle did the damage, and a number of other neighbors, and have them estimate the damage done.

2. A bog spavin in a two-year-old colt may be blistered, if it is considered necessary. As the animal grows older and matures these puffy tumors on the hock (bog spavins) sometimes disappear without medical or surgical interference. Unless the tumor is quite large, or is causing lameness, we would advise you not to blister, but to attend to the feet. See that they are kept regularly and evenly pared down to their natural size. Also be sure that the colt gets regular exercise in fair weather.

### UMBILICAL HERNIA—SIGNS OF PARTURITION

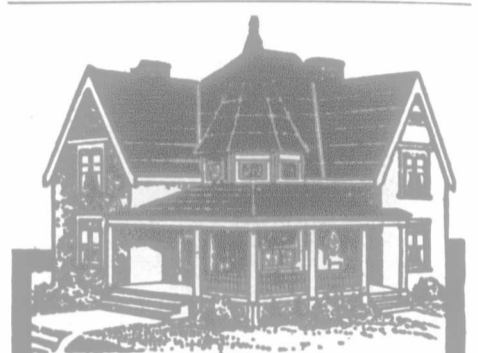
I have a heifer due to calve in two weeks' time. Her udder and teats are full and tight, and she has a swelling about the size of two fists on her navel. What is the probable cause of the swelling, and can one tell a few hours or a day beforehand when a cow will calve?

Sask. E. H. D.

Ans.—You must exercise great care with this heifer's udder or you may have a bad case of garget. If she is in good condition, it would be well to give her a laxative dose of Epsom salts, about three-fourths of a pound. This should be given at once. She should be stabled in comfortable quarters, and always have a good bed under her to prevent the udder becoming chilled. You do not state whether the swelling at the navel is of recent origin, or of long standing. We presume it is an "umbilical hernia," and is of long standing. If this is the case, the fact of her being heavy with calf would likely cause the swelling to become larger. After calving the swelling will get smaller. You may then use a pad on the tumor, kept in place with a wide bandage around the body; but if it still remains large you had better consult your veterinary surgeon as to the advisability of performing an operation.

The principle signs of approaching parturition are: The vulva becomes relaxed and placid, the inside lining is red, and there is a discharge of mucous in long filamentous streams, soiling the tail and hocks. This mucous is destined to lubricate the genital passage. The ligaments of the croup also are relaxed, and the parts look hollow, the animal becomes restless, the udder becomes hard and tender to the touch, just before calving the animal becomes soft. As parturition draws near these phenomena are most marked.

Mr. John Ramsay, Priddis, Alberta, in sending in a change of advertisement, which is running in this issue, informs us that he intends reducing his herd, and is offering for immediate sale, 20 cows and heifers and a number of exceptionally promising young bulls. Mr. Ramsay reports that his stock has done well during the past summer and will go into winter quarters in unusually good condition. The lot he is offering in cows and heifers is an exceptional one for breeding and quality, some of the best individuals in the herd being included. It looks to us like an opportunity for Alberta farmers to pick up some choice breeding animals at unusually attractive prices.



## Don't Paint The Roof

All the expense of painting a roof may be saved by covering it with

## Brantford "Crystal" Roofing

—and the cost will be one-third less than for wooden or metal shingles

You certainly owe it to your pocketbook to learn more about this wonderful roofing. You should have a sample. Then you can test the flexibility and toughness of Brantford "Crystal" for yourself—and see with your own eyes its time-defying Surface of Rock Crystals. A surface that cannot be improved upon for weather-and-fire-proofness. A surface that needs no painting at the start and never will, as rock crystals cannot dry out, crack, freeze, or melt—practically indestructible.

Sample, and big roofing book, will be mailed FREE as soon as we hear from you, which should be by next mail.

Brantford Roofing Co. Limited  
Brantford, Canada

WINNIPEG AGENTS—  
General Supply Co., of Canada,  
147 Bannatyne St.  
VANCOUVER AGENTS—  
Fleck Bros., Ltd.,  
Imperial Bldg., Seymour St.



GOSSIP

THE BLIND MAN'S NEWSPAPER.

Of the 80,000 sightless persons in America about 35,000 are able to read blind printing. The fact that they are blind lessens in most instances their earning capacity, and inasmuch as the making of reading matter for them is a costly operation it is practically impossible without aid from wealthy people to supply them with literature.

The oldest newspaper for the blind is published at College View, Neb. It is called the Christian Record and was founded at Battle Creek, Mich., in 1900 by A. O. Wilson and his wife, who are both blind.

Wilson did the editing, his wife the printing and binding. Wilson has since engaged in other business, but his wife is still the composing room force. Four years ago the plant was moved to Nebraska.

It began with a circulation of 100 copies. To-day 2,000 copies are printed each month, and there are 6,000 names on the waiting list. These persons would like to subscribe and are willing to pay the subscription price, but the publisher is in the position of losing more money the more subscribers he gets.

One sheet of paper can carry but one page of reading matter, since the matter printed is read from the opposite side from that upon which the printing is done. When the magazine or book is bound it must be padded at the back to allow for the raised or embossed printing.

Blind printing has been in the process of evolution since 1784, but only within the last ten years has invention made it possible to place the results, either in book or magazine form, at a price that many of the blind could afford. A number of printing establishments exist in the United States, the largest being that of the *Matilda Zeigler Magazine* in New York city, which has the largest circulation of any printed. This is made possible by the fact that Mrs. Zeigler pays the excess of cost above the selling price, about \$20,000 a year.

In most establishments the work is done by blind people. The editor writes his copy with a little machine built on the principle of the typewriter, but so small that it can be held on one knee, which embosses the letters. This copy is turned over to the compositor and the writing is reproduced on a machine similar to the one used by the editor except that it is larger, about the size of a sewing machine, and it makes the impression on thin copper plates. A foot lever is used to force the points into the metal plates. In some of the small shops the impression is made by a tap on an awl-like piece of steel.

When the metal sheets are finished the compositor or the editor does the proof-reading. If an error is detected it is necessary to smooth down the surface at that point, or if that is impossible the plate must be made over again. The mechanical difficulties involved make changes from copy very infrequent.

The metal plates are next put in the printing press on rollers. These rest against other rollers holding rubber mats. The paper runs between, and at each revolution the copper plates force their impression through the paper, turning out printed pages.

In the papers and magazines printed for the blind very little fiction is found. Some short stories appear, but seldom any serial. While most of the papers have a religious tinge, they aim to give condensations of current events.

The College View publication has a wide range of circulation. Nevada is the only State not represented on its subscription list, and copies go to Canada, England, Australia, and Mexico.—*The Star*

\$9.50 — Wingold Ball-Bearing Washing Machine — \$9.50



If you want the very best and the highest grade reciprocating washing machine made in the world, a machine which combines every good feature of all other swing washing machines with many special features not to be found on any other washing machine made, if you want a washing machine that will do a big washing quicker and better than any other swing washing machine, no matter what its name, make or price, and a machine which runs so easily as to require almost no effort at all, by all means order our Wingold Ball Bearing Machine.

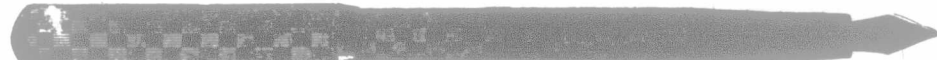
THIS IS ABSOLUTELY THE BEST MACHINE

of the reciprocating or swing washing machine type that we have ever offered. While those who have bought our machines heretofore are perfectly satisfied with them and claim that we have sold them the best machines they have ever seen for the money. We have made many improvements by testing and trying new features, and have been able to bring our washing machines for this season up to a still higher grade of efficiency than before. Our Wingold Ball Bearing, our easy running wonder, represents the perfection of washing machine manufacturing. Nothing would please us more than to have you compare our Wingold Ball Bearing easy running wonder with the highest priced machines made by others at any price, and we know that your judgment will be in our favor. Don't pay \$15.00 to \$18.00 for a washing machine. You simply throw money away if you do. \$9.50 is all you need to pay for the best washing machine made.

Our Patented Features make it possible for you to wash anything in the Wingold which can be washed in any washer, a claim which cannot be made for any other reciprocating washing machine offered by others even at \$15 to \$18. Heavy blankets, rugs, comforters, carpets, mechanics' blouses and overalls, men's working clothes of all kinds pass through this machine with ease, and yet the Ball Bearing Wingold is so scientific in construction that the most delicate fabrics, even rare laces and delicate curtains are thoroughly cleansed without the slightest injury to the materials. A Thorough Cleansing Washer. A great clothes and labour saver. Even a child can run it. Guaranteed for five years against defects. You have Six Month's Free Trial to test the qualities and if it does not do exactly as we claim, you may return it and we will refund both the price and any transportation charges you paid. Send us your order to-day. Buy a Wingold Washer and get away from the back breaking and spirit breaking washday. Before you buy a washer of any kind write for our wonderful washing offer. Do it Now. Dept. F. A.

The WINGOLD STOVE CO. Ltd., 245 Notre Dame Ave., WINNIPEG, MAN.

Solid Gold Nib Fountain Pen FRUIT LAND



GIVEN FOR SELLING COLORED XMAS POSTCARDS, 6 FOR 10c.

This Pen has a solid 14-karat Gold Nib, well shaped and finely tempered. The holder is made of the best hard rubber, handsomely finished in the checker-board pattern, which gives a sure grip. Given for selling \$3.00 worth of Lovely Christmas Postcards; 25 designs, all gems of art; many richly embossed on solid backgrounds of gold; all brilliantly colored. They are worth 5c. At 6 for 10c you have only to hand them out and take the money. Write your name and address plainly. The Gold Medal Premium Co., Xmas Card Dept. P 14, Toronto.

WHERE AN ADVERTISER PATRONIZES A FARMER'S PAPER HE IS DESERVING OF A FARMER'S PATRONAGE

Five and Ten Acre Blocks  
Three miles from New Westminster  
Cleared land, \$200.00 per acre  
Uncleared " 125.00 " "  
Quarter Cash—Balance very easy  
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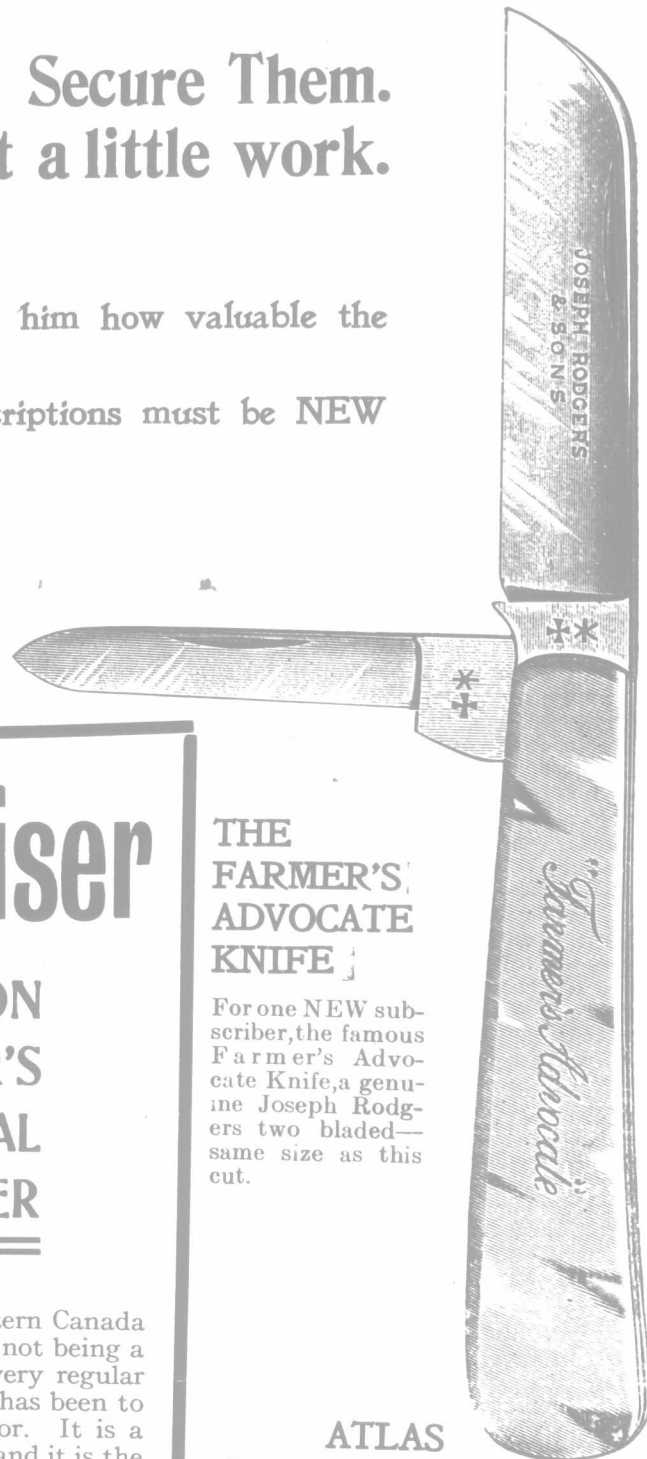
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**HUNTING THE MUSK-OX IN THE FAR NORTH**

One of the most interesting animals of the far north of Canada is the musk-ox, and Mr. Tyrrell, in his new book, "Across the Sub-Arctics of Canada," devotes a chapter to the hunting of these animals. In general appearance they look rather like huge, horned sheep, but in size resemble the ox, or, more nearly, the buffalo. They are found generally in herds of twenty or thirty. In prehistoric times the musk-ox occupied a very wide area of the earth's surface, both in Europe, Asia and America, but now his range is limited to the northern parts of Canada and Greenland. "From personal observation," says Mr. Tyrrell, "I have found the southern boundary of the musk-ox habitat to-day to be Hudson Straits and Bay, Chesterfield Inlet, the Thelon River, Clinton-Golden and Aylmer Lakes, whereas in the time of Samuel Hearne, one hundred and fifty years ago, we have his assertion that musk-oxen frequented the vicinity of Fort Churchill, four hundred miles south of their present haunts."

The author tells of his first musk-ox hunt as follows:

It was 11 p. m. one glorious sub-arctic night in summer. . . . In perfect silence our canoe was drawn ashore at the base of the bluff, and, having marked our ground as we approached, my companion and I selected a little gully or waterway on the side of the bluff as the best place for our ascent. The Indians, who were unarmed, crept behind close on our heels, evidently courting the protection of the rifles. The hill being high and steep, we were all pretty badly winded before the summit was reached, so a halt was made to recover breath and nerve, for by this time suspense and nervous expectation were keyed up to a pretty high pitch. A few minutes' pause, however, greatly relieved the situation, and, having examined our rifles, we cautiously crept the remaining distance until, our eyes coming level with the brow of the hill, we found ourselves suddenly within full view of nine huge, dark, shaggy forms, which, of course, we knew to be musk-oxen. They were all within comparatively close range, not more than one hundred yards distant. It is quite impossible for me to describe the thrill of admiration and excitement which now possessed us, but in an instant we selected the two nearest bulls and pulled. Both staggered, but to our surprise neither fell, so without stirring we pulled and pulled again before they fell.

The remaining seven animals, apparently not having located us, were thrown into a state of frenzy and rushed back and forth in a state of wild disorder. Having despatched the first two victims, we turned our rifles upon the next two most dangerous-looking brutes and brought one to earth, but the other, having located us, and with blood streaming from a wound in his side, led the band in a furious charge straight for our position. Nor did we easily evade their blood-thirsty onslaught, but, springing from concealment to our feet, we met them with three deadly volleys. This so demoralized the band that only one young ox got away unharmed. The remaining eight were either killed or wounded. In the heat of the encounter we had forgotten our Indians, but they had thought of themselves and had kept close behind us. They were now set to work to skin and save the best meat of the slain oxen, whilst we proceeded to despatch the wounded. This was by no means an easy task. One old bull (most of the band were males) refused to fall until he had received six mortal wounds, three of which I found from my own subsequent examination passed through his heart, leaving it completely shattered. Others which had run for some distance, were pursued until the huge forms were stretched upon the ground, only the one having escaped.

While the Indians were busily engaged in skinning the oxen, I, with my companion, returned to the camp, and though the hour was now mid-

night, ordered an immediate move to the scene of the slaughter, so that all might engage in the work of skinning, cutting and curing as much as possible of the meat.

While several of the party were busying themselves with the arrangements of our new camp, they were suddenly startled by the horse below of a musk-ox almost at their ears. The young bull, which we had allowed to escape, had returned in search of his comrades, and had given forceful vent to his feelings just at the moment when he was turning a sharp angle of the bluff within a few feet of a tent occupied by two of my companions. Not having been in the tent I can only imagine the expressions depicted upon their faces, but the musk-ox, finding himself in such unexpected company, galloped past the camp and out on to a long, narrow, bare point extending into the lake. Seeing now an opportunity for sport, and preferring it to further slaughter, Mr. F. and I armed ourselves with cameras, and calling out all hands, we arranged ourselves in a line across the base of the point and proceeded to advance upon the enemy, thinking that he would likely take to the water, and that we might there effect his capture by means of a lasso. We were not long left in doubt as to the outcome of the project, nor were we permitted to push our enemy to the extreme, for, sizing up his position and evidently not wishing to take chances in the lake, he wheeled about and faced our line. For a moment, with lowered head and with fury glaring from his protruding eye-balls, he stood at bay, and then like a rocket sped straight for the centre of our line, where stood Mr. F. with his camera.

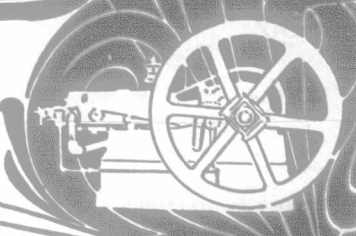
A less ferocious-looking object approaching in so precipitate a manner would have been sufficient to cause most individuals to take to the woods, had there been any available, but not so with my friend, who posed like a target until at fifteen feet he snapped the flying charger and sprang to one side only in time to preserve his anatomy. Our project had failed, so far as effecting the capture of the musk-ox was concerned, for he was now gone, but it had proved a huge success as a source of entertainment, nor was the play yet ended. Stimulated by the excitement of the last encounter, Percy—and another member of the party secured their rifles and set off in pursuit of the ox, which exhibited an inclination to return to the place where he had lost his comrades. Several rifle shots were heard in the distance, and after a short time Percy's companion returned. Other shots were again heard in closer proximity and quick succession, and upon descending the bluff I witnessed one of the most entertaining episodes I have ever seen. There on the farther side of the hill were Percy and the musk-ox in hot chase of each other around a huge boulder, the former calling excitedly for someone to bring him more cartridges. Believing my friend to be in no great danger, I instead ran for my camera, hoping to procure a snapshot of the scene, which I did, though imperfectly, for the hour of the night was now 1.30.

As I approached the combatants, what impressed itself most vividly upon my memory was hearing Percy exclaim, "Get out, you brute!" at the same time bringing his empty rifle with a crash across his adversary's adamant head, certainly doing no damage, unless to the rifle.

Others of the party who were less interested in photography than I responded promptly to Percy's appeal for assistance, and immediately upon the accomplishment of my object his was also effected, and the night's sport was ended, at the cost of the lives of nine noble animals.

I might add that, although many other opportunities of working similar destruction were afforded me during the continuance of my journey, no recurrence was perpetrated or permitted, knowing that I had already overstepped the bounds of true sportsmanship.

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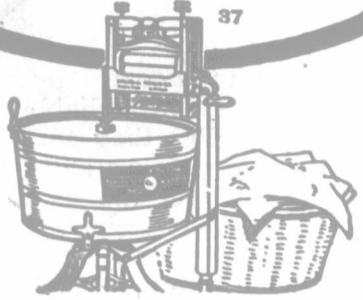


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**CONTROL OF BOVINE TUBERULOSIS**

(Continued from page 465)

In this connection, I have read with much interest the plan proposed by Dr. Nivan, Medical Health Officer of Manchester, and supported by Professor Delepine and Mr. Brittlebank, the Chief Veterinary Officer of that city, which includes the forming of disease-free in lands by eradicating tuberculosis from certain farms, and gradually extending the work over small districts, to be still further enlarged as the system finds favor with stock owners. While there are some features of the scheme, such as the spending of public money in specially-selected localities, to the exclusion of other taxpayers, and the supplying of sanitary buildings, through bringing pressure to bear on landlords, or otherwise, which are scarcely applicable to conditions in America it is in my opinion much more sensible and likely to be productive of ultimate benefit than the diffuse policy of promiscuously testing a herd here or there over an extensive territory, difficult, if not impossible, to keep under observation or control, without an enormous staff of well-trained, experienced, and absolutely conscientious veterinary inspectors, having no interest, beyond that of duty, in the herds with which they are called upon to deal or their owners. I might here say that the policy of employing local practitioners for this work has been repeatedly tried, and, in my experience, at least, has not, in the majority of instances, proved either beneficial or successful.

**THE BANG SYSTEM**

I have nothing to say against the Bang system itself; in fact, I am, and always have been, one of its most consistent advocates and admirers. I cannot, however, after thirty years' experience as a veterinarian on this continent, and with the knowledge acquired in that time of conditions on the ordinary North American farm, bring myself to believe that it is capable of successful general application on this continent. There is no doubt that, if all our stock-owners were thoroughly intelligent, well-informed, anxious to rid their herds of tuberculosis, and gifted with an infinite capacity for taking pains, either the Bang system or that of Ostertag might be adopted with every hope of a successful issue. As matters stand, we must, in order to deal with bovine tuberculosis effectively, have some definite policy of legal control, and the question, to my mind, is whether or not such control can properly be based on the tuberculin test.

**COMBINATION OF SYSTEMS PROPOSED**

At present I am inclined to favor a combination of the systems of Bang and Ostertag with that of the Manchester men, accompanied by a closer supervision of infected herds than is recommended by either of the two first-named authorities, so far as I understand their methods. All clinical, or, if they can be detected, open cases of tuberculosis, should be destroyed; all the adults in herds in which such cases are found to be treated as if diseased, marked and segregated accordingly; all milk from such herds to be pasteurized, whether used for human food or for that of animals, the progeny to be effectively separated from the adults, regularly submitted to the tuberculin test, and kept by themselves until the disease has been eliminated from the premises by the death or removal of the affected parent-stock. Any animals added to the healthy herd would, of course, have to be tested on purchase, and retested after three months' careful isolation. I am free to admit that this plan is open to many of the objections which I myself have advanced against the other two already mentioned, but it appears to me to obviate the enormous economic waste and the tremendous popular opposition involved in the policy of compulsory slaughter, while it promises, if systematically applied, and patiently and carefully

carried out, infinitely better results than can be hoped for from that of promiscuously testing the herds of only such owners as are willing to submit them to the action of the authorities. The presence of one or more actual clinical cases of tuberculosis in any herd would constitute a perfectly defensible and reasonable ground for official action; and by making notification by owners or veterinarians compulsory, as in other scheduled diseases, reliable information on which such action could be taken, would in most instances be forthcoming.

As has been well said by the editor of the Lancet, in commenting on the recent able paper of Dr. Overland, of Norway, the famous address of Dr. Koch, in 1901, has, after all, by stimulating others to investigation and research, been productive of good, perhaps to an extent sufficient to offset the hesitation and delay in actual practical effort which it undoubtedly caused.

As a result of that address, we veterinarians to-day know, or, perhaps I should say, have the proofs, conclusive and satisfactory, of many things which we knew before, but were scarcely able to prove, regarding the transmissibility to man of bovine tuberculosis, and vice versa.

**BOVO-VACCINE**

And this brings me to vaccination, a subject on which I have nothing to say, beyond that, up to the present, the published results of inoculation with bovo-vaccine are, from a practical viewpoint, singularly confusing, inconclusive, and discouraging. The immunity acquired under the most favorable conditions appears to be of short duration, and any advantage which may be gained is, to my thinking, more than offset by the danger of spreading the disease.

Where cultures of the human type are used, the risks appear to be, if possible, even more serious. Weber and Tirze, working under the direction of the German Imperial Health Office, report, according to Theobald Smith, that the udder of a cow vaccinated with a human culture shed human bacilli into the milk for a period of fifteen months.

Let us make haste slowly in work of this kind, and be sure of our ground before we issue any more of these definite pronouncements which make nasty swallowing later on.

I have now briefly and inadequately placed before this Congress my views regarding the various methods recommended by scientists for the control of bovine tuberculosis. While these views may to some appear pessimistic, they are at least honest, and have been carefully considered, with due regard to the responsibility which the veterinary sanitarian entrusted with large interests owes to humanity at large, as well as to those interests. Dogmatize as we may, we are still groping, and in this, as in other matters of a like nature, those who have delved the deepest are the least sure of their ground.

In the meantime, while we are waiting, as I fear we will for some time yet have to wait, the discovery of a certain and satisfactory scientific method of dealing with bovine tuberculosis, let us, as practical men, carry on an energetic campaign of education among cattle-owners and the general public. Bovine tuberculosis will be stamped out when individual owners realize that it pays much better to keep sound cattle than to lose money and feed in maintaining herds tainted with disease.

**IMPORTANCE OF STABLE VENTILATION**

In this campaign of education there should first be taken up a question in regard to which veterinarians have hitherto, in most cases, been culpably negligent. If there is one matter to-day in which veterinarians are behind the age, it is that of failing to insist, at all times, in season and out of season, on the importance to live stock of thorough and effective stable ventilation. Having before us the object-lesson afforded by the medical profession, and the marvellous results which its members are

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achieving by open-air treatment, not only helping, but actually curing advanced cases of tuberculosis, to say nothing of checking the disease, as is now daily done in its early stages, it is nothing short of disgraceful that we are yearly permitting thousands of valuable animals to become infected, owing to the insanitary conditions under which their owners insist on keeping them. Of the truth of this contention, which is, perhaps, at first sight, rather sweeping, there is no lack of proof. In northern countries, where cattle are generally closely housed, and where a proper system of ventilation is the exception, and not the rule, we almost invariably find bovine tuberculosis rampant. In milder climates, where animals have free access to fresh air, as, for instance, among the Hereford cattle in England, it is a rare thing to find a case that disease. On the ranges, tuberculosis is unknown, except where it has been introduced by some pampered, stable-bred individual, and even such an one is more likely to recover than to die, provided the malady is not too far advanced and the first winter can be endured. To put the case plainly, stockmen are BREEDING TUBERCULOSIS a great deal faster through neglect of this important subject of ventilation than it


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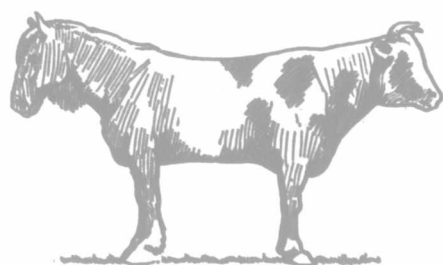
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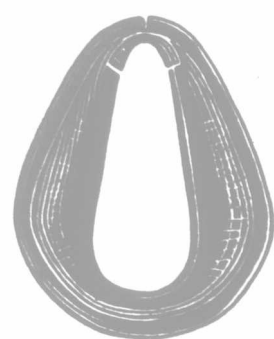
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would ever be possible to stamp it out by the promiscuous use of tuberculin and the slaughter of diseased animals.

**OPEN-AIR TREATMENT OF A TUBERCULOUS HERD**

I may be pardoned if, while on this subject, I refer briefly to an experiment which I have been carrying on for the last three years. A herd of forty-three (43) cattle, twenty-one (21) being dairy cows, twenty-eight of which had reacted to tuberculin, the remaining fifteen being apparently free from disease, has been kept under open-air conditions since the fall of 1905. The objects of this experiment, which is of a purely practical nature, are threefold: firstly, to ascertain the effect of open-air treatment upon the diseased cattle themselves; secondly, to ascertain to what extent healthy cattle, kept in contact with diseased cattle, under open-air conditions, are subject to infection; thirdly, to ascertain what percentage of healthy calves it is possible to rear from diseased cows, kept without any precautions under open-air conditions. The experiment is not yet concluded, nor have its results been properly tabulated for publication. I may say, however, that of the 28 reactors, only one has broken down from generalized tuberculosis during the three years which have elapsed since the experiment began. One other has been killed, owing to tuberculosis of the udder. Of the healthy animals kept in contact with them, feeding from the same racks, grazing over the same ground, drinking from the same pool, not a single one has become affected, and this in spite of the fact that from time to time animals suffering from acute, generalized tuberculosis have been introduced to the herd, and allowed to mix freely with its original members.

The results in the rearing of healthy calves, however, remind one somewhat of the Irishman's pigs, which, you will recollect, when killed, did not weigh as much as he expected, and he never thought they would.

Of the calves dropped and reared by reacting cows, seventy-five per cent. have so far entirely failed to react, while twenty-five per cent. have reacted, at various ages, ranging from four months to one year. One calf died at six weeks old from generalized tuberculosis, this case being probably congenital.

The results of the various tests of the original reactors, made at intervals of about six months, and in the last case after a lapse of twelve months, are exceedingly interesting, and will, when published, together with the post-mortem notes, merit the careful perusal of those who believe in the absolute reliability of tuberculin as a diagnostic agent.

I might add that the cattle have had no shelter but open sheds, and have, with the exception of a few of the weaker individuals, been fed nothing but hay for the three winters during which they have been under observation.

It should be mentioned that, through an error in judgment on the part of an over-zealous herdsman during the first winter, our calves began to arrive in December of 1906, the first being dropped when the thermometer was 29 below zero, the others following at intervals, sometimes very short, until the middle of March, 1907, and that, in spite of this, both dams and progeny thrive well in the open air.

The results are very interesting, in view of the present tendency to consider the digestive tract the most frequent and certain channel of infection. While the experiment above outlined assists in proving that young animals can be and are most frequently infected through the digestive system, it also, to my mind, shows that, in the case of adults, infection through the air passages plays an important part.

I feel satisfied, and I think all practical men will agree, that had the healthy cattle in this experiment been kept under ordinary stable conditions with their diseased compan-

ions, they would not have escaped as they have done.

**GET CLOSER TO NATURE**

The highest medical authorities are nowadays advising—and with the very best possible results—our modern hot-house humanity to get "closer to nature" in every possible way. The advantages of adopting a similar policy in the handling and housing of domestic animals are too apparent to admit of discussion. Nature has furnished our animal friends with every conceivable requisite for protection against ordinary climatic conditions, and most of the diseases and disabilities to which they are subject have been caused by and owe their continuance to the irrational artificial conditions imposed upon them by well-meaning but ignorant, or, rather, unthinking owners and attendants.

I am here, however, to learn, and not to teach. The problem of the control of bovine tuberculosis is undoubtedly the most serious confronting the veterinary sanitarian of today, and if the labors of this section of the International Congress result in its solution, I, for one, will be forever grateful.

**THE INTERNATIONAL TUBERCULOSIS CONGRESS**

The World's Congress on Tuberculosis, the most notable gathering of scientists ever held for the discussion of tuberculosis, met at Washington, D. C., during the later half of September. Dr. A. J. Douglas, who was the official representative of the city of Winnipeg at that meeting, furnishes the following report of the proceedings: "In point of numbers the attendance was very large. There was a registered attendance of between five and six thousand, and thirty-three countries were officially represented. Places as far apart as Chili and Sweden, British Columbia and Russia, had exhibits almost side by side. Those taking an active part were drawn from the most adverse quarters of human society, great scientists and country doctors, bacteriologists and judges, labor leaders and rich philanthropists, health officers and dairymen, settlement workers and farmers, architects and hospital superintendents, lawyers and college professors, officers of the army and navy, manufacturers and railroad officials, and a great many more met on a common ground to enlist against a common enemy.

"Perhaps the outstanding feature of this great convention was the earnestness one saw displayed on every hand. Those in attendance went about as if they had come to learn something and intended to take the lesson home to their communities. When it is borne in mind that in the United States, tuberculosis, in various forms, kills 160,000 people per year, in Canada 14,000, and that it is responsible for 11 per cent. of the total death rate, the importance of earnestness and united effort in doing something is made abundantly clear.

"The congress was divided into seven sections, each with a set of officers of its own, and each taking up a different part of the tuberculosis problem. These sections held their meetings simultaneously in separate rooms, and at each papers were read and discussions took place.

"In addition, public lectures and demonstrations were given at night in the large hall by eminent men from various parts of the world. These papers, lectures and discussions presented much of vital importance and considerable that is new. Probably the greatest interest was aroused at the joint session of the sections of state and municipal control, and that of tuberculosis in animals and its relation to man. At this Professor Koch promulgated his latest dictum regarding the transmissibility of tuberculosis from animals to human beings. Professor Koch stated at the congress of 1901 that infection could not be conveyed from animals to man, and that, therefore, the danger from tuberculous meat and milk was practically nil. This year he some-

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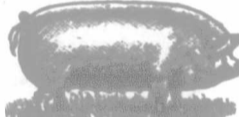




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We are nearly sold out of bulls but have a few females for sale.  
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This prize winning herd is headed by the Imported Champion Bull Allister. Several animals for sale a number of prize winners in the lot. Farm one mile from station. Improved Yorkshire pigs and Banded Plymouth Rocks.  
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**CHOICE GOODS—40741**  
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For immediate sale: The well known bull, Neepawa Chief, winner at Neepawa, Portage la Prairie, Winnipeg and Brandon fairs, guaranteed sure stock getter. Red Jack, a splendid 3 year old; also 3 exceptional yearlings. In Tamworths, everything in the herd. This stock has won firsts and championships wherever shown. A nice bunch of May pigs for quick sale. Write for particulars, **A. W. CASWELL, Neepawa, Man.**

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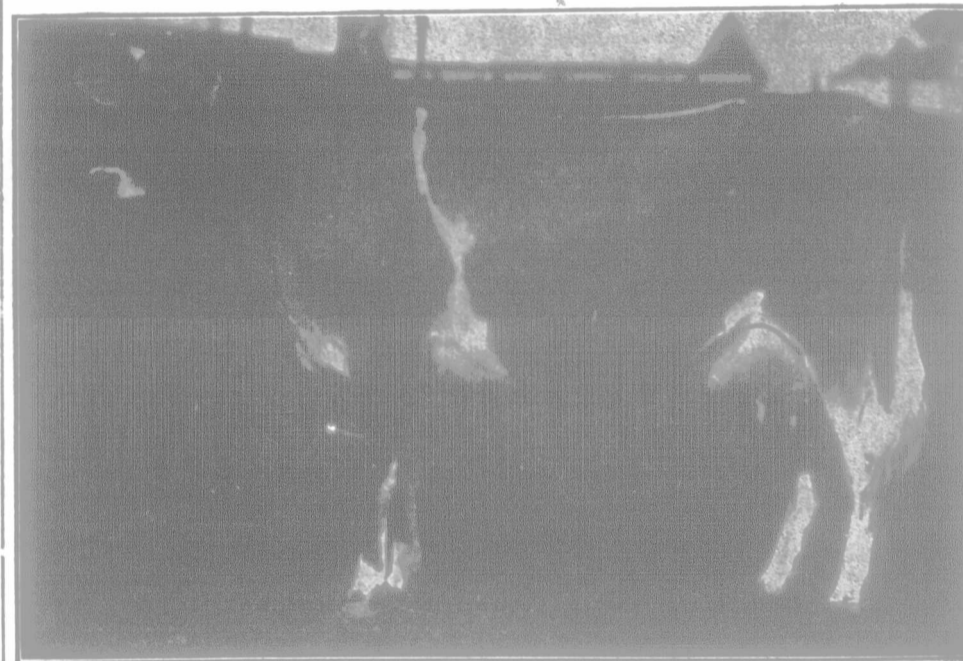
what modified his view, and stated that while bovine and human tuberculosis were different diseases, yet sometimes bovine tuberculosis did attack the human organism, but its results, however, were never serious, the infection being confined practically to the lymphatic glands, and it never caused consumption. This view was vigorously opposed. Almost all the prominent pathologists and bacteriologists present assailed Professor Koch's position and endeavored to show that the bovine type of the bacillus was responsible for a very large proportion of the tuberculosis that affects man.

"After a stormy session the consensus of opinion was that animal tuberculosis is transmissible, and is particularly efficacious in causing glandular, intestinal and joint tuberculosis, and possibly tubercular meningitis, and that steps should be taken to control, as far as possible, the disease in animals.

"A large number of papers were read by representatives from various countries, states and cities, setting forth their conditions regarding tuberculosis, the remedies they are applying, and the results they are obtaining. Particularly striking were the figures from England, Germany, and Denmark, where the anti-tuberculosis propaganda is possibly more advanced than anywhere else in the world, and where the death rate from this affection has been reduced to

of the milk. There was an exhibit of a sanitary spittoon, and the way it should be cleaned and handled. There were remarkable models of tenement blocks in the city of New York—as they were formally allowed to be constructed—dark, ill-ventilated and insanitary; and as the ordinance now requires them—light, airy and sanitary. There was an exhibit of tuberculous meat fresh from the city abattoirs. There was a pathological exhibit showing the various morbid conditions caused in the human and animal organism by the tubercle bacillus. There were compact travelling exhibits which could be set up anywhere in a short time (consisting of pictures, models, etc.) that go about in various states with a view to instructing and educating the public. There was a demonstration several times daily of the Nathan Strauss method of pasteurizing milk. There were models of Indian villages, showing what the United States government is doing to resist consumption among these people. There was an exhibit of the proper method of dusting and sweeping rooms, and of washing dishes.

"To those of us who came from Canada there was one regrettable feature about the exhibition, and that was the lamentable lack of material from our own country, which had but two exhibits—a small one from British Columbia, and an excellent collection of pathological



**SULTANE 24TH**  
Jersey cow, 3 years old. First in class, Royal Show, Newcastle.

one-half of what it was 40 years ago. "Apart from papers and discussions, and more important than either, was a splendid tuberculosis exhibition. This was such that 'he who runs may read,' and was the most inspiring part of the whole gathering. Nearly every country, state and many cities had something tangible to show as to what they are doing. The exhibits took the forms of models and photographs of hospitals, dispensaries, and sanatoria; diagrams, plans, and models made up from vital statistics showing how the tuberculosis death rate could be lowered by concerted effort; copies of by-laws, placards, public lectures, pamphlets and regulations regarding bovine tubercle; reports of what had been accomplished in dispensaries and sanatoria. As an example of dispensary work, two models of the same room were shown side by side. In one, the condition when found occupied by a phthisical patient, no ventilation, filth everywhere, over-crowded, and no precautions taken as to the spread of the disease. In the other, the same room after visiting and renovation—a most striking contrast.

"There was a model dairy shown—the stable built on the most sanitary lines, tubercule tested cows, clean milkers in white duck suits, small-mouthed pails, cows carefully brushed and washed before milking, milk cooled at once by modern methods and bottled, and then a demonstration of the bacterial count

specimens from McGill University, Montreal, Canada, from its showing at this congress, apparently has done but little, and it seems to me that we should commence at once to put our house in order.

"The fight against tuberculosis is conducted in a comparatively simple and eminently common-sense method, and involves effort along the following lines, viz.

"1. The collection and tabulation of statistics relating to tuberculosis through reports of each individual case—without this, one cannot even get an idea of how much tuberculosis actually exists.

"2. The establishment of one or more sanatoria for the treatment of incipient cases, and one or more hospitals for advanced and hopeless cases. The sanatoria are usually built and operated by the state or provincial government. In the case of cities, hospitals for advanced cases are often owned and operated by the cities themselves.

"3. The establishment of dispensaries for the care of cases which cannot or will not avail themselves of sanatorium or hospital treatment, including house visitations and the study of occupational conditions.

"4. The maintenance of laboratories for the free examination of sputum and tuberculous lesions.

"5. The restriction of tuberculosis by the disinfection of rooms and buildings.

"6. The supervision and control of bovine tuberculosis.



"7. The enactment of laws prohibiting the construction of buildings having dark, ill-ventilated rooms either for sleeping or working in, and the remedying of these conditions when found.

"8. The enactment and enforcement of anti-spitting laws.

"9. The provision of ample park accommodation and open spaces in cities and the prevention of overcrowding.

"10. The medical inspection of schools and the education of school children as to tuberculosis and how to avoid it.

"11. The dissemination of information regarding the disease to the public by means of lectures, literature, etc."

**PREVENTING PIG TROUBLES**

There is no class of enquiries which are answered with so little satisfaction to the agricultural press and to its readers as those concerning ailing pigs. It is hard enough to diagnose pig troubles when one has an opportunity to make a personal examination, and doubly hard when such an examination is impossible. Even after the trouble is correctly diagnosed, treatment in the case of pigs is often very unsatisfactory. The truth of the old maxim, "An ounce of prevention is worth a pound of cure," was never better illustrated than in the case of pig diseases. There is no need of arguing the desirability of keeping the pig healthy and thrifty. All readers will agree with us on this point, but singularly enough it is difficult to get them to act upon their own belief. "Take," says *Wallace's Farmer*, "the disease known as partial paralysis, which has become quite common, comparatively speaking, during the last two or three years. We are convinced that if due care were exercised in the matter of feeding the pigs and very common preventive measures taken, this disease would not be at all troublesome, but notwithstanding the frequency with which we have emphasized the importance of preventives during the past two or three years, not one out of ten of our friends who ask for help in this particular matter have made an effort to prevent it. In addition to providing clean, well-ventilated sleeping quarters, and a ration which contains some muscle-making food in addition to the corn, it will pay to feed the Government recipe to all hogs which show any signs of disease. This recipe, which we have published many times before, is as follows:

	Pounds
Wood charcoal.....	1
Sulphur.....	1
Sodium chloride.....	2
Sodium bicarbonate.....	2
Sodium hyposulphite.....	2
Sodium sulphate.....	1
Antimony sulphide (black antimony)	1

"These ingredients should be completely pulverized and thoroughly mixed. The dose of the mixture is a large tablespoonful for each 200 pounds weight of hogs to be treated, and it should be given but once a day.

Our friends should also keep before the hogs a box of wood ashes or charcoal, in which a little salt has been mixed. This ought to be where the hogs can have access to it at all times. If they will adopt these simple precautions and then exercise some care in feeding a balanced ration, the number of complaints of pig diseases of one sort or another will be cut in half within three months."

**NUT GATHERING**

Have you ever gone nutting in a bush large and dense enough that you couldn't see out? Have you got up early on a brisk October morning and scampered back to the woods to make a hurried circuit of the hickory trees ere some "pot-hunting" neighbor had gathered the "rough" of the morning's drop? Have you, returning, hastily deposited a peck or half bushel of nuts in the old chest, against the day when there should be time to hull them, then hustled off to school, cheeks glowing with healthy exercise, and eyes kindled by anticipation of winter evenings, with feasts of nuts and apples before the fire? Have you, some windy Saturday, following a frosty night, spent a day in the bush harvesting a bonanza crop, filling sack after sack in the old

sugar house, which served as a base of operations? Have you trampled bare-foot all day over the fresh-littered, spongy mould of leaves, now through the inky swale, anon digging your toes into the decaying trunk of a falling pine? Has your heart danced to the music of the wind swaying the lofty tree-tops overhead? Have you bounded like a deer when approaching the favorite old hickory tree, which bore the "large, three-cornered" nuts, and dropping to your hands and knees, snatched eagerly at the tempting fruitage which filled the bag so fast? Have you spied the old hawk's nest, away up in the crotch, where the thinning leafage no longer hid it from view? Have you noted with jealous eye the red squirrel helping himself to a crop which, by right of eminent domain, belonged to you, reflecting meanwhile upon the utter uselessness of red squirrels anyway in the economy of man? Have you more complacently observed a big fat black or gray squirrel up in another tree, marking well the spot, and contemplating the tempting pot-pie there would be when father could bring back the double-barrelled breech-loader some evening after school, and try his aim at squirrels? Have you, at dusk, tramped up the long farm lane to the house, and, depositing the heavy load, trudged wearily off to do the evening chores? Have you come in to supper happy but tired, and as hungry as a bear? Have you filled up on fried potatoes, bread and butter, and apple sauce, and pie, and then laid down on the sitting-room lounge, from which you were almost immediately roused and hustled off upstairs? Have you stumbled your way upstairs to "roost", undressed, and tumbled into bed, to dream of forests where all the trees were hickories, and none of the squirrels were red? If you have done these things, you have experienced a sweet touch of nature's enchanting paradise. If not, you have missed one of the supreme joys of juvenile country life.

**Wanted—An Employer—(Continued)**

his verbs as if "going through" was solely a physical exercise on the flying-wedge order, and Junius chuckled.

"Then I'll tell him that father stood almost at the head of his class in high school, and he almost took a lot of honors."

"Well," assented Junius, "that 'almost' is a step farther than a heap of the rest of us got."

"Yes," exulted the boy, "I guess Mr. Florins will say so, too. Then I'll tell him that father taught a lot when he couldn't go through college."

"What next?" inquired Junius. They were approaching Twelfth Street now, and the car was hardly moving in the press of vehicles.

Edward Billings curled his bare toes under, and unconsciously pushed forward with all his slender might. "Then I'll tell him that father used to read a lot, law-books and things, same as he does—"

"But, see here!" interrupted Junius. "All this talk will be about your father. What are you going to say about yourself?"

A cloud overspread Edward Billings's face. He raised a pair of troubled eyes to his questioner. "Why, I never stopped to think of that," he began, slowly, all the brightness fading out of his tone. "There's nothing much to say about me. I sell papers and help father—"

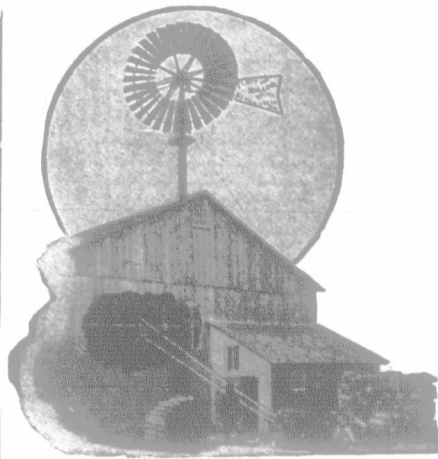
"What does your father do?" asked Junius.

The boy hesitated. His face flushed, and he looked up uncertainly at the goggles. "He used to teach, I told you," was the evasive answer, "until his eyes gave out."

"And now?"

Edward Billings Henry wriggled about on the padded leather. "He's always had bad legs"—the evasion continued—"but his arms and back are strong, and his legs all right to stand on."

"Yes," insisted Junius, and waited. "So he's doing something he ain't going to do if I can get this job. Then I could sell papers after and before office hours, and earn a lot of money." Edward Billings Henry talked rapidly, but the young man beside him was not to be turned from his purpose.



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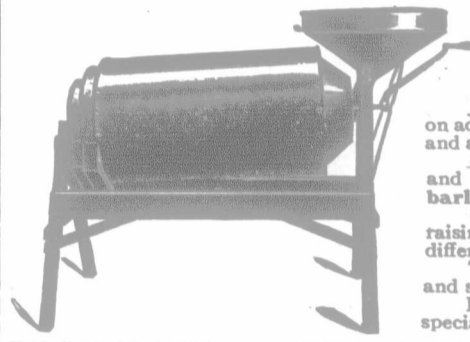
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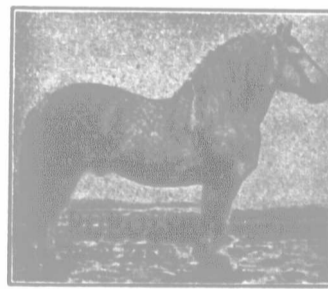
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Stallions and Mares of excellent breeding, of all ages, for sale. Also some choice young bulls fit for service and a number of cows and heifers of noted Scotch strains. Many of them Leading Prize Winners at the big Western Fairs.

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**FOR SALE—REGISTERED PERCHERONS**  
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Your choice of 40 bred from imported stock. One black Stallion, Charleroi, 6 years old, weight 2,050 lbs.; Mares weighing 1,500 lbs. to 1,700 lbs.; Yearlings and two-year-olds of good quality. Correspondence solicited. Photos sent on application. Imported stallion, Robosse, at head of herd. Prices very low for this class of stock. Farm 3 miles from North Portal.

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**STOCKMEN!**

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**Farmer's Advocate                      Winnipeg, Man.**



"Then what is it he's not going to do?"

The boy hesitated again. "Father takes in washing," he finally burst out, proudly defiant, "and I help him, and we do it good, I tell you! No one ever complains. Father says if you can't do what you want to, you can try something else, and that was all he could do, and found out he could wash and iron good, and a lot of it."

Junius considerably looked straight ahead of him, not wishing to add to the embarrassment of Edward Billings Henry, Junior, but he could not resist the temptation to ask, "Are you going to tell this to Mr. Florins?"

"No, sir-ee!" responded the boy, proudly. "Father ain't going to do washings—any longer if I can get the job."

The car entered Congress Square, drew up in front of an imposing stone building, and stopped. The driver removed his goggles and turned a pair of pleasant gray eyes on the boy. "Well, Edward Billings, here we are—and you've got the job all right. Can you come in the morning?"

Edward Billings nearly fell off the seat.

"W-hat?" he stammered.

"The job is yours," smiled the young man. "I happen to be that same Mr. Florins, who, you have assured me, will never regret employing you. My office is on the second floor here. I did advertise for a boy, but had totally forgotten it." He gave a short laugh; business had never oppressed Junius Florins. "Report in the morning, please, and we'll see about a suit and some shoes and that stone-bruised toe."

Out of the automobile Edward Billings Henry tumbled in a dazed condition, and stood beside his new employer, looking up speechlessly.

"I'll advance you a car fare on your salary," the young man continued. He carefully avoided the pocket where lay the nickel previously owned by his passenger, and produced the change. "And, Edward Billings, just tell your father from me that his maxims work out so well that I'm thinking of adopting them myself."

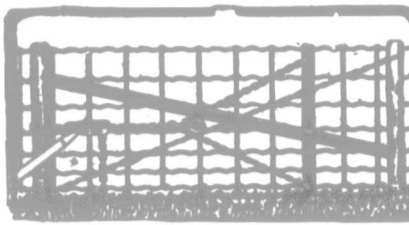
#### FARMING IN ALASKA

There is a chance to make good money in farming in Alaska. Many have an idea that because it is severely cold in winter and the winters are long, that it is impossible for cereals to grow, but such is not the case. As a matter of fact, nature has regulated things so that in the far North latitudes vegetation grows much faster than it does farther South, seemingly realizing that it has to hustle to make up for the short season. Vegetables, and, in fact, all eatables, are high in Alaska, and if some of the prospectors would start a garden they would find gold quicker than by looking in the rocks.

*Suburban Life* says that in the north of Alaska, where the country is frozen solid through most of the months of the year, is said to be a plot of several acres owned and worked by a young miner named Karshner, which yields profusely most of the common garden vegetables known to more temperate climates. Karshner was prospecting for gold through this region last year, and found, instead, a spring of hot water. Investigation showed him that many acres of land here was warmed and irrigated during the entire year by innumerable hot springs. His valley was surrounded by snow and ice, but the soil of the little plot was moist and warm to the touch.

The prospector immediately abandoned his search for raw gold, and decided to become a farmer. He sent southward for tomato, potato, cabbage, squash and other seeds, and sowed his land. In a short time his plants pushed through the earth, and speedily matured. His first crop of fresh vegetables was sold at fabulous prices. A few melons, which he raised as an experiment, were disposed of for a small fortune.

Karshner, next season, proposes to double the yield of his farm. He has also invested in chickens, and sells fresh eggs to the miners of the neighborhood.



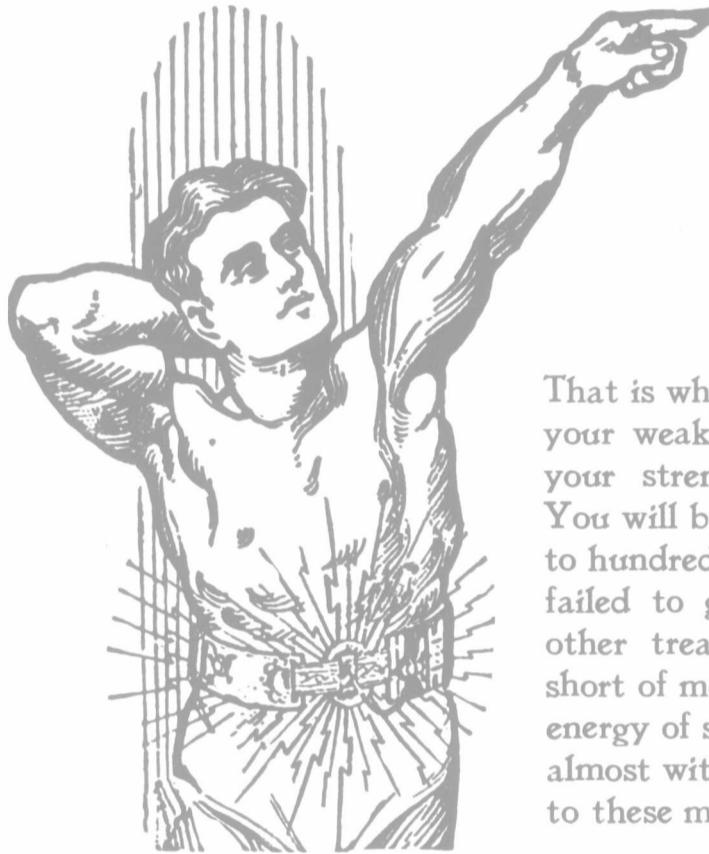
## HOW TO BUILD A GOOD FENCE

Everyone intending fence building should send for our folder on Erecting Fences. It's full of valuable information on fence building, tells how to erect woven wire fencing quickly and substantially, describes the manufacture of fence wire and has an article quoted from bulletin of U. S. Dept. of Agriculture on concrete post making, showing how these durable posts can be economically made at home. Don't fail to write for a copy. It's free.

THE BANWELL HOKIE WIRE FENCE CO., Ltd.  
Dept. M Hamilton, Ontario. Winnipeg, Manitoba.



# WHY AM I WEAK?



That is the question which every weak man puts to himself. If you have thought much of your trouble you know that the force which keeps up the health and strength of your body is nothing more nor less than electricity. All the motive power in your body is born of electricity.

That is what you lack, and that force given to your weak organism as I will give it, will renew your strength. You will be able to enjoy life. You will be strong again. I can point with pride to hundreds of men who came to me after having failed to get the craved results from drugs and other treatments, men broken down, sleepless, short of memory and without the courage and energy of strong people. They have come to me almost without hope, discouraged; and I can point to these men to-day, after their having worn

## Dr. McLaughlin's Electric Belt

happy, enthused and shouting with gladness in the possession of the full vigor of perfect manhood. These men will at any time be glad to tell you what I have done for them.

Dr. McLaughlin:—

Dear Sir:—I purchased one of your Belts in December, 1905, and after using it as you directed, I felt like a new man, and I am pleased to inform you that I am just as well to-day and free from pain as I ever was in my life. I found your Belt much better than was represented, and I have recommended it to many others, and shall always feel a pleasure in doing so. I am more than satisfied with my Belt. I followed your instructions and found it complete. Hoping you will have every success.

TIMOTHY LEADBEATER.

The confidence I have in the wonderful curative powers of my Belt allows me to offer any man or woman who can give me reasonable security, the use of the Belt at my risk, and they can

Dr. McLaughlin:—

Dear Sir:—It is some five years since I wrote you that your Belt had given me perfect satisfaction, and I am still as strong and hearty as any man could expect to be. It is certainly a Godsend that such an appliance should be invented for the cure of the ailments of poor, wrecked humanity. I can now eat anything that is eatable and digest it well; no trouble worries me and my nerves are very strong. I have been singing the praises of your Electric Belt for eight years, and will continue to do so. I cannot say too much for it has made my body a pleasure to own.

W. L. FLEMINGTON, Lumsden, Sask.

## PAY WHEN CURED

This appliance has cures in almost every town and city in the country, and if you will write to me I will send you testimonials, given to me by people that are probably well known to you. My Belt not only cures weakness

DR. M. D. McLAUGHLIN, 112 Yonge St., TORONTO, Can.

Dear Sir,—Please forward me one of your books as advertised.

Name.....

Address.....

Office Hours—9 a.m. to 6 p.m.; Wednesday and Saturday till 9 p.m. Write Plain.

HAVE YOUR

# PRINTING

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FARMER'S ADVOCATE OF WINNIPEG

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 Write for our November Price Lists.  
 We Pay all Express Charges.

**E. T. CARTER & CO.**  
 82 Front St. E., Toronto, Ont.  
 Established 1865

**FURS**

**WIT AND HUMOR**

"I have just read a story of an economical farmer that Mr. Rockefeller, jr., had been telling to his Sunday school class," said Higgins. "He says there is a farmer out near Cleveland who makes a fad of economy. Every time he drives into town he carries a hen with him tied to the seat of his buggy. A friend who rode out with him one day was curious to learn the use of that hen so he watched carefully, and found out. When at noon the farmer lunched under a tree, he gave his mare a feed from the nosebag, and the hen, placed on the ground, ate all the horse had spilled from the bag, so that there was no waste at all."

"Good story," said Wiggins, "and true, too. I know that old farmer. Mr. Rockefeller didn't say where he got his lunch, did he?"

"No," said Higgins. "The story stops there."

"It was an egg the hen laid under the buggy-seat on the way out," said Wiggins.

The major was laying down the law on whist. He always did, and went to the man who ventured to differ with him!

"I tell you," he said, glaring defiantly round, as if daring anyone to contradict him, "I once, and once only, had all thirteen trumps dealt to me!"

"You, I suppose, were—er—the dealer?" a meek-looking man put in.

The major turned purple.

"No sir," he roared, "no, sir! Confound your impudence, I was not the dealer!"

**NEWFOUNDLAND PAYS TRIBUTE**

To the Grand Work Dodd's Kidney Pills are Doing.

Fishermen Regard Them as a Boon to Mankind — Mr. Frank Banfield Tells How They Cured His Backache.

GARNISH, FORTUNE BAY, N.F.L.D., Nov. 9 (Special)—Among the fishermen here, who, through exposure to wet and cold, are subject to those pains and aches which come from diseased Kidneys, Dodd's Kidney Pills are looked upon as a positive boon to mankind. They are never tired of telling how their Backaches and their Rheumatism vanish before the great Kidney remedy.

Among many others, Mr. Frank Banfield, after years of suffering, has found relief in Dodd's Kidney Pills, and here is what he is telling his friends:—

"I find Dodd's Kidney Pills the best medicine for Backache I have ever used. I only used two boxes and they cured me of Backache I had had for five years. It started through a strain. My father's back also bothered him, and he got some relief from one pill I gave him. They were too precious to give him more. All persons suffering from Backache should use Dodd's Kidney Pills."

"How do Dodd's Kidney Pills cure Backache? Simply because Backache is caused by Rheumatism, and Dodd's Kidney Pills cure all Kidney aches and Rheumatism. This has been proved in thousands of cases in Canada. If you haven't cured yourself ask your neighbors.

"Then may I ask," the meek young man asked calmly, "what happened to be the trump card the dealer turned up?"

By the time the major had recovered from an apopleptic fit the meek young man had left the room.

\*\*\*

You ask why I weep and moan, like some lost spirit in despair, and why I wander off alone, and paw the ground and tear my hair? You ask me why I pack this gun, all loaded up, prepared to shoot? Alas! my troubles have begun—the women folk are canning fruit! There is no place for me to eat, unless I eat upon the floor; and peelings get beneath my feet, and make me fall a block or more; the odors from the boiling jam, all day assail my weary snout; you find me, then the wreck I am—the women folk are canning fruit! O, they have peaches on the chairs, and moldy apples on the floor, and wormy plums upon the stairs, and piles of pears outside the door; and they are boiling pulp and juice, and you may hear them yell and hoot; a man's existence is the deuce—the women folk are canning fruit!

A lecturer was touring through the country recently, and delivered an address before an audience in a country schoolhouse.

In the course of his remarks he reviewed the agricultural prospects of the country, and as an illustration told a story of a poor farmer who had died, leaving to his wife the farm heavily mortgaged. He said that the widow set to work with a will and succeeded upon one year's wheat crop in paying off the entire mortgage.

When he had completed his lecture, the gentleman shook hands and greeted the members of his audience. One middle-aged man finally approached him thoughtfully, and began:—

"I say, mister, you told a story 'bout the widow raising a mortgage on one year's crop?"

"Yes, my friend, that was a true story. It happened only two years ago."

"Well, sir, could you tell me who that widow is? She's just the kind of woman I've been looking for all the time"

A tramp passing through the waiting-room of the North Western depot at Milwaukee spied a small enamelled pin lying on the floor. He picked it up, looked it over in a careless way, and pinned it on the lapel of his coat. The same tramp, a few moments later, was hit and knocked into unconsciousness by a switch engine in the freight yards, just outside the depot. The trainmen picked him up and telephoned to police headquarters for an ambulance.

"What did you say his name was?" came over the telephone from the desk sergeant.

"Don't know. The man is unconscious," replied the switchman.

"Any papers on him by which you can identify him?" asked the sergeant.

"Not a thing," phoned back the switchman.

"Does he belong to any lodge or union?" inquired the sergeant.

"Hold the line till I take a look," replied the switchman, and in a moment the desk sergeant was greatly surprised to receive this information:—

"Yes; he is a Lady Macabean."

A large German woman held up a long line of people at the money order window in the Boston post office the other day, and all because her memory went back on her. She wanted to send some money to her son, a sailor on a men-hunt steamer then in foreign waters, but when she presented the application

at the window the clerk noticed that the address was lacking.

"Well, where do you want to send it?" he asked. "We can't give you the money order unless you know the name of the place."

"Yah, dot's de trouble," she replied. "I didn't pring his letter und I can't remember der name of der town, but it's some place out by China, dot sounds like der noise an automobile makes."

The two clerks looked at each other dubiously.

"What kind of a noise does an automobile make?" asked one.

"Honk, honk," suggested the other.

"Yah, dot's it!" exclaimed the woman. "Honk, honk, dot's de place."

"Fill it in Hongkong," said the clerk, and she paid over her money with a sigh of relief.

Professor Phelps used to tell with glee of the way he achieved a reputation for knowing a thing he hated. He took a walk with Professor Newton, who lived in the world of mathematics, and started off at once to discuss an abstruse problem. Mr. Phelps' mind could not follow, and wandered to other things. At last he was called back, when the professor wound up with, "Which you see gives us X." "Does it?" asked Mr. Phelps, politely. "Why, doesn't it?" exclaimed the professor, excitedly, alarmed at the possibility of a flaw in his calculations. Quickly his mind ran back and detected a mistake. "You are right, Mr. Phelps. You are right!" shouted the professor. "It doesn't give us X; it gives us Y." And from that time Professor Phelps was looked upon as a mathematical prodigy, the first man who ever tripped the professor.—*Christian Register.*

It is told that Cyrus Leland, while pushing his candidature for the Republican gubernatorial nomination, wrote a letter to a Kansas farmer asking him for his support at the primary.

"Answer this letter, daughter," said the farmer to his fifteen-year-old girl, of whose penmanship he was proud, when the letter reached him. "Tell Uncle Cy, that I am too busy in the field to do anything for him. Tell him I'm working early and late to get in my crops."

The girl waited until her father had gone back to his fields, and then penned this short note, which she thought told the story: "Papa has all he can do to support himself without supporting anybody else." She mailed it.—*Kansas City Journal.*

**BRONCHITIS**

Bronchitis is generally the result of a cold caused by exposure to wet and inclement weather, and is a very dangerous inflammatory affection of the bronchial tubes.

The Symptoms are tightness across the chest, sharp pains and a difficulty in breathing, and a secretion of thick phlegm, at first white, but later of a greenish or yellowish color. Neglected Bronchitis is one of the most general causes of Consumption.

Cure it at once by the use of

**Dr. Wood's Norway Pine SYRUP**

Mrs. D. D. Miller, Allandale, Ont., writes: "My husband got a bottle of Dr. Wood's Norway Pine Syrup for my little girl who had Bronchitis. She wheezed so badly you could hear her from one room to the other, but it was not long until we could see the effect your medicine had on her. That was last winter when we lived in Toronto.

"She had a bad cold this winter, but instead of getting another bottle of Dr. Wood's Norway Pine Syrup, I tried a home made receipt which I got from a neighbor but found that her cold lasted about twice as long. My husband highly praises 'Dr. Wood's,' and says he will see that a bottle of it is always kept in the house."

The price of Dr. Wood's Norway Pine Syrup is 25 cents per bottle. It is put up in a yellow wrapper, three pine trees the trade mark, so, be sure and accept none of the many substitutes of the original "Norway Pine Syrup."

**RHEUMATISM.**

The Best and Safest Cure for GOUT, RHEUMATISM, SCIATICA, LUMBAGO, is **BLAIR'S GOUT & RHEUMATIC PILLS**

All Druggists at 40c. and \$1.00 per box.

Try us with an Advertisement

**DRS. KENNEDY & KENNEDY**  
 SUCCESSORS TO  
**DRS. Kennedy & Kergan**

**SPECIAL NOTICE.**  
 Owing to Dr. Kergan being deceased, Dr. J. D. Kennedy, Medical Director, has associated with him Dr. Kennedy Jr., who has been with the firm for several years, so hereafter business will be conducted under the name of **DRS. KENNEDY & KENNEDY**

**NERVOUS DEBILITY**  
 Thousands of young and middle aged men are annually swept to a premature grave through EARLY INDISCRETIONS, EXCESSES AND BLOOD DISEASES. If you have any of the following symptoms consult us before it is too late. Are you nervous and weak, despondent and gloomy, specks before the eyes, with dark circles under them, weak back, kidneys irritable, palpitation of the heart, bashful, dreams and losses, sediment in urine, pimples on the face, eyes sunken, hollow cheeks careworn expression, poor memory, lifeless, distrustful, lack energy and strength, tired mornings, restless nights, changeable moods, weak manhood, premature decay, bone pains, hair loose, sore throat etc.

**BLOOD POISONS** Blood Poisons are the most prevalent and most serious diseases. They sap the very life blood of the victim, and unless entirely eradicated from the system may affect the future generation. Beware of Mercury. It only suppresses the symptoms—OUR NEW METHOD cures them.

**OUR NEW METHOD TREATMENT** alone can cure you, and make a man of you. Under its influence the brain becomes active, the blood purified so that all pimples, blotches, and ulcers disappear, the nerves become strong as steel, so that nervousness, bashfulness and despondency vanish, the eye becomes bright, the face full and clear, energy returns to the body, and the moral, physical, and vital systems are invigorated; all drains cease—no more vital waste from the system. Don't let quacks and fakirs rob you of your hard earned dollars. **We will cure you or no pay.**

**READER** No matter who has treated you, write for an honest opinion Free of Charge. **BOOKS FREE**—"The Golden Monitor" (illustrated)  
 Question List for Home Treatment Sent on Request.

**DRS. KENNEDY & KENNEDY**  
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If you farm for profit, you need one of my scales.



MANSON CAMPBELL

I will make the price right and the terms easy.

ONLY my scales are sold direct from the one Canadian maker who has made good with the Canadian farmer on a straight business basis.

You can't farm right without a scale; and you can't find a scale that is equal to those I make. Manson Campbell, President

## EVERY Chatham Pitless Scale is sold with a Government Inspection Certificate that warrants its accuracy.

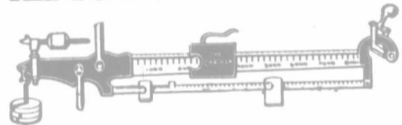
There is no extra charge for this warranty, signed by a resident Government Inspector, who tests every scale we make before it leaves the factory.

### This Scale is COMPLETE Can't Get Out of Order

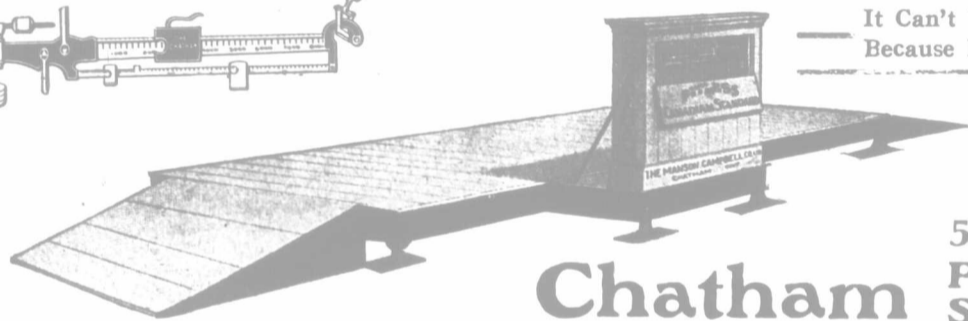
Any other scale comes to you as a few parts with a huge blue print, showing how you can build the rest of it; and you have to build it, too, before you do any weighing. This Chatham Pitless Scale is absolutely complete, built of heavy steel, staunchly bolted together, easily erected ready for use in a few hours. Read Mr. MacLean's letter below. It stands solidly on its broad steel feet, clear above ground, needing no fixed foundation. Move it readily anywhere. You cannot do that with a pit scale.

No check rods, no frail parts to get out of order. Compound beam, finely finished, fully tested, shows full tare on lower section—easily read, no chance of error. Poise on top beam runs on roller bearings; notches lock the beam by a touch at each 200 lbs. Odd weights shown by small poise on lower beam. Weighs with absolute, warranted accuracy up to FIVE FULL TONS—ten thousand pounds. Nothing about it to go wrong—built so well, tested so carefully.

#### THE FULL CAPACITY COMPOUND BEAM



It Can't Wear Out Because It's Steel



5-Ton Pitless Scale  
**Chatham**

### Mr. W. F. MacLean, M. P. for East York, Says This About The Scale :

DONLANDS FARM, ONT., July 2nd, 1908.  
"Some days ago the Chatham 5-Ton Pitless Scale ordered from you came to hand. The farm foreman and another man went to work at it in the morning, and in the afternoon they had it all set up and were weighing on it before supper. The directions were so explicit, and the parts so simple that they had no trouble in putting the scale together and verifying the weighing capacity. As well as being useful for weighing hay and straw and things of that kind, it is very useful for weighing cattle and other livestock. One good way of selling horses is to be able to give their exact weight; and the way to get most for cattle and hogs is to know their weight before leaving the farm. Your scales are admirably adapted for every kind of work on the farm."  
W. F. MACLEAN.

### Big Enough For Any Scale Use. Your Farm Needs Such a Scale.

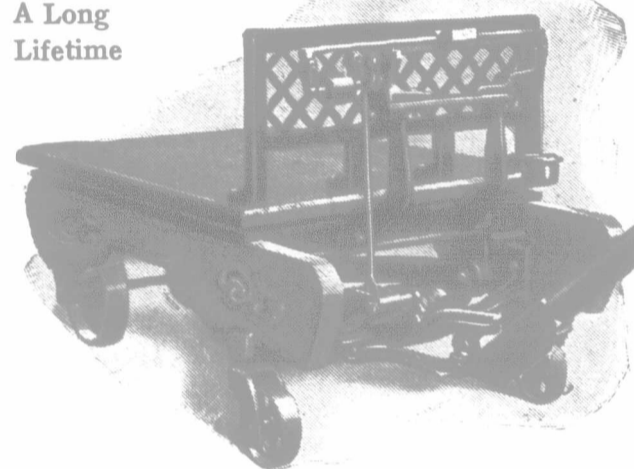
The Chatham's Platform is 8 x 14 feet—ample room for big load of hay, six fat steers, twelve hogs, etc. Platform can't sag, won't wobble, won't get sprung. Whole outfit built so it will last a lifetime and be good every minute. Sold for a fair price, on easy terms, and fully warranted in every way.

You ought to weigh all you buy, all you sell; ought to weigh your stock regularly; ought to keep track of your farm's yield—be a BUSINESS farmer. This scale makes it easy to do all this, and thus save its cost to you over and over—because you can't cheat yourself, nor can you be cheated with this on your farm.

## The Scale Every Farm Needs

Weights Up To 2000 Lbs. Accurately.

Will Last  
A Long  
Lifetime



### Chatham Portable Barn Scale

is the handiest truck scale built—compact, easily moved, readily turned short (front wheels and pole are swivelled.) Certified by attached Government Inspection Certificate to be absolutely accurate and well-made. Will weigh up to 2,000 lbs. with positive certainty. Warranted in every way. Priced low enough to suit you. Terms to suit you, too, if you wish credit.

#### THE SAFEST SCALE TO BUY

No other scale is so fully worth your money. The Chatham levers are solid casting, extra staunch, can't spring a bit, strong enough to carry TWO tons. Main frame all one-piece solid casting. Bearings self-aligning, whole pivot rests on bearing loop—so scale must weigh right even if not standing level. Chatham drop-lever principle spares weighing parts the jar of loads, thus bearings stay sharp fifty years or more. Send for description, prices, etc.

You Can Afford This Scale



The CHATHAM Portable Platform Scale

Very handy on any farm, specially so on dairy farm. Weighs accurately to 1,000 lbs. Has Double Brass Beam—no extra charge for this. Strongly built, finely finished. Government inspection warrant attached to each scale. Freight prepaid.

Lowest Priced 1,000 Lb. Scale in the World

Address Warehouse Nearest You For Booklet, Price, Terms, Etc.

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CALGARY