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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

PUBLISHED AT LONDON, ONTARIO. JULY 13, 1905. WINNIPEG, MANITOBA. No. 668

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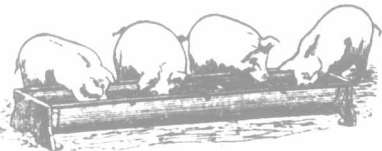
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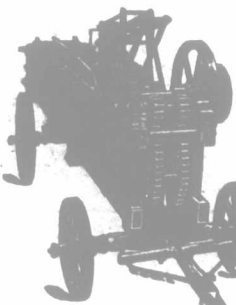
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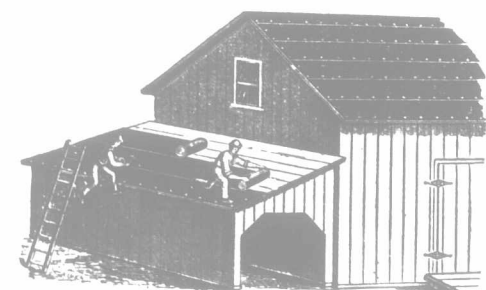
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The
Farmer's Advocate
and Home Magazine.

"PERSEVERE AND SUCCEED"

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No. 668

EDITORIAL.

The Scheme of a New Farmer King.

Some time ago the "Farmer's Advocate" called attention to the fact that the King of Italy had on hand a big co-operative agricultural scheme, in connection with which a conference was to be held during the early part of the summer. The conference has come and gone. One hundred and nineteen delegates, from 38 different states in all parts of the world, were present at it, and though few of its deliberations have as yet been made public, enough has been divulged to intimate that the meeting has been a success, and the King's plan one which is likely to command a great deal of attention in the early future.

So far as known, the most important resolution passed provides for the establishment of an International Institute of Agriculture, to be established permanently at Rome, for the commercial and agricultural benefit of all the nations which choose to enter it. The Institute will be chiefly made up of a staff and committee, composed of representatives from all the countries and colonies of the world, and its duty will be to collect and publish all kinds of statistics and information in regard to agriculture—production, prices, insurance, wages, diseases of plants and animals and the best methods of combating them, etc. It will also strive to promote mutually helpful co-operative schemes of various kinds, and will suggest to the different governments means for improving agricultural conditions in their respective countries. In addition, there will be an International Assembly, which will meet once in every three or four years. The annual sum required to maintain the Institute has been calculated at \$170,000, but of this amount the King of Italy has offered to provide \$60,000 from his private revenue, and ratification of the resolutions by the various Governments by whom delegates were sent is now all that is necessary to secure the first donation and bring about the establishment of the Institute.

The whole scheme is decidedly novel, and is intensely significant of the tremendous importance which agriculture is assuming in the economics of the world. King Edward has often been referred to as the Farmer King. Victor Emmanuel is establishing his claim to a similar title. It may be surmised, however, that the man who takes such an interest in the crops and Thoroughbreds at Sandringham will be quick to endorse the plan projected by the Italian Sovereign, and that he will be by no means a silent partner to the contract.

"Back to the land!" It is the old call over again. Having gone just as far as possible from the pastoral life with its idyllic simplicity, the reaction has set in, and the whole world—from King to shopman—is turning little by little to the benediction of old Mother Earth. It is not altogether with a purpose, but as an unconscious result, that the cry for a "Simple Life" has arisen, and with it all comes the glorification of the farmer. He has seen his period of depreciation; his time of appreciation is already here.

Whether the King of Italy's scheme will meet with all the success that is hoped for it or not, remains to be proved, but at all events the effort will have redounded much to the honor of the King. In the light of twentieth century ideals he cannot but stand as a revelation of benevolence, dignity and common sense, and his International Agricultural Institute is much more likely to im-

press the nations of the world than the "Big Pistol" parade of the warships which the German Emperor is sending forth on a voyage of triumph this coming fall.

The Great Meat Trust.

Those who have been following the exposition of the big American trusts, which has become such a popular feature of late in some of the leading American magazines, are likely to come upon the assertion occasionally that it is the "system" that is wrong, and that those who stand with their hands upon the wires by which the markets under Trust control are manipulated are, on the whole, a rather good sort of fellows—men who are "models of business integrity," having and adhering to "their own standard of rectitude"; men generous to a fault, and zealous of good works in relieving such cases of distress as come beneath their ken.

Now, to a degree this may be all true. Court-teous, agreeable gentlemen these magnates are likely to be; good Samaritans on occasion—to a certain extent. But to place all the blame upon the system, to the practical exoneration of those who benefit by it, and who have, in fact, created it, is to trade upon the assumption that those who read such assertions are—to use a slang expression—decidedly "easy." Most certainly the system is wrong; but what has made it so? Systems do not generate of themselves; neither do they grow without direction, and it is rather straining an issue to assert that the man who invents or countenances or grows rich by an evil system is any better than the system by which he trafficks. So long as the evil in great business transactions is attributed to "system," absolute cleanness can scarcely be looked for in lesser ones. There is always the weak man, contemptible though he be, who will find salve for his own misdeeds in contemplating those of the "great."

The name "Rockefeller" carries with it the idea of king of the Trust magnates, the incarnation of the Trust evil in its most virulent form. True, Rockefeller has made his \$900,000,000 out of "Standard Oil," but while Thos. W. Lawson and Ida M. Tarbell have been uncovering the many sins of the Standard Oil, another investigator, Mr. Charles Edward Russell, has come forward with an exposition, outlined elsewhere in this issue, more startling still. In the U. S. West he finds a Trust, previously known to our readers as the "Big Four," beside which, in comprehensiveness of its designs, Standard Oil fades into insignificance, and the big steel corporation dwindles. Not content with the ownership of steam and electric railroads, entire trolley services, factories, shops, mills, lands and land companies, plants and warehouses, ad infinitum, this great combination has laid hands upon the very food supply of the American people. To-day it controls, not only the price of live animals, but the price of every pound of beef, mutton or pork sold in the United States, and also, to an enormous extent, that of all fruits, fertilizers, canned goods, soaps and dairy products, and is still reaching out for more influence. Already, within certain limits, its grip is upon the wheat, corn and oat trade of the Republic, and when it has accomplished its full purpose, it will have at its pleasure the price of practically every morsel that goes into the mouth of every man, woman and child in the United States. Should no checkmaking power intervene, the little knot of men at the head of this vast machine will then see within their grasp the realization of visions

of untold wealth, and the power of boundless extortion. But, of course, there is always the chance of the "slip." For reasons not more urgent there have occurred before this seasons of "a reign of terror." Though America may stop short of the horrors of a revolutionary war, there may be, underneath the present surface of submission, latent forces which may yet burst forth, to the consternation of the trust and all in connection with it.

To the uninitiated this policy of waiting seems an incomprehensible one. "Why doesn't the Government put a stop to it at once?" one says. "This is a free country, then why does the Government stand still and let such a thing exist? What is the law for?" Nevertheless, tramping upon legislators, politicians and congressmen at will; terrorizing great railway companies and forcing them to hand over millions of dollars on demand, the Trust, like a mighty Juggernaut, goes on, and if the people dragging it against their will go under, or are crushed beneath the relentless wheels, what matter? There are others who must take up the burden, and the jewels hang all the more thickly on the nose of the idol. It goes against the grain of a democratic American citizen of the 20th century to confess that, in the face of such an evil, the Government is either helpless or else is a fellow-conspirator against the common people. But the people are being awakened. Public sentiment, aroused by the press, is crystallizing. A Federal investigation has been in progress. Enough evidence has been unearthed to warrant the issue a few days ago at Chicago of indictments against seventeen men and five big companies for conspiracy in restraining trade, constituting a violation of the Sherman Anti-Trust Act.

Popularity of the Horse.

Any apprehensions of danger of the horse being displaced as a means of transportation by the artificial motor on the common roads of the country and in cities and towns, is easily dissipated from the mind of the man who attends a first-class horse show, or witnesses an open-air horse parade, such as that seen in the City of Toronto on Dominion Day, where, notwithstanding that a large proportion of the people take advantage of the holiday excursion rates to leave the city, probably a larger crowd assembles in Queen's Park to see the horse show than is attracted by any other event of the year, with the possible exception of the National Exhibition in the same city in the early days of September—an exhibition in which horses are one of the most attractive features, if not the most attractive, to the greatest number of people. The pleasure excited by seeing or handling an artificial contrivance sinks into mediocrity compared to that inspired by the graceful movements and intelligent co-operation of an animal instinct with animation, ambition and courage, while equally amenable to the will and wish of the driver as any machine yet invented. And the beauty of it is that a horse can go where a machine dare not venture, and that he improves in value and usefulness with his years up to a certain or uncertain point, while the machine deteriorates in every respect from the start, and finds an early end in the scrap heap.

The love and pleasure inspired in his owner and others by a well-mannered horse stands in striking contrast with the feeling for an automobile and the average operator of such machines as seen on the country roads—the one admired for himself and his manners, the other hated

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
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JOHN WELD, MANAGER.

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gardeners, and stockmen, of any publication in Canada.

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and dreaded by those who drive horses and pay for maintaining the roads, and regarded with contempt by pedestrians as they pass by, the drivers apparently indifferent to or regardless of the rights of others, rights which the driver of horses seldom fails to respect. The latter, if not loaded, will generally give a lift to a weary walker on the road, but who ever heard of an automobilist stopping to take up a way-worn traveler?

The horse—the most faithful and one of the most useful of the servants of man—will continue to hold his place of precedence in his regard, and will be in demand as long as grass grows and water runs, and is bound to improve and grow in favor as more intelligent attention is paid to his breeding, care and education. The horse show and street parade have had and will continue to have an excellent influence in keeping in view the most desirable and profitable types, and will inspire a proper pride in owners and grooms in the care and keeping of their charges, and lovers of the equine race in every city and town may, with advantage, copy the example of Toronto, by organizing a Horse Parade Association for an exhibition at least once a year.

Farmers' Postal Interests Grossly Neglected.

To the Editor "Farmer's Advocate":

Sir,—The editorials and letters which appear in these columns from time to time in reference to the postal service in rural districts, are very interesting. The letter of Mr. C. J. Hine, of Elgin Co., in the issue of June 8th, is right to the point, and in the true spirit of citizenship turns the flashlight of public criticism upon an administration which, in postal matters, toadies to the wealthy town and city dwellers, but deprives the residents of the rural districts of a fair and equitable system of mail delivery, and uses the money thus saved to gain the goodwill of wealthy corporations, and to provide in Government positions fat salaries for party devotees.

In the township of Edwardsburg there are eight school sections in a block in which there is not one solitary post office. Within this area there is a resident population of upwards of one hundred and fifty, four churches, four cheese factories, good schools, and farm property in value amounting to about one million dollars.

ries, good schools, and farm property in value amounting to about one million dollars.

In school section No. 8, Edwardsburg, in which I reside, there are two churches, a cheese factory and a society hall, but most of the residents have to drive from six to eight miles to reach a convenient and efficient post office. About five years ago the Postmaster-General was petitioned to establish a post office at the residence of Mr. Wm. Gare, a place convenient to churches, cheese factory and school, and he was also petitioned to establish a circuitous mail route by which the existing offices in the north and east part of the township and the proposed office could be given a daily mail for little more than was spent on the miserable service given the existing offices over four different routes. But the effort to obtain for the farmers a more efficient and economic postal service was not appreciated by that member of the "King's Privy Council for Canada," and he has been indifferent to our needs and heedless of our requests ever since.

There appeared, also, in the issue of June 8th, a letter from the pen of Mr. H. H. Miller, of the House of Commons, giving expression to some views which may be considered sound, and to some which we would not expect to emanate from such a source. I take exception particularly to the statement, "For most of the desired improvements the farmers will have to look entirely to the Postmaster-General, who is, I believe, anxious to serve the interests of the farmers as fully as possible, and to make improvement in the service as quickly as possible." Now, Mr. Editor, I think that sounds fishy. Surely we will not have to look entirely to the Postmaster-General for the desired improvement, but rather to public opinion. Our system of Government is not autocratic or bureaucratic, but elective and responsible. The people can elect whom they please to serve in our legislative halls and preside over the different departments of the ship of state; and if the farmers will cease to be mendicants looking for favors, and rise to be citizens demanding their rights, their interests will be supreme in the minds of the men who sit to the right of Mr. Speaker, and the lordly occupants of the department buildings, who, perchance, may treat their requests with the "proud man's contumely," will wend their way down the hill to mingle with the crowds on the lower levels.

Grenville Co., Ont. JOHN NEWMAN.

In the Country.

(Editorial correspondence.)

To a denizen of the city, erstwhile a graduate of the farm, even a brief visit in summer to the scene of a half century of farm life is a genuine treat, serving to renew old-time acquaintances and revive reminiscences which add to the pleasure of a review of the past. The one hundred and twenty miles of country traversed by the G. T. R. between the cities of London and Toronto, passing through parts of the fine counties of Middlesex, Perth, Waterloo, Wellington, Halton, Peel and York, is fairly representative of the farm lands of Western Ontario, than which there are few better adapted to general agriculture in any country.

An early and propitious spring-seeding time found the land in excellent condition for the preparation of the seed-bed, with just enough moisture to give the crops a good start, and, while May was a very dry month, the looseness of the land gave the plants a liberty which kept them looking fresh, though making slow headway, while the copious rains in June sent the crops forward rapidly, and on July 1st they presented a splendid appearance, the only apprehension now being that they are in some places too heavy and inclined to lodge, a condition which is apt to injuriously affect the yield in quantity and quality. But with more bright weather and heat, which the probabilities seem to promise, the prospect is fair for a bumper harvest in nearly every line.

This statement applies generally to all the section outlined, and particularly to Peel County, the old-time home of the writer, where the soil is mainly strong clay, with variations of more or less loam—a section once noted as a winter-wheat and barley growing district in the times when prices for those products were high and many farms suffered severely from constant cropping with those cereals, which were sold as such, while the feeding of stock was neglected, the consequence being that not a few of the farms had run down to such an extent that it was generally thought they had seen their best days and would never be restored to their former fertility. The United States protective tariff bill struck a stunning blow to the barley trade in Canada, and for many years those who were slow to take a new tack and turn to dairying and feeding had a hard time, while those who pinned their faith to the cow, and later to the sow as well, found a combination that proved their financial salvation, and these were the first to recover from the depression and the first to show its effect in the building of modern basement barns for the more convenient and economical feeding of stock. Others later followed suit, and the result of growing clover freely in a short rotation of crops and feeding

cows and other stock, is that farms once considered exhausted have been brought back to fertility, and to-day are growing full crops in average years. Evidences of prosperity are seen on all sides, and more high-class barns and substantial and comfortable dwellings are being built in Peel County than in any other section of the country that we know of.

Fall wheat, to a limited extent, is still successfully grown here, not so much for the money that is in it as for the straw for bedding of stock and for reseeding with clover and grasses, the favorite preparation being the plowing down of a pasture or clover stubble in July, and by repeated surface cultivation conserving moisture, hastening decomposition of the vegetable matter turned under, and securing a firm seed-bed, which gives the crop sown early in September a good start, and making it strong to stand the winter test. Peas, formerly a favorite crop in this section, had to be abandoned for several years, owing to the depredations of the bug, but that pest having had its day for a time, peas are again being grown to some extent, and will probably be more largely cultivated, as there is no grain feed equal to this for stock-feeding, while the effect of its cultivation is helpful, rather than hurtful, to the land as a preparation for following crops.

Owing to the extreme difficulty of securing satisfactory help, many farmers are laying their land down largely to permanent pasture for the grazing of beef cattle, a system which in some years has proved profitable, but which is likely this year to be shorn of profit, owing to the high price paid for short feeders, in some cases as high as 5½ cents per pound, while the market for the best cattle at present rules lower than that mark, but may yet improve in time to let the farmer out safely if not to allow him a margin. Fortunately grass is abundant, and cattle may be carried till a possible rise in values may relieve the situation.

It is gratifying to notice a gradual improvement in the average of farming in this country, doubtless due to a considerable extent to the diffusion of information as to improved methods through the medium of farm papers, experiment stations and farmers' institutes, and largely to the influence of the example of enterprising farmers who have made a success of their work, and thus given practical demonstration that it pays to keep pace with the changing conditions of the times.

Another pleasing feature, seen in many sections, is the increasing attention given to the prevention of weed seeding, and to the beautifying of the farm home by the planting of shade and ornamental trees, the keeping of well-trimmed lawns, the cultivation of flowers, supplying the family with good books, papers and magazines, and the study of music, all of which are means of making farm life more attractive and enjoyable.

J. C. S.

HORSES.

Horse-breeders' Wants.

At a meeting of the Canadian Horse-breeders' Association in Toronto, on July 3rd, President Dr. Andrew Smith in the chair, a resolution, moved by E. C. H. Tisdale, and seconded by John Gardhouse, was adopted, setting forth the necessity for an office in the Parliament buildings, and the recognition of the Secretary of the association, in order that grants from the city and other institutions could be legally voted to the Horse-breeders' Association, in aid of the various exhibitions that are held under its auspices from time to time.

It was moved by Peter Christie, M.P., and seconded by W. E. Wellington, that in the interest of the other horse-breeders' associations, viz., the Clydesdale, Shire and Hackney, that have moved the registration department to Ottawa, an office should be maintained in Toronto.

On motion of Ald. McBride, seconded by W. E. Wellington, it was decided to appoint a deputation to visit Ottawa and interview Hon. Sydney Fisher, Minister of Agriculture, and F. W. Hodson, Live-stock Commissioner, to ascertain if the guarantee given to Henry Wade prior to the formation of the National Live-stock Association, that he would receive \$2,500 per annum as a retiring allowance, had been authorized, and if it was the intention of the Government to carry it out. Reference was made to the services of Mr. Wade during the years he was registrar and secretary-treasurer of the different associations in Ontario.

Dr. Andrew Smith, W. E. Wellington, Peter Christie, M. P., and George Pepper were appointed as a deputation to wait upon Hon. Mr. Monteith, Minister of Agriculture, as to the continuance of the Government grant for horse-show purposes, and to ascertain his views as to the best mode of continuing the usefulness of the Canadian Horse-breeders' Association.

IF YOU HAVE A FARM FOR SALE OR WANT A SITUATION, PUT AN ADVERTISEMENT UNDER THE HEADING OF "WANT AND FOR SALE" IN THE "FARMER'S ADVOCATE."

Untoward Results of Castration.

(Continued.)

TETANUS, or lockjaw, may result from castration although all possible precautions have been taken and the operation skillfully performed. This disease being due to a germ that exists in the ground or stable, and gains the circulation through the wounds in the scrotum, the operator cannot be held responsible. The symptoms usually appear about eight or ten days after the operation, and the symptoms and treatment are similar to those of the disease resulting from any wound, which will be discussed at a subsequent date.

AMAUIROSIS is a disease of the eyes in which there is a paralysis of the optic nerve and its expansion, called the retina, which is the seat of vision. The pupil becomes dilated and round (the normal shape of the pupil in the horse is elliptical), the eyes assume a somewhat glassy, though dull appearance, and there is total blindness, which is shown by the general movements and actions of the patient. This condition is liable to occur when there has been considerable bleeding, perspiration or excitement before, during or following the operation. The disease often follows excessive secretions of any kind, or loss of blood, and, as a rule, will gradually disappear as the fluids of the body are restored to their normal quantity and condition. Hence, treatment consists in quietude and good care and food, which can be assisted by the administration of nerve tonics, as two-dram doses of nux vomica three times daily. While in most cases the symptoms gradually disappear and the eyes assume their normal condition, there are some cases in which a recovery does not take place. In such the eyes become duller, the pupils remain dilated, and eventually the whole visible portion of the eyes become clouded and of a milky color.

FISTULA, or chronic suppuration of the scrotum, sometimes occurs. There is an enlargement and induration of the cord, apparently arising from an adhesion of the scrotal wounds to the cord. In such cases the cord is hard and enlarged within the scrotum, and from time to time suppuration occurs; abscesses form and discharge a purulent matter for a variable time and then heal, but the enlarged cord can always be felt and often noticed within the scrotum. The formation of these abscesses occurs periodically, and may be induced by very trivial, exciting causes, as a cold, an attack of influenza, strangles, laryngitis, etc., or even by hard work and exposure. The cord becomes inflamed, the animal becomes stiff and lame, feverish, and unfit for work, which condition occasionally remains for weeks after the abscesses have discharged their contents. Geldings subject to this affection are generally unthrifty, go wide behind, and more or less stiffness is usually noticed in their gait. They are unsound.

TREATMENT is the same as for scirrhous cord. The animal must be thrown and secured as for castration, an opening made in the scrotum, and the diseased cord separated from the surrounding tissues, and severed above the diseased portion with an emasculator or caesear, or a clam applied. If in moderate weather, after treatment is not necessary; but if in extreme weather, especially in hot weather when flies are troublesome, the wound should be washed and the cavity flushed out daily with a good antiseptic, as a four-per-cent. solution of carbolic acid. "WHIP."

Hackney Laurels.

The winning of the Osler, Hammond & Nanton cup for the best horse any breed or type, at the recent Winnipeg horse show, by the Hackney stallion Burrow Mars Meteor, in the strongest possible competition, adds another to the many marks of popularity of this favorite breed. The Hackney is one of the latest breeds to be introduced into the West, yet in the short time he has been here he has firmly established himself in the affections of horse lovers. There is something about this stylish breed of horses that seems to satisfy the popular fancy to a greater extent than other types. His form is a model of symmetry, his action proud and clean, his spirit bounding and energetic, and all combined, he at once appeals to the spectator and judge as a type of horse to be admired. Among our horse stocks at present there are many mares inclined to be a little lacking in substance and low and stiff in action, with which the Hackney, when mated, produces horses that sell well as carriage horses, delivery horses, light workers and saddlers.

The Horse at Fairs.

The fairs and exhibitions which are annually held all over the country afford one of the best opportunities for the study of type in horses. It is always something to one's credit to be perfectly familiar with the requirements of all classes of horses, and it is expected of those who handle horses all their lives that they be able to allot a horse to his particular class, whatever his type may be. It is no uncommon circumstance to find men who think an agricultural horse is a heavy

draft, while others would call the same individual a general-purpose animal. Others, again, are scarcely able to distinguish between the roadster and carriage type. At the fairs where there is a proper classification, these different types are illustrated, and if one watches closely the judging-ring, it should result in a larger store of knowledge and greater familiarity with a class of stock with which we nearly all have something to do, and about which we are all anxious to know a good deal.

STOCK.

The Story of the Meat Trust.

Some few years ago there were four great rival dressed-meat companies operating chiefly in Chicago and westward—Swift, Armour, Hammond and Nelson Morris. As rivals the competition between these houses waxed fast and furious, and there were exciting times at the big buying centers. Good times these were for the farmers and shippers also. When they came in from the farms or ranges with their carloads of live stock or other produce, there was sure to be lively bidding; the best stock commanded the best prices; there was some encouragement to produce the best possible "article." Mortgages began to disappear, and country banks flourished. Cattle-raising became a great feature in the West, and many people found the trade so lucrative that, instead of simply selling what cattle they could raise, they resorted to the practice of buying up a number and finishing them off for a few months on grass or corn. In order to do this capital was needed; hence it was often necessary to borrow from the banks. However, sales were sure, and there was no difficulty about redeeming the notes.

Now about this time the four great houses began to grow closer together, and the upshot of the matter was that from entering into a "gentleman's agreement," by which certain privileges were mutually conferred, they united, and the "American Beef Trust" was begun. The next step was to absorb the smaller houses. Some were bought out, some were smothered by competition, while others still hung on, putting up a brave struggle, believing that surely there must be room for all, and that at the turning of the long lane things would be better.

But these had reckoned without their host. Already was beginning the development of a system which was to put them pitilessly at the mercy of the big Beef Trust. For certain considerations the railways were induced to give rebates, known as "Private Car Charges," to the members of the trust. This was the entering of the camel's foot. About the same time the invention of refrigerator cars opened up a great opportunity. The big trust, having immense capital at its back, was enabled to put thousands of refrigerator cars on the lines, and literally bulldozed the railway companies into giving them a rebate on all stock or produce shipped in such cars. If this was refused the simple threat of switching the traffic off on to other lines was sufficient for all purposes, and the companies speedily "fell to." Needless to say the smaller concerns got no rebate. Before long they found it impossible to work against such opposition. With higher railway rates they could not afford to sell for the same as the Trust. Besides, as often as not, they found their cars side-tracked and forced to suffer delay, in order that the Trust's long line of big yellow boxes might be rushed through. The only thing was to go out of business, and hundreds of concerns shut up with heavy loss or even ruin to the owners of them.

From granting the first little rebate, the railway companies were now hopelessly entangled in a net from which there was no escape. At the next turn they were compelled to sanction an arrangement which provided that they should carry no perishable goods save in the Trust Company's cars, and their humiliation was complete when they were still further compelled actually to pay mileage rates for hauling Trust cars whether full or empty. Rave and grumble as they might, there was nothing else for it; it was all the same to the Beef Trust.

Meanwhile, what of the farmers and shippers? asks Mr. Chas. E. Russell, in his story of this Trust in Everybody's Magazine. Bringing in their stock to the great slaughtering centers, Chicago, Kansas, Omaha, etc., they found that a strange change had come over the face of the markets. Where formerly there had been fierce competition and spirited bidding, there were now but a few indifferent buyers, who all offered the same figure, and that invariably low. At first not a few sellers, deeming themselves foxy, held their cattle over, or sent them on to a further market. The same result; one price offered, and that lower still. Stock-raising speedily became unprofitable, and not only stock, but poultry, dairy products, fruits—all were in the same box, for all were under control of the so-called "Beef Trust." The age of prosperity had passed, and many farmers were unable to redeem their notes at the banks. As a result banks failed all over the country, and during last year the suicide of seven bank managers and cashiers was reported from a single State. Mortgages began to reappear, and yet the poor farmer, with his

customary patience, struggled on, hoping for better things. Not that he never received encouragement. The Trust was foxy enough for that. Occasionally prices went up—when there were not enough cattle, or whatever it might be, for the company's purposes. Then the farmer felt brisk, and sent his products off. If he were first in he got the benefit of the first prices; but in nineteen cases out of twenty the price had dropped again before he had his stuff disposed of, and he was obliged to sell at rock-bottom prices, or take his stock home. By virtue of such performances the total losses of cattle feeders in Iowa for 1904 were estimated at \$12,500,000.

But a more curious phenomenon still became evident. The consumers in towns and cities began to suffer. No matter how low the prices paid to farmers, the prices of the retailed article in town were going steadily up. Before this the rule had been low prices to the farmers, low prices to everybody else, and vice versa; now it was low prices to farmers, high prices to everybody else. No wonder that the problem became a puzzling one, and people began to surmise that somewhere things had gone far from straight.

In the meantime it had dawned upon some that the big packing houses were in league, and an investigation began. Upon certain disclosures, as might be expected, a big fight was put up, and the matter went to Congress. Petitions, bills, meetings, resolutions, were the order of the day; but the big Trust looked silently on and laughed. And for the past few years events had been transpiring which left the most of the laughing to one man. Old P. D. Armour had died, as had also Swift; Morris had become so old as to be beyond such mundane interests as the monopoly of a nation's unrest, and only young Armour and Hammond were left. Armour bought out Hammond's interests, and so got into his hands supreme control of this immense power. The fortunes of his satellites depend, it is true, upon the fortunes of the Trust, but he alone stands, with possibilities many times greater than those of a Rockefeller at his disposal, and he is still a young man—this J. Ogden Armour. His Trust now controls every stockyard in the United States except two. One is already on its way to dissolution. The other, owned by Vanderbilt and Morgan, will probably fight for its existence, and ere long there may be thrown before the public a gigantic struggle, second only in interest to the great struggle between Russia and Japan.

On July 1st, at Chicago, after an investigation of several months, during which more than 100 witnesses were examined, a federal grand jury returned indictments against seventeen men prominent in the beef-packing industry, for violation of the Sherman anti-trust law, and against four officials of Schwarzschild & Sulzberger, for alleged illegal rebating agreement with railroads.

Besides these individual indictments, bills were against Armour & Co., Swift & Co., Nelson Morris & Co., the Cudahy Packing Company, and the Fairbank Canning Company.

The men indicted for alleged conspiracy in restraint of trade, which constitutes a violation of the Sherman act, are: J. Ogden Armour, president of Armour & Co.; Arthur Meeker, general manager Armour & Co.; T. J. Connors, director Armour & Co.; P. A. Valentine, treasurer Armour & Co.; Samuel McRoberts, assistant treasurer Armour & Co.; Louis F. Swift, president of Swift & Co.; Charles Swift, of Swift & Co.; Lawrence A. Carson, treasurer of Swift & Co.; Arthur F. Evans, attorney of Swift & Co.; R. C. Manua, attorney for Swift & Co.; A. H. Veeder, general counsel for Swift & Co.; Edward Cudahy, of Cudahy & Co.; D. E. Hartwell, secretary Swift & Co.; Edward F. Swift, vice-president Swift & Co.; Edward Morris, secretary Nelson Morris & Co.; Ira W. Morris, of Nelson Morris & Co.

The four employes of Schwarzschild & Sulzberger who were indicted for alleged rebating with the railroads are all connected with the traffic departments of the corporation. Their names are: Samuel Weil, B. O. Cusey, C. E. Todd and V. D. Skipworth. The indictments voted for alleged violation of the anti-trust law were identical in each instance.

Camphor for Diarrhoea in Calves.

To the Editor "Farmer's Advocate":

I see R. McL. wants to know what to do for calves that have diarrhoea when two or three days old. Some years ago we had a great many deaths from this trouble. We could not get anything to help them. Most of them would only be sick for twelve or twenty-four hours, and then we would find them dead. We employed three different veterinary surgeons; all of no use. I had a cousin here from Iowa, where they had had the same trouble and could get no help, till some veterinary surgeon discovered that one drop (and for the most severe cases two drops) of strong camphor, given every hour in a teaspoonful of fresh milk, is a sure cure. Just as soon as you see signs of relief stop giving the camphor. I have treated many bad cases of this trouble, and have never lost a calf since. We have used this treatment only on calves that are a day or two old. GEO. H. TREFFRY.

Oxford Co., Ont.

Owing to the war, the demand for meat in Japan far exceeds the supply, prices have risen, and the people are looking for additional supplies from other countries.

FARM.

Eradicating Mustard.

To the Editor "Farmer's Advocate":

Sir,—In reply to your letter re method adopted to eradicate wild mustard (charlock) from farm purchased by me, I beg to say: Field number one was sown with barley, but the mustard came up so thick and strong that it completely overshadowed the barley. When the mustard was in flower we plowed under the whole crop, and cultivated that field as frequently as possible until after harvesting the other crops. After harvest that field was again plowed and cultivated frequently, each cultivation bringing up a strong growth of mustard. The following spring the field was cultivated as early as practicable and harrowed weekly, until the balance of the farm was seeded, when it was sown with oats, and that spring being favorable to cultivation, there was very little mustard to eradicate from that crop, or since that time.

Field number two was sown with oats, and with it appeared a fair crop of mustard, but not so strong as in field number one. This crop was allowed to mature, but the field was well cultivated as soon as the crop was hauled off. This brought up a strong growth of mustard, which was plowed under and the field cultivated same as field number one.

The following spring this field was cultivated weekly until the last days of May, and then planted with corn for ensilage. Very little mustard appeared, and that was eradicated in cultivating the corn, and very little mustard has since appeared in these fields, or the other on that farm that obtained a similar cultivation.

Mustard, or charlock, grows from the seed only, and while the seed will retain its vitality for an indefinite time in the ground, it only requires to be brought to the surface sufficiently to germinate, when its vitality is gone. As mustard does not grow from the old roots, and the seed is not carried by the wind from one farm to another, it requires only a determined effort to completely eradicate it.

If, by accident, mustard seed was sown upon an otherwise clean field, that crop of mustard can be killed by spraying with a three to five-percent solution of sulphate of copper (bluestone) without injuring the grain crop. It may be necessary to spray twice to destroy a crop of mustard.

Hoping your efforts will induce the farmers of Canada to rid their farms of a weed that in many sections of the country has taken possession of the land.

The Senate, Ottawa.

W. OWENS.

About That "Open Letter."

To the Editor "Farmer's Advocate":

I saw an enquiry in the "Farmer's Advocate" for something to keep horses from barking shade trees. Take a little coal tar and smear some on different parts of the tree, and the horses will not touch them, and it will not injure the trees. I tried it last summer, after losing some fine trees. It stopped the horses, and the trees are still doing well.

I was very much amused on reading the open letter to men in the "Farmer's Advocate," and have come to the conclusion that the nurse must have had her eagle eye on some young farmer, and that he did not respond to her liking; or else that she must have been very unfortunate in the patients she secured. One would think that people able to hire a trained nurse would observe the common decencies on entering the house. But no farmer has the time to change his clothing at the door, and I think he does not need to, to save the delicate nose of trained nurses, or their wives either, if they take the same care that is observed on my farm and the majority of my neighbors. I think the farmer has as delicate a nose and resents bad smells as any nurse that sets herself up as their critic.

Elgin Co., Ont.

THOS. N. HAVENS.

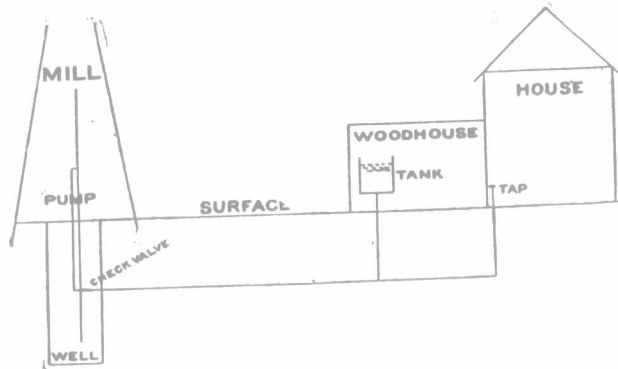
Rape for Pasture.

Rape as pasture has the advantage that it may be sown at any time during the summer, with a good prospect of yielding a lot of good forage in the fall months and right up to winter. It is especially suited to growing and fattening sheep and pigs, but is also an excellent feed for young cattle and for those intended to be fed for beef in the winter months. A piece of clover sod, plowed down after the hay crop is harvested, may make a good seed-bed for rape if it is rolled and harrowed well to reduce it to a fine tilth, and the rape seed sown broadcast at the rate of four or five pounds per acre and harrowed, or in drills two feet apart at the rate of two pounds per acre. A barley stubble plowed immediately after harvest and prepared in the same way may also produce a good crop of rape if the season proves favorable; that is, if a fair amount of moisture develops. If there is sufficient moisture in the land to give it a good start, it will stand a good deal of drought and make headway from the first.

Windmill for Water Supply.

To the Editor "Farmer's Advocate":

I notice in your issue of June 8th D. V. E. asking best and cheapest way to supply water from well twenty-seven rods distant from house.



I would advise the use of an eight-foot windmill erected over well, piping being run to buildings. A force-pump will be required, and I would not use anything smaller than one-inch piping, and galvanized at that. The cost will depend on the mill, pump, piping and tank, which can be obtained from any of the agents. I have used a windmill for three years, and it has given perfect satisfaction. If a check valve is used, as shown in the accompanying sketch, the pipe can be tapped anywhere between check and supply tank to water other buildings or stock at barn or anywhere desired.

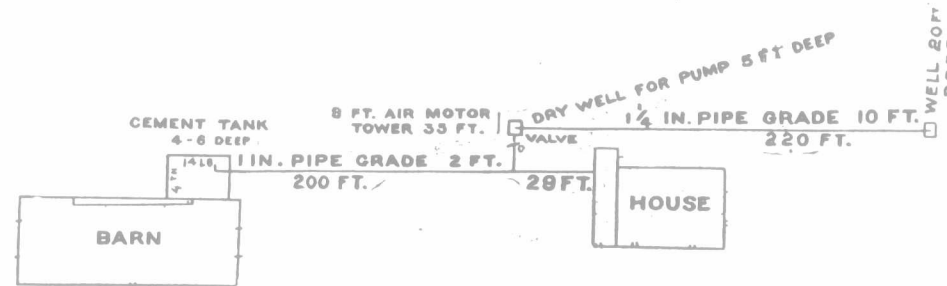
Grey Co., Ont.

J. R. PHILP.

Plan of Water System.

To the Editor "Farmer's Advocate":

I will send you my plan of water pipes and pumping windmill that has proven satisfactory: Well 20 feet deep, 4 feet water, pipes laid 3 feet in ground. Tank cement, 12 feet higher ground than well, dry well for pump and windmill, 5 feet deep. Check valve on short pipe from dry well, pipes from tank to house, with frostproof



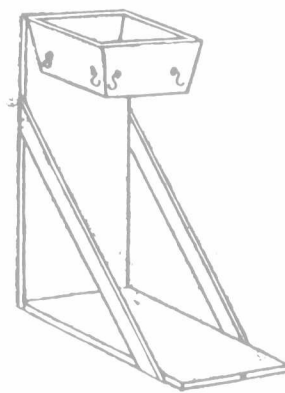
hydrant in back kitchen, which will not freeze, nor get warm in summer time. Windmill and pipes cost \$153. The cement tank is underground, and cost \$15.

Huron Co., Ont.

WILLIAM SALTER.

Portable Bag Holder.

More than once we have caught a little villain shivering and holding the bags in an icy granary, while the lusty men sweated over turning the fanning-mill and scooping up the grain. And we have seen men holding sacks in the busy threshing season, when the simple contrivance illustrated in



the accompanying cut could do the work better. The upright plank is an inch thick, three and a half feet long, and fifteen inches wide. The bottom plank is of the same dimensions, except that it is a foot and a half shorter. The hopper is easily constructed, and the hooks secured at any hardware store, or possibly improvised at home from bent nails. The base of the hopper is wedged from the perpendicular plank so that the bag may wrap all the way around.—[Australasian.]

Making Hay in One Day.

To the Editor "Farmer's Advocate":

In the June 29th issue of the "Farmer's Advocate" I notice an article entitled "Cut and Cure Hay in One Day." If any other reader of the "Farmer's Advocate" has any experience in this method of curing hay, please let us hear from him, or does "Subscriber" let his hay ripen like grain before cutting? HAYMAKER.

Renfrew Co., Ont.

[Note.—The making of hay in one day depends upon the weather and the amount of exposure of the hay to the influence of the sun and air. If cut after the dew is dried off in the morning, and kept tossed so that the wind and sun can act freely upon it on a bright day, hay may be safely stored the day it is cut, even if it be far from ripe; but if all these conditions are not available, it is safer to put it up in cocks when all outside moisture is dried off, and let it stand to sweat for a day or more, according to the weather, before putting in the mow. The writer saw six acres of heavy clover this season that was stored in prime condition before the 1st of July. It was, of course, a long way from being ripe, but it was kept moving nearly every hour from the time of cutting to loading, so that wind and sun could act upon it.—Ed.]

"Exaggerated and One-sided."

To the Editor "Farmer's Advocate":

Sir,—Being a farmer's daughter and a farmer's wife, and having taught school for six years in the country and boarded with farmers, I feel compelled to answer the open letter in your issue of June 29th, by "Nurse."

In all my experience I have only come across one man who was guilty of any of the faults spoken of by Nurse. Surely there must be something wrong with a nurse who has been in so many homes, and says: "Surely, if clean, clever farmers were so common as some say, I must have met one now and again," for by that expression she says she never met a clean, clever farmer. We say, surely that nurse must lack in proficiency to have been only employed by the class she described. She ought to be very grateful to you for withholding her name. For my part, I certainly pity her, and advise her to change her occupation to something she can do better, and

then, perhaps, the longing she expresses in these words, "When I hear of those well-conducted homes your readers describe, I do so long to see the men," may be gratified. Like "Nurse," I have lived among farmers in four or five counties of Ontario, but, unlike her, in all those homes there were

all the necessary comforts of life and some luxuries, and all paid for. I am confident that the lady readers of this paper join me in wondering how the Editor of a worthy, sensible paper like the "Farmer's Advocate" ever found room for such an exaggerated, one-sided letter. Of course, "Nurse" says it is not exaggerated, but who can believe that anyone could live in this fair, prosperous agricultural Province for any length of time and not "meet a clean, clever farmer now and again"?

A FARMER'S WIFE.

Oxford Co., Ont.

Our Scottish Letter.

June so far has been a very pleasant month for the pleasure-seeker and tourist. We have had comparatively little rain all month, and the atmosphere has been kept cool by breezes of east wind, while the sun has been shining in his strength. All this is excellent from the standpoint of almost everybody except the farmer. The wheat and oats and barley crop got a grand start, with plenty of rain in spring, and were heavy rains to come now these white crops might seriously suffer, by becoming too rank. But the hay crop is to be light, and the turnip braird has made a very poor start, the fly obviously obtaining a firm hold of a plant not over robust. A short hay crop means a big decrease in the revenue to the farmer who sells, and the bad prospects of the turnip crop means reduced prices for lambs in autumn. The outlook at present is, therefore, not too bright, and, speaking generally, we are in the somewhat unusual predicament of wanting more rain.

At such a time reflection on our pastures and the hay crop, which is the almost invariable precursor of pasture in this country, is natural, and an illuminating bulletin on the subject has been issued by the West of Scotland Agricultural College. This school has the good fortune to number on its staff one of the most capable and brilliant investigators in this country. Mr. A. W. MacAlpine is a teacher of whom any school might well be proud. He is witty, which helps him greatly in dealing with scientific truth in presence of a

popular audience, and he is a genius, in the best sense of the term, for he has an unique capacity for taking pains. The bulletin on pastures is from his brilliant pen, and records the experimental seeding carried out by him on 17 farms in Scotland during the past four seasons, with control plots at the College Experiment Station at Kilmarnock. The result of the lengthened and extended series of experiments has been to show the necessity for some revision of methods usually pursued in Scottish agriculture. In laying down land to pasture, say for three years, the usual practice has been to "sow out," as we term it, with an oat crop and rye grass seed, the latter for hay in the following year. It has been accepted agricultural gospel, that a hay crop is impossible without perennial rye grass, even although there may have been misgivings as to the succeeding body of pasture. Mr. MacAlpine's experiments show that rye grass is not necessary for the hay crop, and is still less necessary for the succeeding pasture, in the proportion usually assigned to it in Scottish farming. Mr. MacAlpine lays down the sound, self-evident proposition that cattle browse on green grass and not on white grass. No seed degenerates so rapidly into white "pasture," and, therefore, there are other grasses which ought to be included in any well-balanced seed mixture if pastures are to follow. Chief among these are the fescues, cocksfoot, tall oat grass—the latter not of the bulbous variety, which degenerates into a most troublesome weed—and timothy and Italian rye grass. From these normal mixtures rye grass is not excluded, but it is made evident by the combined results that a well-selected seeding of approved grasses, with an admixture of clovers and alsike, makes the best all-round hay crop and pastures. The four tests of a good grass mixture are: A profitable hay crop; a green pasture, which stock will graze; freedom from weeds, and enhanced fertility through the action of the clovers, as nitrogen collectors and distributors in the soil.

Contagious disease was happily rare amongst British stock in 1904. The summary of all that transpired throughout the year has now been published by the Board of Agriculture and Fisheries, and the figures with respect to the dreaded scourges of pleuro-pneumonia and foot-and-mouth disease are most satisfactory; that is to say, there are no figures. Cattle are very healthy in these islands, and long may they so continue. Sheep are also free from any dangerous diseases; the one troublesome thing being scab, about which there has lately been a great bother. Swine fever, or hog cholera, as it is termed on the other side of the Atlantic, is being got well in hand, and ere long one hopes to hear that figures relative to it are like those relating to pleuro-pneumonia and foot-and-mouth disease, non-existent. But two diseases are giving rise to disquietude. Anthrax is in some districts too common, and there is reason to suspect that this is largely due to the ignorance and carelessness of stock-owners in whose hands an animal may be struck down. Such a carcass should on no account be opened. It should be consumed by fire, and every vestige of it burned to ashes. Unhappily there is no possible external method of diagnosing anthrax. The only possible way is by cutting off a very small piece, say of the ear, and having the blood examined by a bacteriologist. Fortunately, there is no possibility of an expert mistaking the spore of the disease, but the farmer is placed in the cruel position of being criminally prosecuted for not reporting the presence of a disease which cannot be clinically diagnosed. His only safety lies in concluding that every animal which dies suddenly dies of anthrax. To proceed on any other principle will assuredly bring him within the clutches of the criminal law. Yet having regard to the deadly nature of the disease, and its communicability to the human species, the authorities would seem to have no alternative. The other disease which threatens to increase is glanders among horses. This disease is almost unknown among farm horses, but in London and one or two other cities having a large horse population, it almost seems to be on the increase. The cause of this is now said to be the ease with which the disease can be spread by animals in which it is latent. The mischief is that all this is capable of prevention by the use of the Mallein test, but the Government refuses to make provision for the adequate compensation of owners whose horses may be destroyed to save others. Perhaps nowhere in the world are there healthier horses than in Great Britain, but these glanders centers in large cities are a blot on the administration of our Contagious Diseases Acts. One rejoices that the stock which colonial and foreign buyers seek after is singularly free from all such diseases. Sir Walter Gilbey thinks we should not let the world know that we have these troublesome diseases in some places to contend against; but ignoring their existence won't help to clear out disease, and experience shows that nothing is so effective to that end as the free discussion of the extent and effect of disease. Cover it up and it does endless mischief; reveal its existence and bravely combat it and disease can be overcome.

I suppose you sometimes have trouble with people who profess to be able to govern much better than those who are called by the votes of their fellows to undertake that office. It is so here. The Board of Agriculture could be run by at least a score of amateurs, who, if one were to take them at their own valuation, would all make ministers. On the whole, the Board does very good work. It does not attempt too much, and it wisely endeavors to do the greatest good to the greatest number; hence, it occasionally trends on the horns of those who would rather it tread on the horns of the other man. Any mistakes

made by the Board have been made in a laudable endeavor to honor this sound principle, and in spite of occasional slips, and some wrong moves, on the whole the successive presidents have done first-rate work. Some have been stronger than others, and some have had more to show for their labors than others. Mr. Long was the most successful legislator the Board has yet seen; Mr. Hambury easily the most aggressive administrator. He meant his office to be honored, and to that end he first of all set himself the task of showing that he magnified his office. Soon the world took that office seriously, and under Mr. Hambury the Board got on very well. Several problems set by him are now being seriously grappled with, and the memory of the big, jolly Lancastrian will survive in agriculture for many a day.

In stock matters there is a large amount of useful activity. Clydesdale sires are being eagerly hired for 1906, and there are few complaints among stallion owners this season. The recent series of county shows reveals the presence in the country of quite a large number of useful, well-bred two-year-old colts. Other classes of stock have been making plenty prices. A sale of surplus Hackneys, from the famous Terregles stud of Mr. C. E. Galbraith, was recently held at Peterborough, when about £1,023 15s. was paid for the London champion horse, Administrator, and the London champion mare, Rosadora, made £745 10s. These are surely great prices. At recent county shows we have had very good displays of all classes of stock, although we incline to think there was an absence of an out-and-out sensational animal in almost any breed.

"SCOTLAND YET."

DAIRY.

Handling Overripe and Tainted Milk.

The subject of the following letter is probably the most important that confronts the cheesemaker at this season. With an extended and successful experience as a maker, proprietor of a first-class factory, the product of which ranks at the top of the market, and one of the directors of the Western Dairy-men's Association, Mr. Brodie, the writer, is well qualified to deal with the question.—Editor.

In handling overripe milk at cheese factories, there is no doubt but the best method is to return it to the patron who sent it, as there is positively no excuse whatever for the cheesemaker who accepts it, or the patron who delivers it.

The cheesemaker has in the acidimeter a quick and accurate method of ascertaining the exact per cent. of acidity in milk as it is delivered, and if he rejected all that had over .21 per cent. of acidity he would not have overripe milk to make up, and if he set this standard and impressed on the patrons the absolute necessity of cooling milk to 60 or 65 degrees he would avoid the unpleasant duty of returning it.

This is certainly a case in which the ounce-of-prevention-is-worth-a-pound-of-cure remedy is very applicable, and if patrons only realized the loss they sustain by delivering overripe or tainted milk at factories I think they would make an effort to deliver it always clean and sweet.

If the cheesemaker accidentally or carelessly accepts overripe milk, then it is not a question of how much cheese he can make from the milk delivered, but to get a passable cheese at all, and he will have to "hustle," raise temperature as quickly as possible to 84 or 86 degrees, use about one ounce more rennet at setting to 1,000 pounds of milk, cut curd earlier or before it has firmed as much as you would a normal-working curd and very much finer, remove part of the whey, raise temperature quickly to 98 degrees; in extreme cases temperature might be raised three or four degrees higher, but I would rather cut curd an extra time than raise the temperature above 98 or 100 degrees. Keep well stirred all the time and when removed close to curd, dip with a little less acid, or as soon as the curd is fairly firm or cooked, and stir out well in sink; endeavor to get it quite dry before piling up to mat. The object is to get a certain per cent. of moisture removed from the curd, or to have it fairly well cooked before there is sufficient acid development to injure the texture of the cheese. If you have been successful in this you can likely proceed from this stage to the hoops as with a normal-working curd—a little less salt, perhaps, as the average is higher. If you have not been successful in getting the curd fairly well cooked before there is .21 or .22 per cent. acid on the whey at dipping, or 30 or 32 per cent. acid on dippings from sink after curd has been dipped and well stirred out and good and firm, you will not have accomplished the object you have been working for. Nothing you can do afterwards will prevent the product from being short-grained, mealy-textured, acid cheese, just to the extent that you have been successful or not at this particular point.

In handling tainted milk every preventive precaution should be strictly observed, by making a close examination of every can of milk delivered each and every morning, and reject always any that is tainted, and send instructions to the patron to observe strict cleanliness and cool milk to 60 or 65 degrees. But if taints cannot be

discovered in this way, curd tests should be made to discover the guilty party, and the cause removed. In treating milk tainted by the cows having access to objectionable foods, there is only one satisfactory way—reject it entirely. If the taints are of bacterial origin, causing pin-holes, gassy curds, bad flavor, etc., etc., especially I would emphasize the importance of cooling the milk to 60 or 65 degrees, as temperature is a greater factor in determining the number of bacteria than the extent of the original contamination. If all preventive measures have failed, the use of a pure lactic acid culture, or, as is commonly known among cheesemakers, "a pasteurized starter," introduced previous to adding rennet, will be found not only beneficial, but absolutely necessary, and when used intelligently the results will be found satisfactory. JOHN BRODIE.

Butter Trade in Great Britain.

The race for supremacy in the butter business in England is daily becoming more keen. For years past Danish has held first place, but now Sweden, Finland, Siberia, Argentina, Australia, New Zealand, and last, though not least, the Irish creameries have entered the contest. Swedish and Finnish butters, on account of their bulk, command a large share of attention at present, and are coming to the front. Recently, in the Manchester market, there was an exceptionally good demand for Finnish, for it sold at nearly as high a price as the choicest Danish.

From the first of July last, until the middle of May, the import of Australian butter was 20,000 tons in excess of the same period two years ago, and of New Zealand nearly 5,000 tons. The receipts from Australia and New Zealand are virtually at an end for this season, and it most probably will be September before the first shipment of next season's butter reaches the United Kingdom. The import of butter into England is over 360 tons a week below that of last year.

I give herewith the total imports of butter from Australia, New Zealand and Canada for eleven months, from the 30th June, 1904, to 27th May, 1905:

	Cwts.
Victoria	238,910
New South Wales	155,059
South Australia	7,806
Queensland	54,833
New Zealand	292,440
Canada	257,407

Total

The total for same period in previous year was 825,216 cwts. P. B. MACNAMARA, Commercial Agent.

Colored or White Cheese.

To the Editor "Farmer's Advocate":

Sir,—Regarding the tendency to use coloring matter in cheese and the effect of the same from a commercial and a health standpoint, I would say in the outset that there seems to be no great change taking place in the relative proportions of white and colored cheese being manufactured. Certain districts in Eastern Ontario have, for years, produced colored cheese almost exclusively, while others have manufactured white cheese almost entirely; while again, other sections are more mixed. On the whole there are probably two-thirds of the cheese in Eastern Ontario that are not colored. From a commercial standpoint there is very little to say, further than this, that there is a certain demand for white and a certain demand for colored cheese, and it is the business of the manufacturers to aim to satisfy these demands. They cannot be the dictators. The great bulk of the coloring used is a harmless vegetable coloring, an extract from the annatto seed. Some, of course, comes from other sources, such as coal tar, etc., but we have a preference for the former, both on account of its being known to be entirely unobjectionable, and from the fact that it seems to hold its color better. Where a good brand of coloring is used there can be no objection to it from a health standpoint, as the material used in it is not injurious to the health, and the quantity used is so small that this acts as a secondary safeguard. You will see what a small quantity is used when I mention the fact that there is only an ounce, or a little over, used to a thousand pounds of milk.

The question of the use of color in butter and cheese practically simmers itself down to one of taste. Speaking personally, I like a little coloring in butter when it would otherwise have a white, lard-like appearance, and I have no objection to the coloring of cheese, providing a good brand of coloring is used and the cheese are not colored too deeply. J. W. MITCHELL, Supt. Eastern Dairy School.

We Can Sell that Farm for You.

A SMALL ADVERTISEMENT IN OUR "WANT AND FOR SALE" COLUMN WILL DO THE TRICK. ADDRESS: THE FARMER'S ADVOCATE AND HOME MAGAZINE, LONDON, ONT.

Cows in Summer.

The cows are out at pasture the whole time now, excepting at the milking hours, and are, or ought to be, yielding their utmost at the milk pail, and glutting the market with surplus milk. This is the time of the year when the animals should dispense with all extra feeding. Cows, however, have their own minds about matters, and when I stopped feeding mine they refused to come to the homestead morning and evening of their own accord to be milked, and, consequently, I have had to give them just a mouthful of cake to please them. Apart from the fact that the cows yield extra well at this time of the year—though the milk is likely to be poorer in quality—the rich lush grass is very laxative, and the best corrective of this is an allowance of common cotton cake. This material is more or less a cause of costiveness, on account of the excess of seed hull (or cortex) in it, and it is thus a valuable corrective, and goes well with strong grass—a fact pointed out long ago by the late Dr. Voelcker.

Very soon, however—too soon, indeed—the extra growth of grass will disappear, and we shall be confronted with bare, brown pastures, and a short supply of milk. Then will be found the value of the forage crops that should have been sown last autumn, or early in the spring, while at the time of writing, the maize crop is being planted for a succession to come on later, in August, September and October. In northern districts, or where there is a sufficiency of rainfall, there is not likely to be the deficiency of grass in summer and autumn we have to put up with in the South, and, therefore, not the same need for soiling with forage or feeding with artificial food; but even there a little of this has to be done to keep up the milk yield after the flush of spring is past.

There is another point that wants to be impressed on dairy farmers who are engaged in the new-milk trade. As the cows naturally give a large yield of milk at this time, we ought to have as few of them calving as possible, but have them coming in later on in the season, to help up the supply, and then be ready to rise in yield again when winter feeding starts. This is perfectly easy of attainment, by shutting up the bulls at the proper season. Before me, as I write, lies a circular issued to the members of the Eastern Counties Society requesting them to shut up their bulls during June, July, and the half of August, so that there may be no calvings in March, April and May, and thus reduce the glut of milk at the time when it is naturally most plentiful. The members of the above Society—of which the writer is one—have regularly done this sort of thing for years with the greatest benefit, though, of course, it does not wholly meet the trouble of surplus milk, and many individuals do not follow this lead. There is no doubt, however, that this is a move in the right direction, and dairy farmers all round would be wise to try it, more especially as the thing is very easily done, and there is very little trouble incurred.

A change of pasturage is good for cows, and for the pasture also, if it can be arranged. By this means the animals later on get a new start at fresh grass, while the old fields get a chance to show up some growth of clean leaf once again. The perpetual trampling about of the cattle defiles the herbage, more especially in dry, dusty weather, while even in wet weather it is dirtied, in spite of the washing by rain, and a change of fields helps this trouble. It is, of course, not easy to do this always, but in one way it can be, and that is to turn the animals onto the hay-fields as soon as these are cleared.

When the hot, blazing sun looks down in summer, our cows suffer greatly from the heat and the flies, and shade is exceedingly grateful to them. Trees about the pastures, and high, overhanging hedges are useful adjuncts on a cow-gang, and to them they will repair when the afternoon sun becomes too oppressive and the flies bite their hardest. Shelter in fields cannot very well be made if it does not exist already, for trees and hedges grow slowly, and sheds are not desirable. We can, however, put them indoors in the hottest part of the day, and it will pay to do so. In the hot, sultry weather, if the animals are tied up soon after mid-day, and then given their allowance of forage or cake, or meal, as the case may be, they will return grateful thanks at the pail for help given them in time of need. A cow always returns good treatment at a liberal rate of interest, and this system of management suits her admirably well.

It is a commonplace now to insist on plenty of good water in the pastures. A running stream is the best, but many of us have to put up with pond water. The main point is that it must be free from sewage taint, as there is little or no danger from ordinary water if free from this. If water is not plentiful, and fairly pure, on a dairy farm, both the quantity and quality of the milk will suffer, and the dairy farmer will find

that it pays him to go to some expense and trouble to get a satisfactory supply.

The production of an ample supply of good milk depends on many things, of which the above are a few, and the more of these we attend to and keep right, the more likely are we to succeed.—[Primrose McConnell, in Creamery Journal.]

Canadian Cheese Boxes.

The large dealers in Manchester, Eng., report that boxes from Canada are arriving in good condition, and that the weights are stenciled, and these are very desirable conditions, and a continuance thereof is hoped for. Considerable Cheshire cheese is at present offered, and realizes slightly higher prices for choicest than for new colonial cheese. Common Cheshire is selling at lower prices than colonial. The feeling of the trade is that prices will fluctuate very little during the summer months. Rain that was very much needed has fallen pretty generally throughout England, and the prospects promise well for an abundant harvest.

POULTRY.

Cause and Treatment of Gapes.

My chickens gape and wheeze as though they had a cold. They are from four to six weeks old, and have been fed barley meal scalded, and have been free to range all day. We gave the first chicken so afflicted, two drops of turpentine twice, and two half-teaspoonfuls of coal oil. It recovered, but the second chicken similarly treated died. Now two more are afflicted in the same way. J. N. P.

Ans.—The chickens are likely suffering from gape worms, congestion of the lungs, pneumonia, or tuberculosis. Before the subscriber could be sure what the trouble is it would probably be necessary to hold a post-mortem examination. If the chickens are affected with gape worms, the windpipe will be found to be more or less covered with small worms, somewhat reddish in color. The closer these worms are together and the more there are in the windpipe the harder it is for the chicken to breathe. The chicken usually stands with its mouth open and gapes for breath. If the chickens have lung trouble, on examination the lungs will be found to be more or less covered with white spots; in some cases the lungs appear to be filled with air bubbles. In a few cases, but not very many, the windpipe appears to be coated with a yellowish substance; in many cases this is somewhat lumpy, and in others it is about the consistency of rich cream.

The lung troubles are usually due to over-crowding in the coop, and insufficient ventilation. These diseases affect brooder chicks much more than hen-hatched chickens, for the reason that in many instances when the chickens reach from four to six weeks of age, there is a tendency for the chickens to become overheated; or, in other words, crowd in the brooder, unless they are taken care of.

There are a great many treatments recommended for gapes, some of which are more or less satisfactory. Personally, I have had no experience with this trouble, but I have seen a great number of cases on the American side. The disease is an old one, but is not very common in Ontario; a few cases have been reported from Western Ontario. The disease usually makes its appearance in chickens from four to eight weeks, and rarely attacks birds over three to four months old. Where one has time to treat each chicken individually, perhaps one of the best treatments to be used by a farmer would be to strip a feather of all but some down at the end. The feather should be moistened in spirits of turpentine. This does not mean that the feather should be soaked, but simply moistened. After moistening the feather, open the chicken's mouth and put the feather down the windpipe. Be sure that the feather is down the windpipe and not down the throat. The operation causes the bird to sneeze, which in most cases will throw the worms from the throat. The turpentine is claimed by some to kill the worms, and by others that it simply makes them relax their hold on the lining of the windpipe. A very good thing as a preventive is to add a little camphor to the drinking water, giving no other water to drink. All that is required is sufficient camphor to flavor the water. Others recommend using a little spirits of camphor, rubbing the same on the outside of the throat.

There are quite a number of theories regarding the cause of gape-worm trouble. The general belief is that gape worms are due to filthy conditions and feeding in damp places. It is also believed that earthworms are the cause of the disease. It is known that where chickens are kept off the ground until they reach the age of eight weeks, there is little or no trouble with gapes. I would suggest that where people have had trouble with gape worms that the ground on which the affected birds have run be well limed and plowed, and that the next season all chickens be raised on new ground, care being taken to keep the coops clean, and move the coops to fresh ground each day, if possible, and also to feed young chicks off clean boards and not on the ground. W. R. GRAHAM.

Ontario Agricultural College.

Fowls with Liver Trouble.

I have a disease in my hens which is doing a good deal of havoc. They first go lame, then get weak, and can hardly walk around; their heads, combs and wattles get a very dark red; they also have diarrhoea with it—sometimes the lameness is preceded by diarrhoea. The house has been thoroughly cleaned and fresh earth put in. We had gravel in for a time, then we took gravel out and put in clay. We thought the gravel damp, which was causing the trouble, but it made no difference. The disease is just as bad with the clay bottom. S. T. M.

Durham Co., Ont.

Ans.—In all probability the chickens are affected with liver trouble, possibly due to over-feeding, particularly during the winter months, and the excessive usage of such feeds as corn and fat meat, with a lack of green feed and exercise. These conditions would have the effect of producing a few chickens with similar ailments to those mentioned in your letter. If the whole flock was affected as mentioned in the letter, or even 25%, I would certainly advise the correspondent to send one or two of the sick birds to the Bacteriological Laboratory here for examination. It is quite possible that these chickens may be affected with tuberculosis or enteritis, possibly both. My experience has led me to believe that it is a wise precaution where any birds are sick to have them examined in a laboratory, and sometimes the disease is quite different to what we might expect from outward appearances. Furthermore, if it is an epidemic one knows how to combat it. The fresh earth that was used in the house no doubt did good. I would suggest that all the sick birds be isolated, and be fed food such as bread and milk, wheat, and perhaps a little boiled rice. I also think that a dose of salts, perhaps every other day, to each fowl would be found beneficial. An ordinary dose for a chicken is $\frac{1}{2}$ teaspoonful of dry salts. Simply open the bird's mouth and pour the salts down the best you can from a spoon.

I would suggest that the henhouse be whitewashed, using fresh lime and carbolic acid, or some similar disinfectant. Put this on while it is warm; also cover the floor of the henhouse with fresh slacked lime. This should give it a thorough cleaning.

If the chickens are not valuable—that is to say, if they are not worth from three to five dollars apiece—I would not entertain the idea of doctoring them at all. The doctoring of sick chickens has, in nearly all instances, been a losing speculation, and it is much better, under average conditions, to kill the chicken and bury it; or, better still, burn it. W. R. GRAHAM.

Ontario Agricultural College.

APIARY.

Let the Honey Get Ripe.

July and August are the months in which most of the honey is extracted in Ontario, and the more of this work that is left until August the better. There are several different methods of removing the honey from the hives and extracting it, and the correspondents of the publications devoted to the beekeeping industry generally have more or less to say in regard to the details of the different systems. But it makes no difference in the end whether a man takes the honey from the bees by means of bee escapes, smoking, shaking, brushing, kicking or jouncing; whether he carries it to his extracting house in his hands, on a wheelbarrow, a truck, a wagon, or a flying-machine; whether he uses his uncapping knife hot, cold, wet or dry, or in what particular kind of extractor he throws the honey from the combs. The resulting honey is practically the same in either case, provided care has been taken to have everything clean, and as it should be. The great and important point in the extracting operation is that the honey shall be ready to extract, and the bees have not finished their work on it until they seal it up in the combs. If extracted before it is sealed, it is practically impossible to keep it in good condition any length of time, and it is almost certain to turn sour and ferment in the course of a few months. When the consumer buys a can of this honey and finds it "off," he does not know what is the matter with it, and thinks it is adulterated, and doesn't buy any more for a while, perhaps not at all. Then the beekeeper wonders what is the matter with the honey market, and thinks things about the "mixers" in the cities. There is practically nothing to be gained in the way of quantity by this extracting "green," as it is called, and very much to be lost in the way of quality, as stated above; but still it is done on a large scale in many sections. Some people do it because they think they get more honey that way, and some because they don't know any better, and think it is the right way; but a great deal of it is due to impatience or excitement, or some similar disease which strikes the beekeeper, especially if he be young in the business. When the bees are fairly falling over themselves piling the honey away in the extracting combs, there comes an almost irresistible impulse to the beekeeper to get in a hurry to take the honey from the bees and pile it away in his honey house. If asked why he was doing it, it might bother him to answer. Nine times out of ten it is simply because he wants the honey where he can see it and watch it grow, and figure up how much money he will have when it is all sold at the top of the market. A whole lot of honey in a tank strikes far more forcibly on the sense of possession than the

same amount scattered over the apiary, out of sight, and covered with bees. But the bees can take care of the honey better than the beekeeper can, and it should be left in their charge until the season is well over, or at least until it is practically all sealed, and then extracted and canned up tight to preserve all the natural flavor and aroma, so that, whether it be kept a month, a year, or ten years, when a can is uncanded and opened up it will be found in just as good condition as when it was put away. F. F.

GARDEN AND ORCHARD.

Pistillate Variety Planted Alone.

I am sending you by this mail a sample of strawberry bloom, also one of the plants. I question if you ever saw finer plants than these, which stand, on an average, 18 inches high, with any amount of bloom. They were simply white with blossoms, but positively no berries formed. The patch is of this variety exclusively. C. T.



Strawberry Blossoms.

(1) Perfect; (2) Pistillate or Imperfect.

Ans.—The reason your plants do not produce fruit is because they are all pistillate-flowered; that is, there are no stamens present in the flower to furnish pollen for fertilization of the blossoms. These are what are sometimes spoken of as "female plants." To insure fruitfulness with varieties of this kind it is necessary to plant near them some perfect-flowered varieties, which will furnish pollen for fertilization of the blossoms. I would recommend you to get a few new varieties. It is well to have at least three or four varieties to furnish a succession of fruit from early to late. I would recommend the following as good varieties to cover the season from the earliest to the latest: Splendid, Warfield, Clyde, and Irene. Both Warfield and Irene are pistillate varieties, but the others bear perfect flowers and will ensure good fertilization.

H. L. HUTT, Horticulturist.

Ontario Agricultural College.

Small Canning Factories in Virginia.

To the Editor "Farmer's Advocate":

Sir,—In many sections of Canada the question of the establishment of a canning factory has been considered, but, in the majority of cases, only to be given up as impracticable, the common impression being that it requires a very large amount of capital, especial training or skill in processing or in the management of the business, and the fear that farmers would not plant a sufficient acreage, and that an expensive plant would be idle; or, on the other hand, that they would plant too much, and the packed goods would have to be sold at a loss.

Now, the advantages of small factories are many. First, in a community where there has been little or no experience with such a factory, it is far better to start in a small way. Such a factory could be easily enlarged afterwards, as success warranted. A very small amount of capital is required, so that one person, or at most two or three, could manage the factory to suit themselves, and thus avoid the organization of a stock company. Such companies are often failures, owing to inexperienced men being at the head of them, or to friction among the members. No large amount of money is lying idle if the factory does not run each year, and it does not take so much money to run a small factory. In fact, one can be built simply to can the surplus fruit in good years, which would otherwise go to waste. It can then be held until such time as a profitable market can be found. In years when the prices of fruits and vegetables are good it could be allowed to lie idle, with no very great loss. Another strong point is the superior quality of goods which can be kept up by hand packing in a small factory. More personal attention can be given to sorting and packing, and in the majority of cases they can be packed fresh from the field, while in many cases in the large factories they have to be hauled long distances on dusty roads or on railroads, and then frequently held in stock, when the supply is large, until they are partly spoiled, or, at least, until the flavor has depreciated to a large extent. I was forcibly impressed with the advantages of the small factory during my recent trip through the Counties of Roanoke and Botetourt, Virginia. These two counties are largely devoted to the growing and canning of tomatoes and other fruits and vegetables. The larger number of the factories are owned by the growers

themselves. A very small building, or what we would call in Ontario a shed, answers for the factory, while in many cases I saw a threshing engine being used as a means of furnishing the steam. I was greatly surprised on being told by one man that his factory only cost \$500, and the capacity was estimated at 5,000 cans per day.

The following estimates, given by Prof. Price, Horticulturist, Virginia Experimental Station, who has managed a small factory on his own farm, will probably be interesting to your readers, in giving them an idea of what is really necessary.

THE COST OF A CANNING OUTFIT.

The cost will depend largely upon local conditions, the number of cans expected to be put up each day, or the kind of goods canned.

Prof. Price places the cost of a factory, estimated at 3,000 No. 3 cans or 5,000 No. 2 cans per day, as follows:

1 process kettle, 36 inches diameter by 36 inches deep	\$18 00
1 exhaust kettle, 36 inches diameter, by 24 inches deep	16 00
1 scalding kettle, 36 inches diameter by 24 inches deep	14 00
3 set of grate bars (or 3 steam coils, if boiler is used) and 3 furnace doors	15 00
2 gasoline fire pots (complete)	32 00
2 six-tier process crates	14 00
2 one-tier exhaust crates	7 00
1 set crane fixtures	10 00
4 capping machines	3 00
4 capping coppers	4 00
2 tipping coppers	1 00
2 scalding baskets	2 00
1 forging handle	25
1 forging stake	2 50
1 vise	2 50
1/2 dozen files	1 35
1 pair can tongs	70
1 forging hammer	1 16
1 floor truck	12 00
1 dozen peeling knives	2 00
Total	\$158 40

This estimate is exclusive of the building and the boiler. The kettles may be set in brick-work, or be attached to a boiler (a 20-horsepower would be required. Prof. Price prefers a building with two rooms, and gives the following instructions: The processing may be carried on in the room where the boiler is, and the peeling and preparing in the other, where there is not so much heat. The building in which the peeling is carried on should be well ventilated, so that the fruit will keep better. If the kettles are set in brick the cost will be much less than if a boiler is used, but canning will be more inconvenient and the capacity of the factory will be lessened. A boiler is much preferable. In the list just given no close top kettle is given for canning corn and beans. If this piece of machinery is added it will run the cost up \$125 additional.

Some tables on which to pack, cut and tip are necessary. Any ordinary carpenter can make them, and rough lumber may be used to lessen cost. A good supply of clean water is necessary. G. F. MARSH.

Paris Green for Potato Bugs.

Of late years there has arisen a howl against the use of Paris green for potato bugs, on the ground that it is injurious to the vines. That badly-made Paris green will, occasionally, burn the foliage of the potato plants is not denied; but that the pure article rightly used may be depended on not to do so, and that it is still the best standby for the potato grower is the verdict of the New York Agricultural Experiment Station, in a series of experiments undertaken with a view to establishing the efficacy or otherwise of the old-fashioned remedy.

In Bulletin No. 267, issued by the Station, a full description of the tests is given. Five rows were especially treated, the first with Paris green and water; the second with Paris green in lime water; the third with Paris green in Bordeaux mixture; the fourth with Bordeaux mixture alone; while the fifth was left unsprayed. The bugs were kept off the 5th and 6th by hand-picking. This series of five rows was repeated five times, and the plants were sprayed five times between July 7th and August 25th, one pound of the poison being used to each 50 gals. of liquid. In the lime mixture 2 lbs. of freshly-slacked lime were used for each 50 gals. of water.

All of the rows upon which the poison was used were found throughout to be quite free from bugs, and the foliage, especially in the rows upon which the Bordeaux mixture was used, was found to be much greener and fresher than that upon rows in which the picking was done by hand. From this it was argued that the Paris green actually helped in controlling blight as well as in killing bugs. There was no difference between the foliage of rows upon which lime was used and those on which the poison was used in water alone; nor was there any difference between the Bordeaux sprayed rows with and without Paris green. At digging time, however, the Paris green was found to have had a very beneficial effect, while the lime was shown to have been even injurious. The following table will show the exact improvement shown by the different treatments:

Paris green in water, increased the yield 46 bush. 9 lbs. per acre.

Paris green in lime water, increased the yield 33 bush. 53 lbs. per acre.

Paris green with Bordeaux, increased the yield 150 bush. per acre.

Bordeaux alone, increased the yield 142 bush. 30 lbs. per acre.

From this it will be seen that Bordeaux with Paris green is the best mixture yet discovered for potato plants.

Arsenite of lime in Bordeaux was also found effective, but unless prepared with great care is dangerous to use, hence cannot be recommended as a general remedy.

NEWS OF THE DAY.

Canadian.

Floods in Algoma stopped traffic on the C.N.R., between Port Arthur and Winnipeg, on July 6th.

Peterborough, Ont., was incorporated as a city on July 1st.

A heavy fire has been raging in the Temagami forest reserve.

Hon. Mr. Fielding has given notice of a resolution, fixing the salaries of the Governors of the new Provinces of Alberta and Saskatchewan at \$9,000.

Mr. John Bell, K.C., senior consulting solicitor of the Grand Trunk Railway Co., died in Belleville on July 5th, at the age of 84 years.

The ten Grand Trunk men who risked their lives in trying to rescue men from the St. Clair Tunnel last October have been presented with medals.

The freight traffic through the Sault Canals for the month of June has broken all records. The total tonnage for the month was 6,057,491, as compared with 3,139,236 for the corresponding time last year.

Rich discoveries of silver-cobalt, averaging \$3,000 to the ton, is reported from Kerr Lake, in the Temiscaming district, by Prof. Miller, Provincial Geologist for Ontario.

A surveying party will go over the country between Lake Abitibi and James Bay, with a view to reporting upon the advisability of extending the Temiscaming line northward to that point.

British and Foreign.

It is rumored that M. Witte may soon appear as full leader of the Liberal party in Russia.

General Sakharoff, Minister of War for Russia, has resigned.

Premier Rouvier has agreed to a conference, on condition that the Anglo-French entente will neither be judged upon nor interfered with.

The Russian battleship *Peresviet*, which was sunk at Port Arthur, has been successfully floated by the Japanese.

The town of Guanajuato, Mexico, has been devastated by a flood, in which over 500 people lost their lives.

It is stated on good authority that France has been drawn into the alliance between Great Britain and Japan.

During a tornado and thunderstorm which passed near Nocana, Texas, recently, twenty-five people were killed and many others injured. Hundreds of cattle were also killed.

Rockefeller has donated \$11,000,000 for the furtherance of higher education in the United States, \$1,000,000 to Yale, and \$10,000,000 to the Education Bureau at Washington.

Troops are being trained in Norway, but the Norwegians deny that they are to be moved against Sweden. It is reported also that orders have been issued for the mobilization of the Swedish army.

Lord Kitchener and Lord Curzon have come to an agreement regarding the erection of a line of fortifications along Northern India as a safeguard against possible Russian encroachments.

Colonel John Hay, Secretary of State of the United States, and one of the most eminent statesmen of the present time, died suddenly at his summer residence at Lake Sunapee on July 1st. Ellhu Root has been appointed as his successor.

In one of the most fashionable churches in East

Pennsylvania, the clergyman requested the men to appear in shirt-waists and the women without hats during the hot weather.

Lightning struck and injured ten people in Prospect Park, Brooklyn.

The French and German representatives have agreed upon plans for a conference on the Moroccan question.

Auditor-General McDougall has resigned. A request for increased superannuation accompanied his resignation.

The rebel ship Kniaz Potemkine, which has been dodging Vice-Admiral Kruger's squadron in the Black Sea for the past fortnight, has been captured, and the mutiny is probably over.

A Toledo, Ohio, inventor, A. R. Knabegshue, sailed three miles through the air in 25 minutes in his airship recently. The trip is said to be the most remarkable yet made, and Mr. Knabegshue says he has solved the problem of aerial navigation.

The Japanese have landed troops on the island of Sakhalin, the first exclusively Russian territory invaded by them. No battle was fought in invading it, but the movement is looked upon as very important, inasmuch as it proclaims Japan's intention to claim possession of it as one of the peace conditions to be discussed at Washington. The island is about 600 miles long, and from 20 to 150 miles broad, and is very valuable because of its coal mines and pine and spruce forests. Its population is about 20,000 of mixed Japanese and Siberians, with but few Russians.

THE FARM BULLETIN

Peach and grape prospects in the Niagara district are particularly good. The apple crop does not promise very favorably.

Niagara district farmers are taking steps to enforce the new Provincial law in regard to reckless automobiling, and prosecution of offenders will be vigorously carried forward until the nuisance is stopped.

A despatch from Santa Rosa, Cal., says that Luther Burbank has, by crossing, produced a tree, a species of walnut, which makes the fastest growth of any tree known.

"I notice in one of the newspapers a glowing announcement that a fast service for Old Country mail is being developed by the P. O. Department at Ottawa. That is all right I expect, but what we want is a swifter mail service in the country, so that farmers will have a daily delivery of their mail at local post offices, and also that these be more conveniently located, as has been suggested in the 'Farmer's Advocate.'"
READER.

Prince Edward Island.

After a somewhat cold spring we are now having delightful weather. As a result of abundant rains crops are looking exceedingly well. A good hay crop is now assured, and grain crops never looked better. The root crops are doing finely, and the cutworm that did so much damage last year is not much in evidence. We look forward to a bumper crop in all lines. This, with the promise of a good supply of milk and good prices for cheese and butter, will enable the farmer to recover from the effects of last year's exceedingly poor crops. Though it is the off year here, there is promise of a fair crop of apples.

The property, factory and plant of the Dominion Packing Company was sold under mortgage in Charlottetown on the 20th day of June, and bid in by the bondholders at the price of \$55,000. There is a probability that this factory may be run again in the near future. Its failure last fall demoralized our hog trade to a great extent, and we hope when it again resumes business under new and better management that it will be one of our most useful institutions. The bacon business can hardly be made pay here without a slaughtering-house.

Just now a Montreal firm are trying the experiment of shipping live hogs from here to Montreal. A fairly large shipment goes forward to-day. If this shipment turns out satisfactory others will be made during the hot weather. Considerable of our pork went in carcass to Montreal and Hull last fall. It would seem with such prospects for markets opening up that a stimulus will be given to the raising of bacon hogs again, which suffered severely from the mismanagement and failure of our only slaughtering-house.

An Institute campaign is in progress here, led by Duncan Anderson, of Ontario, and W. F. Stephen, of Quebec, assisted by local men. The principal feature of the meetings is education along dairy lines. The afternoon meetings are devoted to demonstrations of judging dairy cattle, score cards being distributed among the farmers present. The evening meetings are devoted to discussions of breeding, feeding, and keeping records of milk. This ought to have the effect of reviving our dairy industry, which has been waning of late years. Good horses—drivers and draft—are in

strong demand. Beef is a good price, and is being shipped to Sydney in quarters, by express, which enables it to get there in 24 hours. Eggs are a little lower, selling now at 14c. W. S.
July 3rd.

Disgusted with Fall Fairs.

Clover is an abundant crop this year with the majority of farmers, and the poultry should be provided for now. A good way is for a certain very choice piece to be selected. Let this be harvested in the best style, and laid away where it will be available next winter when the fowl complain because the good old summer time is no longer here. Clover is rich in many of the food properties that the best poultrymen regard as essential to the hen's welfare, and this is the time of the year to secure a stock of it that is neither too rank nor too ripe, but which is cured as nearly perfectly as wind and sun and thrift render it possible.

These are the days when the directors of our fall shows are meeting to prepare for the coming fall agricultural exhibitions. At such meetings policies are discussed, and a word in season may be well received. Cannot something be done to make these shows a greater help to the farmer? One has but to look over the list of prizewinners at the fall fairs to see that the names of many of our best practical farmers are conspicuous by their absence. The prizewinner, say in wheat, is not in many cases the man who is the best wheat-grower in the community. Rather, he is the man who is best skilled in the use of screens, and who is willing to take time to go over his show products handful by handful, if not grain by grain. This he does because he has his mind made up to visit all the shows within reach, not with the intention of promoting the good of agriculture, but of securing prizes for his own advantage. Comparing his wheat product acre for acre with his neighbor, his product may be found to be vastly inferior. His methods of culture may be the crudest and least worthy of imitation, but he is a prizewinner.

Again, at a recent fall fair a prize was given for the best farmer's turnout. The prize was captured by a competitor who had borrowed nearly everything but the horse and the wife. Stolen apples take the prizes in too many cases. Instances need not be multiplied, but it is high time for a move in the direction of honesty and decency in these matters. Scores of our most desirable farmers pass by the fall shows with no attempt at concealing their contempt for such organizations. They declare that our shows are of no use in the community, and that they do not a little to encourage knavery and every kind of sharp practice, while their influence in the way of promoting the interest of practical agriculture amounts to very little or nothing.

Part of the remedy is in appointing to the office an able class of men for directors. Directors require backbone, alertness, enthusiasm for the welfare of the farmer, a nose that will scent a "ringer" or any of his pestilential brood afar off, and a stout shoe to keep such faker-nuisances on the outside of the show grounds. Another remedy is for the directors to study the agricultural industries of the community, and to so adjust the prize-lists that the leading agricultural interests of the community may receive due encouragement.

Mr. W. E. Stock is the banner man in this community for early potatoes. His patch was planted on May 3rd, and the first sale was made on the market on June 23rd. The patch lay well to the sun; the soil is a sandy loam. The potatoes offered were a fine marketable size, and the yield per vine surprisingly abundant. Good drainage, good seed, judicious planting and cultivation are the secrets. Mr. Stock has the lead of this vicinity by about ten days. J. M. Wentworth Co., Ont.

Toronto Horse Parade.

The third annual open-air horse parade, conducted by the Open-air Horse Parade Association of Toronto, came off in that city very successfully on July 1st, the entries totalling over 500, and the number of horses in the procession being over 700. The horses were assembled on the driveways in Queen's Park, where they were classified and judged, gold, silver and bronze medals being awarded as prizes for the best three in each class, and rosettes and ribbons as commendations for others; a uniform money prize of one dollar being given to the groom in many divisions. All classes of horses were represented—saddle, carriage, single drivers and teams, of two, tandem, and four-in-hand, heavy-draft teams, single cart horses, grocers' and butchers' delivery horses, and ponies and old horses, all being out in considerable force, handsomely harnessed, carefully groomed, and in some cases beautifully decorated. After a two-mile parade through principal streets of the city, all returned to the Park, where the medals and ribbons were presented by officials of the association, amid applause from the immense gathering of people assembled to witness the show. Toronto may well be proud of its horses, and the Parade Association, which owes its origin largely to the efforts of Mr. H. G. Wade, now of Ottawa, is deserving of high commendation for its work, which is evidently creating a spirit of pride in the quality and care of the horses of the city, and will have a reflex influence upon the breeding and handling of high-class horses throughout the country. Other cities and towns might well copy the example of Toronto in organizing for an annual horse parade.

Papers and Discussions at the C. S. G. A. Convention.

Below are some of the papers delivered at the Canadian Seed-growers' Association convention, held in Ottawa, June 27th, 28th and 29th, an account of the proceedings of which appeared last issue. The extent and representative character of this body may be gauged from the membership figures given by the retiring secretary-treasurer, G. H. Clark, in his annual address, according to which there are in the Maritime district (New Brunswick, Nova Scotia and P. E. Island) 54 seed plots, operated by 47 members; in Quebec, 51 plots, by 47 members; in Ontario, 99 plots, by 94 members, and in the Western district (Manitoba, N.-W. T., and B. C.), 42 plots, by 41 members. The members have been augmented, too, since the collation of his report.

"METHODS OF GIVING PUBLICITY TO THE PROCEEDINGS AND ACHIEVEMENTS OF THE SEED-GROWERS' ASSOCIATION."

Wm. Thompson.—Upon a recent occasion objection was raised in the Canadian Senate that the newspaper press was not paying sufficient attention to the deliberations of that body. One of the leading journals of the country retorted that in proportion as the sayings and doings of the Senate were of vital interest to the people, would the journalists on Parliament Hill be found gravitating for news to the Red Chamber. At the exhibitions we invariably find people thronging where something is being done. The bee instinctively turns to those plants in which nectar is distilled. From these homely illustrations may we not fairly draw the moral that primarily and fundamentally this association, as an educational organization, must make its transactions of vital value to the farmer, and then facilitate its relations with the agricultural journalism of the country. In proportion as its sayings and doings are useful to agriculture will the press be attracted to its deliberations.

As laid down in the constitution, its avowed purpose is the production and general use of improved seed for farm crops. Toward that end meetings like the present are held, in order to accumulate and diffuse the results of the experience of successful grain-growers and seedsmen, and of the investigations of those eminent men who have made plant improvement their life-work. Of such gatherings the alert officers of the association will:

1st.—Keep the press well advised in advance, and specifically invited to be present in order to record and publish the proceedings.

2nd.—Provision should be made for the issue, as promptly and attractively as may be, of an annual report, giving in extenso the papers and discussions and such other data of this and other association meetings as will be of service, and which should be officially preserved for the benefit of members and others.

3rd.—From time to time during the year information of an emergent, educational character may be issued through the press and otherwise, relating to seed selection, the treatment of seed or crops for insect and fungoid pests, or the eradication of weeds.

4th.—The seedsmen of the country might very well be requested to make use of some of the facts in connection with seed improvement in their announcements or advertisements when offering for sale improved or "pedigreed" seed grown by members of the association.

5th.—More general attention might be paid to seed fairs, and by making displays of improved seed grown by members of the association, at the regular exhibitions, by offering special prizes for instructively-labelled exhibits and descriptions of the process of improved seed-growing, and by competitions in seed-grain judging for farmers' sons.

6th.—Members of this association, wherever farmers' institutes exist, should see that seed improvement is kept to the front by local speakers, and that the superintendents of institutes provide on their delegations speakers who can specialize on these subjects.

7th.—As growers begin to produce improved seed, the valuable qualities of which become recognized and fixed in type, and in sufficient quantities to warrant them in so doing, it will naturally be advertised in the press, and in some cases on placards at the main entrance to the farms, the cleanness and general appearance of which will serve as a guarantee of the excellence of the particular seed which may there be obtained. Whether disposed of direct to individual farmers or on the co-operative plan now under trial in several localities, or through some of the well-established and reputable seed houses of the country, as the good judgment and experience of those directly concerned may indicate, in any case promptness in the acknowledgment of enquiries and of cash, and in filling orders exactly as per representation made, and in accordance with the provisions of the new Seed Bill, will all facilitate the building up of a permanent and satisfactory business. The seed should, of course, be disposed of at such prices as will yield the grower a fair profit for his intelligent effort and enterprise.

"SCOPE OF WORK FOR THE CANADIAN SEED-GROWERS' ASSOCIATION."

Mr. G. H. Clark.—The rapid strides that have been made during the last quarter century in acquiring a knowledge of plant life and how it may be made to better serve the purposes of man, have not been closely followed by the great body of people who make their living primarily from the cultivation of plants in the form of field, garden and orchard crops on over thirty

millions of acres in Canada. Our leaders in research work have not been able to bring about a full application of the product of their work in a way to make for the improvement of crops.

In the production of crops, seed and soil are interdependent—"useless each without the other." It does not require close observation to be convinced of the advantages to be derived from the intelligent feeding of live stock, or the feeding of plants. The results are amply evident, and the profusion of illustrations that may be seen everywhere—many of them accidentally provided—are suggestive of the principles taught, and, as illustrations, they have had a wholesale influence in stimulating to a further application of those principles. That greater progress has not been made in the application of these principles on Canadian farms cannot be attributed so much to lack of understanding of the immediate results of such application as to the disinclination on the part of many farmers to do, at all times, that which they know best.

The benefits that are to be derived from the improvement of live stock and crops by breeding and selection are less readily apparent and seldom accidentally illustrated. They arise mainly through the continued intelligent application of far-reaching principles from generation to generation. A full measure of results is not obtained from a single action in any one year, and although the ultimate advantages from breeding and selection when applied to either animals or plants may be equally as great as those obtained from feeding and cultivation, the means for obtaining results are less attractive because they do not furnish quick and full returns from a single operation.

It is important that seed-growers have a general knowledge of soils and the principles of soil treatment in its relation to the improvement of plants. In the production of high-class seed, it is desirable that the various kinds of crops be provided with the environment and with plant food that will favor their development to the highest degree of perfection, and the dissemination of information relative to the principles of seed-growing would be more complete if combined with instruction regarding the treatment of soils in its relation to the feeding of crops. This is a question which deserves the consideration of those who are concerned in advancing the interests of seed-growers and the Canadian Seed-growers' Association.

The problem of formulating practical methods of applying the knowledge acquired from scientific research in the breeding and selection of plants and seeds, and encouraging their adoption on Canadian farms, is one in which the Seed Branch is mainly concerned. In this our work is, and will continue to be, largely educational, and for the benefit of the people as a whole. The work of the Canadian Seed-growers' Association, at the organization of which our Department of Agriculture stood sponsor, may be expected to be fruitful of direct benefit first to the members of the association—to the farmers who grow the seeds. Were such the only service that this association might render, it would be well worthy of the support of those who are engaged in the production of high-class seeds as a means to advance their personal interests through organized effort, but the narrower object would scarcely command the co-operation and support of our leaders in agriculture, and of Parliament and other governing bodies. The scope of work for the association, however, offers a much wider field for useful and attractive service. From the point of view of the Department of Agriculture, the organization of this association was made necessary in as much as it is expedient that this branch of educational work may have the full support and be in accord with the common teachings of agricultural educators, and be uniform throughout. By unitedly giving recognition to its objects, our leaders in agriculture, who are expected—in their advisory capacity as honorary members—to mould the workings of the organization, will do much to fix the keystone to the superstructure of future educational work that will make more certain the development, in geometric ratio, of the fruits of concerted action.

In the best interests of all concerned, it would, in my opinion, be well, at least for some few years, for this association to restrict its scope of operations to the general work as outlined in its original constitution, and in those operations to co-operate as best it may with the various other forces that are engaged in kindred work. The breeding of new and improved varieties of crops by cross-fertilization is a work that may for the present safely be left with experiment station experts. It is the privilege and duty of governments to provide liberally for the breeding and introduction of superior types and varieties of crops, and Canadian farmers are likely to continue to look to the departments of agriculture, through their experiment stations, for advancement from such a source. It should rather be the purpose of seed-growers to make the best use of the seed provided from experiment stations by increasing its supply in its state of purity and productiveness, and to make further improvement.

The members of the association will expect you to provide the means as soon as you may, whereby they may, more conveniently, have a voice in the management of its affairs. They have a right to expect that, and the constitution makes provision for the formation of branch associations on the authority of the board of directors of this central organization. The constitution also defines in general terms the duties and scope of work for the officers of this association. It is now plainly evident to me that the time is not far distant when the work of the association may become unwieldy

and too great for your Secretary-Treasurer to manage effectively in the best interests of the association or of the producers and users of seed. It would be better then for the directors of the association to make a division of the work that may be expected of your Secretary, and look to branch associations to carry out such of your general plans and recommendations as may be more effectively managed at closer range. You may then learn of the desires of members through the media of branch associations.

This association and its branch associations have a right to expect liberal support from the Dominion and Provincial Governments, through their Departments of Agriculture, so long as the operations of the association be effectively directed in a way to attain its objects. It will require substantial grants from year to year, but more especially during the first few years of its work. You may be assured, too, that in considering applications for such grants, responsible Ministers of Agriculture will want some evidence that the funds thus supplied will be well and wisely used, as a means to attain the broader objects for which the association was formed. As administrators they will be free to recognize those objects, but may not at all times be expected to approve of and support all the means used by the association to attain them.

Seed-growers should be expected to contribute, either as membership fees or otherwise, such amounts as may be found necessary and expedient to use in an organized effort to further their personal interests. The use of association funds for such purposes as the issue of an annual catalogue of the seed produced for sale by members would be considered legitimate and in the best interests of seed producers, of the association, and of persons desirous of obtaining high-class seeds; but even for so commendable a purpose it may not be considered good policy to supply money that belongs to the people as a whole.



L. H. Newman, B. S. A.

Secretary-treasurer Canadian Seed-growers' Association.

In the continuance of its educational work, the Seed Branch will look to the Canadian Seed-growers' Association for its co-operation and support. It will expect it to provide competent, trustworthy and energetic men to take an active interest in the direction and management of its affairs. The public will not expect that the educational policy of the Seed Branch will be directed with the one view to further the interests of your association, although it might fully appreciate the fact that the best interests of both are inseparable.

The Department may reasonably be expected to assist in protecting the interests of the public who purchase seeds, by examining from time to time into the operations of seed-growers. That would also safeguard the best interests of the association. The Department in return will expect the members of the association, individually and collectively, but more especially those who are entrusted with its government, to use the means at their disposal for stamping out any attempts at perpetrating fraudulent practices on the part of persons who may be admitted as members.

The records of the association will mark the progress of improvement in the cultivation of crops throughout the agricultural districts in Canada. The objects in view are well worthy of the best efforts of men who are willing to undertake things that are difficult of achievement.

FUNGI AND INSECTS AFFECTING FARM CROPS.

Prof. Wm. Lochhead—The plan or method of insect control on an ordinary farm devoted to cereal crops is quite different from that which is adopted on a fruit farm. The chief injurious insects of the farm, viz., the wheat midge, the Hessian fly, the wireworm, and the clover seed midge, cannot be controlled by application of Paris green, kerosene emulsion, or soap solutions—

the plan under present conditions being impracticable. Cultural methods are employed almost entirely, by which we mean "some mode of culture or handling the crop which fatally interferes with the development of a given insect pest. It would simplify matters very much if the farmer could control his insect and fungous pests by spraying, as does the fruit-grower, but, as a matter of fact, he must put forth great exertions; he must be more alert bodily and mentally; he must possess a greater knowledge of the habits and life-histories of the insects he wishes to control, and he must look ahead and consider the effect which any given procedure will have upon the insects."

Let us consider some of the cultural methods which are usually effective, and are adopted by our best farmers:

1. Clean Farming.—This involves the destruction of plant refuse and weeds, which allow the insects to multiply. Many injurious insects pass the winter in dead stalks, under plant refuse, and in weeds and old fence corner sod land, and it is very important that all such plant waste should be destroyed, by fire or other means.

2. High Culture.—It is a well-known fact that vigorous, healthy-growing plants are far less liable to attack, and are far more likely to recover from injury than those that are in any way weakened in vitality from lack of fertility or neglect. Therefore, if a farmer and gardener gives special attention to the fertility and drainage of his land, procures the best seed, and by proper planting and cultivation secures vigorous plants from the start, and by proper care endeavors to keep them in this condition until the product is matured, he will have accomplished more in preventing loss from insect depredations than he would accomplish by the best remedies known, applied to half-starved, neglected plants."

3. General Farm Management.—Under this head comes rotation of crops, which is, perhaps, the most important single factor for the control of farm insects. Where short rotations are adopted, unfavorable conditions are furnished the white grub, wireworm, root aphid, wheat-straw worm, and Hessian fly. The general plan is to change the crop so frequently that it becomes impossible for any insect to pass through its life stages without being seriously disturbed, and its food supply destroyed. Under general farm management will come also time and method of plowing, time of planting and harvesting, all being important factors at critical times. Deep fall plowing is the only means we know of to control wireworms and white grubs, and is effective against locust, cutworms, army worms, and wheat midge. With regard to time of planting, early planting is advocated for the white midge, and late planting for the Hessian fly.

Early harvesting of clover is the only effective means of controlling the clover seed midge, and of securing a supply of clover seed on second crop. Chaff and screenings of infested wheat fields should be destroyed at time of threshing.

The wheat midge has not been so destructive in recent years as in former years, when the losses were enormous. The general adoption of rotation of crops and fall plowing have, perhaps, been the chief factors in its control. The deep plowing of old wheat fields buries the larvae so deeply that the adult flies are unable to make their escape. The remedies are altogether preventive.

The Hessian fly remedies are purely cultural: (1) The preparation of a good seed-bed; (2) the planting of the seed as late as local conditions will allow; (3) the planting of early trap crops; (4) co-operation among farmers, and (5) the destruction of screenings at time of threshing.

Wireworms and white grubs are the larvae of beetles, and require two or more seasons to reach maturity. They do a great amount of injury by feeding on the roots of grasses and cereals. No effective remedy has been found, but fall plowing will do much to reduce their numbers. Where land is not allowed to remain longer than two years in grass or sod, there is little danger that these grubs will multiply. A systematic rotation of crops and the breaking up of the grass land at the end of the second year will control them.

The reddish maggots of the clover-seed midge become full grown about the 20th of June in normal years, when they drop to the ground and pupate. To kill these maggots before they reach the ground is the problem to solve. This may be done by pasturing the clover until the 25th of June, and then securing a late crop of seed, or by cutting the clover for hay before the maggots have left the heads, and securing a late crop of seed as before.

The clover root borer in some districts prevents successful clover growing. Where numerous, the best plan is to plow down the clover after one year and devote the land to other crops.

Weevils of stored grain occasionally do considerable damage, especially when grain is held over from one year to another. Treatment is comparatively simple, and consists in the use of carbon bisulphide (1 lb. to every hundred bushels). If the bin can be made tight, the treatment can be carried out in the granary. The liquid carbon bisulphide is poured into a jar or basin placed on top of the grain. Blankets or oilcloths are then thrown over the grain, and the whole left for thirty-six or forty-eight hours. The liquid quickly changes into gas, which settles down into the grain and kills the weevils. The same method is used to kill pea weevils.

Hydrocyanic acid gas is sometimes used in mills, and is very effective.

Rust.—We must confess that we have no remedial

treatment for rust of cereals. It was thought that the presence of barberry in the immediate presence of grain fields was responsible for this affection, but it now appears that while barberry intensifies the rust and increases the loss, the absence of barberry does not mean the absence of rust. It would seem to be advisable to use as seed grain obtained from fields free of rust, to avoid excessive use of nitrogenous manures, such as barnyard manure or nitrate; to develop rust-resistant varieties of wheat, as has been done with considerable success in Australia; to avoid planting barberries; to drain the land thoroughly; to avoid the use of manure obtained by feeding stock rusty straw, and to burn or plow down the rust stubble before seeding, where such a procedure is practicable, as in the West.

THE INTRODUCTION AND BREEDING OF SUPERIOR VARIETIES OF FIELD CROPS AT THE EXPERIMENTAL FARMS, AND THE DISTRIBUTION OF THE SEED SO OBTAINED.

Dr. Wm. Saunders.—In 1886, when the Act of Parliament was passed under which the Experimental Farms were established, it was provided that they should test the merits, hardiness and adaptability of new or untried varieties of field crops, and disseminate among farmers, upon conditions prescribed by the Minister, samples of the surplus of such products deemed especially worthy of introduction. Accordingly, importations of the seed of important farm crops were made from widely varying sources, including Russia (the home of the Ladoga wheat), England, France and Germany. Trees, shrubs and plants were obtained from at home and abroad.

Among the samples of grain secured the first year were several varieties of wheat from India, many of which were early in ripening and of excellent quality, but as after five or six years' trial it was found impossible to make these wheats produce crops equal in volume to those already grown in Canada, the cultivation of most of them was gradually given up, though not before a number of crosses had been made of the earliest Indian wheats with vigorous productive sorts grown in Canada.

The most promising of the various sorts of grain secured by importation, crossing and otherwise, are grown in large fields at the several Experimental Farms, and a large proportion of the produce is sent every year to Ottawa, whence a general distribution in four and five pound samples is made throughout the Dominion, as per the annual spring announcements. It is remarkable how rapidly a supply of grain may be built up from one of these small samples. Take, for instance, oats. The four pounds if well cared for will usually produce three to four bushels. This, sown on two acres of land, will, at a very moderate estimate, give 100 and sometimes upwards of 200 bushels, but, taking the lower figure, the crop at the end of the second year would be sufficient to sow 50 acres, which at the same moderate computation would furnish 2,500 bushels available for seed or sale at the end of the third year.

The critical point is threshing. Farmers are expected to harvest, store and thresh separately the product of their plots, threshing by hand, with flail or otherwise. Cutting the heads by hand and placing them in sacks may be a convenient method in some cases. At the farm we thresh these sacks by beating with a stick. This spring 42,000 samples have been distributed from the Experimental Farms, making a total since the work was started of over 500,000.

While the great bulk of the farming community appreciates the benefits of this distribution, occasional complaints are made that the samples are too small, and that not less than two bushels should be sent to each applicant. But this would limit the distribution to comparatively few individuals, which would be very unfair and impolitic. The farms have also been criticised for not arranging to have seed grain available to farmers by purchase in lots of two bushels and upwards. The fact is this has been the practice at the Western Farms for many years past, and every season after the regular distribution of smaller samples has been provided for, all the surplus stock has been sold in quantities of from two to five bushels each. During the past season more than 200 farmers have been so supplied.

Improvement in the seed grain used in Canada has been brought about by three different methods: (1) The introduction of varieties grown in other countries; (2) the production of new sorts by cross fertilization, where an effort is made to combine the desirable qualities found in one or two different sorts; (3) the improvement of existing varieties by judicious selection. The first of these has been referred to above; we shall next refer to the breeding of new cereals, restricting our consideration to wheat.

The mature wheat kernel is a single seed, enclosed in tightly-fitting walls, which fold inward, forming a fold or groove upon its upper surface. The skin, which consists of three layers, when crushed and ground forms bran and shorts. The interior of the wheat kernel, which is composed of starch, gluten, etc., when ground furnishes flour in proportion of about seventy to seventy-five per cent. of the whole. The germ or embryo of the plant, in which the principle of life lies dormant, is found at the lower end of the kernel, and is surrounded by a supply of food material. When the grain is sown and conditions are favorable, the germ is awakened to life and begins to feed on the store of nutriment surrounding it. Shortly the roots protrude

and strike into the soil while the blade shoots upward to the light.

There is a broad and general law underlying reproduction in nature, that "like produces like." The seed contains in embryo the perfect plant; its details and characteristics are all enfolded in its substance, awaiting favorable conditions for germination, which, once started in suitable soil, results in a gradual unfolding of the mature specimen. During the formation of the seed the characteristics of the future plant are laid down.

If we examine the structure of a wheat head we find it is formed of a number of spikelets, supported by a central stalk, bent zigzag, forming a series of notches and bearing a number of flattened spikelets, one of which grows on each notch. Each spikelet consists of a number of florets, usually five or six, arranged in a fanlike form. The lower flowers mature first, the second pair follow later, and those at the top last. The first two flowers in each spikelet are usually fertilized and matured without mishap. The others sometimes partially or wholly fail through unsuitable weather, and in that case the weight of the crop is light. If the spikelets are well filled the crop is generally a satisfactory one. Wheat is usually self-fertilized, the pistillate and staminate portions of the flower being near together, within the chaffy enclosure.

The pollen consists of a multitude of very minute round bodies, which when dropped on the succulent pistil send out from their substance a tiny thread, which penetrates the pistil and passing downward through its substance reaches the ovary near the base, penetrates the ovule and fertilizes it. This act of fertilization impresses the seed with its future characteristics, and as the seed grows these are embodied in its substance, and to a considerable extent transmitted to its progeny. When wheat is fertilized by its own pollen the kernels resemble one another very closely, although occasional differences may occur through variation; but where cross-fertilization is effected, the character and structure of the grain is so modified as to partake more or less of the characteristics of both parents. This variation, or sporting, is often continued through several generations, until finally the types become fixed and the varieties reproduce themselves with little or no change.

In artificial fertilizing of wheat, the head should be selected and worked in soon after it has pushed out from the sheath. The floral chambers are covered with two layers of chaff, the outer one of which is torn off, or bent back with a pair of finely-pointed forceps, and the inner one pulled back by seizing it near the tip and bending it downwards, exposing the flower to view. The anthers are then carefully examined, and any spikelets containing anthers mature enough to offer the possibility of any pollen having been shed are torn off and thrown away, and other flowers opened until some are found with the stamens green but almost mature. These are removed with much care, so as to prevent injury to the pistil, and the flower covered by replacing the inner coating of chaff in its natural position. After a sufficient number of flowers have been operated on, the other portions of the head are torn off. From previously collected heads of the variety which is to serve as the male, flowers are sought containing anthers fully matured and covered with pollen. Then the individual flowers prepared for fertilization are reopened in succession, and the soft feathery pistil is gently touched with one or more of the pollen-bearing anthers from the other variety, until a perceptible quantity of the powder has been applied, when the flower case is again closed. After all the flowers in a prepared head have been operated on it is wrapped in thin paper, tied on so as to prevent access of any other pollen. The covered head is then tied to a piece of stick or bamboo cane, and remains untouched until harvest time. Each kernel when sown the following spring will form the starting point of a new variety, or, indeed, of a number of new varieties.

The single plant from any of these kernels grown the first year will produce heads all alike, and these will usually resemble closely the variety on which the kernel has been produced, though occasionally it will take after the plant from which the pollen has been gathered. If the cross has been successfully made, the grain obtained from the plant of the first year's growth when sown the next season will usually produce several different forms, some resembling one parent and some the other, while other plants will produce heads more or less intermediate in character. After selecting the desirable type or types, all others are discarded, and after several seasons of careful selection the type usually becomes fairly permanent. Variations, which occasionally occur, should be separated.

For the first few years our work in cross-breeding was done chiefly by myself, but during the next ten or twelve years able assistance was rendered in cereals by Mr. W. T. Macoun; also by Dr. A. P. Saunders. More recently the bulk of the cross-breeding has been done by Dr. C. E. Saunders, who has been wonderfully successful, not only in cereals, but in fruits and other lines. Since the appointment of Dr. C. E. Saunders as experimentalist in 1902, a large number of additional crosses have been made, and much attention paid to the work of purifying and selection of seed. Much time has been given to the selection of single kernels quite true to type, which have been picked out in sufficient quantities to sow good-sized plots. Much attention has been paid to earliness in ripening, and the best of the earliest wheats now being propagated will ripen fully two weeks earlier than Red Fife, and are of excellent quality, though, of course, not expected to be so

productive. Several selected strains of Red Fife have been found which ripen three or four days earlier than the regular form, and further efforts are being made in this direction.

The foundations for future progress are being thoroughly laid. Ready methods have been worked out by the experimentalist for determining approximately the relative quality of wheats, even where only a few kernels are available, so that inferior milling sorts may be promptly discarded. Researches are also aided by a roller process mill, by means of which the proportion of the different grades of flour in a given sample of wheat can be determined and its milling value ascertained, though no more than a pound or two of the grain is obtainable. A small baking plant completes the testing facilities.

Improvements already in sight as a result of our work are most encouraging. The gain made, with some of the new wheats of high quality, of two weeks over Red Fife in date of ripening will be of immense advantage in the Canadian Northwest, while the improvements made in other sorts of wheat, and in other cereals, lead us to look for great progress, and in future, under the charge of a thoroughly trained worker, advancement will, I believe, be rapid.

N. B. Agricultural Outlook.

In New Brunswick, as in the other Maritime Provinces, we are just beginning to feel a little satisfaction after a most discouraging spring. A few days of warm sunshine and genial showers have brought life and growth where there was nothing but stagnation and threatening death. There has been such an unnatural chill in the air! We have had two warm periods lately, of hardly a week each, but they seem to have done a good month's work, and to have placed us not so far behind an ordinary season, as we appeared to be at one time. All grain crops and potatoes are now looking well. Grass is unequal, but now making rapid growth. There was no winter-killing, and grass is, in general, thick on the ground. This is no fruit district, but every farmer has from a dozen to a hundred apple trees. Blossoms were late of coming out, and I think most escaped the frost. Quite a number of trees all over the country have been destroyed by mice, which seem to have been unusually numerous and destructive. All growing trees should be protected from mice, and there are many ways of doing so well within the reach of all. The cattle of all careful farmers came through the long winter and cold spring in good condition for making the most of the grass and a prosperous season for the farmer. A good many fail to give, cows especially, the needed care, and the income of such is uncertain and often very restricted. In Victoria County almost every farmer keeps sheep, and has from a dozen to three or more dozen of lambs to sell at this season. In this neighborhood we have been very careful in breeding, and have attracted buyers from the other side of the line, who are willing to pay better prices than we can get in the home market.

We have not found the butter or cheese factory a paying business in this part of the country. The land is considerably broken up, roads hilly, settlements and settlers scattered, so that we have no chance but follow mixed farming. In consequence, we are all in search of the animal known as the general-purpose cow. This is a pregnant question all over the Maritime Provinces, and one which breeds much controversy. Dairymen hold that there can be no such animal; that there can be no "happy mean" between the milk and the beef animals. There was a time when the pig seemed a creature intended more for bristles than meat. The breeder took him in hand and made a mountain of grease of him; then when the market called for it we got the fine mixed meat the packer likes. With the long, slick hog as an ideal, we are all the time getting nearer a fixed type—and that in several breeds. May we not hope to reach our ideal in a dual-purpose cow?

I have seen the wild cattle of Britain in their pristine state. They stand in about the same relation to the cattle of to-day that the hog of bristles does to the well-bred hogs of to-day. Our present fine dairy cows, and Shorthorn and Aberdeen-Angus heaves, have been evolved from such animals. We are not through with them yet.

W. L. McPHAIL.
Victoria Co., N.B.

Fair Dates for 1905.

Winnipeg Industrial	July 20—28
Western Manitoba, Brandon	Aug. 1—4
Canadian National, Toronto	Aug. 26—Sept. 12
Eastern Exhibition, Sherbrooke, Que.	Sept. 2—9
Western Fair, London, Ont.	Sept. 8—16
Central Canada, Ottawa	Sept. 8—16
New York State, Syracuse	Sept. 5—10
Ohio, Columbus	Sept. 4—8
Minnesota, Hamline	Sept. 4—9
Wisconsin, Milwaukee	Sept. 11—15
Indiana, Indianapolis	Sept. 11—15
Michigan, Pontiac	Sept. 11—16
Nova Scotia Provincial, Halifax	Sept. 13—21
W. Michigan, Grand Rapids	Sept. 18—22
Kentucky, Lexington	Sept. 18—23
Fredericton, N. B.	Sept. 21—27
Charlottetown, P. E. I.	Sept. 26—29
Illinois, Springfield	Sept. 30—Oct. 7
Dominion Exhibition, New Westminster, B.C., Sept. 27—Oct. 7	
Sussex, N. B.	Oct. 2—6
Lewis & Clark Exposition, Portland, Oregon: Live stock	Sept. 19—29

The Budget Speech.

The budget speech for 1905 was delivered by Hon. Mr. Fielding, Finance Minister, on July 6th. Since 1896, he said, the net public debt had been increased by \$278,232. During the present year there will be an increase of probably \$1,250,000. The expenditure was justified on the grounds of the enormous canal and railway building which has been and is still going forward, and the amounts spent in efforts to attract settlers, as a result of which the population has been increased by fully a million people.

The intention of the Government to maintain a system of maximum and minimum duties, and a British preference, was announced, as was also the establishment of a Tariff Commission, whose members are to be appointed from the Cabinet, and whose duties will be to make inquiry into trade conditions throughout the country, and frame a new tariff for presentation to Parliament next year.

The following tariff changes were announced: Rolled Oats—Duty imposed of 60 cents per hundred-weight.

Dry White Lead—Duty increased from 5 per cent. to 30 per cent., with British preference.

Cement—To equalize, duty of 25 per cent. ad valorem imposed on bags in which cement is imported from United States.

South African Wines—Duty of 25 per cent. to encourage trade.

Settlers' Effects—Clause substituted to prevent the importation of any machinery or plant under the guise of effects.

Machinery—Beet-sugar machinery, and machinery used in alluvial gold mining, continued on free list for another year.

Molasses—To accommodate Newfoundland trade, molasses from British West Indies coming through Newfoundland will be admitted free as though coming direct.



J. B. Spencer, B. S. A.

The new Assistant Live-stock Commissioner.

New Assistant Live-stock Commissioner.

Mr. James B. Spencer, the well-known agricultural journalist, has been appointed Assistant Live-stock Commissioner at Ottawa, where he will assume his new duties this month. Mr. Spencer was born a stockman; his father, the late H. H. Spencer, being well known as a breeder and importer of Southdown, Shropshire and Dorset sheep, Shorthorn cattle, Clydesdale horses

and Berkshire swine, and his grandfather, Mr. John Spencer, imported the first Devon cattle and Shropshire sheep brought to Canada, being also the second importer of Southdowns. He was brought up in the neighborhood of the Millers, Davidsons, Grahams, Hon. John Dryden, Arthur Johnston, Beith, and other stockmen of wide repute, whose spirit and ideas he imbibed. To complete his agricultural education, he took a full course at the Ontario Agricultural College, graduating as a B. S. A. Very largely he earned his own way through that institution. While other boys were at football or other recreations, he was in the stable or the college fields at work. He turned his attention to agricultural journalism, which he learned in the office of the "Farmer's Advocate," doing his work faithfully and well. As a live-stock reviewer, particularly in the horse department, he is well known to the habitués of our leading shows. During the past few years his journalistic work has been in Montreal, of which he takes leave on July 15th. That he will take into his new position the same integrity of character, zeal and faithfulness to duty, with the maturer knowledge of added years, is well assured, and augurs well for the future of the live-stock department, and is a tribute to the wisdom of the Minister of Agriculture in his selection.

Short-turning Hay Rack.

To the Editor "Farmer's Advocate":

In reply to B. M. C., would say any ordinary rack can be arranged to turn short by cutting a piece out



of the sill just behind the front wheels, and bolting and clipping a piece on top, as shown in cut. With a 4x4 bolster block the rack may be turned as short as the reach will allow. E. McKEEN. Springvale, Norfolk Co., Ont.

MARKETS.

Toronto.

LIVE STOCK.

Export Cattle—Choice are quoted at \$4.80 to \$5.20; good to medium, \$4.60 to \$4.80; bulls, \$4 to \$4.50, and cows at \$3 to \$3.75.

Butchers' Cattle—Picked, \$4.80 to \$5; fair to choice, \$3.80 to \$4.80; common, \$3 to \$3.50, and cows and bulls, \$2.50 to \$3.75.

Stockers and Feeders—Stockers, \$2.50 to \$3.80, and feeders at \$3 to \$4.75.

Milch Cows—Few good cows are coming forward, although the demand for these is active. The range of prices is unchanged at \$30 to \$50 each.

Calves—A large number were offering, trade fair, and prices unchanged at \$2 to \$10 each, and 3 1/2c. to 5 1/2c. per lb.

Sheep and lambs—Export sheep, \$3 to \$3.80 per cwt., culls, \$2.50 to \$3.50, and spring lambs, \$3.50 to \$5.25 each.

Hogs—\$6.40 per cwt. for select, and \$6.15 for lights and fats.

BREADSTUFFS.

Wheat—Ontario—Local quotations are 96c. to 98c. for No. 2 red and white, and 78c. to 80c. for No. 1 northern, \$1.11; No. 2 northern, \$1.08, and No. 3, 92c., lake ports.

Millfeed—Bran, \$12; shorts scarce at \$17.50 to \$18. Manitoba bran, \$17; shorts, \$19, at Toronto and equal points.

Oats—Scarce at 45c. to 46c. for No. 2, outside.

Barley—Is in demand for feeding, and sells at 46c. to 48c., according to quality.

Rye—Nominal at 60c., outside. Corn—Canadian, nominal, at 54c. to 55c., Chatham freights; American, firmer, at 64 1/2c. for No. 2 yellow, and 64c. for No. 3 yellow, at lake and rail freights.

Peas—In demand at 71c. to 72c. for No. 2, west and east; 75c. for milling.

Rolled Oats—The increased duty announced in Hon. Mr. Fielding's budget speech is welcomed by the trade. Not that it will, by any means, shut off the American product, but that it puts the duty on rolled oats on a parity with the duty on the grain. At current prices there has been more duty on the grain than on the product. It is calculated that five bushels go to 100 pounds of rolled oats, which, with the duty at 10c. per bushel, would cost 50c. to import, whereas the duty on rolled oats has been considerably less. Now, at 60c. per 100 pounds, the domestic mill can import

THE CROWN BANK OF CANADA

Capital Authorized, \$2,000,000.00. Head Office, Toronto, Ont. Edward Gurney, President.

EVERY DESCRIPTION OF BANKING BUSINESS TRANSACTED. Special attention given to accounts of Cheese Factories, Drovers and Grain Dealers, and all out-of-town accounts. Farmers' Notes Discounted, Farmers' Sales Notes collected and advances made against their security. Municipal and School Section accounts received on favorable terms. SAVINGS BANK DEPARTMENT Deposits of Twenty cents and upwards received, and interest at 3 per cent. per annum, compounded four times a year, without presentation of passbook. No delay in the withdrawal of any portion or the whole of the deposit. G. de C. O'GRADY, General Manager.

oats and have an advantage of 10c. a barrel in the market on the product of imported oats. With the high price of Ontario oats, American mills have been shipping in large quantities of rolled oats and underselling Canadian mills. It is estimated that 20,000 barrels have come in this year. Even now Canadian millers estimate that rolled oats can be imported to compete with them, and this will hold the market. Rolled oats sell at \$3.50 a barrel in Detroit; the new duty will be \$1.08, leaving 42c. to cover the freight, as the difference between the price here, \$5 for cars of barrels, on track, here, and \$4.75 for cars of bags, 25c. more for broken lots here, and 40c. outside.

COUNTRY PRODUCE.

Butter—The demand for butter is active, and the market has a firm tone. Creamery, prints 19c. to 21c. do, solids 18c. to 19c. Dairy lb. rolls, good to choice 15c. to 17c. do, large rolls 14c. to 15c. do, medium 13c. to 14c. do, tubs, good to choice 14 1/2c. to 15 1/2c. do, inferior 12c. to 13c.

Cheese—Receipts are large. Quotations, 10 1/2c. to 10 3/4c. Eggs—The market has still a firm tone. Receipts are fair, but the shrinkage is heavy. Quotations, 17c.

Potatoes—The tone of the market is easy, as receipts of new are heavier. They are quoted at 80c. to 90c. per bushel, or \$2.50 to \$2.75 per barrel. Canadians are commencing to arrive on the market.

Baled Hay—Farmers are still endeavoring to get rid of the heavy stocks on hand, and receipts are large, and the market dull. Anything but No. 1 timothy is almost unsalable. It is quoted at \$7.50 to \$7.75 per ton, on track, here. No. 2 sells at \$6.

Baled Straw—The market is dull, with plenty offering. Quotations unchanged at

\$5.75 to \$6 per ton for car lots, on track, here. Beans—Hold steady, as follows: Hand-picked, \$1.75 to \$1.80; prime, \$1.65 to \$1.70, and under-grades, \$1.25 to \$1.50.

FARMERS' MARKET.

Table listing various farm products and their prices, including Wheat, do, red, do, spring, do, goose, Oats, Buckwheat, Barley, Hay, Dressed hogs, Butter, Eggs, Spring chickens, Fall chickens, Turkeys, Potatoes, Apples, Parsnips, Cabbages, Beef, Mutton, Spring lambs, Calves.

WOOL, HIDES AND TALLOW.

Table listing wool, hides, and tallow prices, including Inspected hides, Country hides, Calfskins, Sheepskins, Horse hides, Tallow, Wool, Rejections.

TORONTO HORSE MARKET.

The local horse market is exceedingly quiet, and even making allowances for the season, the volume of trade passing cannot be regarded as being anything better than "fair," and the limited transactions are generally of a local character, though a couple of carloads of useful animals have been bought here and shipped out for work on the C. P. R. extension from Allison to North Bay. The demand at present is generally for the commercial classes, although carriage horses, drivers and saddle horses of good quality and conformation find a ready sale. At the moment, however, the sale-rings are not very largely attended, and most of the high-class animals offered are being disposed of at private sale. From the standpoint of prices there is not much change to report, and where fluctuations are registered they have generally been in the direction of lower values, though there are no very marked recessions to record.

The range of prices for the week, as reported by the Canadian Horse Exchange, Jarvis Street, is as follows:

Table listing horse market prices for various types of horses and drivers, including Single drivers, Single cobs and carriage horses, Matched pairs and carriage horses, Delivery horses, General-purpose and express horses, Draft horses, Serviceable second-hand workers, Serviceable second-hand drivers, Single roadsters, Matched pairs and carriage horses, Delivery horses, General-purpose and express horses, Draft horses, Serviceable second-hand workers, Serviceable second-hand drivers.

In answering the advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Montreal.

Butter—Not for months has there been such a movement in butter or cheese as there was towards the close of the week before last, and the advance which took place then shows no sign of recession. Fancy creamery butter, 20¢; fine to choice, 20c. to 20½c., and good, at 19½c. to 20c.

Cheese—Finest Ontario, 9½c. to 10½c.; finest Townships, 9½c. to 9½c., and finest Quebecs, 9½c. to 9½c.

Eggs—Straight-gathered, 16c.; select stock, around 18c., and No. 2, 14c. to 14½c.

Potatoes—60c. bag, in store; new American potatoes selling at \$2.50 bbl; new Canadians not yet in quantity.

Beans—Holders demanding \$1.65 to \$1.70 bushel for prime pea beans.

Oats—Carload prices in Montreal, 49c. for No. 3, in store, and 50c. for No. 2.

Hay—Prospects for a large crop of hay. No. 1 timothy, \$8 to \$8.50; \$7 to \$7.50 for No. 2; \$6 to \$6.50 for clover mixed, and less for clover. Demand light.

Live Stock—Demand from Canadian exporters for ocean freight quite active of late, and rates are naturally firmer. Shipments from Montreal during June were 14,442 cattle, 1,695 sheep and 57 horses, or 2,712 fewer cattle, 2,223 fewer sheep, and 10 fewer horses than in June last year. Shipments for the season to date show a decrease of 4,058 cattle, and an increase of 1,347 sheep, as compared with last year, and a decrease of 17,665 cattle and 929 sheep, as compared with 1908. Receipts of live stock light in Montreal last week, particularly of cattle and hogs. The effect was to strengthen prices, and cattle sold higher than for some time, a few being reported as having sold at 6c. The general price for choice, however, was 5½c. to 5½c.; fine to choice being 5c. to 5½c.; good butchers' stock selling at 4½c. to 5c.; mediums are 3½c. to 4c., and common at 2½c. to 3½c. Hogs were also scarce, and prices firm to 7c. and 7½c. for selects, mixed being 6½c. to 7c., and heavy, 6½c. to 6½c. Milch cows were mostly poor, and sold at \$30 to \$40 each. Calves were in good demand, and some sold at high figures, as much as \$13 each being quoted. The general range was \$2 to \$10, according to quality. Lambs sold at \$2.50 to \$5 each, and sheep at 3½c. to 3½c. and 4c. per pound.

Dressed Hogs—In good demand. Fresh-killed fine abattoir stock, 9½c. to 9½c.

Honey—Light strained, 7c. to 7½c.; buckwheat strained, 6½c., in large lots.

Chicago.

Cattle—Good to prime steers, \$5.50 to \$6.15; poor to medium, \$3.60 to \$5.70; stockers and feeders, \$2.50 to \$5.30.

Hogs—Mixed and butchers', \$5.40 to \$5.70; good to choice, heavy, \$5.50 to \$5.70; rough, heavy, \$5.10 to \$5.40; light, \$5.45 to \$5.70; bulk of sales, \$5.55 to \$5.65.

Sheep—Good to choice wethers, shorn, \$4.75 to \$5.50; fair to choice, mixed, shorn, \$3.50 to \$5.10; native lambs, shorn, \$4.50 to \$8.

Buffalo.

Hogs—Heavy, \$5.90 to \$5.95; mixed, \$5.95 to \$6; Yorkers and pigs, \$6 to \$6.35, a few, \$6.10; rough, \$4.90 to \$5.15; stags, \$3.25 to \$3.75; dairies, \$5.60 to \$5.90.

Sheep and Lambs—Active and higher; lambs, \$6.50 to \$8.75; yearlings, \$7 to \$7.50; wethers, \$6 to \$6.25; ewes, \$4.50 to \$5.25; sheep, mixed, \$2.50 to \$5.75.

Cheese Board Prices.

Prices quoted last Saturday from the cheese boards were: Brockville, 9½c.; South Finch, 9½c. to 9½c.; Cornwall, 9½c.; London (Ont.), 9c. bid; Belleville, 9½c., 9 11-16c., and 9½c.; Cowansville, Que., 9½c. to 9 11-16c., butter 20½c. up to 21½c.; Alexandria, 9 9-16c. to 9½c.; Vankleek Hill, 9½c.; Canton, N. Y., twin cheese, 9c., tub butter 20c.

British Cattle Market.

London.—Cattle are quoted at 11½c. to 12½c. per lb.; refrigerator beef, 9½c. to 9½c. per lb.; sheep, 13c. to 14c. per lb.

GOSSIP.

Jubilee Daisy 186, 1400, the well-known Hackney prizewinning mare, owned by L. L. Pound, of Jubilee Farm, Glen-colin, Ont., is dead. She was in foal to Hillhurst Sensation. Jubilee Sensation, her two-year-old daughter, bids fair to perpetuate her memory.

Mr. H. J. Davis, Woodstock, Ont., writes: "I am landing at Levis on the 5th of July, per S.S. Lakonia, sixteen high-class Scotch Shorthorns, personally selected during the past month in Scotland, comprising seven young cows and heifers and nine young bulls, mostly calves. They are of the Roan Lady, Kilblean Beauty, Jilt, Butterfly and Mayflower families, and are all good representatives of the breed. They will be due home from quarantine August 26th, when intending purchasers would do well to look this lot over."

Mr. Israel Groff, Alma, Ont., writes: "My Shorthorns are all doing finely. The show cow, Roan Mary, has improved remarkably since last fall, so has the three-year-old, Lady Fanny 9th, who, though only in fourth place at Toronto last fall, has gone on well and shows great development. I have recently sold Imp. Princess Royal 23rd, and all my young bulls over eight months, some fine young ones from Victor's Roan Duke, whose calves are coming very uniform and of good size and quality."

Messrs. E. Jeffs & Son, Bond Head, Ont., write: "With the frequent showers and warm weather, pastures have been good, and our Shorthorns are doing nicely, the older matrons milking well. The two-year-old roan heifers, by Prince Arthur =23377=; the red yearlings, by Imp. Gladiator =32064=, and the present crop of calves, by Indian Duke =48635= and Wynock Chief =49146=, being all in thrifty condition. The Leicesters, though not shorn until quite late, will have some nice show shearlings among them. But the demand for Berkshires has been so great that almost everything in sight has been picked up. We just have a few suckers left."

The prospects for a bumper season for Canadian sheep breeders is quite well authenticated, and in this the Shropshire breed, which has become so popular in America, will come in for a goodly share of the trade. Of this class, Mr. Geo. Hindmarsh, of Ailsa Craig, Ont., claims a share. His flock, which has been established several years, was built upon an imported foundation, upon which sires of the best quality have been used continuously, whether imported or home-bred. Mr. Hindmarsh, who is a discriminating judge, is determined that they shall be short-legged, broad-backed, well covered with wool of good quality. If these qualities are in the sire, it matters little whether he crossed the briny deep or not. The flock numbers over 100 head just now, and are typical Shrops. The lambs are mostly by the Canadian-bred Campbell ram, Lord Roberts, winner in the American-bred class at the Pan-American Exposition, Buffalo, 1901. He has proved himself a producer of quality, as there are several in the lot that, to our mind, will make show sheep, although they are getting no special care as yet. A few yearling ewes and rams of good quality are also to be seen in the flock, which will be sold at prices in keeping with the times. Those wanting something choice in this line should not delay until the best are sold, but order early, and get the choice. About 20 minutes' walk from Ailsa Craig Station will take you to the farm, where Mr. Hindmarsh will deem it a pleasure to show his flock, whether you buy or not.

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TORONTO SHOW ENTRY DATES. Entries for the great Canadian National Exhibition, to be held in Toronto, August 26th to September 11th, close for the live stock, dairy products, fine arts, natural history, women's and children's work, on Monday, August 7th; for grain, field roots, garden vegetables, floricultural, horticultural, and honey, on Monday, August 14th; for poultry and pet stock and dogs, for which a special prize list has been prepared, on Saturday, August 19th, with Manager Orr at the City Hall offices, Toronto, by addressing whom entry blanks, prize lists and any information can be obtained.

Somewhere in England there is said to be a pretty little country hotel known as the Rose Tavern. Close at hand in the hotel grounds is a quaint, old ivy-mantled chapel. If the hotel becomes overcrowded, as it does now and then, they put away the guests in the chapel. A travelling man occupied it one night. At 6 o'clock the next morning the loud pealing of the chapel bell roused the night clerk, who rushed over in great alarm, and encountered the travelling man. "Are you the night clerk?" asked the travelling man. "I am," said the night clerk; "what's the jolly row?" "Well, for pity's sake," said the travelling man, "rush me over a cocktail to paw 13."

It will be gratifying to stockmen to learn that through the good offices of Mr. W. E. Skinner, of Chicago, arrangements have been made for a consolidation of the live-stock shows to be held in connection with the Lewis & Clark Centennial at Portland, Oregon, this fall. It is announced, on the authority of Supt. Wisdom, of the live-stock department, that the executive committee has decided to place all of the breeding stock on exhibition at the same time; the show to be held Sept. 19 to 29. This arrangement should prove popular, and add greatly to the interest stockmen will take in the Exposition as by the first programme published, the live stock was to be shown in sections at different dates. Entries close August 15th, and applications for entry forms should be made at once to Mr. M. D. Wisdom, Supt. Live Stock, Portland, Oregon.

Among the herds and flocks of Haldimand County, Ont., none are more worthy of special mention than those owned by W. A. Douglas, of Tuscarora P. O., a few miles from Caledonia Station, on the B. & G. branch of the G. T. R. Mr. Douglas, having been for many years associated with his late father in the pure-bred stock business, is well posted along the lines of breeding best suited to present-day requirements. His herd of Shorthorns is not large in numbers, but are richly bred, the same sires being used as in the herd of Mr. Jas. Douglas. The calves are mostly by Rosicrucian of Dalnwy (Imp.), and the young stock is from first-class Strathallan, Claret and Miss Ramsden females, by A1 sires, and are for sale.

Leicester sheep are being bred more extensively just now than are cattle, which is very fortunate for Mr. Douglas, as sheep are the paying stock of to-day. Quite a large flock is kept—breeding and quality as good as the best. They are bred from an imported foundation, and drafts from this flock are frequently sought after for show purposes. A small bunch of yearling rams and about twenty ram lambs, as well as twenty ewe lambs and twenty to thirty young ewes, are for sale. Anyone wishing to get a bunch of good, strong, typical Leicesters would do well to inquire after this lot, or, better still, go and see them. Mr. Douglas will use you well whether you buy or not. Look up his advertisement in this issue of the "Farmer's Advocate."

A LIVING AND A DEAD FŒTUS.

Mr. A. J. MacDiarmid, of Martintown, Ont., writes: "In looking over the 'Veterinary' department of your June 29 issue, I notice that J. E. D. asks if anyone ever heard of a case such as he describes. I know of a number having occurred within a few miles of my home, but of the exact circumstances I am only sure of one. The mare in question was due to foal April 28. She was worked up till that day, and then was let out to grass. On May 26 she foaled. Her colt was not as large as expected, she being a Clyde mare and bred to a Shire horse; and upon examination of the placenta, we noticed a round ball attached. Upon cutting this open, we found a dead foal about the size of a lamb, and black. There was no blood in it, and the skin was as tough as leather. Its head was very large in proportion to the rest of its body. There were a few hairs on the end of its tail, also upon the eyelids. The living colt was very weak, but is getting stronger now. The mare only received one service from the horse."

A similar case is reported by Mr. J. I. Balsdon in this issue.

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Congressman Livingston, of Georgia, tells this story of his boy, George: "One day I said to him, 'Mamma says you've been very naughty to-day, sir; what's the matter?' " "Pop," he replied, seriously, "I think ma's prejudiced against me. Yesterday she told Aunt Sarah I was just the image of you."



Life, Literature and Education.

Thomas O'Hagan, M.A., Ph.D.



Among Canadian poets who have been coming to the fore during the past few years, must be placed Dr. Thomas O'Hagan, known, as well, as the author of several prose works of decided literary value. His first volume of poems, "A Gate of Flowers," attracted considerable attention, and was translated into French. His second, "Songs of the Settlement," appeared in 1893, and became immediately popular, winning the commendation of such competent critics as Chas. G. D. Roberts, Dr. Oliver Wendell Holmes, and Charles Dudley Warner. It is made up chiefly of short poems and sonnets, bearing, most of all, on the farm, the good old pioneer days, and the old, yet ever new, charm of forest, and river, and twinkling stars, and as one reads them one can scarcely fail to read also between the lines, and see in Dr. O'Hagan one who, in spite—or, perhaps, as a result of—long years spent in the strenuous acquirements of the "higher education," still loves the old farm, and sees in the simple life spent close to nature's heart the nearest approach to earthly happiness. "Go forth," he says, in "Lowly Valley"—

"Go forth, my heart, and seek some lowly valley,
Beneath a sky of bright and tender hue,
From which kind stars rain down their mystic splendor
And wake the earth with tears of heavenly dew;
Let not the summit peaks of distant glory
Shut out the peace that reigns within the plain;
Better the flowers that bloom within the valley
Than tempting heights lit up with arid gain."

Some of his poems are pathetic, others humorous; yet all are such as

should appeal to the great farming public.

Dr. O'Hagan's prose works already published are, "Canadian Essays," and "Studies in Poetry," besides contributions on historical, literary and philosophical subjects to various Canadian and American magazines, especially Quarterly Review, American Catholic Review, Catholic World, Donahoe's Magazine, Rosary Magazine and Mosher's Magazine. He has also on hand two new prose works which will appear at an early date, "Studies in English Literature," and "Studies in Poetry, Vol. II." As an outcome of his travels, he expects to bring out a book on what he learned of the life and art of Europe, entitled "With Staff and Scrip."

Dr. O'Hagan, as his name implies, is of Irish descent, and was born in Toronto, Ont., in 1855. He was educated at St. Michael's College and the University of Ottawa, from which he graduated in 1882, with honors in English, Latin, French and German. Later he studied at the Universities of Syracuse, Cornell, Chicago and Columbia, and he has recently spent considerable time in Europe in travel and study at continental universities. At present he is devoting his time exclusively to literary work and lecturing, and his further efforts will be awaited with much interest. Dr. O'Hagan is described by those who know him as a man of sterling integrity, an out-and-out Canadian, and a hater of sham and humbug in every form.

The following selection, "The dance at McDougall's," from his poems, is given, not as an example of the highest type of his work—for, from a purely literary standpoint, he has written better—but as a reminder of earlier and less conventional days than now:

In a little log house near the rim of the forest,
With its windows of sunlight, its threshold of stone,
Lived Donald McDougall, the quaintest of Scotchmen,
And Janet, his wife, in their shanty, alone:
By day the birds sang them a chorus of welcome,
At night they saw Scotland again in their dreams;
They toiled full of hope 'mid the sunshine of friendship,
Their hearts leaping onward like troutlets in streams,
In the little log home of McDougall's.

At evening the boys and girls would all gather
To dance and to court 'neath McDougall's roof-tree;
They were wild as the tide that rushes up Solway
When lashed by the tempests that sweep the North Sea.
There Malcolm and Flora and Angus and Katie
With laughter-tuned paces came tripping along,
And Pat, whose gay heart had been nursed in old Erin,
Would link each Scotch reel with a good Irish song,
Down at the dance at McDougall's.

For the night was as day at McDougall's log shanty,
The blaze on the hearth shed its halo around,

While the feet that tripped lightly the reel "Tullagorum,"
Patter'd each measure with "ooch!" and with bound,
No "Lancers" nor "Jerseys" were danced at McDougall's,
Nor the latest waltz-step found a place on the floor,
But reels and strathspeys and the liveliest of horn-pipes
Shook the room to its centre from fireplace to door,
In the little log house at McDougall's.

Gone now is the light in McDougall's log shanty,
The blaze on the hearth long has sunk into gloom,
And Donald and Janet who dreamed of "Auld Scotia,"
Are dreaming of heaven in the dust of the tomb.
While the boys and the girls—the "balachs" and "calahs"—
Who toiled during day and danced through the night,
Live again in bright dreams of Memory's morning
When their hearts beat to music of life, love and light,
Down at the dance at McDougall's.

His lines on the tragic death of Sir John Thompson, at Windor Castle, England, in December, 1894, appropriately entitled "Tears of the Maple," are in his more serious mood, and conclude with the following strong stanzas:

The greater life of him who died
Is vital in our hearts to-day,
For deeds have power and soul to plan,
To shape our lives, to mould our clay.

Whatever things are done for God
Have root in soil beyond our years,
And bud and bloom in beauteous form,
Devoid of earthly hopes and fears.

This life is but the vestibule,
The altar-stairs that lead to heaven,
Around whose feet the nations kneel,
And pray that peace and light be given.

And looking through the mists of years
I see, as in a dream, a land,
Fashion'd and form'd in toil and prayer,
A gift of God divinely planned,

Where 'neath the light of northern Star,
With truth and honor for a wall,
A nation dwells secure in peace,
With God, our Father, guiding all.

The Gray Squirrel.

This is one of twenty-nine lessons in Nature Study for Primary Grades, in a well-bound volume, by Mrs. Murry, just issued by MacMillan & Co., New York; Morang & Co., Toronto. (Pp. 191; 60c.)

"We had had the mother (a gray squirrel) of these babies for about six weeks, when, on Monday morning, March 15th, our janitor found in the cage five little squirrels. Two died shortly after birth. The little squirrels were perfectly naked—not a hair on the whole body. The bodies of the two largest were two inches long, the tails one and one-fourth inches long, and the legs three-

fourths of an inch long. They were very dark red, with the heads darker than the body. The ears were no larger than flaxseeds. Their eyes were as large as sweet peas, but were tightly closed. Their toe-nails were black with a white tip.

"The mother purred to them. The babies mew'd like kittens. We saw two of them getting dinner. Their front feet moved in a happy way while nursing. We made them a nest of cotton in a box when they came. Their mother tore up much paper and added to the nest.

"When they were a week old their bodies had become plumper, and they began to bleach out a little. We took one of them from the cage. It squealed like a little pig. When a week and a half old the little ones began to squeak like mice whenever things did not go to suit them. Their little ears began to stand out. The mother, when she feared someone was going to hurt one of them, planted her front feet firmly upon its body."

The account quoted proceeds to record, at intervals of two or three days, the changes in appearance and behavior of this little family of gray squirrels, born and brought up for three months in a schoolroom—getting their hair, opening their eyes, cutting their teeth, learning to eat, were all closely observed by these city children in the nature study of a gray squirrel.

"When ten and a half weeks old the babies were still washed by their mother, which she always did by lapping them with her tongue. She still suckled them, though a few times she resisted their demands. They now looked to be almost as large as their mother. The smallest one was a downright tease. It made a practice of skipping up behind one of the others and biting it, and stealing the food from the others, and biting them when they wished to eat. We had to take the little hector out of the cage and give him a cage for himself."

The account states that the children watched with the greatest interest, and reported all the changes, and that they loved the little squirrels and the mother, Fanny, very much.

We can easily believe that children in the primary grades were deeply interested in the development of this squirrel family, and that the interest would be carried into the composition and drawing lessons based upon their observations. Apart from the value that training of the perceptive powers has, the related composition, reading and drawing lessons are more educative than would be the ordinary routine ones occupying the same time.

As we read this chapter we could not help thinking what a wealth of unused material the teacher of farmers' children has been neglecting in the past. There has been many a yellow duckling or pet lamb whose story would have been written with zest by a child who dawdled over compositions on iron, winter, and the blessings of contentment.

It need scarcely be remarked that, to the child who reads this story or hears it read, it is not nature study. Personal observation and judging are necessary to that kind of lesson.

Domestic Economy.

It is not the work, but the worry,
That makes the world grow old,
That numbers the years of its children
Ere half their story is told;
That weakens their faith in heaven
And the wisdom of God's great plan,
Ah! it's not the work but the worry
That breaks the heart of man.

HOW NOT TO BE NERVOUS.

How shall we manage not to be nervous? By proper living; proper working and playing, eating, drinking and sleeping; above all, proper thinking and feeling.

Labor may have been a calamity to Adam and Eve. Nowadays it is no curse, but the bright particular star of happiness. To have a wholesome ambition and to work with enthusiasm for its fulfillment—these form the very essence of a vigorous existence.

Many an invalid would be well to-day if he had a worthy purpose in life and happily labored for it. Many a hysterical woman would be stable and strong had she consistently striven with singleness of aim for a laudable object.

The greatest efficiency of any living tissue is attained by alternating activity and rest.

All life is attuned to this wonderful rhythm of action and repose.

Besides relaxation we must have diversion. We must play, if our work is to be effective and long sustained, and if we are not to be nervous.

Ambition is a wonderful force, and makes for progress. Emulation is an excellent stimulus, and industry is better than both; but in excess the combination has worked the nervous ruin of many.

To sum it all up, if you wish never to be nervous, live with reason, have a purpose in life and work for it, play joyously, strive not for the unattainable, be not annoyed by trifles, aim to attain neither great knowledge nor great riches, but unlimited common sense, be not self-centered, but love the good and thy neighbor as thyself.—[Dietetic and Hygienic Gazette.

A FEW SUMMER SUGGESTIONS.

For Ice Cream.—If the coarse salt and crushed ice needed to freeze ice cream are mixed together in a separate vessel, the mixture then packed around the freezer-can, the contents of the latter will freeze much more evenly. The proportions should be one-third salt to two-thirds ice.

Pineapple Salad.—The pineapples should be ripe and tender enough to admit of shredding thoroughly. Put the shredded fruit into a deep glass dish, and pour over it a half pint of powdered sugar mixed with two teaspoonfuls of any flavoring extract. This should be done at least three hours before the salad is needed, as the sugar must be quite dissolved.

Keeping Butter.—Frequently campers find it hard to keep ice at hand, and the food suffers for the want of it. A common clay flower pot may be made good use of in keeping the butter cool and firm. Place the pot over the plate of butter and around it a cloth wet in cold water, sprinkling water over the outside of the cloth as it becomes dry. Milk will remain cool and sweet if treated in the same manner.

Sugar Cookies.—Of the old-fashioned variety that will remain soft after they are baked are favorite cakes for the children's table. An old family recipe calls for three-quarters of a pound of butter and one pound of fine granulated sugar. Cream together and add, alternately, one cupful of cold water and two cupfuls of flour, with which has been mixed a half teaspoonful of salt. Stir in a scant teaspoonful of soda, dissolved in a little warm water, with flour enough to make a very soft dough. Turn on a well-floured board, roll out, cut in small rounds, and bake in a quick oven. If it is wished to have the cake crisp, add flour enough to make a stiff dough, and roll very thin.

Traveller (in haste).—Am I in time for the next train to Mudbank, porter?

Porter.—Plenty of time, sir—seven-fifty to-morrow morning.

**A Tale.**

Out from the city to spend the day,
All decked up in fine array,
Went Margaret Ann Almira Kate,
And Matilda Jane. They were almost late.
For the train it bellowed and roared away
As they sped from the city to spend the day.

Margaret Ann Almira Kate
Was always proper and most sedate,
Her face was spotless, her dress most neat,
Her temper always, always sweet,
Her hair was never out of curl,
In fact she was quite a model girl.

Now Matilda Jane was far from good,
Her hair never went the way it should,
Her dress was black, where it should be white,
And crumpled and spoiled—'twas a perfect fright!

And as for her temper, dear, dear me!
Why, she was as cross as she could be.

They wandered away,—for a walk they say,
Though where they went no one knows to this day;
But they stayed and stayed till mother cried,

And hunted all over the country side,
And the dark came down before they found
Matilda Jane on a tiny mound.

She was cuddled up with a wondrous heap
Of violets beside her, fast asleep;
But they never found, for the hour was late

Margaret Ann Almira Kate,
Though Matilda Jane didn't care at all,
For she was her very oldest doll!

Then the fair young grandma smiles again
As she says, "You need not fear,
It's firm as a rock and will surely last
For many and many a year."

COUSIN DOROTHY.

Emma Eikerton deserves honorable mention for her essay, which arrived too late for the competition. C. D.

A Bubble-Bundle Party.

For the entertainment of summer boarders or the amusement of any group who enjoy out-door life and its games in preference to drawing-room pastimes in summer, "Bubbles and Bundles" is just the thing. The requisites for the success of the game are as many clay pipes as there are players, a big bowl of soap suds to which a teaspoonful of glycerine has been added to toughen the bubbles, and a number of tiny bundles tied up in gayly-colored tissue paper with ribbons to match.

Each little bundle contains some trifle that does not make too bulky a package. The bundles are attached to strings and tied from clothes lines, low branches of trees, or any other subject that is not too lofty in height. When they have all been suspended, the guests line up, pipes in hand, and one after another blow bubbles into the air, the aim being for the bubble to touch some bundle, which then becomes the property of the person blowing the bubble. After the bubble has left the pipe, its course can be directed by gently fanning or blowing it.

As soon as a bundle is touched, the bubble-blower retires from the contest to try again after the others have had their turn. Should any member of the company be so unfortunate as to fail to touch a bundle after three trials, he or she is presented with a booby prize. No



Grandpa and Grandma.

Grandpa and Grandma.

Alfred and Maggie were keeping house,—
The others had gone to town—
So Maggie put on dear grandma's
"spees"

And grandma's cap and gown.
The knitting, you see, got sadly mixed,—
The "spees" didn't suit her eyes,
But Alfred peeped o'er the top of his

And tried to look very wise.
"Won't you drink your tea now, grandpa, dear?"

Said Maggie, "I'll soon grow cold,"
And Alfred replies, "I really fear

That I must be growing old:
The Advocate's not so easy to read

As it was ten years ago,—
But no sensible man will try to farm

Unless he reads it, you know,
I've studied it nearly forty years,

And have learned a thing or two
About feeding stock and planting crops

If it failed what should we do?"

one is allowed to open a bundle until the blowing is over. Then all seat themselves in a circle, and the winner of the first bundle opens it. Whatever it contains he must make up a sentence in which its name appears, the sentence not to contain more than ten words or less than five, and to be of a nature that the second blower can take up in narrative form introducing the name of the article contained in his bundle.

As each person opens the respective bundle, only as it comes his turn to add to the story, there is no opportunity for preparation, and as only a minute is allowed for thought, it frequently happens that some very ridiculous things are said.

Those who did not secure bundles in the blowing contest copy the sentences as they are uttered, the complete story being read aloud at the end. Thus if number one finds a toy doll, number two an artificial rose, number three a ribbon,

number four a little cake, and number five a pencil, the sentences could read something like the following, though, of course, the story depends entirely on what the bundles contain; but, for example:

(Once on a time a little girl had a doll.) (She put it under a rose bush), (tying it to a branch with a ribbon). (Then she went to get some cake), (but returned with a pencil instead).

The last one to fill out the story must bring it to a full stop somehow, no matter how ridiculous the conclusion. If the trifles in the bundles can be chosen so that it will be difficult to furnish a sensible story introducing their names the fun is all the greater. The pipes, tied with ribbons, can be retained as souvenirs, should the idea of giving such in the bundles be deemed too expensive. In that case the tissue paper bundles could contain merely cards with words written on them, instead of the genuine articles. When this method is employed, the composition can be made very perplexing.

A Day in the Country.

Annie Roberts lived in a town; she had never been in the country, although she was ten years old. She had friends in the country, but they had just moved there.

One fine morning in August, Mrs. Roberts asked Annie if she would like to go to the country to see her friend, whose name was Hatton. Annie said nothing would please her better.

Mr. Roberts had a horse, so he drove Annie and her mother to the country. Mr. and Mrs. Hatton and the children, Mary, Grace and Harold, welcomed them joyfully.

After they got rested, Grace asked Annie if she would like to go to pick a few raspberries for dinner. Annie went, but did not put many in her dish. She ate more than she put in her dish. After awhile, they thought it must be near dinner time, so they went to the house. Grace had her dish full of berries, but Annie only had hers half full.

After dinner, they agreed they would get some neighbor girls and boys to come and play baseball. They got six girls and three boys. Harold was one captain and Annie the other. Annie's side was in first, but got out with a whitewash. (A whitewash is when the first three get out right after each other.) They played ball till about half-past four, when they went down to the field, as the wheat was late. Mr. Hatton was cutting it. Annie wanted to follow the binder and watch it throw out the sheaves. Mary said she would go, if Annie went. They waited till the binder came around to where they were, and then followed it. They followed it till about six o'clock, when they went to the house for supper.

After supper, Mr. and Mrs. Roberts and Annie went home. Annie said she never enjoyed herself more in all her life.

NELLIE GRAY (aged 12).

Port Elgin.

Humorous.

Henderson.—Let's see; they call the man who runs a motor car a chauffeur, don't they?

Uncle Joseph.—Well, in our village, they call him worse names than that.

"I was bound to marry a nobleman or nothing," remarked an American girl returning with a foreign husband.

"I guess you got both," said her father, and went on making out a cheque.

Complaint is made of the men because they do not take their wives flowers as they did in their courting days. But every woman knows that if her husband brought home a costly bouquet, she would tell him it would have been more sensible to have brought home a new teapot or a ham.

William.—There's one thing about Miss Charming's house I don't like.

Arthur.—What's that?

William.—Her father.

Mistress.—Do you call this sponge-cake? Why it's as hard as it can be!

New Cook.—Yes, mum; that's the way a sponge is before it's wet. Soak it in your tea, mum.

"Are you Hungary?" "Yes, Siam."

"Well, come along, I'll Fijl!"



Food Value

Mooney's Perfection Cream Sodas are crisp squares of wholesome nourishment. They are the food that builds strength and muscle. They are as easily digested by the child and invalid as by the sturdy workman. They contain ALL the food properties of finest Canadian wheat flour, in a form that delights the appetite. Always fresh and crisp in the moisture-proof packages. At all grocers in 1 and 3 pound packages.

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Advertise in the Advocate

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Pay Your Debts.

Render therefore to all their due: tribute to whom tribute is due! custom to whom custom! fear to whom fear! honor to whom honor!—Rom. xiii.: 7.

"Who is the honest man? He that doth still and strongly good pursue,— To GOD, his neighbor, and himself most true; Whom neither force nor fawning can Unpin, or wrench from giving to all their Due. . . . What Place or Person calls for,—he doth pay."

Debts are of many kinds, but if we would be honest in the sight of God, we must earnestly try to obey the command: "Render therefore to all their due." We are linked together in many different ways, and life would be much easier for everybody if we were always prompt in paying our debts—I don't mean only money debts, although too many people seem to think it is not necessary to be very particular about a little matter of five cents or a quarter, in dealing with a friend. One thing we should always be very particular about, and that is to deal justly and fairly with those who work for us. We have no right to grind them down to the lowest possible level of wages, nor have we any right to grind out of them the utmost possible amount of work in return for their wages. We are, in fact, bound to give them their "due" in the matter of money and recreation. God has said that He Himself will be a swift witness "against those that oppress the hireling in his wages," and He never overlooks such an offence against His poor. "Thou shalt not oppress an hired servant that is poor and needy, whether he be of thy brethren, or of thy strangers that are in thy land within thy gates. At his day thou shalt give him his hire, neither shall the sun go down upon it; for he is poor, and setteth his heart upon it: lest he cry against thee unto the Lord, and it be sin unto thee." Perhaps one reason our young people prefer to work in stores and factories, rather than in private houses, is because they know they are sure to get their hire as soon as it is due—"at his day." It may not seem a matter of much consequence to the master or mistress, but it is of consequence to the person to whom the wages are due, and it is of consequence also in God's eyes.

Then we owe to others a debt of kindness—kindness in word as well as act. Many who are generous and kind to the poor who are not working for them, never seem to dream of treating with equal consideration those who are employed by them. How few ever think of giving five cents extra occasionally to the poor woman who has been washing and cleaning all day; and who has, perhaps, half a dozen small children to feed and clothe! Do you try, if possible, to get the services of one who is willing to work for starvation wages because she has only herself to keep? When people are forced by circumstances to accept less than their work is really worth, are we willing to "steal" their valuable time and strength?—for that is what it amounts to if we don't attempt to render to them their "due." It is not only the laborer in the spiritual field who is "worthy of his hire," and, though a man may seem poor and friendless, he has a powerful Friend to look after his interests, and who will surely punish those who oppress him.

"Give to Caesar what is Caesar's? Yes, but tell me if you can, Is this superscription Caesar's—here upon our brother-man? Is not here some Other's image—dark and sullied though it be, In this fellow-soul that worships, struggles Godward e'en as we?"

One who does not deal justly and kindly with his fellows is refusing to pay his debts to God! When St. Paul, before his conversion, was eagerly persecuting the Christians who seemed so helpless and friendless, he was solemnly warned by a voice from heaven that he was persecuting the Lord Jesus Himself. Have things changed since then? The golden rule of doing to others what we should like them to do to us, is not a sentimental idea which we may safely neglect if we choose. It is a strict command, and always—if we are kind or unkind, just or unjust to one of the least of Christ's brethren—yes, even to a little child—He considers that we are dealing directly with Him. Can we fancy that is a light matter?

Then there is a debt at our very side which is too often left unpaid. How often do we see a loving, unselfish woman, toiling along day after day, year after year, to make things nice and comfortable for husband and children? Has she not justly earned the word of appreciation, of loving gratitude, which would, in her opinion, be ample pay for all her long-suffering self-sacrifice? Does she often get that pay, which would be so easy to give? Do not the rest of the family generally accept all her weary work as a matter of course, and even feel really injured if the long strain has told at last on her strength and nerves, and she fails to keep the house, meals and garden up to its usual standard? Would you be quite so chary with your words of praise, so ready to blame, if you realized that the tired woman, of whose just rights you have been so long neglectful, might "happen to be—GOD?" The young people get the new clothes—"mother" can always get along with old things. They go off on jolly summer outings—she stays at home in the heat and does all the work. Because she never dreams of complaining—perhaps does not know she is being defrauded of her just rights—does that make things any better? Oh, wake up! before it is too late. Wake up! before the habits of selfishness become too strong to be broken; before you get too hardened to care whether you are selfish or not; before the dear wife or mother gets into tread-mill ways, and ceases to care for the pretty new dress or dainty collar; ceases to wish for any change from the ceaseless round of work. I don't ask this for her sake half as much as for yours. It is not the unselfish, weary souls who really are to be pitied, but the careless ones who are heaping up an unpaid debt year after year—a debt which some day they would gladly give all they owned to be able to pay. Debts which we cannot pay will be a sore burden some day.

"The tender word unspoken, The letters never sent, The long-forgotten messages, The wealth of love unspent; For these some hearts are breaking, For these some loved ones wait; So show them that you care for them Before it is TOO LATE."

We have no business to live to ourselves—to mind only our own business. The happiness of other lives is largely dependent on us—on such little things as bright looks, tender words, and the hundred-and-one trivial kindnesses which we "owe" to God through our neighbor. Habit is second nature in the matter of everyday behavior—let us see to it that the habits we are forming are habits of kindly courtesy.

Lastly, in rendering to "all" their due, your own claims must not be forgotten. You have no right to make a victim of yourself unless it be really necessary. If not for your own sake, at least for the sake of your relations and friends, do not use up all your energy and become nervous and irritable—as overworked people are apt to become. Remember that our Lord took His dis-

ciples apart that they might "rest awhile." If you would do really good work for Him and the world, keep yourself as healthy and happy as you can. If you live in a constant rush of work and worry, unnecessarily, how can you cultivate the three great Christian graces—love, joy, peace? Martha was a very energetic, busy woman, and she complained that her sister was letting her do all the work, but the Master must have seen that some of the work being done might better have been neglected so that the time could be spent in cultivating the spirit. Mary pleased Him best, and we know He would never have encouraged her if she had really been idly leaving her proper share of the work to another. I have talked of this often before, and shall probably talk of it often again, for if there is one place where the women never seem to think it right to enjoy a quiet hour—except occasionally on a Sunday—it is on a farm. In the city the noisy rush of life destroys all the peace of a quiet hour, and in the country too many people seem to imagine it is wrong to indulge in one. If you will only try to gain a little time every day for the necessary—necessary if the spirit is to grow in strength and beauty—sitting at the Master's feet, you will soon find that it is far from wasted time. Peace and gladness are worth far more than fancy-work, grand clothes or elaborate cooking—worth more to yourself and to the rest of the household—and the Lord holds these in His hand for you, but you must go to Him continually for them. Only the heart that is stayed upon Him knows the continual blessing of perfect peace.

I must thank "Well-wisher" for her sweet words of encouragement. I wish no higher joy in this world than the joy of being allowed to draw weary souls a little nearer to the Prince of Peace.

I also want to thank those who have made such a generous response to the appeal for the Fresh-air Mission. Today—June 27th—I received a letter from my friend in Toronto, who wrote to me about the work. She says: "We are reaping the fruit plentifully of your kind aid in the 'Farmer's Advocate.' Already about forty children have been asked for, and I could not say how much money."

"The way to receiving is giving, However so little it be; And love is the keynote of living, The love that makes everyone free." HOPE.

The Dear Little Wife at Home.

The dear little wife at home, John, With ever so much to do,— Stitches to set and babies to pet, And so many thoughts of you. The beautiful household fairy, Filling your heart with light; Whatever you meet to-day, John, Go cheerily home to-night.

For though you are worn and weary, You needn't be cross or curt; There are words like darts to gentle hearts, There are looks that wound and hurt. With the key in the latch at home, John, Drop troubles out of sight; To the dear little wife who is waiting Go cheerily home to-night.

You know she will come to meet you, A smile on her sunny face, And your wee little girl, as pure as a pearl, Will be there in her childish grace; And the boy, his father's pride, John, With the eyes so brave and bright, From the strife and the din, to the peace, John, Go cheerily home to-night.

What though the tempter try you, Though the shafts of adverse fate May bustle near, and the sky be drear, And the laggard fortune wait; You are passing rich already, Let the haunting fears take flight; With the faith that wins success, John, Go cheerily home to-night. —Margaret E. Sangster.

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Watch and fret over a hot oven trying to make good bread with an inferior flour? **Five Roses Flour**, a little yeast, some water and an oven will give you a bigger and sweeter loaf, with less trouble, than the flour so-called "just as good."

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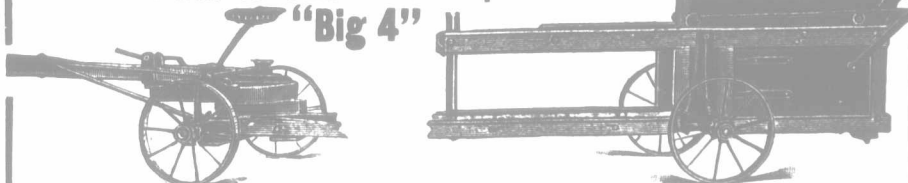
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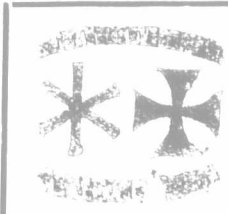
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11 x 15, on heavy plate paper, suitable for framing, together with memoir, the funeral service and sermon on the occasion; price for the two, \$6.00; 5 sets, one address, \$1.00; cash with order. om

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A Competition.

Before going away for holidays, I have thought it would be "nice" (what an inane little word that is!—but handy on occasion) to have just one short, brisk, rousing competition, something out of the ordinary line of our past ones. This need by no means conflict with our house-furnishing series of letters, which will continue to appear from time to time, as sent in, until further notice. Our subject this time, then, will be, "At What Age Should a Girl Marry?" and prizes will be given for the best letters which conform to the following rules: (1) Letters must not contain more than 250 words. (2) All letters must be received at this office before the 1st of August. . . . In judging, attention will be given to the originality of thought and expression, brightness, neatness, etc., etc.—all the qualities in short, that go to make up the crisp, readable, short essay.

Now, "Chatterers," you all have ideas on this subject. Write them out and send them along, and let us have one of the liveliest competitions we ever had. We may get some fun out of it, at any rate. Kindly address all letters to

DAME DURDEN.

"Farmer's Advocate" office, London, Ont.

Canning Vegetables.

The majority of people who have tried canning peas or other vegetables have had some trouble in getting them to "keep." Most housewives now know that this tendency to spoil is caused by minute organisms called bacteria, too small for the unaided eye to see, yet readily enough recognized in their work. In peas, corn, etc., which, of course, must be "done up" without sugar, itself a preservative agent when used in sufficient quantities, these bacteria find an element which suits them beautifully; hence is it that, as a rule, vegetables are so much more likely to spoil than fruit.

Now, as will probably be remembered from previous notes given in this column, there are several ways of preserving foods of all kinds: (1) By subjecting to a heat sufficient to kill all germs, and keeping afterwards in air-tight vessels; (2) by keeping foods so cold that the growth of bacteria is discouraged; (3) by drying foods and so providing an unfavorable element; (4) by adding sugar or salt in quantities, spices, vinegar, etc.

Of these methods the first is, of course, the one to be used in canning all vegetables, and in adopting it care must be taken that the heat is great enough and applied long enough to kill every organism, and thoroughly sterilize every vessel in which the vegetables are to be kept. Once more, then, may we give directions for doing this: Put the sealer rims into cold water, set on the stove and let boil. Adjust the rubbers on the jars, and twirl in boiling water. If you dip the jars in sidewise, so that the water will reach both inside and outside at the same time, they will not likely crack. Set the jars in a boiler on a wooden rack, and surround partly with water warm enough to prevent the hot jars from coming to grief; fill up with the vegetables, which should already be cooked and still hot—if salt is added, put it in now—put on the lids loosely; cover the boiler, and bring gradually to a boil. It will be necessary to boil peas three hours, corn four hours, string beans 1 1/2 hours, and beans 1 1/2 hours. When done, fasten on the tops firmly, let cool in the water, and remove. Keep in a cool, dark place, with each sealer wrapped in paper.

Re "Doing Up" Fruit.

"A New Beginner" asks information re managing fruit, jellies and pickles. Ans.—In canning fruit, which is the

popular way at present, sterilize the "sealers" as given above for vegetables, fill to overflowing with the stewed fruit, while it and the sealers are both very hot (if you set the sealers on a cloth, wet with hot water, they are not likely to crack), screw the covers on tightly, and turn the jars upside down on the table for a while. When cool, give the tops a final twist, and set the jars away in a cool, dark place. When stewing the fruit, always use a granite or enameled kettle, and put in just enough sugar to flavor nicely. If you choose, instead of stewing the fruit separately, you may fill the jars with it, adding enough sugar to sweeten (half a pound of sugar to the quart is usually enough for currants, raspberries, etc., more for sourer fruits), and boil in the boiler exactly as for vegetables, only not so long. Small fruits, as a rule, need only ten minutes of actual boiling, larger ones fifteen to twenty minutes.

To make jelly, put your fruit in a granite kettle, adding a very little water, if the fruit is a dry kind. Cover closely, and cook till soft, then pulp it with the potato-masher, and strain through cheesecloth. Put the juice on the stove again in the kettle, let boil twenty minutes, then add sugar which has been heated in the oven. The quantity will depend somewhat on the kind of fruit. The old recipes gave "a pound to a pint" as the proper proportions, and when considerable water is added, this may be necessary, but if done as above, currants, grapes, crab apples, blackberries and cranberries will be found to need only half a pound of sugar to each pint. Plum jelly requires one-third more sugar than the measure of juice; apples (boiled skins, cores and all), three-quarters of a pound to the pint. After the hot sugar is added, let all come to a boil and boil a few minutes, then take from the fire and pour into hot sterilized jelly glasses. After filling, cover with pieces of glass and set in the sun for a day or two, then place circles of paper wet with brandy on the jelly, or pour in a little melted paraffine to prevent mould, seal and set away. Some hints regarding pickling will be given as soon as possible.

From the Far West.

Dear Dame Durden,—I wonder if you can admit one more member to your Ingle Nook? I expect you have nearly if not quite as many members as you care about. However, if you will have me, I will promise not to trouble you very often. I am afraid I have no helpful suggestions to offer as an excuse for my intrusion, but, instead, I come asking for help. So many send most useful hints re washing, cooking, cleaning, and all things interesting to the busy housekeeper, but I notice none give any suggestions with regard to the children, the wee toddlers, I mean,—those who constantly need watching and amusing, and yet have to be frequently neglected where there is just one to look after everything.

Cousin Bee's letter is most encouraging to those who, like myself, came to this country without any training for the new life ahead of them.

Don't you think it would be a very good idea if say one page a week of the "Farmer's Advocate" could be devoted to teaching the rudiments of farming? One buys an agricultural work and then finds it is written for those who know the A B C of farming. I think there will be many who, like ourselves, are just starting to farm, and who are prevented by circumstances from going to work for a few years on a good farm.

Trusting I have not written at too great length, and with all good wishes, I am

AN ENGLISHWOMAN.

Athabaska Landing.

We have handed your suggestion to the men's editorial department, and have no doubt but that it will be given favorable consideration. Thank you for the idea. We are always glad to receive suggestions from our readers.

The LEAVENWORTH CASE.

By A. K. Green.

BOOK IV.—THE PROBLEM SOLVED.

CHAPTER XXXIV.

Mr. Gryce Resumes Control.

A half-hour had passed. The train upon which I had every reason to expect Mr. Gryce, had arrived, and I saw him hobbling very painfully down the street.

It would seem natural, in the conversation which followed his instalment in Mrs. Belden's parlor, I should begin my narration by showing him Hannah's confession; but it was not so. Whether there lingered within me sufficient resentment for the persistent disregard he had always paid to my suspicions of Henry Clavering, to make it a matter of moment to me to spring this knowledge upon him just at the instant his own convictions seemed to have reached the point of absolute certainty, I cannot say. Not till I had given him a full account of every other matter connected with my stay in this house did I allow myself to hand him the letter I had taken from under the dead body of Hannah.

"Good heavens!" cried he, "what's this?"

"A dying confession," replied I, "of the girl Hannah. I found it lying in her bed, when I went up a half hour ago to take a second look at her."

Opening it, he glanced over it with an incredulous air, that speedily, however, turned to one of the utmost astonishment.

"A remarkable piece of evidence," exclaimed I, not without a certain feeling of triumph; "quite changes the aspect of affairs!"

"Think so?" answered he; then he looked up and said: "You tell me you found this in her bed. Whereabouts in her bed?"

"Under the body of the girl herself. I saw one corner of it protruding from beneath her shoulders, and drew it out."

"Was it folded or open, when you first looked at it?"

"Folded; fastened up in this envelope."

He took it, looked at it for a moment, and then went on: "This envelope has a very crumpled appearance, as well as the letter itself. Were they so when you found them?"

"Yes, not only so, but doubled up as you see."

"Doubled up? You are sure of that? Folded, sealed, and then doubled up as if her body had rolled across it while alive?"

"Yes."

"No trickery about it? No look as if the thing had been insinuated there since her death?"

"Not at all. I should rather say that to every appearance she held it in her hand when she lay down, but, turning over, dropped it and had lain upon it."

Laying the letter down, he stood musing, but suddenly lifted it again, scrutinized the edges of the paper on which it was written. Then he flung the letter down on the table with an air of the greatest excitement, and cried:

"It is the rummest case on record! Mr Raymond, prepare yourself for a disappointment. This pretended confession of Hannah's is a friend! The girl never wrote it."

"Look at it," said he; "examine it closely. Now tell me what is the first thing you notice in regard to it."

"Why, the first thing that strikes me is that the words are printed, instead of written, something which might be expected from this girl, according to all accounts."

"Well?"

"That they are printed on the inside of a sheet of ordinary paper—"

"That is, a sheet of commercial note of ordinary quality?"

"Of course."

"Look at the lines."

"What of them? Oh, I see, they run up close to the top of the page; evidently the scissors have been used here."

"In short, it is a large sheet, trimmed down to the size of commercial note?"

"Yes."

"Don't you perceive what has been lost by means of this trimming down?"

"No, unless you mean the manufacturer's stamp in the corner. But I don't see why the loss of that should be deemed of any importance."

(To be continued.)



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"Royal Household" Flour

Gives Stomach Less Work and Body More Strength.

No flour in the world is so nourishing, so vitalizing, so rich in all the elements of body, bone and brain building as pure, well-balanced, white flour.

Bran in bread is just so much wood fibre—so much extra work for the stomach—there is no nourishment in it for man. Cattle digest it and get nourishment from it because nature has given them a fermenting plant and double chewing facilities.

But man masticates once and digests once. For that reason he gets nothing whatever out of anything but the gluten portion of wheat—the inside of the grain—the part which yields "protein." And he gets more out of Royal Household Flour because more of the branny and waste portions are removed in making it than from any other flour.

The Royal Household Mills eliminate more bran and snorts than any other mill—therefore Royal Household Flour is the most nourishing flour in the world.

Royal Household Recipes free for the asking.

Ogilvie's "Royal Household" Flour.



THE ELBOW OF THE SOUTH SASKATCHEWAN

Is now attracting much attention, following the announcement of the C.P.R. of its intention to build north-westerly from Moose Jaw into that region. The Elbow District contains a large quantity of the finest wheat land in the Northwest. We have a choice selection of land in that district, located close upon the projected line of the road. These lands are situated in Townships 25 and 26, Ranges 4 and 5 west 3rd P.M. We can offer a small quantity for a short period at \$7.50 per acre on easy terms. Prices will advance rapidly in this section. Don't miss this chance. Write us for particulars. This is the famous Davidson District.

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W. N. REID & CO.

REGINA, Box 371.

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In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

HEALTH IN THE HOME.

By a Trained Nurse

In the Sick Room.

DAINTY DISHES FOR THE SICK.

When anyone is sick in your house, do not try to make him or her eat too much. A little fasting is not nearly so likely to injure a sick person as over-eating. Nature herself shows this by depriving the ill one of appetite. Nourishment, of course, is necessary unless prohibited by the doctor in attendance (as in the case of convalescence from fevers), but it should be given in small quantities, at such intervals as are prescribed by the physician, and it should consist always of something that is easily digested, and nourishing. It is, perhaps, even necessary to state that cake, pie, pudding of a pastry nature, or fatty or fried meats, should not be given to a sick person. We heard of one woman who gave fried sausage to a typhoid convalescent, and simply killed him by doing so. The following recipes may prove useful to someone who has to cook for sick people.

If the patient is permitted to eat eggs, poached ones are as light and dainty as any. But there are poached eggs and poached eggs. One that is all watery, and hardened inside to a leathery consistency, is not an appetizing or nutritious morsel for a sick person. To poach an egg in the shell, first select a very fresh one. Drop it into boiling water, and let it boil exactly three minutes and a half. Have ready a bowl of very cold water. Take the egg out of the boiling water and drop it into the cold water, leaving it there for an even two minutes. Take it out, pick the shell all off carefully, sprinkle with a dash of salt and pepper, and slip it upon a small square of toast. If done carefully, it should be a semi-transparent ball of white, through which the yolk just shows. Two ways of boiling eggs which are to be eaten in the shell are recommended: (1) Drop the egg into cold water and let the water come almost to a boil. Remove the egg then at once. (2) A very good way: Drop the egg into boiling water and immediately draw the vessel to the very back of the stove, where it can boil no longer. Cover, and let it stand for ten minutes. . . . Never give a fried egg to a sick person.

Chicken Broth.—Don't put on a chicken and boil and boil it, then drain off the soup. Rather cut up some of the raw meat into very small bits. Put them into a little cold water and let soak for an hour. This softens the meat and extracts some of the juices. The idea is to get as much of the juice as possible out into the soup. Now set the pan on the stove (a granite saucepan is nice), and let the whole simmer until all of the juice is out in the soup. Season with salt and pepper. Put some cracker crumbs in, or thicken just a little with cornstarch.

Beef Tea.—Scrape a tablespoonful of raw beef down with a sharp knife. Put it in a cup. Fill the cup with boiling water (after first heating the cup). The boiling water will cook the beef sufficiently. Season with pepper and salt.

If cornstarch in any form is permitted, make an ordinary boiled custard, with milk, cornstarch and an egg. Do not make it too thick. For orange custard (if fruit is not prohibited), slice part of an orange into an individual fruit dish. Cover with white sugar, and pour over it some of the custard, flavored slightly with some delicate flavoring. Bananas, strawberries or shredded pineapple may be used as above instead of the oranges.

Moonshine.—Beat white of one egg stiff; add gradually one tablespoon of powdered sugar, beating well. Then heat in some bits of canned peaches, and pour some cream over the whole.

To cook rice: Wash it well; drop gradually into boiling water on the stove, a cupful to each tablespoon of rice. The water should be salted, and should not be permitted to get "off the boil," or the rice will become heavy and

sticky. When the rice is quite soft (in about 15 or 20 minutes) pour the water all off. Then pour in cold water on the rice and wash it well. Drain, and set in the oven to re-heat. Serve with cream and sugar.

Pearl barley is often recommended by physicians. It should always be boiled in a granite or enameled dish, as tin or iron has a tendency to blacken it.

Junket is also recommended. It may be procured at the drug store, with full directions for preparing.

One thing, however, is always necessary. Consult the doctor about the diet which your patient is to have, and follow his directions implicitly.

What to Do in a Sick Room.

Open the door promptly without rattling the handle.

Walk in quietly, but do not take ostentatious care to glide in with absolute silence. Don't pause and murmur enquiries to the nurse, but go straight to the bed and speak in a clearly audible, everyday tone to the patient.

Choose topics of interest that will entertain without being exciting, leaving a few new ideas with your invalid as food for pleasant reflection after your leaving, and making only a passing reference to the present malady.

Look as fresh and as pretty as the power in you lies, and thereby act as an unconscious tonic to your friend. Avoid any article of dress that jingles or rustles.

Having risen to say good-bye, go instantly without lingering over last words or pouring forth exaggerated condolences and hopes.

A growing plant with scentless blossoms is a pretty gift for an invalid. It is entertaining and lasting, and one which does not worry the nurses with its wants as much as do cut flowers.

Plain Living and High Thinking.

Let us remember that the greatest teachers the world has ever known were poor men. Moses, Socrates, Plato, Buddha, all lived on very little. It is not at the shrine of luxury that the flame is kindled which will purify humanity; and still we all haste to be rich. Why? Let us take care lest in losing our simplicity and single-mindedness—in becoming the slaves of high living and low thinking—we lose that sense of duty and moral responsibility so essential to a great nation. Men are four, says the old Arab proverb:

He who knows not and knows not he knows not,

He is a fool; shun him.

He who knows not and knows he knows not,

He is simple; teach him.

He who knows and knows not he knows,

He is asleep; wake him.

He who knows and knows he knows,

He is wise; follow him.

We lose every day something in not denying ourselves more; there is a great happiness comes to all with the act of giving.

Emerson says: "Other people cannot cheat us; we only cheat ourselves." Do we not cheat ourselves daily in not making others happy?

It is in the renunciation of self that the strength of character lies; the man who has power over himself is the strong man.

Recipes.

Wafers: Four dessertspoons butter (melted), 1 cup milk, 1 level teaspoon salt, 3 well-beaten eggs, enough "Five Roses" flour to make a dough; roll thin; cut in cakes; bake in a moderate oven and frost.

Puffs: One cup sweet milk, 1 egg, 1 level cup "Five Roses" flour, a pinch of salt; beat together, and bake in buttered cups or deep patty pans in a very quick oven.



FURRIERS

To H. M. Queen Alexandra
H. R. H. Prince of Wales

About Furs

Our catalogue, showing the new fur styles for 1905-6, will soon be ready to mail. We will be pleased to mail you a copy. We are the largest retail furriers in Canada. We buy our skins direct, and make them up in our own factories. That means a saving in price that is worth considering. And every article we sell we guarantee to be exactly as represented.

Write for catalogue F.

HOLTRENFREW & CO.

5 KING ST., EAST, TORONTO,
AND AT QUEBEC. OM

Cures Permanently

All the following complaints, viz.: Female weakness, leucorrhoea, painful periods, backache, pains in side and abdomen, tumors, cancers in their earlier stages, and all ovarian troubles. Write to-day for 10 days' treatment and cure yourself before it is too late. Enclose stamp, and address MRS. F. V. CURRAH, Windsor, Ont.

\$3 a Day Sure Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once IMPERIAL SILVERWARE CO., Box 706, WINDSOR, ONT.

STAMMERERS

We treat the cause, not simply the habit, and therefore produce natural speech. Write for particulars. THE DR. ARNOTT INSTITUTE, BERLIN, ONT.



Advertisements will be inserted under this heading, such as Farm Properties, Help and situations Wanted, and miscellaneous advertising.

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

BARGAIN—\$3,500 for 200-acre farm, about 40 miles from Toronto. Good buildings and stream. F. A. Mason, 158 Bay St., Toronto.

FOR SALE—2,000 acres of wood lands, en bloc or in lots, to suit purchasers. Principals only dealt with. E. W. Hay, Falkenburg Station.

FOR SALE—503 acres rich black loam in the celebrated Pincher Creek district, Southern Alberta. Price, \$12 per acre. Four miles from C. P. R. Apply E. Blaquier, box 683, Brandon, Man.

GINSENG—Canadian roots best. Write E. Beattie, Highbgate.

KAMLOOPS, British Columbia—Ranching and farming properties for sale in all parts of the interior. Write for lists to Martin Beattie, real estate, Kamloops, B. C.

THOROUGHbred COLLIE PUPS for sale. King Edward Collie Kennels, 7 Concord avenue, Toronto.

WANTED—Parties having land, village property or a business for sale to write us. We have buyers who will pay cash for good propositions. Address, Western Business Agency, 505 Main St., Winnipeg.

100 ACRE FARM. Good farm, Lot 23, Con. 5, Markham. Apply to John Trudgeon, Markham P. O.

Farm for Sale—200 acres on the Thames Road, adjoining Exeter, county of Huron. This is a splendid opportunity to secure a well-improved and conveniently situated clay loam farm in a first-class farming district at a reasonable price. If interested, write to W. H. HARVEY, Exeter.

GOODBY.

Mr. E. Dymont, Copetown, Wentworth Co., Ont., in ordering a change in his advt., writes: In spite of the wet weather of the past few weeks my Dorset sheep are looking well. I have to offer at present some fine young stock from the same sire as was the St. Louis winner in the junior ram lamb class. Have also some fine Yorkshires from imported stock. Can supply either sheep or swine in pairs, not akin.

The Plum Grove herd of Shorthorns, the property of Solomon Shantz, Haysville, Ont., is in prime condition, and not over-fitted. The noted prizewinning Golden Drop bull, Kinellar Stamp (imp.), is still at the head of the herd, and seems to be as sprightly as ever, and is stamping his own good qualities on his get in a marked degree. He is a large bull, weighing about 2,500 lbs. in ordinary flesh, and is comparatively smooth for one of his size. Among the bulls that are in stock is one 16 months old (red with a little white), of excellent breeding, being by Imp. Kinellar Stamp, by Emancipator; dam queen, by Imp. Oxford; g.-d. Vermont Lass, by Knight of Vermont (imp.). This young bull is thrifty and straight, and we are told he is an excellent worker, and he is, we think, going to make an all-round good bull. Several of the females are by Beauchamp, who has stamped them quite similarly with thick, natural flesh; a few are by Goldfinder, whose sire was Lord Abbott (imp.). Imp. Mary Ann is doing good work for Mr. Shantz. She is now raising her second calf, which is by Kinellar Stamp, and is in calf to him again. Her yearling is a beautiful roan heifer, by Imp. Nonpareil Archer, and is a mellow, typical Scot, that combines the breeding of at least two noted families—the Nonpareils and Minas. Mr. Shantz informed the writer that he had no trouble selling to anyone that came to see what they were buying. When in want of anything fresh to put into your herd, be it male or female, go and see what Mr. Shantz has to offer. He will meet you at Hamburg Station, G. T. R., if notified when you are coming, and he can likely suit you; if not, he will use you well.

SALE DATE CHANGED.

Mr. W. D. Platt, Hamilton, Ont., writes that the date of the auction sale of the 50 imported Clydesdale fillies which Messrs. A. & W. Montgomery are selecting for him, has been changed to August 23rd, as he has received a cable message from Messrs. Montgomery that they find it utterly impossible to fill the bill satisfactorily and ship in time to hold the sale on Aug. 9th, as formerly announced. The advertisement and fuller particulars will appear in later issues.

TRADE TOPICS.

FUR STYLES FOR 1905-6.—The attention of our readers is directed to the new advertisement in this issue "about furs" of the Holt Renfrew Co., 5 King St., East, Toronto, and Quebec. This firm has an excellent reputation for enterprise and fair dealing, and claim to be the largest retail furriers in Canada, buying their own skins and making them up in their own factory, and they guarantee all their goods as represented. Send for their new catalogue, showing the styles for 1905-6.

MESSRS. W. N. REID & Co., of Brandon, Man., and Regina, N.-W. T., whose card appears in this issue of the "Farmer's Advocate," offer for sale a large line of choice selections in wheat lands situated at the Elbow of the South Saskatchewan. Mr. Reid, senior member of this firm, enjoys an experience of 26 years in the West; is a practical wheat-grower and land expert, and is thoroughly familiar with the subject of Western land and its producing possibilities. This firm we believe is perfectly reliable, and they will be found a valuable guide and adviser to any who intend purchasing land in the West. They will be pleased to place their services at the disposal of prospective buyers, and to furnish any desired information in response to enquiries.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.



Reach for Success

Knowledge is the ONLY stepping stone to Success and Money. You know you could EARN MORE if only you KNEW MORE.

STUDY AT HOME
in your
SPARE TIME

and so fit yourself for a higher salary. Capital is paying high prices for men WHO KNOW SOMETHING WELL.

Our College is PURELY CANADIAN, our Courses thorough and practical; our tutors well-known professors; OUR PRICES LOW.

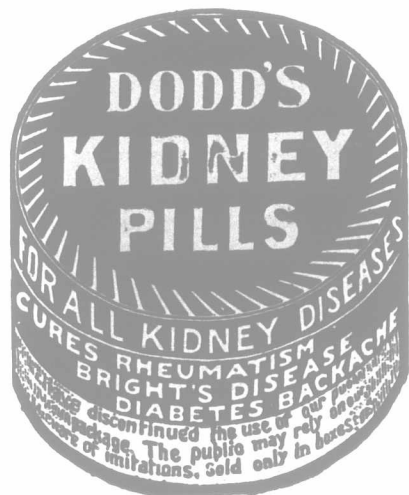
Cut out, mark and mail this coupon to us TO-DAY. We will send you full particulars and advice free.

Canadian Correspondence College, Limited
161 Bay St. Toronto, Ont.
Gentlemen:—Please send me full particulars as to how I can qualify for the position marked "X" in the list below, or written on the extra line at bottom.

Accounting	Scientific Farming
Bookkeeping	Stock-Judging
Stenography	Household Science
Chemistry	Insurance
Electrician	Civil Service
Draftsman	Journalism
Designing	School Teacher
Adv. Writing	Matriculation

Extra line
Name.....
Address.....

It was nature lesson in a West Side public school, and the subject was birds and their ways. The teacher asked the pupils to name such fowls as they knew that lay eggs. Chickens, ducks, turkeys and others were quickly named. Then a little girl, who for several minutes had been eagerly waving her hand, was called on. She proudly announced: "My father, he lays bricks."



QUESTIONS AND ANSWERS.
1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.
2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Miscellaneous.

BOOK ON SAW-SHARPENING.

Where can I get a book on saw sharpening?
R. J.

Ans.—"The Art of Saw Filing," an illustrated little book in cloth binding, by H. W. Holly, may be ordered through this office; price, 75c.

HOW TO CONTROL HORSE-RADISH.

Have a good garden plot which is being badly encroached upon by horse-radish. How can I subdue it?
CONSTANT READER.

Ans.—With hoe and spade.

WANTED, EXPERIENCE IN TRAINING DOGS.

I would like very much if some of your qualified correspondents would give us a short article on how to train a well-bred young collie to bring the cows and be generally useful on the farm.

Ans.—This subject has been already treated in our columns, but there is always room for anyone who can describe clearly how he has done something, whether it be growing crops, raising a family or training dogs.

TO TRAIN A COLLIE.

A Welland County subscriber has written asking if we knew anyone who could train a young collie dog to drive cattle.
E. W. F.

Ans.—Unfortunately we are not acquainted with any competent dog-trainer in his section, and to send a pup to a distance to be trained is hardly practicable. The best plan is to undertake the job oneself. Kindness, firmness, patience and common sense are among the prime requisites in handling dogs and other animals.

REGISTRY OF STALLIONS.

I would like to know if a stallion named Grit Wilkes is registered, and if he has any record; if so, give his number and time. I would also like to have Rifeman's number and record.
G. T.

Ans.—These horses are evidently trotting-bred stock. There is no recognized register for trotting stock in Canada. The Secretary of the American Trotting Register is W. H. Knight, Chicago, who will doubtless furnish the desired information.

COMMON FUMITORY.

I am sending you by this mail a sample of a weed which has been found growing on one farm in this section. It practically smothered out any grain that is sown where it is. Can you tell me what it is, and give any methods for its eradication?
W. P. N.

Ans.—This plant is common fumitory (*Fumaria officinalis*), a smooth herb with brittle stem, watery juice, dissected leaves and irregular flowers. Dr. Jas. Fletcher, Entomologist and Botanist, Central Experimental Farm, Ottawa, reports: "It is a weed of some importance in Nova Scotia and Quebec, as well as in England, and is referred to in English books as 'a troublesome and persevering weed, but an indication of good and productive land, occurring particularly on newly-turned-over soil.' It, as a rule, flourishes with the greatest luxuriance in the cooler months of autumn. I am surprised that it should have been found troublesome in Prince Edward County, where they have such steady hot summers. The best remedy for this weed when growing amongst grain is to harrow or use a weeder upon the fields from the time the grain is two inches high until it is six or eight inches. This will not hurt the grain in any way, but will destroy all of the young and delicate seedlings growing between the drills. The common fumitory is an annual plant coming from seed every year, and certainly is a very persistent weed. Many years ago I grew a few plants as botanical specimens, the seed of which I had collected at Father Point, Que., and although I have destroyed these regularly every year, a few seeds continue to germinate every time the soil is turned over.



Farmers' Boys Learning to Judge Beef Cattle at the O. A. C.

MEDICAL DEPARTMENT

Western University, London

The 24th Session of this well-known Medical College OPENS SEPTEMBER 13th, 1905. Students commencing the study of

MEDICINE

should consider most favorably the advantages of this School. At the recent examinations of the Ontario Medical Council 100% of the Final and Intermediate students and 80% of those writing on the Primary were successful—a record that, it is believed, has never been equalled by any Medical School in the Province.

Laboratory and Hospital facilities are unexcelled. A double course leading to the degree of B.A., M.D., is provided.

For further information and announcement apply to

W. H. MOORHOUSE, B.A., M.B., Dean
W. WAUGH, M.D., C.M., Registrar.

GOSSIP

Messrs. F. N. Neil & Sons, Maple Avenue Stock Farm, Lucan, Ont., write: "We have a very choice lot of Lincoln sheep for the fall trade. Our present stock bull, Star Chief, is proving himself a grand sire. Our 1905 crop of calves, sired by him, are very choice. I have just returned a short time ago from delivering to Utah breeders twenty Short-horn bulls and heifers, including all our yearlings which were sired by Star Chief, which were very choice. We have orders for a number more of our Short-horns and Lincolns, to be delivered this coming fall to Western breeders."

ROYAL SHOW CHAMPIONS.

As we go to press the report of the Royal Agricultural Society's Show, held at Park Royal, London, England, June 27th—30th, is received. We can only give in this issue the champion winners in a few prominent classes, and will publish a fuller report next week. Horses and cattle were strong, Shires leading in the former and Shorthorns in the latter. Following are champions: Shire stallion, Lord Rothschild's Delamere Chorister; Shire mare, Sir A. P. Muntz's Dunsmore Fuchsia; Clyde stallion, A. & W. Montgomery's Baron Fyvie, a two-year-old son of Baron's Pride; Clyde mare, J. E. Kerr's Lady Garnet; Hackey stallion, R. P. Evans' Evantheus, three years old, Hackney mare, W. B. Tubbs' Rosadora. Shorthorn bull, R. Taylor's roan, four-year-old, Royal Emblem, bred by Jas. Durno, Jackston; reserve, A. J. Marshall's Roan Conqueror. First prize two-year-old, Dean Willis' Dayton Brave Archer; first-prize yearling, Lord Polworth's British Renown. Champion female Shorthorn, F. Miller's two-year-old Lady Amy 7th; reserve, the King's yearling Reception. First-prize cow, J. D. Willis' White Heather. Champion Hereford bull, the King's Fire King; champion female, Sir C. H. Boughton's Lady Betty. Aberdeen-Angus bull, R. W. Hudson's Danesfield Jester; female, C. E. Hunter's Ruritania. Southdown ram, the King (shearling); pen of ewes, the King (shearlings); Lincoln ram, T. Caswell (2-year-old); reserve, R. & W. Wright (shearling). Shropshires—2-shear ram, R. P. Cooper; shearling, M. Williams; 5 shearling rams, Cooper; 3 ram lambs, E. Nock; 3 shearling ewes, 1 and 2 Cooper; ewe lambs, Minton, Harding. Berkshire champion, J. Jefferson's Peel Champion (boar); reserve, Duchess of Devonshire's Polegate Dahlia (sow). Yorkshire champion, Earl of Ellesmere's Worsley Sunbeam.

FARMERS' BOYS

may get a cheap and practical education at the

Ontario Agricultural College

Next course opens September 13th. Write for Calendar.

G. C. CREELMAN, B. S. A., M. S.
President.

QUESTIONS AND ANSWERS.
Miscellaneous.

WEAK JOINTS IN FOAL.

I have a colt, two weeks old, and when he walks he goes forward on the fetlock joint. He is doing well. Is there anything I could do to help him?
A SUBSCRIBER.

Ans.—As a rule, as the colt gains in strength, its joints straighten and become stronger. Bandaging and hand-rubbing have also been tried with good effect.

PROBABLY GOITRE.

I have a sheep that seems to have throat trouble. She breathes hard; her cheeks rise and fall; she makes a rumbling sound in her throat, as if she were choking; before this she had a bleeding from the nose, and showed signs of grub in the head, for which I administered turpentine. She is in good condition.
A. J. B.

Ans.—The symptoms are those caused by goitre, an enlargement of the thyroid glands, generally about the size and shape of a kidney on each side of the windpipe, but in some cases much larger, affecting the breathing. If this condition exists, the only treatment likely to give relief is the application of iodine ointment well rubbed in and repeated, the wool being first clipped off. If it is not goitre, it is probably an affection of the lungs, for which no treatment is likely to avail.

REGISTERING HEREFORDS.

I have a sheep that seems to have National Record of Canadian recorded Herefords and also of American recorded Herefords? Do all A. H. R. ancestors have to be put in, and at what fee?

2. What grain ration would you advise to feed to a draft stallion, one year old, to forward best development; mention quantities of each kind of feed, and whether rolled or whole oats is preferred? Would the colt take enough exercise in a yard, say 30 feet square?
A. T.

Ans.—1. The registration fees in the National Record for Canadian recorded Herefords are: Members, 75c. each; non-members, \$1.25; membership fee, \$2 per annum. Fees for American recorded Herefords have been as follows: 75c. to record American pedigree in our book, and 25c. for each ancestor not already on record in the Canadian Herdbook. It is expected that in the course of a few weeks all ancestors will be recorded free of charge, and in that case, the fees for recording American recorded pedigrees will be the same as Canadian.

2. We do not know of anything more suitable and safe than whole oats and bran. Two quarts, three times daily, of oats and the same amount of bran, or a little more, together with clean, sweet, well-cured hay (clover preferred, if it is free from dust and mustiness), should bring the colt on satisfactorily. We do not think there would be any special advantage in feeding rolled oats. The yard described should afford a fair amount of exercise, but if it is convenient to give him a run in pasture at nights, it would be all the better for development of muscle and feet and cleanness of Hmbs.

At the Holstein breeders' joint sale at Syracuse, N. Y., on June 8 and 9, the four-year-old cow, Pontiac Netherland De Kol, contributed by Stevens Bros., Hastings Co., sold for \$1,000, and the 69 head contributed for them, averaged \$209 each; twenty-five of the females averaging \$300 per head.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Highway Bridges



This Fellow is a dandy.



This also is a Dandy.

Beam Spans Riveted Spans Through Spans Pin Spans Swing Bridges Deck Spans

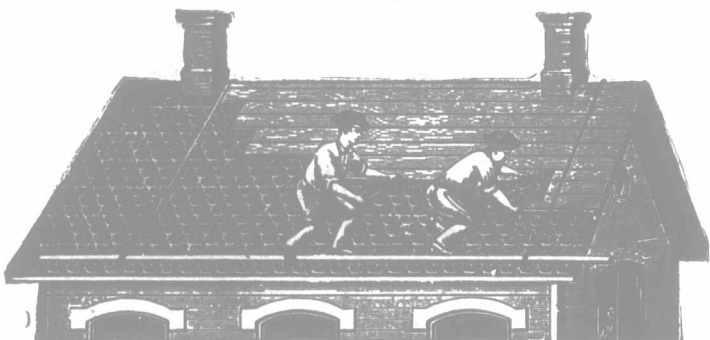
Prices, Estimates, Plans and other information cheerfully given on application.

HAMILTON BRIDGE WORKS CO.

HAMILTON, Limited, CANADA.

Pedlar's Steel Siding and Shingles

At \$2.00 and \$2.55 per 100 Square Feet



Painted red on both sides. Most durable and economical covering for Roofing or Siding for Residences, Houses, Barns, Elevators, stores, Churches, Poultry Houses, Cribbs, etc. Easier to lay and will last longer than any other covering. Cheaper than wood shingles or slate. No experience necessary. A hammer and snips are the only tools required. It is semi-hardened high-grade steel. Brick or Stone Siding at \$3.00 per 100 Square Feet. Pedlar's Patent Steel Shingles at \$2.55 per 100 Square Feet. Also Corrugated Iron, Painted or Galvanized, in sheets 36 inches long. Beaded and Embossed Ceilings. V Crimped Roofing. 2 000 designs of Roofing, Siding and Ceilings in all grades. Thousands of buildings through the Dominion covered with our Sheet Metal Goods, making them

FIRE, WATER AND LIGHTNING PROOF.

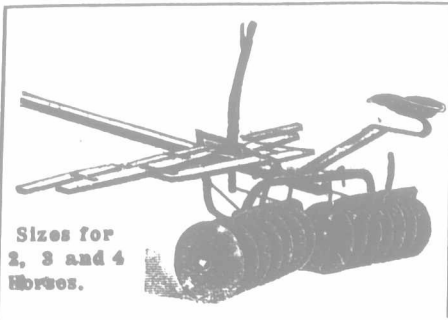
Send in your order for as many squares (10x10 feet) as you require to cover your new or old building. The very best roofing for this climate. We can supply Eave Trough, all sizes, Corrugated or Plain Round, Conductor Pipes, Shoes, Elbows, Spikes, Tubes.

All goods shipped day after order is received. We are the largest concern of the kind under the British flag. Established 1861. Capital invested \$150,000.00.

THE PEDLAR PEOPLE, OSHAWA, ONT., CANADA.

MONTREAL, Que., OTTAWA, TORONTO, CALGARY, Alta., VANCOUVER, B.C.
767 Craig St. 423 Sussex St. 50 Yonge St. 201 7th Ave., E. 615 Pender St.
Write Your Nearest Office.

The BISSELL DISK HARROW possesses features



Sizes for
2, 3 and 4
Horses.

Of unusual merit. The shape is right. A plow mouldboard must have the right turn, or it is useless. This is true of the Harrow Disk Plate. The plates on the Bissell Disks have the correct shape, or concave. They do the best work with the least horse power. Where old-style plates only scrape the surface and set the soil on edge, the Bissell shears, cuts, turns and completely pulverizes the soil. Years of experience in the Disk Harrow trade have placed the Bissell far ahead of all competitors. Specially adapted for preparing root ground and for summer-fallow work.

None genuine without the name "BISSELL."
Send us your address on a postal card; we will cheerfully give you further information. Address:

T. E. BISSELL, MANUFACTURER, ELORA, ONTARIO.
DEPT. W.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

GOSSIP.

"What in Canada most impresses the Englishman or Scotchman is the diffused well-being of the mass of the people," says the Leeds Mercury. "He sees squalor nowhere, never meets tramps or beggars, everywhere he meets politeness, but nowhere cringing servility." A considerable part of this "diffused well-being" is due to our freedom from the burden of militarism. In England each worker must, on the average, spend two weeks each year in earning the money necessary to pay his share of the war tax.

Dr. Smead, writing in the New York Tribune Farmer, says that while in Cleveland he was asked to advise as to the most humane way to destroy the sight of a horse, so the eyes would not look bad, yet the horse would be entirely blind. "I consider myself a make-up that is hard to knock out in the first round," said Dr. Smead, "but this question came pretty near it. My study of the horse has been largely devoted to saving his sight, and not destroying it. But I managed to gasp and ask: 'What in the name of sense do you want a horse's eyes put out for?' The propounder of the question, by the way, was a dealer in horses. His answer was: 'Some of the automobiles, built as they are, after a pattern similar to what the heathen Chinese formerly used to scare away devils with and intimidate their opponents in battle, are so scaring to horses that blind horses are in great demand. People are afraid to drive a horse on the country roads or ride behind one, and are asking for blind horses, that can't see the hideous things.'"

Geo. M. Smith, of Haysville P. O., Waterloo Co., Ont., is a breeder of Yorkshire hogs, who gives a good deal of attention to the business. His herd is as usual in good working form. Dalmeny Topsman (imp.) heads the herd. This boar is lengthy, has good hams, and a strong middle, and is producing stock quite similar to himself. We noticed a choice litter, by him, from Imp. Dalmeny Lassie, farrowed early in June. There were nine in the lot, and as alike as peas. Dalmeny Topsman weighed 700 lbs. last fall when ready for the local shows. Dalmeny Emperor (imp.) is also in use in the herd. A few young boars, nearly ready for service, also sows, of the same age, are by Holywell Cardiff a boar bred at the Dominion Experimental Farm, Ottawa, and are for sale. Summer Hill Stella (imp.) is a fine specimen of the breed, weighing about 600 lbs, and nicks well with Dalmeny Emperor, from which boar she has a choice litter ready for shipping. Mr. Smith is in excellent shape to supply pigs of the most fashionable breeding in pairs or trios not akin, having two imported boars and both imported and home-bred sows to select pigs from. Write him for a trial order when you are wanting Yorkshires. Hamburg is the nearest station, G. T. R.

Mr. Adam Dawson, Cannington, Ont. importer of Clydesdale and Hackney horses, still has two first-class stallions, one of each breed, to dispose of. The Clyde is Whiteside Duke (12786), bay, foaled May, 1902, white on face and fore legs, is a colt of excellent breeding. His sire, King o' Kyle 10213, was a noted stock horse. His grandsire, Prince of Kyle 7155, it is said, was sold when rising two years old for \$10,000, and won the Cawdor cup three times. His great-grandsire was the noted Prince of Wales (673), who won many of the best premiums in Britain for several years, and sold for \$4,725 when eighteen years old. This colt's pedigree is a good one, and anyone wanting such can buy him at a bargain now that the regular season is about closed, and get him in time to fit him for the exhibitions. Painslack Prime Minister (8599) 223, the Hackney, is a dark bay five-year-old, by Pilot 2nd (3864), grandsire Lord Derwent 2nd (1034), dam Lady Gwendoline 6895, by Highflyer (1648). This is a horse with more than ordinary make-up, and with plenty of size and substance, and we look for him to make a good impression as a sire of the fashionable high-stepper. This horse can also be bought reasonably. See the advertisement in the "Farmer's Advocate."

Bear in mind that the world is demanding better stuff than it did in former years, and to meet that demand better stuff must be made. The straw-stack calf no longer goes. It has been turned off with the hazel hog, the smart-weed steer and the blue-mud cow. "Old things have passed away." Let them go. —[Up-to-date Farming.]

Mr. J. I. Baleson, of Markham, Ont., writes: "In your last week's issue I see a report of a mare having two foals—one dead and one alive. Such occurrences are not very frequent, but there have been a few cases of it in my recollection. In 1903, I bred a three-year-old mare all season. After the season, I bred her to another horse; she got in foal. In April, 1904, she prepared to foal by all appearance; the milk ran from her, and we expected her to foal at any hour. We watched her every night for seven weeks, and worked her every day the weather was fit, and the milk still ran from her. Parties said I was running a big risk of killing mare and colt, she would be sure to have a dead colt. On June 27th she foaled in the pasture. When we came to her, she had two colts—one dead and one alive. The dead one was about the size of a dog and a little brown in color; the live one was very poor, but is the making of a good gelding; it will weigh about 1,000 lbs. now. The mare has had another colt this year."

Glencairn Kennels, the property of Mr. R. E. Clarke, West Lorne, Elgin Co., Ont., is situated a few minutes' walk from the station. Realizing the growing need throughout this fair land for a better class of farm dogs, Mr. Clarke has launched out quite extensively into the breeding of Scotch collies, founded with some of the best that could be secured. Among the bitches is Holyrood Missie 6150, a litter-sister to Holyrood Monty, a winner of \$300 at one of the Chicago dog shows. Her grandam, Holyrood Thistle, was also a New York winner. The sire used is Holyrood Production 70785, sire Cheviot Production, dam Holyrood Petrel, by Imp. Champion Laurel Laddie. This dog has also proved himself a sire of winners, as one of his get, from Holyrood Missie, secured first prize in 1903 in Ohio. Two litters of pups of similar breeding to the above are now ready for shipping. Nearly every farmer keeps a dog and pays taxes on him, and in many cases a mongrel-bred one that is very likely to get into mischief, killing sheep or worrying other stock. To such we would say better keep one that will help you to drive the cattle or sheep and do it gently, and to this end we would say get a collie. See Mr. Clarke's advertisement in this issue.

THIS MUSICIAN IS DELIGHTED

His Kidney Disease and Gravel Cured by Dodd's Kidney Pills.

Tried Many Medicines, but Got No Relief Till He Used the Great Canadian Kidney Remedy.

ROSEDENE, Ont., July 17.—(Special.)—Mr. Samuel J. Crow, the well-known musician of this place, relates an experience that adds to the already great popularity of Dodd's Kidney Pills in this locality.

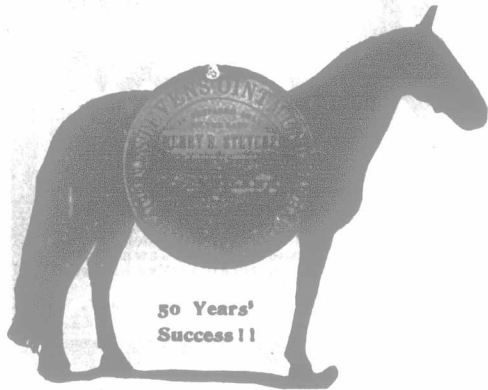
"I suffered for years with Kidney Trouble," says Mr. Crow, "which became aggravated with every attack of cold and caused me much agony. The disease developed into Gravel, when I was totally unfit for anything."

"I tried different remedies without the desired result, and was in much misery when I decided to try Dodd's Kidney Pills, when to my astonishment and delight I immediately began to recover."

"After using five boxes, the ailment had entirely ceased, and I was again enjoying perfect vigor, all of which I owe to Dodd's Kidney Pills."

The fact that Gravel yields so readily to Dodd's Kidney Pills is good news indeed, as it does away with those terrible operations that were supposed to be the only relief from this trouble.

WHAT A HORSE'S LEGS



STEVENS' OINTMENT

are to a horse—so is
to a horse's legs. Get a box now! Then it will always be ready at a moment's notice. It keeps its strength for generations. Cures

Splint, Spavin, Curb, Ringbone,

and all enlargements in horses and cattle. 75c. small, \$1.50 large box, at Chemists, or direct from

Evans & Sons, Ltd., Montreal, Que.
Agents for Canada. o

JOHN CHAMBERS & SONS

Holdenby, Northampton, Eng.

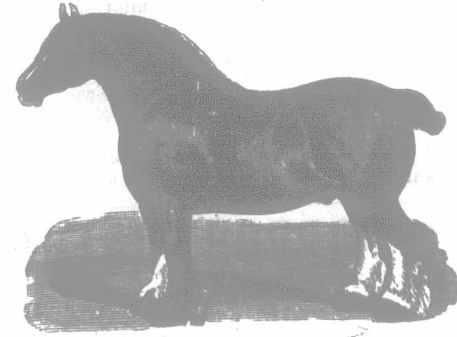
Farm over 2,000 acres of land just in the centre of the Shires, and breed the very best and soundest of the

SHIRE HORSE

which from birth are kept in their natural condition, neither forcing nor overfeeding for showing purposes.

Canadian buyers visiting England are invited to call and see what we have to show them and obtain their stallions and mares direct from the men that breed them. No fancy prices, and all delivered free Liverpool landing stage. Correspondence invited.

Station—Althorp Park, L. & N.W. Ry



JOHN KENWARD,

Expert Auctioneer on Thoroughbred Live Stock.

Sales of registered stock scientifically conducted anywhere in Canada.

I am expert judge and auctioneer of all classes of live stock. Parties thinking of holding sales will save money and make money by employing the undersigned.

JOHN KENWARD, Auctioneer, Woodstock, Ont.

GLENCAIRN COLLIE KENNELS are offering Holyrood Production, 70785, A. K. C., at stud. Also young pups for sale.

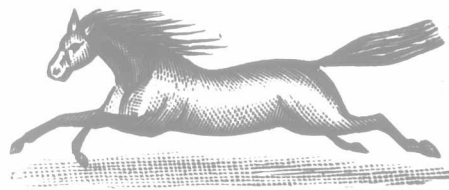
R. E. CLARKE, West Lorne, Ont.

For Sale—Pure-bred sable and white SCOTCH COLLIE PUPS, of Holyrood Production stock, at \$5 apiece. Orders filled promptly.

J. K. HUX, Rodney, Ont.

"THE REPOSITORY"

Burns & Sheppard, Proprietors,



Cor. Simcoe and Nelson Sts., TORONTO.

Auction Sales of Horses, Carriages, Buggies, Harness, etc. every Tuesday and Friday at 11 o'clock.

Special Sales of Thoroughbred Stock conducted. Consignments solicited. Correspondence will receive prompt attention.

This is the best market in Canada for either buyer or seller. Nearly two hundred horses sold each week.

Clydesdale Stallions and Fillies.

Imported and Canadian-bred. For sale: Three 2-year-old stallions and imported mares with foals at foot, from imp. sire and dam. Also SHORTHORN Cows and Heifers for sale. Reasonable prices. For particulars write to

JAS. W. INNES, Woodstock, Ont.

Clydesdales, Shorthorns and Leicesters—Present offering: One choice mare, 4 years old, from imp. sire and dam. Two young bulls (sired by Golden Count 26440). Prices reasonable.

W. M. MCINTOSH, Prop., Burgoyne P. O., Port Elgin Sta. and Telegraph.

Clydesdales, Shorthorns and Cotswolds—Present offerings: 2 Clydesdale stallions, 1 and 2 years old, by MacQueen; one yearling bull by imp. sire; also some yearling rams. For price and particulars write to

W. D. FURSH, Clarendon, Ont.



Your druggist has it or can get it from any wholesale druggist.

QUESTIONS AND ANSWERS. Veterinary.

ENLARGED HOCK.

Mare has enlargement as the result of a kick on hind leg above fetlock. It is quite hard.

H. J. G.

Ans.—Rub a little of the following liniment well into the enlargement once daily, viz.: Iodine crystals, resublimed, 4 drams; iodide of potash, 4 drams; glycerine, 4 ounces; alcohol, 4 ounces.

V.

INGUINAL HERNIA.

I castrated a colt, and in a few days a soft lump that appears to be a rupture appeared. The wounds have healed, but the soft tumor remains.

C. H. B.

Ans.—It is probable this is a rupture, and if it does not disappear spontaneously, it will be necessary to get your veterinarian to operate. The usual operation in such cases is the application of a clam, which can be successfully done only by a veterinarian. Leave him alone until fall, and then, if the tumor is still present, get your veterinarian to examine him, and, if necessary, operate.

V.

COWS DIE SUDDENLY.

I have had two cows die without apparent cause. They both gave a full flow of milk until the day before death, when they gave only one pound. Is it poison or sunstroke, and would stagnant water affect them?

G. T. T.

Ans.—It is not possible for me to give an intelligent idea of the cause of death without definite ante-mortem and, if possible, post-mortem symptoms. All acute diseases reduce milk secretion, and there are many diseases, such as those caused by the different poisons, anthrax, indigestion, bloating, etc., which often cause death in the course of a day. Stagnant water might cause fatal illness. It is quite unsafe to allow cattle to drink such.

V.

CARE OF YEARLING COLT.

1. What grain ration would you advise for a yearling draft stallion; mention quantities of each, and whether whole or rolled oats is preferred?

2. Would the colt take sufficient exercise in a yard 30 feet square. W. W. Co.

Ans.—1. I prefer rolled oats, and would advise one gallon three times daily, and a feed of one and a half gallons of bran made moist with warm water twice weekly in addition to the oats. When grass can be got give him all he will eat. At other seasons, give good hay and a carrot or two daily, or turnips may be given instead.

2. No; he should be turned out in a large paddock for a few hours each day, or given daily exercise on the halter.

V.

GOSSIP.

An article in Freeman's Journal, London, England, on the production of bacon says that the secret of Canadian success with bacon in the markets of the United Kingdom can clearly be traced to the way the Government works hand in hand with the producer and guides him in every detail. This means a frequently-revised pamphlet of technical instruction complete from farrowing to marketing.

We are in receipt of advanced proofs of the prize list of the 17th annual Bench Show, in connection with the Industrial Exhibition at Toronto, which is to be held this year from Sept. 4th to Sept. 8th. There have been several changes made in the list as a whole, the chief one being the equalization of the prize money in the various classes; that is, the puppies, novice and limit classes have been brought up to the money offered heretofore in the regular open classes, viz.: \$8 first, and \$5 second. This makes a large increase in the amount of money offered. There is a full classification of puppies, novice, limit and open in the following breeds: St. Bernards, English and Irish Setters, Cocker Spaniels, Collies, Bulldogs, Fox Terriers, smooth and wire Bull Terriers, Boston Terriers, Irish Terriers, and Black and Tan. In the other breeds some have a very full classification, whilst others are not so large, owing to the entries in the past not justifying the committee in enlarging upon the classes that we have had hitherto.

Bone Spavin

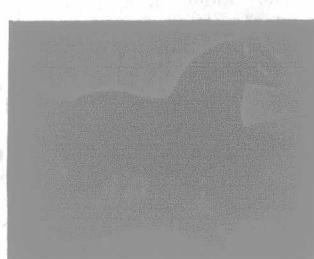
Know it by the lump and the limp—a hard, bony growth on the inner side of the hock joint, usually low down and a little forward of the center of the leg—a quick hitch with the sound leg, and a stiff movement of the lame leg, bearing the weight on the toe, most noticeable in starting.

New cases, old and bad cases, the very worst cases, cases where firing has failed, are cured by

Fleming's Spavin and Ringbone Paste Guaranteed to cure the lameness for good—may or may not take off the lump. Easily used by anybody, and a single 45-minute application usually does the work—occasionally two required. It gives all the particulars, and tells you what to do for other kinds of blemishes.

FLEMING BROS., Chemists, 45 Front Street, West, Toronto, Ont.

PERCHERONS at BARGAIN PRICES



In order to make room for our new importation, for the next 60 days we will sell stallions at greatly reduced prices. Come and see us while this sale lasts. We have some of our best ones yet. Among them is a black not three years old, weighing 1900 lbs., with the best of breeding. Located three miles out of town, or two miles from Ruthven, on the Pere Marquette. We pay lively if on hand to meet you. Address: o

I. A. & H. J. WIGLE, Kingsville, Ontario, Essex County.

SMITH & RICHARDSON'S CLYDESDALES

Columbus, Ontario.

We are now offering for sale the finest lot we ever imported, at reasonable prices. Amongst them, Baron Gartley, winner of 1st prize and sweepstakes. Stations: Oshawa and Brooklin, G. T. R. Myrtle, C. P. R. Long-distance Telephone at Residence.

CLAYFIELD STOCK FARM

Clydesdales, Shorthorns and Cotswolds 41 prizes won at World's Fair at St. Louis, 11 firsts, 5 championships. Will now offer my entire flock of rams and ewes at prices according to quality.

J. C. ROSS, Jarvis, Ont.

HORSE OWNERS! USE



CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from Horses. Impossible to produce scar or blemish. Send for descriptive circulars.

THE LAWRENCE-WILLIAMS CO., Toronto, Can.

\$100 Reward



For a case of disease in horses that Tuttle's Elixir will not cure, if we recommend it to do so. It is the only remedy that stops pain at once and cures quickly and permanently distemper, founder, pneumonia, and many other horse ailments.

For Race Horses

It prevents stiffness, colds, cures sprains, lacerations and cures lameness, and as a body wash keeps the circulation in good condition under hard driving. Tuttle's Hoof and Hoisting Ointment cures all hoof diseases. Tuttle's White Star is the best healer known. Our 100-page book "Veterinary Experience" free. Tuttle's Elixir Co. 66 Beverly St. Boston, Mass. Beware of so-called imitations. Tuttle's only in Canada. Avoid all others they are only temporary relief. **LYMAN, KNOX & SON, AGENTS, Montreal and Toronto, Canada.**

IT SAVES TROUBLE

and annoyance many times to have

ABSORBINE

handy in case of a Bruise or Strain. This remedy is rapid to cure, pleasant to use, and you can work the horse. No blister, no hair gone. **ABSORBINE** cures lameness, always pain, removes any soft bunch quickly. \$1.00 per bottle delivered or of regular dealer. Book & E. Free.

ABSORBINE, JR. for mankind, \$1.00 Bottle. Cures Sore Throat, Strained Joints or Ligaments, Kills Pain. **W. F. Young, P.O. 73 Monmouth St., Springfield, Mass. Canadian Agents, Lyman, Knox & Co., Montreal.**

THORNCLIFFE STOCK FARM

CLYDESDALES

ROBERT DAVIES

Has two-year-olds, three-year-olds and aged mares for sale, in foal to "Right Forward" imp. Please write for prices. City address: o

36 Toronto St. TORONTO, ONT.

STOWE PARK STOCK FARM

A few young

BULLS FOR SALE

Of choice quality and breeding, sired by Rupert of Ingleside Ind.

WALTER BENNETT, Proprietor, Chatham, Ont. Box 525.

THE SUNNYSIDE HEREFORDS

Imp. Onward in service. Six choice bulls of serviceable age; this includes 1 3-year-old, all of the blocky, heavy type, at prices that will move them. We can yet spare some cows and heifers. o **FRED BIRD, Sunnyside, Ont. Elderton Sta., L. E. & N.; Lucas Sta., C. T. R.**

MURON CENTRAL STOCK FARM

ABERDEEN-ANGUS

Our present offering is seven young bulls, 8 to 18 months old. All sired by the champion bull Godolich Chief 1175. All stock registered in the American Herdbook. Also offering the young coach stallion Godolich, winner of 1st at London this year. o **E. BUTT & SONS, Chatham, Ont.**

GERNGORE STOCK FARM

ABERDEEN-ANGUS

We have still a number of imported-bred Bulls and Females of all ages for sale at reasonable prices. Inspection invited. **GEO. DAVIS, Altona P. O. Erin Sta., C. P. R.**

Shorthorns and Yorkshires

A few shire pigs, either sex, from imp. sire and dam. Also a few young Shorthorns, at reasonable prices. o **W. J. MITTON, Mapleton Park Farm, Thamesville Sta. & P. O.**

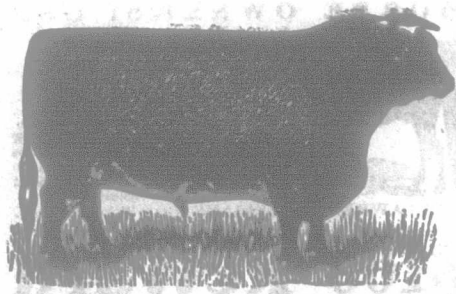
Shorthorns—Prince Banff (Imp.)—45212—

at head of herd. Young stock of either sex for sale. Visitors welcome. o **DAVID HILL, Staffa P. O., Ont.**

Shorthorns, Leicesters and Berkshires—1

yearling bull, bullock, heifer, all ages, for sale; also young Berkshires and Leicesters. For particulars address **B. JEFFES & SON, Bond Head P. O. Bradford and Boston Sts., G. T. R.**

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.



Arthur Johnston
GREENWOOD, ONT.

Offers the following:

- 5 imp. bulls, all registered in E. H. B.
- 7 high-class home-bred bulls, all by imp. sires, and from imp. or pure Scotch cows.
- 7 imp. cows and heifers.
- 7 very fine heifers of our own breeding, by imp. sires, and mostly from imp. dams.

SHORTHORNS

Still have a few good young bulls to offer. Also an exceptionally good lot of heifers, among which there are show animals. Prices easy.

CATALOGUE.

H. GARGILL & SON, GARGILL, ONT.
JOHN CLANCY, Manager.

MAPLE SHADE



One Cruickshank Lavender bull, ready for service. A number of shearling Shropshire show rams.

JOHN DRYDEN & SON,
Brooklin, Ont.

Stations (Brooklin, G. T. R. Myrtle, O. P. R.)
Long-distance telephone.

Spring Grove Stock Farm
SHORTHORN CATTLE & LINCOLN SHEEP.



First herd prize and sweepstakes, Toronto Exhibition, 3 years in succession. Herd headed by the imported Duthie-bred bull, *Ross Morning*, and *White Hall Ramden*. Present crop of calves sired by imp. Prices reasonable. 1st Toronto, 1908. High-class Shorthorns of all ages for sale. Also prize-winning Lincolns. Apply

T. E. ROBSON, ILDERTON, ONT.

PINE GROVE STOCK FARM
ROOKLAND, ONTARIO, CANADA.

Breeders of choice
SCOTCH SHORTHORNS
and **SHROPSHIRE**.

W. C. EDWARDS & CO., Ltd., Props.
JOSEPH W. BARNET, Manager.

T. DOUGLAS & SONS,
Strathroy, Ontario.

SHORTHORNS and CLYDESDALES
Present offerings: 12 young bulls of No. 1 quality, ready for immediate service; also cows and heifers of all ages. Also one imp. stallion and two brood mares. Prices reasonable. Visitors welcome. Farm one mile from town.

MAPLE LODGE STOCK FARM
1854.

15 Shorthorn heifers, sired by imp. bull, and in calf to imp. bull. Also two first-class young bulls. Cows are large milkers.

A. W. SMITH, Maple Lodge P.O., Ont.

SHORTHORNS FOR SALE.
Three bulls about 10 months old, two roans and one red; 5 one-year-old heifers; 6 heifer calves, all sired by imp. Diamond Jubilee. Also a few choice cows carrying calves or with calves at foot. For prices, apply to
FITZGERALD BROS., Mt. St. Louis P.O., Glenvale Sta., Hillsdale Telegraph Office.

SCOTCH-TOPPED SHORTHORNS
Young stock of both sexes for sale; sired by Scottish Baron 4021 (imp.).
H. GOLDING & SONS, Thamesford Ont., Stations, Thamesford C.P.R.; Ingersoll, G.T.R.

SCOTCH SHORTHORNS



Some extra good young show bulls eight to ten months old, by *Bapton Chancellor* (imp.); also cows and heifers. New importation of choice bulls and heifers, due home August 28. All for sale. Write

H. J. DAVIS, Woodstock, Ont.
C.P.R. and G.T.R.

TROUT OREEK SHORTHORNS

Bulls in service: *Gold Cup* (imp.), bred by W. Duthie, and *Ardlethen Royal* (imp.), a Marr Princess Royal

James Smith, Manager. **W. D. FLATT, Hamilton, Ont.**

Scotch Shorthorns

AT **HOLLYMOUNT STOCK FARM**



Young bulls and heifers from imported sires and dams for sale at reasonable prices.

For particulars write to

W. J. THOMPSON, o Mitchell, Ont

CHAS. RANKIN, WYEBRIDGE, ONT.

IMPORTERS AND BREEDERS OF
SHORTHORN CATTLE and OXFORD DOWN SHEEP.

Herd headed by *Friede of Scotland* (imp.).
FOR SALE—Females and bulls of all ages, from noted Scotch families.

Shorthorns & Lincolns

12 young bulls, 6 heifers, and some young cows of choice breeding. Prices very reasonable.

W. H. TAYLOR & SON, Parkhill, Ont.

R. & S. NICHOLSON
SOOTCH SHORTHORNS

Present offering: Seven young bulls of serviceable age; good ones. Prices right. For particulars write to above firm.

Parkhill Sta. and Telegraph. SYLVAN, ONT.

MAPLE HILL STOCK FARM
SCOTCH SHORTHORNS

of the *Brawith Bud*, *Cecelia*, *Mayflower*, *Fashion* and *Daisy* families. Herd headed by the grandly-bred *Lavender* bull, *Wanderer's Star*—4885—, by *Wanderer's Last* (imp.). Special offering: A few choice young bulls.

WM. E. ELLIOTT & SONS,
Box 428. o Guelph, Ont.

12 SHORTHORN BULLS
20 Cows and Heifers

Good ones, Scotch-bred, at moderate prices. Catalogues on application.

H. SMITH, Exeter, Huron Co., Ont.
Station adjoins farm. Long-distance telephone in residence.

Shorthorns, Lincolns and Berkshires

Young stock of either sex for sale. Reasonable. For particulars apply to

W. H. Ford, Maple Shade Farm, Dutton, Ont.

SHORTHORNS

Choice young bulls for sale, ready for service

For particulars write to
JOHN ELDEK, Hensall Sta. o P.O., Ont.

SHORTHORNS FOR SALE

Both male and female, different ages. Prices very reasonable. For particulars write to

CHAS. E. PORTER,
Tottenham Sta., G.T.R. Lloydtown, Ont.

QUESTIONS AND ANSWERS
Miscellaneous.

SWEET CLOVER.

C. E. B., Edgeley, Ont., asks how to get rid of sweet clover.

Ans.—Sweet clover is not a bad weed, as, like other clovers, it is of great value in enriching the land. If it is growing where it is not wanted, however, simply keep cutting down the plants so as to prevent them from seeding. As it is a biennial, this method will soon be successful in eradicating it.

SOW FAILING TO SHOW OESTRUM.

Kindly inform me through the pages of your valuable publication of treatment to bring a sow in heat. Have one that has already had a couple of litters, but after weaning her last litter has failed to come in heat. She is in good condition, and I can give no reason as to her failure.

I. L. H.
Ans.—We know of no treatment likely to produce the desired effect, and can only suggest leaving her with a boar constantly, or turning her with him for a while each day. It is possible she may have oestrus in a mild form, and not show it as plainly as is usual.

WHITE FOAM-ENCIRCLED INSECT.

A reader, Peterboro' County, Ont., inquires respecting a white foam on grass encircling a small insect, which, he says, is more abundant than usual in his neighborhood.

Ans.—A large family of bugs, known as the Cercopidae, contain several species, whose larvae secrete a whitish froth, probably for protection, although it is a means of discovering them to certain wasps, which explore the frothy masses for the larval cercopids to feed their young. These insects are variously known as frog-hoppers, spittle insects, frog-spits and cuckoo-spits. The larvae feed upon grass and other plants, and are usually regarded as more curious than injurious. Doubtless, if they were very numerous they would do noticeable harm to the plants upon which they feed.

J. D.

RAPID CURDLING MILK.

I have a cow I bought some five weeks ago, and I cannot understand how it is that I cannot boil her milk, as it goes to a curd. I bought her for an in-calf cow, and I do not think she is, and I should be very much obliged if you could tell me the reason.

W. E. T.
Ans.—The probable cause of the milk curdling as soon as it is boiled is the presence of large numbers of acid-forming bacteria in the udder of the cow. Under ordinary circumstances, milk in the udder of a perfectly healthy cow contains a few bacteria, but occasionally the udder becomes invaded with a larger number of organisms, and on this account the milk will sour much more quickly. No method of prevention can be given, but the cow should be very thoroughly milked out, and as quickly as possible. This may get rid of the greater number of acid organisms, but the best prevention would be to dry up the cow and the trouble would not likely recur on her again producing milk.

F. C. HARRISON,
Ontario Agricultural College.

LUCERNE.

Enclosed find a sample of weed I found in a meadow. Please give name, general description, and best way of killing it.

Huron County. SUBSCRIBER.
Ans.—The plant enclosed is a stalk of lucerne, also called alfalfa (*Medicago sativa*). It is a legume allied to clovers, but is a perennial, with a tremendously long taproot. Distinguishing characteristics are the purple flowers in a long raceme and spirally-twisted pods. Since the growing of lucerne has become common over many parts of Ontario, it is not unusual for a few seeds to get mixed with clover seed, and in that way become disseminated. With ordinary care there should be no danger of its becoming troublesome, especially seeing that it enriches the land it grows upon, and, when cut early or when pastured, makes even better forage than clover. Its long taproot, however, makes it rather difficult to plow, especially in old fields. This, and the fact that it usually becomes woody before clover is cut for hay, are the only objections to its presence. The only means of eradication worth while is care in the choice of seed.

Lump Jaw
Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use
Fleming's Lump Jaw Cure
No trouble—no risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free illustrated book on Lump Jaw and other diseases and ailments of cattle and horses. Write for it today.
FLEMING BROS., Chemists,
45 Front Street, West, Toronto, Ont.

GREENGILL HERD
of high-class

SHORTHORNS

The choice breeding bull (imp.) *Lord Roseberry*, a Broadhocks, now heads the herd. Our present offering consists of three extra good young bulls, ready for service, from imp. cows; also 40 females bred or with calves at foot, either imp. or home-bred, all of the purest Scotch breeding.

R. MITCHELL & SONS,
Nelson P.O., Ont.; Burlington Junction Sta.

AN OPPORTUNITY

We have decided to offer for sale our imported **SHOW and BREEDING BULL**, *Prime Favorite*, bred by W. S. Marr; one junior yearling bull, one senior yearling heifer, one junior yearling heifer, two senior heifer calves. All in good show form. Also 20 yearling Shropshire rams.

W. G. PETTIT & SONS, Freeman, Ont.,
Burlington Jct. Sta. Telephone in house.

1864 - HILLHURST FARM - 1905

Five registered
SHORTHORN BULLS

ready for service; also bull calves, Scotch-topped, from good milking families, for sale at low prices. Write for catalogue and particulars. Inspection invited.

JAS. A. COCHRANE,
Hillhurst Station, Compton Co., P. Q.

Belvoir Stock Farm

SHORTHORN BULLS, various ages; imported and home-bred, by imp. *Gay Lothario*, a Cruickshank Lavender.

CLYDE STALLION, 2 years old; sire imp., dam a winner, grandam 1st Highland Show.
YORKSHIRES—Sows and boars, various ages; not akin. Three imp. boars and 6 imp. sows to select from, and their progeny. Prices right. Also honorable dealing.

RICHARD GIBSON, Delaware, Ont.

WM. D. DYER, COLUMBUS, ONT.

BREEDER OF
Shorthorns, Shropshires and Clydesdales

Correspondence solicited. Visitors welcome.
Stations: Brooklin, G.T.R.; Myrtle, C. P. R.

R. A. & J. A. WATT

Salem P.O. Kiera Station, C.P.R. and G.T.R.
Telephone in house.

Our herd of seventy-five head of Scotch-bred
SHORTHORNS

compares favorably with the best. Inspection and correspondence invited.

ELM GROVE SHORTHORNS

We have for sale some good young cows and heifers, of the *Fashion* and *Belle Forest* families, in calf to *Scottish Rex* (imp.) or *Village Earl* (imp.), our present herd bull. For prices and particulars address

W. G. SANDERS & SON,
Box 1133. St. Thomas, Ont.

ELMHEDGE SCOTCH SHORTHORNS.

Stamfords, Minas, Nonpareils, *Crimson Flowers*, *Marr Floras* and *Lavinias*. Our herd will stand comparison with any. We reserve nothing: 45 head of both sexes, all ages, for sale. o **James Bowes, Strathnairn P.O., Weaford, Ont.**

LAKEVIEW SHORTHORNS.

Spicy King (imp.) at head of herd. Young bulls for sale reasonably. For prices, etc., apply to

THOS. ALLIN & BROS., OSHAWA, ONT.

Shorthorns—Choice young bulls for sale, ready safe in calf; also bull calves.

WM. E. HERMISTON, Brickley P.O., Ont.

EVERGREEN SCOTCH-TOPPED SHORTHORNS

Young stock of either sex by imp. sire at reasonable prices. For particulars write to
DONALD McQUEEN, Landerkin P. O.,
Mount Forest Sta. and Telegraph.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

... FOR ...

Diarrhoea, Dysentery,
Colic, Stomach Cramps, Cholera
Morbus, Cholera Infantum,
Seasickness,
Summer Complaint,
 and all Looseness of the Bowels in
 Children or Adults.

DR. FOWLER'S
 Extract of
Wild Strawberry

is an instantaneous cure. It has been used in thousands of homes for sixty years, and has never failed to give satisfaction. Every home should have a bottle so as to be ready in case of emergency.

Mrs. GEORGE N. HARVEY, Roseneath, Ont., writes: "I can recommend Dr. Fowler's Extract of Wild Strawberry as the best medicine I have ever used for Diarrhoea and all summer complaints. I always keep it in the house and praise it highly to all my friends."

THREE IMPORTED Shorthorn Bulls
 Four imported cows in calf, home-bred cows, heifers and young bulls, all of straight Scotch families. Four imported Shropshire rams, eight imported ewes and any number of Shropshire and Cotswold ram and ewe lambs of the highest class, in what I can show you now, and all will be priced at moderate prices.

Robert Miller, Stonyville, Ont.
 Representative in America of Alfred Mansell & Co., Shrewsbury, England.

Queenston Heights Shorthorns
 Two bull calves, 6 and 3 months, by Derby (imp.) and from good milking dams. Bargains for quick sale. Also a few young cows and heifers. o

HUDSON USHER, Queenston, Ont.

A. EDWARD MEYER
 Box 378, Guelph, Ont.
SCOTCH SHORTHORNS
 a specialty. Herd bulls: Scottish Hero (imp.), a Shethin Rosemary; Lovely Prince, a Cruickshank Lovely. Correspondence solicited. Visitors welcome. Long-distance phone in house. o

Two Grand Scotch Bulls
 One dark roan Missie, 11 months, by Aberdeen Hero. One light roan, 8 months, from imp. Marr Roan Lady cow and by imp. sire. Both bulls of choicest quality, at very reasonable prices. o

A. D. MCGUGAN, - Rodney, Ont.

BELMAR PARO SHORTHORNS
 Bulls in service: Merryman, imp. (77283) = 32075; Pride of Windsor, imp. (Vol. 50) = 32071; Nonpareil Archer, imp. (81778) = 43202. Our females have been carefully selected and are of the best Scotch breeding, many of them imported. Address correspondence to

PETER WHITE, JR., PEMBROKE, ONT.

FLETOHER SHORTHORNS
 Our herd of breeding cows, both imported and home-bred, are of the most fashionable Scotch families. Among the really good sires which have been used are Spicy Robin 28259, winner of 3rd prize at Dominion Exhibition, Toronto, and Joy of Morning (imp.) 32070, winning 1st prize at same exhibition, 1904. Stock of either sires for sale. GEORGE D. FLETOHER, Binkham P.O., Ont.
 Erin shipping station, C. P. R. o

Shorthorn Bull—Proven = 37865—, 4 years old, in prime condition, sure and active; a grand stock bull. Will sell or exchange for another. RICHARD WILKIN Springfield Stock Farm, o Harriston, Ont.

Ridgewood Stock Farm
SCOTCH SHORTHORNS.
 Present offerings: Plythesome Ruler = 52236—, sire (imp.) Chief Ruler = 45165—, dam (imp.) Missie 15th = 34154—; young stock, either sex. R. C. ATTRILL, GODERICH, ONTARIO
 Breeder of Shorthorns, Shire and Hackney Horses.

Wm. Grainger & Son, Hawthorn Herd of HORNS, Aberdeen Hero (imp.) at head of herd. Two grand young bulls by Prince Misty = 37864—. Also a few females. Lindsboro Sta. and P.O. o

First-class Shorthorns—Young cows and heifers of fashionable breeding. Also Shropshires of different ages. Write for prices, etc., to T. J. T. COLE, Bowmanville Sta., G. T. R. o Tyrone P. O.

J. A. Lattimer, Box 16, Woodstock, Ont.
 Breeder of High-class SCOTCH SHORTHORNS
 Choice females for sale at all times. Inspection of our herd is invited.

TNOS. MERCER, Box 33, Markdale, Ont.
 Breeder and importer of OLYDESDALE HORSES, SHORTHORN CATTLE and YORKSHIRE PIGS.
 Car lots a specialty.

YOUNG SHORTHORNS for sale, either sex, got by the grand Golden Drop show bull, Kinellar (imp.) (imp.). Inquiries cheerfully answered.
 SOLOMON SEANTZ, Haysville P. O., Plum Grove Stock Farm, o Baden Sta.

WILLOW BANK STOCK FARM
 Established 1855
 Large and old-established herd of SHORTHORNS. Good milking qualities. Splendid offering of either sex. Scotch and Scotch topped. o JAMES DOUGLAS, Caledonia, Ont.

SPRING VALLEY SHORTHORNS
 Good bulls at reasonable prices, out of good Scotch cows, and by such bulls as Bapton Chancellor (imp.), Scottish Beau (imp.), Nonpareil Archer (imp.), Clipper Hero, etc. For further particulars, apply to
 KYLE BROS., Agr. Ont. o

DON'T WAIT BE UP-TO-DATE
 And buy some choice young Jerseys. Two bulls and a number of A No. 1 cows and heifers from great milkers. Also collie pups.

W. W. EVERITT, Dun-odin Park Farm
 Box 552, Chatham, Ont. o

Brampton Jersey Herd—We have now for immediate sale ten Bu is, from 6 to 18 months old, descended from St. Lambert or imported stock; also females of all ages. In order to reduce our stock, we are making a special offer. For full particulars, address,
 B. E. BULL & SON, o Brampton, Ont. Phone 68.

QUESTIONS AND ANSWERS. Miscellaneous.

WEED FOR IDENTIFICATION.
 The weed enclosed by A. H., Huron County, Ont., is the English plantain (*Plantago lanceolata*), which is distinguished from the common plantain (*Plantago major*) chiefly by its long slender scape or flower stalk and its flower spikes, which are thick, short and dense instead of long and slender as are those of the common variety.

MASTER AND MAN.
 Can you tell me if there is any publication on the law and customs between farmer and hired man? If so, give me name and address of publisher and price. Ont. H. M.

Ans.—Yes, books dealing with the subject are numerous. Write the Carswell Co., Ltd., Toronto, or the Canada Law Book Co., Toronto, for a catalogue.

CEMENT HOG TROUGHS.
 I am putting in a new hopen, and was putting in cement troughs. I have heard that they will wear the rough off the hogs' tongues. Is there anything in it? W. S.

Ans.—Cement hog troughs are in use on many farms, and we have never heard of any harmful effect of the kind mentioned, or of any kind. If others have we shall be pleased to have it reported to us.

CHICKS DEBILITATED BY LICE.
 Our chickens were troubled with lice and were dying. We put sulphur in coops and on old hens, and have seen none since, but chickens continue to die. We feed bread, hard-boiled egg, a little soft feed (chop and corn meal), until they are a few weeks old. Now they seem to have bowel trouble, some passing blood, and most of them much water in droppings. They go around with wings drooping and have a hoarse squeak, which they keep up most of the time. We have used a poultry preparation, scalded milk and pepper and ginger. The ginger seems to help them most. Coops are clean and moved often, and chickens not let out till dew is mostly gone. M. C.

Middlesex Co., Ont.
 Ans.—It is doubtful whether much can be done to help the chickens. The attack of lice might have been the cause of the trouble. I would suggest that the correspondent thoroughly examine these chickens again, and make sure that they are free from lice, especially look carefully around the head. If any head lice are found, an application of butter would be found useful. Once a chicken becomes weakened when very small, it does not usually amount to much afterwards. In the opinion of a great many growers, a stunted chicken is worse than no chicken at all, for it appears to be subject to all the ailments that chickens are likely to have.

I would recommend the following method of feeding: In place of feeding hard-boiled egg and bread, I would feed bread and milk, with the milk fairly well squeezed out of the bread. Bread and milk and wheat, with a good supply of grit, charcoal and meat meal—the latter would not be essential on the ordinary farm, where there is an abundance of skim milk and insects—will grow first-class chickens, providing they are kept free of lice.

With this special lot of chickens, I would suggest that they be fed johnny-cake made of about 2 1/2 quarts bran, 2 1/2 quarts corn meal, 2 quarts ground oats with the hulls sifted out, a handful of coarse bone meal, and a handful of beef scrap. You can mix this together dry, and rub in about half a dozen infertile eggs, or eggs of any kind, so long as they are good. To this add a heaping teaspoonful of pure cider vinegar. This should be mixed thoroughly, and will require three or four hours' baking under ordinary circumstances. This can be fed two or three times a day.

Where diarrhoea takes the nature of a bloody discharge, as mentioned in the letter, the use of mercury chloride is recommended. The only formula I have at hand is a homeopathic one, which is 3 X tablets, 6 to 12 in each pint of drinking water, according to the severity of the case. I presume that the druggists would be able to supply these or their equivalent.

W. R. GRAHAM, Poultry Manager, Ontario Agricultural College,

Antiseptic and Healing.

THERE ARE SCORES OF WAYS IN WHICH EVERY FAMILY FINDS USE FOR

Dr. Chase's Ointment

Dr. Chase's Ointment is so pure and clean, so remarkably soothing and healing and leaves the skin so soft, smooth and clear that it becomes a pleasure to use it.

Though best known because of its extraordinary control of the most torturing itching skin diseases, such as eczema, salt rheum, psoriasis and tetter, it should not be forgotten that Dr. Chase's Ointment will not injure the most delicate skin, but is in reality a skin beautifier of great value.

Dr. Chase's Ointment is used with splendid results as a cure for:

- Chilblains and frostbites.
- Chapped hands and face.
- Sore and inflamed eyelids.
- Poisoned skin.
- Scald head and baby eczema.
- Sore feet and toes.
- Pimples and blackheads.
- Rough, red skin.
- Hives and insect bites.
- Barber's itch.
- Scalds and burns.
- Itching peculiar to women.
- Ringworm and pinworms.
- Old sores and bed sores.

Especially where there are small children scarcely a week passes in which Dr. Chase's Ointment would not prove useful.

By noting the cures reported from time to time in this paper, you will find that Dr. Chase's Ointment is one of the greatest healing preparations known to science, frequently curing eczema and psoriasis when all other means have failed.

Sixty cents a box, at all dealers, or Edmanson, Bates & Co., Toronto.

Springhill Farm Ayrshires

FOR SALE: One young bull fit for service; also a few bull calves and females, all ages.

Robt. Hunter & Sons, Maxville, Ont. Maxville, C. A. R., and Apple Hill, C. P. R.

AYRSHIRE BULLS

Two 12-months-old bulls, choice individuals, from grand milking cows, at very much reduced prices. Also an extra lot of last fall bull calves, away down in price if taken soon.

W. W. BALLANTYNE, Stratford, Ont.

SUNNYSIDE AYRSHIRES. Are now offering Leader of Meadow Bank, the Post-American winner, and three young bulls, from 1 year to 3 mos. old; also cows and heifers, all ages. Prices right. Address JOHN W. LOGAN, Allan's Corners, Que. o

HIGH-CLASS AYRSHIRE CATTLE For Sale: Both sexes; bulls and heifer calves from 2 to 9 months old; cows and heifers all ages. Famous prize-winning herd from this farm, including Tom Brown and White Fawn, sweetest prize-winners at Chicago. DAVID BENNING & SON, "Glenhurst," o Williamstown, Ont.

Springburn Stock Farm. North Williamsburg, Ont. J. J. Whitaker & Sons, Props. We are now offering 10 Ayrshire Bulls; from 6 to 20 months old. Also eggs for hatching from our Buff Orpington fowls at \$1 per 12. o

MAPLE CLIFF DAIRY AND STOCK FARM Breeder of Clydesdale Horses, Ayrshire Cattle, Berkshire and Tamworth Pigs. Young stock for sale at all times. M. SAID & CO., o Hintonburg, Ont. Farm adjacent Central Experimental Farm.

Ayrshire Bulls for Sale—One 2-year-old, one 1-year-old, one 10 months old. All bred from long-teated, deep milking stock. Also Shropshire sheep, Berkshire pigs, B. Oringtons and B. P. Rocks. Address: A. E. YULL, Carleton Place, Ont. o

Nether Lea Ayrshires—Young stock of either sex, from deep-milking families, for sale. Two choice bred imp. bulls at head of herd. Correspondence and inspection invited. o T. D. McCALLUM, Danville, Que.

Burnside Ayrshires—One 2-year-old and two yearling bulls; also females of all ages, just imported June 1st, Scotch prize-winners; also a number of imp. and home-bred cows, due in Aug. and Sept. Order a good calf from heavy-milking dams. R. E. NESS, Burnside Farm, Howick, Que. o

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

POTASH

Potash as Necessary as Rain
The quality and quantity of the crops depend on a sufficiency of

Potash

In the soil. Fertilizers which are low in Potash will never produce satisfactory results. Every farmer should be familiar with the proper proportions of ingredients that go to make the best fertilizers for every kind of crop. We have published a series of books, containing the latest researches on this all-important subject, which we will send free if you ask. Write now while you think of it to the

GERMAN KALI WORKS
98 Nassau Street, New York.

BARREN COW CURE
makes any animal under 10 years old breed, or refund money. Given in feed twice a day. Particulars from
L. F. HULLBOK, Morrisburg, Ont.

We want you to remember that
HOLSTEIN COWS

owned by me (formerly at Brookbank Stock Farm, Currie's) won all sorts of honors in milk tests at Toronto, Ottawa and Guelph (5 years), and among many other prizes in the show-ring, including sweepstakes at Toronto and Pan-American in competition with the best in the world. Our herd is always improving. We have now 5 cows whose official test average 22.4 lbs. butter in 7 days, 10 cows whose official test average 19.4 lbs. butter in 7 days, 10 (3 and 4 yrs.) whose official test average 17 lbs. butter in 7 days, 10 heifers (average age 20 mos.) whose official test average 11 lbs. butter in 7 days. That is our idea of a dairy herd, and the kind of stock I handle. A few good young bulls, 1 to 18 mos., for sale.

GEO. BUCH
Annandale Stock Farm, Tilsonburg, Ont.

Lyndale Holsteins

Over 60 head to choose from. A number of young cows and heifers for sale. Six young bulls from 3 to 11 months old.

BROWN BROS., Lyn, Ont.

WOODBINE HOLSTEINS

Herd headed by Sir Mechtildse Posch, absolutely the best official-backed sire in Canada. Dam Ianthie Jewel Mechtildse, 25.8 pounds butter in seven days. Champion cow of Canada over all breeds. Sire's dam, Aaltje Posch 4th, holds the world's largest two-day public test record—8.6 pounds butter. Young bulls of the choicest quality for sale.

Maple Park Farm
HOLSTEINS of the choicest strains. Homestead Albino Paul De Kol and Schulling Sir Posch stock bulls.
S. MAOKLIN, Prop., Streetsville, Ont.

IMPERIAL STOCK FARM HOLSTEINS.
For Sale: Four bull calves, 5 months old, whose sire's three nearest dams average 21.79 lbs. of butter in 7 days. Also young bulls by the sire of first-prize herd at London.
W. H. SIMMONS, New Durham, Ont.

High-class Registered Holsteins. Young either sex for sale. Prices reasonable. Apply to:
THOS. CARLAW & SON,
Campbellford Stn., Warkworth P. O.

Hilton Stock Farm Holsteins, Cotswolds and Tamworths. Present offering: One young bull. A few young boars. One good one fit for service. At very reasonable prices if taken soon. For particulars write to
R. O. MORROW, Hilton P. O., Brighton Tel. & Stn.

Maple Grove Holsteins—In official tests they stand 1st for cow, 1st for 3-year-old, 1st 2-year-old and 1st under 2 years old. Special inducements are offered in high-class bulls to quick purchasers. For particulars address,
H. BOLLERT, Canal, Ont.

Maple Glen Holsteins—Select bull calves now for sale. Herd now includes one of the best females ever imported from Holland, a cow bred to Canary Mercedes' Son, and one to Mercedes Julip Pieterje Paul. Secure the best.
O. C. J. GILROY & SON, Glen Buell, Ont.

Advertise in the Advocate

QUESTIONS AND ANSWERS.
Miscellaneous.

ADDRESS OF SECRETARY.

Will you please give the address of the Secretary of the American Shorthorn-breeders' Association in next issue of your paper?
E. D.

Ans.—John W. Groves, 17 Exchange Ave., Chicago, Ill.

A BOY'S WAGES.

How much of my wages should I be allowed to have? What is the law in this part? I am eighteen years old, and am earning \$200 per year on a farm. I have been hired out since I was thirteen years old, and this year my father wants to only give me \$25 per year, and I find my own clothes. What age does a boy have to be before he can claim his own wages?
ONT.

Ans.—Assuming that you do not reside with your parents, you are entitled, being over sixteen years of age, to collect and retain all your wages.

MOVING LINE FENCE.

My neighbor's line fence is considerably on my land, has been so for probably fifteen years. What steps should I take to have it put right, as I don't expect he will remove it unless obliged to? Will its having been there so long give him a title to the land? He has always maintained the fence, as the land on my side lay in commons until it came into my possession, five years ago.
Ont. SUBSCRIBER.

Ans.—You should make the best arrangement you can with your neighbor and avoid having any litigation over the matter. In the event of its being taken into court, he would have a very considerable advantage over you.

IMPROVEMENT OF CLYDES.

D. M., Wellington Co., Ont., writes: In your issue of the 8th instant, I find an answer to my question re improvement of Clydes. It is not quite what I expected it to be. You will, therefore, confer a favor if you would be a little more explicit, and state positively whether alien blood was used in any degree or not, to attain said improvement, and if such was used, please name the strain.

Ans.—We confess to blissful ignorance on the point raised by our correspondent. We have a suspicion that he has a theory up his sleeve, which, if it can be supported by fairly reliable evidence, might be of interest to horse-breeders, in which case it would seem questionable whether he is justified in hiding the light under his initials or other bushel.

RIGHT TO STORM DOORS.

A buys a farm from B in fore part of winter to take possession the first of April, there being screen doors and storm doors belonging to the house. Screen doors were on house when bought by A; the storm doors not being on, but had been on the previous winter. When B moved, he took the storm doors with him. Can I compel him to bring them back, or pay me for them, they not being mentioned when A bought place?
Ont. SUBSCRIBER.

Ans.—No.

RAILWAY SURVEYS

The Railway surveyors are now surveying a line through this township.

1. Can they enter a man's field, just coming in head, and tramp through it four or five days, and chop down shade trees where they like?
W. S.

2. How will we proceed to get recompense?
Burham, Ont.

Ans.—1. They may enter to make surveys and examinations, and even fell trees, but they must do no unnecessary damage, and the railway company must make compensation for all injury done.
2. The Railway Act of Ontario (R. S. O., Chap. 207) provides for such compensation, and also makes provision for ascertaining and determining the amount of same; but if it should be necessary to take steps for its recovery, a solicitor should be employed to attend to the matter.

RE GUELPH HORSE SHOW.

Second prize for single draft, credited to J. A. Watson, Eden Mills, should have been credited to Andrew Richardson, Peepabun, Ontario.—Alex. Stewart, Secretary.

BERKSHIRES

Imported and Canadian-bred
H. M. VANDERLIP, Cainsville
on T. H. & B. and B. & G. division of Grand Trunk. Telephone and telegraph, Cainsville, Ont.

HILLOREST HERD OF ENGLISH BERKSHIRES
JOHN LAMMER, VINE P. O.

Now is the time to book your orders for young pigs for May and June delivery. A few good young boars on hand.

COTSWOLD SHEEP

MR. RUSSELL SWANWICK, breeder and owner of the Royal Agricultural College noted flock of pedigree Cotswold sheep. Rams and lambs of good type. Address: **CIRENCHONSTE, or to JOHN THORNTON & CO., London, England.**

DORSET HORN SHEEP and SCOTCH SHORTHORNS

The latter representing the Nonpareil, Miss Rameaden, Mistle and Gloster families exclusively, and the former comprising more Royal winners and more St. Louis prizewinners than any other flock in the world. Stock for sale always on hand.
John A. McGillivray, North Toronto, Ont.
FAIRVIEW SHROPSHIRE
Have retired from showing at fall fairs. But show sheep are up fitting, FOR SALE. For 23 years won more firsts than all competitors. At St. Louis won more than any three flocks. At last International won 9 of 14 firsts offered. Including champion ram and reserve to same. All making the greatest winnings on record. Have now the best breeding stock ever offered. Who wants good ones to strengthen their flocks?
JOHN CAMPBELL,
Fairview Farm, Woodville, Ontario

WOOL

E. T. CARTER & CO., Toronto.

"BROAD LEA OXFORDS"

Present offerings are: Ram and ewe lambs out of imported ram. One imported three-year-old ram, which has proved to be an excellent sire, and which I have used myself for the last two seasons. Also a few choice Yorkshire pigs of good bacon type.

W. H. ARKELL, Toeswater, Ont.
R. R. Stns.—Mildmay, G. T. R.; Toeswater, C. P. R.

Farnham Oxford Downs

We are offering 70 ranch rams, 20 flock headers, some of them imported, being St. Louis winners. Also 50 yearling ewes and 50 ram and ewe lambs.

HENRY ARKELL & SON, Arkell, Ont.

Oxford Down Sheep, Shorthorn Oattle Yorkshire Hogs.

Present offering: Lambs of either sex. For prices, etc., write to **JOHN COBURN & SONS, Boggs Vista Farm, Harrington, Ont.**

We are Importing Shropshires

If you want any sheep brought out, write us.
LLOYD-JONES BROS., Burford, Ont.

Shropshires—Try me for Shropshires this season. Highest honors awarded at Winter Fair, Guelph, 1904, on live and dressed sheep.
O. **ABRAM RUDELL, Hespeler P. O., Ont.**

DORSETS and YORKSHIRES

Can supply stock of various ages of both sexes, at reasonable prices, quality considered.
E. DYMENT, Copetown, Ont.
Gilead's Spring Farm, Wentworth Co.

NEWCASTLE HERD OF Tamworth Swine and Shorthorn Cattle

We have for quick sale some 60 head of Tamworths, consisting of boars ready for service, young sows bred and ready to breed. A whole lot of beauties, from 6 weeks to 3 and 4 months old, both sexes. Pairs not akin. These are nearly all the direct get of Oel will's Choice, our sweepstakes boar at Toronto for several years. Also a beautiful red Shorthorn bull calf, ready for service. Several calves of both sexes, and a number of heifers about ready to breed, and others well forward in calf. All at moderate prices. Daily mail at our door. All correspondence answered promptly. Write for what you want—we can generally supply you.
COLWILL BROS., NEWCASTLE, ONT.

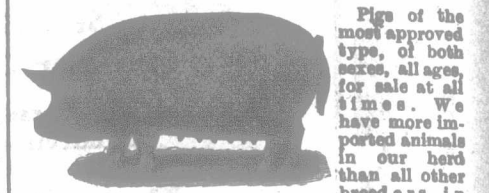
TAMWORTHS & HOLSTEINS

I have for quick sale a choice lot of spring pigs from prize-winning sows, a few sows bred and ready to breed, and my stock hog Elmdale Ned 2503. Also two cows and a choice lot of bull calves from one to eight months old.
BERTRAM HOSKIN,
Grafton Sta., G. T. R. The Gully P. O.

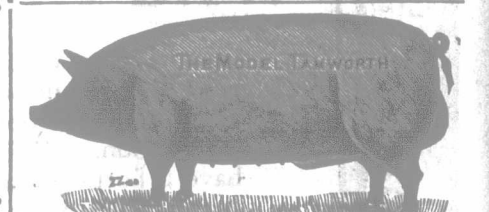
TAMWORTHS

2 fine boars fit for service; also a choice lot of both sexes from 2 to 4 months old, of good breeding stock. Prices reasonable.
Glenairm Farm, Jas. Dickson, Orono, Ont.

LARGE ENGLISH YORKSHIRES



Pigs of the most approved type, of both sexes, all ages, for sale at all times. We have more imported animals in our hand than all other breeders in Canada combined. We won more first prizes at the large shows this year than all other breeders combined. We won every first but one and all Silver medals and Bacon prizes at Toronto and London and at St. Louis we furnished all the first-prize hogs in the breeding classes except two; also supplied both champions and grand champions. Prices reasonable.
D. C. FLATT & SON, MILLGROVE, ONT.



Improved Chester Whites and Tamworths

From this herd have been winners at leading exhibitions of Ontario and Quebec for a number of years. New importations, direct from England, will arrive in May. We have for sale choice lot of young sows, bred; also boars, 3 to 4 months old. Am booking orders for spring pigs. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe arrival guaranteed.

H. GEORGE & SONS, Crampton, Ont.

ENGLISH BERKSHIRES.

Her Grace the Duchess of Devonshire's Berkshire Herd. Winners of 102 awards in 1904, including champion against all breeds in carcass competition, London Fat Stock Show. The breeding sows are sired by the champion boar, Baron Kitchener 8403. Polegate Decoy, Polegate Dame, Polegate Dawn—winners in England, Canada and United States—were exported from this herd. For prices and particulars apply to:
Compton Estate Office, Eastbourne, or to
Y. A. Walling, 7 Cavendish Cottages, Eastbourne, Sussex, England.

Present Offering

A few choice **BERKSHIRE SOWS** due to farrow first part of September; also some excellent **YORKSHIRE BOARS** and **SOWS** two to four months old. Our stock are of the highest standard and have given our customers the utmost satisfaction. We take stock back if not satisfactory, paying all express charges. We can supply you something good. Write to
S. D. CRANDALL & SONS, Cherry Valley, Ont.

LARGE ENGLISH BERKSHIRES

A number of nice young sows, bred to my imported boars. Also a few boars ready for service. Have some nice things 3, 4 and 5 months old, of both sexes. My herd won all the champion prizes at Dominion Exhibition in 1904.
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GLENBURN HERD OF YORKSHIRES

winners of gold medal three years in succession, offers for sale until New Year's a number of fine young sows and boars, from 3 to 4 months old, at \$12 each.
DAVID BARR, Jr., Box 3, Renfrew P. O.

Oakdale Berkshires

Of the largest strains. Imported fresh from England. The produce of these and other noted winners for sale reasonable. Let me book your order for a pair or trio not akin.
L. E. MORGAN, Milliken Stn. and P. O.

For Sale—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; choice young pigs, six weeks to six months old; pairs not akin; express charges prepaid; pedigrees and safe delivery guaranteed. Address:
E. D. GEORGE, Putnam, Ont.

Owing to unforeseen circumstances, I have been unable to supply customers for
Poland Chinas
Write me if you want any. For sale, cheap, pure-bred Berkshire boar, registered.
F. S. Wetherfall, Rushton Farm, Cookshire, Que.

YORKSHIRES

for sale, all ages, from imported prize-winning stock, of both sexes. Pairs not akin.
GEO. M. SMITH, Haysville P. O., Ont.

FIG. 300

THE American Well Works
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Build the Standard BORING, CORING or ROCK PROSPECTING MACHINERY

Your Traction Farm Engine will successfully drive, in prospecting, that OIL, GAS or WATER problem.

Also build FULL LINE heavy PUMPING MACHINERY.

Catalog mailed on request.



A PROFITABLE FARM MACHINE
Cream separators cost. Be sure that to buy the Cream Separator that takes the cream—that gets all the cream possible.

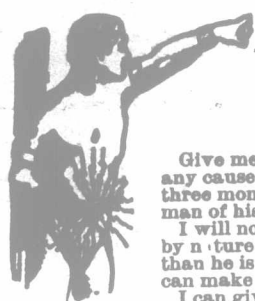
THE U. S. CREAM SEPARATOR
takes out more cream than any other because of the unique construction of the bowl.

AN EXCLUSIVE FEATURE
Only two simple parts inside the bowl, one fits into the other, both fit into the steel bowl shell. When put together there are three bowls in one. No other separator has this advantage, and that is why no other can skim as close as the U. S. Our free booklet fully explains and illustrates this feature. It shows, too, the easy-to-fill milk tank, the standard light running gears, and self-oiling device found in the U. S. It makes every interesting reading. Drop us a line now while the matter is fresh in your mind, and we will send you the booklet by return mail.

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Patent Pending. 10 Government Machines in U. S. and Canada.



HOW I CURE WEAK, PUNY MEN



Give me a man broken down by dissipation, hard work or worry, from any cause which has sapped his vitality. Let him follow my advice for three months and I will make him as vigorous in every respect as any man of his age.

I will not promise to make a Hercules of a man who was never intended by nature to be strong and sturdy. Even that man I can make better than he is; but the man who has been strong and has lost his strength I can make as good as he ever was.

I can give a kick to any man what he has lost by abuse of the laws of nature.

A man who is nervous, whose brain and body are weak, who sleeps badly, awakes more tired than when he went to bed, who is easily discouraged, inclined to brood over imaginary troubles, who has lost ambition and energy to tackle hard problems, lacks the animal electricity which the Dr. McLaughlin Electric Belt supplies.

The whole force of vitality in your body is dependent upon your animal electricity. When you lose that in any manner my Belt will replace it, and will cure you.

Mr. S. Nickerson, Niagara Falls South, Ont., says:—"Your Belt cured me of sciatic rheumatism three years ago, and I am still cured, and my case was one of the worst."

Letters like that tell a story which means a good deal to a sufferer. They are a beacon light to the man who has become discouraged from useless doctoring. I get such letters every day.

My Belt has a wonderful influence upon tired, weak nerves. It braces and invigorates them and stirs up a great force of energy in a man.

I make the best electrical body appliance in the world, having devoted twenty years to perfecting it. I know my trade. My cures, after everything else has failed, are my best arguments.

Mr. Christopher Williams, Cranbrook, B.C.:—"I am pleased with your Belt in every way, and I think it is a grand remedy."

Give me a man with pains in back, a dull ache in his muscles, or joints, "come-and-go" pains in his shoulders, chest and sides, sciatica in his hip, lumbago, rheumatism, or any aches or pain, and my Belt will pour the oil of life into his aching body and drive out every sign of pain. No pain can exist where my Belt is worn.

You run no risk in using my Belt. I take all chances.

Any man or woman who will give me reasonable security I will send them the Belt, with all the necessary attachments suitable for their case, and they can

PAY WHEN CURED.

It's as good for women as for men. Worn while you sleep, it causes no trouble. You feel the gentle, glowing heat from it constantly, but no sting, no burning, as in old style belts.

Call to-day or send for my beautiful book, full of the things a man likes to read if he wants to be a strong man. I send it sealed free. Send me this coupon:

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QUESTIONS AND ANSWERS. Miscellaneous.

ASSESSMENT CASES.

1. Should a butcher, barber, tailor, blacksmith, wagonmaker or marble dealer pay a business assessment?
2. How much interest on mortgages or moneys loaned can a person receive before he must pay an income assessment?
3. Why must I pay on interest on mortgage and not from the moneys received in rent?
4. If a man (retired farmer) invests from 5 to 10 thousand dollars in cattle and has them on pasture, say from one to three or four months, should he not pay a business assessment or income?
5. Should farm lands within a corporation be rated the same as town or village property?

SUBSCRIBER.

- Ont.
- Ans.—1. Yes.
2. All such interest is liable to taxation.
3. The statute assigns no principle as having formed a basis for the distinction.
4. We think not.
5. Not if in blocks of not less than five acres and held and used as farm lands only, provided the person claiming exemption duly notifies the council thereof.

BLACKLEG VACCINE.

I saw in last year's "Farmer's Advocate" some chemist's address who advertised a cure for blackleg or anthrax in cattle; as I have lost track of the paper it was in, and I have lost three of my cattle lately, I wish you would forward it to me as soon as possible. S. F.

Ans.—We never heard of a cure for blackleg, but a sure preventive is inoculation with blackleg vaccine, which may be obtained with full directions by writing the Pasteur Vaccine Co., of Chicago, Ill. Our querist is at fault in using interchangeably the terms blackleg and anthrax. Anthrax is an entirely different and much more virulent disease; but blackleg is sometimes called "symptomatic anthrax." Pasteur discovered the vaccine against anthrax in 1881, which has been used with great success in all civilized countries. It is furnished in the form of a cord, which is inserted under the skin with a small outfit. On this subject Dr. J. G. Rutherford, Veterinary Director General, Ottawa, writes us as follows:

"Anthrax is one of the diseases dealt with under the Animal Contagious Diseases Act, and our regular inspectors are instructed to investigate all outbreaks, and to take such precautions as may appear to be necessary to prevent the spread of infection. Preventive inoculation, although attended with some risk, especially in unskilful hands, is generally successful, but our inspectors are not permitted, for various reasons, to undertake such inoculations. Blackleg, on the other hand, is not dealt with by our officers, as in this disease the mode of infection is exceedingly indirect, and any ordinary quarantine measures which might be adopted would be of little avail. This department has an arrangement with the Pasteur Vaccine Company, of Chicago, whereby blackleg vaccine is supplied direct to owners or veterinary surgeons at 10c. per dose, this being a reduction of 33 1-3 per cent. on the usual retail price. The instrument for its application is also supplied at 40c. A similar arrangement exists in regard to anthrax vaccine, which, however, costs between 18c. and 14c. per dose; but in this case the preparation has to be ordered from Chicago for each outbreak, as it must be fresh to be safe and effective. Both preparations are supplied in lots of not less than ten doses each. I hope to be able, in the near future, to supply these vaccines from our own laboratory at cost, but meanwhile the above arrangement holds good. I enclose copy of our instructions for forwarding specimens to the Biological Laboratory in doubtful cases."

[Note.—In cases where animals are suspected as having died of anthrax, a few drops of blood should be placed on a clean piece of note paper, allowed to dry in the air, folded, placed in an envelope, and forwarded to the Biological Laboratory, Ottawa, for diagnostic purposes.—Ed.]

TAKE MY CURE, WHEN CURED YOU PAY ME



The fear that you could not be cured may have deterred you from taking honest treatment, or you may have been one of the unfortunate, who have been treated in vain by inexperienced physicians, free treatments, free trial samples, patent medicines, electric belts and other similar devices. Such treatments cannot and will never cure you, nor will these maladies cure themselves. When I offer you a cure, and am willing to risk my professional reputation in curing you, and have such faith and confidence in my continued success in treating these diseases that not a dollar need be paid until you are cured, a fair proposition cannot be offered to the sick and afflicted. This should convince the skeptical that I mean what I say, and do exactly as I advertise, as I am positive of curing you in the shortest possible time, without injurious after-effects. My charges will be as low as possible, for conscientious, skilful and successful services, and my guarantee is simple and true. Not a dollar need be paid until cured. I have 14 diplomas and certificates from the various colleges and state boards of medical examiners, which should be sufficient guarantee of my standing and abilities. It makes no difference who has failed to cure you, it will be to your advantage to write to me for my opinion of your case, which I give you free of charge. I want to hear from patients who have been unable to get cured, as I guarantee a positive cure for all chronic, nervous, blood and skin diseases, which I accept for treatment. I not only cure the condition itself, but likewise all the complications, such as rheumatism, kidney and bladder troubles, blood poison, physical and nervous debility, lack of vitality, stomach troubles, etc. All medicines for patients are prepared in my own laboratory to meet the requirements of each individual case. All medicines for Canadian patients sent from Windsor, Ont., free and transportation prepaid. I will send a booklet on the subject which contains the 14 diplomas and certificates, entirely free. Address simply, Dr. S. Goldberg, 206 Woodward Ave, Suite 335 Detroit, Mich.

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Attacks stopped permanently. Cause removed. Breathing organs and nervous system restored. Symptoms never return. No medicine needed afterwards. 21 years of success treating Asthma and Hay Fever. 50,000 patients. Book 57¢ Free. Very interesting. Write F. HAROLD HAYES, Buffalo, N.Y.

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THE SOVEREIGN SPECIALTY CO., P.O. box 459, London, Ont.

CROOKED LINE FENCING.

A and B have farms that join. The line fence between them was put there, I suppose, forty or fifty years ago, when it was all bush. It is bush yet the most of the way. At each end of this fence there is a stake or post put there by the Government surveyor. When this fence was put there so long ago, it was not put straight; some obstruction in the way, I suppose. It is on A some two or three feet for a distance of perhaps ten or twelve rods. B claims this land that is on his side of the fence, and objects to having the fence straightened.

1. Can he hold it?
 2. Is this two or three feet B's by right of possession?
 3. What course should A take?
- The fence has been kept up by putting rails on top; the bottom rails have never been relaid.
- SUBSCRIBER.

Ont.

Ans.—1 and 2. In view of the great length of time during which the fence has been allowed to stand where it now is, we think these questions must be answered in the affirmative.

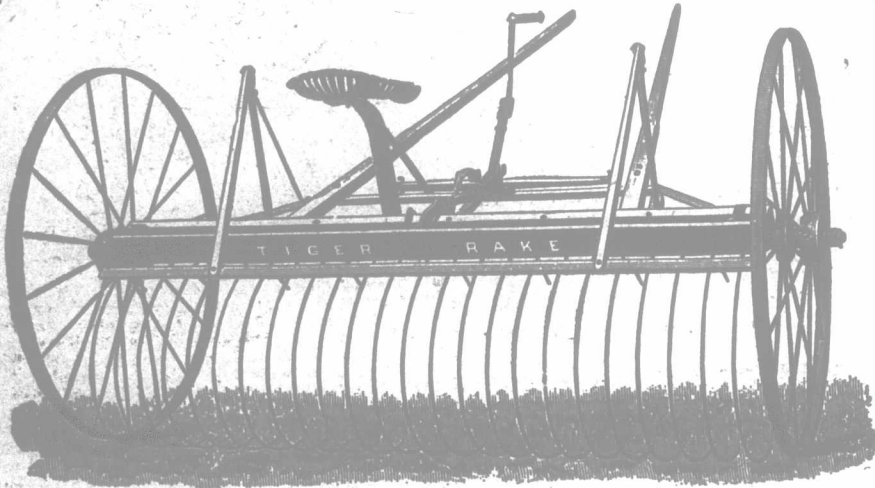
3. A should endeavor to effect some amicable arrangement with B for the straightening of the boundary line and fence.

An All-Steel Rake

is the one you should use on your farm. No part of it is affected by the weather if it is necessary for you to leave it exposed.

THE FROST & WOOD "TIGER" RAKE

is a strong and durable machine—one that will stand all kinds of hard usage and work on rough land.



Frost & Wood "Tiger" Rake. Built in 8 ft., 9 ft., 10 ft. and 12 ft. sizes.

The "TIGER" FRAME is very strong and rigid. On all sizes, except the 8 ft., the frame is trussed, giving it additional strength.
The TINES are bent the proper shape for doing the best work, and are all tempered in oil and tested before leaving the factory.
The AUTOMATIC FOOT-LIFT is the simplest on the market. It acts right in the middle of the Rake where the load is balanced, not at the ends where the load is uneven.
Send now for Illustrated Catalogue "F" and get posted.

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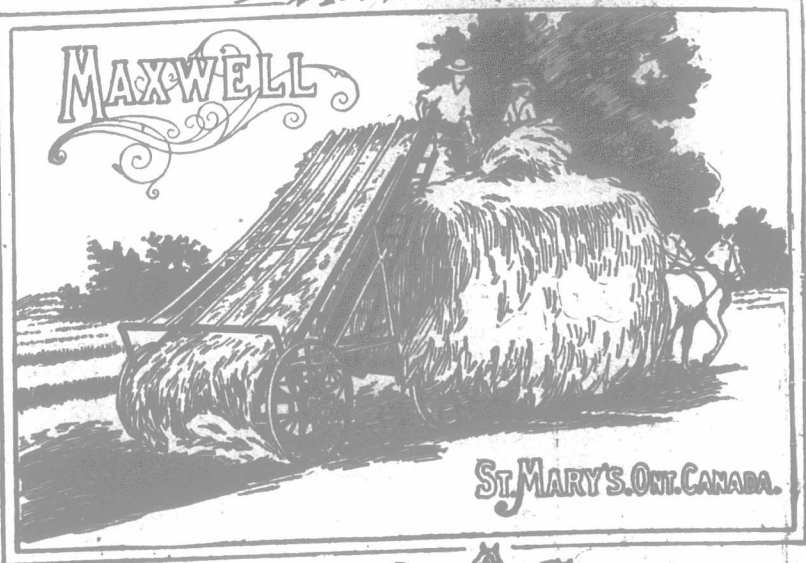
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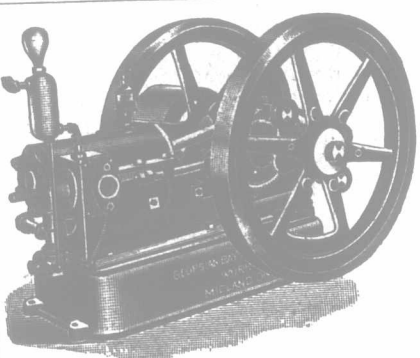
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Valid returning within 90 days from date of issue.
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To points in Manitoba, Assiniboia, Saskatchewan and Alberta. Rates, \$30 to \$39.50.
Good going June 13th, 27th and July 12th. Valid returning within 60 days.

For tickets and full information, call on E. DE LA HOOKE, P. & T. A., Cor. Richmond and Dundas Sts., or E. RUSE, Depot Tkt. Agt., London, Ont.
J. D. McDONALD, District Passgr. Agent, Toronto.

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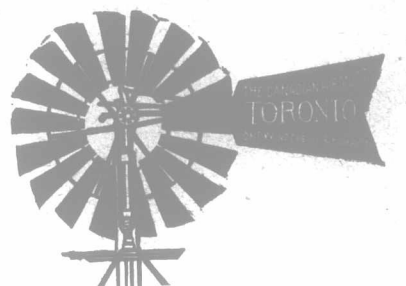
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for all such work as Chopping, Cutting Ensilage, Sawing Wood or Pumping Water can be done just when you want to do it. We would be glad to tell you all about it.

Georgian Bay Engineering Works
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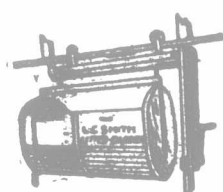
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Is as Good as a Hired Man

Grinds, and Pumps Water. RUNS (Straw Cutter, Pulper, Grindstone, etc.)

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with either Rope or Pipe Tools, write to us describing your work, stating depth of wells and size of Bits or Drills you want. Our machines are the latest and most durable, and the greatest money earners ever made! Results guaranteed.
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FARM LABORERS

Farmers desiring help for the coming season should apply at once to the Government Free Farm Labor Bureau. Write for application form to

Thos. Southworth
Director of Colonization, Toronto.



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It should be weather-proof, durable, and moderate in price. These features are very prominent in our "Safe Lock" Roofing, and, in addition, they are ornamental and fire-proof, but of still greater importance, they protect a building from lightning. There is no other metal shingle on the market as good as the "Safe Lock." They are made of a single sheet of galvanized steel; have no parts to get out of repair, and are so constructed that they interlock each other on all four sides, and are absolutely weather-proof, and should easily last fifty years.
Do not be misled with any of the cheap roofing advertised, but investigate our claims and you will use the "Safe Lock," and have lasting satisfaction. Send size of roof for special estimate and free catalogue, and if you desire samples, will send them by express.

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