

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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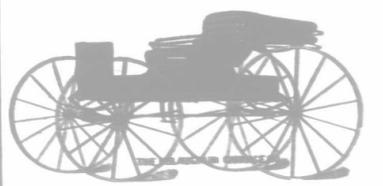
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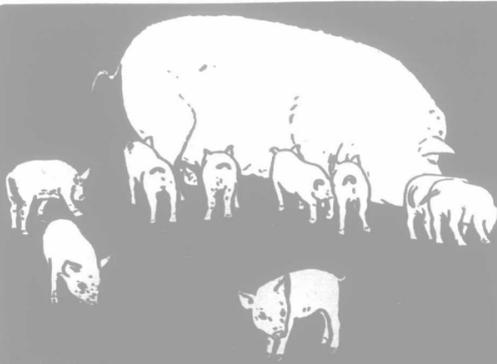
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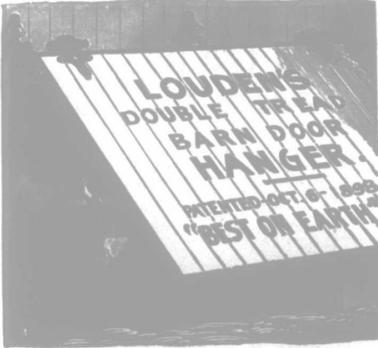
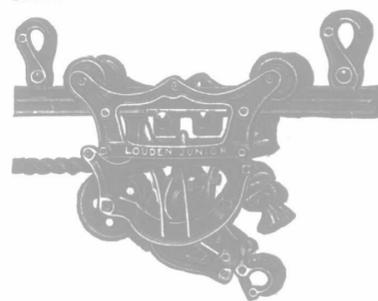
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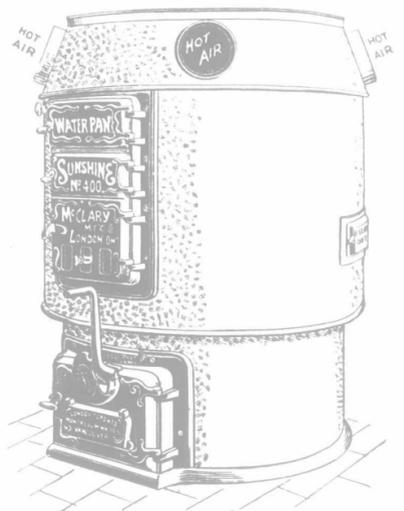
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"PERSEVERE AND SUCCEED."

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VOL. XXXVII.

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EDITORIAL.

Showing and Judging.

The benefits derived by breeders and manufacturers from exhibiting their products, the result of their enterprise and skill, at agricultural and industrial exhibitions, were in part set forth in an article in our last issue. We purpose now to pursue the subject a little further, and to advance some ideas that from experience and observation have occurred to us as being of interest to exhibitors and judges. Success in exhibiting live stock depends primarily on the production or selection of superior animals, and, secondarily, on their proper feeding and preparation for the show-ring, in order that they may show for all they are worth and make the best possible impression on the eye and mind of the judge. To make the best showing, the special feeding and fitting should not be limited to a short period, but had better be a gradual process, so that there may be no forcing, which is always liable to produce indigestion or other ailment, and thus defeat its purpose. An overfed or excessively fat animal, especially if from lack of sufficient exercise its legs have become stocked or crooked and its action clumsy and awkward, almost invariably makes an unfavorable impression on a competent judge, and leads him to seek for something more useful looking in the competing list. Heavy feeding with heating, concentrated foods is liable to put on rolls of hard-feeling fat instead of an even distribution of springy flesh and the quality of hide and hair that is pliable and pleasant to handle and is the result of the feeding of properly-balanced rations of mixed grains and oil cake. This, together with plenty of exercise, blanketing and hand-rubbing, and the polishing of horns, where there are such, the trimming of inequalities, and the training to walk gracefully and stand in the best positions, are parts of the needed preparation that may prove to be essentials in a close competition. But, back of all this, there must be the proper type of animal in conformation and quality to catch the trained eye of the expert judge, for no matter how large nor how smooth and well fitted the animal may be, if it be not of the approved type that meets the demands of present-day markets, and if a male lack the quality known as character, which indicates probable prepotency as a sire, or if a female fail to show a proper degree of femininity in head and neck and in general appearance, its chances to win are at once discounted. Size with quality and approved type is all right, but without these latter qualities it may be regarded as a disadvantage; indeed, abnormal size is not desirable in either breeding or show animals, while the happy medium in this regard, in either meat- or milk-producing animals or horse stock, is more likely to please the taste of an up-to-date judge.

When it is considered, as we believe is generally admitted, that the judges by their decisions, to a very considerable extent, set the standard of desirable type in the various breeds and classes of live stock, the need for care in their selection becomes clearly apparent, as their position is one of great responsibility, requiring a cool, clear head, careful consideration and discriminating judgment. It is not the purpose of this article to discuss the perennial question of the advantage of employing one judge or more than one for a class, though we do not hesitate to proclaim our preference for the single-judge system as the one most

likely to impress a man with a due sense of the seriousness of his responsibility and the one most likely to bring about uniformity of type in the various breeds, a consummation, it seems to us, very desirable, if it means a uniformity of usefulness and excellence combined with attractiveness. Without presuming to lecture judges, we may be permitted to suggest that, from watching the work of those officiating, it has appeared to us that the work is simplified and made more satisfactory to both judges and spectators if the animals in classes shown on the halter are passed around the ring in procession, and a few of the best drawn out, from which the final selection of the winners is made, these being placed in the order of the judge's rating; and the educative value of his work to the onlookers is enhanced by his placing the whole class in order of merit, according to his judgment. By this means the distinctive type he aims to mark with his approval may be seen in so far as it can be shown with the material at hand and the consistency of his work be made manifest.

A Forecast of the West.

The Toronto Globe has put its readers in Ontario and Eastern Canada generally under renewed obligations, and rendered the West good service by the extended series of letters written by a capable staff correspondent, who made a personal visit, recently, to the leading centers of the country. In the main, the deductions which he draws from his observations coincide very closely with the condition, progress and prospects of Manitoba and the Northwest as portrayed with pen and camera in the recent Immigration number of the "Farmer's Advocate." In summing up his impressions, the writer in the Globe truthfully says:

"After one sees the new farmhouses that in hundreds dot what were but two years ago uninhabited wastes, examines the records in the Government land offices, and watches the tide of European immigration that flows through Winnipeg, and the still greater volume on the Soo line from the United States, there is no longer room for scepticism, and even the most doubting Thomas must be satisfied that Western Canada has at last aroused the world's attention."

Mr. J. Obed Smith, Commissioner of Immigration, estimates the number of immigrants during the present calendar year at from 70,000 to 75,000, and he believes the number will increase from year to year till it may reach a maximum of 250,000. The view is confidently entertained that the census of 1911 will show from 1,250,000 to 1,500,000 people in the West and the close of the century 50,000,000 people, all told, in Canada. With regard to the development of the West from a moral and intellectual standpoint, the Globe's correspondent takes a most hopeful view. He notes the three following new elements of progress in the rapid settlement of the country:

1. American capitalists seeking an outlet for surplus funds formerly used in land operations at home have invested very largely in Canadian lands, and will advertise them all over the Union.
2. The American pioneers and frontiersmen, who have led the movement of settlement in their own country, from Iowa to Minnesota, and from Minnesota to the Dakotas, have reached the limit of the good land in their own territory, and are coming to Canada in thousands. The reports they are sending back will for many years to come result in increasing immigration from the United States, for the land they are settling upon is admittedly better than that of any of the States west of Iowa.

3. The rush of European immigration into the United States, which was begun when there were vast tracts of free land there, still continues, and cannot be stopped speedily. Many years must elapse before it becomes generally known to European agriculturists emigrating to America that there is no longer room in the Western States. A large part of these belated land-seekers will cross the border into Canada and find homes with us.

The great irrigation project upon which the chiefs of the Canadian Pacific Railway are engaged in the irrigable belt of over 2,000,000 acres awakens the enthusiasm of the correspondent. He refers to the 116 miles of canal, the storage of billions of gallons of water in reservoirs formed out of natural depressions, and the diversion of the waters of the Bow River, whereby a great stretch of territory, nearly 200 miles easterly from Calgary, can be irrigated. He predicts that out of that southern Alberta area, and including the Lethbridge and other ditches, 25,000,000 bushels of wheat and 500,000 cattle annually can be taken; and quotes C. P. R. reports as indicating that 250,000 cattle can be pastured under irrigation where 50,000 are now kept. The market for the increased cereal production of the eastern slope of the Rockies, he foresees in the newly-awakened China and Japan.

From what has been written, it is evident that some large irrigation projects are looming up in the future. While there are millions of acres that need no irrigation, but only await cultivation to blossom into abundant crops, the irrigation question will not become so sharply defined in the public mind; nor while irrigation projects continue to be developed strictly as railway or private enterprises, and not made a general charge against the taxpayers of the country. This phase of the subject certainly deserves consideration in view of the alleged exactions of irrigation monopolists in California and elsewhere in the irrigated U. S. areas, and the bitter opposition awakened in the eastern States against being required to share in the outlay for irrigation exploits that develop vast areas in the West as fresh competitors with the eastern landowner.

Another question to be considered is the control that governments should retain of the water supply upon which the productiveness of the irrigable areas depend and which in the future will be required for settlement.

Pointers.

The worst menace of the sheep industry in Canada is the wandering dog. About one-half the dogs in every county are not only useless, but an unmitigated nuisance. Yet, within recent years, they have destroyed or damaged thousands of the best friends of the farmer that ever stepped upon his fields. Why are legislators so slow and chary in dealing with this pest? An esteemed correspondent, in Hants, N. S., suggests two remedies in this issue; and Mr. Gilman, of York Co., N. B., writing of the way in which Governments may properly help the farmer, says: "If the Government will only tie up the dog, we will do the rest." Abate the pest!

Hundreds of acres of corn in one Ontario county alone was destroyed by wet, while on adjacent farms, no better naturally, but well drained, the crop is growing luxuriantly. From all parts of Eastern Canada comes the same tale of crops damaged by excessive water that drains would have safely removed. Put down drains!

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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Camera Competition.

Last year the "Farmer's Advocate" conducted a camera competition, which proved decidedly popular. The large number of amateur photographers who sent in samples of their work and the artistic excellence of the photographs indicated in a surprising degree the progress that has been made in that direction. Many of the photos were quite equal in artistic excellence and execution to the work of professionals, the subjects selected showing great variety and interest. So encouraging were the results, that we have decided to announce another competition open to amateurs, and to offer much larger prizes than we did in the competition of 1901. We now offer eight prizes, as follows: 1st, \$10; 2nd, \$7; 3rd, \$5; 4th, \$3; 5th, \$2; 6th, \$1; 7th, \$1; and 8th, \$1; for the best photographs of country homes, individual animals or groups, gardens, field scenes, orchards or fruit trees, bits of scenery or anything of that nature, subject to the subjoined rules:

All photographs must be not less than 4 x 5 inches in size, mounted, and be the work of amateurs.

All photographs must be clear and distinct in detail and well finished.

They must reach the "Farmer's Advocate" office, London, Ont., not later than October 1st, 1902.

The name of the competing photographer and post-office address, and the name and location of the scene, must be marked on the back of each photo.

Any person competing is at liberty to send more than one photograph if desired, but only one prize will be awarded to the same individual.

All the prizewinning photographs will become the property of the "Farmer's Advocate" for the purpose of illustration. We reserve the right to purchase, at 25 cents or 35 cents each, according to size, any photographs that do not win a prize.

No photograph is eligible to competition from which an engraving has previously been made, and photographs must be the work of competitors.

Judging Competitions.

With the improvement in the live-stock industry of this country during the last decade, has come a longing desire on the part of many men, both old and young, to become better acquainted with the formation and distinctive characteristics of the different breeds of stock. A more hopeful sign than this could, probably, not exist. The future success of our industry in beef and dairy products must depend very largely upon the interest which the young men of to-day take in educating themselves in this direction. The faculties of agricultural colleges and the managers of live-stock shows have not, as a rule, been slow to recognize this growth, with the result that during the last two years we find substantial prizes being offered at leading exhibitions to students or farmers' sons for proficiency in placing animals in the show-ring. In the Province of Ontario, the Massey-Harris Co. have offered liberal encouragement for this work at the Toronto, London and Ottawa shows. To a somewhat greater extent has this same feature been carried on at the Chicago International Show. There, however, only regularly enrolled students of agricultural colleges have been allowed to compete. Last year, eight institutions entered teams, and in 1900 a similar number took part. By reports coming from the different States or Provinces taking part, we believe that through these competitions a great stimulus has been given to the interest in stock-judging, not only in the institutions concerned, but also in the country which they represent.

At Canadian shows the contests have always been under the supervision of the exhibition executive, while at Chicago it has been directed entirely by the executive of the Student Judging Association, whose members were officers of agricultural colleges. At the last meeting of this body, held at Lansing, Mich., a few months ago, the question of discontinuing this feature of the International Show was taken up and urged by a majority of those present. In fact, one agricultural college had already issued a manifesto stating that in future their students would not take part. It now seems probable that other colleges will follow their example. These institutions do not object to competition between their own students, but they come out boldly in opposition to the same work when carried on between different agricultural colleges. They give as their principal objection that it tends to cultivate a spirit of rivalry such as should not exist between seats of learning whose aim it is to educate young men to higher usefulness in the agricultural world.

This we consider a serious step on the part of men who share in directing the destinies of our live-stock industry. If competition among young men of the same college be a desirable thing, and we know it is, why should it not be such between students of different institutions at the International? If it be possible that one college has had an unfair advantage in the past, why can better management by those having the contest in charge not overcome this or any other objectionable feature in future? We are pleased to notice that the International executive at their last meeting showed that they were alive to the full importance of this feature of their great show by arranging to carry on student judging-competitions, whether the professors who now have the matter in charge care to do so or not. This will give institutions that are not afraid to place their young men in competition against the world an opportunity to continue in a work which cannot fail to leave an impress of incalculable worth upon the future of our trade in beef products and upon the live-stock industry in general.

In conclusion, we trust that farmers' sons who are deeply interested in pure-bred stock will prepare themselves to take part in one of the judging competitions to be held in a few weeks at Toronto, London and Ottawa exhibitions. Good prizes are being offered, and although all cannot hope to gain a share of the money, to compete will in itself be an educator. Should one feel that his present knowledge does not fit him for entering the ring, he can take the shortest route to gaining a foundation in this line of instruction visit the principal shows, interest himself specially in the stock, go carefully over the prize-winner, do not be afraid to ask the exhibitors

questions as to the breeding and relative merits of individuals being shown, and when winter comes be ready to join the short course in judging, which will doubtless be held again next winter at the Ontario Agricultural College.

The American Association of Farmers' Institute Workers.

(Special correspondence.)

The superintendents and directors of Farmers' Institutes, at their annual meeting held last year at Buffalo, decided to meet this year at Washington, D. C. The dates finally arranged were the 24th, 25th and 26th of June. Canada was represented by Mr. George C. Creelman, Supt. of F. I. for Ontario, and the writer of these notes. Mr. Creelman has for three years been the secretary of the International Association, and to him and the president, Mr. W. L. Amoss, Supt. of F. I. for Maryland, fell the task of arranging the programme. The meeting went without a hitch, the time was fully occupied, and the delegates were well pleased with the results. You can leave Toronto at 5.20 p. m. one day and be in Washington at 8.30 the next morning—an early tea in Toronto and a late breakfast in Washington. Here we have a good example of modern development, though population is extending, the means of communication are becoming more improved—the world is enlarging and contracting at the same time.

We left as the hay harvest was in progress here. When we awoke in Southern Pennsylvania we found the green fields had changed to golden yellow and the wheat harvest was on. We had lost a month of the year during the night, to be regained, however, on our return four days later. The trees were changing also; here and there the southern varieties, strangers to our own Province, were attracting our attention. The oaks of the South were most noticeable, for as we approached Baltimore and Washington we saw them festooned with brown and yellow branches, a strange effect, the cause of which we could not understand till we were on foot in the parks of the city. Here and there we found the ground under the trees perforated with holes, beside which were the discarded cases or coverings of the Cicada. We were now in the region of one of the important and extensive broods of seventeen-year locusts. After their long sleep the Cicadas have awakened in the ground, sloughed off their coverings and laid their eggs in the tender young twigs of the oaks. The destruction of the oak branches at the tips was now explained.

AGRICULTURE AT WASHINGTON.

We were in Washington, the magnificent city, the capital of the nation, the head of the greatest agricultural department of the world, and one of the finest residential cities of the continent. We were an hour too late to see the President, but in lieu thereof paid our respects to the different branches of the great department that annually spends \$5,000,000 in behalf of American agriculture, a work in the benefits of which we of Canada also have a large share. We saw the plans of the new Agricultural building, to replace the old one, at a cost of \$2,500,000. Not having space to refer at length to this work, we might mention that here we had the pleasure of seeing the work in hand to fight the San Jose scale. It may not be known to all your readers that Prof. Marlatt was sent to China and Japan to seek the natural enemies of the scale. The result of his investigation was, that a month or so ago the Entomological Branch of the Department was the proud possessor of two living lady beetles, small black insects with red spots, lady beetles that could be distinguished from a California variety only by the greatest difficulty. Some experts thought they were not a new species, but in the larval form these new beetles have a few microscopic hairs and humps that are lacking in the others. The point, however, and the excuse for spending a couple of thousand dollars apiece for these little beetles, is that they voraciously destroy the scale in Asia. They are breeding rapidly and soon the two will have become a million, and distribution to infested orchards will be undertaken. Is the fate of the scale settled? We shall see ere long.

INSTITUTE WORKERS IN SESSION.

But let us return to our Association. Forty delegates came from as many sections. Here were representatives from California and Washington, on the far Pacific; well-known men from Louisiana, Florida, Mississippi, and the Carolinas. Wisconsin, Indiana, Michigan and Ontario sent "Men of the North." It was a pleasure to meet with veterans in the field of agricultural extension and research. Among the many that might be mentioned were: McKerrow, of Wisconsin; Latta, of Indiana; Smith, of Michigan; Hamilton, of Pennsylvania; Voorhees, of New Jersey; Amoss, of Maryland; and Stockbridge, of Florida. Dr. A. C. True and Prof. Spillman, of the Department, also contributed to the interest of the meeting. The object of the Association is to compare methods, to give and to get help, and to



SELDON.
Gaited saddle horse. Owned by E. F. Frego, Hoopston, Ill.

receive fresh inspiration for work. No two States work along the same lines. In some cases there is little or no system, the superintendent working as best he can with a moderate grant; in fact, in some States there is no special grant at all. In other States there is a liberal grant, but the exactions of legislative enactment are most vigorous and restraining to a man of enterprise. In some States the Superintendent plays a free hand; in others he is secretary of the State Board, and is closely tied down by a cumbersome body. On the whole, I believe the Ontario system combines the best features of the most successful U. S. systems, though there are here and there points at which we can improve. The two things that struck me as to our advantage are the permanency and thoroughness of our local organizations and the flexibility of our work through having it responsible to a Minister.

THE GREAT NEED.

In nearly every State the work has been started from the agricultural college and experiment station, and even now in some cases the men attached to these institutions are carrying on the work with little assistance and no encouragement except from the farmers. College and station work is growing so rapidly that the professors and experimenters are finding themselves unable to meet the demands, and from all directions came up the cry: "How shall we get good workers and speakers?" Again and again this was discussed by the Association, "Men wanted—where and how shall we get them?" The work is great and the laborers are few; that is, laborers able and acceptable. In some States the scientific experts are still looked upon with a little suspicion; in other States the purely practical man with no scientific training will not do. The happy medium, the man who knows and who can do, the rare combination of theory and practice, this is what is wanted, and the need is felt in the South as well as in the North. Many useful suggestions were made by various directors, but perhaps this one may be selected: The man chosen for Institute work must take the agricultural papers and he must receive the reports and bulletins of the colleges and stations, and must read them. He must keep himself abreast of the latest work in scientific agriculture.

AGRICULTURE IN THE PUBLIC SCHOOL.

Though the subject of the teaching of agriculture in our public schools had been allotted to me, there was no special necessity for placing it formally on the programme—it cropped up again and again; it would not stay down, as we say. The Hon. Secretary of Agriculture grew eloquent and waxed strong on the subject, and if some of the educationists of America could have heard him they would have shaken in their shoes at his arraignment of their short-sightedness in regard to this matter. One thing is certain, the farmers of America are gradually becoming thoroughly aroused to the necessity of giving their boys and girls some special instruction in the simple principles of agricultural science, and those who stand by doing nothing and those who stand in the way blindly opposing will, one of these days, be swept out of the way. It was evident that some of the States are ahead of Ontario on this question, and that agriculture and nature-study (which are practically the same subject) are making substantial progress in some of the States of the Union.

WOMAN'S WORK, AND OTHER THINGS.

Woman's work received some attention. We

had two fine papers on the teaching of domestic science. Miss Jacobs, Director of Cooking Schools for the City of Washington, gave us a most comprehensive paper on the best methods for towns and cities, while Miss Breed, of Norfolk, Va., showed what a band of devoted women had done for the negro children of the rural schools of Virginia. Miss Breed's was one of the best home missionary papers I have heard for many a year, and recalled the days of old, when the Southerner took a loving interest in the welfare of the slaves.

There were other subjects discussed. We were told how a western railroad company engages men to conduct Farmers' Institutes in the country through which their road runs. And why not? But I must bring this to a close.

Secretary Wilson talked to us of tea and tobacco, of rice and macaroni, of dates and of peaches, of cotton and silk, and we concluded that though agriculture may be a very wide field when applied to Ontario, when the continent is concerned it becomes the most comprehensive and most interesting subject engaging the attention of mankind.

The U. S. Department of Agriculture will publish the report of this convention in pamphlet form, and many of our Institute workers will be able to read it. But the most interesting and the most helpful part of such a convention does not appear in the printed report. The best part of such a convention is to be had in the personal talks and the comparison of notes made between sessions in the little groups where men disclose the secrets of their work, as they do not in the formal meeting. Our workers will have a chance of attending the convention next year, for, with great cordiality, they accepted the invitation to meet in Toronto the last week of June, 1903, under the presidency of Prof. W. C. Latta, of Indiana. Our Superintendent, Mr. Creelman, remains as secretary, so that we count on having a good programme. Mark the date and keep it marked.

C. C. JAMES.

Secondly.—Let the municipalities put a substantial tax, say five dollars, on all dogs, and collect it and apply the fund towards the loss sustained by sheep-owners through this plague.
W. H. B.
Hants Co., N. S.

Mating for Early Lambs.

Mr. J. S. Woodward, of Niagara County, New York, who is regarded as an authority on mutton-raising, says: "Very many methods have been suggested to make the ewes accept the ram in hot weather, a very necessary thing for the winter lamb-raiser, and I think we have tried about all of them. Sometimes we have thought we had a sure method, only to find the next year that it had no merit at all. It is not natural for sheep to mate till cool weather in the fall, but there is a great difference in breeds. Take the Dorset, for instance; they have been long used for raising early lambs, and have become accustomed to breeding much earlier than any other breed. In fact, a Dorset ewe, if rightly treated, will breed at almost any time of year. But they are not plentiful enough to fill the demand for early lamb-raising, and we want to know how it can be brought about to induce the ordinary grade sheep of the country to breed out of season. Much depends upon the breed of the ram. A Leicester or Cotswold ram can hardly be induced to associate with a flock of ewes before cool nights in October, while a Dorset ram will follow with the ewes at all seasons, regardless of the heat. And there is no disputing the fact that the constant attention of the ram will have much influence in bringing the ewes into condition. I have no faith whatever in any system of medication further than the effect of feed upon the ewes. The largest percentage of ewes we ever had to drop lambs before New Year's was several years ago, when, during the great railroad strikes, we had a flock of ewes tied up in the stock-yards at Detroit for over a week. We could get nothing for them to eat but stock-yards hay—poor, wild hay—with no grain, and before we got them home they looked pretty hard. We then turned them in to good feed, put rams with them, with the result that a remarkably large proportion dropped lambs in December. Since that time I have always found that ewes that were gaining were more disposed to accept the ram, and that is the only thing upon which we place any reliance. We manage to have our ewes in such condition at the beginning of the season that by turning them in to good pasture they will begin to gain, and we also sometimes give a little extra food like wheat bran—anything to start them gaining—and then see to it that the ram is of such breed that he will persistently follow the ewe.

Hog Raising Declining in England.

The live-stock statistics of England show that there are less hogs to-day in that country than at any time since 1893. For this decline various reasons are suggested. One is that the restrictions made necessary through swine fever has made hog-raising less profitable than formerly. Again, it is said that in some districts the farmers are giving up cheese and butter making, and selling their milk to dairy factories in the large cities, thus disposing of the skim milk and whey, which heretofore constituted a valuable part of their swine ration.

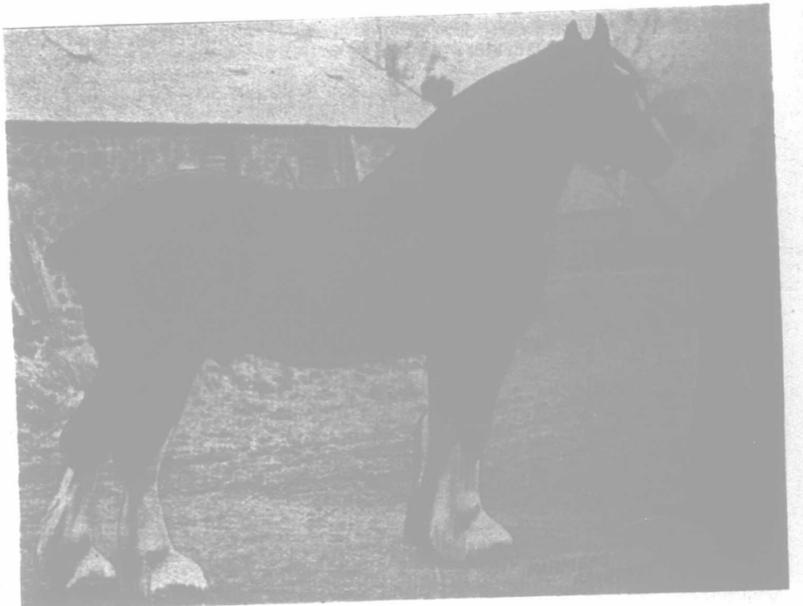
STOCK.

An Effective Dog Law Needed.

To the Editor "Farmer's Advocate":

Sir,—There is no doubt that in this western end of Nova Scotia, apple-raising is what we can do best. Farmers have become better acquainted with the better methods of dealing with the orchard, and no longer set out a few apple trees in the greensward and expect them to shift for themselves. Many are also beginning to realize that a good name is rather to be chosen than great riches (for one year only), and are packing their apples more honestly. I might name many farmers who always get top prices for their fruit simply because people know their fruit is well packed. Last year both crop and prices were good, and this year the crop also promises well, except in some low-lying districts, where an untimely frost nipped the buds.

Reverting to other subjects, let me say: Do use all your influence to have the Governments abate the dog nuisance. The present Sheep Protection Act of Nova Scotia is absolutely inoperative. I would suggest that a man be allowed to kill any dog found straying at any time on a sheep farm. At present it can only be done after dark or when he is seen worrying the sheep.



ROYAL FAVOURITE (10630).
Five-year-old Clydesdale stallion.
BRED AND OWNED BY MR. ANDREW DEWAR, ARNPRIOR, SCOTLAND.

Our Scottish Letter.

At this season there is little else to occupy attention than shows, and the week ending 21st June was perhaps the busiest agricultural-show week of the year. Fortunately, that date also saw the end of a long spell of cold, unseasonable weather, and the week now tapering to a close has been marked by some of the finest weather we have had for many a day. Everything is luxuriating in the sunshine, and but for the tragic postponement caused by the serious illness of the King, the country would have gone a-holidaying to some purpose. The King has always been a keen patron of agriculture, and his influence in popularizing agricultural events has been considerable. The brilliancy of the weather throughout the British Isles on this, the day set apart for the coronation, adds to the intensity of the regret everywhere expressed at what has happened.

There is every prospect now of 1902 yielding good crops of all kinds. The ground was so saturated with moisture that the excessive heat now experienced has made every kind of cereal and root almost grow up sensibly before one's eyes. Hay, however, will in general be a light crop, and early potatoes will not likely, even with the favorable turn in the weather, prove to possess much quality. The first Gervais potatoes were this season lifted by Mr. Andrew Dougan, Straid, about a fortnight ago. This was nearly ten days later than in 1901.

Preparations for the last migratory show of the Royal Agricultural Society, at Carlisle, are now well advanced. The site is most picturesque, lying on both sides of the Eden, just outside the walls of the old city. In 1880, when the Royal Show was last held at the border town, the Citadel joint station had just been completed, and it seems but a thing of yesterday when we tried to make our way through the yard on planks well-nigh afloat. The weather was of the most wretched description, and the officials were almost at their wits' end to know how to provide decent locomotion for the visitors. It makes one feel a little older when he visits two Royal Shows at one center, and 22 years is a considerable item in the life of any man. Many changes have taken place in agriculture during these twenty-two years, and the difference is perhaps more marked in the methods of working crops than in stock. An interesting article on "Hay-making," in the Journal of the Board of Agriculture, just issued, opens up a wide field of reflection on this aspect of things. It would not be too much to affirm that America and Canada have played the chief part in effecting a silent revolution. Few implements manufactured on the other side of the Atlantic can be utilized here without greater or less modification. But the idea embodied in the machinery must ever be retained, and it is in the introduction of these ideas that American influence can be most clearly discerned. The economical benefits accruing to this country from the adoption of such Canadian machines as the Massey-Harris self-binder and cultivator, the Dux plow, and much else, can hardly be overestimated. It has very largely been through the introduction of these and like implements and machinery that the British farmer has been able to keep himself in evidence. That he has done and is doing so does not admit of question, and sooner or later it will be admitted that the agriculture of the Old Country, even in respect of scientific equipment, is fully abreast of the attainments of the new.

Very successful shows of stock were last week held at Glasgow, Stirling, and Cupar-Fife. It would be impossible to name all the other places where creditable exhibits could be seen. The best exhibits at Glasgow were found in the driving-horse section. Perhaps this impression was created by the undoubted fact that this section showed by far the greatest advance on former exhibitions. The Hackney, in spite of the numerous adverse criticisms to which he is subjected, was the principal factor in producing these animals. It is increasingly evident that if the highest class of carriage horses is to be produced in this country, the Hackney will need to furnish the foundation cross. You cannot have a high-class carriage horse without a dash of Hackney blood. If Hackney breeders would keep this steadily in view they would do much to disarm the volume of adverse criticism with which their favorites are assailed.

Clydesdale horses made a good display at Glasgow and Stirling, and enough of novelty was presented in the prize list to give zest to the proceedings. A new sire came right to the front in Mr. Dewar's Royal Favorite 10630. This horse has not been much heard about in open competitions, but his stock out of the ordinary farm mares of Stirlingshire are unusually promising. He was bred by his owner, Mr. Dewar, Arnprior, Kippin. His sire was the Cawdor Cup champion horse, Royal Gartly 9844, while his dam, Rosie of Arnprior 10754, was by the noted Keir horse, Brooklyn 6547. His gr.-dam was by True Blue

1334, and his g.-gr.-dam by Black Comet 66. Through his sire he has a strong dash of Prince of Wales blood. On his dam's side he gets the Darnley dash from the dam of Brooklyn, an uncommonly true specimen of the low-set, wide Clydesdale mare, and another dash of Prince of Wales blood. From True Blue comes the strong, weighty blood of Drumflower Farmer 286, and from Black Comet comes the Comet strain, long favorably known in the north of Scotland. This breeding is not what has been in more recent years regarded as strictly orthodox, but it involves a blending, the issue of which will be worth studying. The sensational animal of the show was Mr. Henry Gray's yearling filly, Nellie. She was bred by her owner at Hawkhill, Kincardine-on-Forth, and got by Royal Favorite, out of a mare by Flashwood 3604, own brother to Macgregor 1487; gr.-dam by MacVicar, a son of Macgregor. This filly was first in her class both at Stirling and Glasgow, and at Glasgow was awarded supreme honors as the best female Clydesdale exhibited. It is nearly 20 years since a similar award was made at Glasgow. In 1884, Lord Arthur Cecil was successful in carrying off supreme honors with the famous yearling, Edith Plantagenet. Mr. Gray's filly has rare quality of limbs and the best of feet and pasterns. Her movement is faultless both in front and in rear, and she takes the eye of the judge right away. Other good fillies were shown at Glasgow by Mr. St. Clair Cunningham, whose three-year-old White Heather, by Baron's Pride 9122, was runner-up for the supreme honors; and by Mr. Davie, Cathcart, whose first two-year-old filly, by Up-to-Time, was first at Paisley and East Kilbride. The best mares were shown by Mr. Alex. Guild, whose magnificent big mare, Lady Margaret, was first in the yeld class; and Mr. J. Ernest Kerr, Harviestown Castle, showed a capital brood mare in Lady Garnet, another daughter of Baron's Pride. The male championship at Glasgow went to Mr. W. S. Park, Hatton, Bishopton, for his Paisley champion, Royal Chattan. This colt is two years old. He was bred by Mr. John Findlay, Springhill, Baillieston, and was got by the Glasgow premium horse, Clan Chattan, out of one of a first-class race of mares. Neither the three-year-old nor the yearling colts at Glasgow were much to boast about, but there is a marvellous gelding in this country called Perfection which is well worth looking at. He is four years o'd, and owned by Mr. Wm. Clark, Netherlee, Gathcart. His sire was Royal Gartly 9844, and, if report speak truly, he has been sold to an American millionaire firm for £250. Be that as it may, the likelihood is that he may find his way across the Atlantic unless some of our home fanciers develop pluck enough to retain him here.

Ayrshires at Glasgow made a creditable display. The leading winner was Mr. James Lawrie, West Newton, Strathaven, whose stock meet the requirements of the fancy. He has been very successful with a bull called Silver Heels, and two of the produce of this sire were first both in the older and in the three-year-old classes of cows in milk. The vessels are correct, level and tight, and the teats will do. Generally at Glasgow there was too much evidence that we have not yet got quite rid of the stupid craze for tight vessels and small corky teats. The vessels are right enough, but the teats have nothing to do with dairy business. "SCOTLAND YET."

Germ Infection at Birth.

In an address to the St. Probus Farmers' Club (Cornwall), the other day, Mr. F. T. Harvey, F. R. C. V. S., gave some information of value to stock-owners. His remarks dealt largely with the danger of germ infection at the birth of colts, calves, and sheep. He said that such infection often caused in young animals rapid and almost sudden death, diarrhoea or white scour, lameness, lung and mouth diseases, abscess, and paralysis. It had been proved over and over again that infection occurred either at birth or immediately after. To guard against infection, animals should be born in clean pastures or houses. Germs work so quickly that they must be dealt with on the first day, and an attempt made to stop infection. The prevention of these diseases was most important to breeders of stock. Investigation had proved that diseases in young animals were mostly due to infection at the start. In colts the worst things they had to guard against were joint evils, which made colts of small value. These diseases were often due to something being wrong at birth. Tetanus was now acknowledged to consist in wound infection, and the germ was very common in moulds, earth of all kinds, and stable manure. Horses were more liable to it than other animals. In view of these facts, wounds should be kept in a clean condition. The principal causes of the disease to day were harness galls and rubs, small abrasions, and pricks and stabs. In the course of the discussion which followed, Mr. T. Oliver, M. R. C. V. S., expressed agreement with Mr. Harvey, and said if some of them had realized that cleanliness was next to godliness they would be richer today. Light and air were necessary to health, and the sun was the best disinfectant.

Iowa College Feeding Experiment.

An experiment of more than usual interest to stockmen has lately been completed by Iowa Experiment Stations. The object of this work, as outlined by Prof. W. J. Kennedy, was to compare the relative flesh- and fat-producing power of the different stock foods which are upon the market when used with a main ration of corn meal. An important feature of the test was the large number of animals made use of. No less than 220 ordinary range-bred steers were selected by Prof. Marshall and divided into eleven equal lots. In addition to their daily ration of corn meal, they were supplied with wheat straw for roughage and water and salt at will. All through this experiment, great care was exercised to insure uniformity of conditions for each lot. They were marketed in Chicago on June 14th, and complete details of the result will be issued by the station staff in a short time. A synopsis of this report will be published in the "Farmer's Advocate" as soon as received. Meanwhile, the following table, showing the average weight, supplementary feed used, and the valuation of each as determined by a committee of expert buyers, will be interesting:

LOT.	Supplementary Feed.	Head.	Average Weight.	Price.
I.	None.	19	1,244 lbs.	\$7.45
II.	Oil-meal	20	1,285 lbs.	7.50
III.	Cottonseed meal	22	1,292 lbs.	7.40
IV.	Gluten meal	19	1,311 lbs.	7.75
V.	Gluten feed	19	1,276 lbs.	7.60
VI.	Germ oil-meal	20	1,265 lbs.	7.40
VII.	Blood-meal	20	1,253 lbs.	7.60
VIII.	Iowa Stock Food	20	1,301 lbs.	7.40
IX.	International Stock Food	20	1,167 lbs.	7.20
X.	Standard Stock Food	20	1,198 lbs.	7.00
XI.	Pasture	20	1,240 lbs.	7.55

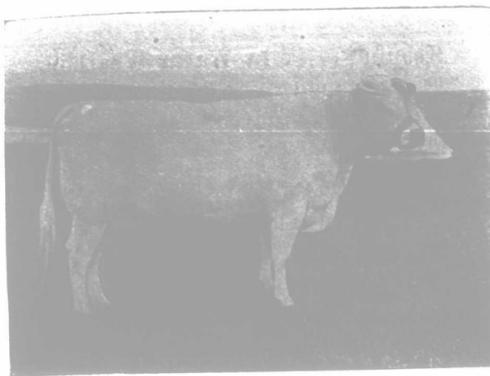
It is well to remember that the places occupied by the different lots in the above list may be by no means taken as conclusive. Animals bringing the highest price per hundredweight do not always bring the most profit to their feeder. Hence, some group at present standing near the bottom may find a place much higher when all is told.

The Stomach Worm

(*Strongylus contortus*).

Ravages of the stomach worm affecting sheep, goats and many cattle are usually felt in infected flocks late in July, August and September, the lambs and yearlings being the ones to succumb, or, at least, show symptoms earlier and more pronounced than older animals; yet the latter are by no means exempt. The symptoms are not very characteristic and scarcely permit a precise diagnosis. There is dullness, languor, intense thirst, anæmia and emaciation. There may be subacute colic and black diarrhoea, which usually terminates fatally, especially in lambs, a post-mortem of which reveals the true identity of the disease. The sheep, as with all ruminants, is provided with four compartments in its stomach: 1st, the rumen, or paunch, acting as a receptacle for coarse particles of food not fully prepared for digestion; 2nd, the reticulum, which aids in returning the coarse food from the rumen to the mouth, to be remasticated; 3rd, the omasum, or manyplies, which also prepares the food for digestion; while the 4th, abomasum, is the true digestive stomach (and immediately precedes the small intestines). It is in this true digestive stomach where the stomach worm lives, abstracting blood from its mucous membrane, causing great and rapid emaciation and death from the irritation therein produced. In holding a post-mortem, care and close observance is necessary, that the worms may not be overlooked. The stomach's lining membrane will be noticed to be somewhat inflamed, which, if examined immediately after death, great numbers of living worms, of a pinkish brown color, will be seen to move. (The writer has seen the stomach walls a living mass and in constant motion.)

Scientific investigations have proven that the stomach worm is aided much in its life-history by the presence of pools of stagnant waters, if, indeed, the presence of such is not absolutely necessary for their existence. The ova of the parasite passes away in the animal's droppings, which become washed into the stagnant water, from which, in too many cases, animals have to depend for their drink. The ova there hatches and assumes its larval form, which, if taken up by the sheep, again completes its life cycle. It is, therefore, evident to the thoughtful flockmaster how important it is not only to supply fresh running water to their animals, but also to fence or drain such sources of contamination to insure the safety of their stock. In the treatment of stomach worms, when their presence has been established beyond doubt, many agents (vermicides) are within reach, and many experiments have been tried within the past five years, especially in the United States, where great ravages have been wrought in many sections. The writer has found the most satisfactory results from fresh powdered arca nut, in small-teaspoonful doses to a 75-lb. lamb,



WHITE HEATHER.

First-prize three-year-old Shorthorn cow and champion female of the breed at the Royal Show, England, 1901; first-prize cow at the Royal Counties Show, 1902.

THE PROPERTY OF MR. J. DEANE WILLIS, BAPTON MANOR, WILTSHIRE.

suspended in 3 or 4 ounces of water and given in a drench, and repeated in about a week; also, in the fluid extract of kamala, in dram doses to each 50-lb. weight of lamb, dissolved in twice its own bulk of glycerine, and added to two or three ounces of water and given in a drench. The latter treatment has probably more advantages, with fewer disadvantages, than anything yet tested, and is regarded by many who have tried it as a specific when the animals have been treated before too great emaciation has become established. Whatever course is pursued, or agent employed, it is necessary to remove the sheep (immediately after treatment) to non-infected pastures, and where emaciation is great, good food and tonics given.

JOHN SPENCER, Veterinarian,
Virginia Experiment Station.

Sheep-Worrying in Britain.

Sheep-worrying by stray dogs is a cause of great loss to flockmasters, and there is singular remissness in formulating schemes for a remedy. The Bill of 1900 embodied some excellent clauses, but since it went the way of the innocents nothing further has been done to end the evil. Local authorities have far too little authority in a matter of this kind. They should have power to seize and lock up stray dogs, and it should be declared legal to shoot at sight dogs found chasing sheep. At present the law in England seems to be that a dog cannot be shot except to save the life of a sheep. If he has already claimed his victim there is no further penalty for him. He must not only be caught in the act, but he must be found so worrying the sheep as to cause its death. There should be no exemptions from license, and every dog should carry a collar bearing his owner's name.—Scottish Farmer.

FARM.

Collect Weed Seeds.

"That enormous sums of money are lost to farmers throughout Canada every year by weeds," no person will deny. In the great war against these enemies, it is necessary that all concerned should become more intelligently acquainted with their habits of growth, and, above all, be able to identify specimens and their seeds. This is the time when seeds can be most conveniently gathered. Many species are becoming ripe. Supply yourself with small bottles and become interested in making a collection. It will pay. In this way one can soon become familiar enough with weed seeds to detect almost any specimen in a sample of clover or other seed when buying. If you do not know the name of all seeds collected, send a sample to this office and we will be pleased to identify it if we can, giving an answer through the columns of the "Farmer's Advocate." If you have not time to do this yourself, interest the younger people in the matter. It will pay.

Sheep Destroy Weeds.

"Of the 600 weeds and grasses growing in the Northwest," writes Prof. Thos. Shaw, "it is estimated by those that have made a study of it, that sheep will eat 576 of them, while horses consume but 82 and cattle only 56. The fact is, sheep prefer many kinds of weeds to grasses, and weedy fields and horse pastures are improved by turning a small flock of sheep into them. When sheep devour the weeds they do not charge anything for the work. On the other hand, they pay the farmer for the privilege of pulling the weeds. They turn the weeds into mutton, fresh, juicy and crisp. A sheep's stomach is the most perfect receptacle that was ever made for weeds. It is sure death to every form of weed life. No weed seeds retain the power of resurrection after having been buried in that living sepulcher, the stomach of a sheep."

Protection Against Lightning.

In order properly to understand the steps to be taken to insure protection against lightning, it is necessary first to understand something about the danger we desire to guard against. The atmosphere during a time of electrical disturbance is under extreme tension. It is then in the same condition as is water dammed up, which, if it suddenly break loose, becomes an element of destruction. If, however, we can drain that water off gradually, in small streams, it will cause no injury. It is precisely the same with the electrical energy in the atmosphere. If we can draw that off in small volume, we prevent the destruction liable to take place where there are accumulations in dangerous quantities.

There is such a gradual drawing off in the villages, towns and cities, and this explains the infrequency of destruction by lightning in these larger centers as compared with the destruction on the farms. When there are a large number of houses together, the electrical energy is dissipated over a wide area, and not enough of it usually is brought together at one point to cause damage. The numerous trees, etc., in these large centers of population also serve as conductors to carry the fluid to the ground at many points and thus lessen its destructive power.

METAL CONDUCTORS.—There are artificial means of protection as well. Buildings may be protected by rods, but if the rods are not properly put on, they become a source of danger instead of a means of protection. If there are plenty of these conductors, properly constructed and properly put on, they will tend to prevent dangerous accumulations of electricity. The best kind of conductor in the form of rod is made of copper. Copper is much better than iron of the same weight. If you allow 100 as representing the conductivity of copper, iron would stand at 18.

POINTS, OR UPPER TERMINALS.—The



BISMARCK =28313=.

One of the sires at the head of the Thorndale herd of Mr. John S. Robson, Manitou, Man. (See Gossip, page 544.)

more points you have extending upward from the conductor, the better. You should have these points five or six feet high, and not more than 40 feet apart. It is essential that these points be bright and sharp, as a bright point seems to have more attraction for lightning than a dull one. Aluminum is recommended as a material for points, because that material will not rust; it is always bright, and is a better conductor than iron. It is better to have these points in broom form than as a single point. For example, if you are using a copper conductor, you can have a flat block of copper at the upper end of the point extending upwards from the roof, and into this block you can solder a number of aluminum points. The extension from the roof would then be exactly like a wire broom: the first part of the upward extension would be in the form of the handle, the copper block at the top would be the holder of the broom, and the two or three dozen small aluminum wires soldered into that block in a bunch would form the broom itself. This broom point will form a much better conductor than a single point. It is well, also, to have all these points connected one with another, so that if the lightning strikes at any point it will be diffused over a number of conductors instead of overcharging one.

There is no reason why farmers should not make their own lightning rods. Two or three strands of barbed wire wound together will make an excellent conductor, and the little barbs which are on this wire, about six inches apart, will assist the regular points in drawing the fluid.

GROUNDS, OR LOWER TERMINALS.—One of the most important points of all in providing for this sort of protection is in having a proper ground connection. It is an easy matter for a careless or dishonest agent to put the ground wire just a little below the surface. It is then

out of sight, and he thinks out of mind as well. Wire buried just below the surface, in dry ground, so far from being a means of protection, is a cause of danger, because the lightning, attracted by the points on the roof, is carried down the conductor, and if it is not then dissipated in damp ground, it is apt to fly off into the building. Protection can be secured by seeing that the ground wire is connected with earth which is always moist. The depth necessary will depend upon the character of the soil and the location of the building. It may not be necessary to go over three feet, or it may be necessary to go ten feet; what is imperative is that the ground wire shall be connected with soil that is never dry. To this end it is best to put the ground wire in during dry weather, because then you will see how far down it is necessary to go.

It is necessary to have something more than a single wire into the ground. You require to take such measures as will provide for the distribution of the current at the bottom. This can be provided for by flattening out an old copper boiler in sheet form and soldering that to your ground wire; or you may take a number of strands of barb wire and connect these with your ground wire below the surface. But it is, as I have said, absolutely imperative to have this ground wire located in ground which is almost moist. It is well to put charcoal about the ground wire, for this not only holds moisture, but attracts it.

INSULATORS.—In a steady flow of the electric fluid, in comparatively small volumes, as in the telegraph and telephone service, the insulator is effectual in confining the current to the wire. The lightning stroke, however, is compared, not to a small, steady current, but to an avalanche which would make light of an inch or two of glass after breaking through several rods of insulating air. The argument used against insulators for lightning rods, therefore, is they are ineffectual. On this account the weight of authority is in favor of supporting rods by ordinary metal fastenings. These may be in the form of a tape fitting the shape of the rod, holding the rod close to the building, and screwed or nailed to the building on each side of the rod. Some fastenings are in the form of spikes, with an eye through which the rod passes.

However, I do not think that the volume of the current is usually great enough but that a good insulator may keep the current from entering a building. Briefly, therefore, I should advise persons intending to erect lightning rods, to use insulators for supports. These insulators may be of the ordinary form as used on telegraph and telephone poles, or of porcelain, as used in inside telephone connections. No special form is necessary for this purpose.

J. B. REYNOLDS,
Professor of Physics.

Ontario Agricultural College.

[Note.—Mr. Thos. Baty, Middlesex County, a few years ago constructed a lightning rod (approved by many experts and which has stood the test of time) of nine strands of No. 8 galvanized iron wire (smooth), twisted together, a grindstone being used for the latter purpose. The ground connection was made by inserting the end of the twisted cable eight feet in the ground, in a hole made by a two-inch well auger. For each length of rod needed, the wire was measured and cut. Then each wire was bent at one end, hooked on the short crank of the grindstone and made fast. At the other end each wire was put through a separate hole in a short piece of board, pulled evenly tight and bent to keep from being pulled back. Then one turned the grindstone and the other held the board, and in a few moments the wires were twisted firm. The wire was attached to the building by three-cornered cedar blocks about three inches across, nailed to the building. These were notched and the cable stapled into the notches. Sufficient blocks were used to keep the wire from touching the building, and each



FIGGIE 76106.

Jersey cow, 11 years old. Sold for \$875 at Hood Farm sale, Lowell, Mass., June, 1902.

rod was brought in as straight a course to the ground as possible. The points are on the ridge of the barn, 20 feet apart and 10 feet high, sprangled out at the top and stayed with light cedar poles. Each point (except one spliced to the rod leading from another point) has separate ground connection. Mr. Baty and man made and put up in less than a day and a half, 240 feet of rod. About 10 ounces of wire per foot of cable were used, at a cost of less than two cents per foot. Several of the best authorities have pronounced this rod correct in principle and efficient. By several, however, the cedar blocks were deemed unnecessary, as the lightning would not likely leave as good a conductor as the rod and take to a wooden wall. We mentioned this rod to Prof. Reynolds, and he pronounced it a good one, more effectual than the ordinary lightning rod. In an interview of recent date, Mr. Baty intimated that if constructing another rod he would use No. 11, instead of No. 8, wire, but would add sufficient strands to make ten ounces per foot. The smaller wire would be more easily worked, and the additional number used would tend to increase the conductivity of the rod. To keep the wire from touching the roof, he would place a cork under each staple before being driven.—Ed. F. A.]

Mustard Spraying.

Prof. M. W. Doherty, of the Ontario Agricultural College, has lately been making a tour through Western Ontario for the purpose of demonstrating that it is possible and practical to destroy wild mustard, by spraying with copper sulphate, without injuring farm crops. On Thursday, June 12th, a representative of the "Farmer's Advocate" had the pleasure of witnessing the operation on the farm of Mr. P. H. Lawson, Westminster township. Ten pounds copper sulphate (bluestone) were placed in a sack and suspended in a large pailful of warm water to dissolve. This was accomplished in about fifteen minutes, after which the solution was placed in a barrel, to which the spray pump was attached, and the whole made up to 45 gallons, an amount sufficient for one acre.

During the afternoon only about two acres were sprayed, it being the Professor's intention to have everything in readiness for the public demonstration, as advertised, for the following day. Unfortunately, however, rain that evening prevented these plans from being carried out. Later, Mr. Lawson continued the spraying according to directions until a field of twelve acres had been treated. A visit to this farm on July 5th showed the mustard practically all gone; only a few leafless stalks were to be seen, with pods half mature. These, no doubt, would have been completely killed had the spraying been done from one to two weeks earlier. The oats, in which the mustard grew quite thickly, were somewhat singed on the top leaves by the solution when spraying took place, but at our last examination—on July 5th—all signs of injury had disappeared. In an adjacent untreated field the yellow blossoms were quite thick and visible at half a mile away, but in the field treated no yellow blossoms were visible.

As a result of our close observation of this work, as well as reliable reports which have been received from other sources, we have no hesitation in recommending Prof. Doherty's method for the destruction of this most pernicious weed. A suitable spraying outfit ready to attach to a cart or wagon may be had for less than twenty dollars. The cost of copper sulphate will not exceed eighty cents per acre, and if the spraying be carefully carried out for four years, there is no doubt but that the weed will have become thin enough to be pulled by hand. The saving in moisture and plant food during that time will in itself be sufficient to pay the actual cost, and in the end the land will be greatly increased in value.

Killing Woodchucks.

Every year considerable damage is done to various farm crops by the woodchuck, or groundhog. Various methods of exterminating this destructive little animal have been devised, but so far none have given as good results as bisulphide of carbon, when carefully used. Prof. Weed, of New Hampshire Experiment Station, in Bulletin No. 91, gives the results of a series of experiments with this substance as a woodchuck killer. Bisulphide of carbon is an inflammable liquid, which may be obtained at any drug store. Upon exposure to air it volatilizes into a vapor that is very destructive to animal life. This vapor is more than twice as heavy as air, so that in a woodchuck burrow it will follow along the hole until it reaches the bottom, crowding the air above it to the top. As the animal is likely to be in the lower part of the burrow, it is almost certain to inhale the poisonous vapor and be killed. To those who use it, however, it must be remembered that it is poisonous and highly explosive when mixed with air. It must be kept away from children and from fire of any kind, but when carefully used out of doors there is little danger. A trial will repay those interested.

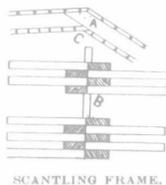
Twelve-Sided Wooden Silo.

To the Editor "Farmer's Advocate":

Sir,—Having noticed in the "Farmer's Advocate" of June 2nd an article on wooden-hooped silos, I herewith give a plan of one which has been used extensively in this locality, and is giving entire satisfaction. They are twelve-sided, and the frame is made of 2x4-inch scantling, twelve feet long, on the inside of which matched and planed inch lumber is used for sheathing.

The outside may be covered with matched and planed or rough lumber or left bare, according to the amount of money to be expended. If the outside be boarded and tar paper be used under both inside and outside sheathing, the air will be kept out as well as the frost to a large extent.

In commencing to build, cut a twelve-foot scantling in three equal pieces, with eight-inch bevel, and nail with 4½-inch cut nails, as seen at A. Twelve pieces, if cut and nailed in this manner, will make a hoop about twelve feet in diameter. Place this frame on a solid foundation of stone or concrete, and continue cutting and laying scantling in the manner as seen at B, leaving two-inch space between each tier, until a height of six feet has been reached. Then studs six inches long should be used between each two rows of scantling, placing one under each corner, as



seen at B above. After building in this way for another six feet, the length of the corner studs may be increased to twelve inches, as the pressure outward will be much less at the top of the silo than at the bottom. These studs in every case will require to be well toe-nailed with three-inch nails. In putting on the inside sheathing, it should be allowed to lap in the corner, as seen at C, to prevent the entrance of air, and if a coat of coal tar or paint be applied, the durability of the silo will be greatly increased. Where this silo is built inside a barn, no roof will be required, but when it is to be constructed outside, one will be necessary. It may be made with twelve rafters, the foot of each nailed where the scantling join, and the upper end of all fastened to a piece of heavy scantling, which may be shaped on top as a spire. Boards and shingles should be added to make the roof complete. For the admission of the silage from the rakes or blower, a Gothic window should be arranged in the roof. At each side, also, of the holes where the fodder is to be thrown out, scantling should be firmly spiked two feet apart. If brackets be nailed across these upright scantling, they may be used as a ladder, and the silo will be strengthened at this its weakest point. Silos built in this way are not affected in the least by the hot sun or strong winds as stove silos are. SUBSCRIBER.

York Co., Ont.

Mr. Glendinning's Method Endorsed.

To the Editor "Farmer's Advocate":

Sir,—Having read with interest an article by Mr. Glendinning on the curing of green clover, we accept your invitation to state briefly our experience with the system outlined by that gentleman. Last year was our first trial with this method, and although only about twenty-five tons of our hay was cured in this way, yet the results have been so satisfactory that we intend handling it in that manner this season.

Most of the clover was cut when the first blossoms were just beginning to turn brown, but we believe that it would be an improvement to cut earlier, owing to the large development of fiber in the later stages. The cutting was done in the forenoon. While this was going on, the cocks put up the previous day were shaken out slightly and exposed to the sun for about an hour before being hauled to the barn. The hay cut in the forenoon was cocked up the same day after drawing in was completed. No hay was handled when the dew was on.

The hay was stored in the mow of a bank barn, on a floor of one ply of inch lumber, over an open shed, being put in as tightly as possible. No preservative was used. The siding of the barn touched the hay on one side only, leaving three sides free until threshing time. Any moisture foreign to the plant itself will cause mustiness if not thoroughly removed before storing the hay in the barn. We have no hesitation in recommending the system as a successful method of handling green clover. JOHN C. READEY.

Lanark Co., Ont.

DAIRY.

Keeping Milk in Warm Weather.

The practice of putting in a supply of ice during the winter has in many instances solved the problem of keeping milk sweet during the summer months. However, where there is one ice house to be found on small dairy farms, we venture to assert that ten of these farms could be found where such an improvement is absent. In view of this, the perplexing problem of keeping milk during the hot weather annually presents itself. The first step in the process of preserving milk in a sweet condition is that of keeping things clean at time of milking. This refers not only to cleanliness of the milker, but also to that of the utensils as well as surroundings at milking time. Milk when drawn from the animal is in a perfect condition for the absorption of odors from the surroundings. At this temperature many organisms when once present in milk multiply at an exceedingly rapid rate, and it is impossible, no matter how cleanly every stage of the milking may be, to prevent the entrance of some of these organisms that cause fermentation or souring. The only thing that can be done, apart from being scrupulously clean in every detail, is to cool the milk as rapidly as possible after it is drawn. This does not mean that the milk should be left in the stable, even should it be cool there, but rather that it be immediately removed to clean, fresh quarters, and there subjected to rapid cooling by surrounding it with water. So much the better if it can be aerated before setting. If an ice supply is not available, ordinary spring or pump water will do exceedingly well. This is usually drawn at a temperature of from 50 to 60 degrees, and it has been ascertained that when milk is suddenly reduced to this temperature, organisms are of exceedingly slow growth. Not only does this check souring or fermentation, but it causes the rapid rise of butter-fat or cream, which in most cases is the object sought. In addition to this, however, it is often necessary to keep the milk sweet during a period of twenty-four, or possibly forty-eight, hours for the purpose of utilizing it as a food for calves. In view of this, the practice that we have recommended is an exceedingly good one in the absence of such dairy machinery as the hand separator.—Homestead.

Delivering Butter to Refrigerator Cars.

The Refrigerator Car Inspector at Montreal, in the employ of the Dominion Department of Agriculture, reports that there is a great variation in the condition and temperature of different lots of butter arriving at Montreal in the same car. He finds some lots of butter quite soft, having a temperature as high as 64 degrees, while other lots are firm and cold and as low as 46 degrees. Mr. J. A. Ruddick, Chief of Dairy Division, Ottawa, wishes to draw the attention of creamery managers to this matter, and points out that the refrigerator car is only calculated to keep the butter cold and firm when it is delivered in that condition, and those who are responsible should see that the butter is delivered to the cars with the least possible exposure to heat. The refrigerator cars run on regular trains, and are timed to arrive at a certain hour. The train may be late, but never ahead of time. Butter should not be delivered to the station before the trains are due to arrive. Waterproof covers should be provided for wagons to protect the butter from the heat of the sun. If the butter is delivered to the cars in a soft condition, it will arrive that way in Montreal, and will deteriorate in quality very rapidly on account of the high temperature. It is quite evident, also, that many of the creameries are not yet provided with proper cold-storage accommodation. Any creamery cold-storage in which the temperature is not kept down to 36 to 38 degrees is either not properly constructed or badly managed. Creamery proprietors should make a point of looking after this matter very closely. The best way to get the average temperature of a creamery cold-storage is to take the actual temperature of the butter after it has been in the refrigerator two or three days.

Moisture in Butter.

In view of the recent enactment in Great Britain, that butter to be accounted genuine must not contain more than 16 per cent. of water, it has been deemed advisable by the Canadian Department of Agriculture to ascertain the average moisture-content of Canadian creamery butter. To this end samples of butter as packed for export are being collected for analysis. Two samples, taken a week apart, are being sent to Ottawa from each creamery, the first to be held until the second is ready, and both forwarded together. A memorandum must accompany each sample, giving the following amongst other details: Name of creamery, whether gathered cream or separator system, name and address of buttermaker, date of churning, style of churn, temperature at various stages, etc. The analysis will be made by Mr. Frank T. Shutt, Chemist at the Experimental Farm, Ottawa.



LADY OF THE BOYNE 5TH (IMP.).

Contributed by W. D. Flatt to the Hamilton sale on August 13th. (See Gossip, page 538.)

How to Make Firm Butter in Hot Weather.

The texture of butter is largely influenced by the temperature at which the cream from which it is obtained is churned. The warmer the cream is at the time of churning the softer will be the resulting butter and the more difficult it will be to get it to show the necessary grain and firmness of body. In very hot weather in summer much difficulty is sometimes experienced on this score, though if proper precautions are taken there need be no trouble in getting the percentage of water reduced below the standard now decided on—viz., 16 per cent. In making butter during hot weather in summer, it is a good plan to keep the cream as cool as possible for a period of ten or twelve hours before churning is timed to commence, and with the same object in view it is a good plan to have the churning performed in the early morning, when the temperature is sensibly lower than at any other period of the day. —Farmer's Gazette.

Experiments in Cheese Ripening.

Ripening of cheese in cold-storage compared with ripening in the ordinary curing-room, is the title of Bulletin 121, just issued by Profs. Dean, Harrison and Harcourt, Ontario Agricultural College. In this report the growing demand of the British market for a "fatter" cheese, or one with a softer body and texture, is pointed out. It is also shown that to produce the desirable quality, factories must be equipped with better ripening-rooms. Co-operation is commended, and the advantages of central or consolidated cold-storage stations are duly considered. The main part of the investigation, however, was a comparison of methods of ripening, and although the authors wish this report to be considered only as preliminary, it should be of special interest to all cheesemen.

CONCLUSIONS.

1. An ice cold-storage chamber, with circulation of air, may be maintained at a temperature of about 40° without moving the ice, if the building is well insulated.
2. The high percentage of moisture, 91.6 per cent., in the cold-storage made the conditions favorable for the growth of mould; yet the mould was no worse on the cheese in the refrigerator than on the cheese in the ordinary ripening-room. In both places the mould was kept in check by the use of a solution of formalin sprayed on the cheese with a hand spray-pump.
3. The acidity of the whey increased up to the time of salting the curd, when it decreased, and then increased again.
4. The saving of loss in weight by ripening at an average temperature of 37.8° for the season was over 2 per cent. on cheese weighing about 30 pounds each. This is a very important item in a large factory, and would alone pay the cost of cold-storage for cheese in hot weather.
5. The quality of the cheese was in the order of placing in the cold-storage as regards time—that put in directly from the hoops standing first. Uniformity of quality in all the cheese placed in cold-storage was the chief point noticed.
6. An increased yield of cheese equal to at least one pound of cheese per 1,000 pounds of milk may be looked for as a result of modifying the method of manufacture and ripening at a

lower temperature than has been commonly supposed necessary.

7. It has been claimed that cheese kept in cold-storage for any length of time will spoil quickly when exposed to an ordinary temperature. Such results were not observed in the experiments conducted, nor are they likely to occur when the cheese have been ripened for the whole period at a moderately low temperature. Further experiments are being made to settle this point.

8. A cheese put directly from the hoop into a dry box and placed in cold-storage, without any turning, ripened satisfactorily. The chief defect was in the large amount of mould on the cheese. A cheese put into a box after ripening in the ordinary room for a week gave similar results. Two cheese made from the same vat of milk as the cheese put into the cheese-boxes, were placed on a shelf in the cold-storage, and the quality was similar to that put directly into a box from the hoop, and to that put into a box at the end of one week. The cheese-boxes should be well seasoned, if the cheese are not to be removed from the boxes. We would advise spraying the inside of box and soaking the scale-boards with formalin, to prevent mould.

9. Undesirable bacteria such as are found in cheese seem unable to grow at a temperature of 38° F., and consequently bad flavors in cheese, caused by bacteria, do not increase in cold-storage.

10. The long life of the lactic acid bacteria in cheese seem to have an important bearing on the question of ripening, checking the development of bacteria which produce bad or undesirable flavors.

11. The temperature at which cheese will cure best is not yet settled. There are involved in the question many points which require further investigation.

A copy of this bulletin may be had by applying to the Department of Agriculture, Toronto.

Composition of Cream.

The average composition of cream may be taken about as follows:

	Per cent.
Water	68.82
Fat	22.66
Casein, albumen, etc.	3.76
Milk sugar	4.23
Ash53
Total	100.00

Large Creamery for British Columbia.

"That the farmers of British Columbia are awake to the advantages of dairy husbandry in that Province," is evident by the fact that at Chilliwack they have formed a co-operative society and have built a new creamery, the largest of its kind west of the Rockies. The building has a desirable location near the town, at which a plentiful supply of pure fresh water may be had. It has capacity to handle the cream of 1,200 to 1,500 cows, and since winter dairying has become quite popular, it is expected that a large output will be maintained throughout the year. The butter will be sold upon the home market, where a ready sale can be made at remunerative prices. Mr. J. W. McGillvery, formerly a student at the Ontario Agricultural College, is the buttermaker, and Mr. T. R. Whitby, of the Bank of Chilliwack, is business manager.

POULTRY.

Provide Foods Rich in Lime.

Bran is excellent for poultry, and one point in favor of bran is, that it contains a much larger proportion of lime than any other cheap food derived from grain, and as the shells of eggs are composed of lime, it is essential that food rich in lime be provided. It may be urged that the use of oyster shells will provide lime, but it will be found that it is the lime in the food that is most serviceable, because it is in a form that can be better digested and assimilated than carbonate of lime, says the American Fancier. Clover is also rich in lime; and when a mess of cut clover and bran is given the fowls they need no oyster shells or other mineral matter as a source from which to obtain a supply of lime for the eggs. Do not forget that in summer, however, all kinds of foods should be used with judgment. If the hens have a free range, give no food at all as long as they are laying, but if they begin to fall off, let bran be the leading ingredient allowed. In winter the bran and clover are even more essential, as the fowls cannot then secure green food on the range.

Three-months-old Chicks Wanted.

In the report of the Dominion Experimental Farms, Mr. A. G. Gilbert, manager poultry department, says the large poultry-purchasing companies in Canada call for a three-months-old chicken, as being best suited to the wants of a certain class of customers in our home and English markets. The chicks are wanted early and in numbers. There should be no difficulty in cur farmers having such chickens by the end of July or beginning of August. A fear is expressed that a chicken of this age will not have weight, but Mr. Gilbert shows by his report that for years they have had no difficulty in that connection. Barred P. Rock, White P. Rock and White Wyandotte cockerels at three months old have averaged from 3 to 3½ pounds each.

Keep Pens Clean.

At no time in the year is it more important that the poultry-house be kept clean than during the sultry days of summer. A few minutes every morning, if spent in removing the droppings and in setting things in order generally, will go a long way toward making the industry profitable. It is at this time of year that disease and vermin do the greatest injury to fowl. Of the latter, certain species are to be found only in the crevices and hiding-places of roosting apartments, from whence they crawl during the night to sap the blood of our feathered friends. To check these and other pests, the walls, ceiling, partitions, nest boxes and roosts should be sprayed or whitened with lime-wash containing crude carbolic acid. It is a good practice, also, to scatter slaked lime around the windows and under the roosts each morning after cleaning up. Nowhere during this season does cleanliness mean so much as in the poultry-house.

Supply Water to Chicks.

During the hot days which are sure to come in the next few weeks, be sure your chicks are constantly supplied with pure fresh water. It is important that they be kept growing at this time. Lack of drink will check their progress. Filthy water may bring on disease. By all means supply plenty of water.



MISTLETOE 21ST (IMP.).

Contributed by W. D. Flatt to the Hamilton sale on August 13th. (See Gossip, page 538.)

GARDEN AND ORCHARD.

Strawberries a Luxury.

The season for strawberries is now over. Those who have had a small patch in the garden have enjoyed them; others who have not, surely learned to appreciate this luscious and healthful fruit more fully. They are a real luxury on any table. Some farmers fear to put down a few plants lest the work of caring for them would be too great. It's a mistake; a little labor well directed in cultivating strawberries cannot be better expended. They require a rich, somewhat moist soil, with good drainage. Spring is the best time to plant, but if that season is to be an unusually busy one, August planting may give good results. Enough plants for a farm garden may be purchased for a trifle. The principal attention required is in providing a good mulch of straw or coarse manure in winter, and occasional cultivation in summer to keep down weeds and conserve moisture. No farmer can afford to neglect the planting and care of a small patch of strawberries.

Selling Early Apples.

Just how to handle the early apple crop and realize a profit is a question confronting fruit-growers just now. Everywhere there are orchards producing more early apples than are required on the farm. So plentiful are they usually, and so low-priced, that many farmers use what they can and allow the rest to go to waste. This year try picking in good time and marketing the best quality in attractive baskets or boxes, instead of in barrels as formerly. The time is close at hand when most all apples for shipment to the English market will be packed only in neat boxes. The demand for any fruit may be improved by careful selection and good packing. Local markets can be influenced in this way to a great extent. Give it a trial with the "harvest" apples.

Thinning Fruit.

A great deal has been said by advanced horticulturists, during the last decade, in regard to the gains to be realized from thinning fruit. In 1900, the Experiment Station of Massachusetts conducted experiments in thinning apples of different varieties. The trees were old and from nine to ten inches in diameter. The results are as follows, No. 1 in each case representing the unthinned trees:

	Cost of Thinning.	Yield, bbls.	Value.
1. Astrachan.....		4.8	\$3.00
2. Astrachan.....	\$1.20	5	5.05
1. Early Harvest.....		1.5	.50
2. Early Harvest.....	.15	1.5	.98
1. Hurlbut.....		5	3.00
2. Hurlbut.....	.45	5	3.55
1. Baldwin.....		3.25	2.00
2. Baldwin.....	.60	4	3.00
1. Greening.....		2	1.50
2. Greening.....	.15	2.5	2.10

In every case it will be noticed that the extra gain was sufficient to more than repay the cost entailed. Greater returns have been claimed for thinning. Further experiments in this work would be interesting and instructive.

Spray Calendar.

In Bulletin 122, just to hand, Prof. Lochhead, of the Ontario Agricultural College, gives valuable directions for treatment of insects and plant diseases. Formulæ and methods of preparation of all the leading spray mixtures are given. The proper time to spray for different pests injurious to orchards, as well as the best mixture to be used in each case, is clearly indicated.

Don't Forget the Weeds.

When the hurry of harvest is on, don't forget that the weeds may be quietly growing in the garden. If any be allowed to seed, a large amount of the labor expended in keeping them down during early summer will be lost. Only a little time may be required to run through the beds and pull up the stray intruders. They are nearly sure to be there. Do not allow them to seed on any account.

Watch for Currant Worms.

Currant and gooseberry bushes will require daily attention, lest their foliage be consumed by the currant worm (*Nematis ribisii*). The second brood are now about due to appear. Have on hand a small quantity of hellebore. It may be dusted in the dry form or used as a spray, one ounce to three gallons of water. Do not purchase more of this insecticide than is intended for immediate use. It rapidly decreases in strength when exposed to the air.

APIARY.

Beekeeping in Manitoba.

EXTRACTING.

Before the time for extracting arrives, the combs to be used for that purpose should be selected. This, indeed, might very well have been done when making things snug for winter at the close of the last season's work, but if neglected then, should certainly be seen to as the bees build-up in the early part of the summer. Combs which are wired and in which brood has been reared should be selected for this purpose. New combs, even though well wired, often collapse in the extractor, despite the most careful handling. These should be used in the brood nests, and the tough old combs that have been already in use there kept for the extracting supers.

As the clover blossoms appear, the hives should be emptied of any surplus honey they may contain, without regard to whether it is capped or not. While very good honey, this is usually dark and had better be kept by itself. From that on to the end of the season it is all of good quality and color—at least this is so in my locality—and may all be allowed to go together.

It is pretty generally accepted that the beehive is a laboratory in which nectar collected from the flowers is converted into honey by a process which is complete only after the cells in which it is stored are sealed over. So that, even though the inexperienced may detect little, if any, difference between sealed and unsealed honey, the fact is that one is honey at its very best, while the other is honey—or nectar—that has not yet reached that degree. It may be that the process continues and the unsealed honey "ripens" after being extracted, and ways have been devised for ripening such honey. But the bees have the only dead-sure process—and it is covered by patents—so men of experience leave all that to be done in the hive, and extract only after the combs are fully sealed over. The beginner may think he is making a gain by extracting sooner, as the work of uncapping is generally slow and disagreeable to one new to the work. But practice and the proper kind of knife—kept as it should be, as sharp as a razor—will soon overcome these objections, and no gain is worth considering if it results in lowering the quality of the honey placed on the market. Western bee-keepers have a large and growing market, which they should set themselves to capture just as quickly as they can acquire the bees to do it with, and the only way to capture and hold this market is by supplying the very best article possible. For this same reason everything about the extracting-room should be scrupulously clean, and flies and dust excluded.

Honey should, of course, be strained as it comes from the extractor. I suppose different people have different ways of doing this and different kinds of strainers as well. Here is a method, and a cheap one, which does everything that any strainer will do, and one very important thing that no other will, viz.: corners the pestiferous fly that persists in drowning itself in the nice clear honey just as it is being poured into the containing can. It is simply a piece of factory cotton spread over the retaining can so as to bag somewhat, and fastened with a string or strap around the can. This may be thought too cheap to be good, but one trial will make it a favorite.

Another thing to remembered is that honey, whether extracted or in the comb, absorbs moisture and this detracts from the quality. Extracted honey that is to remain unsold for a time should be kept in closed vessels, and sections stored in a room that is both warm and dry, and both should be religiously protected from odors of all kinds. J. J. GUNN.

Red River Valley.

Work for July.

CARING FOR EXTRACTING COMBS, ETC.

At the close of the white-honey harvest, in localities where buckwheat is raised, care should be taken to remove all the clover and basswood honey before the buckwheat begins to yield. While buckwheat may be all right by itself, it certainly is not desirable to have it mixed with the clover and basswood. "A little leaven leaveneth the whole lump," so a little buckwheat will decrease the market value of a large amount of white honey.

As long as the clover and basswood yield, the bees will bother the buckwheat but little, so the beekeeper should keep his eyes open and remove the light honey in time. At the last extracting, if no honey is coming in, robbing will be apt to occur if care is not taken. This should be avoided, if possible, particularly if there are neighbors near you, as bees are very vindictive if their stores are taken away when no honey is coming in from the fields, and will sting anything in sight. Bee-escapes are handy at this season, as they can be placed between the supers and brood chambers. After the bees have left the supers, they (the supers) can be taken off, ex-

tracted and returned to the hives in the evening, causing little, if any, excitement. Personally, I go to a colony, give them a little smoke and remove the supers so quickly that the robbers hardly know anything has happened; close the hive up and put the supers in the honey-house. If done properly, and especially if the apiarist has an attendant to help him, using the smoker, etc., a large number of supers can be removed in a short time, when they can be extracted at leisure and returned to the hives in the evening. It is well to return the supers to the hives again, even if there is no buckwheat or other late-summer or fall flora in your section, as the combs, if not on the hives, are sure to fall a prey to the bee moth, which soon makes highways and byways through any exposed combs, in the months of August and September. I never remove any extracting combs before September 15th, at which time I begin to make preparations for winter. Good extracting combs are as cash to the beekeeper. Notwithstanding this, hundreds of combs are destroyed every year, particularly among "farmer beekeepers." The destruction of combs simply means more comb to be built by the bees next year, more foundation to be bought, and a lessening of the honey crop.

In our locality, this present season there has been an unusual amount of swarming, and very likely a lot of weak after-swarms have been hived. By all means double up or dispose of these in some way, as it never pays to try and winter weak colonies. It is just as important to have strong colonies in the fall as in the spring, as the first condition begets the latter. It is well not to forget that, while a strong colony of bees may be quite a valuable asset, a dozen weak ones may be worth a little less than nothing, and the sooner every beekeeper, amateur or professional, becomes alive to this fact, the better for their pocketbook.

If you have secured a crop of honey, don't be in a hurry to rush it on the market. Bide a wee and take a little rest after the rush of the season, which rest, by the way, you may need if (as the writer of these notes has been doing) you have been working seventeen hours a day to catch up with work that is ordinarily done in June other years.

Good honey is not a perishable article, and it may pay you to get posted as to the honey crop and prices likely to prevail for the season. This, of course, you can best do by perusing our agricultural papers, particularly those devoted to bees as a specialty. J. L. BYER.

York Co.

Amount of Honey Consumed by Bees.

The amount of honey consumed by a colony of bees depends upon the length of time they are active during each year. Some authorities have placed the amount as high as 200 pounds for southern countries. It is a difficult matter to determine with any degree of accuracy. In Canada, it is estimated that rarely more than 100 pounds are required for each hive, however strong.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest, or which appear to be asked out of mere curiosity.

3rd.—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, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

WHITE SCOURS IN CALF.

I have a valuable calf, two months old, which sucks its dam. The calf scours all the time. The discharge looks white, like milk. The calf is kept shut up. The dam is out on an old pasture field. Elgin Co., Ont. L. G.

Ans.—Your calf is suffering from what is commonly called white scours. Give the calf 2 ozs. linseed oil mixed with the same amount of lime-water. Then give a powder, morning and evening, composed of catechu, $\frac{1}{2}$ dram, and powdered chalk, 2 drams, till you see an improvement. If possible, change the food of the dam and let her have $\frac{1}{2}$ gallon of limewater every night and morning. H. G. REED, V. S.

RHEUMATISM.

I have a cow which for the last few weeks is very stiff when walking. Is better at night than in the morning; getting thin in flesh. I have been giving her some aconite. Pictou Co., N. S. J. W. M.

Ans.—Your cow is no doubt suffering from rheumatism. This disease is usually caused by cold and damp, but sometimes specific infection. Keep her perfectly quiet and in comfortable quarters. Apply hot fomentations, or flannels wrung out of hot water, to the parts. Give a dram each of bicarbonate of soda and nitrate of potash in her drinking water morning and evening. If the joints are involved, sometimes it is necessary to blister. H. G. REED, V. S.

TETANUS AND ARTHRITIS.

I had a mare foal on June 17th. Everything went well till June 23rd, when the foal was found lying stretched out stiff, with its head thrown back as far as possible, his neck so stiff that in trying to lift it you could raise the whole body. It died at night.

I had another foal that was never able to get up. Could walk a little when raised. Joints in legs swelled. Lived three weeks. H. F. R. Northumberland Co., Ont.

Ans.—I think there is no doubt that your first-mentioned foal died of tetanus (lockjaw). The symptoms you describe strongly suggest that disease. The cause was probably that the germ got entrance through the navel opening of the little animal. Numerous instances of the kind are on record.

The last-mentioned foal, being always weakly, succumbed to an attack of inflammation of the joints, which a strong foal might have shaken off. The fact of those foals being sired by a Clydesdale stallion had nothing to do with their death. H. G. REED, V. S.

INDIGESTION IN YOUNG PIGS.

I have five pigs, seven or eight weeks old, which will suddenly stop eating and knuckle down behind the shoulders as if in pain. Have been fed on chopped peas and barley, with a little bran and milk and clover. Have also another pig, three months old, which has a whitish spot on lower side of eye. W. E. L. Wentworth Co., Ont.

Ans.—Your pigs are suffering from digestive trouble, caused by feeding too much heavy meal before the stomach was strong enough to digest it. Give each pig one ounce of raw linseed or castor oil. Turn them out where they can root in the ground, and give a teaspoonful of powdered gentian in their food morning and evening. Give no chop stronger than oats for a few weeks.

Your other pig is probably suffering from a scum over the eye caused by an injury, which will probably come all right in time. Possibly it is a cataract, in which case treatment would be useless, and blindness will result. H. G. REED, V. S.

TUBERCULOSIS.

I have a calf, dropped last January. When about three months old it began to cough. It kept growing, but got thin in flesh, with dry, rough coat. About two weeks ago I killed it and found pus abscesses in the lungs. Since that time one of my cows, tied in the same stall as calf's dam, has fallen off in her milk and has a dry cough. This cow's calf did all right till about a year old, when it began to lose flesh and look unthrifty, but still keeps on growing. I have heard some of the younger calves with the same dry cough. T. F. T. Middlesex Co.

Ans.—I am very much afraid you have tuberculosis in your herd. You had better have your herd tested with Koch's tuberculin, in order to make sure. In the meantime, keep healthy animals separate from those that cough, and boil all milk from the coughing cows before using either in the family or for other animals. H. G. REED, V. S.

SCROTAL HERNIA IN FOAL.

I have a colt, six weeks old, that appears to be ruptured in scrotum. I can displace the enlargement and it will stay for a time, but will come down again. J. B. L. Elgin Co.

Ans.—Your colt is suffering from scrotal hernia. The chances are that no treatment will be necessary, as the great majority of such cases come all right during the first year of growth. Occasionally, however, when the rupture is very large, a loop of the bowel becomes strangulated or checked in the sac so that the contents of the bowel cannot pass through, when the little animal will show colicky pains. In that case, hold the patient down on his back and endeavor to press the intestine back into the abdomen. In such a case an operation might be necessary, and you would need to consult a competent vet. However, the chances are 50 to 1 in favor of your colt coming all right without any treatment. H. G. REED, V. S.

CHOREA.

I have a two-year-old Clydesdale gelding that was badly bogged on the legs, but that has almost disappeared. When standing in the stable or in the fields, he jerks his legs somewhat like stringhalt, but can walk or trot all right. T. R. Wellington Co.

Ans.—Your colt is evidently suffering from some form of chorea. This disease usually occurs in unthrifty animals, but any animal may become affected. Get 1½ ounces of sulphate of iron and 1 dram of arsenous acid. Mix into one dozen powders, being careful to have the arsenic thoroughly and evenly mixed, and give one powder morning and evening in his food. After he has had a dozen powders, let him go one week without treatment, and then repeat with another dozen powders. This disease is often most unsatisfactory to treat. H. G. REED, V. S.

BULL INJURED BY JUMPING ON FENCE.

I have a three-year-old Holstein bull that injured himself by jumping on a fence, since which he has been of no use for service. J. J. A. Glengarry Co.

Ans.—This is a case in which it is very difficult for a man to give an opinion that would be of much value without having seen the patient. However, I am of the opinion that the bull is suffering from paralysis of the erector muscles of the penis, the result of the injury received. However, it may be due to a stricture of the sheath at the seat of injury. In either case I think that the patient will come all right in time. If it be a case of stricture of the sheath, an operation would most likely effect a cure. If you value the immediate services of the animal, you had better consult a competent vet. H. G. REED, V. S.

BURSAL ENLARGEMENT ON COLT'S KNEE.

Have a sucking colt that four days after birth had a soft swelling come on its front leg right below the knee and to one side, about 3 inches long, 2 inches wide. Colt not lame; plays and runs all right. M. Elgin Co., Ont.

Ans.—Your foal is suffering from an enlarged bursa of the knee joint, or probably where the tendon plays over the joint. In a strong, vigorous young animal, like your foal appears to be, the lump is frequently absorbed without any treatment. If it does not disappear in the course of a few weeks, apply the following blister lightly once a day, being careful not to make the parts raw or sore: Two drams each biniodide of mercury and iodide of potassium, and mix with 8 ounces of water. H. G. REED, V. S.

PREMATURE PARTURITION IN SOW.

I have a young sow which pigged sixteen days before her time. Pigs either born dead or died shortly after birth. Sow fed on turnips and clover. M. B. Wellington Co., Ont.

Ans.—Premature birth is liable to occur in all animals, usually the result of injury of some kind. Sometimes follows an attack of acute indigestion, and occasionally is produced by the use of ergotized food, such as the smut found on grain, especially rye or barley, and sometimes found on grass, especially on low lands. I could not offer an opinion as to what caused it in this case. H. G. REED, V. S.

INFLAMMATION OF WOMB (METRITIS).

I had a mare which foaled on the 3rd of June. Had been slightly stiff with swelling in joints for about three weeks. The third day after foaling, her milk seemed to dry up; and got quite stiff, with spells of trembling; temperature and pulse rising; appetite gone; breathing hard and quite uneasy, standing with fore feet well under the body, and finally died. F. H. Huron Co., Ont.

Ans.—There is little doubt your mare died from inflammation of womb. I think, however, that there was also a complication of parturient laminitis (founder). Treatment for metritis consists of syringing out the womb with bichloride of mercury and water, in the proportion of 1 to 1,000; an application of mustard to the loins, and then covered with heavy cloths rung out of hot water. See that the bowels are kept moving freely, and drench with stimulants, such as nitrous ether, 2 ozs., or about ¼ pint whiskey. Treatment for laminitis: Purge with 1 ounce aloes. Give 1-dram doses of nitrate of potash three times daily for two or three days, and keep the feet soaked in hot-water cloths. H. G. REED, V. S.

ERYSIPELAS.

On Thursday morning a four-year-old horse received wound on hip by backing down on a harrow tooth; wound about two inches deep. I got a vet. to dress the wound, who considered it not at all serious. Friday, horse a little stiff; Saturday, leg swollen; Sunday, swelling worse and sheath involved. Horse died Sunday night. J. R. Wellington Co., Ont.

Ans.—In my opinion, judging from symptoms described, your horse died from erysipelas. This disease often follows very trifling wounds, sometimes a mere scratch in the skin, through which the germ gains an entrance. Assuming that the trouble was erysipelas, I think your veterinary adviser did about all that could have been done. H. G. REED, V. S.

ABNORMAL GROWTH ON COLT'S FOOT.

I have a colt, three years old, with a horn growing out on the top of its foot. It grows for a time and then disappears; whether it is torn off or not I do not know. It does not seem to be sore. J. W. S. Lanark Co.

Ans.—Your colt is suffering from an abnormal development of horn, due to some injury to the top part of the hoof, where the growth or secretion of the horn takes place. Treatment: Cut, or, if you can, twist off the growth, leaving the hoof in as natural a shape as possible, and then apply the following: Two ozs. butter antimony; 1 oz. of tincture of myrrh. Mix, and apply with a feather to the spot where the lump was. Scrape off the burnt portion each day before applying. It will gradually heal over. H. G. REED, V. S.

TAPEWORMS IN LAMBS.

Could you inform me what was the matter with my lambs and prescribe treatment for future cases? They stood with hind legs stretched backwards, looking from side to side. An injection of soapsuds was followed by passage of thick, white, jelly-like substance. No solid excrement. All food and mother's milk refused, but drank freely of water. Died in two days. Post-mortem revealed gall bladder very large, and large yellow tapeworm in small intestines. Wool very loose on hide. F. W. M. WRENSHALL. Grey Co., Ont.

Ans.—The tapeworms found in small intestines have, in all probability, been the cause of death in your lambs. As a preventive measure, we would advise that the sheep be moved to new pastures, and that the old feeding ground be broken up and cultivated for two or three years. Should further symptoms appear in the flock, give oil of turpentine, one to four fluid drams in raw milk. A decoction of pumpkin seeds is also a favorite remedy.

Miscellaneous.

OIL TEST DESCRIBED.

Will you kindly explain the oil test as used by cream-gathering butter factories to determine the per cent. of butter in cream? W. J. HENDERSON. Huron Co., Ont.

Ans.—In "Testing Milk and its Products," Farrington and Woll give the following description of the oil test:

"This system is based on the number of creamery inches of cream which the various patrons deliver to the factory; one inch of cream contains 113 cubic inches. The driver pours the patron's cream into his 18-inch gathering pail, measures it with his rule and records the depth of the cream in the can, in inches and tenths of an inch. The cream is then stirred thoroughly with a ladle or stout dipper, and a sample is taken by filling a test tube from the sample case, to the graduation mark by means of a small, conical dipper provided with a lip. A driver's case contains either two or three "cards," holding fifteen test tubes each. The tubes as filled are placed in the case, and the corresponding number is in each instance recorded in front of the patron's name, together with the number of inches of cream furnished by him.

"On arrival at the creamery the tin tubes are placed in a vessel filled with water of the temperature wanted for churning (say 60° in summer and 65 to 75° in winter). When ready for churning they are placed in the oil-test churn, the cover of the churn put on, and the sample of cream churned into butter. On the completion of the churning, the cards are transferred to water of 175-190° Fahr., where they are left for at least ten minutes to melt the butter and 'cook the buttermilk into a curd.' The oil will now be seen mixed all through the mass. The test tubes are then re-tempered to churning temperature and churned again, by which process the curd is broken into fine particles, which, when the butter is re-melted, will settle to the bottom. The butter is melted after the second churning by placing the tubes in water at 150-175° F., allowing them to remain therein for at least twenty minutes. Some samples may be churned three or four times after a good separation of oil is obtained. A clear separation of oil is often facilitated by adding a little sulphuric acid to the tubes.

The length of the column of liquid butter fat is determined by means of a special rule for measuring the butter oil. This shows the number of pounds and tenths of a pound of butter which an inch of cream will make; the first tenth of a pound on the rule is divided into five equal parts, so that measurements may be made to two-hundredths of a pound. The melted fat is measured with the rule by raising the tin card holding the bottles to about the height of the eye. The reading is recorded on the driver's tablet under 'test per inch,' opposite the number of the particular patron. The test per inch multiplied by the inches and tenths of an inch of cream supplied will give the butter yield in pounds with which the patron will be credited on the books of the creamery."

GRAVEL FOR CEMENT.

I have decided to build a cement concrete silo? 1. Is limestone gravel suitable for this kind of silo? 2. If not, what other kind of gravel would you recommend? 3. Would you recommend broken sandstone and sand for concrete before limestone gravel? B. W. J. Lanark Co., Ont.

Ans.—The best material for mixing with cement to make concrete is good, clean, sharp gravel, containing plenty of pebbles or small stones. We have seen streaks of soft, pulverized sandstone of a rotten texture and containing traces of mica, that we would not consider suitable for cement concrete. If suitable gravel is not available, but you have good sharp sand, less cement will be required and a stronger wall made by mixing in plenty of cobble or broken stones, some of them quite large in size, so long as they are kept well in from the face of the wall, through which they should not protrude.

SERIOUS FATALITY WITH HENS.

I have had trouble with my hens dying, losing sometimes four and five a day; have lost about twenty-five. Symptoms: They sit around for a day or two as if paralyzed and others die on the roost. They eat at night and are dead in the morning. The hens are very fat and heavy. Those opened show no signs of disease that I can see; all have had feed in their crops. Most of them had a kind of diarrhoea—yellow and green droppings. All sick ones have been removed from flock and some killed. Have not been able to save any sick ones. The roosts were disinfected with lime and carbolic acid. Hens have the run of the fields and are well fed on wheat and mixed chop. I used "Pan-ac-ea." I also put a little carbolic acid in their drinking water and a little copperas in another drinking place. Would like to know disease and cure? Neighbors were losing before mine were infected. **POULTRYMAN.**
Norfolk Co., Ont.

The yellowish droppings with the greenish mixture are strong indications of cholera or severe dysentery. Your subscriber has certainly done right in removing from the flock all sick birds. Lime and carbolic acid are good disinfectants. I should advise the free use, especially under the roosts, of air-slaked lime, to which has been added about a pint of crude carbolic to a bushel of lime. The Panacea has in some cases given good results in checking diarrhoea. In trying to treat any of these diseases, it is well to remember that we have first to remove the cause. Where fowls are allowed to drink freely from barnyard cesspools and such places, it is very difficult indeed to prevent this diarrhoea. The cesspool apparently acts as a hotbed for the germs of the disease. If at all possible, do away with the cesspool or else remove the hens to new quarters. If you cannot manage it in any other way, it might be advisable and profitable to build a small open colony house, and put the fowls out in a pasture field or some such place, where they cannot get near this water. I have had some reports of success in treating this disease from parties who have been using steepings from white-oak bark. This is given to drink in not too strong form, also mixed with the soft food and given to the fowls in that way. It is desirable, if at all possible, for the party having the sick fowls to send some of them to the bacteriological laboratory here, in order that we may examine them. We are anxious to get as many birds that are affected with disease as possible, in order that the disease and causes of the diseases may be thoroughly investigated.

W. R. GRAHAM.

Poultry Dept., O. A. C.

PROTECTION FROM MUSTARD.

A farmer in this district has a patch of wild mustard, and his neighbors are anxious to protect themselves from this pest. What can be done to prevent it from spreading to other farms?
Huron Co. **SUBSCRIBER.**

Ans.—If the farmers on adjoining lots be careful neither to sow seed grown on nor accept the threshing machine directly from the infected farm, there is but little danger of encroachment by this weed. But if the Act to Prevent the Spread of Noxious Weeds (R. S. O., Chap. 279) has by municipal by-law been extended to your township, it is the duty of the farmer to cut down or destroy such weeds so often each and every year as is sufficient to prevent the ripening of their seed, provided that such cutting or destruction does not involve the destruction of the growing grain.

BOUNDARY LINE AND LANE.

There is a company lane, two rods wide, between my neighbor and me. This lane runs about two-thirds of the entire length of the lot, but there is no fence between us at the rear end. One rod of this lane belongs to me and the other to him, but has been used by the occupants of both farms for over twenty years. I want my neighbor to build half of the fence on the line, and I would build the rest, but he doesn't seem willing to do it. Would I be justified in building my share on the line, and then take away my fence opposite to his half, which is one rod on me? **A. B. S.**
Wellington Co., Ont.

Ans.—Judging, as we must, from your statement of case alone, we would say that you are probably entitled, in point of law, to do what you propose. It is possible, however, that if the documentary titles to the two farms were looked at, it might be found that the two rods had been mutually provided for the purposes of a permanent way. Its usage for upwards of twenty years, as described, would go to indicate that there was such an arrangement. Assuming that such was the case, you certainly would not be justified in disturbing the premises as suggested.

TANNING WOODCHUCK SKINS.

Please give me a recipe for tanning woodchuck skins for whips and strings, and one for tanning with the fur on?
Lanark Co., Ont. **JAMES MATTHEWS.**

Ans.—See this year's issue of "Farmer's Advocate," January 15th, page 51, and March 15th, page 220, which will answer your questions quite fully.

COLT RUBBING MANE—PLOWING SOD FOR SPRING WHEAT—LIVE-FOR-EVER.

1. Bought a colt last spring with his mane badly rubbed out. Could I do anything to stop him from rubbing it now?

2. Have a piece of timothy sod on which I would like to put spring wheat. Would it be better to plow as soon as hay is off and then plow again in the fall, or would it be better just to plow once in the fall? 3. Have a weed they call "live-forever." Is there any way of killing it? If so, how would you go about it?
Lanark Co. **JOHN W. ELLIOTT.**

Ans.—1. If the rubbing be merely a habit, it will be difficult to stop, unless the animal be tied for some time in a stable. If due to itchiness caused by a skin disease, treat the mane as for mange. See "Farmer's Advocate," July 1st, page 492.

2. The treatment which the sod should receive this fall in preparing for spring wheat will vary, depending upon the freeness of the field from weeds, the texture of the soil, and the toughness of the sod. If the land is free from noxious weeds and apt to turn up quite mellow, plowing late in the fall would do very well. This course would allow the field to be pastured for a much longer time than if plowed early. In no case would it be necessary to turn twice with the ordinary plow. Where it is desired to destroy weeds or germinate weed seeds, and also place the soil in the very best condition for crop the following spring, it is better to plow about five inches deep, roll it once to hold moisture and hasten decay; then follow with cultivator lengthways, and later, when the sod has rotted somewhat, cross cultivation may begin. An occasional stirring of the surface will be sufficient until late fall, when the double-mouldboard plow, or cultivator with ribber attachment, should be used to "rib up." This will expose a large surface to the action of sun and frost and hasten drainage the following spring.

3. We have not known live-forever to withstand good cultivation. If the infested field be in grass, plow up, cultivate and have the sod well rotted for either a hoed crop or a thick covering of rape next year. Careful treatment in this way should wipe the intruder completely out.

NIGHT-FLOWERING CATCHFLY—THICK IN WIND.

1. Will you please inform me, through your next issue, the name of the weed which I send you to-day? I have found some in my timothy hay these two years. It seems to thrive best on low ground. Where did it first originate? How is the best way to get rid of it?

2. What is the best treatment for a horse that is getting thick in the wind? I have taken the "Farmer's Advocate" for a number of years and would not be satisfied to do without it.
Kent Co., Ont. **W. J. C.**

Ans.—1. The weed received is night-flowering catchfly (*Silene noctiflora*), the exact origin of which is unknown. It has been prevalent in certain districts of Ontario for many years, but is by no means one of our worst weeds. It can be wiped out of any farm by sowing only clean seed and by adopting a system of shallow cultivation which will include considerable tillage after harvest. In this way the seeds will be germinated, and, being an annual, it does not reproduce from the root the second season.

2. Horses suffering from unsoundness of wind should not receive large quantities of bulky food. Neither should the fodder contain any dust or be in any way of a musty character. One tablespoonful of oil of tar, if given in the feed three or four times a week, will greatly aid respiration. Animals so affected should not be subjected to violent exercise for at least one hour after feeding or watering.

COWS FAIL TO COME IN HEAT—RAPE FOR FALL PASTURE.

1. I would like to know why my cows do not come in heat? They are young and in fair condition. One calved in August last, and have not noticed her in heat yet. They have good pasture, plenty of well water, and salt about once a week. 2. Also, do you think I could get good results from sowing rape in the latter part of July, broadcast, on alsike-clover sod on light land?
York Co., Ont. **F. W. G.**

Ans.—1. Cows that are suckling calves sometimes fail to come in heat for many months. Cows that are being milked, if in good condition, usually come in season within two or three months after calving. The only suggestion we can offer, with a view of hastening the desired end, is to feed a meal ration once or twice a day or to dry the cow.

2. Yes, if land is rolled and harrowed immediately after plowing, to retain moisture, and the season is fairly favorable to growth.

"CREAMERY" BUTTER.

Can you give me the Chap. and sections of Act you quoted as prohibiting the use of the word "creamery" by farmers on dairy butter, in an issue of the "Advocate," of, I think, either March 1st or 15th, 1902?
Vanneck, Ont.

Ans.—55-56 Vic., Chap. 29, sections 443, 446, 448 and 450, particularly. (Dominion Statutes.)

VETCH, SOW THISTLE AND DOGBANE.

Will you give me information concerning the enclosed weeds? Please give name and best manner to clean the land of them? Weeds Nos. 1 and 2 are spreading over a whole field, No. 3 is only a small patch. Would rape be a good crop to destroy them with?
Huron Co., Ont. **A FARMER'S SON.**

Ans.—Weed No. 1 is vetch (*Vicia sativa*); No. 2, sow thistle (*Sonchus oleraceus*), and No. 3 a species of dogbane. The first two are more difficult to eradicate than the latter. Plow infested fields to a depth of three or four inches soon after harvest, and continue cultivation at regular intervals until the period of growth has ceased. The following season follow, if possible, with a hoed crop. Rape may be used to advantage either when sown in drills and cultivated or when sown broadcast thickly enough to smother slower-growing plants. The adoption of a short rotation of crops affords splendid opportunities for the destruction of troublesome weeds. Dogbane is allied to common milkweed in nature and habit, and, although less difficult to eradicate, will require similar treatment.

IMPORTATION OF MANURES.

Is the importation of manure from the stockyards of Buffalo into Canada prohibited by law? If so, it would be a great boon to the farmers, especially of the Niagara Peninsula, if the restriction could be removed. I notice that the most progressive farmers of York State are railing this manure great distances—in one case that I know of, 70 miles—and surely if any danger was to be apprehended from this practice these people would not continue to incur the risk. Give us free trade in manure at least.
H. D.
Lincoln Co., Ont.

Ans.—Animal and vegetable manures are free of duty, under tariff item 520. There is no restriction on the importation, so far as we are aware, except the certificate in respect of hog manure, referred to in Memo. 880 B, still in force, and which provides "that declarations shall be filed with Collectors of Customs on the entry of imported animal manures, to the effect that such animal manure contains no hog manure; such declarations to be made and signed by the importers in all cases, and also by the railway agent at the port of export, where the importation is by railway, and by the driver of the vehicle, when imported by land otherwise than by railway carriage. This, we presume, is as a safeguard against hog cholera.

PLANTING STRAWBERRIES.

Will strawberry plants planted in the fall, say in September, bear the following summer? What soil is considered the most adaptable; and could you give me the name and address of some Ontario dealer who has plants for sale now?
York Co., Ont. **H. S. STAYNER.**

Ans.—See short article on strawberries in Orchard and Garden department of this issue. If planted in September, a small crop might be expected the next season. We are not sure that any dealer has plants for sale just now. Address R. Crysler, St. George, Ont., or any of the leading seedsmen of Toronto, some of whom might supply you with potted plants.

DRAINING A CELLAR.

I cannot drain my house cellar by tile or drilled well. I have the floor well laid with gravel and cement, 6 inches thick, but the water will soak in. Is there anything that will keep the water out?
Wentworth Co., Ont. **A. BUSH.**

Ans.—Where cement is properly laid, water cannot get through in any quantity; moisture, however, may collect on the inside. A good wall is as necessary in preventing water to enter a cellar as a well-laid floor. If your wall is also of cement and the connection between it and the floor well made, give both walls and floor a good coat of cement wash. Apply in the same manner as ordinary whitewash, only use cement instead of lime.

DRAGON'S HEAD.

Enclosed find a weed which is growing very thickly in some of my grain and also in my neighbor's. Please state if it will do any harm if allowed to spread, and also what I shall do to kill it if it should?
Prince Edward Co., Ont. **SUBSCRIBER.**

Ans.—The weed is known as dragon's head. It is not likely to spread to any extent nor give much trouble in cultivated fields. Land that has not been seeded to clover or grass should receive shallow cultivation after harvest, to cause the germination of the weed seeds in the ground.

CEMENT FLOORS BEST.

Will some readers of the "Farmer's Advocate" give something from their experience with cement stable floors for horses and cattle—i. e., as to their healthfulness and general suitability?

Argenteuil, P. Q. **R. HAMILTON.**
Ans.—This subject has been so frequently dealt with in correspondence and otherwise, that there can be little room for doubt in anyone's mind as to the superiority of cement floors over any other sort, both from a sanitary and economical standpoint.

TAPPING A DRAIN.

I am troubled to get water for my cattle, and noticed some time ago (say two or three years) a plan of taking water from a large crock drain. Kindly put me on proper track to use the water and not stop the usefulness of the drain?

Essex Co., Ont.

J. D. C.

Ans.—In one case we remember, water was brought from a drain (about 25 rods) to cistern in barn, which can be done if fall is sufficient. Unless drain is fed by spring and runs constantly, it is an uncertain water supply. In the case in question, the usefulness of the drain was not interfered with. It was a four-inch tile drain, and the branch to the cistern was a three-inch tile. The whole stream would not be diverted to the well or cistern unless the tile below the junction were stopped up entirely. In that case the cistern, if cemented, might need an overflow pipe.

CEMENT TANK.

1. How will cement do for a water tank that remains outside, exposed to the weather? Will the frost damage it? 2. I have a wooden tank that leaks. How would it answer to give it a coat of cement inside?

York Co., Ont.

F. W. JACKES.

Ans.—1. We understand that such tanks are in use and give good satisfaction. Properly constructed and not too small, there is no good reason why the frost should injure or burst them. What has been the experience of some of our readers with such tanks?

2. A doubtful remedy. Would not pitch be better?

REGISTRATION OF JERSEYS.

Could you give me the name and address of the secretary of the A. J. C. C.; also cost of registry in said book?

Huron Co., Ont.

S. J. P.

Ans.—J. J. Hemingway, 8 W. 17th St., New York. To non-members, \$2 each head, male or female; to members, \$1. All animals over two years old, double fee. For registration of dead animals necessary to complete the registration, \$1. Imported animals, \$10. Transfers are recorded free, if presented within 90 days of date of delivery; after 90 days, \$1 each. Blank forms for registry and transfer are supplied free.

MARKETS.

Every reader is invited to write something for this department that other farmers ought to know. Do it while you think of it. Put it on a post card if you haven't time to put it in a letter.

FARM GOSSIP.

The Western Fair.

Ontario's popular Western Fair, held annually at London, has done much in the past to advance the best interests of agriculture. To its stimulating influence much of the agricultural prosperity of the surrounding country at the present time can be traced. Many of our most progressive farmers gleaned from it that knowledge which has helped them to rise high in their chosen profession, and many more, intensely alive to the needs of improvement along agricultural lines, may, we hope, avail themselves of the grand opportunities which the fair of the present year, Sept. 12th to 20th, will provide.

This year, as customary, new features will be added, worthy of imitation and desirable in every sense, to its already large list of useful attractions, and, perhaps, outstanding among these may be mentioned the home dairy buttermaking competition under the able direction of Miss Bella Miller, formerly lady instructor in dairying at the Strathroy Dairy School. Each competitor in this class will be required to give four demonstrations, the work to cover three days, thus making the test thorough. The trials will be on Tuesday afternoon, Wednesday morning and afternoon, and Thursday afternoon. Arrangements have been made for the seating of the audience so that as large a number as possible may avail themselves of the educational advantages of this competition. The prizes offered are: first, \$30; second, \$20; third, \$15, and fourth, \$8.

In addition to the customary large prize list for horses and other live stock, an extra special for the draft-horse class has been provided, again showing the progressiveness of the managers.

The ladies' work department will be moved upstairs, thereby increasing the space for the large and tasteful collection of the soul-inspiring gems of art. The additional grant of prize money for this department will, no doubt, call forth a greater number of exhibits from the best Canadian artists. In all, \$565.00 is offered in art prizes. In one section the first prize is \$100.00 and the second \$25.00. The judge appointed for this department is Prof. A. H. Griffin, Detroit.

The secretary, Mr. J. C. Nelles, London, Ont., will be pleased to supply all desired information, including prize lists, etc. We might mention that he is now distributing some 10,000 copies of the celebrated Western Fair railway map of Western Ontario, show-

ing the country as far east as Oshawa and as far north as Georgian Bay. It gives a complete list of places, arranged alphabetically, those on a railway being (*) starred.

Ottawa Notes.

GOOD ROADS IN LANARK.

The Lanark County Council has decided to establish a county system of model roads. A by-law to that effect was passed at the June session of the Council. The county will raise the sum of \$65,000 by debentures, which, with the Government grant of \$32,000, it is thought, will be sufficient to buy out all the toll roads in the county, and to construct enough additional model roads to provide for a fairly complete county system. The council refused to vote the grant of \$50 asked for by the Canadian Live Stock Association as the county's share of the \$500 required to ensure the holding of a big fat stock and dairy show at Ottawa next winter for Eastern Ontario. The County of Russell also refused the grant, but Mr. W. C. Edwards, M.P. for the county, has consented to give \$100 as the county's share.

ABOUT POTATO EXHIBITS.

Most agricultural associations provide a set of prizes for potatoes, field roots and grain. In the section for potatoes, prizes are given, in most cases, for separate varieties. This arrangement tends to encourage exhibitors to grow those varieties that the managing committee saw fit to put on the list—a very proper method, provided that the committee look well into the question of varieties and admit only those that are best suited to the district or county where the exhibition is held. But many of the best varieties do not come to stay. Some of them become "run out" within a year after they have become sufficiently well known in a district to deserve a place on the prize list, and on this account it is not always advisable to stipulate the name of varieties. Again, it is quite well known that there are many more names for potatoes than there are varieties. It is much easier for "would-be" seedsmen to invent new names for an old sort than to breed up a new variety. They must have something new to offer each year. To be able to discriminate between varieties of the same type is another problem with which judges are asked to cope when prizes are offered for named varieties. Potato-growers know that there are few judges such "rare birds" as to be able to distinguish Early Rose potatoes from many other varieties of the "Rose type," or the Empire State variety from others of the "Long White type." It might be added, too, that the conscience of potato exhibitors would need to be rather sensitive if they did not take advantage of the judge's inability to "guess right." Potatoes are, practically, all grown for the same purpose. All the varieties can be grouped into several quite distinct and recognized types, which really form the basis of classification for commercial purposes. Why, then, would it not be better to offer a less number but much larger premiums and encourage the introduction and growing of any variety, allowing varieties of the same type to compete one against another? This classification of potatoes has already been adopted by quite a number of agricultural associations, and seems to be meeting with a great deal of approval among potato-growers.

SHEAF AS WELL AS GRAIN.

At the approaching Ottawa Fair, in the section for seed grain, provision has been made so that each half bushel of seed will be accompanied with a small sheaf, showing the full length of straw with heads of grain. It is always difficult to judge the real merits of seed or of a variety from the grain alone. A good sample of grain may often be prepared from a crop which has been taken from a field that would not yield more than five bushels to the acre. The size of the heads of grain and the nature and quality of the straw will be considered in awarding the prizes.

CHICKEN FATTENING.

Mr. F. C. Hare, of the Department of Agriculture, is preparing a bulletin of the rearing, fattening and marketing of chickens. Mr. Hare, after visiting the poultry fattening station at Homesville, Ont., reports the work progressing favorably. He states that farmers who have reared chickens up to two or three pounds of weight at this time of the year will find it to their advantage to place them in the fattening crates recommended by the Department, for three or four weeks before they are placed on the market. Satisfactory results can be obtained in fattening chickens by taking a packing box about twenty inches high and sixteen inches wide and removing the bottom and one side of the box, and by placing laths lengthwise on the bottom of the box, 1 1/2 inches apart. It should also have laths placed up and down the front of the box, two inches apart. The boards on the top of the box should be loosened so that the chickens can be removed from it. Mr. Hare states that the chickens should be fed a thin mash of principally ground oats and sour skim milk. They do not receive any exercise and they will gain rapidly in the crates. Mr. Hare is of the opinion that there will be a good demand for dead fatted chickens this fall, and that prices will be higher than they were last fall. A large firm in Montreal has written to the Department, making enquiries for a large consignment.

P. E. Island.

The weather still keeps cool, and the crops are backward. The month of June was the coldest in many years, and so far in July we have had very little heat. The hay crop will not be more than half of last year's. There is no clover in it and it is thin. Oats are doing pretty well, except on very low lands. Wheat is not doing as well as we could wish, on account of the wet and cold. Potatoes have missed in some few cases, but the bulk of the crop looks well. The root crop is doing fairly well, but a little more heat would help it materially. Grazing is not as good as usual, as the pastures are thin on account of the white clover being all killed out last winter.

The supply of milk at the dairy stations is not nearly so large as at this time last year, and it looks as though our output of dairy produce will fall considerably below last year's figures.

Harvest will be later than usual by, perhaps, ten days or two weeks. June cheese are selling at about 9 1/2c., and creamery butter at 20c. There are very few beef cattle offering, as there is no grass beef yet, and stall-fed cattle are scarce. A good many cattle and sheep of rather poor quality are being shipped from King's County to St. Pierre, Miquelon, and some to Sydney.

Prof. Dear, of the O. A. C., Guelph, and D. Drummond, of the permanent Institute staff, Ottawa, are delivering agricultural addresses on the Island. The former, in the western part, is accompanied by Mr. Vroon, fruit specialist, and the latter, in the eastern section, is accompanied by Walter Simpson, a local man. The meetings are being very well attended, and the addresses are listened to with great interest. The lectures on live stock are illustrated by living specimens before the speaker and audience. Our farmers are gradually waking up to the necessity of better stock and better cultivation.

A company has been incorporated here for the manufacture of starch from wheat. A factory will be built this summer, ready for operation next winter, with a capacity of between two and three thousand bushels of wheat per month.

The apple crop continues very promising, but plums and cherries will be scarce.

W. S.

July 7th, 1902.

Crop Outlook, Drainage, and the Dog Nuisance, in N. B.

Hay on lands well cared for and not fall pastured promises well, on land of the opposite sort the crop will be decidedly short. Island and intervale land very good, although much of such land has been under water later than common and has suffered in consequence.

Grain on lands well drained will be good, but as a large proportion of our land is wet and heavy, less grain than usual was sown, and much of it late, owing to the excessive rainfall from May 24th to July 3rd, and such late seeding can hardly be expected to give satisfactory returns. Mangel seed, beans, corn, parsnips, and many other seeds, with potatoes, on heavy land have rotted badly. Small fruits came through in fairly good condition, blossoming and setting fruit in good average shape. Here, again, thorough drainage makes the difference between a fair crop and a poor one. Apples bloomed full and, apparently, set well, but have dropped more than common. Insect pests are not in such force as usual.

More general purpose stock is needed for the average farmer. The Ayrshires would have many friends but for their extremely short teats. Where time is money this defect of the breed counts heavily against them. The Shorthorn seems to come nearest to what is needed here. An increase of sheep husbandry is much needed; but owing to lack of united effort on the part of those most interested, the dog nuisance still exists. We have good laws to restrain all live stock but the dog, the most utterly useless of all live animals in the Province. They increase and multiply, and in a half-starved state are a menace to more than sheep, owing to the very old and very bad custom of giving the dog more than his fair share of freedom. If any other animal was introduced into the bounds of civilization, given the same freedom, and had done the same harm and as little good, they would be under complete control in every respect in less than two years.

Poultry and egg production both promise well. Fruit-growing, in suitable localities, pays as well as anything. The labor problem makes dairying difficult. The various governments are giving us good help with experimental stations, and the Institute system is also very helpful. If the Provincial Government will only tie up the dog we will do the rest.

York Co., N. B.

J. C. GILMAN.

Burdock Killing and the Moon.

In the "Farmer's Advocate" of June 15th, I notice a few lines from Mr. John B. Stone re killing burdocks. Mr. Stone is quite right in his method of cutting the burdock, but in error as to time. If a burdock's root is hollow in the full moon in June it will not become solid in the dark of the moon intervening between that time and the full moon of the succeeding month and then become hollow again, but will remain hollow after once becoming so. Burdocks cut as he describes will be killed at any time from the time they start to grow in the spring.

W. A. GRANT.

Satisfactory Cement Silo.

I notice a great deal of discussion in the agricultural press about concrete silos. Last year I built a square silo of Queenston cement. It may be that my experience may be of some benefit to my fellow farmers, and I know of no better medium for the farmers giving data to each other than through the "Farmer's Advocate." My silo is square, 12 x 12 ft. inside, 24 ft. high (corners being cut off), walls 14 ins. thick at bottom and 10 ins. at top. The cost was as follows:

Cement for walls, floor and plastering, 50 bbls.,	\$10.00
Lumber for plank and roof.....	15.00
40 yards gravel and 20 yards stone.....	10.00
Total.....	\$35.00

Mr. Usher personally gave us instructions, and we did all the work ourselves. The ensilage has kept perfectly in every part of the silo and I did not have a handful of waste. During the past seven months I have fed ten head of beef cattle, besides some sheep and hogs, and still have a few feet of silage left. About three years ago I built cement walls and floors under my barn, and they are absolutely perfect in every particular. Floors are as hard as granite. I hope I am not taking up too much space in your valuable paper, but as I enjoy reading the correspondence from the farmers I thought a letter from me might be valuable to others. R. H. WOODRUFF.

Lincoln Co., Ont.

Ontario County.

At time of writing, July 7th, the wet weather continues, but vastly different are its effects on vegetation during the few recent warm days than when for a cold fortnight in June some of the farm crops at least were practically at a standstill. The crops, however, though late, are generally looking healthy, and prospects for the winter grains never looked brighter, although there is some talk of the grain not filling properly. Peas and barley are also good, but not extensively grown. Oats and corn were most affected by continued cold weather, and the oat crop will be short. The green streaks in the cornfields are now, however, rapidly approaching each other and the fear of a permanent "set-back" is no longer warranted. The root crop generally may be described as average, with mangels particularly good. Fruit prospects are good, and here, as elsewhere, the tent-caterpillar is a scarcity. In our own trees, at least, we have not seen a single web.

Betrayed by occasional promises made by a few hours' sunshine, some, with very undesirable results, have commenced haying. The meadow crops are, however, late and not suffering yet for want of cutting. The hay crop will probably be short of the average. Impoverished pasture lands, that in other years are drying up at this time, are still quite fresh—an advantage to the improvident man, as the soiling crop will not be much needed to span the time between early pastures and later feeding grounds provided by haying and harvesting operations. Stock of all kinds is looking well. J. W. W.

South Peel.

Poor progress has been made with the hay on account of the wet weather, but the "second growth" will be heavy.

Many mangolds were destroyed by the fly. Some patches were sowed the second time and they are now making rapid progress, as are also the potatoes and turnips. Near the lake the strawberries were a large crop and pickers scarce.

There are no cheese or butter factories in the northern end of this county, although there were a few some years ago. Some of the dairymen make butter and sell it in Toronto, where they always find a ready market; others ship milk, and others cream, which pays better than either of the other ways, leaving the skim milk for raising young stock.

Many barns are being erected this summer. The raising is done principally by the derrick, which was so well described in the "Farmer's Advocate" by a Halton contributor, which is a much safer and cheaper way than raising them with men. J. B. ROSS.

Statute Labor Going Out.

No less than 73 townships in Ontario have commuted and abolished the statute labor system, with a view to securing better roads by a more skilled supervision. About half of these made the change within the last year, as shown by the annual report, just issued, of the Commissioner of Highways, Mr. A. W. Campbell. The report records a marked advance in public sentiment in favor of better roads, and shows that the movement for improvement has attained quite large proportions in the Province.

Backward Maritime Weather.

Miss Laura Rose, of the Guelph (O. A. C.) Dairy School, who has gone on a travelling dairy tour for the Nova Scotia Government, finds the weather similar to what she left in Ontario, and the crops more backward than a year ago, owing to the cold, wet spring.

"Pan-American Debt."

The United States Senate has agreed to appropriate \$500,000 towards the deficit of the Pan-American Exhibition, and \$45,000 towards the expenses connected with the attendance on the late President McKinley.

Importing Canadian Products.

The following table, compiled from Canadian Government reports, shows the quantity and value of a few products imported into Canada from the United States during the ten months ending April, 1902. These imports are those affecting mainly gardeners and fruit-growers. Canada has a competitive free list of about \$39,000,000 worth of farm products coming from the U. S., and a long list of manufactures under moderate tariff.

Potatoes—65,092 bush., valued at.....	\$ 71,102
Tomatoes—9,281 bush., valued at.....	23,567
Peaches—3,545,223 lbs., valued at.....	91,142
Plums—32,052 bush., valued at.....	38,665
Grapes—575,609 lbs., valued at.....	36,600
Green apples—20,529 bbls., valued at.....	79,373
Dried apples—70,152 lbs., valued at.....	4,528
Eggs—638,334 doz., valued at.....	142,166
Total.....	\$487,143

Remedy for Lice on Cattle.

In reply to the enquiry by J. E. J., of Cardwell Co., regarding lice on cattle, I may say that a mixture of coal oil and lard will do the work, but if too much coal oil is used in the mixture the hair will be taken off. "An ounce of prevention," however, "is worth a pound of cure." Keep a mixture of salt and ashes in a box or trough in the yard where the cattle can have access to it and the cattle will not be troubled with lice. W. H. KIPP.

Norfolk Co., Ont.

Exhibition Dates.

CANADA.		
Winnipeg, Man.....	July 21 to July 25	
Brandon, Man.....	" 29 to Aug. 1	
Ottawa.....	Aug. 22 to " 30	
Kingston.....	" 25 to " 29	
Morrisburg.....	" 27 to " 29	
Sherbrooke, Que.....	" 30 to Sept. 6	
St. John, N. B.....	" 30 to " 6	
Toronto.....	Sept. 1 to " 13	
Peterboro.....	" 9 to " 11	
Halifax, N. S.....	" 10 to " 18	
London.....	" 12 to " 20	
Wellesley.....	" 16 and " 17	
Napanee.....	" 16 and " 17	
Metcalfe.....	" 16 and " 17	
Guelph.....	" 16 to " 18	
Owen Sound.....	" 16 to " 18	
Hamilton.....	" 16 to " 18	
Stayner.....	" 17 and " 18	
Orillia.....	" 18 to " 20	
Drumbo.....	" 22 to " 24	
Richmond.....	" 23 and " 24	
Cayuga.....	" 23 and " 24	
Paisley.....	" 23 and " 24	
Prescott.....	" 23 to " 25	
Aylmer.....	" 23 to " 25	
Newmarket.....	" 23 to " 25	
Collingwood.....	" 23 to " 26	
Charlottetown, P. E. I.....	" 23 to " 26	
Merrickville.....	" 24 and " 25	
Strathroy.....	" 24 to " 26	
Paris.....	" 25 and " 26	
Milverton.....	" 25 and " 26	
Woodstock.....	" 25 and " 26	
Lindsay.....	" 25 to " 27	
Tilsonburg.....	" 30 to Oct. 1	
Beachburg.....	Oct. 2 and " 3	
Otterville.....	" 3 and " 4	
Rockton.....	" 7 and " 8	
Blyth.....	" 7 and " 8	
Caledonia.....	" 9 and " 10	
Simcoe.....	" 14 to " 16	
Woodbridge.....	" 15 and " 16	
Ontario Winter Fair, Guelph.....	Dec. 8 to Dec. 12	

UNITED STATES.

Missouri—Sedalia, Mo.....	Aug. 18 to Aug. 23
Iowa—Des Moines.....	" 22 to " 30
N. Y. State Fair—Syracuse.....	" 25 to " 30
Ohio—Columbus.....	Sept. 1 to Sept. 5
Minnesota—Hamline.....	" 1 to " 12
South Dakota—Yankton.....	" 3 to " 12
Wisconsin—Milwaukee.....	" 8 to " 13
Indiana—Indianapolis.....	" 15 to " 19
Michigan State—Pontiac.....	" 22 to " 26
Illinois State—Springfield.....	" 29 to Oct. 4
St. Louis Fair, St. Louis, Mo.....	Oct. 6 to " 11
Kansas City.....	" 20 to " 25
International—Chicago.....	Dec. 1 to Dec. 6

Buffalo Markets.

East Buffalo, N. Y., July 14.—Cattle—Prime steers, \$7.25 to \$7.75; choice 1,200 to 1,300 pound steers, \$6.75 to \$7; fair to good, \$6 to \$6.25; choice heifers, \$6 to \$6.25; best fat cows, \$5 to \$5.80; fair to good, \$4.25 to \$4.75; export bulls, \$5 to \$5.35; fresh cows and springers, good to extra, \$50 to \$60; fair to good, \$35 to \$45; common, \$18 to \$20; feeders, \$4.25 to \$4.50; stockers, \$3.50 to \$4.25; stockers' heifers, \$3.50 to \$3.75. Veals steady; tops, \$6.75 to \$7; fair so good, \$6 to \$6.50; common to light, \$5 to \$5.75. Hogs—Heavy, \$8.05 to \$8.25; mixed, \$7.90 to \$8; Yorkers, \$7.75 to \$7.85; light Yorkers, \$7.70 to \$7.75. Sheep and Lambs—Lambs, \$6.50 to \$6.75; fair to good, \$5.75 to \$6.25; culls to common, \$4.50 to \$5.50; yearlings, \$4.50 to \$5.25; wethers, \$4.25 to \$4.50; sheep, tops mixed, \$3.85 to \$4; fair to good, \$3.50 to \$3.75; culls to common, \$2.25 to \$3.25; ewes, \$3.50 to \$3.75.

Montreal Markets.

Montreal, July 14.—Good cattle scarce, and sold at 5½c. to 6c.; medium beasts, 3½c. to 4½c., and common stock, from 2½c. to 3½c. per lb.; calves, \$2 to \$6 each; shippers paid 3½c. per lb. for good large sheep, and the butchers paid 3c. to 3½c. per lb. for the others. Lambs sold for \$2.50 to a little over \$4 each. Very few fat hogs offered; prices nominally from 6½c. to 6¾c. per lb., weighed off car.

Toronto Markets.

Receipts of live stock at the cattle markets during the past two weeks have been large, 6,543 cattle, 4,894 hogs, 7,455 sheep and lambs, with 514 calves. The quality of fat cattle generally has not been good, the bulk of the deliveries, especially in the butchers' class, having been marketed before they were ready. Trade has not been as brisk during the past week, only the best, well-finished butchers' and exporters' finding a ready market, and even for these prices have been easier.

Export Cattle.—Choice loads of export cattle are worth \$6.25 to \$6.75 per cwt.; medium exporters, \$5.65 to \$6.00.

Export Bulls.—Choice heavy export bulls sold at \$5.50 to \$5.75, and medium light bulls at \$5.00 to \$5.40.

Export Cows.—Export cows sold at \$4.00 to \$4.50 per cwt.

Butchers' Cattle.—Choice picked lots of butchers' heifers and steers, 925 to 1,025 lbs. each, sold at \$5.00 to \$5.35; loads of good butchers' at \$4.50 to \$5.00; loads of medium butchers' at \$4.40 to \$4.75, and common butchers' cows sold as low as \$2.75 to \$3.00.

Messrs. Wilson, Murby & Maybee, commission salesmen, report: "We do not think there has ever been such a wide divergence in prices between the good and bad cattle. For instance, we sold some exporters at 6½ and some common cattle at 2½ cents."

Feeders and Stockers.—In sympathy with the unfinished butchers' cattle, prices for feeders and stockers are lower; steers, weighing from 950 to 1,000 lbs. each, sold at \$4.25 to \$4.75. Stockers, weighing 400 to 600 lbs. each, sold at \$3.00 to \$3.25; steers, 700 to 800 lbs. each, sold at \$3.50 to \$3.75; off-colors are worth about \$2.50 to \$2.75.

Milch Cows.—The demand for milch cows has not been as good and prices are easier, selling from \$25 for inferior to \$37 for medium and \$45 for good. Something choice would bring \$50.

Veal Calves.—Prices for veal calves have taken a drop, the bulk selling during the past week at \$4.00 to \$4.50 per cwt.

Sheep.—Export sheep sold at \$3.40 to \$3.50 per cwt. for ewes; hucks at \$2.50 to \$2.75 per cwt. Cull sheep sold at \$2.00 to \$3.00 each.

Hogs.—Prices for hogs have advanced 25c. per cwt., selling at \$7.25 for selects per cwt., and \$7.00 for thick fats and lights.

Joseph Gould bought 300 exporters, 1,300 lbs. each, the bulk of which were shipped to him direct, and were not for sale on this market, at \$6.25 to \$6.75 per cwt.

	Extreme comparative prices to-day, July 12th.	Two weeks ago.	Same date last year.
Export cattle.....	\$ 6.75	\$ 7.00	\$ 5.15
Butchers' cattle.....	5.00	5.75	4.75
Export bulls.....	5.75	6.00	4.25
Feeders.....	4.75	5.00	4.25
Stockers.....	3.75	4.00	3.75
Sheep (per cwt.).....	3.50	4.00	3.40
Lambs (each).....	3.75	4.00	4.00
Hogs.....	7.25	6.87½	7.25
Milch cows.....	50.00	55.00	50.00

GRAIN AND PRODUCE.

Deliveries of farm produce were light to-day (Saturday).

Oats.—Three hundred bushels sold at 50c.

Hay.—Six loads sold at \$11.00 to \$13.50 per ton.

Potatoes.—Prices easier, three loads of new sold at 60c. to 75c. per bushel from farmers' wagons.

Butter.—Prices easy at 16c. to 20c. per lb., the latter price being for choice lots of dairy from farmers to special customers. The bulk of the butter sold at 18c. per lb. from farmers' baskets.

Eggs.—Strictly new-laid eggs retailed from farmers' baskets, sold at 18c. to 20c. per doz. Case lots at 16c.

Poultry.—Deliveries large, with prices easy, as follows: Spring chickens, 60c. to 90c. per pair; spring ducks, 50c. to \$1.00 per pair; turkeys, 10c. to 12c. per lb.

Chicago Markets.

Chicago, July 14.—Cattle—Good to prime steers, \$7.75 to \$8.70; poor to medium, \$4.75 to \$7.60; stockers and feeders, \$2.50 to \$5.25; bulls, \$2.50 to \$5.50; calves, \$2.50 to \$6.50. Hogs.—Mixed and butchers', \$7.25 to \$8; good to choice, heavy, \$7.75 to \$8.10; rough heavy, \$7.25 to \$7.60; light, \$6.90 to \$7.70; bulk of sales at \$7.60 to \$7.95. Sheep.—Good to choice wethers, \$3.50 to \$4.25; fair to choice, mixed, \$2.50 to \$3.25; western sheep, \$2.50 to \$3.50; native lambs, \$2.50 to \$6.65.

Manitoba Prospects.

As we go to press advices from the editors of our Manitoba and Western Edition indicate the crop prospects are magnificent for all classes of grain, and live stock is doing well.

British Cattle Markets.

London, July 14.—United States cattle, 7½d.; sheep, 6d.; Canadian cattle, 7½d.; sheep, 5½d. to 6d.

Liverpool, July 14.—Canadian cattle, 7½d.; sheep, 5½d.



"There is no frigate like a Book
To take us leagues away;
Nor any coursers like a page
Of prancing Poetry."

"God Save Our King."

The whole British nation stands, as it were, in dumb bewilderment these days. Instead of the joy-bells which were to have "made the welkin ring," there is a silence, and instead of the rejoicing shouts of the gathered multitude from all the ends of the earth, there goes up the cry which, whether in joy or sorrow, is, and ever has been, a prayer, "God Save our King!"

"What I do, thou knowest not now, but thou shalt know hereafter"—and with that assurance we must strive to still the aching of our anxious hearts, for without grasping the meaning of these, to us, inexplicable dealings, we do know that behind them lies some mighty purpose which needed this trial of faith, this suffering of a King, this sorrow and suspense of a loyal people, to bring it to a perfect fulfilment.

One of the uses of suffering is the sympathy it brings. Not only are the hearts of the King's loyal subjects stirred to their very depths, but from other lands and from other peoples, kindly expressions come to us, telling that as they rejoiced with us over the glad advent of peace, so now they sorrow with us in our time of stress and anxiety. In a Boston paper, issued on what was to have been Coronation day, the writer says: "The world deeply sympathizes with England's stricken King. It has been his lot to fill the gap left by his lamented father. He has had to be the throne's representative in unnumbered functions, grave and gay. Imprisoned in the vise of princely propriety, he has been obliged to subject his health to the inevitable dangers that must come of innumerable exposures. The result is that he neared the throne broken down in health, but as striking a sacrifice for his country's honor as though he had died in the field of battle."

"Only the most thoughtless will ascribe the King's long round of strained living to natural choice. He offers an example of vicarious sacrifice for the glory of England, and is an object of true sympathy for all the world."

"No man in his senses can but feel deep sympathy for the King. It is certainly a case where a peasant might pity a potentate."

And then it adds what must surely be most true: "But perhaps the women of the world will most pity Queen Alexandra, whose beautiful face has so often adorned the public prints of late. She will suffer affliction more keenly than all the rest."

There will not be a wife or a mother in the whole Dominion of Canada whose heart to-day will not be beating in unison with that Royal wife, and whose prayers will not go up with hers, that the life so dear to her and so her children, and so essential to the British nation, may yet be spared for years to come. H. A. B.

Agreeable Conversation.

The essentials of agreeable conversation are an alert mind, a well-filled memory, kindly sympathy and a joyful heart. If one does not possess these qualifications, they can be cultivated. It is just as easy to ask, with friendly feeling, after a neighbor's welfare, as it is to grumble about the weather or complain of poor health, and after a little practice, it will seem just as natural.

It is just as easy, as we go through the day's duties, to notice with awakened mind the freshness of a morning scene, the perfume of a flower, the pleasant tone of a voice, a bit of a song, the gold of an evening sky, or the kindness of a human heart, as it is to pass on, stupidly inattentive to all this goodness and beauty which follow us every hour. These impressions of pleasant things, if they be pure and fine, add to the riches of a man's memory and give him something to talk about. It is also these little everyday happenings which go to make up our happiness; and to possess happiness, to be full of good-cheer, is always to be charming in conversation.

Conversation is an exchange of ideas; let us give the best we have. When you meet a friend for a moment, don't hasten to tell him all the bad news in the neighborhood, but if you happen to know of anything that is honest, just, pure, lovely, or of good report, if you know anything that is virtuous or to be praised,

speaking of those things. By so doing you will reveal your own loveliness and strength of character. "His talk impressed me," said an observant man on meeting a stranger, "as being the revelation of an honest, straightforward, true-hearted man."

A few simple rules worth following are these:
Don't talk too much.
Don't talk too fast.
Don't pitch your voice high and shrill.
The man who would prevail with his words must modulate his voice with gentleness and courtesy.
Talk health, cheer, happiness. The world does not like melancholy confidences.

Never bring the excruciating details of disease into your conversation, or, worse still, drag in the filth of scandal, unless you wish your friends to avoid you as they would a plague.

In good society, there is a tacit understanding that conversation shall be an entertainment, bringing in the refreshments, the delight, the joy of life to the soul of man—that it shall be in every sense a recreation.

A young girl, on being asked what was her idea of agreeable conversation, replied after a moment's thought: "To say things to other people, you like to have them say to you." Does it give you a thrill of pleasure to hear a kindly greeting, a word of praise, a piece of great good news—these same things will be sure to please other people, for everybody is very much like everybody else.—Frances Bennett Callaway.

The Red River Settlement.

SOME REMINISCENCES OF FIFTY YEARS AGO.

How those yellow old papers bring back the memory of old familiar faces—most of them never to be seen again on earth, but whose lives have, more or less, left fruitful records behind them. Amongst the foremost comes the kindly, earnest, benevolent face of the first Bishop of Rupert's Land, Dr. Anderson, whose diocese might be said to have had no bounds, for it certainly could have claimed the whole northerly part of the continent of British North America, from the confines of the United States, covering at least two million square miles, some of it within the arctic zone. I remember thinking of Bishop Anderson as a kind of Robinson Crusoe amongst bishops, not only on account of his isolation, but because he seemed to be equally endowed with the faculty of making the best of things as they were and as they were not. He had such a handful of clergy, too, to help him, the exceptional few only, going forth into the wilds to carry their message. But how could they go unless they were sent, and how could their chief pastor send them forth without some practical plan for a provision for themselves and their flock? It was but pioneer work, but without pioneer work such as fell to the lot of those early settlers, both clerical and lay, the development of the Northwest Provinces, and the dioceses and missions of the big Northwest, would assuredly have been much longer delayed. Bishop Anderson was primarily a Christian pastor, then a scholar, and believing in education as a most needed factor in all progress, he at once set to work to obtain for the young people of the settlement, for the sons and daughters of his clergy, and those of the officers of the Hudson's Bay Co., some larger measure of scholastic training than had ever been possible before. In this he, too, builded upon others' foundation—a fact he recognized and was very grateful for. Some day, an old pupil of those earlier days still, may tell the story of the first school established, I believe, by Mr. Macallum, as far back as the forties.

Dr. Anderson filled almost every office, from principal to usher, in the St. John's College of that day, and his sister, who was the guardian angel of the Bishop himself, of his own three bright sons, and by looking after their creature comforts and smoothing over a thousand and one little difficulties, the guardian angel also of the pupils, the boys of St. John's and the girls of the sister school, St. Cross, a field's distance off. The writer can see clearly with her mind's eye—but probably less clearly from having seen her from time to time since—Miss Anderson crossing that field to the large outside storeroom built on the river's bank, followed by John Omond, the Bishop's farmer and factotum, or by his wife, who acted as cook and housekeeper for the boys; and she can see those naughty lads peeping through the chinks to find out what they were going to have for dinner, and passing on the bits of information to their comrades outside. Once it was, when an evil spirit of mischief possessed them, that they set up a derisive cry, the ringleader darting into the willows, hoping not to be caught: "Oh yes, give Mr. Thomas the shoulder, and give the boys the shanks and the neck!" They had never stopped to learn that the two latter were to make them some good wholesome soup, and that the "shoulder" was to be placed before Mr. Thomas to carve for them. I wonder if amongst the older folks of the Winnipeg of to-day there are any who were amongst that mischievous crowd? One thought brings back another as my pen runs over the page, and this little episode recalls the great

difficulty it must always have been, especially in the spring of the year, to provide meat of any kind for those hungry young folks, both of St. John's and St. Cross. If it is the early bird which catches the worm, it certainly was those earliest at the gate of the settler who happened to have a calf to spare who got that calf, and often it was but such a little, little calf! Still, worth having for the replenishment of a nearly empty winter storeroom. I have a mental vision of our own more especial storeroom now, as I write. Out of doors, of course, just opposite the old clay oven where our bread was baked and which had for its picturesque background a grove of thickly-grown trees. Directly Jack Frost began to reign, that big storeroom had to be packed and lined with food, which must last until spring. A whole poultry-yard had given up of its kind as its contribution to the winter's supply, and birds lean and birds fat, birds tender and birds tough, hung suspended from the rafters, pigs stood in rows like a regiment slain by one fell blow—each with its horrible long gaping wound, which it was always a comfort to know was given after instead of before it uttered its last despairing grunt; and where there were no pigs, there were sheep—long, scraggy, and seldom of a weight to win a prize at any cattle show (had Red River ever known of such a thing), for what farmer would care to fatten any "critter" for which there was no direct market, and which, anyway, would just have to be killed when winter came round, as it would not pay for its keep? In the center of the floor was a big square flap, which could be lifted by a large iron ring. This led to the under cellar, upon the piled blocks of ice of which reposed, in the repose which knows no waking, hundreds of frozen fish and other smaller four-legged and two-legged creatures, which before the six or seven months were over would have vanished as if they had never been. The ice was put into the "hold" of our storeroom because it would be a boon indeed during the intermediate season, not because those poor dead things required anything to freeze them more stiff and stark than they were when the laden "sleds" brought them into their last long home in our storeroom. Beef was the only meat which was, so to speak, "drawn and quartered," I suppose because the whole animal could not have been persuaded to enter the door and behave itself decorously by standing upon even two or three of its legs, as the other beasties did.

I could laugh now, in spite of my sixty-odd years, at the comical attitudes which those dead animals assumed as they stiffened into the position from which nought could move them, until after hours of gradual thawing in a somewhat higher temperature, and finally of repose behind the kitchen stove, they gave up the struggle, and by swift blows of the hatchet, followed by the masterful stroke of a sharp-bladed knife, they ceased to be either pig or sheep, but became pork or mutton for the students' table. There was one sheep which one winter had a curious fascination for me whenever I went, half awe-struck, half inquisitively, into that, to us, forbidden storeroom. It looked so comically like the man who once had owned it. Its right front foot was raised, with much the same stern air of rebuke which made the youngsters run from its still living master; it looked as if it would have shaken its reproachful head, as he so often did; but, alas! it would never shake it more; in fact, it looked as if it had died having the last word, anyway. One crisp winter's day, a wave of resistless fun swept over me, though I knew its penalty if caught. The owner of that sheep was expected. We had no such thing as door-bells in those days, and I knew that she who was on the watch to respond to the first thump upon the storm door was sure to be prompt in answering the summons. I caught that lean, lank, reproachful-looking sheep in my arms, dragged it over the snow to that door, propped it up against the panels and hid around the corner to watch it fall prone into the arms of the disgusted handmaiden. I will let the curtain drop upon the tableau; but, indeed, in a place where nothing ever happened, even that "game" was worth the candle.

My readers, please forgive all this digression. I began with a bishop, and have ended with a dead sheep. Moreover, if I am to continue my little records from time to time, you will have to make the best of me and my memories. I cannot promise to be less erratic in the next issue than I have been in this, for a remembered face suggests a remembered incident, and out of an incident grow many remembered faces, and so it may be that to those who only know the Winnipeg of to-day, with its electric cars and its telephone wires, with its parks and its markets, and its public buildings, with its many churches, its opera houses, and its hotels, these old-time trivialities will be but dull reading. But there may be some old friend or comrade still living—left, as I am, with little but the old memories of the long ago we spent together—who may take the "Farmer's Advocate," and for old sake's sake may read with interest and share in the retrospects scribbled from time to time in its pages by—

H. A. B.

THE QUIET HOUR.

Forward, March!

"In hastening on, o'er rough and smooth,
You may be apt sometimes to stumble,
For only he who stands stock-still
Is certain to avoid a tumble.

"In forming plans and doing deeds,
You'll often make mistakes, of course,
For only he who never strives
Will never meet opposing force.

"Better to lose a dozen fights,
And yet march on courageously,
Than halt, a coward, on the field,
And fail to live, through fear to die."

The command given to the Israelites, as they began their march to the Promised Land, is also a command to us: "The Lord said unto Moses, Wherefore criest thou unto Me? Speak unto the children of Israel, that they go forward." Go Forward! Are we obeying that command? When soldiers hear the order, "Quick, march!" they don't stand in one place and mark time; taking steps, but making no real progress. Yet that is what Christian soldiers too often seem to be doing. What were we like a year or two ago? Is our character any stronger and holier to-day? It is a solemn question for each of us, and one that it is wise to ask occasionally, as a merchant takes stock of his goods once or twice a year. How terrible it would be if the judgment pronounced against the Laodiceans should also be pronounced against us: "I know thy works, that thou art neither cold nor hot: I would thou were either cold or hot. So then because thou art lukewarm, and neither cold nor hot, I will spue thee out of My mouth." Are we seeking first the kingdom of God, and making the pursuit of holiness the grand object of our lives; or are we "merely playing at religion, or having religion on us as a bit of veneer?"

One thing that is very important in running our Christian race, is to aim rightly. If a man is only trying to be religious in order to get to heaven, he will probably be quite satisfied with himself and his progress. Comparing himself with his neighbors—or, rather, with what he imagines his neighbors to be—instead of with the perfect Man, he will be very apt to rest on his oars when he has reached a fair standard of worldly respectability. But we should never be satisfied with ourselves. Our business is to press toward the mark, not to pay a small premium—in the shape of good works—as a wise investment in the way of insurance for a future life. Even in worldly matters, as Kingsley says, we should not be perpetually thinking, "Will it pay me?" instead of "Is it right?" Trying to get most money for the least work. In spiritual matters it is far worse. If we think only that selfish and worldly thought, "How much will God take for saving my soul?"—which is the secret thought of too many—then we shall be in a fair way of killing our souls; so that if they be saved, they will not, at all events, be saved alive. For we shall kill in our souls just those instincts of purity, justice, generosity, unselfishness and unworldliness which make the very life of the soul.

Our aim should not be only the selfish one of saving our own souls, for our orders are to aim as high as possible: "Be ye therefore perfect, even as your Father which is in heaven is perfect." Growth is one great proof of life; without growth, how can we be sure that we have any spiritual life at all? But growth is often very slow; we certainly can't reach perfection all at once. The rule is always the same: "First the blade, then the ear, then the full corn in the ear." Life always comes from God. He keeps that secret in His own hands. Men are clever enough to make a great many things, but all the human wisdom in the world can never make the finest insect, or even a plant, that is alive and can grow. This being so, we must come to God for fuller life, instead of trying to clip our souls into shape from the outside. It is beginning at the wrong end to try to make the actions right, if the thoughts and desires are left without control. That is like tying fruit on a tree, fruit which is not the product of its own life and does not show of what sort it is—does not belong to it, in fact. Christ has declared Himself to be The Life, and says that He will give life to all who come to Him. As He said so sadly long ago, still He says to many to-day, "Ye will not come to Me, that ye might have life." The great and infinite God is ready to touch each one of us with the closest union and personal contact, if we will only yield our lives honestly to Him. He has a special message for each soul, "which no man knoweth saving he that receiveth it." Without Him we can do nothing, but we can "do all things" when drawing every moment's power from Him whose strength is made perfect in our weakness.

"Let each man think himself an act of God,
His mind a thought, his life a breath of God
And let each try, by great thoughts and great deeds,
To show the most of Heaven he hath in him."

This life of ours is a grand trust lent to us by God. The idle question, "Is life worth living?"

can never be asked by one who realizes that life means opportunity. We can't afford to waste to-day, for it will never be ours to use again, and to-morrow, when it arrives, will still be to-day—full of possibilities.

"There lies no desert in the land of life—"

Even the bits which seem most dreary and desert-like, are capable of yielding a rich harvest if carefully cultivated. Are we making the most of our own particular corner in God's great vineyard, or are we wasting valuable time in looking over the fence at other spots which are not given to us to cultivate? Perhaps our task is a difficult one, and we are very apt to grumble if companions are not congenial, and if everything is not made smooth and easy for us. But let us remember that difficulties and temptations are intended to help instead of to hinder us. If they are overcome they are like rounds of a ladder on which we may mount daily higher and nearer to our God.

"Difficulties are God's errands;
Ever keep this fact in view:
Proof of trust, and how he honors,
Giving us such tasks to do.
Let us flinch not, moving onward,
With a heart both brave and true."

"Ah! the soul will gain momentum,
Like the avalanche of snow,
From the obstacles that threaten
To impede its course, we know;
Difficulties met and mastered
Give us strength as on we go."

HOPE.

When Woods are Green.

Pleasant it is when woods are green
And winds are soft and low,
To lie amid some sylvan scene,
Where the long drooping boughs between
Shadows dark and sunlight sheen
Alternate come and go.

The green trees whisper low and mild,
It is the sound of joy!
They were my playmates when a child,
And rocked me in their arms so wild.
Still they looked at me and smiled
As if I were a boy

—Longfellow.

A Chapter on Vegetables.

Potatoes come from far Virginia;
Parsley was sent us from Sardinia;
French beans, now growing on the earth,
To distant India trace their birth;
But scarlet runners, gay and tall,
That climb upon your garden wall—
A cheerful sight to all around—
In South America were found.

The onion traveled here from Spain;
The leek from Switzerland we gain,
Garlic from Sicily obtain;
Spinach in far Syria grows;
Two hundred years ago or more
Brazil the artichoke sent o'er,
And Southern Europe's sea-coast shore
Beet root on us bestows.

When Elizabeth was reigning here,
Peas came from Holland, and were dear.
The South of Europe lays its claim
To beans, but some from Egypt came
The radishes, both thin and stout,
Natives of China are, no doubt;
But turnips, carrots, and sea kale,
With celery, so crisp and pale,
Are products of our own fair land,
And cabbages, a goodly tribe,
Which abler pens might well describe,
Are also ours, I understand.

—London Young Folks' Rural.

A Song of Summer Time.

By the whetting of sickles and whirring of crickets,
By the drumming of bees and humming birds' thrum,
Loudest piping of quail in the hazel-fringed thickets,
Pleasures of pleasures, the summer is come!

O my heart, dost thou heed all the beckoning splendor,
Safely sweeping in surges from valley to hill,
Changing green over green in lights soft and tender,
O'er spreading the meadow and binding the rill?

There are robins and swallows above bending daisies,
Low twittering linnets and fluttering leaves!
There are crimsoning peaches and waxing corn mazes,
Gold turning grain over shy squirrel thieves.

Knowest shallows and shadows beneath bending willows,
And sun-cushioned reaches where butterflies swing?
Where is rapture unmeasured and falling in billows,
O my heart! For the summer time sing, O sing!

—Mary H. Coates.

Before green apples blush,
Before green nuts embrown,
Why, one day in the country,
Is worth a month in town.

—Christina G. Rossetti.

How Little it Costs!

How little it costs if we give it thought,
To make happy some heart each day!
Just one kind word or tender smile,
As we go on our daily way;
Perchance a look will suffice to clear
The gloom from a neighbor's face,
And the press of a hand in sympathy
A sorrowful tear efface.

One walks in sunlight; another goes
All weary in the shade;
One treads a path that is fair and smooth,
Another must pay for aid.
It costs so little; I wonder why
We give it so little thought;
A smile—kind words—a glance—a touch!
What magic with them is wrought.

Piazza versus Parlor.

If you cannot have both, by all means have the former. You may say, "Why, if I had a piazza, I should never have time to sit there."

Very likely that is true—now—but if you had a piazza, the right kind, you would find time.

How much time do you have to sit in your carefully-kept parlor—and what is the measure of your enjoyment when you spend a few enforced moments there?

You take pride in your pretty parlor furnishings, and you are very careful that the sun has no chance to fade the carpet, and you laboriously and conscientiously hunt for the destructive moth, in dark corners; you sweep and brush, arranging and rearranging the furniture, putting the little stand in the corner, and dragging the easy-chair where it looks a bit more inviting.

When you have finished renovating the parlor, do you put on your prettiest gown, after brushing your hair until it shines and pinning a rose behind your ear, do you sit down to the organ and play one of the "old songs" as you go back in thought to girlhood days? Do you bring your dainty work-basket, from which you draw a daintier bit of work, and sit down where the sun's rays turn to gold the brown waves of your shining hair? Not a bit of it!

When you get through cleaning that room, you are glad enough to come out and shut the door, after carefully drawing down the shades, thankful that it is in order once more. You do up your hair in the quickest way and slip on a clean apron, wondering what you can get for supper, and if you can get it ready before hungry John and the children come home.

The rose behind the ear, the old song, etc., make nice filling for pretty stories, but in real life we too often find a weary soul in a wearier body, too tired to care for flowers, songs or sunlight, not realizing that contact with nature's beauties is the panacea of all others for the worn spirit and overtaxed body.

In many cases there is neither time nor means for a change for the mother. She cannot go to the mountains or seashore. There is no way, seemingly, for her to get away from her tasks, even for a day or two, and just here is where the piazza makes its claim of superiority to any parlor. Just think of the work that can be done on the former, which one would never think of taking into the latter. The homely and necessary tasks of peeling potatoes and shelling peas lose much of their monotony when performed behind the sweet swaying vines. These tasks are done almost before one realizes it, because one is out of doors! No four walls to confine your vision. Sunlight and blue sky encompass you instead. The song of the teakettle is exchanged for the music of out-of-doors, for the cheery lay of a bird and the soothing drone of the bee.

This outdoor parlor is only a mockery without vines and flowers, an inhospitable place without furnishings. These latter need not be luxurious nor costly. Hall—yes, quarter—the money spent in furnishing the conventional parlor, put into piazza furnishings, would make the latter a perfect rest-cure. It would be such a loadstone, that try as you might, you would be drawn to it and held there.

The first thing to consider is where to have this piazza. If you cannot have it all around the house, then a southern exposure is best, for the flowers and vines must have sunshine.

The woodbine is a quick-growing, strong vine, and interspersed with a few honeysuckles makes a beautiful, fragrant shade. Then there must be comfortable rockers and other chairs, a hammock, and plenty of pillows and cushions clothed in bright, washable covers; nothing must be too good to use.

Take my word for it, if you had such a piazza as this, you certainly would find time to spend upon it—time to work, time to read, and most precious boon of all, time to think.

Yes, I know how much you have to do, I know how tired you are—and that is why I want you to have a piazza instead of a parlor.—[Mary Sargent Hopkins.

Current literature reports the sayings of children, who often in their innocence give specimens of delightful humor:

One cold day Tom, in his first trousers, was walking out with his tiny overcoat turned back to its utmost limit. "Tom," said his father, "button your coat." The boy demurred. "Look at mine," added his father. "Yes," said Tom, ruefully, "but everybody knows you wear trousers."

Ingle Nook Chats.

My dear Guests,—

"Every black must have its white,
And every sweet its sour."

So sings someone whose name I cannot at present recall, but the verse has been brought to my mind by the reception of an irate note from a very irate boy, who tried one of our recent competitions, failed to win, and therefore accuses The Hostess of unfairness in awarding the prizes. As this is the very first taste of "sour" that has found its way into the cup of sweetness proffered by my Guests, I have no cause to complain. Had the imputation any foundation, I should feel it keenly. As it is, I only regret that the person in question has not borne his defeat more bravely, remembering that though

"Glorious it is to wear the crown
Of a deserved and pure success;
He who knows how to fail, has won
A crown whose lustre is not less."

It is strange the different effects similar causes produce in different people. The brave make defeat a stepping-stone to some greater victory; the pusillanimous allow themselves to be weighed down by trifles and make no further effort.

There are contributors to these contests who have tried and failed almost half-a-dozen times, yet they cheerily return for still another attempt. Those persons will eventually win (not through "favor"—all are strangers to me), because each effort leaves them stronger than before. This persistent effort is, moreover, excellent discipline and an aid in the formation of firm character, and will unconsciously leave its trace thereupon, for it is an evident fact that our every action, word, and even thought, is being built into this important life-work.

"For the structure that we raise,
Time is with materials filled;
Our to-days and yesterdays
Are the blocks with which we build."

Another competitor writes: "... We defeated ones may at least do justice to those who have won. . . . Perhaps the failures may succeed next time—Bruce and the spider," you know." This is the true Canadian spirit, and nil desperandum is an excellent motto. I used to see The Khan poems, but have not read any lately. I should like to have the one you mention. I dare not ask for space to publish the poem you ask for, as already we are obliged to condense matters very much. To what do you refer, re the "Mc" to your name? Is it to this old rhyme:

"By Mac and O you'll surely know
True Irishmen, they say;
For if they lack both O and Mac,
No Irishmen are they."

I always thought "Mc" was as much Scotch as Irish.

Indeed, "Baby," the fact of your having had a birthday recently does not excuse you from paying respects to the Nook. It is, instead, a promotion to a higher rank and to win in future will be a greater honor. Don't you be foolish enough to give up horse-back riding (or reasonably short skirts, either) for ever so long yet. Do not be in a hurry to bid adieu to "the glad, wild ways of your schoolgirl days"—the necessity for doing so comes always soon enough, even when longest deferred. Keep your heart and spirits young, and your face will follow their example.

"Marie," you are a 'brick' (dear me! I hope I shall not be reproved for indulging in slang; it is so expressive sometimes), and some day you will walk hand-in-hand with success. Too bad your berries failed. I see you find some consolation still; that's the best way—always look for the silver lining. Do you not love pansies? Their sweet velvety faces are almost human in expression. Mine are not as good as usual thus far. You are at liberty to change your pen-name if you wish.

OUR COMPETITION.

The result of Contest XX. will appear next issue; some of the Provinces have failed to send any representative, which is too bad.

Contest XXI. will excite more general interest, and I hope for a large attendance. Quotation No. 10 should read, "The least flower, etc.," instead of "last," as printed in July 1st issue.

Where are the two hundred and twelve Guests who tried the animal contest last winter? Everybody welcome, young and old; no disgrace to fail; try, try again.
THE HOSTESS.
Ingle Nook Chats, Pakenham, Ont.

Humorous.

Professor Wilson, of Edinburgh University, was, some years ago, appointed Honorary Physician to the Queen. On the morning of his appointment he informed his pupils of the honor he had received by means of a blackboard in the laboratory, thus: "Professor Wilson informs his pupils that he has this day been appointed Honorary Physician to the Queen." During his temporary absence from the room, one of the students added the words: "God save the Queen."

THE CHILDREN'S CORNER.

"Twentieth Century Chickens."

A QUESTION.

"Why, chickies, where is your mother?
You poor little shivering things,
What can the old hen be doing?
You ought to be under her wings."

THE ANSWER.

"Oh, what do you mean by a mother?
No mother at all have we;
We were hatched in an incubator,
Chickens up-to-date are we.

"We've a box that is called a 'brooder,'
But no wings that are warm and soft,
Under which we can run and nestle,
Like those common chicks in the loft.

"For mothers are quite old-fashioned,
Not needed at all to-day
To scratch for a pure-bred 'broiler,'
Though the eggs they still must lay."
COUSIN DOROTHY.

Between Ourselves.

The descriptions of the picture called "Perfect Bliss" are coming in rather slowly, but I hope you will all make an attempt at it before the end of July. I suppose you have heard the saying, "Take care of the pence, and the pounds will take care of themselves." It doesn't mean only that we should be careful not to waste small sums of money. It is possible to be very careful with money and very extravagant in other ways. Your life is the most valuable possession you have—and life is made up of minutes. As it takes a great many coppers to make a thousand dollars, so it takes a great many minutes to make an ordinary life; but as you spend your minutes,

mothers could dress in silk and velvet and drive about in grand carriages, having no work to do. Reuben's mother was a poor widow, and he used to lie in bed on cold mornings, dreaming of the fine things he would do for her some day. It was pleasant to think how kind he would be, and he would draw the bedclothes over his head so that he could not hear his feeble old mother lighting the kitchen fire, pumping water, and even sometimes digging a path through the snow to the henhouse. One day he picked up a story called "The Hero."

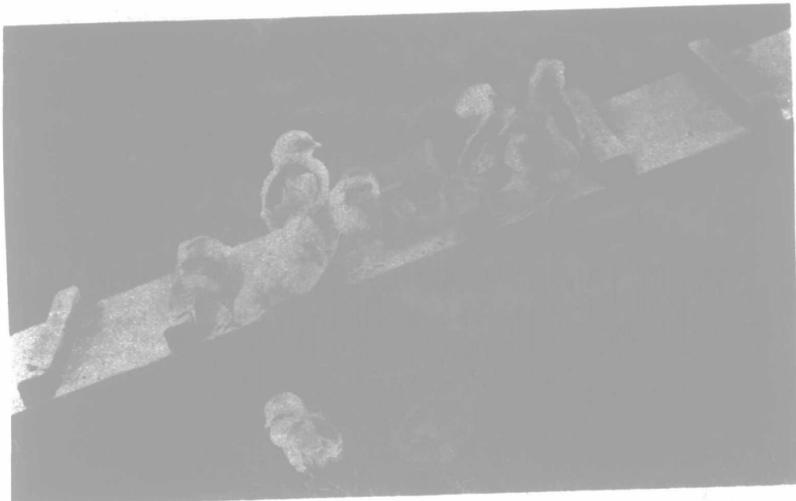
"Hello!" he exclaimed. "What is this about? I mean to be a hero."

The story was about a village which was entirely destroyed by fire. One poor man was in great distress. His neighbors had lost their homes and cattle; but he was nearly frantic, for not only were his house and cows gone, but his son was also missing. All night he wandered about the ruins, and just at daylight he was overjoyed to see his herd of cows return, followed by his son, who, when he saw the fire, had driven them away out of danger. When told that he was a hero, the boy exclaimed, "Oh, no; a hero is one who does something wonderful. I only took the cows away because I knew it was the right thing to do."

"Yes," said the father, "and he who does the right thing at the right time is a hero."

Reuben thought the matter over very seriously, and came to the conclusion that he already had the chance to be that kind of a hero. He also decided that he had better go to work at once, as heroes can't be made in a day.

The greatest heroes are generally most thoughtful in doing little kindnesses. One of the heroes of the British navy in the time of the Crimea was Capt. Peel. He distinguished himself by many daring deeds of gallantry, such as picking up a shell which had fallen near some boxes of powder, and throwing it over the earthworks before it exploded. Once, in 1851, he was crossing a desert when he saw a little bird lying



"TWENTIETH CENTURY CHICKENS."

so your life will be. If you make a habit of wasting minutes, some day you will find that your life has slipped through your hands and is wasted too. Then, some people are very free with their promises, and think they are brave and good because they intend to do great things some day. But our lives are made up of realities, not of dreams; the things we do, not the things we intend to do.

"If I had a heap of yellow corn
And fields of waving wheat,
I'd quickly send a cargo where
They've not enough to eat.
I'd load a ship myself alone
With grain of every kind,
And make my harvest offering
The best that I could find.
Or if I had just money, why,
That, too, would do much good,
For it should go to India
To buy the children food."
'Twas little Rob who said these words,
So generous and bold.
What he would do when he was rich,
He very often told.
But, O, this same dear little boy,
When he had dimes to spend,
Bought something for himself alone—
Had none to give or lend.
But truly now, if Rob expects
To be a generous man,
He'd better practise when he's small
By giving what he can.

I once heard of a boy called Reuben, who made up his mind to be a hero. He was always reading stories about boys who had done wonderful things, such as going into strange countries and returning with heaps of money, so that their

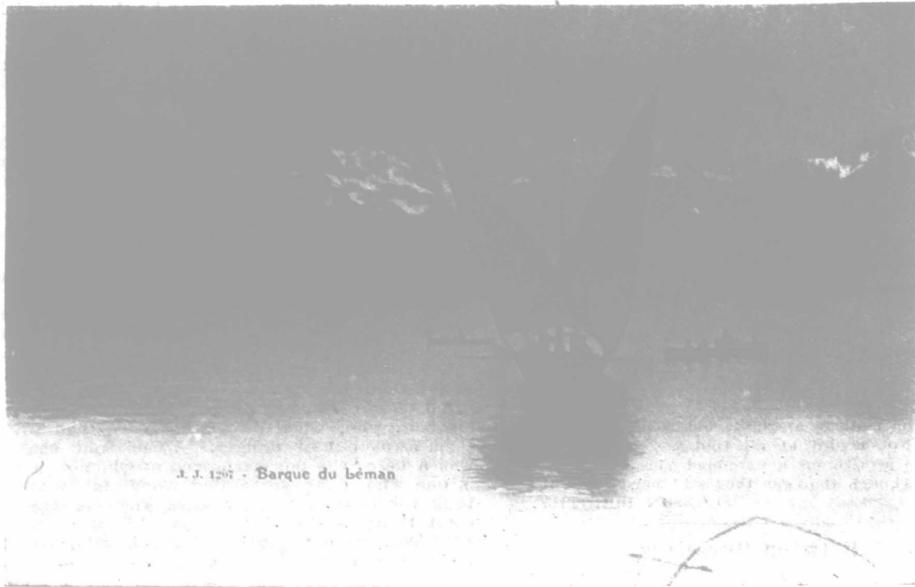
on the sand, dying of thirst. Knowing that courage and gentleness go together in a true soldier, perhaps you will not be surprised to hear that he got off his camel and gave some of his store of water to save the life of that poor little creature.

Now, boys, you want to be heroes some day, I am very sure. Why shouldn't you be heroes to-day, and every day? If being a hero is simply doing the right thing at the right time, why NOW is the time to begin.

"Up with the early song-birds,
Fresh for the busy day,
Driving the cows to pasture,
Tossing the new-mown hay,
Feeding the ducks and chickens,
Riding the horse to the creek,
Hunting the eggs in the barnyard—
How many dozen a week?
Running of errands for mother,
Picking the early greens,
Hilling the corn and potatoes,
Shelling the peas and beans;
Going to school in the winter,
Learning to read and spell,
Working at home in the summer,
Gathering knowledge as well,
Growing to useful manhood,
Far from the busy town,
One of these country boys may yet
Be first in the world's renown."

COUSIN DOROTHY.

Mamma—"Why, Susie, you've offered your butter-scotch to everybody but little brother. Why didn't you hand it to him?" Susie (with innocent candor)—"Because, mamma, little brother always takes it."



J. J. 1257 - Barque du beman

LAKE LEMAN, SWITZERLAND.
Visited by "Mollie" in her travels.**Travelling Notes.**

Montreux, May 25th.

I have written this on Sunday afternoon, whilst the town and the streets are one whirl of excitement, for although the Swiss are a good people and keep Sunday better than the French, they have great license during this fete. They are a simple country lot, nicely dressed and respectable, and though here, and in France, wine—their own make, sour and poor—is the common drink, I never see an intoxicated person. I read in my guidebook that Switzerland is bounded on the north and east by Germany, on the south by Italy, and on the west by France. It is a republic formed of twenty-two cantons, and the population is composed of French, German, and Italian. The German language is spoken by the inhabitants in sixteen cantons, the French in four, and the Italian in two. Its greatest length from east to west is 200 miles, and its breadth, 156. Two-thirds of its surface consists of lofty mountain chains and valleys, the higher peaks being covered in perpetual snow. The two most important rivers are the Rhine and the Rhone. In its towering mountains and vast glaciers, its beautiful lakes and smiling valleys, its numberless Alpine streams and glittering cascades, Switzerland combines various features of grand and striking scenery. This is how Lord Byron describes it:

"Above me are the Alps,
The palaces of Nature, whose vast walls
Have pinnacled in clouds their snowy scalps,
And throned Eternity in icy halls
Of cold sublimity where forms and falls
The avalanche—the thunderbolt of snow!
All that expands the spirit yet appals,
Gather around these summits, as to show
How earth may pierce to Heaven, yet leave vain
man below."

So far we have only been into French Switzerland, going from place to place on Lac Lemman, better known to us as the Lake of Geneva. It has rained more than half the time, but they tell us it has been an unusually rainy May. It seems odd that no matter where one goes, if it is too hot or too cold, or too windy or too rainy, it is always the same story—"an unusual season, its like never before heard of!" Why this should happen just when we go to these places is unanswerable. In this case we can forgive the weather, for there have been so many nice things, which quite overbalance the disagreeables. The people are all most kind and friendly, no matter what nationality, and we have been a mixed party at some of the pensions, viz., Swiss, French, Germans, Italians, Russians, Greeks, English, and Canadians. The French language has prevailed, but nearly all speak English a little, fortunately for me, as I know but little French, and less German.

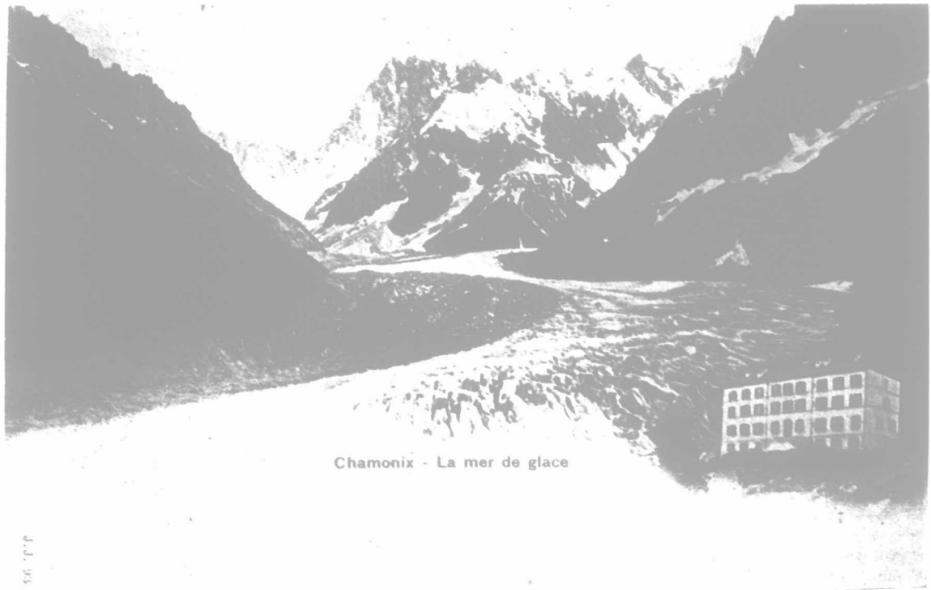
Montreux is a charming Swiss village, at the head of Lake Geneva, renowned not only for its beautiful scenery, but also for its healthy situation.

We are fortunate to be here this week, for Montreux is all in holiday attire, its streets are one mass of flags, Chinese lanterns, and flowers, the attraction being the annual "Fete de Nar-

cissus," and Battle of Flowers. Bands are playing, and hundreds of young people and little children, dressed in most picturesque style, are taking part in marches and pretty dances and minuets and singing. At the close of the programme in the park, they all go through the streets in floral carriages and big vans, and then follows a battle of flowers, somewhat similar to that which we witnessed on the Riviera, only with this difference, that here flowers are not so plentiful, except the narcissus, which grows wild and is gathered by the bushel. Confetti is used as well as flowers, so every man, woman and child, as well as the streets, are completely covered with both.

The Swiss railroad has been to us an object of friendly amusement. We had only got used to the sound as of a boatswain's pipe, of the French conductors, often resembling the cry of the peacock, when here we find the train is started by a small Christmas-horn, blown sometimes by a woman! Sleeping berths are an expensive luxury on the Continent—they will ask you from five to fifteen dollars for a single berth, so it is not strange the native prefers to doze away the night bolt-upright, or to crouch into a corner of the carriage. For myself, I have long since learned to break the journey, and sleep at some hotel over night. As one travels through this part of Switzerland, the eye falls upon a world of vineyards. In other words, the vines clothe all the little levels and vast slopes of the mountain-sides as far up as the cold will let the grapes grow. There is literally almost no other cultivation, and it is a pretty sight.

On the top of the mountains are the chalets, with their kine and herds of goats. At a sharp turn in the road, the other day, a little goat-herd and his flock came full gallop upon me; the boy roughshod, with a pointed stick in his hand, and behind him a merry troop, tinkling their bells in as many tones as their rough coats were



Chamonix - La mer de glace

CHAMONIX - LA MER DE GLACE, SWISS ALPS.
Visited by "Mollie" in her travels.

many-colored. The elder ones jogged along, sedate and full-saddered, in the forefront, but the kids danced, nimble-footed, deliberately foolish and frolicsome, bounding and turning upon themselves in sheer silly caprice.

There are many delightful excursions to be made round Montreux, viz.: Clarens, of which Lord Byron wrote in Childe Harold's Pilgrimage:

"Clarens! by heavenly feet thy paths are trod,
Undying Love's who here ascends a throne
To which the steps are mountains
He who hath loved not, here would learn that lore
And make his heart a spirit; he who knows
That tender mystery, will love the more"

and Vevey, where the world-known Nestle Food is made, and celebrated chocolates. Chillon is a fine old Gothic castle on the border of the lake. It is stated that a great Swiss general drew up his Helvetian forces here and quietly awaited the approach of a powerful Roman army under the Consul Cassius, grandfather of Julius Caesar's wife, B. C. 107. After a long and terrible combat, the Roman army was completely routed.

The illustrious Emperor Charlemagne, 742-814, repaired and strengthened Chillon. Bonivard, soldier, poet and patriotic reformer, enemy of Charles III., Duke of Savoy, was chained here to a pillar for four years, by the order of the Duke, until released by the Berne army in 1536. Lord Byron has made it famous in his noble poem, the "Prisoner of Chillon":

"Chillon! Thy prison is a holy place
And thy sad floor an altar—for 'twas trod,
Until his very steps have left a trace
Worn, as if thy cold pavement were a sod,
By Bonivard!
There are seven pillars of Gothic mould,
In Chillon's dungeons deep and old
There are seven columns massy and gray,
Dim with a dull imprisoned ray.
Lake Lemman lies by Chillon's walls:
A thousand feet in depth below
Its massy waters meet and flow;
Thus much the fathom line was sent
From Chillon's snow-white battlement."

MOLLIE.

To Counteract Sunburn and Remove Tan.

If one fears to use drugs on the skin, it is pleasant to realize that few of them are more efficacious than simple remedies to be found at hand in all homes. Of these there is nothing better than fresh buttermilk for removing tan, freckles and sunburn. It has the great advantage that it does not injure the skin, but makes it soft, white and smooth. Take a soft cloth or sponge, and bathe the face, neck and arms thoroughly before retiring for the night; then wipe off the drops lightly. In the morning wash thoroughly, and wipe dry and rub the skin with a crash towel. Two or three such baths will take off the tan and summer freckles, and occasional applications of the buttermilk will keep the hands soft and smooth. If it is necessary to have the hands in dishwater or suds, rinse in buttermilk and dry with oatmeal or finely-ground cornmeal.

An old-fashioned cosmetic for tan and sunburn, which is agreeable to use, is the juice of crushed strawberries, or the milky juice from the stalks of flowering lettuce. It should be well but gently rubbed into the skin at night, and if persevered in for a week or more the change will be markedly for the better. Vegetable compositions are much better for the skin than other kinds, and will not make it flabby, as animal oils often do.

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JULY 21st to 25th, 1902.



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The largest and most prosperous retail dairy business in Canada is offered for sale, doing a cash business of about eighty-five thousand dollars a year; could easily be doubled; select trade only; established eleven years at Toronto. The equipment (including new cold-storage plant) is perfect and up-to-date. Owners retiring. Price, twenty thousand dollars, or would exchange for farm. Profits would pay for it in three years. Excellent system for operating the business. A magnificent investment. For all information, address Fred. R. Ginn, Toronto, Ont.

THE IOWA FEEDING TEST—As the time approaches for the final report of the Iowa College experiment with different supplementary foods, the International Stock Food Company wish it to be distinctly understood that at no period did they claim to be able to give as good results on stock handled by an Agricultural College as when fed by the average farmer. Although realizing they were at a disadvantage, they decided to stand by their guns, and when invited by Prof. Kennedy to join the test, 400 lbs. of stock food was supplied free of

cost. Whether the final test, therefore, shows International Stock Food to occupy a high or low place on the list, the proprietors write us that they are prepared to guarantee the best results only to the practical stockman, and that they are prepared to send out 200 lb. lots to farmers to feed for four months, and any one who is not satisfied with the results and will write them to that effect, they will credit his account in full and the use will not cost him a cent. It is sold, not as a food product, but on a strictly medicinal basis, and when fed in small doses is calculated to aid digestion and assimilation, purify the blood and strengthen the entire system.

GOSSIP.

Mr. Jas. Gibb, of Brooksdale, Ont., writes: "I have to report the following sales of Shorthorns: To W.D. Platt, Hamilton, Ont., my two-year-old imported bull, Spicy Marquis, supposed to be one of the best in Canada, also two yearling bulls and five yearling heifers; to R. Mitchell & Son, Nelson, Ont., one two-year-old heifer. I have bought from R. Mitchell & Son, Nelson, Ont., the imported bull, Prince William, to head my herd. He is a large, massive bull, with good quality, and should make a good stock bull. There has been a good demand for Shorthorns, with fair prices.

Elsewhere in this issue Wm. Lockwood, Delaware, Ont., advertises his farm stock and implements for sale. The list of stock includes horses, milch cows, steers, and twenty head pure-bred Shorthorns of Scotch blood. Persons interested in the purchase of some good cattle should reach Mt. Brydges on the morning train, where carriages will be in waiting to convey visitors to the sale.

The executive committee of the International Live Stock Show, to be held at Chicago on December 1-6, have made some notable changes in their rules. All compulsory slaughter tests are abolished, but in order to encourage the exhibition of animals fitted to win both on foot and on block, prizes awarded any animal that wins in both classes will be doubled by the Exposition authorities. The following changes were also made: The classes for rams and ewes two years old or over are dropped, which changes the flock to consist of one ram under two years old, two ewes under two years, and two ewe lambs. This necessarily restricts the age of the champion ram and ewe, which has formerly been allowed to any age in the fat sheep division, the second and third prizes for Dorsets, Cheviots and Rambouillets are dropped, and the money from these classes divided among the other classes in the fat division. In the carload lot classes the new

classification reads carload lots of native sheep bred east of the 98th degree of longitude. A new class is made for range-bred sheep, limited to sheep bred west of the 98th degree of longitude. The range car lot classification is two years old and over, \$100 for first prize and \$50 for second; one year and under two years, same amount. The champion carload will be taken from the native division and be made sweepstakes champion carload of the show.

AGRICULTURAL COLLEGE

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- (2) Three Years' Course for Associate Diploma and Specialist Certificate in Agriculture or Horticulture—Sept. 13, 1902.
- (3) Four Years' Course for B.S.A. degree—Sept. 13, '02.
- (4) Three Weeks' Creamery Course—Dec. 2, '02.
- (5) Twelve Weeks' Dairy Course—Jan. 3, '03.
- (6) Two Weeks' Course in Stock and Grain Judging—Jan. 8, '03.
- (7) Four Weeks' Course in Poultry-raising—Jan. 9, '03.

Ladies admitted to Dairy and Poultry Courses. Send for Circulars.
JAMES MILLS, M.A., PRESIDENT.
Guelph, July, 1902.

GOSSIP.

THE GREAT SHORTHORN SALE TO MATERIALIZE AT HAMILTON, AUGUST 13TH.

It is safe to say that never before in Canada were offered at public sale so many high-class Shorthorns, selected from so many noted herds, and comprising so great a variety of representatives of first-class families and strains of blood, as will be found in the offerings from the seven fine herds drawn upon for the combination sale to be held at Hamilton, Ont., on August 13th. And from what is known of the character of these herds, it is safe to predict that in combination with this variety there will be found uniformity of excellence of type and quality in high degree, for the reason that besides the large percentage of imported animals of similar breeding and stamp included, there have been used in each of the herds for many years, and in most of them from the date of their establishment, only first-class bulls of like breeding and pattern. Never has as good an opportunity been afforded farmers and young breeders in this country to lay the foundation of families or herds on a safe and sound basis than will be found in this sale. Much depends upon starting right. It is not unusual to find the progeny of one cow selling for thousands of dollars more than that of another in a given number of years, a fact which emphasizes the importance of a good selection of foundation stock and of following it up by the use of well-selected sires as to breeding and stamp. There has never been a more promising or propitious time than the present for starting in the business of breeding pure-bred stock, or for securing good bulls for service in grade herds to improve the form and feeding qualities of the cattle on Canadian farms. Good cattle are scarce, and are getting scarcer every year, while the demand for such was never better nor the prices higher, while the prospect is clearly for a continuation of good prices for good cattle, and they are the only sort that pay a reasonable profit on their feed and the cost of raising them. There is every prospect of a bountiful supply of good feed in the country this year, and there is room for a few more good cattle in most of the pure-bred herds in the country, and many of them will be the better for an infusion of new blood such as may be secured at the Hamilton sale and which will tell for good on the character of the herds into which the animals go.

The catalogue of the sale is not to hand at this writing, but in a general way the offering may be summarized:

MESSRS. W. G. PETTIT & SON have sent us the private herd catalogue, indicating the numbers they have contributed to the sale, which include the two imported Kinellar Claret bulls, Prince George, a red three-year-old, by Director, by the Prince Royal bull, Prince Horace, his dam by Sittyton Sort, and gr. dam by Gravesend; and Scottish Hero, a roan two-year-old, by the Duthie-bred Count Amaranth, who belongs to the same family as the famous Field Marshal; dam by Kintore Hero, of the Ythan tribe, with clan Alpine, Gravesend and Vermont as sires behind these. Of the ten females from this herd in the sale, eight are imported animals, from one to four years old, and representing the Cruickshank, Orange Blossom, Fragrance, Flora, Killean Beauty, Jealousy, Jilt and Bessie tribes, and having for sires such noted bulls as the Duthie-bred Sittyton Prince, of the Cruickshank Victoria tribe; Craibstone, of W. S. Marr's Bessie tribe, by William of Orange; Spicy King, bred by Mr. Marr, from the Uppermill Goldie family, by Spicy Robin, whose dam was by William of Orange; Reveller, bred by Mr. Duthie, from the Uppermill Roan Lady tribe; Red Light, of the Gordon Castle Lustre tribe; the Marr Missie bull, Lord Hampton, by Deane Willis' Bapton Czar, and Belisarius, by the Prince Royal sire, Prince Horace, a son of the noted William of Orange.

MR. JAS. DOUGLAS, of Willowbank Stock Farm, Caledonia, Ont., contributes five very choice heifers of excellent families. Mirth 13th, by Duncan Stanley 16364, and out of Mirth 11th = 25191, is a very short-legged, thickly-fleshed roan two-year-old, with calf to Imp. Christopher = 28859. Victoria 17th is a red two-year-old heifer of exceedingly smooth finish and good size, by Imp. Christopher 28859, and out of Victoria 8th = 16080, one of Mr. Douglas' best cows. Queen Alice, a yearling, by Imp. Christopher 28859, and out of Lady Clare = 29412, is a grand individual and gives promise of making a particularly good show heifer. She is large for her age, very smoothly fleshed, and has a thrifty appearance, which speaks well for her future. Elgitha 32nd, by Imp. Christopher, and out of Elgitha 8th = 16758, is a real neat yearling, of a very good milking strain. Britannia 54th is a dark roan eight-months-old calf, and to all appearances will make a grand show animal. She is of pleasing form, thickly fleshed, and stands on good, straight, strong legs, rightly placed. She is sired by Imp. Christopher 28859, and out of Britannia 40th. The top sires of these heifers are noted bulls, representing several of the very best Scotch Shorthorn families. Take for example, Duncan Stanley = 16364, by Stanley, the sire of the champion Toisman, and Imp. Christopher = 28859, by Emancipator, out of Fairy Girl, of the Kinellar Fair Queen family, by Gravesend, a Cruickshank Bravith Red bull, used with great success at Kinellar and Collynie. The "Willowbank" Stock Farm contribution to the sale is a good one and will be in good condition.

CAPT. T. E. ROBSON, of Iderton Farm, contributes six, including the grand two-year-old imported Marr-bred bull, Wanderer's Last, sired by the veteran Cruickshank-bred Wanderer (60188), out of Missie 144th, by Roan Robin, who was in service in the Royal herd at Windsor, Collynie and Bapton Manor, and grandam by Athabasca, three superior Cruickshank bulls, with the Marr-bred Prince Charlie and Heir of Englishman immediately back of these. Wanderer's Last is a thickly-fleshed, low-set, massive fellow, smooth and uniform throughout, a splendid type of the right kind to breed from. Goldie 46th, imported by H. Cargill & Son, and bred by W. S. Marr, of Uppermill, is a beautiful roan of first quality. Mysie's Lady, sired by Golden Wimple, is a very neat red calf. Roan Lady, sired by First Choice, champion at Toronto, 1900, is a grand individual, possessing substance and quality hard to surpass. Queen Leonore, a roan, sired by Lord Strathmore, and Burnbrae Nettle, a red, are both very choice yearling heifers.

MR. ROBERT MILLER'S 10 head are all Scotch-bred, representing a number of popular families, and all young animals of high-class individual merit.

MR. J. M. GARDHOUSE includes in his selection of 5 head an excellent half-sister of the noted American champion bull, St. Valentine; two daughters of the Imp. Duthie-bred bull, Prime Minister, and a Cruickshank Matchless.

MR. HARRY SMITH contributes 5 heifers and 1 bull, all Scotch-bred, of the excellent families and by the high-class sires that have figured so successfully in his grandly bred herd and in the principal Canadian shows in recent years.

MR. AMOS and MR. A. C. PETTIT are young breeders who are winning their spurs, having commenced right by putting sound and select foundation stock of approved stamp. The former will sell 6 head, two of which are imported and the balance nicely bred, being deep in the best of Scotch blood lines. Of the four head contributed by Mr. Pettit, two are imported and the other two bred from imported stock. Further reference to these offerings may be expected in the August 1st issue of the "Advocate." In the meantime all interested will do well to apply early for the catalogue, as the indications are that there will be a very large demand for it. Mr. Platt, who has the management of the sale in hand, having already received applications from a very widely extended territory, including most of the Provinces and many of the States.

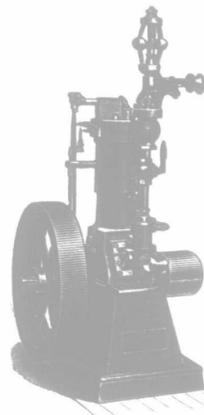
Isleigh Grange Farm, Danville, P.Q., writes: "Our sales have been excellent, and results satisfactory to all purchasers. Our Shropshire lambs this season are away ahead of former years—new blood tells every time. Canadian Flagstaff, by Ulster Rose, dam by Ercae Flagstaff, and going back to the Crane-bred ram, Calcot 317, is a good one, and his lambs show it. We have still a few Ayrshire and Guernsey calves to part with. Note change of advertisement."

LADY OF THE BOYNE 5TH AND MISTLETOE 21ST.

In this issue we publish photo-engravings of two contributions by Mr. W. D. Platt to the great combination Shorthorn sale in Hamilton on August 13th. The beautiful Missie-bred roan, Mistletoe 21st (Imp.) = 3415, was calved March 30th, and bred by Wm. Duthie, out of Mistletoe 4th, one of his best cows, and by Nonpareil Victor (7107), got by Deane Willis' celebrated Victoria bull, Count Victor. The other cow portrayed, Lady of the Boyne 5th (Imp.) = 38063, was bred by Robt. Turner, Carlton of Bonnie, Portsoy, Banffshire, Scotland. She is by the same sire, President (6761), as Mayflower 4th, sold in Mr. Platt's Chicago sale for \$2,000. She was calved April 10th, 1888, out of Lady of the Boyne, by Challenge Cup 37029.

There are many Separators, each represented to be just as good as the De Laval; they are not, but like all counterfeits, they lack the remarkable qualities of the genuine.

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Write for a sample copy of the Farmer's Advocate, and begin to work for these premiums. Cash must accompany new names. Subscription, \$1 per year.

The WM. WELD CO., Ltd., London, Ontario.

GOSSIP.

Greengill Stock Farm, R. Mitchell & Son, Nelsor, Ont., report sales of Shorthorns since January: To A. E. Stevenson, of Chicago, a yearling heifer of the Miss Lamsden family; to A. W. R. Burdon, Middlemiss, Ont., a nice bull calf and a yearling heifer in calf to Imp. Red Velvet; to Duncan Bros., of Wausau, Wis., one bull calf and two nice home-bred cows; to W. F. Hendry, Dundalk, Ont., a bull calf, by Red Velvet, and an extra good two-year-old heifer, carrying calf to Imp. Major Alpine; to D. Stipe & Son, West Unity, Ohio, three good Scotch-topped yearling heifers in calf; to J. O. Boyarth, Gilsum, Ill., one bull calf and forty-one head of ore, two and three year old heifers, among which were some very nice ones and mostly in calf to our best imported bulls; to F. A. Gardner, Britannia, Ont., one of our best imported heifers, Scotch Thistle, of the Kiblean Beauty tribe; to John Gardhouse, Highfield, Ont., the imported heifer, Roan Rolla, a beautiful thick roan, with heifer calf at foot by Red Velvet; to A. Duncan & Sons, Carluke, Ont., to head their choice little herd, imported Major Alpine, by Count Amaranth, and out of Lady Alpine, by Clan Alpine; to Jas. Gibb, Brookdale, Ont., who has recently sold his herd bull, Spicy Marquis, to head W. D. Flatt's herd, our recent herd bull, imported Prince William, a beautiful bull that has done excellent service at Greengill; to J. S. Brown, Seaforth, Ont., who went out to purchase one of the best bull calves he could find, one just turned a year old, by imported Red Velvet, and out of imported Lady Alpine, of the Lady Ythan tribe, of Campbell & Cruickshank breeding. Mr. Brown took this calf at a good price, as he was what he wanted, a thick, heavy calf, with a great back. We now have at the head of our herd imported Greengill Victor, bred by W. S. Marr, sired by Lavender Victor, a richly-bred Lavender, bred by J. Deane Willis. Victor has for dam Princess Royal 52nd, by Sea King, g-dam Princess Royal 35th, by the great Princess Royal. To mate with this fellow we have a herd of some 75 head, of popular breeding, having representatives of the following tribes: Rosemary, Mayflower, Jilt, Verbena, Orange Blossom, Roan Lady, Strawberry, Duchess, Gwynne, Princess Royal, Beauty, Rosebud, Mysie, Clementina, Victoria, Duchess of Gloster, Augustus, Missie, Flora, Claret, Golder Drop, Lovely, and Village Girl. Visitors, whether wanting to buy Shorthorns or not, are always welcome here to inspect the herd, which, we think, will compare with others of like number.

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BUY A SEPARATOR UNTIL
YOU HAVE SEEN THE

National.

EXAMINE

The simplicity of the design.
All wheels and bearings protected, being perfectly safe in the hands of a child.
It has anti-friction ball bearings.
Few parts to wash—only two pieces inside the bowl.
The National is made by The Raymond Mfg. Co. of Guelph, whose success with the celebrated Raymond Sewing Machine is sufficient guarantee of the high finish and workmanship.
In 1901 five machines a day were manufactured. For 1902 the capacity is increased to 25 machines per day, showing the satisfaction given by the National in the past two years.
The 1902 National contains all the strong points found in other separators, and is placed on the market with the guarantee of being the best and most up-to-date machine in every particular offered to the Western farmers to-day.

The National will well repay investigation by intending purchasers.
National No. 1, capacity 330 to 350 lbs. per hour.
National No. 1 A, capacity 450 to 500 lbs. per hour.

AGENTS WANTED IN UNREPRESENTED DISTRICTS.

The Raymond Mfg. Co. of Guelph,
LIMITED.
GUELPH, ONT.

WE ALSO MAKE GOOD SEWING MACHINES.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Mr. Fred. C. Smith, New Hamburg, of the Spruce Grove herd of Yorkshires, reports a large number of sales through the advertising medium of the "Farmer's Advocate." His stock boar was sired by Mr. D. C. Flatt's "Bottesford Wonder," and is a long, deep, well-proportioned animal, weighing 500 lbs. when 18 months old. Mr. Smith recently purchased from Mr. D. C. Flatt two young sows and an imported boar, good choice animals, which, no doubt, will add to the usefulness of his herd. Many farmers, Mr. Smith thinks, are inclined to breed sows too young. In his estimation, a sow should be one year old before she has her first litter. If this practice is followed, the offspring will be stronger and mature earlier. Rape and clover, he considers very desirable for summer feeding; this can be supplemented to a certain extent, by mangels and ensilage during winter.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS.

From June 16th to July 1st, 1902, four thirty-day records, one fourteen-day record, and thirty-nine seven-day records have been accepted. Of the thirty-day records Belle Moore Zante 52126 leads; age, 3 years 4 months 28 days; days after calving, 9; milk, 1,560.1 lbs.; butter-fat, 54.827 lbs.; equivalent butter 80 per cent. fat 68 lbs. 8.5 ozs., or 63 lbs. 15.4 ozs. 85.7 per cent. fat. Korndyke Queen 2nd 54089, days; age, 2 years 1 month 21 days; days after calving, 13; milk, 1,219.8 lbs.; butter-fat, 44.372 lbs.; equivalent butter 80 per cent. fat 55 lbs. 7.4 ozs., or 51 lbs. 12.3 ozs. 85.7 per cent. Inka Pietertje Hengerveld 54855 was third; age, 2 years 1 month 6 days; days after calving, 27; milk, 1,013.8 lbs.; butter-fat, 35.334 lbs.; equivalent butter 80 per cent. fat 44 lbs. 2.7 ozs., or 41 lbs. 3.6 ozs. 85.7 per cent. Liliith's Beauty 2nd 36515 should also have been continued thirty days; age, 8 years 3 months 12 days; days after calving, 9; milk, 973.5 lbs.; butter-fat, 32.315 lbs.; equivalent butter 80 per cent. fat 40 lbs. 6.3 ozs., or 37 lbs. 11.2 ozs. 85.7 per cent. fat; record fourteen days. The full-aged cows, making seven-day records, twelve in number, produce the very extraordinary average of 15.795 lbs. butter-fat, equivalent to 19 lbs. 11.9 ozs. butter 80 per cent. fat, or 18 lbs. 6.8 ozs. 85.7 per cent. fat. The average of the five highest is 17.961 lbs. butter-fat, equivalent to 22 lbs. 7.2 ozs. butter 80 per cent. fat, or 20 lbs. 15.3 ozs. 85.7 per cent. fat.

NOTICE.

CHANCE TO BUY FARM.—Thos. Hunsley, Beachville, Ont., offers a fine West Zorra farm for sale. See advt. elsewhere.

IMPORTANT COMBINATION SALE
OF 65 HEAD OF

High-class Shorthorns

IMPORTED AND CANADIAN-BRED, SCOTCH AND SCOTCH TOPPED
AT AUCTION IN THE NEW SALE PAVILION OF THE HAMILTON STOCK-YARDS COMPANY,
HAMILTON, ONTARIO, ON

Wednesday, August 13th, 1902.

THE CATTLE ARE ALL YOUNG OR IN THE PRIME OF LIFE, AND ARE SELECTED FROM
THE FOLLOWING WELL-KNOWN HERDS:

- | | |
|--|--|
| <p>W. G. PETTIT & SON, Freeman, 12 Head.
W. D. FLATT, Hamilton, 10 Head.
ROBERT MILLER, Stouffville, 10 Head.
CAPT. T. E. ROBSON, Ilderton, 6 Head.
H. SMITH, Hay, 5 Head.</p> | <p>J. M. GARDHOUSE, Highfield, 5 Head.
JAMES DOUGLAS, Caledonia, 5 Head.
GEORGE AMOS, Moffat, 6 Head.
A. C. PETTIT, Freeman, 4 Head.</p> |
|--|--|

Included is imported WANDERER'S LAST =36129= (80213), chief stock sire for the last two years in the herd of Captain Robson; also the imported Kinellar Claret bulls, PRINCE GEORGE (79620) and SCOTTISH HERO (79921), and a number of first-class Canadian-bred bulls. The females of breeding age will have calves or will have been bred to the high-class sires in the several herds represented. Look for notes in Stock Gossip.

Catalogues will be issued in due time, for which applications may now be booked with

MR. W. D. FLATT, MANAGER, HAMILTON, ONT.

AUCTIONEER: COL. F. M. WOODS, ASSISTED BY CAPT. T. E. ROBSON AND OTHERS IN THE RING.

Leg and Body Wash.



When it comes to stiffness and soreness of muscles, tendons, etc., nothing equals

Tuttle's Elixir

for restoring normal conditions. Apply to the body as a mild sponge bath and put on light blanket. Sponge the legs and put on light bandages.

Used and Endorsed by Adams Express Company.

Tuttle's American Condition Powders

A specific for impure blood and all diseases arising therefrom. TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

Dr. S. A. TUTTLE, 66 Beverly St., Boston, Mass. Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief, if any. LYMAN, KNOX & SON, Agents, Montreal and Toronto, Canada.

HOME-SEEKERS' RATES.

Chicago & North-western Ry.

Round-trip tickets are on sale to points in Wisconsin, Michigan, Minnesota, Iowa, Nebraska, the Dakotas and other points west and north-west at one fare, plus \$2.00, for the round trip, via the North-western Line. Tickets are good twenty-one days to return. Call on any ticket agent for particulars, or address W. B. Kniskern, G. P. & T. A., 22 Fifth Ave., Chicago.

SALE: Clydesdale mare, recorded in Canadian FOR draft stallion, 2 years old, and American books. Also draft stallion, 2 years old, by Bold Boy. Address: Box 387, St. Mary's, Ont.

CLYDESDALE AND HACKNEY STALLIONS AND MARES

FOR SALE.



6 Clydesdale yearling studs,

3 fillies, and several

aged mares, which are regular breeders. Also

2 Hackney stallions, large, handsome, high steppers, well broken to drive.

Size, action and quality combined in all. Inspection invited.

O. SORBY, GUELPH, ONTARIO.

\$50.00 Round Trip to California.

Chicago & North-western R'y from Chicago, August 2 to 10. The new Overland Limited, the luxurious every-day train, leaves Chicago at 8.00 p. m. Only three days en route. Unrivaled scenery. Variable routes. New Drawing-room Sleeping Cars and Compartment Cars, Observation Cars (with telephone). All meals in Dining Cars. Buffet Library Cars (with barber). Electric lighted throughout. Two other fast trains, 10.00 a. m. and 11.30 p. m., daily. The best of everything. Daily and personally conducted tourist car excursions to California, Oregon and Washington. Apply to your nearest ticket agent or address B. H. Bennett, 2 East King St., Toronto, Ont.

DISPERSION SALE ON JULY 23RD.

Scotch and Scotch-topped SHORTHORN CATTLE

(10 COWS AND 10 CALVES,

5 Pure Scotch).

Also 25 two-year-old steers; 5 milch cows; 12 horses, including 4 light and 1 draft team; also all farm machinery. Proprietor has leased his farm.

Three miles from Mt. Brydges, where morning train will be met. WM. LOCKWOOD, DELAWARE, ONT.

WANTED:

Competent, experienced man with horses and stock in general, to take charge of barn on large nursery. Must be steady and reliable, well recommended. Steady job for right man, at good pay. Answer to this office, stating age, experience, married, single, references, etc., fully.

"NURSERY."

A LITTLE GOLD MINE FOR WOMEN.



THE U. S. COOK-STOVE DRIER IS: The best on the market. Always ready for use. Easily set on and off the stove. It works while you cook. Takes no extra fire. Dries all kinds of Berries, Cherries, Fruits and Vegetables, etc., etc. Don't let your fruits, etc., waste. With this Drier you can at odd times evaporate wasting fruits, etc., for family use, and enough to sell and exchange for all, or the greater part of, your grocery bills, and, in fact, household expenses. Write for circulars and special terms to agents.

E. B. FAHRNEY, Wayneboro, Pa. Price, \$5. Box 50.

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office, at the price stated.

A NEW BOOK ON INSECT PESTS. "Insects Injurious to Farm Crops" is the title to a volume of 295 pages, lately issued by E. Dwight Sanderson, B. S. Agr., Entomologist, Delaware Agricultural Experiment Station. This book is most conveniently divided into fifteen chapters, all of which are important and readable. The one on General Farm Practice Against Injurious Insects is especially interesting. It shows why "prevention is better than cure." Methods of preventing insect pests from gaining a foothold in a locality are pointed out and described. Insects beneficial to the farmer are also discussed, and many of them are illustrated. The writer's idea has, evidently, been to produce something suited to the needs of every husbandman. He has hit it admirably. The work is published by John Wiley & Sons, of New York. The price, \$1.50, is within the reach of all. It may be ordered through this office.

A BOOK FOR FRUIT-GROWERS. The latest book on horticulture to come to our notice is entitled "American Horticultural Manual," by J. L. Budd, Professor Emeritus in Horticulture, Iowa Agricultural College, assisted by Prof. N. E. Hansen, Dakota Agricultural College. The manual is well printed on good paper, and equally well bound, by John Wiley & Sons, New York. Various works on this subject have from time to time been published, but none, perhaps, at the price, \$1.50, have ever been issued better fitted to the needs of amateur horticulturists. It comprises the leading principles and practices connected with the propagation, culture and improvement of fruits, nuts, ornamental trees, shrubs and plants in the United States and Canada. First there is a chapter on seeds and seed-growth, followed by germination, sowing and top growth; in fact, every problem that could come up in an orchard or garden is dealt with. Even spraying for insects and fungi is not unthought of. Orders will be taken at this office at the price named.

GOSSIP.

Mr. Edwin Battye, of Gore Bay, writes a very favorable account of the crops of that locality. Considering the heavy rains of the last few weeks, the outlook is good. Hay will be plentiful, but about ten days later than usual. Grass seed has got a splendid catch. Potatoes are looking very promising. In fact, all crops will be up to the average or over. Pasture is extremely good, and consequently cattle are putting on flesh in a very satisfactory manner. Sheep and stockers average about 3c. per lb. live weight.

Mr. Battye also reports a number of sales of pure-bred Shorthorns. Animals of the right type are in demand. During the first week of the present month Mr. Battye sold four of his valuable herd to Mr. Jas. McCutcheon, Tekumoh, Manitoulin, namely: Miss Comfit 10th (imp.), by Rosario =75471= This heifer won 3rd prize at the Lincolnshire Show in England, 1901. She is a beautiful red, very uniform and of great heart-girth. Ladysmith =38537= and Lady Gordon =38536=, both these heifers are red, very thick-fleshed and short-legged. The heifers are with calf by Royal Emperor (imp.), bred by W. S. Marr, of Uppermill. Mr. McCutcheon bought as a stock bull, Winsome Archie, imported in dam, out of Winsome Beauty 3rd, by Archibald, by Scottish Archer, out of a Sittyan Lavender cow bred by Mr. Duthie. With stock of that class for a foundation we will expect to hear favorably of Mr. McCutcheon's herd from time to time. During the same week Mr. Coats, Barrie Island, also bought the young red bull, Duke of York, out of Matchless of Elmhurst =26450=, by Gordon Prince 29942. Besides these, Mr. Battye has, since he returned from Scotland last September, made the following sales: Mr. Ed. Beck, Gore Bay, five cows and three calves; Mr. Arthur Johnston, Ont., one yearling heifer, Duchess of Gloster, and one calf; Mr. Thos. Ingram, Manitowaning, one cow, Daisy Elgin, and a Crimson Flower heifer, out of Crimson Fuchsia 9th, by Prince Cruickshank 2nd. He also sold one bull to each of the following: Messrs. S. Wilson, W. Beckerton, J. Brown and J. Blakely, all of Manitoulin Island. Mr. Battye still has about forty head, and quite a number of the younger individuals of both sexes are for sale.

EXCELLENT FARM FOR SALE:

220 acres, parts lots 1 and 2, 8th concession, West Zorra; 3 good bank barns, 2-story frame house. Good farm for grain, dairying, stock; spring creek. Sell cheap. Apply to THOS. HUNSLEY, Beachville, Ont.

IMP. COTSWOLD SHEEP

Five rams (year-olds), both sires and dams imp.; 10 ewes (year olds), sire imp. Also this year's lambs, both sexes; Yorkshire and Tamworth hogs. om BROOKS & LANQUAID, COURTHOUSE P. O.

First-Class Farm for Sale

MAGNIFICENT farm for sale, in the highest state of cultivation, containing 150 acres, being lot 21, concession 2, West Oxford, Oxford County, Province of Ontario, one-half mile from town of Ingersoll, on G.T.R. and C. P. R. Modern buildings, two-story brick house (54 x 28 feet) with slate roof, and heated with hot-air furnace. Basement barn, 76 x 42; and stable, 52 x 35 feet, with 20-foot posts. Brick piggery, 100 x 30 feet, two stories. Splendid water supply; two orchards; soil rich clay loam, all underdrained, well fenced; 18 acres hard maple bush. No waste land. Within two miles of successful pork-packing house, three cheese factories, and the largest milk-condensing factory in Canada. For full particulars come and see, or write to the proprietor on the premises.

GEORGE SEBBEN,
INGERSOLL, ONTARIO.

THE SHEEP OF THE CENTURY.

PRINCIPAL AWARDS GAINED BY SUFFOLKS AND SUFFOLK CROSSES IN OPEN COMPETITION AGAINST ALL BREEDS, 1898 TO 1901.

SCOTTISH NATIONAL FAT STOCK SHOW—			
Championship of the yard	1898	1899	1900
Reserve number for ditto	1899	1900	1901
SMITHFIELD CLUB SHOW—			
Championship of the yard	1898	1899	1900
Reserve number for ditto	1898	1899	1900
Bred cup—cross-bred section	1898	1899	1900
SMITHFIELD CLUB SHOW (Carcass Competitions)—			
Centenary gold medal (best carcass in the yard)	1898	1899	1900
Reserve number for ditto	1898	1899	1900
First prize—Short-wool lambs	1898	1899	1901
Second prize— " " "	1898	1899	1901
Third prize— " " "	1898	1899	1901
Fourth prize— " " "	1898	1899	1901
First prize—Short-wool wethers	1898	1899	1901
Second prize— " " "	1898	1899	1901
Third prize— " " "	1898	1899	1901
First prize—Long-wool wethers	1898	1899	1901
Second prize— " " "	1898	1899	1901
Third prize— " " "	1898	1899	1901

AN UNEQUALLED RECORD.

Pamphlet, with full description of the breed, show yard honors, live and dead weights of rams, ewes and lambs, can be obtained on application to ERNEST PRENTICE, Secretary Suffolk Sheep Society, IPSWICH, ENGLAND.

"A SPLENDID SILO"

BUILT FOR ADOLPHUS HOOPER,
AT EXETER, HURON COUNTY, WITH

Beaver Portland Cement



THE RATHBUN COMPANY, 310-312 Front St. W., Toronto, Ont.
Sales Agents for THE CANADIAN PORTLAND CEMENT COMPANY, Limited:

EXETER, HURON COUNTY, Nov. 27, 1901.
DEAR SIR:—I am pleased to let you know that the cement-concrete silo built for me last fall by Mr. A. E. Hodgert has proved all that he promised. It is eleven feet in diameter and thirty feet high. It cost me one hundred dollars (\$100.00), with a little time on our part thrown in. It was built with your BEAVER BRAND PORTLAND CEMENT, of which I cannot speak too highly. My opinion is that the round concrete silo, built with a high grade PORTLAND CEMENT, is the only satisfactory one to build. Yours truly,
ADOLPHUS HOOPER.

MANUFACTURED IN CANADA BY,
The Canadian Steel & Wire Co., LIMITED.
 HAMILTON, CANADA.

The best selling because the most satisfactory

Woven Wire Fencing



AMERICAN FIELD AND HOG FENCING

All styles and heights have stays 12 inches or 6 inches apart.



ELWOOD FIELD AND FARM FENCES.
 Six styles: heights 18 inches to 58 inches.

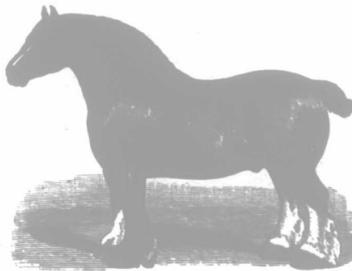
If there is no agency for either of these fences in your town, write for the agency. It is worth having



Clydesdales and Shorthorns

FOR SALE: Seven choice young stallions, and several young mares and fillies. Five young bulls and bull calves, and thirty-five excellent young cows and heifers. Mostly registered in the American Herdbook. om

JOHN BRIGHT, MYRTLE, ONTARIO.



STALLIONS AND MARES.
 A new importation of

Clydesdales, Shires and Hackneys

will arrive about the end of August.

Mr. James Dalgety is now in Great Britain making selections. The character of the last consignment will give an idea of the high class of horses they import, and the next shipment will be the best they have ever made, a number of prizewinners having already been secured by the firm. Intending purchasers should not miss seeing this consignment, om

DALGETY BROS., London, Ontario, and Dundee, Scotland.
 LARGEST IMPORTERS IN CANADA.

GOSSIP.

JERSEY ISLAND TESTS.

In the butter tests conducted by the English Jersey Cattle Society at the R. J. A. S. on the Island of Jersey, on May 8th last, the gold medal was won by Violette P. 8557, owned by N. Du Feu, Jr. The yield of milk was 39 lbs. 12 ozs., and the butter made in twenty-four hours was 3 lbs. 3/4 oz., Island weight, equivalent to 3 lbs. 6 1/4 ozs.

American weight. The silver medal was won by P. J. Ahier's Lady Dorothy 2nd 4993, who gave 32 lbs. 12 ozs. of milk, which made 2 lbs. 5 1/4 ozs. of butter, Island weight, equal to 2 lbs. 9 1/4 ozs. American weight. The bronze medal was won by P. E. Le Feuvre's Albani 8952, whose yield of milk was 38 lbs. 4 ozs. in twenty-four hours, which yielded 2 lbs. 11 1/4 ozs., Jersey weight, equal to 2 lbs. 15 1/4 ozs., American weight. The greatest quantity of milk given by any cow in the twenty-four hours was the yield of Origa's Queen 7559. She

gave in twenty-four hours 42 lbs. She belonged to C. J. Labey. The only other cow giving over 40 lbs. was Fancy's Rose 8277. The only other cows credited with 2 lbs. or more of butter in twenty-four hours, given in Island weights, besides the winners of the medals, were as follows: Fancy's Rose, 2 lbs. 3 1/4 ozs.; Oxford Ixia 7100, 2 lbs.

6 1/4 ozs.; Oxford Ixia 3rd 8584, 2 lbs. 4 1/4 ozs.; Cora 4th 7735, 2 lbs. 9 1/4 ozs.; Patent 2nd 8420, 2 lbs. 3/4 oz.; Brave Lady F. 86445, 2 lbs. 1/4 oz. The thirty-five cows yielded an average of 29 lbs. 11 1/2 ozs. of milk, 1 lb. 12 1/2 ozs. (Island weight), equal to 1 lb. 14 1/2 ozs. American weight. The average time in milk was 12 1/2 days.

NOTICE.

AN OLD COMPANY INCORPORATED.—On May 1st, 1902, E. W. Gillett Co., Ltd., succeeded the old established Canadian business of E. W. Gillett, of Chicago. The new company has a capital of \$350,000, fully subscribed and paid, and the shareholders are principally wholesale and retail grocers in business in Canada. The direct and personal interest of the shareholders of this successful concern has been shown in a marked degree. The increase in sales during the short time the company has been organized has already caused them to secure additional premises, fully as large as they are now occupying, which will increase their capacity for the production of their various lines of goods, viz.: Magic Baking Powder, Gillett's Perfumed Lye, Royal Yeast, etc. The company is doing a large business in Manitoba and the West to the coast, but with the increased facilities they will, no doubt, be able to double their western trade. The officers of the company are: Mr. E. W. Gillett, president; Mr. Wm. Dobie (who has managed the business for 16 years), general manager and treasurer; and Mr. Geo. Hepburn, secretary. The whole office and factory staff are Canadians and British subjects, and the company is, in fact, an all-Canadian one. The E. W. Gillett Co. are firm believers in printer's ink. This policy has made their goods easy to sell and has built up a prosperous and profitable business.

GOSSIP.

JERSEY BUTTER TESTS IN ENGLAND.

Twenty cows out of an entry of 26 competed for the English Jersey Cattle Society's prizes in the butter test at the Royal Counties Show at Reading, on June 10th (last month). The cows were milked out clean at 5 p. m. on the 11th, the next 24 hours' milk being taken for the test, at 7 a. m. and 5 p. m. The 1st prize and gold medal was awarded to Dr. Watson's Sharab, five years old, who, 73 days after calving, gave 55 lbs. 2 ozs. of milk and 3 lbs. 1 oz. churned butter in the 24 hours, a ratio of 1 lb. butter to 18.32 lbs. milk; second to Mr. C. P. Young's five-year-old Oxford Dewdrop, 90 days in milk, whose yield was 50 lbs. 6 ozs. milk and butter, 2 lbs. 13 ozs., ratio 17.91; third to Dr. Watson's Sabau 2nd, 6 years old, 104 days in milk, yielding 35 lbs. 10 ozs. milk and 2 lbs. 6 ozs. butter. Eight Guernsey cows out of thirteen entered came to the test, the first prize going to Mrs. Fown's Princess Rhea, 6 years old, who gave, 77 days after calving, 47 lbs. 6 ozs. of milk and 2 lbs. 4 oz. butter, ratio 23.14 lbs. second to Mr. Plumtree's eight-year-old Gularre 4th, 62 days in milk, yielding 41 lbs. 10 ozs. milk and 2 lbs. 24 ozs. butter, ratio 19.44; third to Mr. Hargreave's four-year-old Sweet Sultan, 104 days in milk, yielding 35 lbs. 8 ozs. milk and 1 lb. 10 1/2 ozs. butter, ratio 21.63.

SPRAMOTOR PAINT
Is a pure mineral paint in dry powder form, requiring only the addition of cold water for instant use. It's fire proof, weather proof, produces a hard enamel finish; will not rub, scale, crack, nor turn yellow with age; covers better than oil paint and at 1/2 the cost. Can be used to equal advantage on stone, brick, wood and plaster, and over oil paint on any good, firm surface. These SPRAMOTOR painting machines will paint a good sized barn in 1 hour. Fully guaranteed. Write for booklet.
SPRAMOTOR CO.,
BUFFALO, N. Y. LONDON, CAN.

Newton's HEAVE, COUGH, DIS- TEMPER & INDIGESTION Cure
A veterinary specific for WIND, THROAT, & STOMACH TROUBLES. Strongly Recommended. \$1.00 per can, dealers or direct.
Newton Horse Remedy Co. (D), Toledo, O. Trade supplied by Lyman Bros. & Co., Toronto, Ont.

4 Imp. Clydesdale Stallions 4
Amphion, Vol. 24, 2 years old, bay; Bucepholus, Vol. 24, 2 years old, black; Voyageur, Vol. 24, 2 years old, brown; Lord Garty, Vol. 23, 4 years old, brown. Representing the blood of Golden Sovereign, Sir Christopher, Montrave Matchless, and Royal Garty.

GEO. G. STEWART,
ROSBANK FARM,
P. O. and station, Howick, Quebec.

IMP. CLYDESDALES AND AYRSHIRES.
The three imp. stallions, Copyright, Baron Frederick and Baron Laing, and the Canadian-bred stallion, Laurentain, Ayrshires all ages; and poultry, utility breeds. Eggs for sale.
ROBT. NESS & SONS, Howick, Que., P.O. & Sta.

WM. SMITH, COLUMBUS, ONT.,
IMPORTER AND BREEDER OF
Clydesdale Horses & Shorthorn Cattle
Shires, Shorthorns, and Leicesters.
Young stock of both sexes for sale. Imported Prince Louis = 32082 = heads the herd. Write for prices or come and see them.
John Gardhouse, Highfield P. O.
Weston, G. T. R. and C. P. R.

DR. PAGE'S ENGLISH SPAVIN CURE

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blister. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by DR. FRED. RICE A. PAGE & SON, 7 AND 9 YORKSHIRE ROAD, LONDON, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: **J. A. JOHNSTON & CO., DRUGGISTS, 171 KING STREET, EAST, TORONTO, ONT.**

British Columbia Farms.
If you are thinking of going to the Pacific Coast, try British Columbia. No extremes of temperature. No cyclones. No dust storms. No cloudbursts. No droughts. No blizzards. Fertile land, and the heaviest crop per acre in Canada; we make this statement without fear of contradiction. The land is cheap, and the markets and prices for farm produce the best on the Pacific Coast. Write for farm pamphlet to **THE SETTLERS' ASSOCIATION OF B. C., BOX 540, VANCOUVER, B. C.**
When writing please refer to this paper.

Wide-Tire Metal Wheels FOR WAGONS.
Made to fit any axle, any sized wheel, any width tire. Every farmer should have a set. They are low and handy. They save labor, and the wide tires avoid cutting the farms into ruts. Write for Prices.
Dominion Wrought Iron Wheel Co., LTD.,
9 AND 11 BRICK AVE., TORONTO, ONT.

BINDER TWINE SEASON 1902.
"Farmers' Special" binder twine supplied to FARMERS ONLY at 1/4c. per lb., baled in cotton grain bags, bound with rope halters, and weighing 60 lbs. to the bag; length over 500 ft. per lb.; quality and length guaranteed. Cash with orders; purchaser pays freight. Address orders, J. T. Gilmour, Warden, Central Prison, Toronto. Further particulars, address James Nuxon, Inspector, Parliament Buildings, Toronto.
J. R. STRATTON, Prov. Secretary.
Toronto, June 10, 1902.

INGLESIDE HEREFORDS.
A few choice heifers and young bulls by **Mark Hanna**, sweepstakes bull at Pan-American.
Shropshire Sheep and Tamworth Swine.
H. D. SMITH,
Compton, Quebec, Ont.

High Park Stock Farm Galloway Cattle, A few choice young heifers and bulls for sale. Inspection invited.
SHAW & MARSTON (late A. M. & R. Shaw)
P. O. Box 294, BRANTFORD, ONT.

Spring Brook Holsteins and Tamworths
A few choice 2-year-old heifers, 1 yearling and 2 calves, all sired by my imp. prizewinning bull, Judge Akkrum De Kol 3rd, and out of rich-bred cows. Stock strictly choice. A few Tamworths to offer.
A. C. HALLMAN, Breslau, Ont.
Box 26, Waterloo Co., Ont. (Formerly New Dundee.)

High-class Herefords
We have for sale the following choice young stock, which have been bred from imported and American sires. Intending buyers will do well to inspect the following: 18 young bulls, 2 aged bulls, 20 young heifers. Correspondence invited.
A. S. HUNTER, DURHAM, ONT.

The Sunny Side Herefords.
Imp. Sunny Side Tom 1st at head. Lord Wilton, Garfield, Grove 3rd, Diplomat and Anxiety blood represented. For sale: 5 bulls from 9 to 30 mos., and 20 choice young cows and heifers. Inspection and correspondence solicited.
O'NEIL BROS., Southgate, Ont.
Lucan station, G. T. R. Elderton station, L. H. & B.

Bonnie Burn Stock Farm. 40 rods north of Ont., offers Shorthorn bulls and heifers with calf. Shropshire ewes with lamb, and Berkshire pigs. All at farmers' prices. Inspection invited.
D. H. RUSSELL, Stouffville, Ontario.

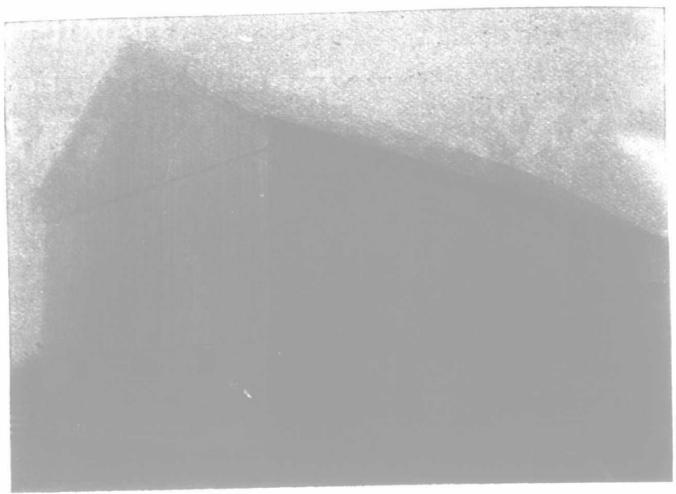
Shorthorns for Sale.
6 heifers (all in calf), from Imp. British Statesman; also two young bulls, 18 months old. Write for prices.
LOUIS ELLARD, Loretto P.O., Beeton Stn.

"IT IS WITH PLEASURE THAT I TESTIFY TO THE GOOD QUALITIES OF YOUR

Thorold Cement

FOR BUILDING PURPOSES."

A WELL-TO-DO FARMER NEAR ALVINSTON THIS TIME.



BASEMENT BARN OF JOHN BLACK, NEAR ALVINSTON, ONT. Walls 36 x 60 feet, 8 feet high. Mr. Black used Thorold Cement in both basement walls of barn and floors of stables.

ALVINSTON, ONT., Oct. 22, 1900.
ESTATE OF JOHN BATTLE, Thorold, Ont.:
DEAR SIRS,—It is with pleasure that I testify to the good qualities of your Thorold Cement for building purposes. I have just completed an eight-foot wall under my barn, 36 x 60 feet. I have also floored all my stables with it, using in all 159 barrels of cement. The work was done under the supervision of William Hand, a man who I am pleased to recommend to any of my fellow farmers contemplating erecting concrete walls or floors.
I remain, Yours truly,
JOHN BLACK.

ESTATE OF JOHN BATTLE, THOROLD, ONTARIO.
MANUFACTURERS OF THOROLD CEMENT.
"We do not place our cement to be sold on commission."

Queenston Cement

WE have reduced our prices, and are prepared to demonstrate that no better value for the money is obtainable anywhere. All work done with our cement according to our instructions is guaranteed to be absolutely perfect. A barrel of Queenston Cement, though weighing less, contains just as many cubic inches of cement as any barrel of Portland. In mixing concrete, the cement is gauged by measure, not by weight. Farmers and others will do well to remember this fact, and not be misled by false statements. Write me, or see my agents, for full particulars.

Isaac Usher, QUEENSTON, ONT.

TROUT CREEK HERD OF Shorthorns
Won first prize for herd and the championship for best bull and best female, any age, at Toronto Industrial and Pan-American Exhibitions, 1901. We keep constantly in our herd a choice lot of imported and Canadian-bred cattle of both sexes. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains if notice is given. Visitors always welcome. Address:
JAMES SMITH, Manager, MILLGROVE, ONT.
W. D. FLATT, 378 HESS ST., SOUTH, Hamilton, Ontario.

ROSEVALE SHORTHORNS



Are of the up-to-date sort. We have for sale a number of young bulls and heifers of all ages. Marengo Heydon Duke (imp.) heads the herd. -om
W. J. SHEAN & CO.
 Owen Sound, Ont.

Shorthorns and Berkshires

Four young bulls, 6 to 12 months old. Pigs, 2 to 6 months old. Pairs supplied not akin. -om
MAC CAMPBELL, NORTHWOOD, ONT.

SHORTHORNS (IMP.)



Cows and heifers, imp. and home bred. Bulls, imp. and home bred—all ages. Representing the fashionable blood of Scotland. -om

EDWARD ROBINSON,
MARKHAM P. O. & STN.

SHORTHORNS: We are offering 3 extra choice yearling bulls, all from imported sires, straight Cruickshank, with Lavendar and Miss Ramsden dams. -om
THOS. ALLIN & BROS.,
 Oshawa, Ont.

FOR SALE: 5 Scotch Shorthorn Durhams (bulls), 5 to 16 months; 5 young cows and heifers. Berkshire pigs, both sexes. Prices reasonable. "Camden View Farm." -om
A. J. C. SHAW & SON, Thamesville P. O.

J. & W. B. WATT,
SALEM, ONTARIO
 (POST AND TELEGRAPH OFFICE).

BREEDERS OF—
 Shorthorn Cattle, Clydesdale Horses, Leicester and Oxford Sheep, and Berkshire Pigs.

Our herd contains such families as Matchless, English Ladies, Mildreds, Village Buds, Missies, Stamford, Mysies, Vanillas, Claretts, and Marthas. The imported bulls, Scottish Peer and Coming Star (a prizewinner at Chicago in 1901), now head the herd.

Farms 2 miles from Elora Stn., G.T.R. and C.P.R., 12 miles north of Guelph. -om

Shorthorns, Berkshires, Leicesters

Am offering at present the grand stock boar, Crown Prince; also some young ones. -om
ISRAEL GROFF, ALMA, ONTARIO.

SHORTHORN BULLS FOR SALE: A choice lot of Shorthorn bulls from 10 to 16 months old, sired by Imp. British Statesman (63729) = 28833 =; and cows of the Mara family. They must be sold at once. Prices away down to suit customers. -om
FITZGERALD BROS.,
 Elmvale Station, G.T.R. Mount St. Louis P. O.

SHORTHORNS, SHROPSHIRE, COTSWOLDS

We are now offering a number of heifers and heifer calves; a few bull calves; a number of cows; all bred in the purple and as good as the best. Also Shropshire and Cotswold sheep. -om
JOSEPH BELL ESTATE, Bradford P. O. & Sta.

SHORTHORNS.

Fashionably bred, of both sexes and all ages. Nothing reserved. -om
H. PARKER, Durham P. O. and Station.

LAKE VIEW STOCK FARM.

SCOTCH SHORTHORNS, both sexes, all ages. As good as the best. -om
Meaford Station, G. T. R. North. om JAMES BOWES,
 Strathnairn P. O.

Maple Lodge Stock Farm.

ESTABLISHED 1854.

SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale. -om
LEICESTERS.—A grand lot of ewes, bred to our imported rams, and a few choice rams, now for sale.

A. W. SMITH,
 Allen Craig Station, Maple Lodge P. O., G.T.R., 3 1/2 miles. -om

SHORTHORNS FOR SALE: 6 yearling bulls, cows and heifers, all ages. Cows and heifers in calf to Sir James, deep milkers. -om

H. E. HIND, Hagersville P. O. and Station,
 G. T. R. and M. C. R.

W. G. PETTIT & SONS

FREEMAN P. O., ONT.,
 IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep,

Make a Special Offering for May and June:

One of our imp. stock bulls, 3 years old, red; one imp. bull, 2 years, roan; two bulls imp. in dam, 15 months; four bull calves from imp. cows, 12 and 14 months; four home-bred bulls by imp. bulls, 15 to 18 months; seventy-five imp. and home-bred cows and heifers, all ages. Catalogues on application. -om

Burlington Jct., G.T.R. Stn., Tele. & 'Phone.

NOTICES.

FIELD TRIAL WINNINGS.—The McCormick Harvesting Machine Co. write us: "We are advised by our European manager of the following triumphs of the McCormick in the field trials and exhibitions, held on the dates and at the places named below: Edinitz, Besarabia Government Exhibition held from May 18th to 23rd, 1902, large silver medal, the only award on harvesting machines, presented by the Imperial Agricultural Society of Russia, Kempen, Holiard, June 12th, 1902, gold medal—first prize over thirteen competing machines, including the Johnston, Deering, Osborne, Adriance, Buckeye, Emerson, Champion, and Wood. This was the most extensive field trial ever held in Holland."

LUMP JAW CURE.—Here is a remedy for lump jaw in cattle that is guaranteed to cure—"free if it fails," is the way the makers put it. There is no guesswork about the results where Fleming's Lump Jaw Cure is used, as it cures in from one to three applications. It is easily applied, harmless and humane. Have also Poll Evil Cure and Cure for Spavin. Free information and book of testimonials from many users sent free to all who write Fleming Bros., 36 Front street, West, Toronto, Ont., mentioning catalogue K.

WOVEN WIRE FENCING.—The up-to-date farmer is very careful about the selection of fencing material, and justly so, for not only is the usefulness of his fields increased when wisely fenced, but also a general attractiveness has been added which is pleasing both to the owner and passer-by. When a genuine good fence has been built, the actual value of the farm has been increased far beyond the total cost of the work and material. The Canadian Steel and Wire Co., Limited, of Hamilton, Ont., furnishes many different styles of guaranteed up-to-date woven wire fencing. The "American Field and Hog Fence" is made by them. It is of six different heights, with stays from six to twelve inches apart, as required, and makes a good serviceable fence. It is manufactured in rolls of 40 rods each, and can be attached to the posts at the rate of one rod per minute. The "Ellwood Special" is another strong, reliable make of the same firm. It is also made in six different heights, and as many different styles. The lateral wires are coiled spring cables, with single-strand reinforcements, diagonally arranged, making a diamond mesh. Regarding mesh, there are many sizes to choose from, but all requirements along that line can be satisfactorily met. It is claimed that 200 rods of this style of fence can be put up each day. This Company makes a specialty of farm and railroad fencing, and fully realizing that material and constructing superior material and employing at all times the best workmen, they have determined to build up a business that shall command confidence and prove a boon to wire-fence purchasers. Although this Company only began operations on the first of March, 1902, the first season's output of their thoroughly equipped factory will reach over 2,000 tons of wire fencing, proving that their effort is being appreciated by farmers and others. Interfering wire-fence purchasers will do well to call at or write to the Canadian Steel and Wire Co., Hamilton, Ont., whose announcement will be found elsewhere in this issue of the Farmer's Advocate.

GOSSIP.

Volume 16 of the British Suffolk Flockbook has been received at this office, for which we are indebted to the kindness of the secretary, Mr. Ernest Prentice, 64 Oxford street, Ipswich, England. It is a well-bound and clearly-printed volume of 295 pages, containing registry of some 250 recognized flocks of pure breeding, and of 375 stud rams, besides a record of prizewinnings at other leading shows in 1901 and much other useful information concerning this breed, which has become very popular with English farmers.

At E. H. Donchey's Shorthorn sale at Newton, Iowa, June 18th, the 53 head sold made an average of \$725. The 49 females sold for an average of \$754. At the sale from Des Moines, Iowa, June 19th, the 56 head disposed of made an average price of \$445. The six-year-old cow, Canadian Duchess of Gloster, 28th, bred by Thos. Allin & Bros., Oshawa, Ont., and sired by Imp. Indian Chief, sold for \$1,045, the highest price made by any animal in the sale.

Mr. Jas. Laigly, of the firm of Dalgety Bros., Dundee, Scotland, and London, Ont., has sailed for Great Britain for the purpose of bringing out another importation of Clydesdale stallions and mares, and a few Shires and Hackneys. The members of the firm in Scotland have already secured a number of prizewinning and high-class stallions and mares, to which will be added other sections of equal excellence, and from the experience and good judgment of the firm and the character of their former importations the coming consignment to arrive about the end of August may be expected to be of high-class quality. Intending purchasers should make it a point to see them early. Read their advt.

Shorthorn Bulls.

Good ones. Choicely bred. Moderate prices. Send for bull catalogue. Also Scotch-bred cows and heifers.

H. SMITH, HAY, ONTARIO.

Exeter station on London and Wingham branch of the G. T. R. adjoins the farm. -om

Hillhurst Shorthorns

AND HAMPSHIRE DOWN SHEEP.

THERE are few herds on the continent that can boast of three as good stud bulls as Joy of Morning 15303, Scottish Hero 14553, and Scottish Beau 14552. These are all imported bulls, of the richest breeding, and right well do they reflect the possibilities of the future character of the Shorthorns being bred at Hillhurst. The breeding cows at Hillhurst are of Scotch and English breeding, and are especially noticeable for their size.—*Live Stock Indicator*, May 15, 1902.

M. H. COCHRANE, COMPTON CO., P. O.,
 G.T.R., 117 MILES EAST OF MONTREAL. -om **HILLHURST STATION.**

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

Imp. Golden Drop Victor our present stock bull. Eleven young bulls and some young cows for sale at reasonable prices.

H. CARGILL & SON,

Cargill Station, G. T. R. CATALOGUE FREE. -om Cargill, Ontario.

ARTHUR JOHNSTON

BREEDER AND IMPORTER OF

SHORTHORNS ONLY.

FOR SALE: Imported bulls and bull calves. Home-bred bulls and bull calves, from imported cows and by imported bulls. Home-bred bull calves. A large and excellent lot of young cows and heifers of various ages. -om

GREENWOOD, ONT., P. O. AND TELEGRAPH OFFICE.
PICKERING, G. T. R., 22 MILES EAST OF TORONTO.
CLAREMONT, C. P. R., 28 MILES EAST OF TORONTO.

RAILWAY STATIONS:

Spring Grove Stock Farm.

Shorthorn Cattle
 AND
 Lincoln Sheep.



get of the great sire, Wanderer, of the Cruickshank Braith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply -om

T. E. Robson,
 HILBERTON, ONT.

Rapids Farm Ayrshires.

REINFORCED BY RECENT IMPORTATIONS of 2 bulls and 20 cows, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows last year. Imported Douglassdale of Dam of Aber, champion at the Pan-American, heads the herd. Representatives of this herd won the first herd prize at the exhibitions at—



Toronto, London and Ottawa in 1900, and at the Pan-American in 1901.

Come and see or write for prices. Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. Watson Ogilvie, Lachine Rapids, Quebec.

Scotch Shorthorns: Of both sexes, of the following noted families: Golden Drops, Rosebuds, Claras, Matchless, Strathallans, Vain Duchesses, Marr Beautys, Mayflowers, Crimson Flowers, and others; 56 head to select from. Herd headed by the imported Bracelet bull, Red Duke = 36084 = (77685). -om
DAVID MILNE & SON, ETHEL P. O.,
 Huron Co., Ont. Ethel Station, G.T.R., half mile from farm.

"ORCHARD HILL" SHORTHORNS.

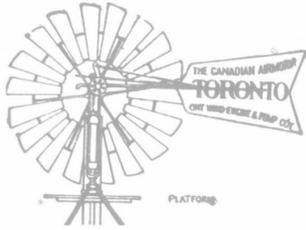
Herd comprises representatives of best Scotch-bred families, with Lord Lavender at head. Young animals of both sexes for sale. -om
ARTHUR JOHNSTON, Vandeleur, Ont.

PLEASE MENTION FARMER'S ADVOCATE

HIGH-CLASS SCOTCH SHORTHORNS

of the following families, for sale at moderate prices: Village Girls, Broadhooks, Beaufort Roses, Missies, Claretts, Marr Floras, Nonpareils, Minas and other choice families. Write for catalogue. Shropshire rams and ewes for sale as usual. -om
ROBERT MILLER, Stouffville, Ont.

WINDMILLS



You require one that will do your work satisfactorily. The

Canadian AIRMOTOR

TERROR TO WORK.

WHY? **CAST-IRON CONSTITUTION. MECHANISM SO SIMPLE. MATERIAL THE BEST.**

ONT. WIND ENGINE & PUMP CO. LIMITED. TORONTO, ONT.

SHORTHORNS.

YHORNHILL HERD. ESTABLISHED 27 YEARS. Imp. Royal Member and Sailor Champion now at head of herd, which are all bred on straight Scotch lines, and are of the up-to-date kind. Present offering: some choice young bulls.

Mercer's Shorthorns

Are represented by Missies, Stamfords, Floras, Claret Princesses, Red Roses, Fashions, Crimson Flowers, and Matchless families. Headed by Village Squire 24983, a son of Abbottsford. Stock of both sexes and all ages for sale.

T. MERCER, MARKDALE P. O. & STN. GEO. ISAAC, BOMANTON, ONT.

Scotch Shorthorn & Clydesdale CATTLE HORSES.

Forty-one head of Shorthorns arrived from quarantine 20th March. One Clydesdale stallion for sale.

MAPLE GROVE SHORTHORNS.

I am now offering 5 bulls from 10 months to 2 years old; imp. and home-bred; of the low, fleshy sort. Write for prices. W. B. CAMPBELL, Campbellcroft P.O. Garden Hill Station.

SHORTHORNS FOR SALE.

Two young bulls, 7 and 10 months; two heifers, 3 years old, with calves at foot; one heifer 1 year old. JAS. RIDDEL, BEETON P. O. and STN.

BISSELL'S DISK HARROW

has a peculiar knack of working dry, hard land or tough, stubborn soil better than any other cultivator. Write for full particulars. T. E. BISSELL, Large sizes made for ELORA, ONT. Northwest farmers.

Shorthorn Cattle, Lincoln Sheep

Imp. Prime Minister at head of herd. Imp. Clippers, Miss Ramsdens, and other Scotch families. Lincolns won more than half the money and first for flock at the Pan American; International, Chicago, 1901 and 1902.

J. T. GIBSON, DENFIELD, ONT.

SHORTHORNS FOR SALE

Sired by Scottish Chief and Abbottsford, and from prizewinning dams. Also cows, heifers, and Berkshire pigs.

ALEX. LOVE, EAGLE P. O. BIRMARCK STATION ON M. C. R.

Shorthorns and Leicesters.

Herd Established 1855. A number of young bulls, cows and heifers for sale. Imported Christopher = 28859 = heads the herd of large cows of grand milking qualities. Also a number of Leicesters of both sexes, from imported foundation. JAMES DOUGLAS, CALEDONIA, ONT.

HORSEMEN! THE ONLY GENUINE US

GOMBAULT'S CAUSTIC BALSAM.

THE SAFEST, BEST BLISTER EVER USED. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or blemish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

ESTABLISHED 1855 TAYLOR'S FIRE & BURGLAR SAFES

HAVE MANY PATENTED IMPROVEMENTS NOT FOUND IN OTHER MAKES THAT WILL WELL REPAY AN INVESTIGATION BY THOSE WHO DESIRE TO SECURE THE BEST SAFE J. & J. TAYLOR. TORONTO SAFE WORKS. TORONTO: MONTREAL VANCOUVER WINNIPEG VICTORIA

About Heating

Is the title of a short, common-sense treatise on this subject which we have just issued, and which we desire to place in the hands of every one interested.

It is brimful of information and advice, and no householder should be without it.

If you send us a card, saying you are interested, we shall send you a copy immediately, free of charge.

CLARE BROS. & CO., PRESTON, ONT.

BELLEVUE SHORTHORNS.

Both sexes. IMPORTED AND HOME BRED. All ages. Prizewinners at home and abroad.

EDWIN BATTYE, GORE BAY P. O. AND PORT. MANTOULIN ISLAND.

R. MITCHELL & SON, NELSON P. O., ONT.

Scotch Shorthorns. We now have for sale three red bulls from 7 to 10 mos. old, by imported sires, and out of Imp. Rosemary, Duchess, Gwynne and Mayflower dams. Also a number of females, Scotch and Scotch-topped, in calf to imported bulls.

Burlington Jct. Station and Tele. Office.

SHORTHORNS (IMP.)

FOR SALE: My stock bull, Imp. Capt. Mayfly, a prizewinner, and calves by him and out of imported and home-bred cows. Various ages.

JAS. A. CREER, Shakespeare Sta. and P. O.

JAS. GIBB, Brooksdale, Ont.

SHORTHORN CATTLE. Imp. Prince William at head of herd. Stock for sale.

HIGH-CLASS SHORTHORNS

Imp. Spicy Count 30117 heads the herd. Just now 1 bulls, from 12 to 18 months, 1 very superior; 10 or 15 young cows and heifers in calf; and a lot of Yorkshire pigs. JAS. McARTHUR, Goble's, Ontario.

GOSSIP.

During the early eighties there were held in New York City annual breeders' sales of Jerseys. These sales were very popular, brought together many prominent Jersey breeders, and were the means of scattering animals of good breeding and splendid individuality among the herds of this breed. These sales will be resumed in the spring of 1903, under the management of V. E. Fuller & Company, with Mr. A. Callahan, of the Country Gentleman, as auctioneer.

Mrs. E. M. Jones, Brockville, Ont., owner of the noted Belvedere herd of Jersey cattle, makes an important announcement in her new advertisement in this issue, which breeders and farmers, as well as town and city people, wanting family cows, will do well to note. Mrs. Jones sends us a photo, too dimly printed for reproduction, of the four-year-old cow, Oria H., in the Belvedere herd that has made nearly 15 lbs. of butter in a week on farmer's keep. Judging from the great size and perfect form of her udder, one can readily believe her capable of beating even this good record. As Mrs. Jones' pasture land is limited, she finds it necessary to reduce the stock of cattle and is offering for sale some very desirable things. Those interested will do well to correspond with her.

The excellent roan four-year-old bull Bismarck, illustrated on another page of this issue, is one of the stock bulls in the extensive herd of high-class Shorthorn cattle maintained on the 3,000-acre Thorndale farm of Mr. John S. Robson, of Manitou, Manitoba. He is a bull of fine quality and character, being sired by Maxon = 24864 =, of the Beauty Roan tribe, by British Flag, a Kinellar Crimson Flower bull by the noted Barmington Hero, whose dam, the Cruickshank-bred Imp. Mimilus, was daughter of the immortal Champion of England, the Nestor of the Sittlyton herd and the most potent influence in the evolution of present-day Shorthorns of approved type. Bismarck is associated in the herd with two other excellent sires, one of which is the roan Royal Judge 29260, by the Champion Judge, by Imp. Royal Sailor, bred by W. S. Marr, of Uppermill. Royal Judge's dam was Roan Mary = 26728 =, bred by Hon. John Dryden, was sired by Conqueror, by Imp. Vensgarth, and out of Imp. Lady Marjorie, bred by Mr. E. Cruickshank. The other stock bull is the red three-year-old Challenge = 30462 =, by the first-prize-winning Caltheiss = 22065 = and out of the Imp. Jessie 142nd, of the same family as Mr. W. S. Marr's great cow, Missie 153rd, sold for \$6,000 at Chicago last December, the highest-priced cow living. With such sires succeeding the Cruickshank Village bull, Village Boy 52nd, and Marchmont Earl, by Imp. Gravesend Heir 2nd, dam by Imp. Premier Earl, previously in service, the character of the Thorndale herd is bound to go on improving and keeping up to date.

A large draft of over forty Shorthorns has recently been consigned to the order of Mr. W. D. Fatt, of Hamilton, Ontario. The animals were secured from a large number of leading herds, including that of Lord Rosbury at Dalmony. From Mr. P. L. Mills, Riddington, came several very pretty heifers, including Viscountess Oxford of Riddington and Queen of Oxford 9th, both sired by sons of the old-time champion bull, Marengo; Druid Charity, a Clipper heifer by Druid Stone, a son of the famous Corner Stone; Broadhooks Violet, a Broadhook's heifer in calf to Marengo Sittlyton Duke; and Electric Spark, a thick, blocky heifer, by Electric Star, a son of Morning Star. Amongst the other heifers in the group were Julia, a very good Ballechin-bred heifer, by Newton Stone, another son of Corner Stone; Maggie 12th, a sweet roan heifer bred by the late Mr. Goodbrand Ross-shire; Eliza 18th, a very fine heifer, bred by Mr. Stewart, Millhill, Crief, and sired by Lucky Pride; Daylight, a big swashy two-year-old bred by Mr. Davidson, Swinnie, Jedburgh; Fanny Byres, a level, well-colored heifer, bred by Mr. Bruce Byres; Marjory, a very thick, well-fleshed heifer, bred at Balmakyle, and by Merry Fortune; Lucretia, a nice roan heifer, bred at Nether Dalachy; and Fleur de Lis, the first-prize heifer at Aberdeen in the spring. There are also some very fine animals amongst the cows, specially notable being Aggie Grace 2nd, a daughter of the Royal and Highland Society prize cow, Aggie Grace; Gay Lustre, whose dam, Chief Lustre, was a great prizewinner in her day; and Red Lady, a splendidly colored and fleshed cow, bred by Mr. Turner, Cairnton. Other cows worthy of special mention were Lady 28th, a fine young Newmore-bred cow; Scottish Countess, another superior young cow, bred at Legars, Kelso; and Primrose 4th, also a capital young cow in calf to the Dalmony stock bull. Villager - The bulls in the draft were mainly yearlings, amongst them being the Stoneytown-bred Daydream's Pride by Pride of Lancaster; Palermo, a Jackson-bred bull, by Merry Hampton; Courier of Cluny, whose sire was the Collyne-bred bull, Prince of Beauty; and Pride of Dalmony, a very fine young roan, got by Village Archer, out of a cow whose dam, Scottish Primrose, was own sister to the famous breeding bulls, Prince of Fashion and Prince of Archers. The cattle all over formed one of the best drafts that has yet been shipped to Canada, and with luck on the voyage many of them are sure to be further heard of from the other side - London Live Stock Journal.

Free Treatment

DR HOPE'S TINY ABLET TREATMENT

For LIVER KIDNEY and NERVE Troubles.

The three most prevailing causes of death in the present century. The Dr. Hope Medicine Co., Limited are so positive of the efficacy of their Treatment that they send Free Samples and their large treatise entitled "How to Live Long" on receipt of name and address. Write at once to

DR. HOPE MEDICINE CO., LIMITED, TORONTO, ONT.

WE HAVE FOR SALE 10 SHORTHORN BULLS

From 6 to 18 months old. Nearly all from imp. dams, and sired by the imp. Golden Drop bull, Royal Prince. Catalogue upon application.

John Miller & Sons, Brougham P. O. CLAREMONT STATION, C. P. R. ONT.

QUEENSTON HEIGHTS SHORTHORNS

SCOTCH AND SCOTCH TOPPED In service: Derby (imp.) = 32057 =; Lord Montalis, by Collynie Archer (imp.) = 28890 =. Some choice heifers and young cows with calf at foot or in calf to imported bull at moderate prices.

HUDSON USHER, QUEENSTON, ONT. FARM 3 MILES NORTH NIAGARA FALLS

For Sale: Very heavy, massive cows of Bates and Cruickshank breed. Two-year-old heifers in calf. Stock bull, Imperial 2nd, No. 28883. Bull calf, 11 months (Cancoper Boy 2nd = 39678 =), dam Flora = 32374 =; also dark red heifer calves. John McFarlane, Dutton, Ont.

GEORGE D. FLETCHER, BINKHAM, ONTARIO.

Breeder of Shorthorn Cattle, Yorkshire Swine, and Single-comb White Leghorn Fowl.

This herd contains such families as Mysies, Nonpareils, Crimson Flowers, Languishes, Butterflays and others, and is headed by my famous stock bull, Spicy Robin 28239 =. Young stock for sale. Also eggs for hatching, \$1 per 15. Erin shipping station, C.P.R.

Shorthorns & Yorkshires

We are offering two Shorthorn bulls, 13 and 18 months, bred close to imported stock, at \$80 each. Two-months Yorkshire pigs, sired by our Toronto winner, at \$7. Embled gese eggs, 25c. each. Barred Rock eggs, five settings for \$2.

W. R. BOWMAN, MT. FOREST, ONT.

JOHN DRYDEN, BROOKLIN, ONTARIO.

BREEDER OF CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP. 40 shearing rams and 30 shearing ewes of extra size, substance and quality now for sale. Prices are interesting. Visitors welcome.

CHARLES RANKIN, WYEBRIDGE, ONT.

Importer and breeder of Shorthorns, Oxford Downs and Berkshire Pigs. Young stock always on hand.

For Sale: TWO CHOICE SHORTHORN BULLS.

registered sires, British Hope (30946) and Royal Charlie (30118). Also Yorkshires and Berkshires, both sexes. Write: C. & J. CARRUTHERS, Cobourg, Ont.

HAWTHORN HERD

of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from 11 dairy cows. WM. GRAINGER & SON, Londesboro, Ont.

Imp. Shorthorns and Lincolns

A. D. MCGUGAN, RODNEY, ONT., P. O. AND STA.

Now offers one year-old roan bull, out of Imp. Day-spring, sire Abbotford 14916; a prizewinner sure. Also a few choice heifers out of imp. and home-bred dams, and ram lambs out of imp. Dudding ewes.

Shorthorns and Yorkshires In Shorthorns we are offering four young bulls from 7 to 9 months, also a few heifers. In Yorkshires we can supply either sex of various ages. All at J. R. McCallum & Son. Living prices. Iona Sta. and P. O., Elgin Co.

HOLWELL MANOR FARM

SHORTHORNS, SHROPSHIRE, YORKSHIRES, SCOTCH COLLIES.

D. G. GANTON, ELMVALE, ONT.

RARE YOUNG BULLS

of serviceable age for sale; also females of all ages. Roans and reds. Prices right.

E. & C. Parkinson, Thornbury P. O. & Stn., G. T. R.

E. JEFFS & SON, BOND HEAD, ONT.

High-class Shorthorns, Leicesters and Berkshires.

Young bulls and heifers; young boars and sows for sale. Write, or come and see.

Shorthorns, Cotswolds & Berkshires

FOR SALE: A choice lot of this year's bull calves—reds and roans—from good milking dams; Bates and Scotch breeding. Also cows, heifers and heifer calves. Young pigs, two months old, of the long bacon type.

F. BONNYCASTLE & SONS, Campbellford, Ont.

Centre Wellington Scotch Shorthorns

Young bulls, heifers and young cows for sale. Farm adjoining town on G. T. R. and C. P. R. Correspondence solicited.

H. B. Webster, Box 66, FERGUS, ONT.

T. DOUGLAS & SONS, STRATHROY, ONT.

BREEDERS OF

Shorthorns & Clydesdales

100 SHORTHORNS TO SELECT FROM. Hard bulls (imp.) Diamond Jubilee = 28861 = and Double Gold = 37852 =. We offer for sale a choice lot of young bulls, cows and heifers of all ages. Also one 3-year-old stallion, and one 4-year-old brood mare. Farm one mile north of town.

Hillside Shorthorns and Shropshires.

Bulls, from 8 to 18 months old; heifers, various ages, of true type and fashionable breeding; also 25 ram lambs and 15 ewe lambs, from imp. sire. Will quote prices right for quick sales.

L. Burnett, Greenbank P. O., Ont.; Uxbridge Sta., G. T. R.

GREEN GROVE SHORTHORNS:

I am now offering a few heifers, Claret, Floras, and one Missie; also a choice year-old bull, by Aberdeen of Markham.

W. O. MILSON, GOBING P. O. and MAREDALE STATION.

NO HUBBUB & PERFECT INSTRUMENTS

Humane Swine V. Stock Marker and Calf Dehorner. Stops wire of all ages from rooting. Makes 48 different ear marks, all sizes, with same blade. Extracts Horses. Testimonials free. Price \$1.50 or send \$1 for trial. If fit works, send balance. Pat'd U.S. May 6, '92 for 17 yrs.; Canada Dec. 17, '01, 15 yrs. FARMER BRIGHTON, Fairfield, Iowa, U.S.A.

SHORTHORNS (imported)

One imported and one Canadian-bred bull. A few cows and heifers.

THOS. RUSSELL, EXETER, ONT.

Brookbank Holsteins

16 to 25 lbs. of butter in 7 days' official test are the records of this herd of Holstein cows. Heifers of equivalent records. Bulls for sale whose sires and dams are in the Advanced Registry, with large official butter records.

GEO. RICE, Currie's Crossing, Ontario, OXFORD COUNTY.

CHOICE JERSEYS.

Am offering 1 cow 5 years old, due to calve Feb. 6, very choice; bull calf 11 months old, registered, and cheap.

WM. N. HASKETT, Avon Manor, Markdale, Ont.

GOSSIP.

Mr. W. H. Hunter, "The Maples" farm, Orangeville, Ont., has recently purchased from Mr. Charles W. Armour, Chicago, three fine three-year-old Hereford heifers for \$1,500. The families represented by his purchase are of choice breeding, and should prove a valuable addition to his herd. His first choice was the imported heifer, Buttermaid 2nd 138043, bred by W. T. Barneby, Saltmarsh Castle, Bromyard, England, by Hilarity, a son of Grove 3rd, and a grandson of Horace; her dam being Bultermaker, by Proher quois, a get of Lord Wilton. His other selections were Garland 138256 and Dorothy 138233, bred by Capt. E. L. Heygate, Ruckland, Leominster, England, by Pine Lad. Three heifers of Fine Lad's get were recently sold to His Majesty the King for the Royal herd at Windsor.

The American Holstein-Friesian Association at its last annual meeting appropriated \$1,000 for prizes for long-period butter records made by cows registered in its herdbook. The records are to be made for periods of thirty days, six months, or 180 days, and the cows may enter in seven different classes, according to age. A cow may compete consecutively in the three periods, and may win three prizes. Full particulars as to conditions may be obtained from the Supt. of Advanced Registry, Mr. S. Hoxie, Yorkville, N. Y.

Ridgevale Stock Farm, the property of Mr. R. W. Walker, breeder of Holstein cattle, is situated in the County of Ontario, five miles from Port Perry station on the G. T. R. and five miles from Myrtle station on the C. P. R. The present splendid herd was founded on the two richly-bred females, Madam R. 651, sired by Sir Westwood No. 12; dam Madam Dot, imp., whose milk record was 75 lbs. a day, and who cost her importers \$800.00. The other was her Diplomat 3rd, by Bonnie Queen's Last Boy; dam Diploma, whose two-year-old milk record was 40 lbs. a day. Her dam, Imp. Sykie, had a milk record of 78 1/2 lbs. a day. Diploma 3rd belongs to the Bonnie Queen Strain, whose superiority as heavy milkers is well known. On these cows and their progeny have been used such well-bred bulls as Butter Boy 2nd, Butter Boy, dam Aaltie Posch 4th, who made five lbs. of butter in three days, three weeks before she was two years old. Father Tensen, by Sir Archibald Mascot 353; dam Maud Tensen 11011, another noted record cow. The present stock bull is Forest Prince last week, 1813. He is a big well-proportioned animal, and is leaving a splendid lot of straight, even, level-backed youngsters. The cows of the herd are a typical dairy-type lot, showing an exceptional development of udder, averaging row on grass alone from 60 to 70 lbs. of milk a day. There are also a number of heifers in milk, two and three years old, that give from 40 to 50 lbs. of milk a day; also three-year-old heifers of the Diploma family, and by the stock bull, and several heifers from four to five months old, by the stock bull. Any or all of these heifers are for sale. At present the bulls are all gone. Mr. Walker reports the demand for Holsteins of the right kind, especially bulls, as by far the best he ever knew. His last one was shipped last week, and he had two orders to ship him at once the same day. In writing Mr. Walker, address him at Utica P. O., Ont.

Grafton herd of Jerseys is the property of Mr. E. B. Hinman & Son, whose farm lies in the County of Northumberland, about three miles east of the Village of Grafton on the main line of the G. T. R. The Messrs. Hinman's herd now numbers thirty head, mostly the St. Lambert strain, headed by the grand old stock bull, Nero of Glen Rouge 50241 sired by the well-known bull, 200 Per Cent.; dam Naomi of Glen Rouge, whose butter record was 18 lbs. 7 ozs. in 7 days. This bull is perfectly quiet. He was never known to make a mismove, which is no mean trait for a Jersey bull. Nearly all of the younger animals in the herd are sired by him, and out of such grand cows as Genie of Combination, by Perfect Combination. She is a cow of perfect form and udder, and is now milking 35 lbs. a day. Another is Marjoram's Blossom, by Marjoram's King. She is now milking 40 lbs. a day. Then there is Nero's Sunbeam, a young cow milking 30 lbs. a day. Gentle Cyclone, by Perfect Combination, is another of the good ones. There are a dozen heifers, some in milk, some in calf, and some younger. One of them sired by imp. Lord of Dentonia, is a cracker. Another, out of the cow, Gentle Cyclone, shows a perfect mould. These young ones are a grand lot, with grand shaped yellow udders, and are for sale. A young bull, lately purchased for a stock bull, is Dentonia's Achievement, by Tip-top Date of Dentonia; dam Island Queen, imp., winner of silver medal on the Island. There is also a couple of young bulls that are for sale that are a very evenly built pair. The Messrs. Hinman are also showing a splendid flock of Shropshire sheep of Thomas strain that are a blocky, well-covered lot. This season's lambs are sired by a Miller-bred ram, and are a fine growthy lot, showing perfect covering. They will all be for sale. Mr. Hinman reports sales in Jerseys as eminently satisfactory, he having sold a large number in the last year, and sent them to different parts of Canada, as well as three head to Americans.

Riverside Holsteins.

Victor De Kol Pietertje heads the herd, assisted by Johanna Rue 4th Lad, whose five nearest dams, including the record of his dam made at 25 months old, average ("official") 82.6 lbs. milk per day and 21.86 lbs. butter in one week.

MATT. RICHARDSON & SON, Haldimand Co. CALEDONIA, ONT.

We have now on hand young females sired by Nero of Glen Rouge 50241, and cows and heifers bred to him.

E. B. HINMAN & SON, GRAFTON, ONT.

4 HOLSTEIN BULLS 4

FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inka, Netherland, Royal Aggie, and Tritonia Prince, and out of imported females that have proven their worth at the pail. THOS. B. CARLAW & SON, Warkworth.

Ridgevale Farm Holstein-Friesians for Sale.

2 yearling bulls; also bull and heifer calves; all of choice breeding. Prices always reasonable. Write, or come and see them. R. W. WALKER, Utica P. O. Shipping stations: Port Perry, G. T. R.; Myrtle, C. P. R. om

LAWN RIDGE STOCK FARM.

Jerseys for Sale. Yearling bull and bull eight months old. Registered cows and heifers of choicest breeding and individuality. Some fresh and others coming in soon. 100 head to choose from.

J. L. CLARK, Norval station: G. T. R. Norval P. O.

CHOICE Jersey CATTLE. EXHIBITION AND DAIRY ANIMALS. MALE AND FEMALE. ALL AGES. MRS. E. M. JONES, BOX 324, BROCKVILLE, ONT., CAN.

JERSEYS FOR SALE. A few choice Jersey bulls and bull calves for sale at very low prices. Choice breeding; good colors. Write for prices. W. W. EVERITT, CHATHAM, ONTARIO. "Dun Edie Park Farm," Box 555.

BURNSIDE JERSEYS. For Sale: Two-year-old bull and bull calves for sale at very low prices. Choice breeding; good colors. Write for prices. W. W. EVERITT, CHATHAM, ONTARIO. "Dun Edie Park Farm," Box 555.

72 Head of High-class Jerseys 72

IN THE BRAMPTON JERSEY HERD NOW FOR SALE. Two yearling bulls of first-class dairy breeding and sure prizewinners. Seven bull calves, the best we ever had. Also a large number of cows and heifers. We have what you want. Come and see, or address, stating what you want. E. H. BULL & SON, BRAMPTON, ONT. C. P. R. and G. T. R. stations within 2 miles of farm.

SUNNYLEA FARM.

For sale: Jerseys—6 yearling bulls; females of any age. Tamworths—30 boars and sows, different ages. Shropshire sheep—rams and ewes of good breeding. Prices reasonable.

H. E. WILLIAMS, Knowlton, P. Q.

Exmoor Jerseys for Sale.

Heifer calves and deep-milking cows.

A. Norman Smith, Meaford P. O. and Stn.

F. L. GREEN,

BREEDER OF Jersey Cattle and Yorkshire Pigs.

Choice stock of each sex for sale.

PICKERING STATION, G. T. R. GREENWOOD P. O. CLAREMONT STATION, G. T. R.

Wm. Willis, Newmarket, Ont.

Breeder of A. J. C. C. Jerseys and registered Cotswold sheep. Have yet two fine young bulls from Count, fit for service; also Yorkshire swine.

FOR SALE:

Three grandly-bred Ayrshire bull calves, 12 to 15 mos. old. Also young calves, by Napoleon of Anchenbrain (imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshire and Yorkshire sows could be served before shipping. Cattle pups, from Perfection Queen. Address—T. D. McCALLUM, Danville, Que.

Nether Lea, -om

Show Ayrshires

FOR SALE.—I offer 2 choice show heifer calves; also 3 August (1901) bulls and 4 very fine March (1902) bulls by imp. sire. om W. W. BALLANTYNE, Stratford, Ont. "Neidpath Farm" adjoins city. Main line G. T. R.



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Meadowside Farm, Carleton Place, Ontario, Breeders of Ayrshire cattle, Shropshire sheep, Berkshire swine, and Barred Plymouth Rocks. A fine lot of the long Large English Berkshires for sale, ready to ship.

FOR SALE!

High-class IMPORTED AND HOME-BRED AYRSHIRES,

including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.

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Importers and breeders of choice, deep-milking

Ayrshires

Males and females for sale.

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W. F. STEPHEN, Trout River, Que., breeder

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Breeders of North Williamsburg, Ont. AYRSHIRE CATTLE, OXFORD DOWN SHEEP, BERKSHIRE PIGS AND BLACK JAVA FOWLS.

For Sale: 5 Bulls, from 6 to 12 months old. Females any age. One 2-year-old ram, six shearing rams, and five ram lambs.

Winchester, C. P. R. | Morrisburg, G. T. R.

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Imported bulls at head of herd: Glencairn 3rd, Napoleon of Anchenbrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address JAMES BODEN, Mgr., St. Anne de Bellevue, Quebec. Farm close to St. Anne Station, G.T.R. & C.P.R., 20 miles west of Montreal. om

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A yearling bull and several choice calves from heavy milkers, fit for exhibition purposes. Three Yorkshire boars fit for service; three sows ready to mate, also a number of young pigs fit to ship. om ALEX. HUME, MENIE, ONTARIO.

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Choice young AYRSHIRE bulls and heifer calves, from 2 to 9 months old. Also cows and heifers all ages. Write WM. STEWART & SON, Menie, Ont.

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Breeder of high-class AYRSHIRES. KESLO, P. Q.

AYRSHIRES.

Young stock for sale from imported and home-bred foundation. Prices reasonable.

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Non-Poisonous Fluid Dip

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

For sheep. Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

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Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective

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Sold in large tins at 75 cents. Sufficient in each to make from 25 to 50 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

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Sole agent for the Dominion. -om

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Stock always on hand for sale.

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Ayrshire HERD OF 150 cows and heifers, bred from deep milkers, with large teats, of a commercial stamp. Established over half a century. J. & A. Wilson, Boghall Farm, Houston, Renfrewshire, Scotland.

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Cows and heifers, all bred from prizewinning stock at the leading shows. Robert Wilson, Mansurna, Bridge of Weir, Renfrewshire, Scotland.

English Shorthorns.

Both and Bates Shorthorns, topped with Cruick-shank bulls, Young cows, bulls and heifers always on hand for sale. Eligible for the American herd-book. Royal and Highland prizewinners included for the last two years. Close on \$400 won in prizes last year and this. WM. BELL, Ratochugh Farm, Alnwick, Northumberland, Eng.

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One of the oldest and best of the English breeds for quality with size, hardiness, and milking properties. Suitable for all climates.

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JOHN BRYAN & SON, Southleigh, Witney, Oxon. - One of the oldest registered flocks of pure-bred Oxford Down. Annual sale of rams. Oxford ram fair. Rams and ewes for sale at home. Inspection invited.

Robert W. Hobbs, Kelmscott, Lechlade, England.

One of the largest flocks in Oxford Down Flockbook. Numerous prizes obtained for ram lambs at principal shows. Rams and ewes always on sale.

J. E. CASSWELL'S LINCOLNS. Loughton, Folkingham, Lincolnshire, England.

Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged \$51 each; 14 of the best averaged \$63 each, this being the highest sale of the season in the Argentine. Ram and ewe horns and shearing for sale; also Shire horses, Shorthorns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingsboro, G. N. E.

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Secretary of the National Sheep Breeders' Association.
Secretary of the Kent or Romney Marsh Sheep Breeders' Association,
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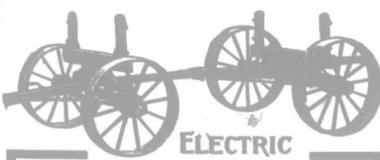
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The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England.

This herd is unrivalled for its true type, large size and strong constitutional vigor. It is the premier herd in England at the present day. Its show-yard career is unique, the champion prize for the best Large White pig at the R. A. S. E. having been won by pigs bred in the herd in 1896, '97, '99 and 1901, besides leading prizes too numerous to mention at all the principal agricultural shows in England. A choice selection of boars and sows for sale. Inspection invited. All purchases carefully shipped. For particulars, apply to the Manager, MR. J. HALLAS, Higher Walton, Warrington, England. Railway stations:—Warrington (Bank Quay) per L. & N. W. Ry.; (Central) per Midland, G. N. or G. C. Rys. Telegrams: "HALLAS Higher-Walton."



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We are now offering some choice shearings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

BROOKS & LANGMAID, COURTICE P. O.
SIX MILES FROM ORHAWA STATION, G. T. R.

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Offers for Sale

Cotswold Ewes and Ewe Lambs of good quality and breeding. Also a 3-year-old Clydesdale filly from imported stock, registered No. 3025. A Shorthorn heifer calf 8 months old from imported stock; Meadow Flower strain. Write for prices.

Dorsets & Chesters Young stock in Dorset Sheep and Chester White Hogs of good quality for sale, reasonable. R. H. HARDING, THORNDAL, ONT. "MAPLEVIEW FARM."

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Imported ewes and lambs. Can supply show flocks.

J. H. PATRICK, ILBERTON, ONT., CAN.

BROAD LEA OXFORDS.

We are offering for sale 30 shearing ewes of first-class quality, and 6 extra good ones in show condition; also 25 good shearing rams and 1 three-shear imported ram, and all of this season's lambs, which are a good lot. Write us for prices or come and see our flock.

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Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes.

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A choice lot of ram lambs (yearlings) and a few two and three shear rams fit for show and to head pure-bred flocks; imp. and home-bred, well covered, good quality.

om R. J. HINK, Dutton, Ont.

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Oxford Down Sheep

An offering 40 choice yearling rams to head flocks. 50 superior yearling ewes. 70 ranch rams. 100 ram and ewe lambs of 1902. From imported sires, and a number from imported dams. All registered. Barred Rock eggs, 75 cents per setting.

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SHROPSHIRE

Sired by CANADIAN FLAGSTAFF (IMPORTED) 15866.

This season's lambs; woolled all over, and of superior quality; from imported and home-bred ewes. Orders booked. A few GUERNSEY and AYRSHIRE bull calves. Prices reasonable. Satisfaction guaranteed. Address:

Isaleigh Grange Stock Farm, Danville, Que.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

TERRITORIAL RAM SALE AT MEDICINE HAT—SHEEP RECORD.

A well-attended meeting of the Board of Directors of the recently-organized Territorial Sheep Breeders' Association was held at Medicine Hat on the 23rd of June, the president, D. H. Andrews, of Crane Lake, in the chair. C. W. Peterson, secretary, suggested that arrangements might be made to organize a sale of pure-bred sheep during the coming fall. There were now very few breeders of pure-bred sheep in the country, principally owing to the absence of a regular cash market for rams, which such a sale would create. Messrs. D. H. Andrews, John A. Turner, J. A. Grant and others spoke in favor of the proposition. One of the principal objects of such a sale would also be to facilitate the exchange of sires, owners of small flocks being able to consign their discarded rams to the sale and buy others. It was pointed out that there were a great many useful pure-bred rams now on the range that had lost their ear tags, and that some difficulty would, therefore, be experienced in identifying them. In order to overcome this difficulty, a motion was passed to the effect that for the coming sale, rams to be offered should be divided into two classes. The first, accompanied by regular certificate of breeding; the second, only accompanied by owner's declaration of pure breeding to meet the cases where the identity of the ram had been lost. Upon the motion of Mr. John A. Turner, it was decided also to accept entries of pure-bred ewes. The mover stated that it would greatly stimulate the production of rams in the Territories if female stock were included in the sale. The auction sale is to be held in conjunction with the fall fair of the Medicine Hat Agricultural Society, which is to take place during the last week in September. In framing the rules governing the auction sale, those of the pure-bred cattle sale held at Calgary by the sister association were largely followed. It was decided to charge an entry fee of one dollar per head on all sheep entered, which will entitle the owner to free transportation from his nearest railway station to the point of sale, and also to free feed and maintenance of the animal up to the time it is disposed of. The entry fee for sheep delivered on the grounds at Medicine Hat was fixed at fifty cents. It was decided to charge all purchasers a uniform fee of fifty cents per head upon all sheep to be shipped by the Association to points lying west of Moose Jaw, to assist towards covering expenses.

The feeling of the meeting was that the number of pure-bred rams in the country was greatly out of proportion to the actual requirements, and it was, therefore, agreed that rams imported from the Eastern Provinces should be admitted to the privileges of the sale upon the same conditions as those now owned or bred in the Territories. Two members present at the meeting professed their willingness to bring in one hundred and fifty pure-bred rams from Ontario to be put up without reserve. The question of holding a show of pure-bred sheep was then taken up, and after careful deliberation the decision was arrived at to meet the Medicine Hat Agricultural Society with a view to arranging to have the sheep section of its fall fair placed under the charge and control of the Sheep Breeders' Association. The intention was to offer prizes for breeding stock and provide separate classes open only to competition amongst sheep consigned to the sale, thus following the practice of the Spring Pure-bred Cattle Show, Calgary.

At a subsequent joint meeting of the directors of the local agricultural society and the Sheep Breeders' Association, the former expressed their willingness to comply in every way with the wishes of the Association and to cooperate in the heartiest manner. The agricultural fair grounds were placed at the disposal of the Sheep Association, and a covered sale-rings, containing the accommodation required for the sale, will be provided by the agricultural society and exhibition board.

A number of the directors were in favor of instituting "sheep-dog trials," in the hope of encouraging Territorial shepherds to properly train their dogs. Owing to the indifferent class of dogs available, it was left in the hands of the Executive Committee to arrange these events, if found practicable.

Mr. John A. Turner introduced a motion to the effect that a record, to be called "The Western Canadian Pure-bred Sheep Record," should be started by the Association. In speaking of the motion the mover explained that there were at present no Canadian records for the registration of pure-bred Shropshire sheep, as well as of other breeds of sheep, and that all sheep of such breeds had to be recorded in the United States. This caused endless delay and inconvenience, and a considerable sum of money was thus annually sent out of the country, for which it was felt local breeders did not receive any adequate return. Mr. Peterson was quite in accord with the object of the motion, but called attention to the fact that legislation had been provided by Parliament in 1901 authorizing the Dominion Department of Agriculture to organize records for pure-bred live stock, and, while in favor of the proposal, would suggest that the register be started subject to the understanding that it should be handed over to the Dominion authorities, free of charge, as soon as the necessary machinery had been provided to deal with the matter in the office of the Dominion Live Stock Commissioner. The fee was fixed at 25c for each record. Motion was unanimously carried.

OXFORD DOWNS

Imported and home-bred, for sale. This flock has won more first prizes for Canadian-bred pens than any flock in Canada. SMITH EVANS, Gourock (near Guelph), Ont.

Shropshires 40 FOR SALE. Shearing and two-shear rams, also one three-shear ram. Shearing ewes, and ram and ewe lambs by Imp. Thomas ram. C. F. R. Station, Streetsville Jct. N. W. SWITZER, Streetsville, Ontario.

AGAIN STOP! AND LISTEN!! FAIRVIEW SHROPSHIRE

Have this season produced a Great crop of high-class lambs. Do you want a flock header? If so, let us tell you that we Have excellent imported and Home-bred rams of different ages To sell at good values to purchasers. They are of the best breeding. Are of good size, and extra quality. JOHN CAMPBELL, Woodville, Ont., Can.

SHROPSHIRE

We are now offering a number of two-shear rams and ram lambs—Mansell strain; good ones and well covered. Price right. ROWAT BROS., Hillisdale P. O., Elmvale Sta.

Shropshire Sheep, and Chester White Swine

of good bacon type. Write for prices. W. E. WRIGHT, GLANWORTH, ONT. "SUNNYSIDE STOCK FARM."

W. S. CARPENTER,

"MODEL FARM," SIMCOE, ONT., IMPORTER AND BREEDER OF

SHROPSHIRE SHEEP.

An offering 19 choice shearing rams, sired by Chancellor (imp.). Ram and ewe lambs for the fall trade, sired by Ruddington Knight. Also one imported shearing ram, good size and quality. Come and see them. Station One-half Mile from Farm, Wabash and G. T. R.

HIGH-CLASS SHROPSHIRE.

A flock of 75, of good type. Two-shear rams, shearing rams, ram lambs, ewe lambs, fine lusty fellows. Flock headed by a fine imported ram. Write for prices. Abram Rudell, Hespeler P. O., Ont. om C. P. R. and G. T. R.

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lambs of both sexes. Also shearing ewes and 2 shearing rams. Prices right and quality guaranteed. o GEO. HINDMARSH, Ailsa Craig, Ont.

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Two boars 11 mos. old; 4 boars 6 mos. old; 3 boars 5 mos. old; 4 boars 3 mos. old; also a number of sows from 3 to 5 mos. old. Now is the time to order spring pigs, which are arriving daily, sired by Longfellow

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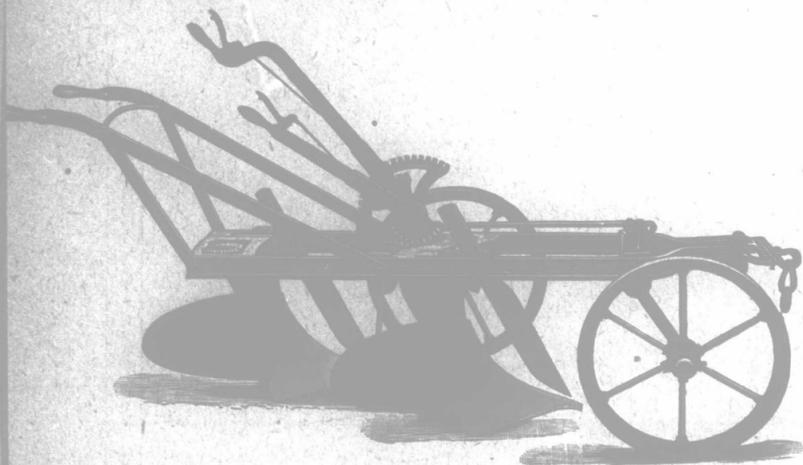
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At a meeting of the Board of Directors of the American Aberdeen-Angus Association, held in Kansas City the latter part of last month, it was unanimously decided to change the Association headquarters from Harvey, Ill., to Chicago. The offices will be moved about October 15th, by which time it is expected that the new Pure-bred Live Stock Record Building will be ready for occupancy.

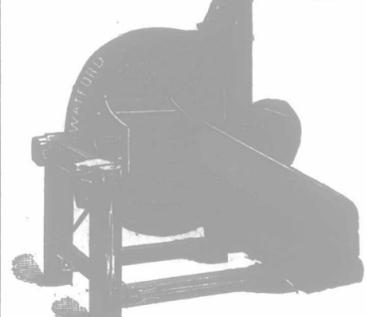
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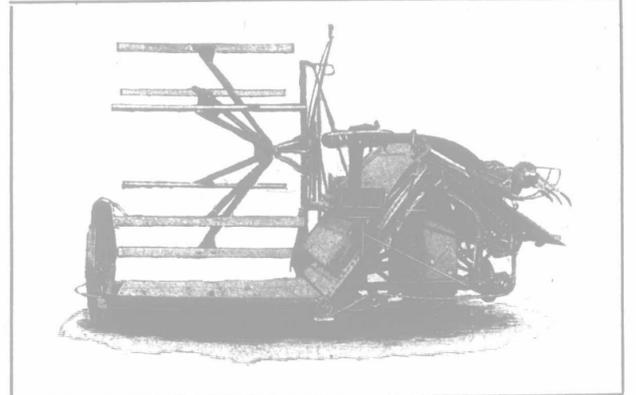
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