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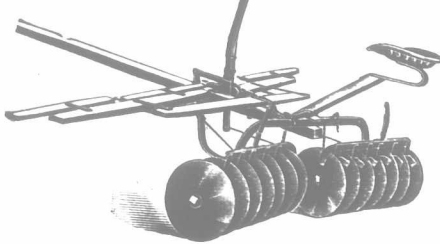
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The Farmer's Advocate

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Vol. XLI.

LONDON, ONT., AUGUST 30, 1906.

No. 727

EDITORIAL.

Etiquette of the Show-yard.

"Social observance required by good breeding," one of the dictionary definitions of the initial word in the above caption, would appear to suggest its apt application to the conduct of all those concerned in show-yard intercourse, whether as manager, exhibitor, judge, superintendent, ring master, privileged visitor or spectator at large. In these periodical gatherings considerable importance is attached to good breeding in the improved classes of live stock, and if it "tells," as is generally conceded it does, in the behavior of individuals of that realm, may we not reasonably expect to find it exemplified in greater degree in the higher order or "the brotherhood of man." These annual meetings of farmers, exhibitors and fair managers are, speaking generally, pleasant reunions of persons laboring for a common cause, and as the years go by we meet, with pleasure, or miss, with sadness, faces, forms and voices familiar to some of us for "lang syne," and it is well for us all to reflect that some day we too shall be missed, and, let us hope, remembered for our courteous observance of the etiquette of the show-yard. To contend manfully for one's rights, when denied or infringed upon, is the duty, and should be the privilege of all, but none should forget that others have rights which demand recognition and respect, and some allowance should be made for a possibly honest difference of opinion, and for the different standpoints from which things may be seen. The exhibitor should be a sportsman, in the sense of accepting gracefully the disappointments he is liable to meet from an adverse decision of the judge, remembering that even competent arbiters sometimes honestly differ in judgment and taste where competition is close, and that for this reason a showman sometimes receives more honors than he deems himself entitled to, and that in the long run his successes may average satisfactorily. This, we have reason to believe, is the experience of the majority of plucky exhibitors.

Judges are generally carefully chosen, for known competency, integrity, and acquaintance with the correct type of the class assigned them, and are supposed to adjudicate honestly and conscientiously, according to the best of their knowledge and discretion, as we believe they generally do. But if from any cause a mistake is made, or, in the opinion of an exhibitor, a wrong decision is given, he will gain nothing by exhibiting temper or indulging in offensive language in the hearing of the judge, who, if reasonably capable, is entitled to courteous consideration and respect. The judge should realize the serious responsibility of his position, remembering that, as a rule, much labor and expense has been devoted to the production and preparation of the exhibits before him, and that a faulty decision may do a man grave injustice, and also present an improper object lesson on type and quality to onlookers, some of whom may be equally as well qualified to judge as himself; while others, who look to him by his decisions to set the standard of excellence, in so far as the material before him admits, may be misled. Officers and superintendents of departments, it is conceded, have many difficulties to contend with in the effort to satisfy exhibitors and others whose demands are not always reasonable. But respectful attention to requests or complaints is due, and the soft answer or pleasant rejoinder costs no more than the snappish reply or the boorish rebuff, and leaves both parties in a happier mood and with more agreeable recollections. It will not in the least lower the sense of dignity of

a sensible official to regard himself as a servant of the people for the time being, since the highest examples of human kindness teach that it is nobler to minister to others than to be ministered to, and officials need to practice patience in their capacity, and to reflect that those who ask for information or make request for privilege have not the same facilities for securing information or ascertaining just what are their rights as have those in authority. Firmness in denying an unreasonable request may rightly be observed without giving offense, provided the denial be courteously given.

Ideal Types in Live Stock.

The state of perfection to which modern photography and photogravure has been brought, rendering possible the reproduction on the printed page of true likenesses of animals or other subjects, has added greatly to the interest of periodical literature, as well as to that of books, in the estimation of readers, both old and young. The present may be said to be in a marked degree an age of illustration in the realm of literature, and for the purposes of giving instruction and conveying information to the mind through the medium of the eye, photography, and its twin sister, photoengraving, have proved themselves peculiarly valuable. Pictures have in all ages been an attractive accompaniment of literature, but their adaptation to use on the printing press, except in the expensive form of steel or wood engravings, was comparatively impracticable before the discovery of photography, and their representations were at best but imperfect likenesses of the subject, as they were generally open to the charges of flattery or exaggeration, though in many instances fine productions of the art of drawing or delineation. In other cases they were, properly speaking, caricatures rather than correct portraits.

For this reason the pictures found in old books and papers, by way of illustration, especially those intended to represent animal life, convey by no means a correct idea of the types of the various breeds of live stock as they appeared in their day, leaving a good deal to be guessed at. This disability will not apply in respect to the character of the animal portraiture of the present by means of the camera, and the reproduction of its work in photoengraving as found in the pages of the agricultural papers and books of our day; and those who come after us will find in these productions fairly correct portraiture of the approved types of farm stock in the early years of the twentieth century and the latter part of the nineteenth, with which to make comparison, provided the contrast is confined to cuts made from productions of the camera.

"The Farmer's Advocate" has in recent years made a specialty of presenting to its readers high-class cuts, made from photographs, of the best types of pure-bred live stock as found in our own country and in the Old Land, the native home of most of the improved breeds, and we believe we are not open to the charge of undue egotism in saying that in this respect our pages compare favorably with those of the best journals of its class in any country. The present issue is liberally illustrated with first-class portraits of representative prizewinning animals of many of the leading breeds in Great Britain, which may serve to convey a good idea of the prevailing type of the best of those breeds, and may safely be taken as a guide by breeders in the selection and production of the class of stock approved by experienced breeders, by expert judges in the showing, by dealers in the markets, and by consumers who are connoisseurs in the final analysis.

Crop Estimates.

The business of estimating the world's crops is coming to be regarded as something of a colossal "bluff." The difficulty of making a reliable calculation of, say, the world's wheat harvest and the price per bushel six months hence, is prodigious, and the best attempts are hardly more than guesses. Experience has repeatedly been that official forecasts have been woefully astray, yet notwithstanding accumulated evidence of the almost impossible nature of the task, Departments of Agriculture, crop "experts," and financial publications are continually trying their hand at it. Market manipulators encourage the craft, with a view to furthering their own ends, and the easy-prey newspaper readers swallow the reports, estimates and forecasts as if they were really valuable information, and regard with admiration the enterprising journalists who, by some occult means, possess themselves of so much authentic (?) information. It would be in the interest of a credulous public to have the wool gently lifted from its eyes that it might see how superficially such reports are commonly compiled, how little besides "guff" there is in the figures, and how even the most expert crop reporters miss their guesses sadly. "The Farmer's Advocate," preferring to remain silent rather than set forth misleading half-truths, never has much to say about crop prospects and prices. If we really had reliable means of presaging yields and prices, as some papers purport to have, we would use the knowledge in making fortunes for ourselves, and so would the publishers and editors of the other papers. The latter, however, know full well that there is more money in serving up this "information" to the public than in speculating on the strength of it.

It is not denied that an accurate idea of the world's crops and crop prospects would be a boon to the farmer, enabling him to reap a higher average return for his produce, and govern his farm operations accordingly, thus tending to avoid over or under production, as the case might be. It is possible that when the King of Italy gets his International Agricultural Institute in running order he may develop a useful bureau of world-wide agricultural statistics. Meanwhile, it is all right enough for the press to post its readers so far as possible concerning yield and price prospects in its own and foreign countries, but the readers should be warned against jumping to conclusions that, because there is insurrection in Russia, or rust in the Northwest, therefore wheat prices will soar. The world is a big place, and one pollywog doesn't make a fish-pond. Substitution of one food product for another, unsuspected supplies in certain quarters, inaccurate reports, and a dozen other factors, must enter into consideration in all calculations. Then, too, information carefully compiled may be distorted in publication. For example, on the financial page of a usually reliable American magazine we noticed lately a paragraph summarizing the United States Government's crop report, and the article concluded with the remark, "Canada's wheat harvest is now (Aug. 16th) at its height. Last year's yield was 83,000,000 bushels. This year's will be about 100,000,000." In the first place, the figures, 83,000,000 bushels, applied merely to the spring-wheat production of our Northwest. The Dominion's total wheat crop must have been well over 160,000,000 bushels. In the second place, late reports do not indicate any such increase in the Western crop as the figures indicate. No doubt, however, they are about as near the mark as crop estimates usually are—which goes to substantiate our contention.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
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JOHN WELD, MANAGER.

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1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. (52 issues per year.) It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, United States, England, Ireland and Scotland, \$1.50 per year, in advance; \$2.00 when not paid in advance. All other countries, 12s.
3. ADVERTISING RATES.—Single insertion, 20 cents per line agate. Contract rates furnished on application.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.
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13. ALL COMMUNICATIONS in reference to any matter connected with this paper, should be addressed as below, and not to any individual connected with the paper.

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Direct Tips re Canadian Dairy Produce.

Direct from the British market, where Canadian products may be examined and compared with those from competing countries, as they strike the eye of the Old Country dealer, is the editorial correspondence on another page dealing with Canadian dairy products in England. The article has been penned by a regular member of our editorial staff who has been spending a brief vacation—if vacation it can be called—in Great Britain. The impressions recorded are the result of diligent enquiry and careful personal observation, and should carry a needed lesson to producers and dealers in Canadian export dairy products. The British market is big, the British people are numerous and hungry, and the British purse is long, but the British taste is a fastidious one, and its free-trade market is the objective for the choicest surplus of all the world. Even Argentina looms up as a probable competitor of consequence in the market for dairy products. We Canadians have a great opportunity in Britain, but eager competitors are striving to win their way against us, and in some notable particulars, particularly in the matter of packing and packages, they show themselves more alert than we are. We cannot afford to rest on our oars. The progress we have made will avail us little unless it is maintained. Better butter, better cheese, better boxes, better packages, more discriminate catering to particular market requirements, and, above all, honorable adherence to high standards of excellence, are necessary if we would hold our own, let alone making any advance.

To all the prize is open,
But only he can take it
Who says with Roman courage,
I'll find a way or make it.

Plans are under way for a 1906 Christmas number of "The Farmer's Advocate," better than we have ever yet turned out. Persuade your friends to subscribe now and get it.

Our Maritime Letter.

Seldom is the agriculture of any section of the Federation subjected to such extended and persistent attacks by insects as is ours this season. Dry, hot weather usually lends itself to the development of these little things of God's creation; and since July came in we have been having one of the hottest and driest summers experienced for years. The potato crop—inferior enough on account of the numerous "misses," accounted for only by their being planted too early, as the season went, and, therefore, submitted to a long period of cold, rainy weather in the ground before germination—has had to resist, in its puny stages, and right through to the present writing, the most persistent and multiplied attack of Colorado beetles we have noticed for a long time. Everybody got to work to poison them with Paris green, but, whether from defective quality or some other condition, one application of the poison—one pound to 40 gallons of water—seemed to produce little effect. It is no light job for most farmers, who still follow the sprinkling-pail methods, to go over every stalk of their two or three or four acres of potatoes in this way. Still, it has to be done, and done effectually, before moderate relief is within sight. The air appeared at times to be full of the old beetles on the wing, and they seemed determined to deposit eggs anywhere—not only on potato vines, but on blades of grass and other plants about the patches. They came late, but were working energetically to make up for lost time. The Paris green may not have been what it pretends to be, either. Here the supply was not at all in many cases equal to the demand, and Berger's, which we have ever regarded as the most reliable, could not be secured. The Co.'s preparation in paper boxes was, therefore, used, and with very indifferent results often. If the Government should do any one thing scrupulously, it is to analyze the Paris green preparations of the country, and see that the poor farmers compelled to use them are not wasting their time and money. Paris green has been remarkably dear this year; why, one cannot readily see; but latterly 28c. was exacted for pound packages in paper, when half that money would purchase the same quantity of Berger's green in tin cans a couple of years ago. The trust nuisance seems to be attaining many things in Canada, as elsewhere.

Entomologists told us that the horn fly, the great cattle pest of these parts, would grow "smaller and smaller and beautifully less" in a short period of years. Indeed, two or three were all they gave it to jubilate in. We were all somewhat cheered by this announcement, for when the cattle suffer we, who stand round, share their sufferings and inconveniences to a limited extent at least. Do all we can, this fly pest in years like the present abounds, not only causing discomfort and loss of milk to the cattle, but also goading the horses to desperation, and even leaving the trimmest among their masters open to the imputation of having "flies on them." Only last Sunday, in one of our churches, we witnessed the discomfort of the preacher, who had all he could do, in the insufferably hot weather, to stick to his text and ward off the attentions of a common horn fly, which coveted the vantage ground of his nose.

"You must not kill a little fly,
It is an act of cruelty."

seems to be rather distorted doctrine in the premises—but to get at him always, there's the rub.

Well, we have had horn fly ad infinitum this year. We don't know what those good scientists think of it, but it's a fact which saddens us only too much to say—and the end is not yet. Neither do we expect the sudden taking off of these newcomers. We are curious enough to desire to know, however, just what the entomologists think now. Have they revised their opinions, or are they busy discovering fly-killers? We don't want to be hard on them—they are our best friends usually, but on this and a few other heads they have made a miss, and must put up with the jollying they get. What has the competent, painstaking, and famous Dr. Fletcher to say for himself? Most of the remedies suggested, too, are worse

than the flies on the cattle. Indeed, it is difficult to get anything effective which will not greatly inconvenience the animal to which it is applied. What is the Ontarian practice?

Whilst no very sustained attack of Hessian fly or small-grain pest has affected the growing crop in late years, we have had small troubles in restricted areas. Last year the joint-worm (*Isosoma* sp.) made its appearance in that portion of Prince County bordering on the gulf shore, known as Malpeque. The attack was sufficiently widespread to destroy many valuable wheat fields, and thoroughly frighten the farmers concerned. Specimens of the affected straw were sent up to Dr. Fletcher, at his own request, and he identified the worm as the larva of the *Isosoma tritici*. This pest is produced by a small, black, four-winged fly, one-tenth of an inch in length, which deposits its eggs about the first joints of growing grain, or on the grasses adjacent to them. Galls or swellings, in which from five to ten of these maggots hatched, are soon formed, and in a very short time, if numerous enough, a vigorous field is completely broken down and destroyed. The only remedy offered is to burn the stubble, as most of the larvae are there protected; and, also, all the galls and short pieces of affected straw which go through the fanners. The straw should be burnt or fed to animals promptly. If plowed in deeply, the stubble will not permit of the larva, either as such or as the perfect fly, reappearing or doing damage afterwards. Care should be taken to cut the adjacent grasses, and use them in such a way as to prevent the spread of the pest.

Dr. Fletcher, writing us the other day, asks us to bring this pest to the notice of our readers in this way, as too many fail to do what is absolutely necessary to rid their fields of the joint-worm. He informs us that it has broken out at Stanley Bridge, as well as Malpeque; a letter from somebody at the former place saying that the wheat of a whole section there is completely destroyed by it. This may be somewhat exaggerated, but it is evidently a serious menace to wheat-growing here, and must be handled promptly and effectually. Someone has suggested that the Governments take hold and exterminate it, but if we wait for the Governments to do our common work, the heather will be fired all over Maritime Canada with this enemy before any move is made. We must do our own extirpation work. If Dr. Fletcher's advice had been acted upon last year, these outbreaks would hardly have to be chronicled now.

A. E. BURKE.

50,000 Names for 1907.

The exhibition season marks the approach of another subscription campaign. Since 1866 the old reliable "Farmer's Advocate" has been doing an ever-increasing business at the old stand, building up an army of select subscribers and a clientele of advertising patrons second to that of no paper of its class in the world. And the opinion of impartial observers is that no other agricultural journal possesses the confidence of its readers to the same extent, nor gives so much solid practical reading matter for the money. It neither cringes nor fawns to any class. It is absolutely independent of every body and interest. No graft, truckling or scheming has contributed to the acquisition of its list of over thirty thousand subscribers. No Department of Agriculture has been wheedled into distributing it gratis on the pretence of necessary missionary work. Every subscriber is a person who wants the paper badly enough to pay for it, and is willing to give a fair price for the best article on the market. The success of the paper has been founded on merit and upright business principles. Our aim is to put out the best paper possible for the money, and give everybody a square deal.

Our ambition has always been improvement. We have sought to produce each year a better paper than the year before. In this, if the voluntary testimony of thousands of friends is to be accepted, we have abundantly succeeded. During the past year we can point to a marked advance, and can promise, further, that 1907 will witness an equally great improvement over the current volume.

Our friends can help us to make this prediction good. Improving the paper costs money. To

get it we must increase our business. Subscribers are secured principally by canvassing, and experience has taught us that our readers are the best agents. We are willing to pay for the service, and our large list of premiums, all splendid value and fully up to representations, are the rewards offered for the comparatively slight effort of getting new names. In lieu of premiums, anyone who wishes may have his own subscription advanced six months for every new name he sends us, accompanied by \$1.50. By sending us two new names and \$3.00, he can get his own paper free

for one year. In addition to the premium reward is the far greater satisfaction of doing a public-spirited act. Every time you recruit our ranks by a new reader you are placing in his hands a medium of knowledge and progress that will benefit him many times the subscription price, and also indirectly benefit the community at large. There is no "book-agent" humbug about canvassing for "The Farmer's Advocate." All over the country practically all the best farmers take it, and freely attribute a considerable measure of their success to perusal of its pages. It is our firm con-

viction that, no matter how many other papers he may be getting, any Canadian farmer who does not take "The Farmer's Advocate" is standing in his own light. It is for our loyal army of present subscribers to assist in placing the facts squarely before this class, and we expect to do it with such success that our lists may be increased fifty per cent. this winter. "The Farmer's Advocate" expects every subscriber to do his duty this year. Fifty thousand names for 1907! How many can you send?

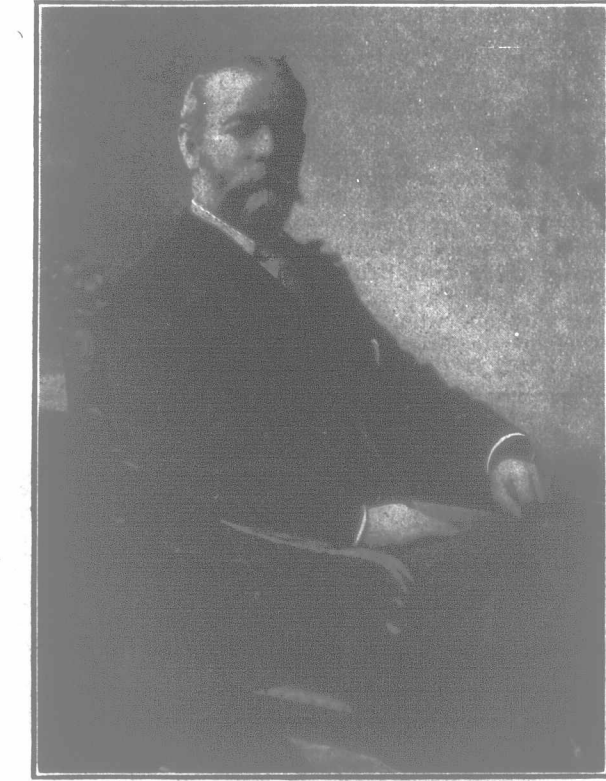
THE DOMINION DEPARTMENT OF AGRICULTURE.

In many ways the people of Canada are continually reminded of the branch of Governmental administration at Ottawa called the Department of Agriculture. If you pick up a book published by a Canadian house, you will find it has been "Entered according to Act of the Parliament . . . at the Department of Agriculture." If you wish to secure a patent or record a trade-mark; if you have dealings with the Dominion Census officials or statisticians, or with Dr. Montizambert, Director-General of the Public Health Branch, you will notice "Department of Agriculture" on the stationery bearing the correspondence received. You may wonder why so many miscellaneous offices of Government should be vested in this one department. On second thought, however, it is not surprising. The farmer was never a man of leisure, and it would not be meet that his Cabinet representative should be, especially in the case of the present incumbent, who happens to be a bachelor. To make sure that he earns his salary, they long ago began saddling on his portfolio some half dozen branches about as directly related to agriculture as a schoolhouse is to a silo. But for all the responsibility, the Premier always manages to find a man for the place. He has not always been a farmer. Sometimes the Department of Agriculture has been a convenient Cabinet niche in which to ensconce a fluent speaker or clever politician. Hon. Dr. Montague, for instance, who held down the job for a year or so before Hon. Sydney Fisher, must have felt about as much at home on it as a turtle on a setting of hens' eggs. In Hon. Mr. Fisher we have a Minister who is an actual farmer, and, whatever is said in criticism, it must be admitted that during his tenure of office a marked development has occurred in the more strictly agricultural branches of this department.

When in Ottawa, a round of the Agricultural Department is more or less worth while. The offices are not all together, but during the past year those of the Live-stock, Dairy, Seed and the Census-and-Statistics Branches have been moved to the new Canadian Building on Slater Street, just off Elgin, and but a few minutes' walk from the House of Parliament. You will not find here, on casual examination, anything to remind you very rudely of fields or stables; on the other hand, you will note in the corridors and offices the sway-backed swagger of the well-fed, well-rested Government clerk, whose time permits him to make imposing business out of ever so trivial details. Peering into the offices, you will be greeted genially, for visitors are always welcome, and there is usually time to entertain them. There is no "washing" to get out, or hay to haul in. All the same, should you make yourself acquainted, and get talking to G. H. Clark, J. A. Ruddick, A. McNeill, J. B. Spencer or W. A. Clemons, you will recognize the sensible man who has served his apprenticeship at practical work. They know their business, and will bear questioning and acquaintance. They are the stamp of well-posted, broad-gauge men who have done much in a commercial and, to some extent, an educational way for the several lines of Canadian agriculture. We need them there; they earn their money. In a country like ours, a well-manned, energetic Department of Agriculture is an eminent necessity. We trust an appreciation of its scope and effort may be gathered from the following paragraphs:

ORIGIN AND ORGANIZATION.

In 1851, under the Hincks-Morin Administration of Upper and Lower Canada, a Bureau of



Hon. Sydney Fisher.

Minister of Agriculture in the Dominion Cabinet.

Agriculture and Statistics was created. In 1862 the Bureau became a distinct Department, with Sir Narcisse Caron as Minister, and in 1864 Dr. J. C. Tache was appointed Deputy Minister of the Department, which, at Confederation, was continued with an extended scope, further widened by legislation of 1886



Geo. F. O'Halloran.

Dominion Deputy-Minister of Agriculture.

and subsequent years. Hon. Sydney Fisher, sworn in July 13th, is the ninth Minister of Agriculture since Confederation, and his present Deputy, Geo. F. O'Halloran, appointed May, 1902, is the fourth to occupy that position.

The Department is divided into eleven—or perhaps we should now say ten—Branches, each with a separate head, directly responsible to the Minister. Several of these Branches are sub-

divided into two or more Divisions. The Branches are:

- The Patent Branch.
- The Trade-mark and Copyright Branch.
- The Census and Statistics Branch.
- The Public Health Branch.
- The Experimental Farms Branch.
- The Veterinary Branch.
- The Exhibition Branch.
- The Archives Branch.
- Seed Commissioner's Branch.
- Dairy Commissioner's Branch.
- Live-stock Commissioner's Branch (lately merged with the Veterinary Branch, under Dr. Rutherford).

Mr. Fisher, who represents the constituency of Brome, Que., is a Cambridge-University-trained farmer, somewhat of the English country-gentleman type, and is known through the country as a breeder of Guernsey cattle. Of unquestionable character, broad-minded, and fluent of speech, he has administered his Department with a mind of his own, always having regard for what he conceived to be the interests of agriculture and the national well-being. He has demonstrated capacity in his choice of lieutenants, and never loses an opportunity to uphold the dignity of his Department and the industry it represents.

Geo. F. O'Halloran is the man whose facsimile signature franks Departmental correspondence through the mails. Unlike Prof. James, of Toronto, he does not profess much practical knowledge of agriculture. His duties are rather executive, scrutinous and advisory. All the same, they will tell you around the Department that he has pretty shrewd ideas about farming and things pertaining thereto. His unrelenting acumen is a terror ever before the mind of the doer of shady deeds. They "can't fool the Deputy."

THE DAIRY COMMISSIONER'S BRANCH.

We refer to this Branch first in order, because it enables us to bring in conveniently a few words about the man who has done probably more in an official capacity for Canadian agriculture than any other man in or out of the present arena. Prof. James W. Robertson was translated from the chair of Professor of Dairy Husbandry, O. A. C., Guelph, Ont., to the Department of Agriculture at Ottawa, where he was given the post of Commissioner of Dairy Husbandry for the Dominion of Canada, and later, Commissioner of Agriculture and Dairying, with subvention extended to practically the whole range of agricultural effort. Here he put forth herculean and amazingly successful efforts to bring about an improvement in the quality and increase in the output of Canadian dairy products, to improve the conditions under which they were transported to Old World markets, and to establish there an enviable reputation for our goods, particularly our cheese. He infused a spirit of enterprise into the whole agricultural life of the Dominion. Meanwhile his genius for organization was reaching out and building up new divisions of his department. These he manned capably, and infused into his appointees a reflex of his own indomitable energy, till the wooden old Department became fairly vibrant with activity and pregnant with suggestions and plans for the extension of our agricultural prowess. In 1904 he resigned, to devote himself to Sir William Macdonald's Agricultural-College enterprise at St. Anne de Bellevue, Que. Advantage of this change was taken by the Minister to readjust things by appointing three commissioners in place of Prof. Robertson, viz., J. A. Ruddick, Dairy Commissioner; F. W. Hodson, Live-stock Commissioner, and G. H. Clark, Seed Commissioner. Under these heads, the remaining divisions, such as the Fruit Division, Poultry Division, etc., were grouped according to administrative convenience.

The Dairy Branch consists of four divisions, viz., Dairy, Fruit, Extension of Markets and Cold Storage Divisions. Mr. Ruddick, the Commissioner, joined the Dominion Government service in 1891 as the first of Prof. Robertson's staff of experts. Previously he had obtained a wide experience and a practical knowledge of the factory end of dairying. In 1894 he resigned to become Superintendent of the Kingston, Ont., Dairy

School, and two years later accepted the Dairy Commissionership of New Zealand. In July, 1900, he returned to Canada to become Chief of the Dairy Division under Prof. Robertson, and in 1904 stepped into the Commissionership, still, however, personally directing the work of the Dairy Division. This Division is entrusted with the work undertaken by the Branch which has for its object any improvement in the production of milk, in the manufacture of butter, the manufacture and curing of cheese, improvement in dairy buildings, and the general organization of the dairy industry. The work along these lines in the past has covered a wide range. It has even included the operation of cheese factories and creameries on a large scale for the demonstration of correct principles in their management, and to establish the industry on a sound basis in certain new districts. The erection and operation, now for the fourth season, of model cool-curing rooms, to demonstrate the advantage of curing cheese at a low temperature, the preparation of plans of creameries and cheese factories, which may be had upon request, and the appointment of an official cheese and butter referee at Montreal, whose duty it was to report on the quality of these products when there was dispute between buyer and seller, have all been lines undertaken by the Dairy Division. At present the position of official Referee is vacant, owing to the resignation last spring of Mr. A. W. Woodard. During the last year, C. F. Whitley, an O. A. C. graduate of 1901, who joined the Branch a few months later, has been engaged in organizing and assisting co-operative cow-testing associations throughout Canada.

Mr. J. C. Chapais is the assistant Dairy Commissioner; his work is largely confined to French-speaking communities.

THE FRUIT DIVISION was formed in 1901, to assist in the enforcement of the Fruit Marks Act. Its first Chief was W. A. McKinnon, succeeded in 1904 by Alex. McNeill, who had been senior fruit inspector up to that time. Previously, Mr. McNeill had many years' experience as a fruit-grower, where his enthusiasm, coupled with his training as a High School Science Master, soon established him as an expert, and he became well known as a Farmers' Institute worker. The rank and file of fruit-growers are heartily loyal to their chief, who, they believe, only requires a freer hand and elevation of his position to the rank of Commissioner to enable him to accomplish important things for the industry. At present, the Division supervises the enforcement of the Fruit Marks Act. Seven permanent fruit inspectors and several temporary ones report direct to Chief McNeill. In this one matter alone the benefit to Canadian industry, present and prospective, would go quite a way to justify the expenditure in the whole Agricultural Department, for a wonderful improvement in fruit-packing has been brought about. A monthly fruit-crop report is also compiled and published broadcast during the season. Demonstrations and instructions in fruit-packing, power spraying and orchard work are among the means employed to assist the fruit industry, particularly the commerce in fruits.

THE EXTENSION OF MARKETS DIVISION inspects the cold-storage service on land and sea, including the inspection of cargoes of perishable products as loaded at Canadian ports, and also as discharged in Britain. From the information obtained helpful suggestions are made to shippers. W. W. Moore is the young man who has been Chief of this Division since it was organized in 1902. Mr. A. W. Grindley is Chief Cargo Inspector in Britain.

THE COLD-STORAGE DIVISION has to do with cold storage at creameries, iced butter and cheese car services, experiments in insulation for cold-storage purposes, and other work of this kind. Mr. C. E. Mortureux, an O. A. C. graduate, is attached to this Division as inspector and promoter of cold storage at creameries.

THE VETERINARY BRANCH.

One of the least ostentatious but most efficient and important Branches is the Veterinary Director-General's, presided over by that universally-respected Scotchman, Dr. J. G. Rutherford, V. S. A close watch is kept on other countries, with the object of keeping quarantine effective. The export cattle trade is carefully safeguarded, all animals being rigidly inspected and marked before shipment. There is a close supervision of live stock throughout the West and in the Yukon, including inspection of all animals imported from the United States and Mexico. In all the Provinces are officers who promptly investigate and deal with outbreaks of contagious diseases, under direct control from Ottawa. A biological laboratory has been established at Ottawa, where experimental work is carried on. An experimental station has been established at Antigonish, N. S., for the study of Pictou Cattle Disease. Recent reference to the results has been made in the Maritime Letter, and the subject will be discussed more fully a little later. A number of specially-trained veterinarians devote their whole time to the work of this Branch, and no effort is spared

to keep the Dominion veterinary service efficient and up-to-date.

THE LIVE-STOCK BRANCH.

In Prof. Robertson's day this Branch or Division occupied an important status, whose chief, F. W. Hodson, had a rank almost co-ordinate with his own, being, in fact, called a Commissioner. Reviewing Mr. Hodson's work at this date, it is but fair to say that, while his methods were not always acceptable, he certainly displayed a creditable initiative, and galvanized his staff into a furious activity. In developing the Winter Fair at Guelph, inaugurating one at Amherst, N. S., and another in the West, in providing from his staff Farmers' Institute lecturers, and interesting himself in many efforts more or less wisely calculated to advance the interests of farmers and stock-breeders, he displayed a great deal of resource. His crowning achievement was the nationalization of the Canadian Live-stock Records, a movement begun in 1904 and consummated in 1905. For this work he is entitled to a generous meed of praise. On Mr. Hodson's resignation a year ago last June, the duties of the office devolved for a time upon his newly-appointed, painstaking assistant, J. B. Spencer, at one time of "The Farmer's Advocate" staff. Last month Veterinary Director-General Rutherford was made Live-stock Commissioner, thus virtually merging these two Branches. Mr. Spencer continues to serve under him. His staff consists of D. Drummond, who is connected with the official testing of pure-bred dairy cows in consonance with

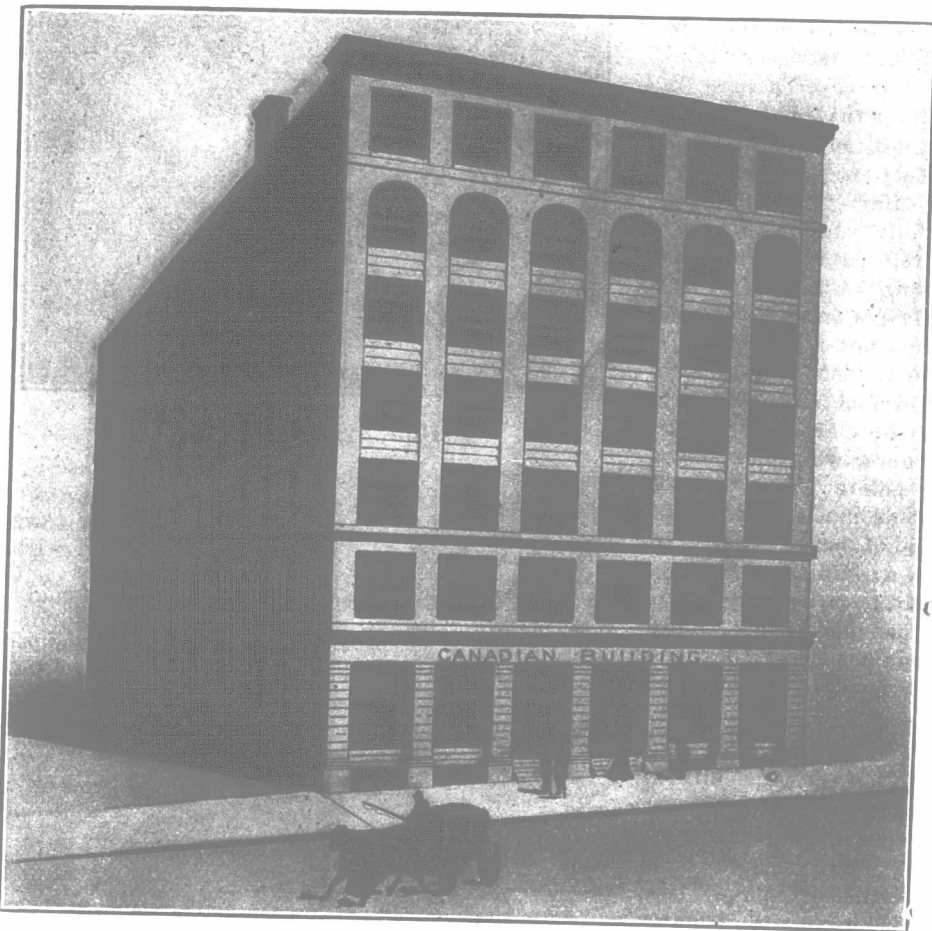
Minister's intentions in the matter of a successor. Both Mr. Hare and Mr. Elford did excellent work in their rather circumscribed sphere of the Live-stock Branch.

THE SEED BRANCH.

In April, 1900, G. H. Clark joined the Government service, having charge under Prof. Robertson of work connected with the Macdonald Seed-grain Competition. In 1902 he secured permission to equip a moderate seed laboratory, and seed investigation was begun. A few months later he became Chief of the Seed Division, and in 1904 Seed Commissioner. The Branch now has a permanent staff of about a dozen clerks and analysts, besides a field staff of five representatives, to wit: F. W. Broderick, for the Maritime Provinces; J. C. Cote, for Quebec; T. G. Raynor, Ontario; J. Bracken, who succeeds Jas. Murray in Manitoba and Saskatchewan; and W. C. McKilloan in Alberta and British Columbia. There are all O. A. C. boys. The chief lines of effort have been seed testing, as respects purity and vitality, for farmers and seedsmen; the conception, framing, revision and enforcement of the Seed Control Act, 1905; encouragement and financial assistance towards local seed fairs; action resulting in the formation two years ago of the Canadian Seed-growers' Association; and finally, generally and always, educational work by pen and platform. The work of seed-testing has developed rapidly. In 1903 scarcely 300 samples were analyzed, whereas during the first three months of 1906, Mr. Clark told us, an average of 64 reports per day were issued. Summed up, the aim and object of this Branch is to bring about the production and use of good clean seeds.

THE EXPERIMENTAL FARMS.

This branch was established in 1886, and was designed to assist farmers through experiments and investigation. There are in all five farms, the Central one and four branch farms, while two additional branches have been decided on this year for the new Province of Alberta. The Central Farm, at Ottawa, serves Ontario and Quebec. Director Wm. Saunders resides here, and it is also the headquarters for Dr. James Fletcher, Dominion Entomologist and Botanist; Prof. Frank T. Shutt, Chemist; and Chas. E. Saunders, Cerealist—all of whom are engaged in a scope of work comprehending the whole Dominion. In addition are J. H. Grisdale, Agriculturist; W. T. Macoun, Horticulturist; and A. G. Gilbert, Poultry Manager. All these men are assisted by clerks and stenographers, and do a great amount of work in answering correspondence.



The Canadian building, Ottawa.

Where the offices of several Branches of the Department of Agriculture are to be found; also the offices of the National Records.

the National Record scheme, and Mr. C. M. MacRae, principally engaged in stock-judging and Institute work. W. A. Clemons is the Dominion Registrar of Live Stock, who examines pedigrees passed upon by the secretaries of the various breed associations in the National Record scheme, and, when satisfactory, affixes the Government seal to them. Although the offices of the National Records are on the same floor of the Canadian Building as those of the Live-stock Branch, none of the men connected with the Records are attached to the Department save Mr. Clemons, who is thus the connecting link between the National Records and the Minister.

Outside representatives of the Live-stock Branch are: E. B. Elderkin, in the Maritime Provinces; G. H. Greig, in Manitoba; and F. M. Logan, in British Columbia.

THE POULTRY DIVISION was established under Prof. Robertson, and had largely to do with the organization and maintenance of poultry stations in various Provinces, where experiments and demonstrations in fattening and other lines were carried on. Its first Chief was F. C. Hare, after whose resignation F. C. Elford, an O. A. C. ex-student, formerly in charge of the station at Holmesville, Ont., became acting Chief. He continued to act till June of this year, when he resigned to become poultry manager at the Macdonald Agricultural College, St. Anne de Bellevue. At date of writing we are not aware of the

do a great amount of work in answering correspondence.

At Nappan, N. S., is a branch farm, serving the Maritime Provinces, in charge of Superintendent R. Robertson. In Manitoba is a farm, at Brandon, where an immense amount of good work has been done under ex-Superintendent S. A. Bedford, lately succeeded by Mr. Woolverton. At Indian Head, Sask., is the third branch farm, in charge of Angus McKay, and at Agassiz, B. C., is the fourth branch, in charge of Thomas A. Sharpe. The two new Alberta farms are: One at Lacombe, in charge of G. H. Hutton, B. S. A., a 1900 graduate of the Ontario Agricultural College; and one in the irrigation district near Lethbridge, in charge of a Mr. W. H. Fairfield. Over fifty thousand farmers throughout Canada receive the reports and bulletins from the Farms, and a vast amount of valuable information is disseminated by the officers through the press and from the platform.

MISCELLANEOUS.

THE EXHIBITION BRANCH.—Canada has taken part in many international exhibitions, for each of which a special commission used to be appointed, but in view of the frequency with which they recur, Hon. Mr. Fisher concluded it would be advantageous to have a permanent exhibition staff of practical experts, whose duty it would be to take full charge of exhibition work. This was accordingly appointed, and, under Commis-

HORSES.

sioner Wm. Hutchison, some very creditable exhibits have been made at Osaka, Japan; St. Louis, Mo., and other important world exhibitions.

PUBLIC HEALTH BRANCH.—The stations of this Branch range from Louisburg, Cape Breton, to Forty Mile, Yukon. The organized stations are, or were, at least, in 1903: Sydney, C. B.; Halifax, N. S.; St. John and Chatham, N. B.; Charlottetown, P. E. I.; Crosse Isle, with Rimouski, in the River St. Lawrence, and William Head and Vancouver in British Columbia. The unorganized stations are every other port on both coasts and every inland customs port on the Canadian frontier between the Pacific and the Atlantic Oceans. The appliances at the organized stations include the most modern provision for the scientific disinfection both of clothing and persons on land, and of vessels and their contents in the offing. The quarantine steamers at the different stations meet the incoming vessels immediately upon arrival at any hour of the day or night. The Crosse Isle and William Head stations are fully equipped with bacteriological laboratories for the detection of infectious disease and the confirmation of the diagnoses made from clinical symptoms. A laboratory has also been erected at the Halifax station.

Another recent feature in the administration of this service is that of disinfection at the port of departure, which destroys infection before embarking, lessens the chance of disease during the voyage, diminishes the risk to cabin passengers of contracting disease from the steerage, and by so much replaces any routine disinfection of healthy vessels—even during epidemics—at quarantine, and greatly lessens interference with travel and traffic.

The service of this Branch includes, moreover, the administration of epidemic disease, such as smallpox, in the unorganized districts of the Northwest and other territories where there is no Provincial or Territorial board of health.

The leper lazaretto at Tracadie, N. B., is administered through this Branch, the Director-General of which makes annual inspection of this institution.

The administration of the Public Works (Health) Act is also under the Public Health service, the inspector being an officer of that Branch, and it being provided that any acts of the different health boards on the various public works shall be subject at all times to be revised or superseded by the Director-General of Public Health on reference from the Inspector.

THE PATENT BRANCH.—Under this Branch patents are granted for inventions. The first patent in Canada was granted June 8th, 1824, to Noah Cushing, a resident of Quebec City, for an invention of a washing and fulling machine, covering the Province of Quebec. In that year there were only three patents granted in Canada. During 1903, 5,678 patents were issued, and the fees reached about \$140,000. The business of this branch is ever growing. Seventy per cent. of the Canadian patents granted are issued to citizens of the United States.

THE TRADE-MARK AND COPYRIGHT BRANCH copyrights literary, scientific and artistic works and compositions, and registers trademarks, timber marks and industrial designs. This Canadian copyright extends to all British possessions, as well as the foreign countries which are parties to the Berne Convention of 1884. From \$15,000 to \$20,000 is received annually in fees. This, too, is a growing branch.

CENSUS AND STATISTICS.—This Branch, statistically, has been a part of the Department of Agriculture since the institution of the latter, under the designation, "Bureau of Agriculture and Statistics."

By legislation of 1859 the Minister of Agriculture was empowered to collect useful facts and statistics relating to the agricultural, mechanical and manufacturing interests, and adopt measures for the dissemination or publication of them. In 1876 provision was made for the registration of criminal statistics. In 1886 the first volume of the Statistical Yearbook of Canada was issued. It is now in its twentieth year of issue, with ever-increasing acceptability. The Census section of this Branch has been in existence, periodically (every ten years), since 1851, when a census of Upper and Lower Canada was obtained. The first official census of the Dominion was taken in 1871. In the last general census, 1901, 8,800 enumerators, 283 commissioners, 66 assistant commissioners, 37 interpreters and a number of other chief officers were engaged in the work of enumeration alone. It may be remarked that a special provision has been made by the present Government for a quinquennial instead of a decennial census, in the new and rapidly-growing Provinces of the West.

If a lawyer is ignorant, his client pays for it—in the penitentiary; if a doctor is ignorant, his client realizes it—in the next world; if a farmer is ignorant, he pays for it himself, every time he sells or buys.—Geo. T. Winston.

When selecting a brood mare, try to secure one with a natural gloss to the coat; such are generally good milkers, and milk makes the foal.

A report of the Highland Agricultural Society states that the judging of the Clydesdales points to more weight as one of the requirements of the judges at that great Scotch show.

A Western farmer gave to an Eastern judge one reason for the fine exhibit of horses at the different shows, "We ride at all our work."

Clydesdale Character and Draft Type.

The decisions of Mr. John Gardhouse in the Clydesdale ring at Brandon, says the horse-ring reviewer of "The Farmer's Advocate," Winnipeg, should be given more than local significance. They are worthy of more careful thought than simply that such and such a horse won. It was a case of the exhibitors bumping up against a judge who was looking for, draft horses, and who has cut himself free from breed fancies. The adherents to the Clydesdale breed type were somewhat aghast at the manner in which breed character was ignored, and the emphasis Mr Gardhouse placed upon substance and general massiveness. Many protested that such placings would be ridiculed in Scotland by the best judges of Clydesdales, and for the present we do not doubt their assertions, but notice that reports from Scottish shows state that there is more of a tendency to favor draft character before Clydesdale type this year than has been witnessed.

We seem to have come to a time when it shall be decided whether or not the Clydesdale is to be classed as a draft horse. Hitherto we have assumed that he is, but while the demand has been increasing for horses of weight and substance, the Scotch breeders have been busy developing a horse with the best possible feet and legs, apparently leaving out of consideration the value of weight. Now, it appears, the Scots are to devote themselves to the problem of putting more horse upon the feet and legs they have produced, and the action of Mr. Gardhouse in favoring substance, as he did at Brandon, was but a prelude to the coming policy of Clydesdale breeders.

In evolving the draft horse of Scotland, Clydesdale breeders have no one to emulate; they have begun their work at the ground, and will no doubt complete it at the top, for it is not sufficient that the Clydesdale should take rank as an agricultural horse. His foundation is so constructed that, when he has the weight of body, he is superior to any other breed for dray purposes, and it is for this object that draft horses

are bred, those falling short being classed as agricultural cobs or light drafters, which, although they bring a good price now, are never considered market-toppers.

The contention was raised among horsemen at Brandon that all the teaching and theorizing upon sloping pasterns and flat bone in draft horses has been contradicted by the placings in the ring. To us this appears an extreme view, for although the horse with the best feet, pasterns and legs did not win, those of the first-prize horse were not a negative quantity. In the judge's opinion he was fairly good there as a Clydesdale, and very good according to draft-horse standards. The Clydesdale horse, when perfection is reached, will not be less finished about the ground than the best specimens now are, but will have increased substance, and his Clydesdale character will be somewhat sacrificed to draft type. The market demands it, and Clydesdale breeders are too shrewd to ignore the market demands.

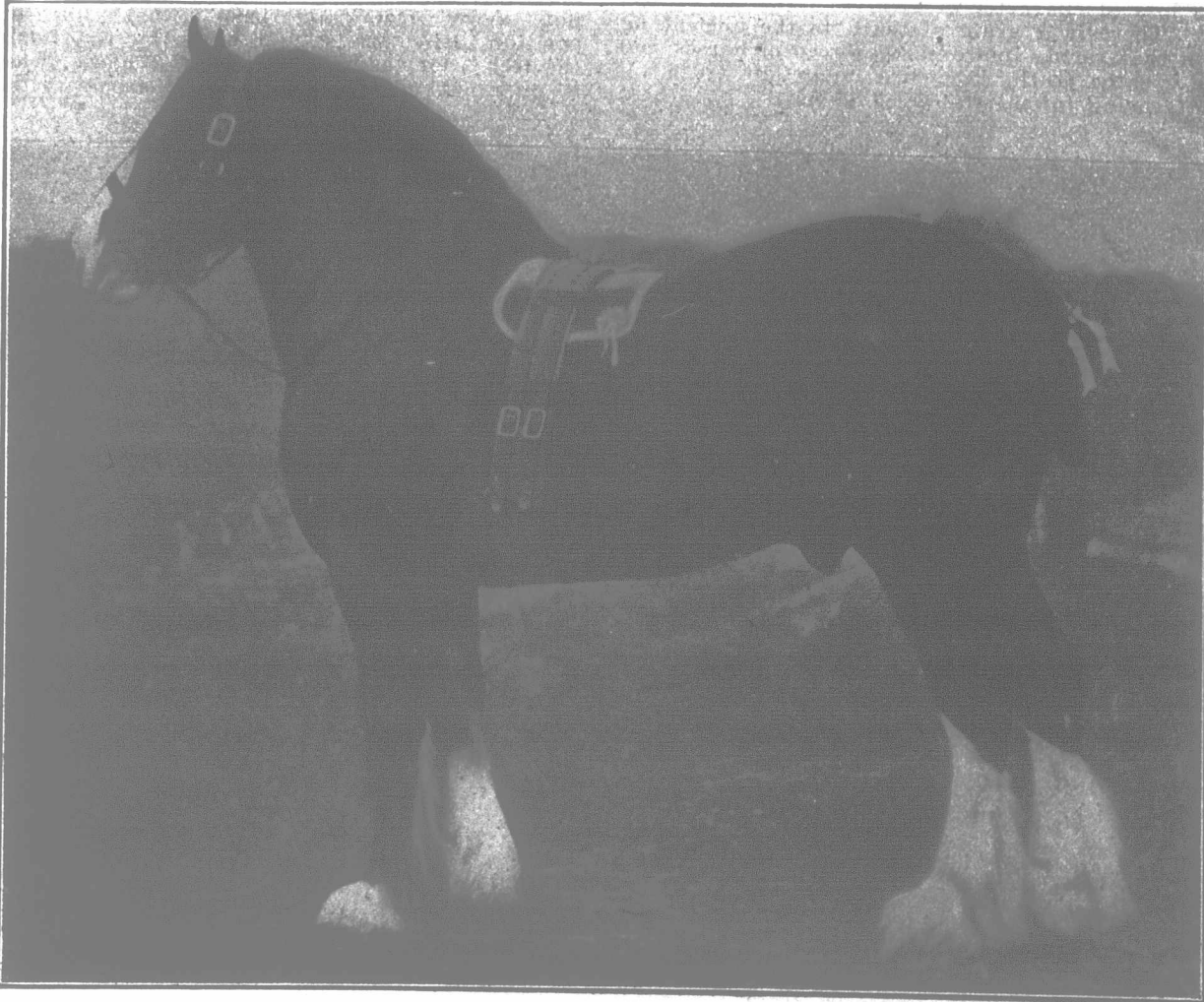
It is not the object of these paragraphs to justify Mr. Gardhouse's decision. We believe he discharged his work conscientiously, and, in his opinion, to the best interests of the breed. It was a rare case where a line had to be drawn between extreme Clydesdale type on the one hand and a draft type on the other. Probably such an instance will not occur again for a long time, but for the present it serves as an object lesson of the relative values a man in close touch with breeding and market operations sets upon Clydesdale character and draft-horse type.

The Noble Horse.

Through all the strength of recorded time; through all the steps of mechanical invention and progress, humanity has been faithful to the horse. The first stages of civilization, when knightly instincts were taking root, when the tide of battle was turned by the spear, the horse contributed to the impressiveness of ceremonial occasion as he does to-day, and his end is as distant as the stars which gem the sky of night. His form has advanced with the ascending waves of civilization, and love of him has not grown cold in the human heart. He comes to us from the twilight of antiquity, and he is here to stay until thoughts of vanity and rank are obliterated from the mind. Although motor-cars raise more dust and take more complete possession of the highways than the bicycle once did, horses number higher in the country than ever before, and breeders are unable to meet the demand for individuals of merit.—[The Horseman.]

Invaluable.

I have been a constant reader of your paper for years, and find it invaluable.
West York, Ont. A. S. JOHNSON.



Baron's Pride (9122).

Most successful sire of prizewinning Clydesdales in the world. Property of A. & W. Montgomery, Kirkcudbright, Scot.

Nail Wounds in Horse's Feet.

It has long been known that nail pricks and other similar injuries in the horse's hoof may lead to an infection followed by the formation of pus under the horn of the hoof, and a serious general disease of the horse, or, at least, the loss of the hoof. In a bulletin of the South Dakota Station, Prof. Moore has recently reported results obtained in a number of cases from applying a strict antiseptic treatment to injuries of this sort. The method consists in paring away the horn of the hoof from the affected part until the blood oozes out. The hoof is then thoroughly washed in a solution of bichloride of mercury, at the rate of 1 part to 500 of water, after which absorbent cotton saturated in a solution of the same strength is applied to the wound and the whole hoof is packed in cotton, surrounded by a bandage and well coated with tar. This prevents any further filth from coming in contact with the wound. The operation must usually be done by a qualified veterinarian. Subsequent treatment, however, can be applied by the average farmer, since all that is necessary is to pour a little of this solution of bichloride of mercury upon the cotton which projects from the upper part of the bandage. The cotton will absorb enough of the solution to keep the wound moistened and hasten the healing process. If a remedy of this sort is not adopted in the case of foot wounds in the horse, the owner runs considerable risk of serious infection, either of blood poisoning or lockjaw.

The Breed of Men More Important than the Breed of Horses.

In World's Work for August is a remarkable article dealing with the question of horse-racing, from which we take the liberty of making a few excerpts:

"Betting is necessary to draw the crowds—at least big crowds. The average race-goer cares little for the individual horses; there's no reason he should.

"Betting is a high-powered excitant—a multiplier of interest.

"The undeniable attractiveness of a horse-race, plus the added excitement that is given by the bet, plus the hope of getting 'easy money'—it is this sum that draws the crowd. If there were no betting, the last two incentives would be wiped out. The crowd would not attend, or at least the far greater part of it.

"The bookmaker, pure and simple, is not strictly a gambler. He risks nothing. He and the keeper of a gambling house are certain of their profits, no matter how the horses run or the cards fall. The bookmaker takes the laws of chance into account, but he does not depend on chance; he depends upon a cold business principle.

"The bookmaker, so long as he sticks to his system, cannot lose. He has the percentage with him.

"The public can't beat the game, but the chief loss is far more serious than the monetary one—the loss of character of men.

"There is a grain of truth in the ancient fiction that racing improves the breed of horses; but the greater truth, the more important truth, is that racing lowers the breed of men.

"Betting on races should be made as difficult as possible; it should be forbidden by law.

"The result of such laws may be the death of racing; but the breed of men is more important than the breed of horses."

The Horse as Xenophon Knew Him.

It is interesting to note with what care the early writers described the animals with which they came into contact. Xenophon was born 434 years before the birth of Christ, but even at that time the points of a horse were discussed, and the description is not far from being applicable

may be, if the foundation is imperfect, the horse is of no value if he has not good feet. Look first to the horny portions of the hoof, for those horses with thick hoofs are superior to those horses with thin hoofs. Next, it should be noticed whether the hoofs be upright before and behind, or low and flat on the ground. The high hoofs keep the frog at a distance from the ground, while the flat hoofs press equally with the soft and hard part of the feet. Strong-footed animals can be known by the sound of their tramp on the hard earth, but the hollow-hoofed foot rings like a cymbal when it strikes the earth.

"It is desirable that the parts above the hoofs and below the fetlocks (the pasterns) be not too erect, like those of the goat, for legs of this kind, being stiff and inflexible, are apt to jar the rider, and are more liable to inflammation. The bones must not, however, be too low and springy, for in that case the fetlocks are liable to be chafed and bruised when the horse gallops over clods and stones.

"The bones of the shanks should be thick, for these are the columns that support the body; but the veins and flesh on them should not be thick. If they are thick, then when the horse is galloped over rough ground the veins will fill with blood and will become varicose, so that the shanks will be thickened and the skin become distended and free from the bone. When this happens the back sinew gives way and the horse becomes lame.

If the horse, when walking, bends his knees flexibly, he will also have flexible knees when going at a faster pace. Horses increase in the flexibility of the knees when they increase in age. Flexible goers are highly esteemed, as they should be, for such horses are less liable to stumble than when they have rigid, unbending joints.

"If the arms below the shoulder-blades be thick and muscular, the horse appears handsomer and stronger than otherwise, as in the case of men. The breast should be broad, as well for beauty as for strength. This also causes better action of the fore legs, which do not then interfere, but are carried well apart.

"The neck should not be set on, like that of a



Baron's Best (11597).

Son of Baron's Pride; foaled, 1901; first in aged class, Highland Society's Show, 1906. Owned by Wm. Clark.

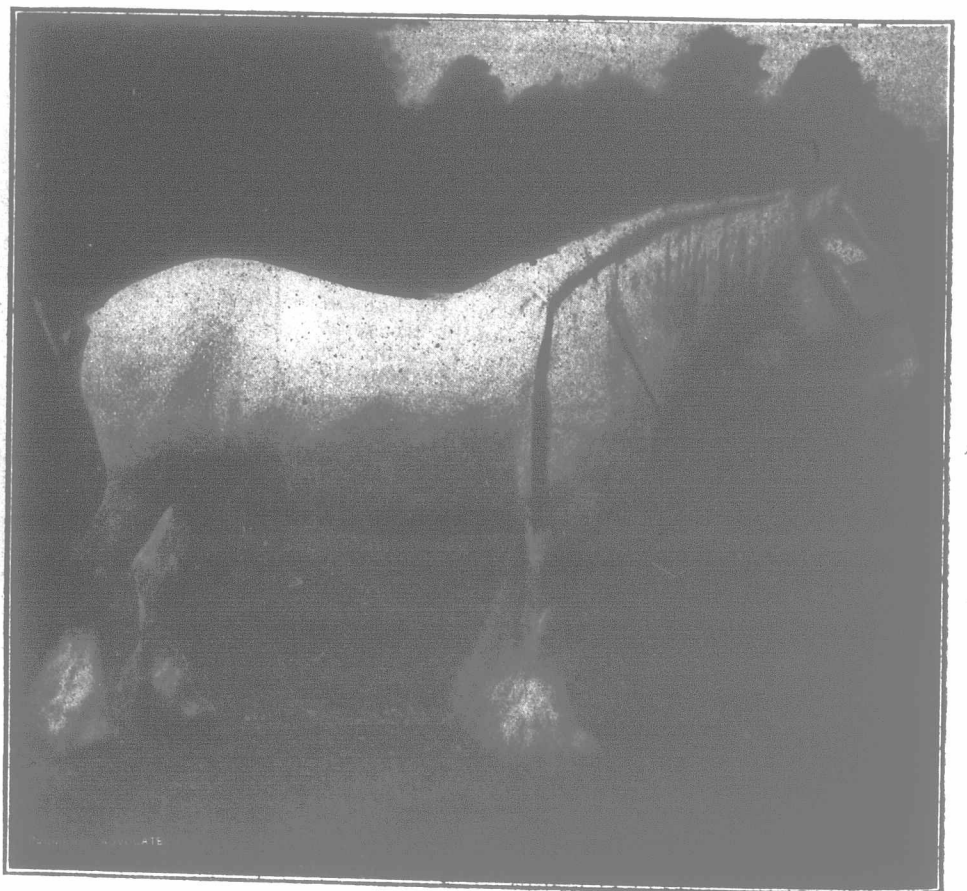
in the present day. Xenophon, who was in the memorable retreat of the 10,000 Greeks from Cunaxa to the Black Sea, and who was one of the most noted writers of that day, evidently thought it would be a good thing to write out a careful description of the points of a horse for the sake of the uninitiated. He says:

"I write how not to be deceived in the purchase of a horse. If the horse is an unbroken colt, one must judge him by the construction of his body, as, if he has not been ridden, one cannot know from experience what his disposition is. It is first necessary to examine the feet; for, as in the case of a house, where it does not matter how fine the superstructure



Pyrene.

Champion Clydesdale female, Highland Show, 1906.



Sussex Blue Gown (40352).

Exhibited 81 lbs. mare in aged class, Royal Show, 1906.

boar, horizontally from the chest, but like that of a game-cock, should be upright toward the crest. The head should be long, but the jawbone should be small and narrow, so that the neck will be in front of the rider, and the eye will look down at what is before the feet. A horse of this conformation will be less likely to run away, even if he be a high-spirited horse, for horses do not attempt to run away by bringing in but by thrusting out their heads and necks. Note whether the mouth be equally hard on both sides. If the jaws are not equally sensitive the horse may be hard-mouthed on one side or the other. It is better to have the eye prominent than hollow, as the prominent eye will see farther than the hollow one.

"Wide nostrils are better for respiration than narrow ones, and they give the war-horse a fiercer aspect. The higher the crest and the smaller the ear, the more horselike and handsome is the head. High withers give the rider a sure seat and produce a firmer adhesion between the body and shoulders. A double loin is also softer to sit upon, and better to look upon than if it be single. A deep side rounded toward the belly renders the horse easier to sit. He is also stronger, and can more easily be kept in condition. The shorter and broader the loin, the more easily will the horse raise his forequarters and collect his hindquarters under him in going. These points cause the belly to appear smaller. If it be large it injures the appearance of the animal, renders him weaker and less manageable. The quarters should be broad and fleshy, in order to correspond with the sides and chest. If they are firm and solid the horse will be light in the gallop and will be speedy."

Horse Notes.

Never leave mud on the legs and feet of horses over night.

A pretty and well-shaped foot on a horse does not always mean a good or sound foot.

The time to treat a sick or lame horse is the first time something wrong is discovered.

Keep up the supply of horses on the farm by breeding two or more good mares each year.

One of the best ways to increase the appetite of a horse, if such a thing is necessary, is to change his diet.

The nearer you get to pure blood in breeding, the more certain you are of good results.

The difference in stamina and durability of horses is often due to the kind of food they were raised upon.

Burning ruins the wall of the foot, so that it will not retain the shoe so long, besides rendering it so brittle that a heavy strain upon it causes it to break.

Load according to the strength of the teams, and use the whip as little as possible. Nothing will spoil a high-spirited horse quicker than the whip and an ill-tempered driver.

Whenever a man imagines that he knows all about horses, and has no more to learn, it is about time for him to get out of the business.

Where sound, flinty bone can be grown, good feet, as a rule, follow. If too fine bone is produced, the quality of horn hoof is proportionately lessened.

The value of good seed is seen only when the harvest is gathered, and the advantage of breeding to pure-bred and good stallions is best realized when the colts are ready for market.

A good strong mare can raise a colt each year and still do about as much work on the farm as a gelding. It pays to farm with good breeding mares, if they are properly handled and bred to good horses.

The horse that can walk fast, whether he be a saddler, driver or draft horse, always commands a better price than the one equally as good in other respects, but a slow walker.

The fast walker need not necessarily be a long-legged animal. It is the sprightly step, the lively action and the powers of endurance that make up the walking horse.

The value of a stallion lies in his individual and inherited possession of that prepotent transmitting quality which enables him with certainty to impress upon his progeny those characteristics desired in the animal produced.—[Live-Stock Journal.

A Snap.

Pay for your paper this year by helping two neighbors. The publishers of "The Farmer's Advocate" are making the extraordinarily liberal offer to advance one year the date on the label of every paid-up subscriber who will send us the names of two new, cash-in-advance subscribers, accompanied by \$3.00. The best weekly agricultural journal in America free for the mere service of persuading two friends to invest \$1.50 each in a proposition that is bound to return them from 100 to 1,000 per cent. interest on their money! Are you in?

An Improved Morgan.

We Canadians are watching with scarcely less interest than our American friends the attempt to re-establish that splendid old breed or strain of horses known as the Morgans. We therefore need not apologize for giving space to the following particulars concerning it:

Early in the last century New England in general, and Vermont in particular, were famous for their Morgan horses. These horses were small,

very largely bred out. These Standard-bred horses were not of the Morgan type, and in many cases they were not desirable individuals for breeding purposes. Even in Vermont the effects of these crosses are found on every hand. In the southern part of the State it is hard to find horses showing the Morgan type, but farther north they are more common.

Believing that the Morgan characteristics were too valuable to the horse-breeding industry to be lost, the Bureau of Animal Industry of the U. S.

Department of Agriculture has established a stud in co-operation with the Vermont Experiment Station to revive interest in the Morgan breed. The type selected is that of the old Morgan, with size and quality. With increased size the Morgan horse will answer the requirements of the market for light horses, and will be a profitable horse for farmers to raise.

Nine mares and two fillies were bought in June. They are uniform in type, with full-made bodies, fine heads and necks, full hind quarters, good legs and feet, and abundant quality. Seven mares and two fillies were purchased in Vermont, and two mares in Kentucky. Those bought in Vermont are by such sires as General Bates, Bob Morgan, Young Ethan Allen, Rocky Mountain and

Gillig. The Kentucky mares are by Harrison Chief, out of Morgan mares, and are in foal to the saddle stallion, Highland Denmark, a horse of splendid conformation and quality, and an excellent stock-getter.

Some of the Vermont mares were in foal at the time of purchase. Those not in foal will be bred to the Morgan stallions, General Bates, Frank Allen and Rex. A stallion will not be purchased at present, as sufficient funds are not available. The introduction of Harrison Chief and other saddle blood was thought desirable on account of the great effect the blood has had on the quality of the harness horses for which Kentucky is famous.

These mares were bought by a board composed of Prof. C. F. Curtis, Director of the Iowa Experiment Station; Cassius Peck, of the Vermont Experiment Station, and Geo. M. Rommel, Animal Husbandman of the Bureau of Animal Industry. In addition to the characteristics mentioned above, the board insisted on pure trotting action, and discriminated sharply against pacing or any tendency to

mix in gaits. Pacing strains in the pedigrees were also avoided as far as possible. The mares are temporarily on a farm rented by the Vermont Experiment Station near Burlington, and will be moved to the College farm as soon as it is fitted up. A barn has been remodeled, and is very well adapted to the purpose for which it is to be used. Selection of type will be rigidly practiced and undesirable animals culled out from time to time. W. F. Hammond has been ap-



Holker Menestral 2nd (22451).

First in aged Shire class, Royal Show, England, 1906. Bred and exhibited by Rt. Hon. Victor C. W. Cavendish, M. P.

but well built, compact, and very good roadsters, with powers of endurance little short of remarkable. From Vermont they were distributed over the entire United States and over a considerable portion of Canada, the blood entering into the light-harness stock of both countries and having an effect of great value. The principal effect was the endurance and stamina which it gave. With few exceptions it did not produce extreme speed.



Copmanthorpe Performer.

Two-year-old Hackney stallion, champion, Highland Society's Show, 1906. Owned by Arthur Hall, Wilberfoss, England.

For this reason the passion for speed in the light horse, at all costs, caused Morgan breeders to neglect conformation and quality, and even that stamina for continuous travel for long distances for which the Morgan was noted.

The small size of the Morgans was also a fault when market requirements were considered. The result was that Morgan mares were mated with Standard-bred stallions of other strains to get speed and increased size, and the Morgan type was

pointed to conduct the work at the Experiment Station. Mr. Hammond has had a lifelong experience in horse-breeding in Vermont, and is descended from the Hammonds who developed the Vermont Merino sheep.

The Horse vs. the Auto-car.

The following, from a letter by an Englishman to the London Live-stock Journal, will serve to show the position of the horse in relation to the automobile in that country, where the latter has recently been cutting a rather wide swath:

"A few months ago the imminent extinction of the horse was a constant topic of the comic papers, and undoubtedly many timid-hearted breeders were persuaded by their fears to dispose of at least a portion of their studs at low prices, lest worse should befall them later on. Even the most level-headed of your contemporaries were wont to eulogize the automobile in its varied forms, and to refer to it as the only vehicle of the future. American and other foreign shippers of second-class draft horses were compelled to suspend consignments to this country; the British public, like the Athenians of old, were running after something new, and even the leading omnibus companies were investing large sums in the building of motor 'buses.

"In short, the position, so far as the prospects of horseflesh were concerned, was said to have been even worse than it was when railways were first built, and certainly the appearance of the bicycle failed to excite anything like such a state of anxiety amongst breeders. But history is rapidly repeating itself, as the first scare being over, people are beginning to enquire of each other whether they have not been a little too precipitate in throwing over the horse, which they knew and understood, in favor of a machine of which they knew nothing, and understood, if possible, less. The terrible tragedy recently, associated as it has been with many lesser mishaps, has been the means of at last opening the eyes of the public to the danger that is menacing them on every side. The consequences of collisions between automobiles, and the risks they bring upon pedestrians and others who use the King's highway, have, of course, always been apparent to everybody, but the sad catastrophe lately has emboldened both householders and scientists to express their views, and it is remarkable to see the unanimity which prevails. One hears of the foundations becoming unsafe, of walls and ceilings cracking, and of drains leaking, through the vibration caused by the heavy traffic; municipal bodies are complaining bitterly of the additional expense that is incurred in the upkeep of roads, and rate-payers are rebelling against having to pay through the nose for the pleasures of strangers whose appearance amongst them is not only a source of danger, but the ruin of their property. The men of science, too, are raising their voices against the danger to health that is caused by inhaling the fumes of petrol, and, in fact, generally speaking, the automobile, for the time, has lost favor with many of the public.

"I do not for a moment suggest or believe that the present state of affairs entails the extinction of the automobile. It really proves that the existing types of machine are far from approaching perfection, that additional precautions should be taken to insure proper inspection, and licenses only being granted to really competent drivers. In fact, everything goes to show that we have been too much in a hurry all round—the public, motorists, and horse-breeders.

"The result of the present position is that horses are in greater demand than they have been for some time past, and that breeders can now dispose of the 'useful' class of animal at a remunerative price. Breeders who declined to be scared are therefore reaping the reward of their allegiance to the horse, whilst many who have 'gone out' in a hurry are now repenting at leisure. Nor does it appear to be in the least degree probable that the demand for horses will slacken for a long time to come, as with so many inducements to do their duty, and thereby protect the lives and property of the public and the pockets of the ratepayer, it is inconceivable that the Legislature will neglect to insist upon a proper type of automobile being produced. This, if we believe all we are told, will not be an easy task, and therefore until the problem is solved the position of the British horse appears to be very surely secured."

The men who have achieved success are the men who have worked, read, thought more than was absolutely necessary, who have not been content with knowledge sufficient for the present need, but who have sought additional knowledge and stored it away for the emergency reserve. It is the superfluous labor that equips a man for everything that counts most in life.—Cushman K. Davis.

LIVE STOCK.

Utility the Basis for All Ideals.

When Robert Bakewell started his work of improvement upon the Leicester sheep he had no beaten path to follow, and no ideals save what he himself created. His aims were to produce an animal which would give better returns for food consumed, and which, when fattened, would meet the requirements of the market, giving less offal, and a larger proportion of valuable meat than the animals with which he started out. The same objects were kept in view in his work with Long-

achieving fame, undertook to produce something which would supply the want. Here, then, are two men who achieved undying fame through increasing the usefulness of the animals they produced. In other words, utility is the foundation of all successful work in stock-breeding. Fads and fancies may have their day, but they eventually disappear, and their originators are forgotten. It is only the work which has utility for its foundations that can endure.

It is not unprofitable for present-day breeders to turn back the leaves of the past and study the results of following true and false ideals. The great markets of the world practically fix our ideals. If our ideal is out of harmony with

market demands, we may rest assured that we must either change our ideal or be numbered among those who have essayed the impossible and failed. Perhaps one of the greatest stumbling blocks in the way of the average breeder is the question of fashion. A fashionable pedigree will cover a multitude of faults in the eyes of many breeders. Do we ever stop to consider what made certain strains or families of live stock popular, or fashionable, and why animals derived from these strains are accounted fashionably bred? Was it the pedigree that brought these families into prominence? Most certainly not. It was the remarkable excellence of the animals from a utility standpoint which attracted attention to



Meteor (86631).

Three-year-old Shorthorn bull; first and champion, Highland Society's Show, at Peebles, 1906. Property of Sir Richard Cooper, Bart.

horn cattle, and to increase usefulness was his main object when striving to improve the English cart-horse. We have stated that Bakewell had no beaten path to follow, but there are cases where breeders have deliberately left the beaten path, climbed the walls of prejudice erected on either side to keep the faithful from straying, and blazed new trails which eventually became popular highways, overshadowing in importance the original paths. Such a man was Amos Cruickshank, and the stories of his trials and difficulties, and of his ultimate triumph, are too well known to re-

the families to which they belonged and caused their pedigree to become popular or fashionable. Take Shorthorn cattle, for example. Scotch Shorthorns are popular at the present day, especially those which trace back to the herd of Amos Cruickshank. Whence came their popularity? Was it not from their excellence as utility animals? But, unfortunately, Scotch cattle are not all good. Even among the most fashionably-bred sorts we find inferior specimens, and if the excellence of the animal has disappeared, of what value is the pedigree? A Scotch pedigree is good, but it

must be accompanied by an animal possessing Scotch merit. The same principle applies to all classes of stock, and there is always a danger that the inexperienced breeder may mistake the shadow for the substance. The pedigree is the shadow. It indicates possibilities, and gives us indispensable information regarding the ancestry of the animal; but the animal is the substance, and if it is a weakling, no pedigree can make it good. No reflection is intended upon pedigree as a means to assist the breeder, but pedigree was never intended to serve as an ideal.

Modern ideals, then, must have the same basis as those of the older breeders.

The demand of the market, or, in other words, utility, must be the foundation of correct ideals. When markets change, ideals must change with them. This point has been well illustrated in our own country. If we are to succeed as breeders of flesh-producing animals, the feeder, the butcher and the consumer must ever be kept in view, and our ideals shaped accordingly. In this connection the show-ring plays an important part. The show-ring cannot originate ideals, but, if competent judges are employed, it places before the general public types



Brampton Agnes 33rd.

Two-year-old Hereford heifer; first and champion, Royal Show, 1906. Property of Mr. Lawton Moore.

quire repetition here. We might go on citing instances of successful breeders almost indefinitely, but perhaps enough has been said to illustrate what might be called the origin of ideals. Where did Bakewell get his ideals? Was it not from the fact that farm animals of his day did not meet the requirements of the farmer and the consumer? Whence came Cruickshank's inspiration? We are told it was from the demand of the tenant farmer. The Shorthorns of that day did not meet the requirements of the tenant-farmer, and Cruickshank, with no thought of

which meet the demands of the day. The judge should know what the market demands, and his decisions should make this point clear to the on-lookers. Too often we are led to regard the show-ring as merely a battlefield where breeders strive for supremacy. But it should be more than this; it should be a school where the everyday farmer and feeder of live stock can come to learn what kind of animal is most in demand. The show-ring should be educational, and should spread abroad information regarding what ideals are safest to follow.

In concluding these rambling observations, let me urge upon every young breeder to make sure that his foundation is sound, and to assure him that there can be no safe ground except that of utility. Let his watchword be, utility first, utility last, utility always.

G. E. DAY.
Ontario Agricultural College, Guelph.

Open-air Treatment for the Tuberculous Cattle.

(Ottawa correspondence.)

Under the superintendence of the Dominion Veterinary Director-General and Live-stock Commissioner, Dr. J. G. Rutherford, a practical experiment in the treatment of tuberculous cattle is being carried on, on a farm a short distance from the city of Hull. The experiment is to test the efficacy of the open-air treatment on a number of animals that have reacted to the tuberculin test. At the outset it may be said that the strictest precautions have been taken to prevent contact of the experimental herd with outside cattle, the animals being in charge of capable caretakers. The test is being made for its practical value. Suppose, for instance, a man has a herd of valuable stock, and discovers through the tuberculin test that several of them are affected. He knows that if he keeps the infected ones with the herd they will not only grow worse, but will eventually affect the healthy animals, the young stock and any new cattle he may bring in. What is he to do? Kill the whole lot, as is sometimes done, to the ruin of the owner? If by any course of treatment he can restore them to health and continue his business with the healthy ones, then it is of great value that that treatment be scientifically established and generally known.

As before stated, it is the object of the present test to establish by results what a large majority of veterinarians believe, that the open-air treatment is as efficacious in cattle as in human beings. The evidence of Dr. Rutherford before the Select Standing Committee on Agriculture and Colonization, given last spring upon this subject, expresses the case in his terse, characteristic way. He said: "The highest medical authorities are nowadays advising, and with the very best results, our modern hothouse humanity to get 'closer to nature' in every possible way. The advantages of adopting a similar policy in the handling and housing of domestic animals are too apparent to admit of discussion. Nature has furnished our animal friends with every conceivable requisite for protection against ordinary climatic conditions, and most of the diseases and disabilities to which they are subject have been caused by and owe their continuance to the irrational, artificial conditions imposed upon them by their well-meaning, but ignorant, or rather unthinking, owners and attendants."

In the same evidence the Doctor referred to the commencement of the test here spoken of at the Experimental Farm at Nappan, Nova Scotia, and his intention to have the animals removed as soon as possible to Ottawa, where the opportunities for close observation would be greater and the results generally more satisfactory. The animals that are being treated are some that were chosen from the herd at Nappan. The tuberculin test having been made, it was found that many of the animals were infected. Those that showed evidence of breaking down were killed, and forty head were retained for the experiment. Of these there were twelve that did not show signs of disease. These were kept in the herd, as it was desired to obtain, among other things, a knowledge of the probability of infection of healthy animals by contact under open-air conditions. The cattle are of different breeds and ages. Some of the cows are of good age. There are, besides, a few young growing calves. The animals will breed and carry on their natural functions, and will be under practically constant observation by experts. Being near headquarters, the Veterinary Director-General will give personal superintendence to the experiment.

The Canadian analyst warns people to beware of preparations labelled "potted" or "deviled" chicken, beef, ham, turkey or tongue. Fortunately the farmer does not need to call on this line of goods; his menu can be made up of the fresh in place of the be-deviled article.

Starting a Shorthorn Herd.

Several young farmers we have known have shown at times sufficient interest in pure-bred cattle to discuss embarking in the breeding of the reds, whites and roans. These young fellows did not begin for several reasons, one being that the view that they took was discouraging to a beginner with little money and anxious to get returns right from the start. They saw breeders pay big money for fashionably-bred cows, which later dropped calves that straightway were given

expense, which is not an insuperable obstacle after all.

If a man knows milch cows, how to feed and select, and has the ambition to breed Shorthorns, there is no reason why he should not begin, and make the venture a paying one from the start, if he will only select sound, deep milkers, milk the cows from the calving, and raise the calves well by hand. There are numbers of such deep-milking cows in the breed, and, given a little care in the handling and selection, such traits may be indelibly stamped upon the herd as it multiplies

year by year. It is just as feasible, even more so, to make a profit by milking Shorthorn cows as it is to expect to do it from grades. In fact, for one to get the most profitable (year in and year out) cows of the breed, it is essential that the beginner should select cows with plenty of femininity, deep and wide-chested, ample bosoms and large middles, big, tortuous milk veins and spacious milk wells, as well as shapely udders and moderate-sized and square-set teats. Avoid the heifer matured at eighteen months or two years, especially if she bear those marks of indulgence at the feed-box, viz., bunchiness at hips and tail-root, or hard rolls over the back ribs. Beware of

the cow whose udder development resembles more that of a bovine virgin, which may have had a calf, but which Dame Nature, with her inexorable laws, let die because its mother could not feed it. Get, therefore, one or more cows of size and feminine appearance, breed them and milk them as you would expect to do with a herd of grades that had to pay its way. The matrons with the silky skins and velvety touch, mild-eyed and calm, carrying plenty of evenly-laid-on flesh and of irreproachable smoothness—given such cows, mated with bulls from deep-milking dams low-set, thick and heavily fleshed, one need

not be afraid of making the venture a success. It matters not what breed one keeps, the milking function must not be allowed to decline or remain in abeyance. Nature, as already mentioned, never fails to extort the penalty, which in this case is early decline of bovine good looks and an exasperating sterility, so provoking and unprofitable in its barrenness.

One of the snags which has capsized many a man's ideas of the milking Shorthorn is the rushing after cattle of the breed that approximated to the so-called dairy type, "discovered" a few years ago by an editor of a dairy paper or professor of dairy husbandry—we forget which. The Cumberland and the Old Country breeders

have had the type for years, and there is no reason why our breeders should not also, provided they do not forget the possibilities in selection and the power of inheritance.

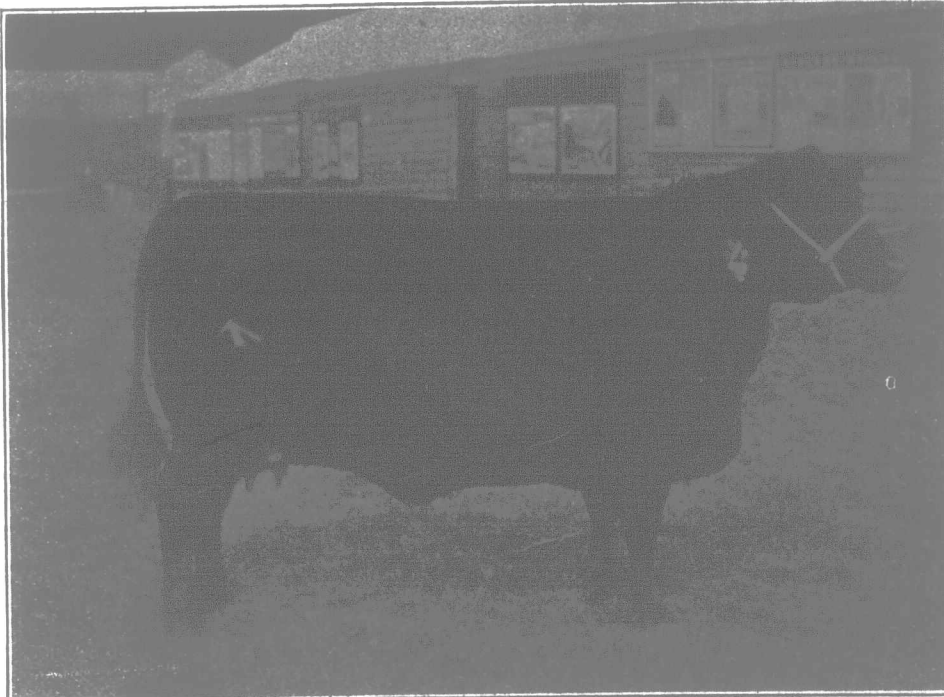
How would it be if a few women were made directors of some of the fair boards and attraction committees? Women have been known to do good work on school boards and in other public offices; why not on fair boards?



Admiral (23256).

Three-year-old Hereford bull; first at Royal Show, 1906. Bred and exhibited by His Majesty the King.

wet-nurses, while these same cows were allowed to forget the maternal duties, and were dried up so as to make a good appearance at some of the big shows; other pure-bred matrons shared the duty and pleasure of raising their offspring with aliens, in many cases cows plebian by birth, but whose milk was every bit as nourishing as that of the bovine aristocrats. Unfortunately, the would-be breeders of Shorthorns looked no further, but, after figuring the matter up, decided in their own minds that, as they had their living to make, they could not afford the pure-breds, so contented themselves with the grade cattle of the country.



Juana Erica.

Three-year-old Aberdeen-Angus cow; first and champion Highland Show, 1906. Exhibited by Mr. Ernest Kerr.

Herein they were not entirely to blame, as neither breed society nor exhibition association gave hint that some other procedure might be followed with profit, or that different types of cows might be had, cows whose views on race suicide were not so radical as to prevent donating to the world a calf every twelve months, and giving a sufficiency of milk not only to raise that calf, but with some to spare for the human race. We would say right here that the only possible and legitimate deterrent to the investment in one or two good Shorthorn cows by the beginner on his own account in breeding good live stock, is the initial

His Majesty King Edward VII. to the Live-stock Breeders at the Royal Show at Derby.

"I commenced very early in life to take a warm interest in all matters connected with agriculture, and I have long appreciated the difficulties with which farmers are forced to contend in order to carry on their industry. The cultivation of the land is a factor of the highest importance to the prosperity of the country, and much credit is due to the agricultural societies for their strenuous efforts to promote the welfare of the cause they have at heart, by encouraging

new processes of cultivation, and by disseminating information of utility to farmers. I have watched with pleasure during many years the improvements which have been introduced in the methods of raising stock. The application of scientific principles to the breeding of horses, cattle, sheep, pigs and poultry has produced wonderful results, and the extent of the exportation of the best class of animals to foreign countries shows the high appreciation in which our breeds are held. I cannot peruse without a feeling of pride the sale lists, in which I see so many names of purchasers coming to this country from all parts of the world, and I feel confident that the perseverance and skill of our breeders will enable us to produce as good stock in the future as in the past."

Management of Sheep.

Sheep are trumps these days, judging by the way the country is being scoured by buyers from the States and elsewhere. Farmers who are fortunate enough to have kept their flocks intact should be careful to hold their young ewes for the strengthening of the flock, as the demand will doubtless continue for years, and grow stronger. Sheep have, in the last few years, been sold off very closely, and are scarce all over this continent. Prices for sheep, lambs and wool have ruled higher this summer than for a long time, and everything points to a continuation of good times for flockmasters in the years to come. Those who contemplate founding flocks, or increasing them by purchase, should set about it early in the fall season, or they will find it difficult to secure what they want. Those needing to change their stock rams will do well to make their selections early, before the best have been picked up. The quality of the sire counts for much in the improvement of the flock. He should be strong, vigorous, masculine in head and neck and back, have good legs, well placed, show approved breed character in his general appearance, and his fleece should be fine, dense, lustrous, and of even quality all over the body as nearly as is possible to secure. It is not wise, as a rule, to purchase a ram that has been heavily fed in fitting for show purposes, and if such is chosen he should not be reduced in condition too rapidly, but kept in shed or paddock, fed on such safe food as oats, bran and roots, the ewes brought to him once a day, those in season being caught and penned, and but one service allowed to each. It is safer to use what is called a "field ram," one that has run out on grass all summer, and been used to finding his own living. If he is being used to more than thirty ewes, he will be the better for being taken in once a day and fed a ration of oats or oats and bran, especially in the case of a ram lamb. But in that case about twenty ewes should be about the limit allowed, while a yearling or older ram may be allotted fifty or sixty, if well cared for and kept in good heart.

Breeders of pure-bred sheep, as a rule, plan to have their lambs come early in March, and to this end mate the ewes with the ram early in October. If it is desired to have lambs come earlier than this, it will be well to provide some fresh pasturage to flush the ewes in condition to come in season earlier. It is an advantage to have the lambs come as nearly together as possible, as this ensures a more uniform lot in the fall when they are offered for sale, the lambing season is concluded in a shorter space of time, and the feeding of the flock is more easily controlled. For the average farmer, raising sheep for sale as mutton, there may be economy in having the lambs born in April, as the ewes will need extra feeding for a shorter period before going to grass, and will require less watching during the lambing season, owing to the milder weather conditions.

The lambs, after weaning, and throughout the fall months, should have the freshest and sweetest pasture on the farm, and the sexes should be separated in September, in order that they may be kept quiet and make the most improvement in condition. Ram lambs intended for show or for sale should be fed a little grain, preferably oats, in order to grow them strong and fit them for the ordeal of shipping and service.

Stable Disinfection.

From an excellent bulletin on the characteristics of some of the contagious and infectious stock diseases, just to hand from Purdue University Agricultural Experiment Station, Indiana, we quote as follows re the important subject of barn and stable disinfection:

The object of disinfection is to kill all forms of disease-producing germs. This is accomplished in nature principally by sunlight. The same agent should be employed as far as may be practicable as a continuous disinfectant, both for the prevention of disease and for stamping it out. It has been shown by experiment that most disease germs will be killed by direct sunlight in a few hours, by diffuse light, as in a room, in a few

thresher engine can be hired at almost any place. Burning may be employed in some feed-lots.

Gases are very often recommended as disinfectants. Those most employed are formaldehyde, and that given off by burning sulphur. Formaldehyde is an excellent disinfectant for houses and tightly-enclosed places, but it finds little application in barn disinfection. In order that formaldehyde be effective, it is necessary that a certain volume of gas be developed and maintained in a given space. In a barn or shed this is not possible, where doors and windows fit loosely and the walls and ceilings are not tight.

The burning sulphur develops a fume that was considered to be a perfect disinfectant for a great many years. The dry gas, as produced by burn-

ing sulphur upon hot coals, is ineffective if used alone. It requires that steam should be generated in the room at the same time to produce moisture with which it may combine to produce sulphurous acid, and this will clear the air and destroy all forms with which it may come in contact.

Among the chemical agents which may be used is a one-fourth of one-per-cent. solution of formaldehyde applied with a spray pump. The application of a two to four-per-cent. solution of coal-tar disinfectants, such as cresol, or carbolic acid, may be made in the same manner, and are not so disagreeable to apply. Every part must be thoroughly covered.



Lovely of Pine Grove 3rd.

Two-year-old Shorthorn heifer in Hillhurst herd. Property of Jas. A. Cochrane, Compton, Quebec, to be dispersed by auction at Sherbrooke, Que., Sept. 7.

days, and in rather dark stables and basements in several weeks. The logic, therefore, is to secure the greatest amount of light that is possible in the stable. With light, there should be ample cubic content for ventilation. Sunlight and air are the cheapest disinfectors for horse stables, cow stables, sheep pens, and hog pens; if given an opportunity, they will work continuously.

It sometimes becomes necessary to supplement the natural disinfectants by artificial measures, especially when quick relief is demanded, the place to be reached is inaccessible to strong light, or the germs of such character as not to be affected by light.

The agents to be used are heat and chemicals. There is only one form of heat available for

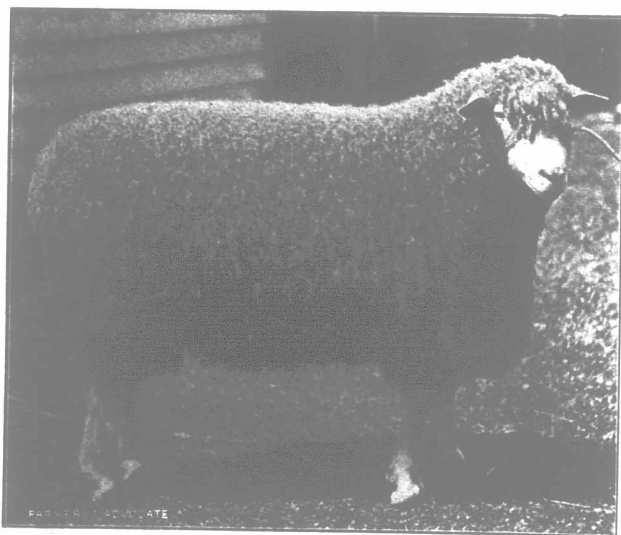
An excellent disinfectant—one always obtainable—is turpentine. This may be sprayed or painted on, the same as the others. It is a little too expensive for use upon a large place. Another is good fresh whitewash. There are many places where this should have the preference. It kills germs, holds them whenever they may be caught, and lightens dark places. The material can be applied with a spray pump or brush, and hurried or incomplete work can be seen as the job progresses, or after it has been finished. It has the other requisite so much in demand, cheapness.

There are a number of other disinfectants, but it is better to use those which are least liable to cause injury to the buildings, to be poisonous to stock or harmful to those making the application. I consider the use of formaldehyde the most objectionable of those recommended because of its being so irritating to the nose, eyes, lungs, and to the hands.

Harness should be disinfected by first washing with soap and water, and then with the cresol solution, and finally rinsed with water. Blankets can be disinfected best by placing in a tub or a barrel and covering with boiling water. Robes or things which might be injured by the heat or soaking, can be placed in a tight box, and a small quantity of formaldehyde placed inside on some cotton (four tablespoonfuls to a space equal to that of a flour barrel).

In case an animal be buried, as a result of anthrax, blackleg, hog cholera, swine plague, corn-stalk disease, tetanus, or any other soil or water-borne disease, the best disinfectant is lime. The lime should be fresh, be broken up into small lumps, and a half barrel be used directly upon the body of a full-grown cow or horse. Antiseptic solutions, such as cresol solutions, drain away before they accomplish the desired result. Crystals of copper sulphate may be used for the disinfecting. All bedding and litter containing germs of diseases which live on the ground or in water, should be burned. The litter from animals infected with glanders, influenza, tuberculosis, strangles or parasitic infections, will be perfectly safe if deposited on cultivated ground, but should not be deposited upon grass land or pasture fields.

A contributor to one of our exchanges remarks with considerable truth that, "Appearance has more to do with the sale of an article than anything else, and when this is lacking sale will be slow."



Lincoln Two-shear Ram.

First at Bath & West of England Show, 1906. Exhibited by T. Casswell, Pointon, Lincoln.

disinfecting buildings, and that is steam. This is effective, and more readily available than is generally supposed. Any farm boiler or thresher engine will answer the purpose as a steam generator.

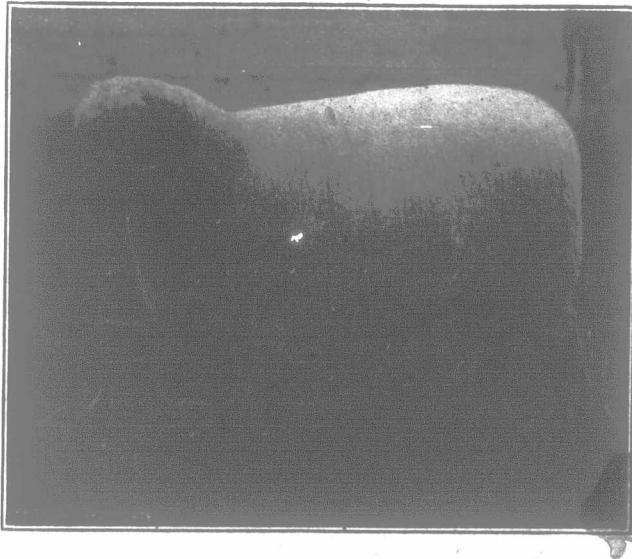
Steam generated to a pressure of twenty pounds may be carried inside the barn or stable by means of a hose, and a jet directed upon every part of the walls, ceiling, stable fixtures and floor. This is quickly done and not expensive, as a

Influence of the Show-yard on the Breeder's Ideal.

Never has improvement in live stock been more rapid than in the present age. It has fully kept pace with that in other lines of agriculture and arts. Sometimes great forward movements were and are due to single individuals. As instances, Bates, Booth and Cruickshank set forth their progressive ideals in Shorthorns; Hugh Watson and McCombie in Aberdeen-Angus cattle; Bakewell in sheep circles; and others still living are building up fountain-heads of improved blood, which largely benefit Canadians—specially Ontarians, in producing bacon hogs; that line of business which is so universal, and which has more nearly approached the ideal on the average, than any other line of live-stock improvement in our midst, judging by the practical test of every-day markets.

The ideals of excellence set before the public in bygone years were the necessary types to meet the requirements of the existing conditions of the time; and conditions largely mean the consumer's demand, and what is needed to fully supply the want. In other words, markets are what all useful ideals must cater to. The types evolved by the earlier master breeders mentioned above would not pass muster at present. Their work was suitable to the existing conditions, but conditions have changed, and so frequently and fast do new requirements make their appearance in this rushing age, ideals have to be set high and higher as the years go by. In this strenuous time a single person here, and another on the other side the sea, may be building up ideal flocks or herds, but 'tis close comparison only that will speedily inform interested spectators which one is furnishing the source of improvement from which they can draw the blood which will best suit their purpose. When we saw Britain's ideal and champion Shorthorn, Cicely, pitted in Chicago's International show-yard against America's best type, as seen in Ruberta, the assembled critical breeders gathered new thoughts, deeply impressed, which would, undoubtedly, lead many to alter their ideas, cause them to fix up the ideal of perfection hitherto carried in the mind, and set the mark still higher. It is by the ring-side, and before, as well as after in the stables, that the many can get most satisfactory information. Such teaching is the best of its kind. Lessons can there be learned, by the anxious inquirer, who seeks knowledge in the cheapest and best way; lessons which in his home efforts it might take him years of patient, practical work to master. Another case in point: How many of us would know that Ontario has of late years placed ideals of Shorthorn perfection before the world, were it not for the show-yards? Who would have looked on, examined and studied over and over again, Harry Fairbairn's productions of Fair Queen and Queen Ideal, champions of many American fairs—the former with her unbeaten record, and the latter, said by the British breeder who judged at the International, to be the best he ever saw of the breed—were it not for show-yard gatherings? Time alone will tell in full how breeders—breeders who are onlookers, and, especially, breeders who are contestants in the ring—return home, determined to produce not only as good, but better in their line, be that what it may. And it is by such friendly contests that enthusiasm is brought into action, that spirit which is absolutely necessary to great success. Britain is a country of live-stock shows, from early summer till autumn, and no country in the world produces so many high-class animals of so many breeds of horses, cattle, sheep and pigs as the mother land. Nor can all other countries together equal her. The inference then is clear: high-toned live-stock show-yards have a great educating influence for good to the people who patronize them in the right spirit. Time was when fat was, perhaps, the chief aim in meat-making animal husbandry—not so now. We must have flesh, lean and juicy, if we wish to secure the patronage of the best markets. Here is where the bred-into early maturity counts, where blood tells, and we must have smoothness of form, and form indicating good constitution. The wide hook bones of past years—yes, and of present days—must pass away; so must bare loins, and with them let go waspish heart-girths and squeezed-in chests—in fact, we must secure all that is of vital importance to the animal's thrift and well-doing. To get the best results, breeding must be along right lines, and so must the feeding be in keeping. That is another practical lesson to be learned from the show-yard, and specially so by the wide-awake young caretaker, who watches not only his own pets, but keeps at least half-an-eye on how and what the other fellows are feeding. This much may be stated in a general way—too much grain feeding does not give the quality of flesh now in demand, nor does that system of feeding tend to constitutional vigor. Abundance and variety of green feeds grow a better quality of flesh, promote health, and so give better tone to the animal's system, as may be seen in cattle's skin and hair, and the sheep's fleece. The strong-fibred, oily fleece is the one in demand, and sells at higher price. Someone says, "Are there not some fancy points, very important ones, which we must watch for closely, and without which we will fail? We must have hair of a certain color on our cattle, wool to the nose and toes on sheep, and a certain curl of pigs' tails. These we must have first of all, and then whatever is left of useful qualities will have to make up our ideal. Just what the late Mr. James I. Davidson said of the faddist customer who went to him for a bull, will fit in here: "Why, the man does not want a bull; all he wants is

red hair." Young breeders should steer clear of worthless fads. To them let us say, in making your selection of foundation stock go slow and sure; be certain in having the utility points as fully developed as possible in sire and dam, but especially in the former; then study your markets, and give as much attention as is necessary, and no more, to what fancy points customers will demand. Better, far better, start on a small scale in establishing a pure-bred flock or herd, putting the available cash into fewer good ones, rather than having a large number of low-class stock. With careful management the smaller start will afford a better opportunity for studying the individuals, their characteristics, their weaknesses, their strong points, their degrees of



Oxford Down Shearling Ram.

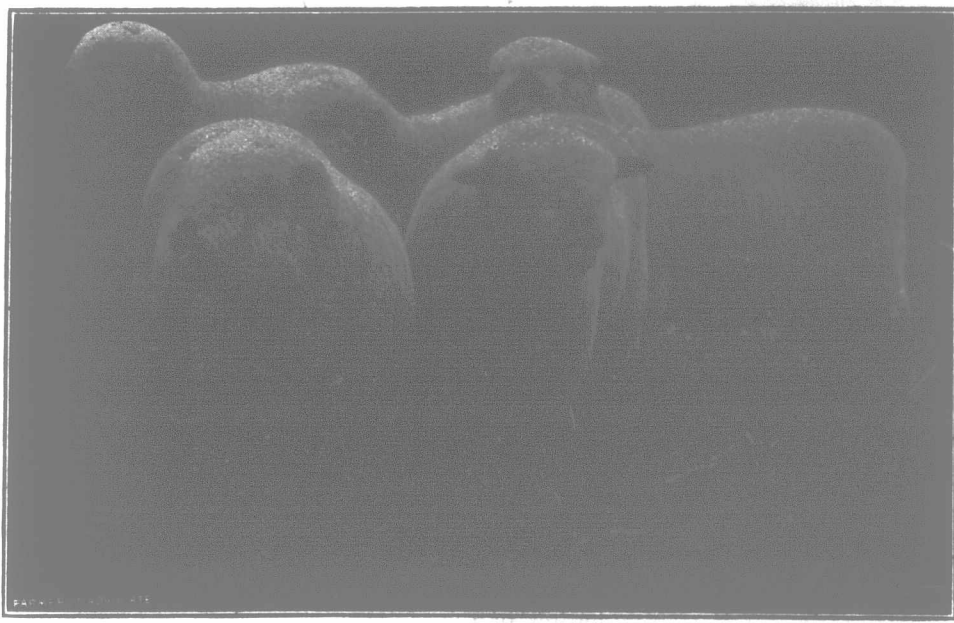
First at Bath & West of England Show, 1906. Shown by Mr. J. T. Hobbs.

usefulness and their returns, and so the work of establishing a flock or herd of uniform excellence will be easier and more certain.

There is another line of showing not yet referred to which has done wonders for Canadian stock-breeders, in the line of utility. The winter fairs have probably done more to educate clearly and unmistakably along what types of living animals are likely to furnish the best carcasses than any other source of information in reach. Inspection of limited numbers of living winners, followed by an examination as they hang in the cooling room, and afterwards seeing some of the best and worst cut up, are practical demonstrations of how our living ideals have pleased or disappointed us from the utility standpoint. Comparisons of high-class stock in the fall show-yards, followed by such tests of, perhaps, some of the progeny of the autumn champions, with other close competitors, cannot fail to have the minds of the discerning and willing-to-learn breeders—young and old—so acted upon that the ideal of what is required by present-day conditions becomes more firmly fixed, and continued improvement is sure and certain.

Victoria Co., Ont.

JOHN CAMPBELL.



Pen of Shropshire Lambs.

Owned by Sir R. P. Cooper. First and reserve champions, Shropshire & West Midland Show, 1906.

Hogs and growing pigs may be turned into the orchard, where they will have shade and can eat the early-falling fruit, which is apt to be worm-eaten and unfit for other use, while the worms, at the same time, are destroyed; but the hogs should be ringed to prevent them from rooting up the ground, making the surface rough and unsightly. Hogs are about the only stock that can be turned into an orchard without doing some damage.

Pigs: Breeds and Management.

The keen demand and high prices at present prevailing, and likely to continue, for hogs of the bacon type, makes the raising of this class of stock one of the most profitable branches of farming in Eastern Canada, especially when it is combined with dairying; the by-products of the dairy—skim milk and whey—which otherwise would be largely wasted, serving an excellent purpose in growing the young pigs rapidly while young, and furnishing bone and muscle as a foundation for the finishing that makes the best quality of bacon and ham and brings the highest price in our market. Thanks to the enterprising spirit of breeders of this class of stock, and to the admirable educational campaign prosecuted by the agricultural press and varied allied organizations for disseminating information along these lines, the swine stock of this country has, in a surprisingly short time, been generally conformed fairly well to the type required for the purposes of our market, with the result that farmers are now reaping a rich reward for their efforts in this direction.

It is gratifying that the influence of pure-bred stock in bringing about this general conformity to the approved type in so short a period, is so freely acknowledged by the rank and file of farmers, who are usually slow to give to pure breeding the deserved credit for the improvement affected in the commercial classes of live stock. The unprecedented demand for pure-bred pigs in the last few years is a very satisfactory evidence of intelligent appreciation of the enterprise of breeders and of the educative influences engaged in the work of moulding public opinion, taste and effort along these lines. And while it has been mainly through the use of pure-bred sires mated with the mixed and mongrel sows that this improvement in type and quality of the general swine stock of the country has been effected, it is satisfactory to find that an ever-increasing percentage of the farmers are taking up the breeding of pure-bred herds, finding that it costs no more to raise and keep pure-breeds than nondescripts.

The fact that many farmers claim that animals the result of a cross between the bacon breeds are more satisfactory feeders than the pure-breeds, is by no means a reflection upon the value of the latter, but rather a compliment to pure breeding, for it must be conceded that without pure-breeds there could be neither good cross-breeds nor good grades. There can be no objection to crossing the breeds if one is satisfied he gets better results by that course, but it should be an invariable rule to feed for slaughter the male progeny of such crosses, and not to retain them for breeding purposes, as they cannot be depended upon to breed with any certainty to type, and, as a rule, the females also should go the way of the packing-house, as the cost of a pure-bred at present is easily within the means of the average farmer, while the cross-bred will bring as much for the shambles as will the pure-bred of similar stamp.

The problem of mating in order to having pigs born at periods which will admit of their being grown and finished when the best market prices prevail, is one not easily solved to satisfaction. The factors of climatic conditions and suitable food products must be considered, as well as the probabilities of the market range. Were the weather conditions as favorable in winter for pigs getting the necessary exercise and green forage, or a suitable substitute, as in summer, there would be less difficulty in raising pigs profitably at that season; but since, owing to deep snow and cold weather in winter, this is not always practicable, it is perhaps advisable to have the bulk of the litters born in March and September, as those farrowed in the former month may get some outdoor exercise by the time they are a month old, and those farrowed in September may have ample exercise for two or three months to strengthen their bone and lay a firm foundation of flesh, sufficient to carry them safely through the enforced confinement of the winter months. There will, of course, be exceptional cases of litters coming between those terms, owing to sows failing to conceive at the desired time, and to others being too young to breed for progeny at

such time; then, some winters are much milder than others, admitting of successful growing of late litters, and these contingencies occurring over a large area of country will generally serve to supply the market requirements fairly well if farmers generally increase their stock of brood sows to a limited extent. The hog trade in this country is too good a thing to the farmer to be trifled with, and it should be intelligently prosecuted, with a view to making the most of it.

THE FARM.

It Was No Dream.

WHERE THE MANURE WENT.

He had cultivated numerous acres of corn, milked a number of cows, attended to the chores and various other things, small and great, that a farmer finds to do in the pleasant summer-time, and now sat down in the coolest corner he could find, with an old meerschaum for a companion, to rest a little and wait for a little coolness that will sometimes come, even on days that are so blistering hot that one can almost hear the corn grow.

The combination of tobacco and a warm evening made him drowsy, but just as he was dropping into a nap he heard a noise down by the barn that put him on his feet and started him in that direction with quick steps. He looked around; the cows were quiet, the horses comfortable, and everything seemed safe, but the noise continued, and he heard a small, thin voice that seemed to come from around the corner of the barn where there was a large pile of manure left over from the spring before, that was not hauled out because the ground was too soft when he had the time, and he had no time when it was harder.

From the manure heap, the yard sloped rapidly down to a little run that was dry in summer, but every rain made it a small torrent. A light shower had just begun, and the rain was falling from the eaves of the barn into the manure pile below, but the sight of the barnyard made him gasp. On a post well elevated above the water and mud sat a round-bodied, slim-legged, small person who was issuing orders to a swarm of small people of like build and make-up as himself, and what was more peculiar was the fact that each drop of water as it struck the ground appeared to immediately develop into one of these small personages, who immediately began, under the orders of the boss, to fill a large bag at the manure pile and painfully carry it on his shoulder down to the brook, where he emptied it and disappeared. But the shower continually supplied new carriers, and the pile was lessening in size.

As he stood there in the rain, the farmer saw that the bags differed in size. One kind was large and light and seemed to be empty, but the carriers were the busiest of the lot.

He puzzled over this until he heard the boss call out, "More ammonia bags, there! Don't you see that a lot of it is getting away from you? It's worth 15 cents a pound, and there are a lot of corn plants down on the flat that will be glad to buy it. More, I say! Get a move on you! And, say! we want some more potash and phosphorus. There is a lot of tobacco that will pay 6 cents a pound for that, and this shower won't last ten minutes."

The rain came down thicker and heavier, and the procession of carriers, each with his bag, covered the hillside as each one hurried down to the run, jumping and sliding and jostling his neighbors. And over all was the small voice of the boss urging them to faster work.

A loud call of "Supper," seeming to come from the boss on the post, roused the farmer, and he started. The rain was gone; the barnyard vanished, and he again sat in his chair on the porch, back again in the warm, soft evening.

As he picked up his pipe to go into the house he muttered to himself: "Dreaming, I guess, but what was it he said? Ammonia 15 cents per pound; potash 6, and phosphoric acid 6 cents per pound, and all in that old heap of manure. Gosh! That's no dream. And he went into the house thinking, thinking.—[Exchange.

Wheat-breeding in Kansas.

The experiment station of the Sunflower State has its botanical department engaged in the breeding of improved wheat. The botanist makes the statement, "Almost no named variety of wheat sold by a seedsman carries a single type with it. From our variety plots grown from seed-named varieties of wheat from the best seed-houses in the world, both at home and in Europe, we have been able to select as many as six or more distinct types from each in many cases. In practically no case do we get an absolutely pure stock of plants."

More Triumphs for Reinforced Concrete.

MAKING GREAT GAINS IN SAN FRANCISCO AND SOUTHERN CALIFORNIA.

It was quickly determined, after the great San Francisco earthquake of last April, that reinforced concrete buildings had best withstood the strain of the shock and the attacks of fire, but illustrations are still being found of the remarkable solidity of reinforced concrete. New and interesting cases are being cited to show that structures made of combinations of concrete and steel gives the best assurance of safety of human beings and of surety to heavy investors in great structures.

As a result of the demonstrations made by the earthquake, reinforced concrete has secured



Cholderton Buzzer.

Champion Tamworth sow, Royal Show, 1906. Mr. R. Ibbotson.

many powerful advocates in San Francisco among property owners.

STOOD LIKE A ROCK.

One of the most remarkable illustrations of the strength of this material was the manner in which the new light station on the famous "Mile Rock" withstood the attacks of the quake. The station was completed only a few months ago. It is situated at the very entrance to Golden Gate, and is three-eighths of a mile off the mainland, on a mere sharp, ragged pinnacle of rock—merely jutting above the ocean's level at extreme high tide. It is a circular structure nearly ninety feet high.

The foundation is composed of reinforced concrete, enclosed in a colossal steel cylinder. In height the cylinder is 42 feet; it is elliptical in its diameter, being 45 feet long, by 25 feet wide. The plates of steel are three-eighths of an inch thick, and very strongly riveted together. The huge cylinder covers the entire top of the sharp rock, and was built up slowly. All the space between the inner walls of the cylinder were filled



Waudsworth Gem.

Berkshire sow, first at Royal Show, 1906. Exhibited by Middlesex County Asylum.

with concrete of first-class standard. Sharp and ragged points of the rock jutted far up into the hollow of the cylinder, and over and around these the concrete was poured and firmly tamped.

When the entire foundation was complete, there was a mass 42x45x25 feet of solid concrete firmly anchored to the rock below. On this massive foundation was erected the steel superstructure of the station, rising 56 feet high. More than 1,200 barrels of cement alone were used in building the foundation, and many tons of steel plates.

At that point the shock was unusually heavy, as was shown by the effects of the earthquake on the near mainland. The tower swayed to and fro like a tempest-rocked pine, and the sea raged in fury around the base. But the concrete foundation stood immovable, defying the force and fury of the elemental conflict.

For a short space the light-keeper and his assistant thought the whole station, foundation and all, would topple over into the angry sea, and gave themselves up as lost. When the shock subsided, thousands in the city thought of the station, and deemed its fate sealed. But it stood without a trace of yielding.

Since the disaster United States Engineers have made a careful examination of this station, especially of the foundation, and have pronounced it solid.

With such lessons as this before them, it is no wonder that some of the most prominent and influential citizens of San Francisco have become enthusiasts over reinforced concrete, as is shown by the course of the committee on general reconstruction. This body has formally recommended the use of reinforced concrete on all new buildings, instead of brick.—[Concrete.

Cement Culverts.

Observation convinces the editors of "The Farmer's Advocate" that there have, of late years, been many cement tile used for sluices on the public highways, where concrete culverts would have given very much better satisfaction, and proven more economical in the long run. Culvert tile may be all right for small waterways, where there can be no doubt of their sufficiency to accommodate the maximum flow of water. The difficulty with tile, however, as Mr. A. W. Campbell points out in one of his annual reports, is that they are frequently used in places where a larger waterway should be provided, and while they may be large enough for the greatest flow of water for a period of years, there is liable to come a time of sudden flood or freshet, when their capacity is overtaxed, and a washout results. When putting in culverts, care should be taken to provide for the unusual, not merely the usual flow. To this end, arch culverts of concrete or stone masonry should be constructed, or concrete culverts with a flag-stone top may be employed for some of the smaller watercourses.

Concrete is made of gravel and Portland cement, or, of broken stone, sand and Portland cement. If properly made, concrete is not only cheaper, in many cases, but is more durable than stone masonry.

ARCH CULVERTS.

The cost of a concrete culvert, says Mr. Campbell, will range from about \$4.50 to \$6.50 per cubic yard of concrete in the structure. The variation is created by a number of details—the availability of gravel, the cost of Portland cement, the cost of labor and other items. The first to be constructed by a municipality always costs more than subsequent work.

A stone arch is so designed that the stone will remain in place without being held together by mortar. Concrete arches, on the other hand, are dependent upon the cohesive strength of the materials. Good workmanship and good materials are therefore of exceedingly great importance in building concrete arch culverts. It is also essential that the side walls of arch culverts shall rest on a firm stratum of hardpan, gravel, compact earth, or other unyielding base, so that there will be the least possible settlement. If settlement occurs to any extent, it is rarely uniform, and the arch is thereby distorted and cracked. Usually it is necessary to excavate, for the side walls, a depth of about two feet below the bed of the stream. A certain depth is necessary in any location, in order that the side walls may not only be safe from settlement, but also from the undermining tendency of the stream.

FLAT CULVERTS.

A concrete culvert with a flat top can be adapted to any location where stone masonry walls, with a flagstone top, could be used, and is a parallel case, in which artificial stone or concrete is used in place of natural stone. In this type of culvert the principal matter to guard against would be a break in the cover-stone. There is seldom difficulty, for short spans up to say six feet, in proportioning the thickness of this cover for any possible load to which the culvert would be subjected. A possible cause of failure would arise from the displacement of the side walls by frost, which might break the cover-stone, or by uneven settlement from any cause.

Care should in every case be taken to see that the side walls are carried to a sufficient depth to a secure foundation. Two feet is sufficient for most situations, especially where a layer of hardpan, firm gravel, or rock, is close to the surface. The greater the span, the more necessity there is for a deep or a solid foundation.

The strength for the cover-stone, especially culverts of greater span, say six or eight feet, would be increased by having barbed or smooth fence wire stretched back and forth across the culvert, which would be fully imbedded in concrete, but as close as possible to the bottom of the cover-stone.

It is desirable that a layer of earth, six inches or more in depth, should be over the top of the

culvert. If this is impossible, and the top of the culvert must be level with the road surface, the cover-stone should have a finishing coat rich in cement, in the proportions of one part of cement to two of sand. Otherwise, a culvert of this description may be made throughout of Portland cement and gravel, mixed in the proportions of one of cement to six parts of gravel. Wing and parapet walls may be built, as the situation of the culvert requires.

Where a small waterway only is required, a culvert can be cheaply and easily made by constructing a square-box frame, and packing the concrete around it.

Buckwheat.

Although buckwheat is no longer a crop of very great importance in Canada, except in limited areas, a number of our readers will be interested in the following excerpts from a bulletin on this crop, published by the New York Experiment Station:

Buckwheat is the least important in respect to quantity produced of the six principal grain crops of the United States. The cultivation of buckwheat in the United States is practically limited to the northern States that lie east of the Mississippi River. According to the statistics of 1900, the North Atlantic division, together with the States of the North Central division that lie east of the Mississippi, contained 89.4 per cent. of the total area under buckwheat, and produced 90.9 per cent. of the total yield in 1899. By including three States of the South Atlantic division—Maryland, Virginia and West Virginia—it is found that the sections named contained 95.5 per cent. of the total buckwheat area, and produced 96.5 per cent. of the total yield.

Name and Relationship.—The name "Buckwheat" seems to be a corruption of the German *buchweizen*, meaning beech wheat, a name given to the plant on account of the shape of the seeds, being similar to that of the beechnut, while their food constituents are similar to those of wheat grains. Botanically buckwheat is not a cereal, but since its seeds serve the same purposes as the cereal grains, it is usually classed in market reports among the cereals. The family to which buckwheat belongs (*Polygonaceæ*) includes several well-known, troublesome weeds, as sorrel and dock (*Rumex*), and smartweed, knotweed and bindweed (*Polygonum*).

The Plant.—Buckwheat is an annual, of erect habit, under ordinary conditions attaining about three feet in height. The root system consists of one primary root and several branches, the former extending well downward to reach moist earth, but the total development of roots is not large. The stem varies from one-fourth to five-eighths inch in diameter, and from green to purplish-red in color while fresh, and changes to brown at maturity.

Only one stem is produced from each seed—the plant, instead of tillering or producing suckers, branching more or less freely, depending on the thickness of seeding. It thus adapts itself to its environment even more completely than the cereals, which tiller freely.

Composition.—The following table, compiled by Prof. T. F. Hunt, in *The Cereals in America*, shows the composition of the grain, straw, flour, middlings and hulls of buckwheat:

	Grain.	Straw.	Flour.	Middlings.	Hulls.
No. of analyses.....	8	3	4	6	3
Water	12.6	9.9	14.6	12.7	10.1
Ash	2.	5.5	1.	5.1	2.
Protein (Nx6.25)	10.	5.2	6.9	28.1	4.6
Crude fiber	8.7	43.	.3	4.2	44.7
Nitrogen-free extract	64.5	35.1	75.8	42.4	37.7
Fat	2.2	1.3	1.4	7.	.9

Owing to its thick, heavy hull, buckwheat contains a larger percentage of crude fiber than the cereal grains. The percentage of protein and nitrogen-free extract is somewhat lower than in the case of wheat. Buckwheat flour contains only about two-thirds as much protein as wheat flour. The straw of buckwheat contains a somewhat higher percentage of protein and crude fiber and a lower percentage of nitrogen-free extract than wheat straw. Buckwheat middlings, on account of its high percentage of protein and fat, is in great demand as a food for dairy cows. The hulls are so hard and indigestible that they are not often used for animal food, although the analysis would suggest that they have some feeding value.

Harvesting.—Buckwheat is rarely harvested with the self-binder, but may be cut with the hand-cradle or the dropper-reaper. To avoid the shelling and loss of the more mature grains, it is preferably cut early in the morning while damp from dew, or during damp, cloudy weather. It is usually allowed to lie a few days in swath or gavel, when it is set up in small independent shocks or stooks. It is not bound tightly by bands, as are most cereal grains, but the tops of the shocks are held together by a few stems being twisted around in a way peculiar to the crop. This setting up is also usually done when the crop is damp, to avoid shelling of the grain.

The unthreshed crop is not often stored in barns or stacked, but is threshed direct from the field. Formerly much of the threshing was done with the hand flail, in which case it is necessary that the work be performed on a dry, airy day, so that the grain will shell easily.

If threshed by machinery, neither crop nor day need be so dry. It is usual to remove from the thresher the spiked concave, and put in its place a smooth one, or a suitable piece of hardwood plank. This is to avoid cracking the grain and unnecessarily breaking the straw. The pedicels bearing the seeds are slender, and these, as well as the straw, when dry, are brittle so that the grain threshes much easier than the cereals.

Consumption.—Formerly a considerable part of the buckwheat was used for animal food, only enough flour being manufactured to meet the requirements of the rural districts during the winter season. Of late the demand for the flour in the cities has been such that most of the grain is ground for flour and less of the flour is consumed in the rural districts.

Buckwheat flour is whiter than that made from wheat, and has a peculiar mealy feel to the hand, that enables one readily to distinguish it from wheat flour. The first flour on the market after harvest brings a high price, but the price rapidly declines as the supply increases. The grain must be well dried and the grinding performed in cool, dry weather to secure best results in milling. The yield of flour per bushel of buckwheat is usually about twenty-five pounds, though twenty-eight or more may be secured if the grain is plump and very dry. The middlings, a by-product of the flouring process, is much sought by dairymen as food for dairy cows, on account of its high content of protein. The hulls have little or no value. Sometimes they are ground and used as an adulterant for black pepper.

Buckwheat grain is much relished by poultry, and has a reputation of being of special value in egg-production. In recent feeding experiments this reputation is scarcely sustained.

Enemies.—The buckwheat crop is usually free from interference from weeds or plant diseases. It starts so quickly and grows so rapidly that most weeds get no chance to make headway against it. In fact, buck-

planted 60 last January, and never lost a tree. Keep plenty of chaffy straw around them the first three or four years, never allowing any weeds or grass to grow around them. I do the same with cedars, chestnuts and walnuts. Hoping to hear from anyone having a better way.

Brant Co., Ont.

JAMES GIBSON.

THE DAIRY.

Canadian Dairy Products in England.

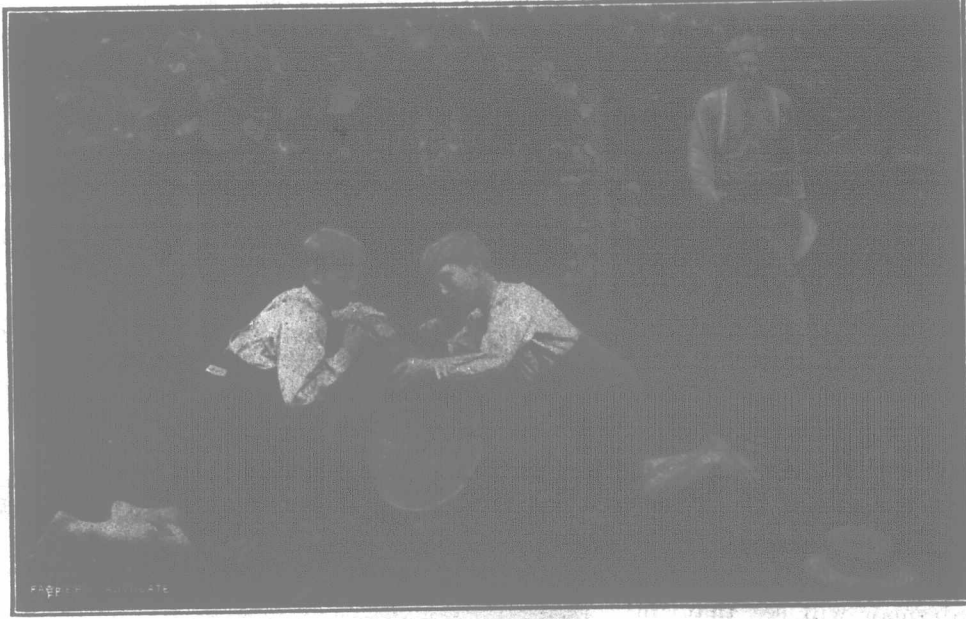
(Editorial Correspondence.)

In the course of our enquiries at London and Liverpool into the present condition of the trade in Canadian dairy products, we found that the only serious complaint in respect to cheese related to defective boxes. Some of the large dealers reported an improvement this season; others estimated the breakages at about 15 per cent., arising mainly from defective material and flimsily-made boxes, but it is probable that hurried or reckless handling in the course of transportation is responsible for a share of the fractures. One cause of breakage and injury to the body of the cheese itself arises from the latter not fitting the package snugly at sides and top. When loose, the cheese slip about, and if too high for the box, the weight of the cheese above crushes the lowest one in the tier. This, and the necessity for watching the temperature and other conditions in shipping, demonstrates the wisdom of the Canadian Department of Agriculture in maintaining a staff of competent experts at the great ports to keep the Canadian end of this business promptly and thoroughly posted. One of the most progressive of the Liverpool produce and dressed-meat importers

(Booth Cold Storage and Ice Co.) called our attention to a most conclusive test with 2,500 boxes of Australian cheese, held for 6 months, from December 28th last, at 38 degrees F. The cheese ripened nicely, and there was a shrinkage of only one pound per cheese in the period, a mere trifle compared with the loss under ordinary conditions; besides, the greatly enhanced price was secured.

CHEESE BOXES.

Favorable mention was made of a birchwood box coming from Prince Edward Island, and of



Stolen Sweets.

wheat is one of the best crops for cleaning land by smothering out weed growths. Wild birds, as well as domestic, are fond of the grain, and when abundant sometimes cause considerable loss. No insect or fungous troubles have been sufficiently destructive to attract much attention.

Buckwheat as a Soiling Crop.—A number of farmers have reported favorably upon the use of buckwheat as a soiling crop, but its use for this purpose has not been sufficiently extended to establish its value.

Buckwheat as a Green Manure Crop.—The use of buckwheat as a green manure has been much more extended. It possesses several characteristics that adapt it to this purpose. It thrives on quite poor soil. It grows rapidly. It smotheres out weeds, thus helping to clean the land. It leaves hard soils in a remarkably mellow condition. It decays quickly when plowed under.

Success in Transplanting Trees.

Editor "The Farmer's Advocate":

Being an old subscriber to your valuable paper, I am much interested in your Question and Answer Department. In regard to the recent enquiry about planting spruce trees, I had very bad luck when I started to plant trees, but for a number of years I have lost hardly one tree. I have nearly 400 growing around my farm. I have many times wondered why people with lots of money never thought of planting a few trees. It takes a good while for them to grow, but I think people should try to beautify their homes with evergreens. I have a place in my garden where I plant them when I get them from the nursery. I leave them there the first year, and hoe around them. I have my ground prepared a year ahead. The next year, or any time at my leisure, I transplant, lifting plenty of soil with the tree. I

the good heavy boxes from several Ontario cheese districts. The McPherson stitched box was favorably mentioned as showing only one per cent. of breakages, and reference was also made to small metal clips, fastened at intervals on the sides of the boxes, adding strength. The open New Zealand crate, made of slats fastened at the ends with wire, and holding two cheeses, was condemned, particularly on account of being too heavy. A good many boxes coming from Quebec were reported very bad. We heard several complaints of the increasing size of Canadian cheeses, which makes them much heavier to handle and more subject to waste on the small shop counters, though they may suit some of those in the wholesale trade better, as each box means a greater turnover in the volume of cheese handled. About 70 to 75 pounds is thought by many to be a happy medium. When the 80-pound weight is reached or passed the cheese becomes rather weighty for the ordinary man to handle. On all sides there is evidence that the competition will continue keen, and we cannot assume that Canadian cheese is impregnable in the British market, nor rest on our reputation and present dominance. Quality must be maintained, varying market tastes must be catered to, transportation facilities must be kept up to the standard, and, for the sake of saving a fraction on boxes, it will never do to allow stacks of wrecked boxes to pile up on the docks or in the warehouses. The day for that sort of thing is past. Canadian cheese holds an enviable position in the English market; let it be maintained.

Among the better classes, one will be struck with the absence from the tables of Cheddar cheese and the increasing consumption of the fancy, soft and highly-flavored varieties. But for the great middle and lower classes, as they are called,

Cheddar is the staple, and this will likely continue to be the favorite field for the output of Canadian cheese factories.

THE BUTTER BUSINESS.

When we come to look into the butter trade, the situation is entirely different. Compared with the volume reaching England from other countries and the total consumption, the Canadian contribution is infinitesimal; the shipments have been irregular, and its status is not high. We spent a good deal of the time in some of the big Tooley street produce warehouses in London, and box after box of Australian, New Zealand and Canadian butters were turned out for inspection. It is easy to hear complaints, and in many cases they were only too well founded. Some of the Canadian boxes were dirty, and though dove-tailed, being made of soft wood, were not equal to the Australian boxes made of very hard wood, simply nailed together. After the cheap, bad boxes were passed sufficiently under review, attention was called to the defective parchment paper wrapping. The Canadian wrapper was a single sheet around the block of butter each way, and not very tidy-looking. The Australian wrapper was made of a better class of paper, the sheet was double and it fitted the butter like a glove, just as the butter did the box, while the Canadian product showed a quarter of an inch space slack, and the top was filled in with a worse than useless layer of sloppy-looking salt, the whole thing being utterly discreditable. The butter itself, under the trier, was as mottled as a leopard, and rank enough to raise the lid. Fortunately, it had no factory or dealers' brands, and for the sake of Canada, we trust this lot was an exceptional one. But it was a very effective and shocking illustration of something which is going on and which must be stopped, because one consignment of that sort of stuff will offset the good impression made by a thousand boxes of fragrant, fresh "Canadian Creameries." We find that factory brands are frequently scraped off and dealers' brands substituted therefor. The favorite Australian box is square, the New Zealand package being oblong, but each holding uniformly 56 lbs. of butter. They are well made, and clean, and nicely covered with cotton sacks, which are in use by up-to-date Canadian shippers also.

Throughout large areas of England, such as London, there is an all but universal demand now for absolutely fresh (saltless) butter, of delicate creamy color. In the homes and better class of restaurants that is what is served. It is hard to obtain what the average Canadian would call butter. At first there seems nothing to this insipid, white product, but people have come to like it. A taste for anything (or nothing) can be so cultivated. Even in great manufacturing and other centers where salted butter is still in demand, a very much less percentage is permissible than formerly. It is growing less and less possible now to cover a multitude of dairy sins with salt. The practical dairyman will see that infinitely greater care is required in the making and transport of such butter, if it is to reach the consumer in passable condition or of a quality to command the highest price. Concurrently with this saltless-butter trade has naturally grown up the necessity for the use of preservatives, and here the creameryman must exercise very great caution in using only what are innocuous and also immediately soluble when applied to the butter. The authorities are taking steps to protect the English consumer from excessive moisture in the butter (16 per cent. being the limit), and anything deleterious in its nature, and from excess of preservatives. On this point the Special Parliamentary Committee recently reported as follows: "Reference was also made to the use of preservatives in butter. It does not appear that the trade is unsatisfactory in this respect, but it does not appear that there are any adequate means in the present state of the law of checking any abuse of preservatives which may arise." Power will therefore be sought to fix standards for preservatives.

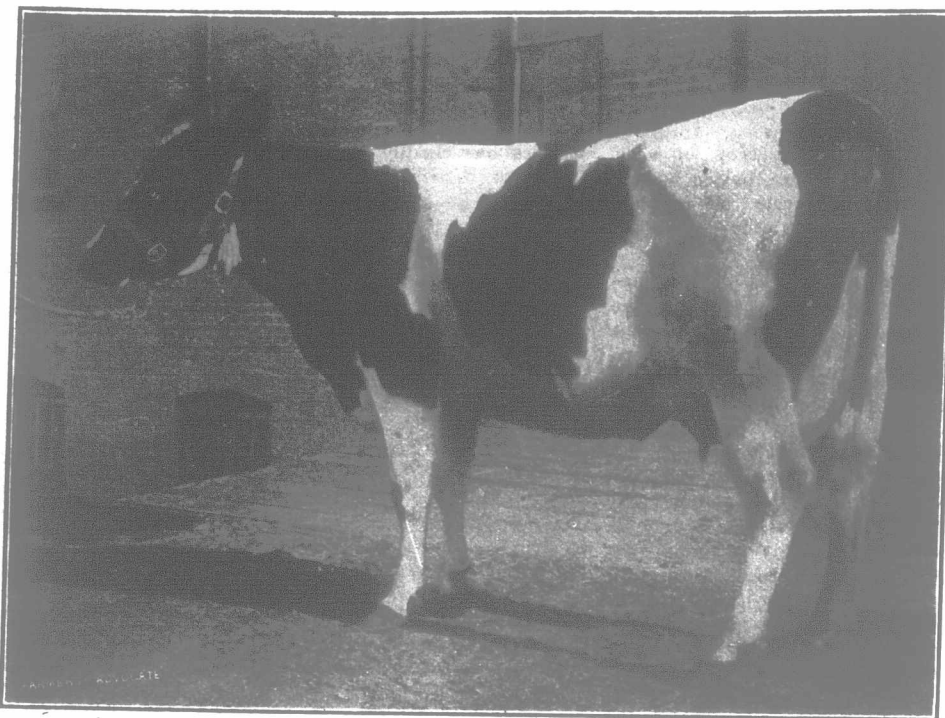
CANADIANS WARNED.

More rigid legal enactments may be expected. Officers of the Board of Agriculture are taking triplicate samples of shipments, as they arrive at port, of Canadian and other butters, which are put to rigid test, so that our dairymen will do well to be on their guard. We noticed by the newspaper reports of frequent prosecutions of dealers in dairy and other products for violations of the Food and Drugs Act, and the penalties were very severe. The Britisher likes free food, but he wants to know exactly what he is getting, and once he puts on a restriction or embargo, it is usually on to stay. Vast multitudes of consumers cannot afford to buy genuine, high-class butter, so there is a large trade for margarine and what is called "Milk-blended Butter," a rather taking name of one class of butter blended with another by the use of milk. This product

can be sold cheaper than regular butter. There is also evidence to show that water has been added in the process of blending to an excessive degree. The authorities are bent on stopping this sort of "faking." Canada will do well to stick to the genuine article, and cater for the trade that pays the best and most profitable prices.

A NEW COMPETITOR.

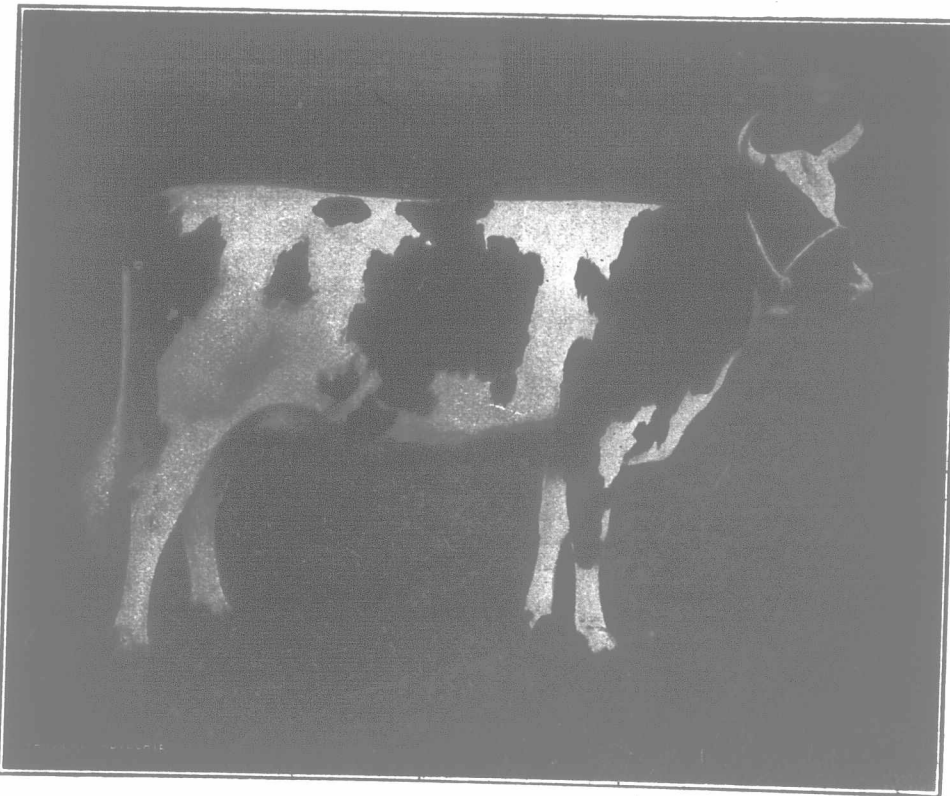
We were urgently desired by a leading Tooley



Rosalind Hacker.

Four-year-old Holstein cow; weight, 1,580 lbs. In official seven-day test gave 431.7 lbs. milk, and 14.56 lbs. butter-fat, equivalent to over 18 lbs. butter. Owned by Geo. Rice, Tillsonburg, Ont.

street importer to remind Canadians that the Argentine dairyman would soon be a new competitor in the field, and the warning should not go unheeded. Usually we do not associate dairying with great wheat-growing or ranching areas like the South American Republic, but if they apply the same enterprise and system to butter or cheese production that they have to live-stock improvement and the frozen-meat trade, they will assuredly make it hot for the dairymen



Lady Diana.

Three-year-old Ayrshire cow; first and champion, Highland Show, 1906. Shown by Mr. A. Cross.

of the north temperate zone. Our Tooley street friend entertained the conviction that the Canadian farmer is getting a little too prosperous and independent to bother himself about improvement in the details of dairying and factory management. In imagination he sees the Canadian farmer riding the automobile, and piano-playing more popular than milking cows. "You are getting too cocky over there," he said, "and success in dairying is not to be obtained in that way." A notably weak link in the transportation

chain is the want of provision on the docks by the Liverpool Dock and Harbor Board of suitable cold storage into which dairy products can be immediately placed temporarily when the cargo is discharged from the steamships. Attention has been called to this lack before, but the aforesaid D. and H. Board, though big and powerful, is correspondingly conservative. It will likely wake up as the trade moves away from the Mersey to London and Bristol, or other ports where the facilities are right for perishable products like butter.

When one considers at close range the enormous populations of the busy English cities and towns, the realization is forced home how dependent they are from day to day for food, and, consequently, what an opportunity there is here for the expansion of the Canadian butter business. They may hedge it about with iron-clad safeguards in the interests of the consumer, but they must have the butter, all the same, from somewhere. In purchasing, the buyer is not greatly influenced by sentimental considerations. He buys according to his purse, unhampered by a tariff.

Centrifugal Cream Separators.

J. W. Mitchell, B. A., Supt. Eastern Dairy School.

Although now almost as common and well known in many parts of Canada as the clocks on our mantels, yet the centrifugal cream separator is a comparatively new invention. The writer, who has still a long time to live before he reaches the "chloroform stage," has a clear recollection of the time when the power separator, which preceded the hand, was not known to Canadian dairymen—at least not in a practical way; for in his boyhood he hauled milk twice daily to a creamery, where all the milk, immediately upon its arrival, was drawn into "shot-gun" cans and set in large tanks in the floor, into and out of which water from a nearby spring constantly flowed, the cream being removed from the cans by means of a conical dipper and then churned into sweet-cream butter, while the sweet skim milk was converted into skim-milk cheese. This, however, did not prove a success for any length of time, as, besides the enormous labor the system entailed, the cheese soon became a drug on the market.

As the introduction of the centrifugal cream separator forms so important a landmark in the development of dairying, and as this system of creaming milk has become so very general, some historical notes, a brief discussion of the principles of cream separation, and a few suggestions regarding the handling and care of separators and the cream from them, should prove of interest and value. One should aim to become reasonably well acquainted with any machine he is called upon to operate, in order that he may know when

it is running right and when not, be able to keep it in good repair and operate it intelligently.

HISTORICAL.

The cream separator had to pass through several stages and many vicissitudes before reaching the present state of perfection. Possibly the first attempt to apply centrifugal force to milk was made by Prof. Fuchs, Karlsruhe, Germany, who in 1859 proposed the testing of the richness of milk by rotating it in test tubes to separate the cream. Gradually the idea of its being practical to cream milk by centrifuging it grew in the minds of both European and American inventors, as is illustrated by the fact that in 1864 Mr. Prandtl, a brewer of Munich; in 1870 a Mr. Bond, of Northboro, Mass.; and in 1873 a Mr. Jensen, of Denmark—each invented a centrifugal machine whose essential features were jars, buckets or pails which swung about a center, much as the test bottles do in the Babcock test machine. The milk was subjected to centrifugal force in these pails or buckets, which would rotate at the rate of from 200 to 400 revolutions per minute. Several machines of this type were invented, but all proved impractical, as the process was too slow, was not continuous, and called for too much power to drive the machine, and the separation was not sufficiently complete. Nevertheless, though a humble start, it was a start in the direction of the utilization of centrifugal force for the creaming of milk.

The second stage in the development of the cream separator consisted in the discarding of the swinging pail or bucket idea, and the substitution of a hollow bowl with wings within to make the milk take the motion of the bowl. Furthermore, the need for a process of continuous separation was gaining hold on the mind of the inventor. A machine of this hollow-bowl type, invented in 1876 by Mr. Winstrup, a Dane, contained valves on the circumference of the drum which could be opened while the machine was in motion. From time to time during the process of separation these were opened to allow the skim milk to escape. More whole milk would then be run into the machine, and, after sufficient rotation, the skim milk would again be drawn off. This process was continued until the bowl became filled with cream, when the machine was stopped and the cream drawn off. Another make of machine, invented by a Mr. Lefeldt, about 1878, allowed the escape of cream from the flanged opening in the top of the bowl, and of continuing the process of running milk into the bowl until it filled with skim milk, when it must be stopped and emptied. We might add that this inventor had previously invented machines which were more or less successful, and which led to the invention of this machine. It was the firm to which Lefeldt belonged that established the first centrifugal separator creamery, at Kiel, Holstein. These two styles, of what may be termed semi-continuous bowl machines, proved great power-savers, as compared with the bucket style, and were harbingers of the continuous process of cream separation.

The third stage in the development of centrifugal cream separation was the invention of the continuous separator; that is, the type which allows the constant inflow of milk and the outflow of the skim milk and cream through different outlets. The first makes of this type were all hollow-bowl machines. In 1878 Messrs. Neilsen and Petersen, of Denmark, and in 1879 Dr. De Laval, of Sweden, invented continuous separators of the hollow-bowl type. About the same time a continuous centrifugal cream separator was invented by Houston & Thompson, of Philadelphia. The invention of the Alpha disc machine, by Dr. De Laval, clearly demonstrated the advantages of a skimming device which divides the milk into thin layers, and in such a way as to allow the cream to quickly separate. Practically all the separators of to-day have skimming devices—more or less efficient—and they are essential for close and rapid skimming, unless the difficulty be overcome by greatly reducing the diameter and correspondingly increasing the length and speed of the bowl. The point is, that the cream must not have far to travel before it is free from the skim milk, and, as already indicated, this may be accomplished either by means of a good skimming device, or reducing the diameter and increasing the length of the bowl. This principle is now generally recognized by separator experts.

PRINCIPLE, AND A FEW SUGGESTIONS.

The force created by the swinging of an object or substance about a center, and thereby causing it to tend to fly off from this center, is the force made use of in our cream separators, and is known as centrifugal (or fleeing-from-the-center) force. It is well illustrated in a simple way by the swinging of a bucket full of water around the head at a speed sufficient to cause the water to remain in the bucket when its mouth is turned downward; or, again, in the swinging of a stone in a sling, the force created being sufficient to hurl the stone to a great distance when let free.

Why is it possible to cream milk in the

various ways in which we do? Is there any difference in principle between the different methods? When either salt or sugar is dissolved in water a true solution is formed, and neither by the force of gravity nor by centrifugal force can the dissolved salt or sugar be separated from the water. Nor would it be possible to separate the butter-fat portion of milk from the milk serum (skim milk) by such means as we adopt, were it in solution. The butter-fat of milk is not dissolved in the serum, but is suspended in it in the form of tiny globules—an emulsion—and, furthermore, it is lighter than the serum or skim-milk portion. It is because of these two facts that it is possible for us to cream milk as we do. When milk is set in a pan or pail, it is subjected to the force of gravity which acts directly downwards, and under these conditions, the milk serum being the heavier, gradually goes in the direction in which the force is acting—that is, to the bottom of the vessel—and compels the lighter fat globules to gradually travel in the opposite direction, or to float to the top. When milk is subjected to the centrifugal force in a cream separator, we have precisely the same principle brought into play. As this force acts outward, we find the heavier skim milk moving towards the outside of the bowl, and compelling the lighter, butter-fat to travel in the opposite direction, or towards the

center of the bowl. There is, then, no real difference in principle between the gravity and separator methods of creaming milk—just the utilization of different forces which act in different directions. In both cases we depend upon the facts that the fat is not in solution and that it is lighter than skim milk, and that a force, natural or created, acts upon the milk, causing the heavier portion—the milk serum—and the lighter portion—the butter-fat—to separate, the former moving in the direction in which the force is acting, and compelling the latter to move in the opposite direction.



Clatford Hope.

Guernsey bull; first at Bath & West of England, 1906.

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As the force exerted by a centrifugal cream separator is several thousand times as great as that of gravity, this method of creaming milk is much more rapid and more efficient than any method of setting it. Under the best methods of setting milk there is a loss of 8 to 10 per cent. of the butter-fat in the skim milk, while under ordinary methods it is often double this. This statement we have proven by actual and off-repeated experiments. With a good separator, properly run, the loss is reduced to a minimum, and is scarcely worth considering. It is very evident from this that the money expended in the purchasing of a hand separator will earn large returns, even where one keeps but a few cows, if he be converting their product into butter.

NOTES.

As cream-gathering creameries and hand separators are now so common, we would, in closing, make a few notes upon separators and the care of cream.

In selecting a separator, select one that turns easily, runs smoothly, gives evidence of good workmanship, good material and lasting qualities, is easy to clean, is convenient as to height of can, and not too small for the size of the herd. There is a great difference between individual machines of the same make, as regards both ease of running and closeness of skimming. Test your skim milk, and know what your machine is doing.

Set the separator in a clean and convenient room, but do not sacrifice cleanliness to convenience.

Set the separator on a firm floor or foundation, and see that it is set level.

Study your separator so as to be able to keep

all of its parts clean and in good working order, and thus both add to the life of the machine and keep it running easily.

See that the separator has a tight floor surrounding it, one that can be kept clean. An earth or ground floor is to be condemned as unclean and unsanitary.

Milk for buttermaking should receive the same care in its production and the same careful handling as milk for cheesemaking.

Milk will separate best when it is fresh and warm. Separate it immediately after milking.

For close skimming, a separator must run smoothly, and be turned regularly and at full speed—better a couple of turns above than a little below the required speed. Study and follow closely the directions that go with your machine.

The warm cream from the separator should be kept in a separate vessel until cooled, and should be cooled immediately after coming from the separator.

Cleanliness in the production of milk, prompt separating, keeping the cream in a separate vessel until cooled, and promptly cooling the cream well under 50 degrees, and holding it at this temperature until collected, are the great factors in the production of sweet, clean-flavored cream. Let me repeat that cleanliness and cooling are the

two great essentials, and that prompt cooling is quite as important as the temperature cooled to.

Use only good utensils for holding the milk and cream, and keep them thoroughly clean. The separator bowl and all parts that come into contact with the milk should be thoroughly cleaned every time that the separator is used. First wash with warm water, then with hot water containing some good washing powder, and finally scald with water as near boiling as possible. Use a brush for washing purposes and allow the heat of a utensil to dry it. Never wipe with a cloth.

Cream should be collected frequently—not less than three times a week in summer, and better more frequently where practicable. Cream that is even slightly stale or over-ripe will never make fancy butter.

As a final note—and we make it final on account of its importance—we would urge upon creamery patrons the absolute necessity of storing ice. Until this practice becomes general we cannot hope to make butter of the finest quality. Many creamery patrons are simply playing at the caring of cream, and must so continue until they decide to store ice.

A City's Milk Supply.

To furnish a city like Toronto, having a population of 262,749 (according to the November, 1905, police census), with probably 24,000 gallons daily of pure and wholesome milk, is a big problem, which the City Dairy Company has done a great deal to solve.

Three parties are concerned in the proposition: 1st, the company and its staff, who rightly look for a good return, in the shape of creamy dividends on their enterprise and investment, and of stipend for their labor and intelligence; 2nd, the citizens, who want good milk efficiently delivered for their money; and, 3rd, the farmers of York and Peel counties, who are entitled to a good return for their investment in land and dairy stock, labor and intelligence. The problem is to keep these respective interests adjusted in fair relation, so that there will be a proportionate division of responsibility and proceeds. The crux of the situation will probably be found in the vicinity of the dividends, with which the shareholders, of the party of the first part, will be satisfied.

According to the last annual statement, the real estate, equipment, plant, goodwill, etc., aggregate over \$1,000,000. The preferred capital amounts to over \$270,000, and the common stock to \$563,000. The financial report for last year, we understand, showed a net profit of a little better than 11% on the total paid-up preferred stock, or over \$30,000, in addition to \$7,500 added to a reserve account.

That the business is a growing one, may be seen in the fact that more than 2,000 were added to the list of daily customers in 1905, the total number varying from 12,000 to 15,000.

The premises occupy a commanding position on Spadina Ave., on The Crescent, where the surroundings

and atmosphere are clean. The writer visited the buildings without giving intimation of his coming, and found everything running with clock-like regularity, and scrupulously clean from where the cans arrive from the dairy farmers to where the white-sealed bottles of milk and cream go out for the citizens in a phalanx of vehicles drawn by about 80 well-kept horses. All told, this establishment employs some 200 people, and there is a superb plant of separators, pasteurizers, etc., for clarifying, cooling and bottling the milk as it arrives daily from the farmers. The cream from the surplus milk is made into butter, as many as 200,000 pound-prints being sold in a year. The price of milk amounts to about seven cents per quart, the "pint-ticket" system (30 tickets for \$1) being in use, enabling the customer to get either milk or cream with multiples of the same ticket. The price of cream varies, according to its fat per cent., three grades, 16%, 24% and 32%, being delivered. The output of cream varies from 1,500 gallons per week in winter, to 4,500 gallons in summer. An ice-cream branch has also been established, of which the output is probably 4,000 gallons per week. The buttermilk is sold for 5c. per quart. During the present season the company is receiving per day 450 cans, containing 84½ lbs. each of milk.

Last year a disastrous fire destroyed the old College St. stables of the company, together with 41 horses. The new stables are unique, being constructed of reinforced cement concrete, perfectly fireproof, 85x112 ft., three stories high. The floors, walls, partitions, stalls and roof are all concrete. The stables are fitted up with electric light and every provision for sanitation. The first floor accommodates the wagons, the second floor 86 horses, while on the third floor is located the wagon, blacksmith, paint and harness shops, with storage space for hay and grain, and 25 or 30 extra stalls when needed. It is the most important and up-to-date stable of the kind we have seen anywhere.

About 175 dairy farmers supply the milk, under written contract, the price varying from \$1.05 per can in summer to \$1.15 in winter, to contain not less than 3.7% butter-fat, determined by composite test made twice a month. In some cases a bonus, amounting to 2½ cents per can, is allowed patrons whose milk tests over 3.7%. In the course of a visit among some of the dairy farmers who send their milk down to Toronto over the Metropolitan Electric Railway, we found a pretty general feeling that the old-fashioned 8-gallon can has been increased till it holds about 8½ gallons; or, as one dairyman said, even one pint over that quantity. The company buys and pays for 84½ lbs. net. As cans grow old, they become bruised and dented, so that they hold less than when new. Then in transmission from the farm to the city dealers' premises there is more or less shrinkage in bulk through stoppage, etc., and criticism arises as to who will bear the loss, or how it shall be adjusted. During the present session at Ottawa, successful efforts were made to get the matter regulated by Act of Parliament. As to the price of milk, the dairy farmers naturally look for a greater return, in view of the higher price of labor and foodstuffs. Around "Lot 40," not far from Richmond Hill, we found many old and staunch friends of "The Farmer's Advocate," as is the case in all prosperous farming communities in Canada.

The regulations issued by the company for the guidance of owners of the cows and their helpers, enforce cleanliness at every point. Persons suffering from or exposed to contagious disease, must remain away from cows and milk. When contagious disease appears in the family, or among the helpers, the milk must be kept at home till directions are received from the company. The rules regarding light, ventilation and cleanliness in the stalls and premises are very rigid, including white-washing and the use of disinfectants. The use is forbidden of such foods as turnip tops, rape, hay, meal or grain that is musty or containing noxious weeds. Brewers' grains, ensilage, turnips and alsike clover are allowed to be fed in moderate quantities, directly after milking only. Milking with dry hands after the udders have been well brushed, is required, and the use of a little vaseline on the hands, especially if the cows' teats are sore, is advised.

The milk from fresh-calved cows is not to be mixed with other milk till eight days have elapsed, and cows are not to be milked longer than until five weeks before calving. As soon as drawn from the cow, milk must be removed to milk house, and strained through two thicknesses of cheese-cloth. The milk must be aerated, and night's milk cooled down to 40 degrees. Morning and night's milk should be treated alike, and not mixed unless both are chilled to the same temperature. The water in the cooling vats should stand higher than the milk in the can. Protect milk from sun in summer and frost in winter. Never close a can containing warm milk which has not been aerated. Cans with the lids left off should be covered with fine netting or thin cloth. Discard all rough or rusty utensils. Remove lids from cans as soon as received at the farm, and place both lids and cans with open end down on a rack two or three feet above the floor or ground. Rinse cans with clean water before putting milk into them. Scald utensils after washing, and place them in pure air to dry. Do not dry them with a cloth, as it is not necessary after scalding.

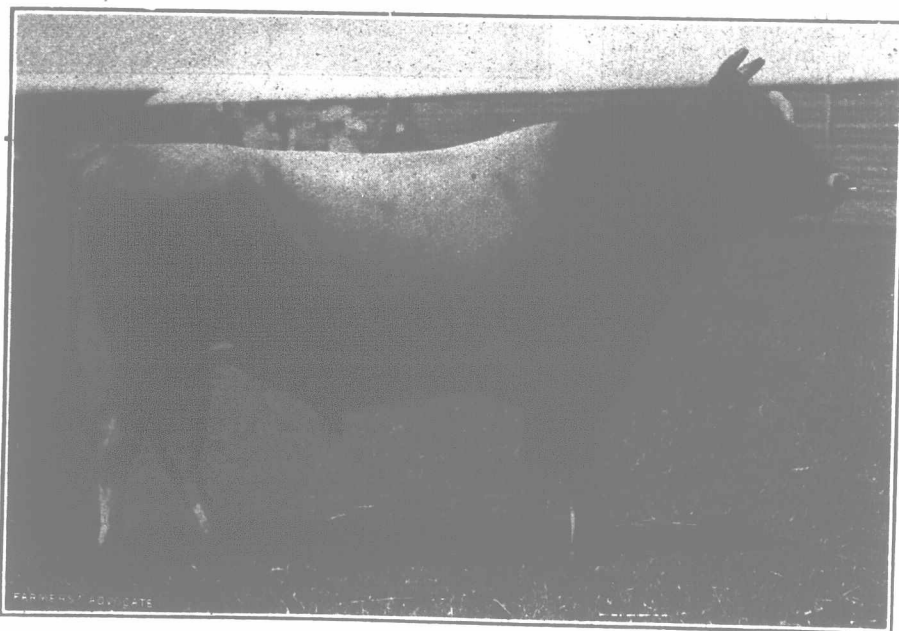
The general manager of the City Dairy is Mr. C. E. Potter, and the veterinary surgeon and inspector, Dr. F. J. Galkebaugh, V.S. This year the company will probably sell the 1,314,000 gallons of milk, and the enterprise is one of which Toronto has reason to be proud.

Where to Buy Dairy Bulls.

Keep your eye on the breeder of pure-bred dairy cattle who is going in for official testing. He is the one to buy stock from. In the first place, the fact that he goes in for testing is an evidence of enterprise and of a candid desire to improve. It is, also, in most cases, a sign that he has faith in the producing capacity of his cows, and capacity for production is the one inherent trait of a dairy bull that returns a dividend when his daughters come to the pail. Of course, it is possible there may be unscrupulous men having their cows officially tested, in the hope of making capital out of one or two big records; and it is also possible that, with all the care exercised by the officials of the Department of Agriculture, a little "stuffing" of yield totals may be done. But, in the main, we have found the breeders of pure-bred stock an exceptionally honorable body of men, and in the case of many their word is as good as their bond. Records of cows owned by such men may be banked on implicitly, and it is to these we would go in choosing a sire for the dairy herd.

The Way of the Dairyman Looks Bright Ahead.

From present indications, the United States is rapidly coming to the point where it will consume more dairy produce than it raises. Official statistics of the U. S. Department of Agriculture account for 17,000,000 dairy cows in the Republic, i. e., cows used exclusively for dairy purposes. The increase since the census of 1889 has not kept pace with the increase of population. An increased number of cows are being employed to supply milk for cities and towns. Besides this must be reckoned the increased consumption of butter per capita, largely attributable, no doubt, to general prosperity. All things considered, the way of the American dairyman looks exceedingly bright ahead, and, with 13-cent cheese in this country, his Canadian cousin is sharing the good times, and those of us who persevere in the face of labor scarcity and other difficulties will reap the reward of the strong-hearted, which, in this case, consists in stable prosperity and improved farms. There has probably never been a more propitious time to stay with the dairy business.



Jersey Bull, Gallant.

First, Bath & West; second, Royal Show, 1903. Exhibited by Lady de Rothschild.

Report on British Butter Trade.

The Select Committee of the British House of Commons, appointed early this session to consider whether any, and if so, what further legislation is required in order to secure the better conduct and control of the trade in butter and butter substitutes, have concluded, with practical unanimity, their draft report, recently issued as a parliamentary paper. The Committee met seventeen times, and received the evidence of 49 witnesses, showing how carefully their work was done. "The Farmer's Advocate" has received an official copy, and Canadian dairymen will find food for consideration in the recommendations made which will presumably form the basis for future legislation. They are as follows:

1. That Inspectors of the Board of Agriculture and Fisheries, and the Department of Agriculture and Technical Instruction for Ireland, should have power to enter any premises where they have reasonable grounds for believing that butter is made, blended, re-worked, treated by any process, adulterated or stored.

2. That the premises where butter is blended, or re-worked, or treated by any process, or where abnormal butter is habitually produced, shall be

registered with the local authority of the district as a butter factory.

3. That no fat, other than butter-fat, and no vegetable or other oils, nor any substance capable of being used as an adulterant of butter should be brought into or stored, or allowed to be in any registered butter factory.

4. That no substance be added to butter whereby the percentage of moisture in the butter is increased.

5. That the addition to the butter at any stage of the process of manufacture of any fat not derived from milk be expressly and directly prohibited.

6. That margarine, when sold by retail, should be handed to the purchaser in a wrapper on which the word "Margarine" shall be printed in black, solid capital letters not less than ¼ inch square, and if more than one wrapper is applied to the margarine, the word "Margarine" shall be printed as above on the inner wrapper; that no fancy name or description should be permitted which refers to butter or anything connected with the dairy industry; that the outside wrapper, as well as the inside wrapper, should contain nothing but the word "Margarine" in type as aforesaid; and if any fancy name is printed on any other wrapper, the word "Margarine" should be suffixed or affixed to the fancy name in letters of the same size, color and type as those in which the fancy name is printed.

7. That no margarine made in any margarine factory shall, when the process of manufacture is complete, contain more than 16 per cent. of water, and no margarine shall be imported containing more than 16 per cent. of moisture.

8. That premises where margarine is re-worked or submitted to any process shall be registered as margarine factories.

9. That Sub-section 3 of Section 20 of the Sale of Food and Drugs Act, 1899, be amended so as to provide that a warranty or invoice given by a person resident outside the United Kingdom shall not be available as a defence to any proceedings under the Sale of Food and Drugs Act.

10. That penalties for the importation of adulterated butter should be proportionate to the magnitude of the consignment.

11. That all practicable steps should be taken to bring about international agreements as to the prevention of adulteration.

12. That Section 4 of the Sale of Food and Drugs Act, 1899, should be amended so as to give the Board of Agriculture and Fisheries and the Department of Agriculture and Technical Instruction for Ireland power to fix standards for curd, and to give the Local Government Board power to fix standards for preservatives.

13. That the Department of Agriculture and Technical Instruction for Ireland should have power to take proceedings under the Merchandise Mark Act.

14. That nothing shall be sold under the name of butter which contains more than 16 per cent. of moisture.

15. That substances other than butter (not being margarine) containing

butter-fat should be sold, with a limit of 24 per cent. of moisture, under a name approved of by the Board of Agriculture and Fisheries; provided that such name should not be calculated to prejudice the sale of the article.

16. That such substances, when sold by retail, should be delivered to the purchaser in a wrapper approved by the Board of Agriculture and Fisheries, containing a description of the nature, substance and quality of the article; and as far as possible under the same conditions as apply to the sale of margarine.

17. That the provisions of the Margarine Act of 1887, as amended by the Sale of Food and Drugs Act, 1899, should apply to such substances.

18. Inspectors acting under the direction of the local authority should have power to enter butter factories, to inspect processes, and to take samples.

19. That butter having been once sold in any process shall not be allowed to be sold in the original packages.

POULTRY.

Breeds of Poultry.

There are always many people interested in the question of breeds, and frequently we are questioned upon it. While it is possible to name some excellent breeds and others that are practically useless from a farmer's standpoint, a fair comparative estimate is exceedingly difficult to make. No one man's opinion and no one paper's announcement settles the matter, but we believe the following notes on the different classes and breeds are pretty near the mark. They were prepared by A. G. Gilbert, Poultry Manager, Experimental Farm, Ottawa, for his recently-published bulletin on the breeding, feeding and general management of poultry:

THE DIFFERENT BREEDS AND THEIR CHARACTERISTICS.

Long experience has shown that no variety of fowls are better suited to the requirements of farmers and others than barred and white Plymouth Rocks, white Wyandottes and buff Orpingtons. Both barred Plymouth Rocks and white Wyandottes are to be found in every locality, and eggs from them may be had at reasonable cost. No variety seems to have a greater hold on the farming community than the barred Plymouth Rock. The Orpingtons are comparatively newcomers, but have rapidly made their way to a first place in the utility class. Particularly may this be said of the buff variety. The points of merit of the different varieties of the most serviceable breeds are as follows:

AMERICAN GROUP.

Plymouth Rocks.—There are three varieties of this breed, viz., barred, white and buff, all of which are good for eggs and flesh. The following descriptions refer to these different varieties:

Barred Plymouth Rocks.—Natives of America, first making their appearance in the Eastern States. Pure-bred birds should have yellow beaks, legs and toes. Faces, combs and wattles bright red. Eyes bright and rich bay. The plumage should be bluish-gray, and distinctly barred to the skin. Young females sometimes have a slightly dark stripe down the beak, but this is permissible in young birds. Well-bred females make good winter layers up to two years of age; after this they are apt to put on fat and become unprofitable. The chickens are hardy, of good market type, and should make, when properly fed and cared for, weight development of one pound and a quarter per month, especially the first month. The standard weights of this variety are: Cock, 9 pounds 8 ounces; cockerel, 8 pounds; hen, 7 pounds 8 ounces; pullet, 6 pounds 8 ounces. Eggs, dark or light brown, according to strain.

White Plymouth Rocks.—A popular and well-known variety, and one which seems to be improving from year to year, doubtless the result of careful breeding. The points are the same as in the Barred Plymouth Rocks, with the exception of plumage, which should be pure white. Weights are same as in first-named variety. Color of eggs brown, preferably dark brown.

Buff Plymouth Rocks.—A variety which is not so old as the two others named, but one which is gaining many friends on account of its merits, as well as handsome appearance. The weights and points are the same as with the others, with the exception of plumage, which should be golden buff of even shade.

WYANDOTTES.—The Wyandotte family, which is well known and popular, is composed of several varieties, viz.:

Silver-laced Wyandottes.—The first and oldest variety, and one possessing much merit as a layer and market fowl, as well as beauty of plumage. The hens make good winter layers, good sitters and good mothers. The chickens are hardy, and make quick growth. Of late, Silver-laced Wyandottes have not been so numerous as in previous years, perhaps owing to the favor with which the newer and equally good varieties have been received, notably the White. For standard weights, see White variety. Color of egg, light brown.

White Wyandottes.—A typical fowl for the farmer, being blocky, broad in breast, with meaty body, and having a low rose comb. Hens are excellent winter layers. Chickens are hardy, and make flesh development equal to that of the Barred Plymouth Rocks. Great favorites with broiler raisers, particularly in the Eastern States. Standard weights are: Cock, 8½ pounds; cockerel, 7½ pounds; hen, 6½ pounds; pullet, 5½ pounds. Distinguishing points are: Yellow beak, shanks and toes; bright red comb, face, wattles and earlobes; plumage and quills, pure white; color of egg, light brown.

Golden Wyandottes.—A very handsome as well as useful variety, and one which has many friends and admirers. The plumage is beautifully marked, and is described in the language of the Standard as, "short, close, golden-bay in color, with a black stripe on the feathers, wide at the base and extending to a fine point." Weights, same as the white variety.

Buff and Black Wyandottes are to be found in many localities. The former are in greater number than the latter. They are useful as well as handsome, and are likely to occupy a front place among the utility breeds. Weights, same as the white variety.

Rhode Island Reds.—A popular breed, and one found in the hands of many farmers in the State in which it originated, and the name of which it bears. They are becoming more popular in

other localities, owing to their reputation as layers and market types. The flesh has a slightly yellow tinge, which makes it rather acceptable to the prevailing taste in the United States.

ASIATIC GROUP.

The Asiatic family is the oldest one known in poultry history, and from it may be traced many of the most popular English, French and American varieties of to-day. This class is composed of eight varieties, as follows:

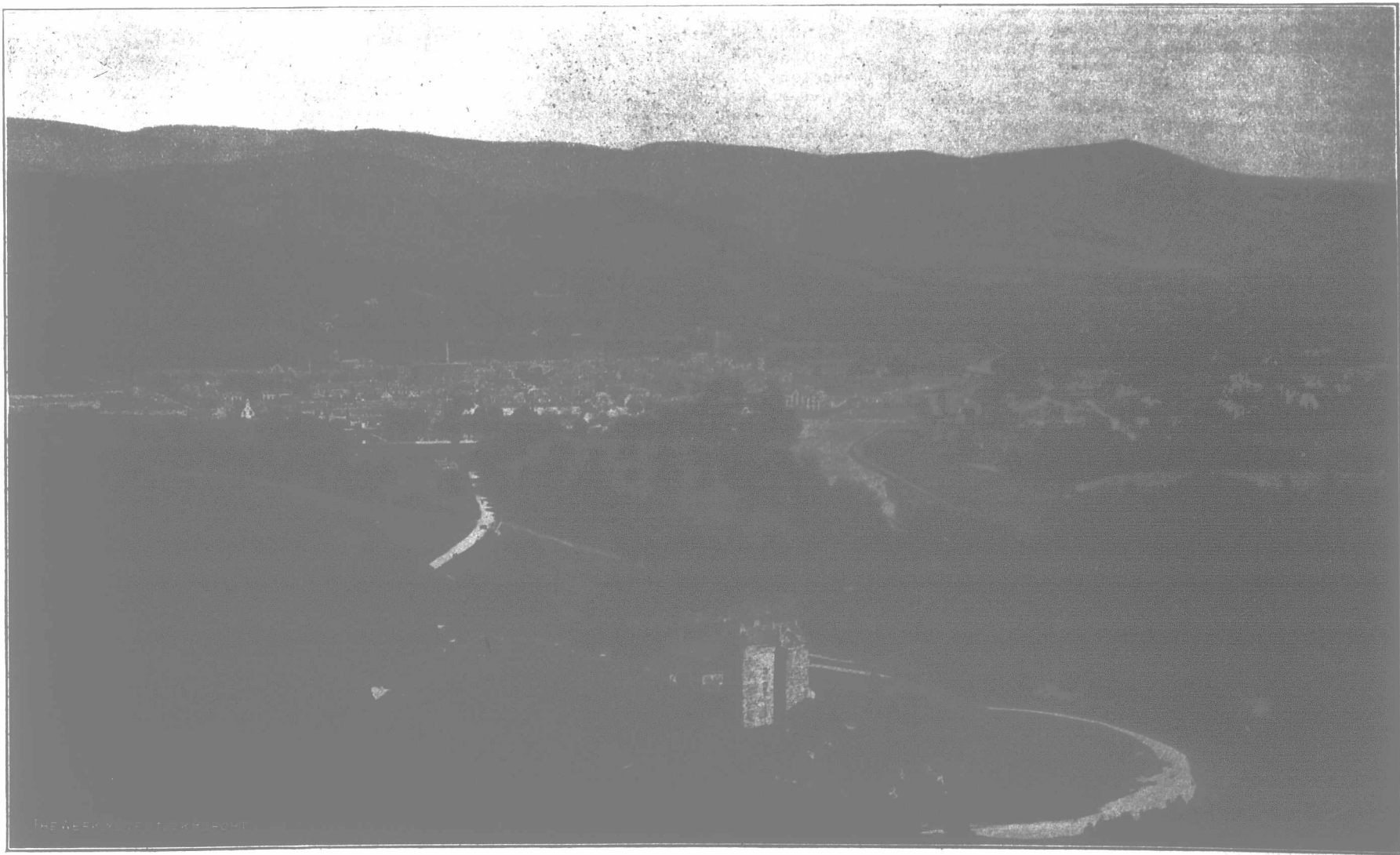
Light Brahmas.—A large and handsome fowl, which for a long period has been a great favorite as layer and table fowl, and is yet so regarded by many breeders. The advent of the more rapidly-maturing and smaller-boned Plymouth Rock and Wyandotte fowls has been the cause of the Brahmas taking second place as a leading general-purpose variety. For many years they were the choice variety with Eastern States broiler-raisers. Now the White Wyandottes or Barred Plymouth Rocks have largely taken their place. Some strains are excellent layers of dark-brown eggs of large size. Chicks are hardy, and make steady growth. Hens are rather heavy to put on early spring eggs, when shells are apt to be thin, but they are quiet and careful mothers. Light Brahmas are the heaviest variety of the Asiatic breeds. Standard weights are: Cock, 12 pounds; cockerel, 10 pounds; hen, 9½ pounds; pullet, 8 pounds. In pure-bred Light Brahmas the points called for are: Bright-red face, comb, wattles and earlobes; yellow shanks and toes; beak, yellow, with dark stripe down the upper mandible.

Dark Brahmas.—Are not so numerous or well known among the farming community as the light variety. The females are beautifully marked. Characteristics much the same as the variety first named. The standard weights of this variety are slightly different from the whites, and are: Cock, 11 pounds; cockerel, 9 pounds; hen, 8½ pounds; pullet, 7 pounds.

Buff Cochins.—Are a well-known and favorite variety of the Cochin group. They have been extensively used for crossing purposes, both in the older countries and on this continent. Crosses of Buff Cochin with Indian Game and Dorking have long been favorite broiler-making crosses. The hens of this variety lay a dark-brown egg, of large or small size, according to age. They make faithful mothers, and their chickens are hardy. The weights of this group are the same as Dark Brahmas.

White, Black and Partridge Cochins.—are well known and liked. Hens are layers of dark-brown eggs of rich color and fairly large size. They make excellent mothers. Chickens hardy. The male of the black is half a pound lighter than those of the other varieties. Weights of all the others the same as in the case of Dark Brahmas.

Black and White Langshans.—Of these, the



Peebles, in the Vale of the Tweed, Where the Highland Show was Held.

former variety is much the best known, but both have good points as layers and table fowls. Their flesh is white, of fine grain and superior quality. The females lay eggs of medium size and of rich-brown color. Chicks are hardy, and grow well. Hens make excellent mothers. Standard weights are: Cock, 10 pounds; cockerel, 8 pounds; hens, 7 pounds; pullets, 6 pounds.

MEDITERRANEAN GROUP.

This family is composed of four breeds, viz.: Leghorn, Minorca, Andalusian and Spanish—all non-sitters. They again embrace several varieties, which are described as follows:

White Leghorns.—One of the best known and popular varieties of the Leghorn family. They are prolific egg-layers, as indeed are all the females of the Leghorn group. There are no standard weights for Leghorns, Andalusians or Spanish fowls. Eggs are white in color and of medium size, some strains laying eggs of large size. Chickens are hardy, and make rapid growth.

Brown Leghorns.—Another popular variety with many admirers. They possess all the merits of the white variety, but their eggs are slightly smaller. Color of egg, white. Chickens hardy, and rapid growers.

Buff Leghorns.—A comparatively new, but popular variety. Eggs large and white in color. Chickens hardy, and quick growers.

There are rose-comb varieties of the White and Brown.

Other varieties of the Leghorn family are Black Dominique and Silver Duckwing. Neither of these varieties are as well known as the three first mentioned. All varieties of the Leghorn breed are non-sitters.

Black Minorcas.—A well-known and much-appreciated variety. They have, to a great extent, taken the place of the Black Spanish, because they are larger, heavier and hardier. The hens lay large eggs, many of them weighing six to the pound, and most of them seven to the pound. The chickens are hardy, and make vigorous growth. Eggs white; non-sitters. The Standard gives Minorcas the following weights: Cock, 8 pounds; cockerel, 6½ pounds; hen, 6½ pounds; pullet, 5½ pounds.

White Minorcas.—Are not to be found in such numbers as the black variety. Eggs large, and white in color. Excellent layers. Weights same as the black variety. Non-sitters.

Andalusians.—At times called Blue Spanish. A well-known and popular variety of the Spanish family. A good layer of large white eggs. Like Leghorns and Minorcas, when properly fed, cared for and housed, they have proved themselves fairly good winter layers. Chickens are hardy, and grow well. They do not always breed true to the light-blue, slaty color called for, and for that reason a number of chicks may be necessary to make up a full pen of the color required by the Standard. They are non-sitters. They are not given weights by the Standard.

FRENCH GROUP.

The French group of fowls embrace several breeds, the best known of which are as follows:

Houdans.—Crested fowls of mottled color. They are non-sitters, are good layers, and plump in body and white in color of flesh. The two latter qualifications, coupled with a small frame, go to make them a capital table fowl. As capons, they are very acceptable on the French markets. They are great foragers, and do best when they have range. The crest on the heads of the chicks, it is said, causes them to fall an easy prey to hawks. In this respect, however, they are no worse than Polish fowls. Chickens are hardy, and grow well and fast. The standard weights are: Cock, 7 pounds; cockerel, 6 pounds; hen, 6 pounds; pullet, 5 pounds.

Faverolles.—The salmon variety is the best known in this country, but as yet they are held by comparatively few persons. They are, however, steadily gaining ground. The merit of the Faverolle is that of a table fowl, of small bone and fine quality of flesh. They are also fairly good layers of eggs of medium size. Mr. T. H. Robinson, the English Faverolle breeder, says of them "that they will attain a size and weight with less trouble than some of our finer breeds, and a young fowl of this variety will leave nothing in the way of quality to be desired." The chickens make quick growth, and are hardy.

HAMBURG GROUP.

The Hamburg group embraces three breeds, viz.: Hamburgs, Redcaps and Campines. These are again subdivided into eight varieties, six belonging to the Hamburgs, two to the Campines, the Redcaps being without a variety.

ENGLISH GROUP.

The English group of fowls may be said to embrace many different kinds, and, for the most part, they have been valued for their egg-laying and table qualities. As with the American breeds, the aim seems to have been a combination

of egg-laying and market types, with small frame and superior quality of flesh. In this respect the English and French breeds may be said to be unexcelled. Both nations are also skilled in crossing varieties, with the aim of producing flesh with small frames and a fine quality of meat of white color.

Some American varieties, notably Silver-laced Wyandottes, have been so skillfully handled by the English breeders as to much improve them in size and markings. Some of the best known English breeds and their varieties are noted as follows:

Colored Dorkings.—Are well known in this country, and have many friends. They are famous—as all Dorking varieties are—for their table qualities. For many years Dorkings or their crosses have held first place in England and France as market types. The colored variety in Canada has been found, when acclimatized, a most useful one. Their bodies are long, broad and deep; legs short and of fresh color. They have five toes on each foot, and so have many of their crosses. The females are fairly good layers of eggs of medium size. As with other varieties of fowls, some strains are much better layers of large eggs than others. Their standard weights are: Cock, 8 pounds; cockerel, 7 pounds; hen, 6½ pounds; pullet, 5½ pounds.

Silver-grey Dorkings.—These are very much the same as the colored variety, the difference being in plumage and not in utility points. They have proved unusually good winter layers and market fowls in the hands of certain breeders. Some strains have shown symptoms of tenderness, but the eradication of this weakness is only a matter of careful manipulation and time. Weights, the same as in the first-named variety.

White Dorkings.—This variety is not so well known as the two preceding ones, but it is not without merit as an egg-layer and table fowl. The fowls differ from the others in having rose instead of single combs. They also slightly differ in weights, which are: Cock, 7½ pounds; cockerel, 6½ pounds; hen, 6 pounds; pullet, 5 pounds.

Buff Orpingtons.—Buff Orpingtons are one of many varieties in the Orpington family. They are comparatively newcomers, but have taken a front place in the utility-poultry ranks as winter layers and market fowls. There is great demand for eggs and fowls of this breed. They have light-colored legs and white flesh. Chickens are hardy, and grow rapidly. Eggs are of medium, or larger size, according to strain. Canadian Buff Orpington Club accords them the following weights: Cock, 9 pounds; cockerel, 7½ pounds; hen, 7 pounds; pullet, 6 pounds.

White Orpingtons are a most promising variety, and are likely to become popular on account of their merits as layers and table fowls. They are not yet well known, but will soon make many friends. Their characteristics are about the same as those of the buff variety, with the exception of the color of the plumage, which is pure white.

Jubilee, Spangled and Rose-comb Buff and White Orpingtons are varieties of the same family which are yet in few hands. All claim more or less merit. The buff and white varieties are likely to be first in favor of fanciers and breeders for some time to come, as they are best known and have certainly made a favorable impression.

Among the English breeds may be classed the numerous family of Games, which are to be found in all parts of the Dominion. They are principally held for show purposes, but occasionally are used for crossing with other varieties. As a commercial fowl they are not much known. Of the Game family, the Cornish-Indian variety is the best liked for market and for crossing with.

Don't Thresh All the Grain.

Editor "The Farmer's Advocate":

Farmers should take advantage of their opportunities and save some oat sheaves unthreshed. There is nothing better than a sheaf of oats or wheat to hang in the henhouse. This will induce exercise, without which good results cannot be looked for. They should be hung by a rope or string to ceiling, sufficiently high that the birds have to jump off the floor to reach them. I have one now in each henhouse, and also in the orchard for the chicks. It is better for them to be jumping about than loafing under the bushes most of the day. It gives them vigor, and brings them into the habit of working for their living. The sooner the pullets begin working for what they get, the earlier they will lay, and also will make more persistent layers.

Fowl and growing pigs can be fed considerable unthreshed grain, and it will give better returns, bushel for bushel, than threshed grain. Besides, there are from two to four cents per bushel saved in this way. With the saving in threshing expenses, coupled with the fact that the actual feeding value is increased, it is certainly worth a trial.

J. R. H.

APIARY.

Keeping Queens.

The following important practical directions on the care of queen bees, we take from a Canadian exchange, which prints it over the subscription of W. H. Laws, of Texas:

"As many queens are shipped out and received by the buyer at a time when he is not quite ready to care for them, I have thought this an important question, for after a man has paid his good money for a nice lot of queens, it is a pity, indeed, if for lack of proper care they are lost before an egg is laid. A long, tedious journey through the mail does not add anything to the value of a queen, neither does it in one case out of a hundred do her any perceptible damage. Some of the best queens I ever saw had crossed the ocean in a mail pouch, and had been thirty days on the road; but the real damage would come to a queen where, through neglect or otherwise, she would be allowed to be thrown around in the cage after reaching the party addressed, and before introducing to the colony in which she is expected to reign. No thinking bee-man would allow this, if possible to avoid. The extremes of temperature, the danger of ants, and the natural weakness of confined bees are all against them, and for this reason, any queens coming through the mail should be placed in the beehive they are to occupy at the first possible moment; but when, in the absence of the owner, or if unfavorable weather conditions should prevail, or if for any reason it is not convenient that a hive can be prepared to receive the queens, I would remove the covering from the cages, exposing the wire screen, lay them away in a cool, dry place, secure from ants. In this condition they will keep from a week to ten days in good condition, as there will be plenty of feed in the candy apartments to last that length of time; but do not try feeding, nor do not give them water, for, after many trials, I find either disastrous to caged queens.

"When ready to introduce, I would remove the queen to be replaced, expose the candy at one end of the cage, and shove candy end down between the end of a comb and the frame end in the brood-nest of the hive. If your colony is queenless on arrival of queen, be sure to destroy every cell, and introduce as above.

"A customer, who is now maintaining 60 surplus queens, writes me he is doing very well with the cages turned wire down over queenless colonies, but my experience with keeping laying queens caged over queenless colonies does not accord with his, for I lost the larger part of 40 queens once caged in the upper story of a queenless hive, the bees selecting a few, which they nursed and fed up to the egg-laying degree, while the others were treated as strangers, tormenting and pulling at them through the screen, where I found them dead a few days later.

"The best success I have known in keeping laying queens outside of the nucleus hives from which they were mated were by placing them on unfinished sections of honey, placing a solid board on one side and a wire screen on the other, with a little wad of queenless bees to each queen. In this way I have kept them confined in a perfectly healthy condition until the brood from each queen reared in the section was hatching.

"The queen trade is now taking on magnificent proportions, and it is high time that every buyer should have the best of information as to the handling and introduction of queen bees, the most beautiful and valuable personages of the beehive."

The Raspberry as a Honey Plant.

J. L. Byer, of York Co., Ont., puts in a good word for the raspberry as a honey plant. In the August number of the Canadian Bee Journal he tells about one of his yards booming ahead of the other yards, whereas the reverse condition usually obtained. He decided the reason was clear when he found there were 75 acres of raspberries within reach of the first-named yard. "Last week," he concluded, "we took off 1,700 pounds of honey from that yard, and, although amber in color, the flavor is beautiful, and I surmise the bulk of it is from raspberries."

Rational Food for Bees.

According to the experiments made in the chemical laboratory of the Elsass-Lothringischen Bee Association, which the Leipzig Bienenzzeitung publishes, the most rational bee-food is made in the following way: Two kilos of sugar are put in a saucepan with two litres of water and two grammes of wine-vinegar, covered with the lid, and allowed to boil gently for two to two and a half hours. The syrup is then strained through a linen or flannel cloth, and when cold is ready for use.—[British Bee Journal.]

GARDEN  ORCHARD.

Apple Picking.

We quote the following hints on apple-picking from a bulletin on "Apple Culture" by Prof. Macoun, Experimental Farm, Ottawa. The common Ontario practice in picking apples is deplorable. It is an ordinary sight to see in our orchards great piles of choice apples lying on the grass or even on the ground. A few days under such conditions gravely injures the flavor and keeping quality of the fruit. Apples to be kept or shipped should never touch the ground. In Nova Scotia, where they make small fortunes out of their apple orchards, and have learned how to pick, pack and ship their apples, such a thing as picking and piling on the grass is almost unheard of, as it should be here.

It is difficult to give exact information as to the best time to pick apples. Each fruit-grower must learn this from personal experience. Some varieties require to be picked at one stage of maturity, and some at another. There are, however, several general directions which may be given. Early apples, which are intended for near markets, should be picked when almost mellow, and disposed of as soon as possible, as their season is short. For export purposes, they should be picked when well colored but still firm. Experience will soon teach the best time to pick for this purpose. Winter apples may be left on the trees until there is danger of injurious frost. In large orchards it is necessary to begin picking in good season, and the different varieties will have to be taken in succession, beginning with the early winter sorts and those varieties which drop easily. An apple, before being picked, should have its seeds almost mature, and have taken on most of its color. As seasons vary considerably, judgment has to be shown as to the best time to gather the fruit. It often happens that a good crop of apples of the best quality is ruined by improper picking or gathering. Winter varieties appear so hard when they are picked that one might be led to think a little careless handling would have no injurious effects upon them, but this is not the case. Apples are easily bruised, and some varieties much more easily than others. When an apple is bruised, its appearance is often spoiled for the home market, and its shipping qualities very much lessened for the export trade. The bruises of some varieties, while disfiguring the fruit, do not cause the apple to rot rapidly; on the other hand, there are many varieties which will rot rapidly when once bruised. Bruises may be avoided by careful handling, and nothing should induce the practice adopted by some people of shaking the apples from the trees.

There are many kinds of receptacles for picking apples in, but half-bushel baskets are about as convenient and satisfactory as any. They should be lined with some soft material, to prevent bruising, as too much caution cannot be taken in this regard. A hook may be fastened on the handle so that the basket may be suspended while the picker is at work. The easiest way to remove the apples from the branch will soon be learned. The stem should remain on the apple, as, if broken off, decay is more likely to set in. The fruit may be either sorted immediately or taken to a storehouse and done at some future time. Many of the best growers sort and pack in the orchard, and certainly the fruit has much less danger of being bruised if treated in this way. A sorting-board, covered with some soft material, is arranged at a convenient distance from the ground, on which the apples are emptied from the baskets. They are then usually sorted into three grades. The firsts and seconds are put in baskets as selected, and the culls thrown to one side. These baskets should be small enough to go into a barrel, should the latter be used. Machines for grading and sizing fruit have been used for this work in recent years, but, unless the fruit is free from scab or codling moth, the hand will have to be used also. The usual practice is to face the end of the barrel with two layers of apples placed neatly and tightly in it with the hand. These should be a fair sample of the kind of apples which are in the middle of the barrel. The other apples are now gently emptied out of the baskets into the barrel, and the fruit is made to settle down by rocking the barrel from time to time. This is a very important factor, in successful packing. The last row of apples should come slightly above the heading groove. The apples are pressed into place by means of a lever and a circular band lined with felt, just fitting the barrel, until the top boards can be fitted in. If the apples have been well shaken when being put into the barrel, very little pressing is necessary. As all the pressing that is required is to keep the apples from moving, the more pressure that is put on, the greater quantity of bruised apples there will be. Some yielding material, such as excelsior or felt, placed in each end of the barrel, would lessen the amount of bruised fruit very much.

Warning to Apple Packers.

The correspondence of the Fruit Division, Ottawa, shows that the recent amendments to the Fruit Marks Act are being misunderstood or else unheeded by apple-packers. One of the important changes introduced by the amendments of last session of Parliament is the rendering of the word "Fancy," or one of the numerals, No. 1, No. 2 or No. 3, obligatory in marking grades. X's have been commonly used by the Ontario shippers, XXX being the highest grade, XX the second grade, and X the third grade. The Dominion Conference of Fruit-growers at the meeting last March, in order to secure uniformity throughout the Dominion, recommended the change which was introduced by the Minister of Agriculture.

Another important feature is the definition of grades. Formerly only one grade, No. 1, was defined. There was, therefore, no uniformity about any of the other grades, and many complaints were received from foreign countries as the result of this anomaly. The new amendment defines three grades. The first is a "fancy" grade, containing only perfect apples. The No. 1 grade, in which there is an allowance of ten per cent. for defective specimens, calls for a package containing apples, every one of which is a well-known specimen of the variety named on the package, sound, of not less than medium size, of normal shape, and of good color for the variety. This is a higher standard than was required in the old No. 1 grade, and some packers will, no doubt, continue to pack upon the standard of the old grade, and render themselves liable to a prosecution.

The misconception is with reference to the ten-per-cent. allowance. This is intended simply to cover inadvertencies in rapid work in packing, but many packers have taken it for granted that this ten per cent. may be fruit of any sort, so long as it has grown upon an apple tree. Even a casual reading of the new amendments should show that such is not the case, that even the ten per cent. of defective fruit must be apples of high grade with reference to soundness, size, color and shape.

The definition of a No. 2 apple is not so stringent. There is a twenty-per-cent. allowance for inadvertencies incident to rapid work. All apples in a No. 2 package must be not less than nearly medium size. It is expected that the eighty per cent. will contain some defective apples, but these defects must be of such a character as not to cause "material waste." Therefore, apples that are wormy or seriously scabby will not pass as No. 2. Immature apples will also be barred out, and must not be marked higher than No. 3.

The No. 3 grade is not defined, but the grade-mark is provided to enable shippers to send forward any marketable apples that cannot qualify for the better grades.

Dealers are warned by the Fruit Division that, in making contracts to supply apples, they should not oversell No. 1 apples. It is estimated that there will probably be four barrels of No. 2 apples for every barrel of No. 1 packed in the average orchard this year.

Considerations for Apple Growers.

1. Ascertain the varieties of fruits and produce wanted in the markets desired to be patronized.
2. Select such varieties of fruits as will thrive best in your climate and soil.
3. Plant those varieties liberally, work them thoroughly, grow them as well as they can be grown.
4. When crop is ready, grade carefully and pack properly to suit the respective market and the nature of the products packed.
5. Ship according to the most approved methods, and distribute intelligently.
6. Select, in the market, that merchant in whom you have confidence, who is financially responsible, who enjoys a reputation for promptness and square dealing, who is able and has the facilities to handle your consignments to advantage.
7. When you have selected your commission merchant, advise him regularly by letter or telegram, of the shipment you propose making him.
8. Do not place your goods in competition with each other, by dividing shipments in any market.—W. L. Loeffel, before the Southern Illinois Horticultural Society.

An American Forecast of the Apple Crop

The Chairman of the International Apple-growers' Association makes the following report: "Prospects of the coming crop of apples in the United States, Canada and Nova Scotia, taken as a whole, as compared with last year, show double the quantity, and quality far exceeds any crop of recent years. We are barreling relatively more No. 1 apples in proportion to the crop than in any previous year in our generation." The Chairman had better furbish up his brain on geography, but in the main, his estimate may not be very far astray.

THE FARM BULLETIN.

Co-operative Experiments with Winter Crops.

The Ontario Agricultural and Experimental Union is again this fall offering to send out material for co-operative experiments with winter crops. Material for any one of the five experiments mentioned below will be sent free to any Ontario farmer applying for it, if he will conduct an experiment with great care, and report the results after harvest next year. The seed will be sent out in the order in which applications are received as long as the supply lasts.

- 1.—Testing Hairy Vetches and Winter Rye as fodder crops, two plots.
- 2.—Testing three varieties of Winter Wheat, three plots.
3. Testing five Fertilizers with Winter Wheat, six plots.
- 4.—Testing Autumn and Spring Applications of Nitrate of Soda and Common Salt with Winter Wheat, five plots.
- 5.—Testing two varieties of Winter Rye for grain production, two plots.

The exact size of each plot is to be one rod wide by two rods long. The material for either of the first two experiments or for No. 5 experiment will be forwarded by mail, and for each of the other two by express. Each person wishing to conduct one of these experiments should apply as soon as possible, mentioning which test he desires, and the material, with instructions for testing and the blank form on which to report, will be furnished free of cost until the supply of experimental material is exhausted. J. BUCHANAN. Agricultural College, Guelph, Ont.

Ireland's Agricultural Capabilities.

"Without seeming to be disloyal to the splendid agricultural achievements of our peerless Province of Ontario, I would sooner, as a paying proposition, have my farm located in Ireland than here," was the response of Hon. John Dryden to newspaper interviewers on his return from Ireland last week, where he has been serving as one of the representatives on the Imperial Government's Commission to investigate the working of the Department of Agriculture and Technical Instruction in Ireland, a department created by the Balfour Government in 1899. Mr. Dryden is paying a brief visit home during an adjournment of the Commission till October 15th. Mr. Dryden says he was very favorably disappointed with the agricultural possibilities of Ireland, and apparently considers their climate, soil and contiguity to world markets gives them an advantage over Canadian farmers, and that what they need is education in modern methods and a little more co-operation among the agriculturists themselves. He has a good deal of sympathy with the Irish agriculturists, who have been left largely to feel their own way and find their own markets. The Irish are a fine people—kindly, big-hearted and generous—but their history has tended to develop jealousy and suspicion of outside counsel. Of the land, Mr. Dryden said: "I do not think it would be easy to find a better agricultural district of its size than that found in Ireland, if one deducts two areas, that of the peat-bog district, whence is secured the peat which takes the place of much of the coal and timber for fuel, and what is termed the congested district—hardly expressive of the real condition, for it is but sparsely settled. It is situated on the west coast, and is mountainous, rugged and stony—the little patches of tillable soil having to be worked with a spade, as it is impossible to use machinery. The balance of the country compares very favorably with any other agricultural district I know of. Some of the grass land is magnificent, and the climate is lacking in extremes. It will, in my judgment, grow almost anything."

Fair Dates for 1906.

Canadian National, Toronto.....	Aug. 27—Sept. 6
St. John, N. B.	Sept. 1—7
Winchester, Ont.	Sept. 6—7
Canada Central, Ottawa	Sept. 7—15
Western Fair, London	Sept. 7—15
Michigan West, Grand Rapids.....	Sept. 10—14
Sussex, N. B.	Sept. 10—14
New York State, Syracuse	Sept. 10—15
Guelph Central	Sept. 11—13
Chatham, N. B.	Sept. 14—21
Arthur	Sept. 18—19
Mount Forest	Sept. 18—19
Peel Co., Brampton	Sept. 20—21
East Parry Sound, Burk's Falls.....	Sept. 20—21
South Ontario, Oshawa	Sept. 25—26
Dominion Exhibition, Halifax, N. S....	Sept. 20—Oct. 5
Prince Edward Island Agr. and Industrial Exhibition	Oct. 8—13
Provincial Exhibition, New Westminster, B.C.....	Oct. 2—6
American Royal, Kansas City, Mo.	Oct. 6—13
International, Chicago	Dec. 1—8
Ontario Winter Fair, Guelph	Dec. 10—15
Caledonia	Oct. 11—13

Managers of fairs whose dates do not appear on our list will confer a favor on our readers by sending in their dates.

Not Too Late to Apply for Admission to the O. A. C.

Agricultural College work is cutting a large figure in Canadian agricultural life each year. For a long time the O. A. C. at Guelph was the only institution in Canada for the express purpose of training farmers. Then the N. S. Agricultural College at Truro opened its doors to students of the Maritime Provinces, and last year did excellent work with a small but brainy class of students. This fall a similar sister institution in Winnipeg is commencing with its first class, and before many years more have passed, Quebec will have at St. Anne de Bellevue a magnificent college for agricultural instruction and investigation, for which she will be indebted to the generous Sir William Macdonald, already famous for his handsome benefactions in the cause of common and advanced education.

In this connection we are pleased to mention that the Agricultural Department of the new Province of Saskatchewan is offering attractive scholarships for competition by those of its young men who take the two-year or practical course in any standard agricultural college of which it approves.

Supply creates demand. Increase in number of institutions seems to augment the ranks of those seeking knowledge. Some feared the Ontario farmers' college might find its student body reduced by the multiplication of similar institutions, but it does not seem to be working out so. Over a week ago President Creelman, of the O. A. C., advised us that indications are bright for a full house again this year. Over fifty signed applications were already in, which was unusual for the time of year. In Macdonald Hall every room was already taken, and a number of both Macdonald and Agricultural College students will be obliged to board out. More dormitory room for the College boys is needed very badly.

He also informs us that the new machinery hall is nearing completion, and it will be ready for occupation when school opens. In it they intend to have all kinds of farm machinery, in such shape that it may be handled and taken apart by students during the winter months. Forges are now being put in, so that every student in the first and second years will receive instruction in blacksmithing, as well as lathe work with both wood and iron. This is a very important addition to the work.

An addition is under way providing for the accommodation of Macdonald girls in the Chemical Laboratory, as the science of chemistry underlies the science of foods, and they are trying to give girls who are taking professional housekeeper's work a thorough knowledge of the subject.

Glass houses are being built for the Departments of Physics and Entomology. In physics, the idea is to have summer conditions in the winter time, that students may study practical conditions of the soil under the influence of growing crops, and such problems as root pressure, evaporation, tillage problems, and problems of drainage, and so forth. In Entomology, they expect to illustrate the life-history of insects, by having the students actually trace the life-histories themselves through the different stages under artificial summer conditions under glass.

Above all, they are inviting farmers' sons to attend the work of the first and second years, which are becoming more practical each year, as they have been able to get more help in the scientific departments, and in this way students can get more individual attention from the professors, demonstrators and assistants in charge.

All this is good news. "The Farmer's Advocate" feels a deep interest in the O. A. C. and everything that is done there. We believe the College is doing an inestimable work, and, moreover, we are thoroughly convinced it will pay every young farmer's son who intends to farm to take the two-years' course if he can possibly do so. It is not very expensive. By dint of rigid economy and industry, a healthy young man, who has a fair public-school education to start with, can put himself through for from \$100 to \$125 the first year, and \$125 to \$150 the second year. In times past some have done much better, but the demands on the student's purse and time are increasing slightly year by year. Some of the best students are those who have paid their own way through. Effort increases their appreciation of the advantages to be had.

Doubtless there are many young men hesitating at this moment whether to go or not. Our advice is, go and fit yourself to be a better farmer, to make more money, to get more good out of it, and to qualify for the opportunities for public service open in every community. If you stay at home, you will, in all probability, drift along pretty much in the old humdrum rut. If you go to Guelph, or some similar institution, it will lift you up to a higher plane of success, and inspire you to a higher life. It is not yet too late to make application. Write at once to President G. C. Creelman, O. A. C., Guelph. The success of a lifetime may depend upon your decision now. Make it wisely, and let not your heart be daunted by obstacles. Victory is to him that overcometh.

Reports received from the crop correspondents of the Ontario Vegetable-growers' Association confirm the general impression that vegetables have suffered from lack of rain. While recent showers have improved the situation considerably, many classes of vegetables are too near maturity for them to do any good.

Field-crop Forecast.—The following gives the area and estimated yields of the principal crops in Ontario. The forecast of August 1st is based on returns from 2,000 special correspondents:

Fall Wheat.—787,287 acres, estimated at 19,026,633 bushels, or 24.2 per acre, as compared with 17,933,961 bushels from 796,213 acres in 1905, or 22.5 per acre. The average for 24 years was 20.4.

Spring Wheat.—A reduced area of 171,745 acres is expected to produce 3,348,190 bushels, or 19.5 per acre, as compared with 3,582,627 bushels in 1905, or 18.8 per acre; the average of 24 years being 15.8.

Barley.—756,163 acres, 25,478,250 bushels, or 33.7 per acre, as against 772,633 acres and 24,265,394 bushels in 1905. The average of 24 years was 27.4 per acre.

Oats.—2,716,711 acres, 111,356,914 bushels, or 41.0 per acre, as against 2,668,416 acres and 105,563,572 bushels in 1905. The average of 24 years was 36 per acre.

Rye.—79,870 acres, 1,370,898 bushels, or 17.2 per acre, as against 101,292 acres and 1,714,951 bushels in 1905.

Peas.—410,356 acres, 8,671,567 bushels, or 21.1 per acre, as against 374,518 acres and 7,100,021 bushels in 1905.

Beans.—51,272 acres, 1,034,119 bushels, or 20.2 per acre, as against 50,543 acres and 846,443 bushels in 1905.

Hay and Clover.—3,069,917 acres, 4,862,830 tons, or 1.58 per acre, as against 3,020,365 acres and 5,847,494 tons in 1905. The average of 24 years was 1.48 per acre.

Apples.—6,898,810 trees of bearing age are estimated to produce 34,302,202 bushels, or 4.97 per tree, as compared with 31,380,749 bushels in 1905, which was 4.47 per tree.

The area in other crops for which no estimates are made, are as follows: Potatoes, 136,064 acres; mangels, 69,353; carrots, 4,980; turnips, 132,512; rape, 43,560; flax, 6,902; hops, 1,732; tobacco, 6,087; orchard, 352,306; vineyard, 12,785; pastures (cleared land), 3,349,101.

South Perth.

Since last report, we have been more favored with moisture for the crops which are still uncut. Heavy rains put down the oats in many places, injuring the yield, and making harvesting difficult. However, they are now all cut and nearly all safely housed. The yield will be above the average, save where rust and smut have obtained a foothold. For the latter there is little excuse, as either the corrosive sublimate, hot water or formalin treatments have been found effective. A case of treatment by the latter, under the writer's observation, was particularly noticeable, the treated portion being quite clean, as compared with the untreated. The pea crop is evidently again becoming a dependable one, threshers reporting the yield quite good and quality the same. Spelt is much in favor with some, either mixed with barley or oats or grown singly. The kernels are plump, and although the hull is retained in threshing, it is not a serious objection in feeding. Corn and roots are now making rapid strides, and the pastures are also improving with the recent rains. Heavy shipments of stock (cattle) have recently been made, the bulk of them going to the large packing-houses in Chicago. Thus it would seem that the canned-meat scare has not seriously affected our trade in this line. Further experiments with the fly remedies have demonstrated to the writer's satisfaction that the fish-oil, carbolic-acid and kerosene mixture is fairly effective, if applied thoroughly every morning, and will cost about one to two cents per animal per day. Whether this will pay in dollars and cents is, of course, problematical, but the greater comfort to the animals, the milk or the driver will surely compensate amply for the small outlay.

Bee men report an unusually poor season for honey, and, as the market was not overstocked last season, prices will likely rule somewhat higher. Our side-roads and concessions are being rapidly strung with telephone lines, and as a consequence we hope farm life will soon take on a brighter aspect.

Perth Co., Ont.

J. H. BURNS.

A New Test Association.

The first dairy test association to be organized in New England, was formed at Durham, N. H., on August 6th, says the New York Produce Review. For several weeks the head of the dairy department of the agricultural experiment station has been agitating the matter among local farmers, with the result that the temporary organization formed early in the summer has been made a permanent organization. The membership is made up of some of the most up-to-date progressive farmers in that section.

Medals for Butter and Cheese.

Two handsome medals have been donated by Rylie Bros., jewellers, Toronto, to the Western Fair, London, as prizes for dairy products, one to be given for butter, the other for cheese exhibits, in addition to the regular prizes named in official prize list. The dates for the Western Fair are Sept. 7th to 15th, and the prospect is that it will be better than has been.

Facts About Newfoundland.

AREA AND POPULATION.

Newfoundland covers an area of some 42,000 square miles, about one-third of which consists of lakes and rivers. The population is estimated at 220,000, inclusive of the Labrador coast. Of these, about 30,000 are to be found at St. John's, the capital, and 10,000 at Harbor Grace, the only two large centers in the colony. The rest of the people are to be found in scattered settlements, and small towns and villages along the coast line, mainly engaged in the fishing industry. The larger number of these are settled upon the east coast.

The interior of the country is to a very great extent unoccupied, the land not being cultivated more than a few miles from the coast line. Very little progress has hitherto been made in agricultural operations, and, consequently, the amount of farm produce raised in the colony has not been at all sufficient to supply the needs of even the limited number of people to be found in the colony. It may be generally stated that the inhabitants have to be fed and clothed by importations from abroad.

CANADIAN TRADE INCREASING.

For many years these have mainly been brought from Great Britain and the United States for reasons which are well understood, but which at present have not the same force that they once had. The rapid progress of Canada as a manufacturing and exporting country, together with the greatly-improved facilities of communication with this ancient colony, is sufficient to account for the fact that the imports from Canada have been largely augmented in recent years, naturally at the expense of our competitors in Great Britain, and, more particularly, those in the United States. Other things being equal, there is, I am satisfied, a decided preference in favor of Canada, and it only remains for the traders of the Dominion to cultivate in a careful way the requirements and goodwill of their kinsmen in this colony, not only to retain the large share they now have, but to extend it very materially in the years to come. The day has gone by when any product not considered good enough to send elsewhere, can be sold here to advantage. In recent years there has been a considerable increase in lumbering and mining operations, and the establishment of several local factories, made possible by the customs tariff in force, has, of course, had some effect in the volume of certain imports.

The colony is in a very prosperous condition at present, and the time seems to be an opportune one for the promotion of an increased trade from the Dominion.

The transportation facilities for freight are good, as nearly all the small ports around the coast can be reached by steamer at frequent intervals, while the interior has been opened up in recent years by the Reid Newfoundland railway system, connecting the capital city of St. John's on the east with Port-au-Basques on the west coast, whence a fast steamer runs to North Sydney in Cape Breton, Nova Scotia, thus completing the link between Canada and Newfoundland.—E. D. Arnaud, Canadian Commercial Agent, St. John's, Nfd.

Reply to Subscriber's Question re Water Pipe.

Editor "The Farmer's Advocate":

I see by "The Farmer's Advocate" of August 9th "Subscriber" is in trouble with a water pipe. I have had same trouble. Find highest point on hill where air collects in pipe, put a T on pipe, then an upright pipe on T, say two feet long, then cap on upright; put small tap in cap of upright, plug both ends of pipe, fill with water, put on cap, close tap, and when air collects in upright pipe put mouth to tap, open tap, such the air all out and close the tap. This done once in six months or so, and you will have no trouble.

FARMER.

D. H. Ross, Canadian Commercial agent in Australia, reports, under date of July 9th, that the recent Chicago disclosures have caused many enquiries for Australian canned meats, which, in the various States, are packed under rigid veterinary inspection. The necessity of strict state supervision of all foodstuffs, whether for local consumption or export, is as the present time a marked feature in proposed Australian legislation.

Vancouver men, with some Eastern capitalists, are interested in a scheme to erect a sugar refinery at Prince Rupert, the Grand Trunk Pacific terminus on the Pacific coast, according to report. It is stated that work on the building will commence in a few weeks.

M. R. Baker, B. S. A., a Pennsylvania graduate of the Ontario Agricultural College, has been appointed general assistant to the Chief of the Fruit Division, Ottawa, Department of Agriculture.

Out in Oklahoma rural-free-delivery carriers are using automobiles on their routes. We should judge they would need something of that kind out there.

Saving Made Easy

Spending has ever been an easier matter than saving—but less wise. We offer exceptional inducements and facilities to help you to save.

\$1.00 opens an account in our savings department.
Interest paid 4 times a year.

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Put your money in a place where you can get it when you want it.

68 Branches Throughout Canada.

MARKETS.

Toronto.

LIVE STOCK.

Receipts of all kinds of live stock last week were light.

Exporters.—Trade in shipping cattle is inclined to be dull, owing, largely, to scarcity of space. Prices, \$4.30 to \$4.95; the bulk, \$4.40 to \$4.70 per cwt.; export bulls, \$3.75 to \$4.25 per cwt.

Butchers.—Owing to light supply, prices advanced from 15c. to 25c. per cwt. Prime picked lots sold at \$4.50 to \$4.70; loads of good, \$4.25 to \$4.40; medium, \$3.75 to \$4.15; common, \$3.50 to \$3.65; cows, \$3 to \$3.50 per cwt.

Stockers and Feeders.—Trade dull, few offering, and few wanted. Feeders, 900 to 1,000 lbs. each, are worth \$3.75 to \$3.90; stockers of good quality, \$3.25 to \$3.50; common stockers, \$2.25 to \$3 per cwt.

Milch Cows.—Good to choice cows sold readily at \$40 to \$55 each, with a few of prime quality at \$60, and one extra cow at \$70. Common sold at \$20 to \$35 each.

Veal Calves.—Trade brisk; prices firm at \$3.50 to \$6.50 per cwt., the bulk selling at \$5 to \$6 per cwt.; prime new-milk-fed calves, \$7 per cwt.

Sheep and Lambs.—Trade brisk, and prices firmer. Export ewes, \$4.40 to \$4.65; bucks, \$3.50 to \$3.75 per cwt. Lambs strong at \$6 to \$7 per cwt. Drovers report sheep and lambs scarce, and hard to buy. Several dealers have orders for feeding lambs, from farmers, but thus far have been unable to fill them.

Hogs.—Receipts moderate; prices steady at \$6.90 per cwt., fed and watered.

Horses.—Toronto dealers report good horses scarce, and wanted. Farmers are too busy harvesting, and unwilling to sell at present. Mr. Burns, of the Repository, reports a good market for good quality horses. General-purpose and express horses, from 1,200 to 1,350 lbs., would bring \$125 to \$175, and draft horses, 1,350 to 1,700 lbs., \$160 to \$200 each.

COUNTRY PRODUCE.

Butter.—Receipts have not been so liberal; prices firmer. Creamery prints, 24c. to 25c.; creamery boxes, 22c. to 23c.; dairy pound rolls, 19c. to 21c.; tubs, 18c. to 19c.; bakers' tubs, 14c. to 15c.

Eggs.—Deliveries fairly liberal, with prices about steady, at 18c. to 19c. per dozen.

Cheese.—Receipts are reported light; firmer. Large, 13c.; twins, 13½c.

Poultry.—Spring chickens, alive, 11c. to 13c. per lb.; old fowl, alive, 9c. to 10c. per lb.; ducks, alive, 10c. to 12c. per lb.; turkeys, dressed, 12c. to 14c. per lb.

Potatoes.—Prices firm, at 60c. to 70c. per bushel, by the load.

Hay.—Baled, No. 1 timothy, \$10.50 per ton for old, and \$9 per ton for new timothy, for car lots, on track, at Toronto.

Straw.—Market steady at \$5.50 to \$6 per ton, for car lots, on track, at Toronto.

Beans.—Market dull at \$1.75 to \$1.88 for hand-picked, \$1.50 to \$1.60 for prime, and \$1 to \$1.50 for undergrades.

Honey.—Receipts light; prices firm at 10c. per lb. for strained, and \$2 to \$2.25 per dozen for combs.

BREADSTUFFS.

Grain.—Wheat—Ontario—Little business being done. No. 2 white, 70c., and red at 69c., outside. Manitoba, No. 1 northern, 80c., sellers at lake points; No. 2 northern, sellers at 77½c.

Oats.—Old oats, 36½c., at Toronto; new white, 30c.

Barley.—No. 3 extra selling at 44c., and No. 3 at 42c., outside.

Rye.—Unchanged at 59c. to 60c., outside.

Peas.—One sale was reported at 70c., outside.

Corn.—American yellow, No. 2, firm at 59c. to 59½c., to arrive at Toronto.

Millfeed.—Bran firm at \$14 to \$15 per ton, in bulk, outside; shorts, \$18 to \$18.50, outside.

HIDES AND WOOL.

E. T. Carter & Co., 85 Front St., Toronto, have been paying the following prices: Inspected hides, No. 1 steers, 12½c.; inspected hides, No. 2 steers, 11½c.; inspected hides, No. 1 cows, 12½c.; inspected hides, No. 2 cows, 11½c.; country hides, cured, 11c.; calf skins, No. 1 city, 13c.; calf skins, No. 1 country, 12c.; pelts, 75c.; lamb skins, each, 75c.; horse hides, \$3.25 to \$3.60; horse hair, per lb., 30c.; wool, washed, 26c. to 27c. per lb.; wool, unwashed, fleece, 16c. to 17c. per lb.; tallow, 5c. to 5½c. per lb.

FRUIT MARKET.

Receipts large. Market dull and draggy for some classes. Tomatoes, 20c. to 25c. per basket; Lawton berries, per quart, 8c. to 10c.; blueberries, per box, \$2.40 to \$2.50; peaches, 25c. to 50c. per basket; melons, per basket, 25c. to 30c.; cucumbers, per basket, 10c. to 15c.; apples, per basket, 15c. to 25c.; pears, Bartlett's, per basket, 50c.; eggplant, per basket, 35c. to 40c.; peppers, per basket, 30c.; corn, per dozen, 8c.; celery, per doz., 35c. to 40c.

British Cattle Markets.

London.—Cattle, 10c. to 11½c. per lb.; refrigerator beef, 8½c. to 9c. per lb.; sheep, dressed, 14c. to 16c. per lb.

Montreal.

Live Stock.—Recurrence of hot weather last week had an adverse effect upon the market. Consumption decreased, owing to a reduced appetite for meat and difficulty of keeping same. Choice cattle, 5c.; good to fine, 4c. to 4½c.; medium, 3½c. to 4c., and common, 2½c. to 3½c. Sheep steady at 3½c. to 4½c., and lambs, \$2.50 to \$5 each. Calves, \$2.50 to \$4 for common, and \$5 to \$8 for fine. Milch cows, \$25 to \$55 each. Although advices from other side are quite firm on bacon, hog prices have been a shade easier here; 7½c. to 7¾c.

Dressed Hogs.—10½c. to 10¾c.

Horses.—Remarkably steady, difficulty apparently being to get the stock from the country, supplies being light and owners holding for very firm prices. There is a little business going on, and some shipments continue to be made to the Transcontinental at Quebec. Heavy-draft animals, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light draft, 1,400 to 1,500 lbs., \$200 to \$250 each; express horses, 1,100 to 1,300 lbs., \$150 to \$200 each; choice saddle or driving, \$350 to \$500 each; fair drivers, \$125 to \$150, and old, broken-down animals, \$50 to \$100 each.

Hides, Tallow and Wool.—Receipts of hides have been only fair for some time past, but as demand has just about kept pace, the prices have changed little. Nos. 1, 2 and 3 beef hides are 12½c., 11½c. and 10½c. per lb., respectively, here, tanners paying ½c. more. Lamb skins are steady at the recent advance, at 60c. each, and calf skins at 18c. per lb. for No. 2, and 15c. for No. 1. Rough tallow holds steady at 1½c. to 3c. per lb., and rendered at 5c., demand being moderate. Demand for wool appears to be temporarily rather dull, but the tone is firm enough, and dealers still quote Canada fleece, tub washed, 26c. to 28c., and in the grease, 18c. to 20c. per lb., here; Canada pulled, brushed, 30c., and unbrushed, 27c. to 29c.; pulled lambs, brushed, 30c. to 32c., and unbrushed, 30c.; N-w. Merinos, 18c. to 20c. The only really constant and active source of demand, at present, appears to be the knitting mills.

Cheese.—Market has been rather excited; prices higher than ever, with good reason to anticipate continued advance. Orders from other side coming along in an unusual manner, though some of them are at too low a figure to be filled. Shipments for week ending August 18th were 83,000 boxes, against 74,000 a year ago. Season's shipments 1,200,000 boxes, or 114,000 ahead of the corresponding period last year. Quebec cheese, 12½c. to 12¾c.; Townships, 12½c. to 12¾c., and Ontarios, 12½c. to 13c.

Butter.—Butter also showed an advance last week, following higher cables. Butter seems scarce enough in Old Country, and none too plentiful here; 22½c. to 22¾c. for good to fine creamery, 22½c. to 23c. for fine to fancy.

Eggs.—Straight-gathered, 17c. to 17½c.; No. 1, candled, 17½c. to 18c., and selects, 20c. to 21c., and No. 2, 12c. to 15c.

Potatoes.—Advance in price lately, owing to small deliveries; \$1.15 to \$1.25 per bag of 75 or 80 lbs. on the farmers' market, and \$2.50 for barrels.

Flour.—Hand-to-mouth purchases. Manitoba strong bakers', \$4 per bbl., in bags. Millfeed.—Almost impossible to secure sufficient bran and shorts to meet the demand. Bran, \$19 per ton, in bags; shorts, \$21.

Hay.—A little uncertain, owing to scarcity on spot. Quotations, \$8.50 per ton, on track, for clover and mixed, \$9.50 for No. 2 timothy, and \$10.50 for No. 1. Some quote rather higher than above. Deliveries light.

Representative Cheese Board Prices.

Stirling, 12 9-16c. to 12 11-16c. Peterboro', 12 13-16c. to 12½c. Picton, 12½c. Tweed, 12½c. Kingston, 12 9-16c. Madoc, 12½c. South Finch, 12 9-16c. offered. Napanee, 12 9-16c. Perth, 12½c. offered. Ottawa, 12 7-16c. for white, and 12½c. for colored. Iroquois, 12½c. Listowel, 12½c. on board, 12½c. on street. Kemptville, 12½c. offered.

Chicago.

Cattle.—Common to prime steers, \$3.75 to \$6.75; cows, \$2.85 to \$4.75; heifers, \$2.60 to \$5.35; bulls, \$2 to \$4.50; calves, \$3 to \$7.50; stockers and feeders, \$2.60 to \$4.35. Hogs.—Choice to prime, heavy, \$6.30 to \$6.40; medium to good, heavy, \$6 to \$6.20; butchers' weights, \$6.35 to \$6.50; good to choice, heavy, mixed, \$6 to \$6.15; packing, \$5.50 to \$6.10; pigs, \$5.60 to \$6.50. Sheep and Lambs.—Sheep, \$4.25 to \$5.75; yearlings, \$5 to \$6.50; lambs, \$7 to \$8.

Buffalo.

Veals.—\$4.50 to \$9.50. Hogs.—Heavy, mixed, Yorkers and pigs, \$6.70 to 6.75; roughs, \$5.20 to \$5.40; dairies, \$6.25 to \$6.60. Sheep and Lambs.—Lambs, \$5 to \$8.50; a few, \$8.75; sheep, mixed, \$8 to \$5.50.

THE SPICE OF LIFE.

A city merchant who has a passion for reading out-of-town newspapers and also for answering many of the advertisements he finds in them tells this on himself: "The other day he answered an advertisement in one of the New York papers stating that for one dollar a method for saving gas bills would be sent. In two days he received a printed slip by mail which read, 'Paste them in a scrap-book.'"

The minister's wife was busily engaged one afternoon mending the family clothes when a neighbor called for a friendly chat. After a few moments of news and gossip, the caller remarked, as she began to inspect a basket of miscellaneous buttons: "You seem to be unusually well supplied with buttons of all kinds. Why, there is one like my husband had on his last winter's suit." "Indeed," said the minister's wife, with a slight smile. "All these buttons were found in the contribution box, and I thought I might as well have some use out of them. Well, must you go? Well, good-bye. Come again soon."

In a certain, Western town there was a political office to be filled last spring, paying the munificent salary of \$250 per year, says a Kansas paper. The opposing political parties were about evenly balanced, and there was keen opposition and a lively campaign for this small plum. One of the candidates was a shrewd old fellow and was well liked. It looked as though he would be successful, as a neat little sum had been subscribed and turned over to him as a campaign fund. But to the astonishment of every one, however, he was defeated.

"I can't account for it," said one of the political leaders, gloomily. "With that money we should have won. By the way, how did you lay it out?" "Well, it was this way," replied the defeated candidate, slowly pulling his whiskers, "you see, that office only pays \$250 a year salary, and I didn't see no sense in payin' \$850 out to get the job, so I jist bought meself a little truck farm instead."

Justice Brewer, of the United States Supreme Court, in lecturing to his law class at the George Washington University, told the following story, according to the Washington Star:

"I knew of a case once where two darkies swapped mules. One of them was an old hand at the business, and in making the trade, he represented his mule to be seven years old, and told of many good traits the animal had not. This was in February. About two months later the other darkey began to realize that he had been victimized in the bargain, and that the beast was fully twelve years old. So he decided to go back and tell the swindler he had lied to him about the animal. However, owing to it being the busy season of farming, he was not able to go until about the middle of June. He finally did go, and told his man what he thought of his rascally misrepresentations about the mule.

"'You say,' said the other fellow, 'dat when you got de mule in February he was seven years old, and now it's June and he's twelve years old?'" "'Yes, I do!' was the angry response. "'Well, sah, time sure do fly.'"

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Life, Literature and Education.

George Meredith.

Perhaps the most astounding thing in connection with the study of George Meredith is to be compelled to realize that, although almost universally acknowledged by the "best" critics as the foremost novelist of the present day, he also belongs to the age of Thackeray and Dickens, an age which we now begin to look upon as belonging essentially to the past. So completely, in fact, do we look upon him as our contemporary, that this seems impossible; and yet cold statistics will have it otherwise, and point triumphantly to the fact that Meredith's first prose work was published the year after "Vanity Fair," his first important novel, "The Shaving of Shagpat," appearing a year after "The Newcomes," and his first volume of poems, the edition of 1851, a year after "Pendennis." To carry the record further, his "Farina" appeared simultaneously with "Little Dorrit"; his masterpiece, "The Ordeal of Richard Feverel," almost simultaneously with "The Mill on the Floss," and his "Rhoda Fleming" shortly before "Felix Holt." And yet, while Thackeray, Dickens and George Eliot are long since dead, Meredith still holds his place in the literary arena as the greatest living novelist of to-day.

Wherein the exceeding modernness, even of Meredith's earlier works, consists, must be obvious. Invariably his books are modern—modern in this sense that they deal principally with mind and character, rather than with event or era. Depicting no especial time, they are of every time. . . . Again, Meredith achieved his fame so late in life, or, rather the public was so long in coming to an appreciation of his work, that he truly belongs, not to yesterday, but to to-day.

When one speaks thus of the public in connection with Meredith, one means Meredith's public—for the great outside public that revels in Winston Churchill, Hall Caine and Edith Wharton, or in the finer writing of James Lane Allen and William Dean Howells, will never read George Meredith. Meredith is especially the novelist of the few. He has been called the "novelist's novelist," and certain it is that among the writers he has found his greatest admirers. Robert Louis Stevenson spoke of him as "the master of us all," and yet the great ordinary reading world is likely to challenge this statement. While wading (if one attempts the task) through Meredith's wordy volumes, halting at his eccentricities, vexed with his tantalizing obscurity, perplexed by his jungle-growth of metaphor and simile, the ordinary reader must certainly feel ready to depose the author from a pedestal which, it seems, might be so much more acceptably graced by Stevenson himself.

Nevertheless, to fail in appreciation of Meredith is, it must be confessed, to lay one's self open to the

accusation of the critics. "Meredith is not the lazy man's novelist," say they, and they go on to point out his beauties—a bootless task, perhaps, for those who cannot see. And yet, when all has been said, two facts remain: First, that the majority of readers prefer their literary diet served up in a more readily digestible form—a propensity which has left Meredith, after half a century's writing, less read than any other novelist of his standing; second, that since he has won such unreserved praise from Stevenson and others, there must be something in his work, for those who can command the open sesame of his treasures, well worth the finding.

Upon one point, at least, in regard to Meredith all must agree—his striking originality. No one has ever written like him; it is a question if anyone ever could write like him. He will have no imitators; he can found no school. His philosophy, his irony, may, indeed, be approached; his style, his peculiar Meredithian quality, never. He has, it is true, been compared to Henry James; yet those who have most studied James trace the similarity chiefly in the obscurity, common, whether deliberate or not, to these two writers. Perhaps that writer came nearest a summing up of our author who said, "What Browning is among the poets, Meredith is among English novelists,"—a strong recommendation, surely, to lovers of Browning.

For those who enjoy pure studies of mind, psychological problems, an optimistic agnosticism, caring little for intricacy of plot, delicacy of description, or music of language, Meredith may possess a unique charm; and yet he has written some fine bits of description, too, and here and there a strophe of true music in prose.

Meredith is an out-and-out Englishman, born in Hampshire (1828), and, although he was educated in Germany, spending nearly all of his life in England. He has been a very prolific writer, as the following list, added to those already mentioned, will show: "Evan Harrington" (1861); "Modern Love, and Poems of the English Roadside" (1862); "Emilia in England," now known as "Sandra Belloni" (1864); "Vittoria" (1866); "Adventures of Harry Richmond" (1871); "Beauchamp's Career" (1875); "The Egoist" (1879); "The Tragic Comedians" (1880); "Poems and Lyrics of the Joy of Earth" (1883); "Diana of the Crossways" (1885); "Ballads and Poems of Tragic Life" (1887); "A Reading of Earth" (1888); "One of Our Conquerors" (1891); "Empty Purse" (1892); "Jump to Glory, Jane" (1892); "Lord Ormont and His Aminta" (1894); "The Amazing Marriage" (1895); "The Tale of Chloe," "The House on the Beach," "The Case of General Opie and Lady Camper" (1895); "Comedy, and the Uses of Comic Spirit" (1897); "Selected Poems" (1900).

Mr. Meredith at present lives quietly at his home, Flint Cottage, Surrey, England, and occasionally short articles still emanate from his pen.

Is a Change a Rest?

Is a change as good as a rest? People have been saying that so long that it has passed into a proverb. On the strength of the presumption, the over-wrought or the over-revelled fly off at a tangent to some other form of toil or dissipation, in the vain quest of restoration. At the recent meeting of the British Association for the Advancement of Science, at York, England, the searchlight was incidentally turned upon this subject in a paper on the Physiology of Rest, by Dr. T. D. Ackland, and in the discussion following. The supreme importance of rest in the form of ample sleep for children and those in the adolescent period, in order to ensure growth and tissue-repair, was emphasized, and want of sleep was designated as one of the causes of physical deterioration among the British people. The lack of sufficient sleep was more serious in case of children than adults, and one speaker went so far as to describe the demand for early rising as a fetch. Our own view on that point is that the trouble is not so much with the early getting up as the late going to bed, and, of course, the candle wastes fast if both ends are kept burning. Dr. Ackland indicated very plainly that change was no substitute for rest, nor physical effort for those exhausted with the drain of intense sedentary occupations, because of the intimate inter-relation existing between the mental and the physical natures. In fact, when excessive bodily activity, whether in the form of cycling or pitching hay, was added to the mental fag, the trouble only became aggravated, for the simple reason that the mind has a physical basis, and the one is sapped by the drain upon the other. What is needed is the preservation of a wholesome balance at all times by a reasonable rest period from day to day, and nothing better than "nature's sweet restorer" has yet been discovered. Meanwhile, we may dismiss to the limbo of exploded notions the theory that a change is just as good as a rest on as high an authority as the B. A. A. S.

Count Tolstoi in an Illustrious Place.

Count Tolstoi is by no means in high favor with the Government and Orthodox Church parties in Russia. As a testimony of its regard for him, the latter has recently caused a new ikon, in which the venerable author figures prominently, to be placed in the Glinkaia hermitage. The ikon represents, as in a picture, the last day of judgment. In the foreground sinners are burning in hell fire, and among them Tolstoi holds the central place. The Orthodox Church, it may be remarked, is joining actively with the Government in its endeavor to eliminate "political error" from among the people, and Count Tolstoi, as the friend of the masses, and a heretic excommunicated from the Church, comes in for a double share of its contumely.

Let Us Think.

Back of all voluntary action is thinking. The world needs people who do things, but the doers are the thinkers. The man or woman who thinks good thoughts will do something worth the doing. Let us think, then act. It is easier to imitate; harder to originate new and improved methods and carry them into vigorous execution, but it is the latter that counts. We cannot all of us think great thoughts, but we can think helpful ones—helpful to ourselves and others. Instead of languidly following the "path of least resistance," regardless of the results, let us think of the best that is in us, or within our grasp. With all due respect for old beliefs and old methods, let us be respectful and appreciative of (to us) new truth, and seek to discover and apply it.

Emerson said: "Beware when God lets loose a thinker in the world." Expect results! There is evident implication, however, that thinkers are somewhat scarce. For one who thinks along original lines, a thousand are content to let "the other fellow" do the thinking, while they themselves trudge mechanically along the beaten paths, or drift listlessly down stream.

Let us exercise our God-given power of thinking. Let us exercise this power for its beneficial effect upon character, as a means of discovering truth and renouncing or avoiding error, an aid to success and progress and a guiding-star to happiness.

Kent Co., Ont. W. J. WAY.

The Art of Happiness.

If you want to be really happy, you must try, first of all, to cultivate cheerfulness, even when misfortune assails you. A difficult task, certainly, at first, when there is not the faintest sign of a silver streak in the black clouds. But once you have learned the value of cheerfulness, you will discover that there is a pleasant side to most circumstances—even to life's trials.

Happiness consists in being brave. Face things manfully, and never go under. The black waves of trouble are only, alas, too prone to engulf us, but a little resistance, a little fortitude, will enable us to weather the storms of illness or pecuniary loss. There is a certain fighting instinct in us that should enable us to conquer difficulties and make the best of them.

Don't brood over your troubles, and don't constantly refer to them in your conversation. You are not the only sufferer in the world. Hope is the friend of Happiness, and Hope thinks nothing difficult. Sir Walter Scott wrote, once, that "everything has its fair as well as its seamy side," and so it has. The darkest hour comes before dawn, and so it is with happiness—the time comes when she will tell you to forget the past, live in the present, and prepare yourself for the beauty of that future happiness which is the gift of God alone.—[Selected.]

"She had money, and health and beauty, the triune of perfect stardness, which makes all men astronomers."—[Of Clara, in Meredith's "Egoist."]

Current Events.

A sharp earthquake shock was felt in Silesia on August 22.

By the explosion of a bomb intended to kill Premier Stolypin, 32 people were killed and many injured.

An enormously rich silver mine has been discovered in Nipissing. One nugget weighing 800 pounds has been taken from the seam.

The inhabitants of the burned-out town of Haileybury, New Ontario, have resumed business in tents. Preparations for rebuilding are already under way.

Abdul Hamid, Sultan of Turkey, and the most influential representative of the Mohammedan faith, is so ill that few hopes are entertained for his recovery.

Physicians the world over are much interested in Prof. Behring's new remedy for tuberculosis, which it is hoped may prove more efficacious than any remedy heretofore devised. Quantities of the liquid-called tulase—have been distributed for testing among private physicians, while hospitals are being supplied free of charge. Tulase is given both internally and by subcutaneous injection.

According to recent statistical notes from Ottawa, Canada's aggregate foreign trade for July amounted to \$41,996,228, or an increase of \$9,336,307 over the same month of last year. The imports totalled \$23,652,122, and the domestic exports \$16,549,548, increases of \$5,172,357 and \$3,500,099, respectively. The biggest gain in exports amounted to \$1,555,421, for animals and their products, an item showing distinct progress among the farmers. The total animal and produce exports for the month totalled \$7,420,806.

Reports from Valparaiso indicate that the loss of life caused by the recent earthquake was much heavier than at San Francisco, while the danger to the 100,000 inhabitants encamped near the wrecked city has been much increased by a wave of cold, which is causing much suffering among the weak and sick. It is estimated that upwards of 400 shocks in addition to the two heavy ones which caused the most of the damage, occurred in the Valley. Several small towns have been completely wiped out, while Santiago also suffered considerably. Valparaiso is at present under military rule.

The story of robbery, murder and

intrigue still goes on in every Province in Russia. According to recent official reports, the record for one week was 58 officials assassinated and 53 wounded. Under such circumstances the authorities are bound to exercise repression and deal out punishment, and every retaliatory measure but inflames the revolutionists afresh. In Warsaw the revolutionists and the police are spending their time hunting one another through the streets, and business is at a complete standstill. Were the people as a whole in arms, such a revolution as characterized France during the Reign of Terror must ensue; but the Russian people, on the whole, seem apathetic, the outrages being confined to the extremists, hence, so far, the autocratic party is holding its own.

ILLUSTRIOUS PHYSICIANS IN TORONTO.

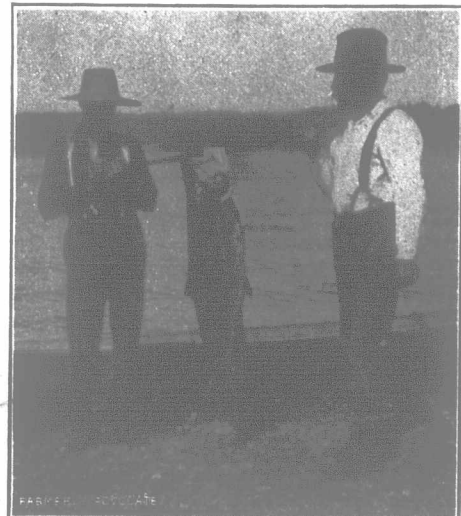
During the past fortnight Toronto has enjoyed the novelty of entertaining many hundred of physicians, who arrived from all parts of the world—France, Germany, the United States, India, China, South Africa—to be present at the annual meeting of the British Medical Association; and not only peculiar interest, but peculiar importance was attached to the presence of such men as Sir Thomas Barlow and Sir William Broadbent, physicians to King Edward; Sir Victor Horsley, of London, England, the most eminent brain surgeon in the world; Sir Hector Cameron, of Glasgow; Sir James Barr, of Liverpool; and many others. It is not only a privilege and a means of instruction, but an inspiration also, to our physicians to have the opportunity of hearing such men speak.

Many topics were discussed during the convention, among them the abandonment of alcohol as a drug by the medical world, the evils of over-eating, the necessity for pure milk and water, cancer, the successful combating of diphtheria by the use of anti-toxin. Sir Victor Horsley spoke at length on surgical operations for brain disease.

The subject most likely to be interesting to Canadians, was, however, tuberculosis, the discussion on which was introduced by Dr. Milliken, of Boston. Open air, sunshine, and forced feeding of nourishing food, especially "raw" foods, such as milk and eggs, were, it was stated, the great forces to be used in fighting the disease. The most important address upon the subject was, perhaps, given by Dr. Evans, of Chicago, who told interestingly of the markedly successful results which have attended the open-air treatment of tuberculous monkeys in Lincoln Park, Chicago. Some of these animals, he stated, had been completely cured by being kept out of doors all winter. "Fresh air every hour of every day of every year of the patient's life," declared Dr. Evans, is an absolute essential to recovery, and if he has succeeded in impressing this fact alone on the minds of the Canadian people, the meeting of the Association will have accomplished a most laudable result.

The Salmon Fisheries of British Columbia.

From the gaudily-lithographed label on the little tin of B. C. salmon, which is the nearest acquaintance the average resident of interior Canada has with the salmon industry, there can be nothing gathered of the strenuous life of the hardy fishermen who rake the rivers and glean the gulfs of the B. C. coast to garner the harvest annually during the run of that wonderful fish, the sockeye salmon. Of its excellent qualities as a wholesome article of diet, and welcome change in a bill-of-fare, otherwise apt to be monotonous in a country where fresh fish from the sea have to be brought thousands of miles packed in ice, everyone is aware, for canned salmon is well-nigh as universal an article of food as it



Salmon 50 Pounds.

Caught in Campbell River, Vancouver Island. Took the writer 5 miles down tide before it was finally captured.

is possible for a single article in one form to become.

Rapid are the various processes through which the salmon is put from the time it is caught in the gulf or river as it makes its way from the sea, where, so far as tradition, legend and scientific knowledge go, it has spent the four-year period which it is popularly supposed the salmon requires from the time of hatching to reach maturity. The whole season, ordinarily, does not cover more than two months, and in that time the entire pack of salmon for the supply of the whole world has to be put up. The fish run with almost unerring regularity, varying but very few days each year in the date of the arrival of the first run off the coasts of British Columbia. On the Fraser River the run is a few weeks later in commencing than further north.

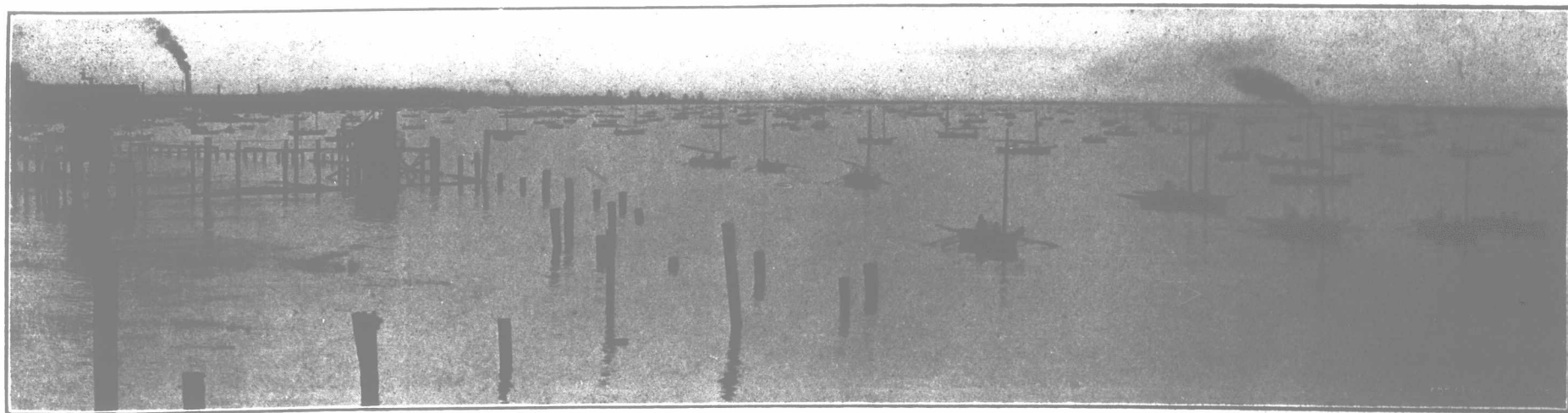
When the first schools of salmon are reported off the salmon banks of the southern coast of Vancouver Island and in the Gulf of Georgia, everything is in readiness for the rush work which will have to be done until the last batch of salmon tins is run into the steam-cooking retorts. On the Fraser River there are some forty-eight canneries, more or less. In the north there are (in British Columbia) probably twenty canneries in all. "More or less" may be a somewhat indefinite term, but with the com-

binations of numerous individual cannery owners, the rebuilding of other canneries, the consolidation of two or more plants in one, the building of new canneries, and complete dismantling of old ones, the number varies every season.

Long before the time when the fish are expected, which, on the Fraser River, is approximately the middle of July each year, the canneries have been clearing decks for action. The plants have to be overhauled, and put in good running order, boilers and engines refitted or replaced, new machinery installed, fishing boats built, and nets and other supplies secured. The preparation of the tins is a big undertaking. Nowadays every cannery has its own can-making machines. The tin in sheets is brought by hundreds of tons in the many merchant vessels that ply between Liverpool and the ports of British Columbia, and some tin from U. S. manufacturers is also used. The making of the approximate number of tins which it is expected will be used, gives employment to a number of cannery hands who will later on be engaged on the work of packing the salmon.

Most of these first hands are Chinese; indeed, the majority of the employees in the cannery, engaged on the operations from the receiving of the fish until they are sealed in the tins, are Chinese. There is one explanation of this, and that is, that Chinese labor is contracted for through "tyees," or Chinese "labor contractors," who engage to supply sufficient men to pack the expected output of each cannery at so much per case of the finished product. The operations on which they are engaged are specified, and these are mainly the cutting up of the fish and making them ready for the cans, filling the tins, running the various machines through which the tins go until, completed, topped, wiped and soldered, they are ready to be packed in the slatted iron trays, on which they are run into the cooking retorts. It takes a great many hands to do this work in all the canneries at the same time. The Chinese are the only men having sufficient numbers under their control who can be relied upon to be on hand at the time wanted. As the whole salmon-packing industry is a rush operation, dependent on the run of the fish, and will not brook delays, the cannery men have fallen in the habit of letting contracts to these Chinese "tyees," who are uniformly keen to get good and permanent contracts, and who never fail to carry them out, and have their men on hand when wanted. But this is by no means intended as a defence of Chinese labor, or a discussion of the case, which has been threshed out pro and con many times. Suffice it, that the facts are as stated, and the Chinese acquire great skill and deftness in the various stages of the operations of filling the cans with slices of salmon flesh.

Each cannery is a maze of shafts and belting, and no cannery is equipped with less than one complete "line" of automatic can machines. This automatic salmon-cannery machinery is a specialty, and must surely have reached its highest perfection on the Pacific coast, where so many hundreds of machines are in use. The making of tins, cutting of covers, the covering, wiping, topping, soldering, re-wiping, and every step in the work, except the cleaning of the fish and the actual placing them in the tins, is now done automatically, so that even the Chinese are being as far as possible



Salmon Fishing on the Fraser. Fleet of Fishing Boats Leaving for the Mouth of the River.

eliminated by labor-saving devices. One machine, typically advertised as the "Iron Chink," is made with a mould, which is supposed to be fitted to receive the body of the average-sized sockeye salmon. In this the fish is laid, and as it travels along a belt, on which are other similar moulds, like buckets of a belt conveyor, one turn of a revolving disc knife splits the fish lengthwise. A half-turn of the mould on its pivot, as it passes a point, turns it so that in passing under a set of revolving discs, it is cut in lengths just large enough to fill the tin. Then it dumps on a table in front of a row of Chinese waiting to place the pieces in the cans, while another set of Chinamen carry the tins in trays to a row of machines, where other men stand and feed the tins, one by one, into a machine which carries them on an endless belt past a point where a swift arm claps a tin cover, already stamped out, on the top. Away the tins go along another belt to the next machine, where they whirl under a set of rolls which crease the cover on tightly; then, away they go again to be "wiped" before they are run on their endless-chain journey to the soldering machine, where, on a link-belt conveyor, they are rolled on edge through a long bath of melted solder, getting a sufficient number of revolutions as they pass through the melted metal to thoroughly seal them up. Thence they go to the trays, where they are placed in rows ready to be wheeled on iron trucks into the steam-cooking retorts, whose doors open the full-size of the end of the retort, and where, again, speed is the prime object. It takes but a fraction of a second to open the retorts, draw out the cooked salmon, and run in fresh truck-loads of tins, which will stay the regulation number of hours in the superheated steam till thoroughly cooked.

After coming from the retorts, the salmon tins are carefully gone over by hand and inspected for "blows" or little leaks in the soldering, as the steam will show. While this process is, of course, precautionary, the percentage of leaks found is very small, as the automatic-soldering process is so perfect.

It is to be expected that in the rush and hurry of the packing season, the labelling and packing into cases will not be given the attention that other steps in the process receive; but for weeks after the salmon have stopped running, and the cannery is closed down so far as canning is concerned, the work of sorting, labelling, and packing into cases is carried on. By Christmas, the entire

pack, be it a million or more cases, or less than half a million cases, according to the run, will have been got ready for shipment to the world's market, and the bulk of it will have gone forward; indeed, many thousands of cases will have found their way into the hands of the retail merchants, and will have been sold and consumed by the end of the year.

The shipment of the salmon pack engages the attention of the management of the various canneries and their staff of officials until it is almost time to begin the work of preparing for the next

of the salmon pack was shipped in sailing ships, and the chartering, arrival and departure of the "salmon fleet" as the wind-jammers were known, was an event in shipping circles. For weeks there would be one or more sailing ships in the Fraser River, at Steveston, receiving cargo, and it usually took four to eight ships to carry away the pack of British Columbia. Now, the big steam freighters, the iron and steel leviathans of the Alfred Holt lines, known as the Blue Funnel steamers, make regular trips between Liverpool, London and the

Some fishermen own their own boat and net, having possibly made both these essential parts of their equipment. In fact, this is commonly the case with the Japanese fishermen. An individual owner usually hires a helper, on a basis of the catch. If two men own the boat and net jointly, they share in the returns. If men desire to fish who have no outfit, the canneries all have a certain number of boats, which they supply on a basis of one-third of the proceeds of the fishing. Perhaps half the boats on the Fraser River and Gulf of Georgia are thus owned by the canneries. The fisherman outfitted by a cannery must turn in his fish to that cannery.

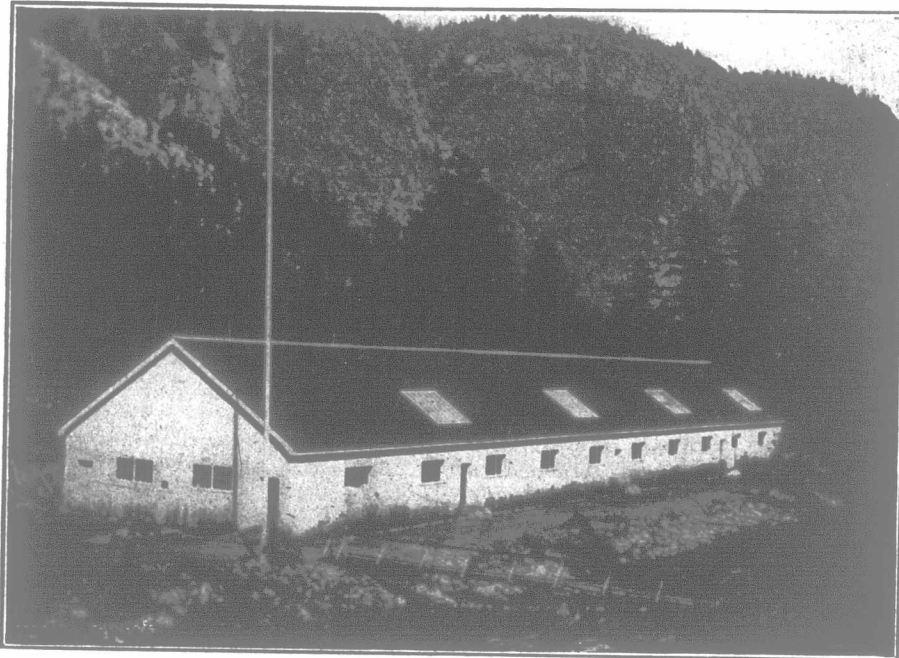
The Columbia River fishing boat, as it is called, is an open clinker-built vessel, with usually one sail. The vessel is about 24 to 35 feet in length, and two men handle it and the net easily. There are times, however, that the coming of a sudden storm drives the vessels far out in the gulf before they can run for shelter, and then the tale of the sea is often a sad record of upturned fishing vessels picked up by passing steamers, while the missing fishermen never are found. In the main, however, the fishing season is remarkably free from loss of life, considering the great number of men, some of them green at sailing, who are engaged. Of course, most of those blown out in the gulf during a storm are simply compelled to spend two and sometimes three or four days at sea in their open boat, until they are able to get back to the mouth of the river again.

Many fishermen are Japanese, and, of course, the Indians are born fishermen, and have fallen into the way of fishing for the canneries for the season. Many other nationalities are represented in the small navy which gathers at the mouth of the mighty Fraser every year, and the number of white men is, perhaps, a little more than half the total. Of these, a good percentage are farmers and ranchers who own land on or near the banks of the Fraser, the ready cash obtained from the fishing enabling them to develop their land more rapidly than otherwise. Oddly enough, the Chinese have not taken to the fishing, though, as previously mentioned, they are in the majority inside the canneries in the process of packing the fish. It is, perhaps, because the "Chink" is a poor sailor, though there is nothing to hinder him engaging in the occupation, except, perhaps, that in taking out a fishing license he must have been a resident long enough to have applied for his naturalization papers, without which no license is issued.

When the fishing first begins, after the salmon are reported to be running, the boats put to sea nearly all at the same time. This remarkable flotilla, with its motley crew of all nations, is one of the sights of the coast, and excursions are frequently run to the mouth of the river to see it. Especially is this occasion marked every Sunday evening after the weekly close season of thirty-six hours from six o'clock Saturday morning, during which time every net must be out of the water. Not a fishing boat may leave the land in that time, and all are ready for the signal gun at six o'clock Sunday evening.

Every boat carries a net of 80 meshes in depth, and from 100 to 200 fathoms in length, the depth and size of mesh being regulated by law. The top edge of the net is strung with floats—oval blocks of wood, some six inches long. And so specialized is this fishing industry that there is a wonderful machine which grinds out these floats ready-made, with even the hole bored down their length ready to string on the line. A row of lead sinkers weight the bottom edge of the big net, which thus hangs like a curtain when flung out in the water. The end away from the boat is marked by a buoy, usually made from a five-gallon oil-tin, painted some distinctive color.

When the boats put out, and their nets let down for a "drift," if there is much wind, the sails are dropped, and the fishermen lie there almost as if at anchor, waiting till the bobbing of the line of floats shows them that a number of salmon have "gilled" in the net. Taking up the net, the fish are quickly disengaged from the meshes and thrown into the holds of the boat; square, box-like wells or cribs with loose board covers occupying the center of the boat. When a small number of fish are caught,



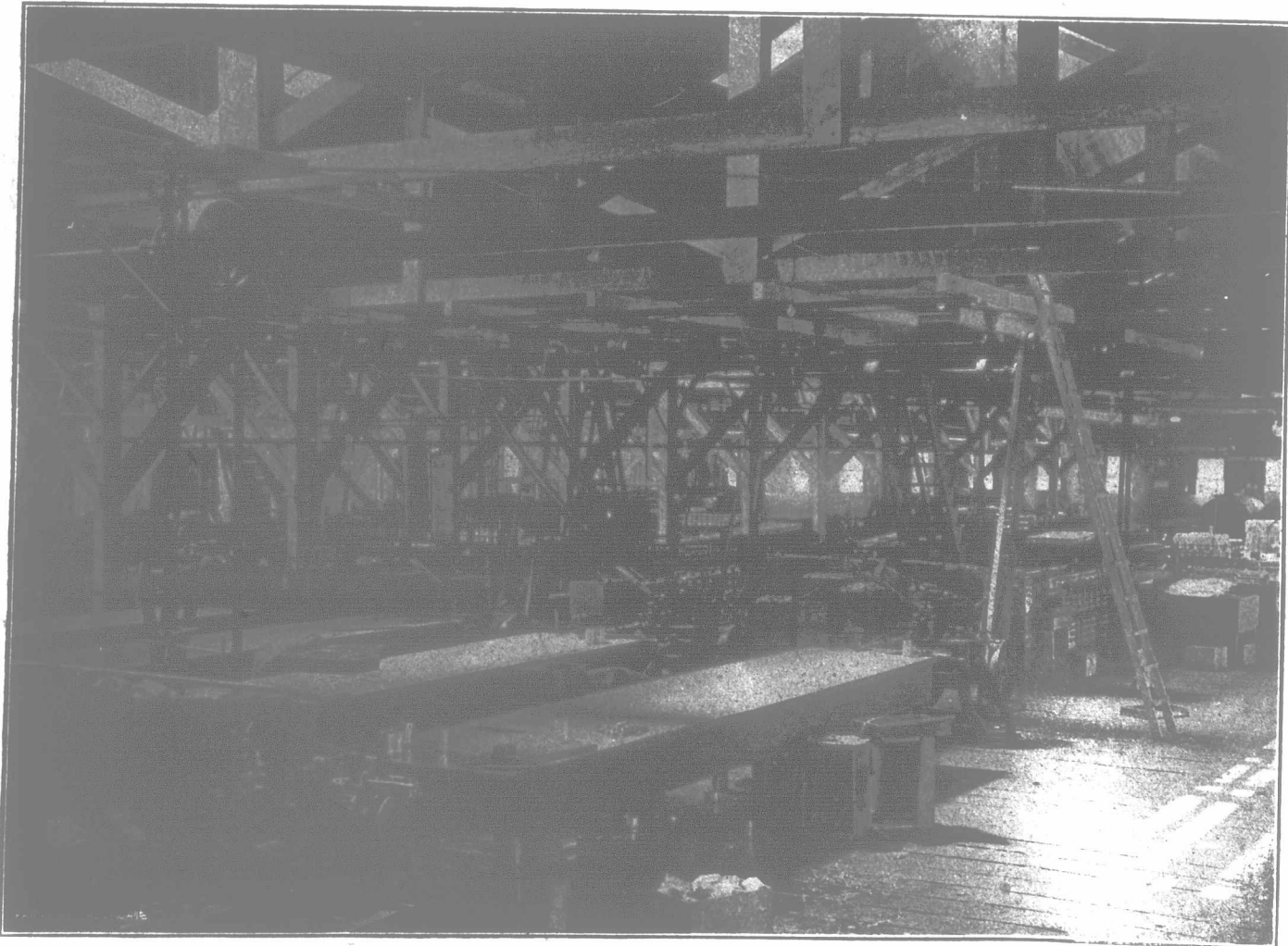
Provincial Government Hatchery, Seton Lake.

season, so that while the actual work of packing the salmon is of brief duration, the industry itself is continuous, and in one or other department there is always activity. The shipments of tin for next year may be brought back in the holds of the very freighter which took over the consignments of canned salmon to Liverpool and London, where the bulk of the British Columbia pack goes.

Large quantities are shipped to Australia, and this trade is growing every year. The supplies for Eastern Canada, of course, are sent overland by rail, and, indeed, some hurry-up orders for the Old Country market are occasionally sent that way, when stocks have run low. In former years, the bulk

Pacific coast direct, coming and going via the Suez and India. These vessels carry cargoes of 10,000 and 12,000 tons, and as their rate of freight is not much higher than by sailing ship, while the shipment is delivered much sooner and insurance is less, the salmon-carrying has all fallen into their hands. No sailing ships have been chartered the past two years to take B. C. salmon to the Old Country market.

A fleet of three or four thousand fishing boats, each manned by two fishermen, is engaged, during the run of the sockeye, in catching the fish. There are several ways in which these men are outfitted, the boat and net being worth, perhaps, two or three hundred dollars all told.



View of Salmon Cannery.

a second, even a third drift will be made, before the fishermen turn toward land with their catch. Usually the fleet puts to sea in the evening, and in the early hours of morning they begin to return. Often, of course, the fishermen, finding that the fish run well, return to the gulf or river at once, so that, in season, boats are coming and going at all times. Of late years the canneries have developed the system of keeping tugs with big scows patrolling the waters and taking up from their respective fishermen what they have caught. This serves the double purpose of getting the fish to the cannery promptly while fresh, and of saving the fishermen the time and trouble of coming in.

When the fish run well, phenomenal catches are sometimes made, as high as 500, 600 and even 800 fish to a boat in a single night being not uncommon. In poor years, and early in the season, there are oftentimes when the "high boat" will not have more than ten or fifteen fish. And, of course, when the fish do not run well, there is often heard the world-old cry from returning boats, "We have toiled all night and caught nothing."

While the number of fishermen on the river and gulf does not seem to diminish, the growth of trap-fishing on the American side for several years, and more recently on the Canadian side, has greatly increased the possibilities of large catches. These traps are all owned by individual canneries. When they were not allowed in B. C., the Fraser River canneries frequently bought scow-loads of the fish, and brought them in from the American traps. To do this, a small duty is exacted, of which ninety per cent. is rebated when the canned salmon is exported. The advent of the traps in B. C. waters has caused great controversy. Certain it is that the traps, located as they are on the south shores of Vancouver Island, merely intercept the fish before they can get to the American traps just south of our peculiar International Boundary Line. It would seem a strong argument that it would be silly for us to refuse to have traps, when the fish thus caught are stopped from going into the traps which are set in the American waters of Puget Sound and the Gulf of Georgia to catch the fish on their way to the Fraser.

Involved in the question of trap-fishing, and the over-fishing of the Fraser River, is the larger question of preserving for future generations a valuable industry, which represents, in a good season, a turnover of millions of dollars, put in circulation in this province. The capital invested in cannery plants, etc., also runs into the millions, and the number of people who gain in livelihood for all or part of the year, from the salmon industry, must be fully twenty thousand, taking the northern B. C. fisheries in with the Fraser River.

The preservation of the sockeye salmon on the Fraser River is very largely dependent now upon artificial propagation. The steps taken by the Dominion and Provincial Governments to this end have been very progressive, and good results are certain. The chief difficulty is that in the off seasons, it is found impossible to get enough fish in the upper waters of the Fraser and tributaries on which the hatcheries are located, from which ova can be obtained to fill the plants. In 1904, the small run of salmon was shown by the fact that but a very small percentage of the capacity of the hatcheries was filled. In a big year, such as last (the present year shows a decided falling off), there is no trouble to more than fill the hatcheries. The three "lean" years form the problem for the fisheries authorities in operating or even extending the number of their hatcheries.

In the process of securing the salmon ova for the hatcheries, it is the practice to form "pounds" on the streams where the fish go to spawn. These are held till the females are "ripe," that is, ready to discharge the eggs. The operators secure the females from the pound, and by a pressure of thumb and fore-finger strip the ova rapidly. At the same time another operator takes the eggs in a vessel, and places them in water, where the milt from a male is stripped over them. Afterwards the ova, thus fertilized, are taken to the hatchery and placed in troughs, where every process is carefully watched, and the ova are kept under perfect condi-

tions. The young fry, when hatched, are held for a time before being liberated to run their four-year course before returning, if they ever do, to their parent stream.

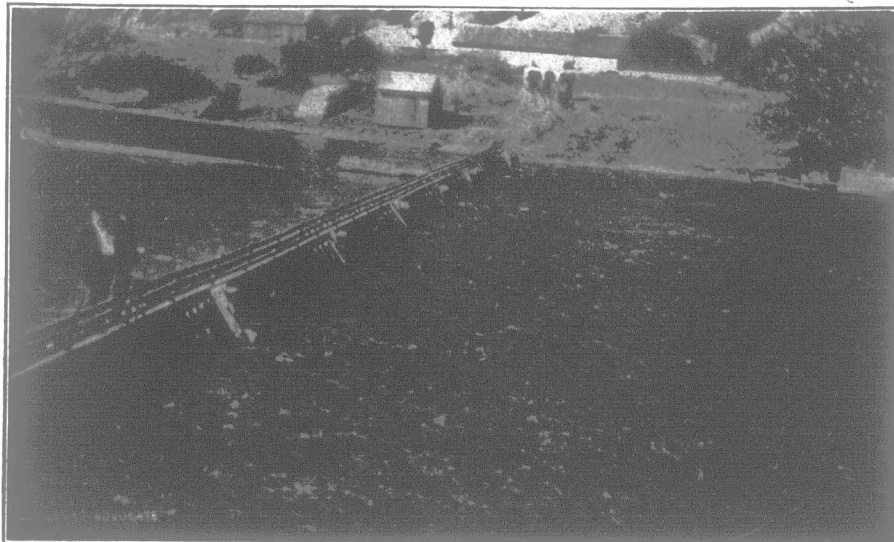
There are three Dominion Government hatcheries on the tributaries of the Fraser River, and one maintained by the Provincial Government. The Dominion hatcher-

natural conditions. That is, the ova are protected from the time they are taken from the female until the young fry, after being hatched several weeks, are allowed to attain considerable growth. Then they are taken to the head waters of the streams and set free, to take their chances there in the open waters. In these waters, however, cer-

stage of development minutely. As ova at various stages are to be seen in the hatchery at the same time, it is possible for a visitor to see all, or nearly all, the metamorphoses the ova undergo.

The trap-fishing, or securing of salmon by large pound-nets, instead of by using drift nets as done by individual fishermen, is becoming a very prominent feature of the industry. Essentials are a suitable location on the coast approaching the mouth of a river in which the fish run, preferably where shallow-tide flats exist; a large number of piles driven so that an enormous pound-net, like a "corral," can be fastened; a long line or lines of piles to which "leaders," or long nets are attached, by which the fish are turned in the direction of the opening to the pound-net. As a considerable capital is required to erect a trap, all are owned by the canneries, and, as previously stated, most of these are in U. S. waters. During the past two years, Canadian canneries have erected and operated traps on the south-western shore of Vancouver Island, not far from the city of Victoria. These have really intercepted the fish which would otherwise stand a good chance of being caught in running the gauntlet of the many American traps south of the mouth of the Fraser River, and directly in the course followed every year by the salmon seeking that stream. While traps catch all sorts and sizes of fish, it is claimed for them that they get the fish fresher and in better shape by taking them in salt water, while it is not necessary to kill them by taking them at once from the water, thus holding them till they can be at once taken to the canneries.

Last year the total pack of salmon on the Fraser River and in northern waters of British Columbia was estimated at about 1,025,000 cases. This year the pack is very light, the shortage aggregating about 400,000 cases for the entire coast fisheries. It takes an average



Fish Pound, Seton Lake Hatchery.

Every dot in the water indicates a fish.

ies are at Bon Accord, Harrison Lake and Pemberton, and the Provincial hatchery is at Seton Lake, in the Lillooet district. The combined capacity of these four hatcheries is nearly 100,000,000 fry.

An occasional visitor to the hatcheries will find many features that are novel and interesting, though the whole process is carried on under perfectly natural conditions; to be more exact, under ideally

tain pounds or limits are made and kept free from natural enemies of the young fry to give them all possible chance for their life.

The most interesting feature of salmon culture is, of course, the observance of the stages of development from the time the fertilized ova are set in the hatching troughs until the fry is produced. The transparency of the fluid surrounding each ovum makes it possible to observe each



Salmon Traps. Brailing Out a Trap.

of twelve to fifteen fish to the case, the fish being smaller when the run is large. A "single-line" cannery will handle about 18,000 fish in twenty-four hours, the average number of cases for a good day's run being 1,000 to 1,200. There are a number of "two-line" canneries—that is, with two lines of machinery—while one cannery on the Fraser has four lines.

At an average value of \$6 per case, the total worth of the canned-salmon pack of B. C. last year amounted to over \$6,000,000. In addition, there is to be considered the thousands of tons of fresh salmon and mild-cured salmon shipped every year to eastern markets, and to the Old Country.

The Ingle Nook.

A Last Budget on Ice Cream Without a Freezer.

Dear Dame Durden,—I have been a silent reader of your paper for some time, but when "A Farmer's Daughter" asked about making ice cream without a freezer, I thought I might give her some hints that would help her through her difficulty. The secret is in making the ice cream in small quantities. Fill a pint jar or quart jar with the sweetened and flavored cream, cool down by setting in water as much as you can, then set the jar in a larger dish or pail, and fill in around with ice clear to the top of the jar, making sure to add a good amount of salt to the ice. Cover the pail with some thick cloth, and set away in some cool place. Stir occasionally. This should make good ice cream. If you prefer having it cooked, be sure to cool down with water before adding the ice and salt. Would like a good recipe for tomato ketchup.

Norfolk Co., Ont. MARGOLD.

As so many raisin-pie recipes have been given, we do not insert yours. Thank you all the same. A recipe for tomato ketchup was given in "About the House" recently. Perhaps someone can supply a variation.

Ice Cream—Oil Stains.

Dear Dame Durden,—I have very often intended writing to the Ingle Nook, but have always, until now, put it aside as one of the unnecessary things. However, I feel compelled to answer "Farmer's Daughter." I frequently make ice cream, and have no freezer, only of my own construction. For the cream, boil one pint of whole milk, and, when boiling, add two well-beaten eggs, and one dessertspoon cornstarch, mixed with milk. Let it boil, then set away to cool. When ready to freeze, take two quarts new milk, stir in the thickening previously made, add flavoring and granulated sugar to taste, also a pinch of salt. Put this in a tawny pail, with a tight lid, that would hold a quart more, as it expands when frozen. For putting the ice in, I use a lard bucket or a candy pail. Break the ice small; put in ice to cover the bottom, and cover ice with salt. Set in your cream pail, and pack it around with ice and salt until you have the ice a little higher on the outside than the cream is on the inside. Turn backward and forward until frozen. It should freeze in thirty minutes.

For cream to whip, I find that the older it is the better it will whip; also it must be good thick cream, and not from a fresh milk cow, or it will very likely go into butter. May I ask a question, or have I exceeded the limit? I have a very delicate baby, and am applying cod-liver oil externally. It leaves the little all-wool vests an exceedingly nasty color, almost too ugly to use even a second time. Can anyone tell me what will take the stain out, also out of the lawn slips? I hope I have not worn out my welcome.

A BUSY MOTHER.

Huron Co., Ont.
You are very welcome. A mixture that is said to remove grease from the finest fabrics without injuring them is made as follows: One quart rain-water, 2 ounces ammonia, 1 teaspoon saltpetre, and 1 ounce shaving soap cut up fine. Put a pad of blotting paper under the spots when rubbing them with the mixture.

Many letters have been held over, but will appear in our next issue.

The Quiet Hour.

The Victory of Faith.

This is the victory that overcometh the world, even our faith.—1 St. John, 5:4.

Now, thanks be unto God, which always causeth us to triumph in Christ.—2 Cor., 2:14.

Yet there are some to whom a strength is given—

A Will, a self-constraining Energy,—
A Faith which feeds upon no earthly Hope,
Which never thinks of Victory,—but content

In its own consummation, combating
Because it ought to combat,
And conscious that to find in martyrdom
The stamp and signet of most perfect life,

Is all the science that mankind can reach,—

Rejoicing fights; and, still rejoicing, fails.
It may be that to Spirits high-toned as these

A revelation of the end of Time
Is also granted; that they feel a sense
Giving them firm assurance that the foe,
By which they must be crushed (in Death well-won

Alone to find their freedom) in his turn
Will be subdued, though not by such as they.

Evil, which is the King of Time, in Time

Cannot be overcome; but who has said
That Time shall be forever? Who can lay
The limits of Creation? Who can know
That Realm and Monarch shall not sink together

Into the deep of blest Eternity,
And Love and Peace be all the Universe?

—Houghton.

Several years ago a woman was trying, not very successfully, to face life bravely under the burden of a sudden sorrow. Gladness and courage seemed out of her reach, when she was roused by this quietly-confident message from an old friend: "Tell her," he wrote, "that I know she will exhibit the victory of faith." Just a few words, but words are mighty sometimes, and these inspired an earnest determination to be worthy of the confidence expressed—worthy then and always, God helping her.

What our life beyond the grave may be like only God knows; but, as long as we belong to the Church Militant here on earth, our business is fighting—and fighting to win. Oh, if we could only "exhibit the victory of faith" every day, and show the world that in the Cross of our King we can conquer, in great battles and in small—and it is often harder to be victorious in the monotonous warfare of the common days than in a great crisis when the soul gathers its reserve forces for battle.

It is a great mistake to fancy that those who have laid their wills and lives in complete consecration at the feet of Christ, are spiritless and down-trodden. It is a mistake, often made, that to come out boldly and glory in the title of "Christian," means to sacrifice all that makes life worth living here for the sake of future happiness. On the contrary, "godliness is profitable unto all things, having promise of the life that now is," as well as of that which is to come. Solomon says that riches and wealth, and the power to rejoice in labor, is the gift of God to a man, "because God answereth him in the joy of his heart." Christians follow in the steps of One Who goes forth "conquering and to conquer." He "always causeth us to triumph" if we continue to follow and trust Him, for the victory that overcometh the world is "Faith." The harder the fight, the more glorious will be the victory, and St. Paul glories in lighting up with the triumphant Love of Christ the darkness of tribulation, distress, persecution, famine, nakedness, peril and death. He heaps up all possible earthly troubles, piles on top of them invisible dangers from spiritual principalities and powers, and then confronts them all with his ringing defiance: "In all these things we are more than conquerors through Him that loved us!"

A Christian has no business to submit to defeat, for his Leader has proved that

the most utter failure of earthly hopes may be the greatest of victories. It is not when life is easiest that he should lift up his head most triumphantly, but when he has to fight every inch of the way, following Christ, even—if need be—to Calvary. Such warriors as St. Paul can lift the Banner of their King, even in the last hand-to-hand struggle with Death, and sing their triumphant battle-song when lesser souls would be crushed.

"Of wounds and sore defeat
I made my battle stay;
Winged sandals for my feet
I wove of my delay;
Of weariness and fear
I made my shouting spear;
Of loss, and doubt, and dread,
And swift oncoming doom,
I made a helmet for my head
And a floating plume.
From the shutting mist of death,
From the failure of the breath,
I made a battle horn to blow
Across the vale of overthrow.
O hearken, love, the battle horn!
The triumph clear, the silver scorn!
O hearken where the echoes bring,
Down the grey disastrous morn,
Laughter and rallying!"

Of course, such wringing of victory from defeat is impossible if the soldier of the Cross looks only at the visible result of his work. The disciple cannot be above his Master, and certainly if our Lord had judged only by the visible result of His life of perfect self-consecration, He could not have seen of the travail of His soul and have been "Satisfied." He beggared Himself to enrich the world with the only true riches, and yet, even now—after all these centuries of Christian influence—how terrible is the power of evil over the souls of men. To the outward eye it might almost seem as if the Great Sacrifice for sin had failed in its object. Sometimes I am awakened in the night by noisy, half-intoxicated men who make the very air shudder with their awful blasphemy. And yet God does not give up the battle with sin, but works steadily on in the patient steadfastness of His infinite Love. Why should we despair when He does not? Man may well be the link between the lower creation and the Creator, for his nature seems capable of sinking to infinite depths of wickedness or rising to infinite heights of holiness. If the heart sickens with almost hopeless discouragement in looking at the one type, the other inspires us with fresh hope and courage—for beauty of soul is possible for us too. We gain unspeakably from friendship with those who, as Moberly says, "are exceptionally and conspicuously beautiful; who most fully know and sun themselves in the blessedness of union with God; souls that glorify life, glad of heart and of face, reflecting joy and love wheresoever they pass, manifestly irradiated with His Spirit, and eloquent not in what they say, but in what they are, to declare even to our dim thoughts the meaning of the glowing life of which St. John speaks to us—the glory of a real sacramental union with Christ. "That which we have seen and heard declare we unto you, that ye also may have fellowship with us: and truly our fellowship is with the Father, and with His Son Jesus Christ. And these things write we unto you, that your joy may be full. Blessed be God for the souls in whom He makes His beauty conspicuous!"

Indeed, we may well thank God for the beautiful lives which light up our world, because they reflect the King's own beauty. Noblest of all are those brave souls who are ready, like Abraham, to obey God's call even when it means giving up one dearer than life; imitating—I say it with reverent awe—the Eternal Father, Who freely offered up His only beloved Son. And there is a present joy in a costly sacrifice, quite apart from the fact that our Lord has His own mysterious way of fulfilling secretly and spiritually—yet very really—His own promise: "Every one that hath forsaken houses or brethren, or sisters, or father, or mother, or wife, or children, or lands, for My Name's sake, shall receive an hundredfold, and shall inherit everlasting life."

The outside world may fancy that this promise has not been kept, for the Master loves to have glad secrets with the souls that are set on overcoming. He gives, even in this life, a "white-stone,"

a shining jewel, with its mysterious inscription, which cannot be read by anyone save the recipient and the Giver.

And we can also rejoice, really rejoice in the splendid victory of faith, if our beloved has passed out of our sight into God's own dearer keeping. If we keep our hold on Christ, then death can only bring those who are gazing into His unveiled face nearer, ever nearer to us. Though the physical parting is terribly hard to bear sometimes, yet the real union and fellowship of soul with soul can go on triumphantly to its infinite perfecting. These who have opened wide the door to admit Christ as their most honored Guest soon find that He has reversed the position and is entertaining them as His guests. And His best things never are given first; as in the marriage at Cana, the best wine is kept until the last; the light-hearted happiness of youth may change in character, but it burns with a steadily increasing and more radiant glow right on through life. "The best is yet to be" always, though even now the servants of the Most High God "rejoice in their beds" with an unspeakable joy which only He who made the heart can fully enter into. There is the evening gladness of throwing down the cares of the day, leaving them entirely in God's keeping, and refusing to be troubled about them—a gladness like that of a tired child nestling into its father's arms. Then there is the gladness of prayerful communion with those we love, a heart-fellowship which makes the night-watches unutterably holy. And there is the morning joy of waking to a new, glad day of active service. Or, if that be denied, the body can—as has been beautifully said—"lie back on God, and be pressed into His Life," linking Him with man in a new connection. For the Incarnation is an ever-fresh, ever-growing Reality, and Christ is still being "formed" in virgin souls, and in bodies which are temples of the Holy Ghost.—Gal., 4:19.

God allows us to help in the salvation of the world from sin—we are called to the high privilege of being fellow-workers with Him—but it is well to remember that the Great Sacrifice was finished, not in active energy, but in the harder energy of patient suffering, not in magnificent popularity, but in silent loneliness and shameful neglect. Those who are shut-in by the Great Physician are often helping the world most of all—and He never makes a mistake in His treatment of any soul or body.

Those who are living victoriously, find that already "that day" described by the prophet Zechariah has arrived for them, that day when the commonest utensils used in the household "shall be holiness to the LORD of Hosts," fit to be used for sacrifice—holy as the carpenter's bench in Nazareth or the manger in Bethlehem. Yes, it is a glorious thing to be living in God's world, and to have the privilege of serving Him triumphantly TO-DAY.

"Listen to the Exhortation of the Dawn! Look to this Day!
For it is Life, the very Life of Life.
In its brief course lie all the
Varieties and Realities of your Existence.

The bliss of growth—
The Glory of Action,
The Splendor of Beauty:
For Yesterday is but a Dream
And To-morrow is only a Vision.
But To-day well lived makes
Every Yesterday a Dream of Happiness,
And every To-morrow a Vision of Hope.
Look well, therefore, to the Day!
Such is the Salutation of the Dawn."
HOPE.

"As for the death of the body, it is like the fall of the leaf in autumn, part of nature's preparation for a spring to come. Like the activities of life, it becomes intelligible and endurable in the light of its bearing upon the collective welfare of the species. Is it, then, a worthy thing to stain it with grief and terror?"—[Meredith.]

A Knowledge of the Abstract—"What is an abstract noun, Nellie?" asked the teacher of a bright little girl. "Don't know!" was the answer. "Well, it's the name of something you can think of, but can't touch. Now can you give an example?" "A red-hot poker."

With the Flowers.

Plant Your Bulbs and Peonies in September.

Considering the beauty and the comparative ease with which "bulbs" may be grown, it is little wonder that, each year, their popularity increases. There is a waxiness of texture about these bulb flowers, a peculiarity of perfume found, perhaps, in no other kinds of plants. Add to this that, if well chosen, they enliven the garden from the passing of the snow until the end of May, and that the remarkable rapidity with which they send up their fresh green spike-like leafage invests them with a never-failing interest, and it may be readily understood why a bulb-grower once is a bulb-grower always.

For Canadian gardens, a list comprising Snowdrops, Scillas, Crocuses, Hyacinths, Narcissus, Daffodils, Star of Bethlehem, and a few of the lilies will probably be found quite satisfactory. To these may be added Peonies, Iris, and Dicentras, not bulbous-rooted, but requiring practically the same care. All of these should be planted during the latter part of September or early in October; otherwise there will not be time for the necessary root-growth to develop.

As a general rule, the soil for bulb-beds should be a rich, well-drained loam, loosened, if at all stiff, with a little sand. Fresh manure should never be added, as, if it comes into contact with the bulbs, it is almost sure to cause rot or disease. In order to secure the necessary richness, one of two plans may be adopted: (1) The beds may be made in spring, thoroughly incorporated with fresh manure, then left standing all summer in order to be ready for the insertion of the bulbs in the fall. (2) Very old, black barnyard muck may be used, with, perhaps, a dressing of good leaf mould. If absolutely necessary that manure, even well-rotted, be added immediately before planting, a handful of sand should be placed under each bulb.

The beds should invariably be well drained, and should be thoroughly dug up to a depth of from 1 to 2 feet, depending on the kind of bulbs to be planted.

As regards planting, the following table may be of use:

Plant	2 inches deep and 2 to 3 inches apart.	3 inches deep and 3 to 4 inches apart.	4 inches deep and 4 to 5 inches apart.	5 inches deep and 5 to 6 inches apart.	6 inches deep and 6 to 8 inches apart.
Snowdrops	3	4	5	6	8
Scillas	4	5	6	8	10
Crocus	2 to 3	3 to 4	4 to 5	5 to 6	6 to 8
Tulips	4 to 6	5 to 7	6 to 8	8 to 10	10 to 12
Hyacinth (grape)	1 to 3	2 to 4	3 to 5	4 to 6	5 to 7
Hyacinth (larger)	3 to 5	4 to 6	5 to 7	6 to 8	8 to 10
Daffodils and Narcissus	3 to 4	4 to 5	5 to 6	6 to 8	8 to 10
Iris	2 to 4	3 to 5	4 to 6	5 to 7	6 to 8
Star of Bethlehem	3	4	5	6	8
Peony	4	5	6	8	10
Lilium Candidum	4	5	6	8	10
Canada Lily	4	5	6	8	10
Lilium Rubrum	6 to 8	8 to 10	10 to 12	12 to 14	14 to 16

When setting out the bulbs, it should be remembered that they are most effective in masses, each variety by itself. Much of their beauty is lost if they are set out in straight rows, or mixed. They do very well, however, in the perennial border if planted in small clumps, care being taken that the colors do not clash. For the latter reason, it is wiser to buy bulbs in separate packages—a specified color in each—rather than to

trust to the indiscriminate "mixtures," which are cheaper, but likely to be much less satisfactory, both as regards quality and the possibilities of arrangement.

After the first nip of frost, a mulch of straw, leaves or strawy manure should be put over the bulbs, to prevent both further inroads of the cold and upheaval during winter thaws or in the successive freezing and thawing weather of March. As the warm weather of spring advances, the mulch should be gradually removed. Crocuses are, however, very hardy, and may be planted in clumps over the lawn, where the snow will form an efficient enough protector. To plant them thus, simply make a slit in the sod, put in the bulb, and press the sod down again. Their blooming period will be over by the time it is necessary to give the grass its first cutting. Snowdrops, also, will do without a protective mulch, but should be planted in a spot which the snow leaves early. Upon the south side of a protective fence or wall, Snowdrops come in bloom as soon as the ground is bare, and for the best effect should be planted in quite large masses. Scillas look best when the two varieties, the blue and the white, are mingled irregularly. Narcissus and Daffodils should be given a partially-shaded situation.

Children's Corner.

The Letter Box.

Dear Cousin Dorothy,—I was going to write to you before this, but thought my letter would go to the W.-P. basket. I live in the country, near Bob's Lake. I have a great time, for I am trying to learn to swim. We have five horses, two colts, and two farms. One is across the lake. We have a scow that we take the horses and machinery over on. My birthday comes on the eighteenth of March. I have two miles to walk to school. I am in the Fourth Book. We have a nice teacher. I have two sisters and two brothers. We have taken "The Farmer's Advocate" about six years. I hope I have not taken up too much of your precious Corner.

MAY BYGROVE (age 13).

Althorpe P. O., Ont.

Dear Cousin Dorothy,—I have seen so many different letters in the Children's Corner, I thought I would like to become a member. I live on a farm, and would rather live in the country than in the city. I go to school, and have about half a mile to walk. I am in the Fourth Book, and take up quite a lot of studies. We have three horses; their names are Nancy, Tom, and John. We have four milking cows, and three little Hereford calves. For pets I have two little kittens; one is a pure-white one, and the other one is slate-colored. I also have a large yellow dog; he is very intelligent, and will let me harness him and hitch him up, and then he will haul me around. I call him Shepherd. Like some other members, I am a post-card collector, and would like to exchange with any of the cousins. I would also like to correspond.

Here is a riddle:
A colored waiter carried a platter of turkey; he let it fall. What harm did it do to what four nations? Ans.—Downfall of Turkey, break-up of China, overflowing of Greece, and confusion of Africa.

Well, I will close, hoping to see this in print.
CLINTON W. BENNETT.
Bennett, Que.

Dear Cousin Dorothy,—I have been silently enjoying the Children's Corner of "The Farmer's Advocate" for some time. I have been afraid to write before, for fear the letter would reach the waste-paper basket. I am ten years old, and I am in the Junior Fourth class at school. I like going to school. I have three brothers younger than I, and one sister, who is older. Some who write to the Children's Corner tell about their pets. We have a canary, and three kittens. If we put our fingers in the cage, he pecks them. We feed him bread, birdseed, gravel, lettuce and meat. We have six horses and one colt, five cows and a number of young cattle and pigs.

MYRTLE ARMSTRONG.

Harrisburg, Ont.



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as a bread or pastry maker, all depends upon the quality of the flour used. A flour with a good reputation is sure to give her good results, for a good reputation is proof of good quality. "Five Roses" Flour possesses the highest reputation of any brand on the market, and the results obtained with it are better than those obtained with ordinary brands.

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When Writing to Advertisers Please Mention Advocate

About the House.

Food and Food Economy.

[Written for "The Farmer's Advocate," by Prof. J. F. Snell, of the University of Cincinnati, formerly Expert Assistant in the Nutrition Investigations of the office of Experiment Stations, U. S. Department of Agriculture.]

"What shall I provide for my family to eat?" "Could I economize in the food supply without materially decreasing its palatability or its real sustaining powers?" Such questions must sometimes occur to every thoughtful housewife. And, in most cases, one might safely answer, "Madam, you could." The question that would naturally follow—"How?"—would, of course, be harder to answer, and could not be satisfactorily answered without a full knowledge of all the particulars of foods used—their quality and cost, size and personnel of family, and even the health and activity of the various members of the family. In other words, this question is too practical to be answered by anyone but the housekeeper herself, or by one in possession of all her knowledge.

Yet it is possible that an outsider, even one who, in the housekeeper's place, would make a sad mess of the practical questions which confront her, may be able to supply some information on the food question, which the intelligent woman can turn to practical account in the economy of the home. For, after all, how many of even the most skillful cooks know anything definite about the comparative food values of the animal and vegetable materials from which they prepare their delicacies? How many of them have really clearly-defined ideas in mind, when they speak of different foods as "digestible" or "indigestible," "rich," "sustaining," "nutritious," and so forth? How many of them in buying oysters, turnips, watermelon, or beefsteak, realize how much of their money is being paid for real nutriment, and how much for water, flavoring matter, inedible refuse (bone, gristle, peel, etc.), and edible, but indigestible, woody fibre? Are there not among them some even ready to accept the absurd statement that a banana contains as much nutriment as a pound of beefsteak, or the humorously extravagant claims of the advertisers of prepared cereals, who would fain persuade us that all the happiness of life depends upon the use of their particular products?

The science of food and nutrition is a complex one, and it is not surprising—one might even say it is inevitable—that the great majority should have very incomplete knowledge of the subject. But this science is one which so closely concerns each one of us, that a little effort is surely worth while to grasp at least the fundamental principles and to learn to appreciate the important results attained by those who have devoted much study to the intelligent application of these principles to practical problems.

Almost all of our common foods (sugar is a notable exception) are mixtures of simpler substances, and one of the first and most important duties of the food scientist is to analyze these complex foods, and thus determine how much of the different classes of these simpler constituents, which are called nutrients, each food contains. All foods (with a very few exceptions, such as sugar) contain more or less water, and small quantities of so-called mineral or inorganic substances, such as common salt (sodium chloride), the closely-allied substance, potassium chloride, and the phosphates of sodium, potassium and lime. The remainder of the food consists of so-called "organic" compounds—compounds containing the elements carbon, hydrogen and oxygen, and in many cases other elements in addition to these three.

No one will be surprised that the amount of water present in different food substances varies greatly, but to one who has not given the matter such close consideration as to look up the actual quantities, the range of this variation is, indeed, surprising. That many of our vegetables and fruits—for instance, turnips, cauliflower, strawberries and watermelon—solid as they are, actually contain more water than does milk, or a

strong brine or thick pea soup, strikes one as curious. Yet analysis shows that 100 parts of good fresh milk contains 87 parts of water; 100 parts pea soup may contain as low as 88 parts of water, and a saturated brine contains only about 75 parts of water to 25 parts of salt; on the other hand, 100 parts of cauliflower contains, when fresh, 91 parts, and, when boiled, 98 parts of water; 100 parts of fresh strawberries contains 89 parts of water; 100 parts of watermelon, 93 parts of water, and 100 parts of turnip, hard as it is, 90 parts of water before cooking, and 97 parts of water after cooking. Is it not of some importance to the housekeeper to realize how much of such foods is water and how little real nutriment they contain? As examples of drier foods, we may cite bread, with 35 parts of water per hundred; flour, with 12 parts; raisins, with 15 parts; fat salt pork, with 8 parts; cream crackers, with only 6.8 parts, and dried nuts, with less than 5 parts per hundred.

It is, of course, impossible in a brief article like the present to give the quantities of water contained in all the various foods; but, in a general way, we may say that the edible portion of green vegetables (cabbage, lettuce, cauliflower, celery, cucumber, asparagus, etc.) contains 90 per cent. or more of water; roots and tubers, from 75 to 90 per cent., sweet potatoes and common potatoes being the driest of this class; the edible portion of fresh fruits, also, 75 to 90 per cent., the driest (with the exception of olives and persimmons, which have only 66 per cent. of water) being bananas, grapes, prunes and figs; meats, excepting fat pork, 35 to 75 per cent.; fresh fish, 65 to 80 per cent.; poultry, 50 to 70 per cent.; eggs, 74 per cent.; cheese, 35 per cent.; butter, 10 per cent.; fat salt pork, 8 per cent.

A knowledge of the quantity of water in a food is of value in a sort of negative way. We want to know how much water there is in the food in order that we may subtract it from the weight of the whole food, and find out how much solid matter we are buying or using when we buy or use a certain weight of the food in question. A word should be added to call attention to the fact that the above figures refer to the edible portions of the foods named. In comparing the relative costs of different foods, it is, of course, necessary to take account of the amount of refuse matter purchased with the food—bone and gristle with the meat, peel and core with the fruit, shells with the eggs, etc. In estimating the quantity of nutrients in the food, the quantity of refuse, as well as the quantity of water, must be subtracted from the weight of the food as purchased. In the above estimates, the quantity of refuse had already been subtracted, and the specified number of parts of water mean so many parts in 100 of the remaining, that is to say of the edible, portion of the food.

As regards the refuse itself, it is evident that the quantity will vary greatly, not only in the different classes of foods, but also, particularly in the case of meats, in different portions of the same class of food. For instance, while a round roast, pickled tongue or piece of corned beef will have only 5 to 10 parts of refuse per hundred, a sirloin or porterhouse steak, or a loin roast, will have, on the average, 13 parts; a rib or a rump roast, 21 parts, and a shank, perhaps as much as 37 parts of refuse per hundred parts. Poultry and fish have relatively more refuse matter than meats. Most fruits have considerable quantities (apples, grapes and oranges, say, 25 per cent.; bananas, 35 per cent., and watermelons, 60 per cent.), while nuts have still more (25 to 75 per cent.).

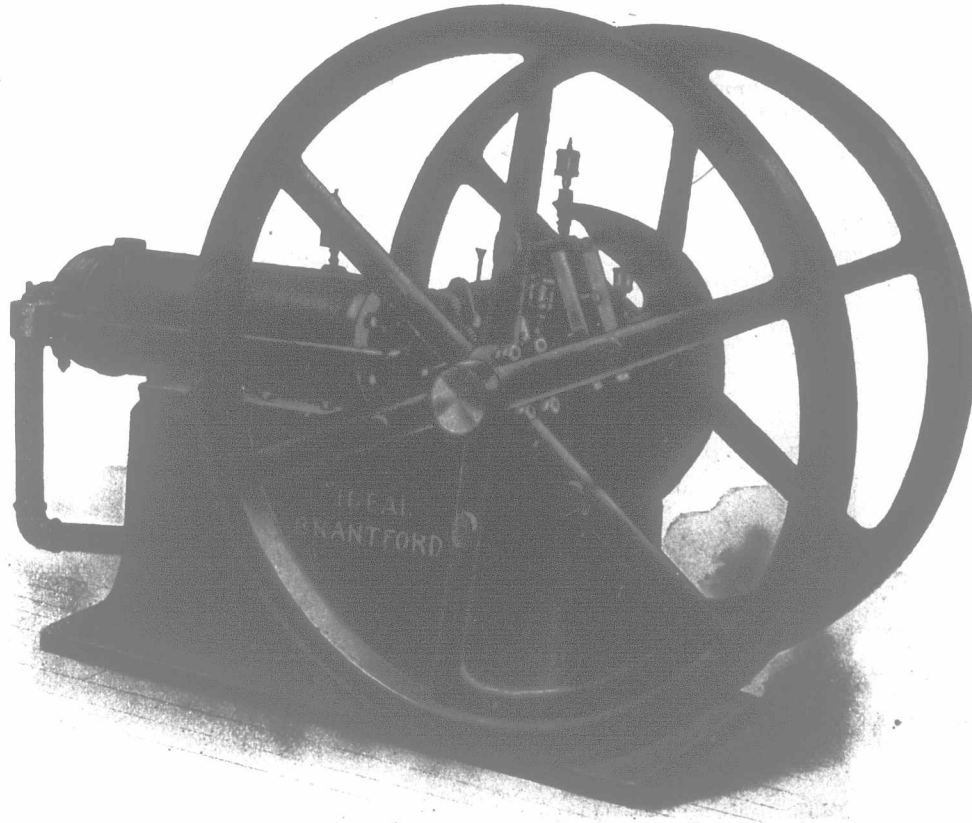
(To be continued.)

Recipes.

Ginger Snaps.—One cup butter and lard (mixed), 1 cup each sugar and molasses, $\frac{1}{2}$ cup water, 2 scant teaspoons soda, 1 teaspoon ginger, "Five Roses" flour to make into dough.

Scones.—Half a lb. "Five Roses" flour, $\frac{1}{2}$ teaspoon soda, $\frac{1}{2}$ teaspoon cream tartar, $\frac{1}{2}$ teaspoon salt, 1 teaspoon sugar. Mix into a soft paste with a knife. Do not knead, simply roll out and cut in small cakes. Bake on griddle on top of stove.

Windmills, Gas and Gasoline Engines, Grain Grinders, Etc.



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THE SPICE OF LIFE

The driver, wearing a waterproof cap, goggles, and a light dust cloak, turned the crank handle of the motor-car industriously, but without producing any effect.

He paused for breath.

The crowd made audible comments, such as "Twist it again," "Hire a horse," "Go it, Sandow!" But to these he was deaf.

Once more he hopefully seized the crank and turned it again strenuously. No result. He paused again to remove his cap and catch his breath.

An elderly gentleman, observing the action, stepped forward and dropped a coin in the upturned cap. He said, with calm appreciation:

"It's the only street organ I ever saw that wasn't a real nuisance. You deserve a copper."

In a small country church near Harrisburg not long since a little child was brought forward for baptism.

The young minister, taking the little one in his arms, spoke as follows:

"Beloved hearers, no one can foretell the future of this little child. He may grow up to be a great astronomer like Sir Isaac Newton or a great orator like Patrick Henry, and it is possible that he might become the President of the United States."

Turning to the mother, he inquired: "What is the name of the child?" "Mary Ann," was the reply.

The proprietors of a Siamese newspaper have distributed hand bills containing the following notice:

"The news of English we tell the latest. Writ in perfectly style and most earliest. Do a murder, git commit, we hear of and tell it. Do a mighty chief die, we publish it, and in borders of sombre. Staff has each one been colleged, and write like the Kipling and the Dickens. We circle every town, and extortionate not for advertisements. Buy it. Buy it. Tell each of you its greatness for good. Ready on Friday, Number first."



To Keep People Honest, Don't Give Them a Chance to Cheat. My FREE Scale Book Tells You How to Save Many a Dollar.

I want to send you my new Illustrated Scale Book which tells all about CHATHAM FARM SCALES—the best weighing machines ever made.

My book tells how Chatham Scales are made and why they are the best.

It tells about my factory and my liberal selling terms.

Your name and address on a post card mailed today, gets this book by return mail postpaid. It's FREE.

I want to send it to you because it tells many dollar saving facts you ought to know about my Scales.

Every Chatham Farm Scale is tested by an official of the Canadian Government.

He will not put his seal of approval on it unless it is perfect.

And I sell no scales without this seal.

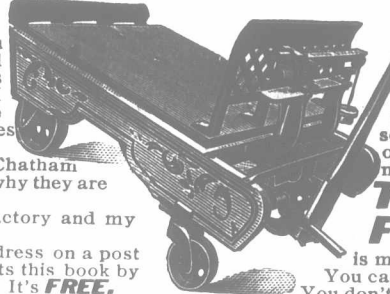
You ought to weigh everything you sell if you want to get full value for your produce.

And you ought to weigh everything you buy if you expect to get your money's worth always.

The men you sell to and buy from may be honest, but their scales may be "a little off" without anyone knowing it.

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As an advertisement we give you absolutely free a ladies' or gents' size silvered, gold-filled or gun-metal watch, guaranteed for 10 years, and keeps correct time to a second, or a sterling silver handle umbrella, silvered clock, a real diamond solid gold Government hall-marked stamped Ring, Cutlery, Leather Goods, Musical Instruments, Mechanical Toys, Blue Fox Collar, besides hundreds of other useful or fancy articles which you can select from our grand 1906 list. We give any of these articles free to any person selling 20 packets of Beautiful, Up-to-date, Artistic Pictorial Postcards at 10 cents a packet (5 magnificent 10-colored cards to a packet). Our Pictorial cards are world-renowned, and we send you every card different, no two alike. Views of dear old England, Historical Views, Latest Comics, facsimile of Death-warrant of King Charles I., England's Most Beautiful Actresses, etc., etc. It need not cost you one cent of your own money. We pay all postage and duty, and deliver cards and present free to your address. Send us at once your name and address (postage is 2 cents). Don't delay. Write immediately to ACTE & COMPANY (Dept. F. A.), 85 Fleet St., London, E. C., England.



Weigh all you sell and all you buy—on your own scales—then you will know.

In nearly every Canadian town I have a responsible agent, who sells my scales and gives you your own time to pay. I make my terms to suit your needs.

The Chatham Farm Scale

is mounted on wheels. You can haul it about like a truck. You don't have to bring things to the scale to weigh them. You can take the scale where you want to do the weighing.

When you write for my scale book, if I have no agent near you, I will tell you how you can buy my Scales direct from the factory, freight prepaid to your Railroad Station.

No one could make you a better offer than this. And by getting a Canadian scale—made by a Canadian concern—you save all customs charges.

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Learn how a CHATHAM FARM SCALE puts dollars in your pocket. Write me at once.

MANSON CAMPBELL, Pres. The Manson Campbell Co. Ltd. Dept. 50, CHATHAM, ONTARIO.

GOSSIP.

GREEN GROVE SHORTHORNS.

In the county of Grey, eight miles north-east of Markdale Station, C. P. R., lies Green Grove Stock Farm, the property of Mr. W. G. Milson, a young man of energy and courage rapidly coming to the front as one of Ontario's leading Shorthorn breeders. His herd now numbers 40 head, representing Fairy Queens, of which there are four; Village Girls, of which there are five; Urys, of which there are two; Floras, of which there are three; Clarets, of which there are four; Rose of Autumns, of which there are two, and Isabellas, of which there are two. The present stock bull is Imp. Royal Prince, Vol. 17, bred by R. C. Copland, Arlethan, Aberdeen, sired by Mystic Archer, dam Sensation, sired by Merry Mason. He is a Bessie-bred bull, that, in the hands of Harry Smith, sired a number of Toronto winners, and the young stuff he is leaving for Mr. Milson show form that develops into winners.

Among them are three or four young bulls about seven months old that are particularly well balanced, and should make rare good ones. A number of the younger females are the get of the noted stock and show bull, Abbotsford, through which he has sustained his reputation as a sire of a very high order.

The herd as a whole is among the many good ones of Ontario, the cows being large, heavy-fleshed and even, and being bred in the choicest Scotch strains makes them a very desirable class of Shorthorns to invest in. Nothing in the herd is reserved, and no fancy prices are asked either. There being a number of heifers and a few young bulls, visitors will have a big range to pick from. Mr. Milson is also breeding up a choice flock of Lincoln sheep that, in another year or two, will offer an opportunity for purchasers to get their wants supplied. Write Mr. Milson, to Goring P. O., Ont.

We are advised that the dates claimed by Capt. T. E. Robson and Mr. H. J. Davis for their Shorthorn sales have been changed to Oct. 23rd and 24th.

READ THIS, and See Why the Most Successful "SUCCESS" MANURE SPREADER is the

Most every up-to-date farmer either owns a manure spreader or is seriously thinking of purchasing one. As there are several makes of manure spreaders on the market, and each make is claimed to be the best, it's no wonder a man is doubtful which one to purchase. Now, if you only knew as much about manure spreaders as we do, it wouldn't take you long to decide on owning a "Success." No other machine is built to do the work so successfully as the "Success." First of all, the "Success" is constructed throughout of the finest grade of materials. Every part is made to bear its share of the heavy work a manure spreader is required to do. Not a weak point in the machine. Simpler in construction than any other machine, it is easier to set up, easier to operate—less parts to get out of order, too. And it is not a heavy, cumbersome machine which wears the life out of the horses. Easy on man and beast.

Rear Axle is the Foundation of a Manure Spreader.

It not only has to bear the weight of a large portion of the load, but also convey power to pulverize and distribute it. A weak axle will be a continual source of trouble—constant disarrangement of parts and breakage the result. "Success" has a cold rolled steel axle, 2½ inches in diameter, largest and strongest of any machine on the market.

Beater Driving Mechanism the Most Important Part

of any manure spreader. It is where the greatest strain comes, where the "Success" excels all others. Direct heavy chain drive used on the "Success" is free from complicated gears, pinions, levers and clutches, which are continually getting out of order and breaking. Composed of fewer parts, much stronger and much lighter draft than other machines.



Delivery of 15 "Success" Spreaders at Climax, Minn.

You really must buy the "Success" if you want the surest, quickest, most satisfactory manure spreader on the market. Write to us to-day for our Free Illustrated Catalogue and any further information you desire about manure spreaders.

PARIS PLOW COMPANY, LTD., Paris, Ont., Winnipeg, Man.

Eastern Agents: FROST & WOOD, Limited, Montreal, Quebec, St. John and Truro.

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A HEAVY-WEIGHT ROOFING.—Granite roofing weighs 140 pounds to the roll, or nearly double the weight of the ordinary three- or four-ply. It is a more permanent and substantial covering than ordinary roofing, being especially valuable for railroad and factory use, where the areas are very large and cost is an important consideration. Granite roofing is not, however, a high-priced roofing, and is easily within the reach of everybody who wants to protect a shed or farm building in a thorough manner. Its stone surface makes painting or coating entirely unnecessary. Moreover, it is easily laid, and is proof against fire. Sample will be sent free on request by postal to the makers, Eastern Granite Roofing Company, New York, Chicago, St. Louis.

A FINE TRIO OF BOOKS.—A fine trio of books which promise to be invaluable to all who live in the country, or possess small suburban gardens, has been issued by Doubleday, Page & Co., New York.

"How to Keep Bees," by Anna Botsford Comstock, is a neat little volume, written in Mrs. Comstock's well-known literary style, and packed with practical information for beekeepers. It contains 32 pages of photographic illustrations, and retails at \$1.00.

"How to Make a Vegetable Garden," by Edith Loring Fullerton, is a large volume, containing 200 illustrations. It treats very fully all subjects in connection with gardening, and retails at \$2.00 per volume.

"How to Make a Flower Garden," is a very fine manual on flowers, containing instructions, not only in regard to ordinary flower-gardening, but also in regard to shrubs, trees, water gardens, rock gardens, window gardens, etc. It contains 100 fine photographic illustrations, and is got up in Doubleday's well-known handsome style. The price is \$1.00.

GOSSIP.

Choice lambs were selling up to \$7 per cwt. in Toronto and up to \$8.40 in Chicago last week. What's the matter with the sheep-breeding industry in view of such quotations.

At the 28th annual auction sale of Shorthorns, from the herd of the Flynn Farm Co., Des Moines, Iowa, on August 16th, the 54 head sold brought an average price of \$163.70. The highest price was \$505 for the four-year-old Bates-bred cow, Kirklevington Countess, bought by Emory Cobb, Kankakee, Ill. The top price for a bull was \$355 for Lord Avon 3rd, three years old, purchased by Bartlett Hurd Company, Arizona.

Mr. Robert Miller, importer and breeder of Shorthorns and Shropshires, Stouffville, Ont., writes: "Since reporting my arrival with an importation of sheep and cattle, I have sold a great many of the sheep and some of the Shorthorns. Can still show prospective customers some splendid yearling rams, ram lambs, yearling ewes and ewe lambs in both breeds, that would strengthen almost any show flock this year. I have never had better Shropshire rams for service, and have never had as good Cotswold rams as I have now. They should go to head the best flocks in the land."

Mr. G. A. Brodie, Bethesda, Ont., writes: "Since I recently wrote you, I have made the following sales: Clydesdales—To Robert Holthy, Manchester, the three-year-old filly, Highland Lily, by the noted Prince Alexander, and out of a Sir Everard dam; also the two-year-old filly, Lady Everard, by the great breeding horse, Sir Hugo. They will match well, and as they were both bred in Scotland, no doubt will prove a good investment. To Wm. Holthy, Manchester, the four-year-old mare, Lady Lyle, a good breeder and a grand mare, and to mate her, the two-year-old filly, Lady Dalrioch, also by the great breeding horse, Sir Hugo. This team should, at maturity, weigh 3,000 lbs. To E. Holthy, Manchester, the Prince Thomas

three-year-old, Lady Yester, out of a Royal Gartly dam. This mare would have been shown at Toronto had I kept her. To Walter Leonard, Craigvale, the Royal Favorite three-year-old, Peggy Patterson, out of a Baron's Pride dam. This is also a show mare, and, no doubt, will be heard of hereafter."

ROSEBANK BERKSHIRES.

Rapidly coming to the front as one of the leading Berkshire herds in the Dominion is the Rosebank herd, the property of Mr. John Boyes, Jr., of Churchill, Simcoe Co., Ont. Mr. Boyes is a young man of more than ordinary intelligence and ambition, and what he sets out to do is done well. In this spirit he started the breeding of Berkshire hogs, purchasing as a foundation the choicest animals he could procure, and determining to do a strictly straight business. His success has been phenomenal, having shipped pigs practically all over the country, and every customer is satisfied. Lately, he shipped no less than thirty in one week, and all for breeding purposes. His present stock boar is Maple Lodge Doctor 3rd 14974, by Imp. Polgate Doctor, dam Belle of Milton 5020, by Star One (imp.). He is one of the smooth, lengthy, even kind, and a great sire, his get being very even and true to type. The brood sows show the same superior type. Rosebank Lady 10169, by Union Bank, dam by Tom Lee, is a lengthy, good kind. Rosebank Lily 4th 15654, by Willow Lodge Crown 8th, dam by Halle, is another that commands attention. Concord Madam 13839, by Imp. Stall Pitt's Winner, dam Concord Maud, by the great Perfection (imp. in dam), is a rare nice one. Another is Rosebank Queen 15000, by Willow Lodge Crown 8th, dam by Willow Lodge Ken. Still another is Rosebank Belle, by Perfection (imp. in dam), by Halle. Space forbids further individual mention, but the above is enough to show anyone at all acquainted with Berkshire lore that their breeding is not only gilt-edged, but that they are bred on prize-winning lines. Just now on hand for sale are a number of both sexes from two to three months of age—a rare nice lot. The farm is

"Success" Beater Freeing Device dispenses with the cumbersome and unsatisfactory end-board. Insures safe and easy start. Prevents any strain on the machine.

"Success" adjustable Spring Pulverizing Rake

makes manure as fine or coarse as desired. Throws out sticks, stones, etc., without injuring the machine in the slightest.

Apron Movement of "Success"

is one of its strongest features. Bottom of machine is driven back with a worm and gear. This assures a positive force feed, and apron moves free from that uncertain, jerky, destructive motion so common to some machines. This device also prevents the load from feeding back too fast in going up hill, or running away from the cylinder in going down.

"Success" Change of Feed

device is remarkably simple—one lever alone being required.

about two miles from Lefroy Station on the northern branch of the Grand Trunk. Write Mr. Boyes, to Churchill P. O., Ont.

Farmers should not fail to see the L. C. Smith litter carrier at the Toronto and other fairs. It is a great labor-saver; simple in construction, strongly built, nothing to get out of order or break, will dump the manure from stables on wagon or sleigh or in yard as desired, can also be used for conveying feed to all parts of stable. At Toronto Exhibition, it will be found on north side, and not far from the west main entrance.

QUESTIONS AND ANSWERS.

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

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Veterinary.

PTYALISM.

I have a pair of horses pasturing on ground that has never been tilled. When in the stable, they slaver very freely from their mouths. When moving, they are not so bad; but when allowed to stand, a clear fluid runs freely. There are colts in the same field, but they are not affected. There are geese in the field. Will they cause the trouble?

G. B. S.

Ans.—The geese do not cause the trouble. It is caused by something they get in the pasture, probably white clover. The colts being allowed to remain on pasture, and having no change of food, do not show the symptoms. The condition is not serious, and there is no way of checking it, except removing the cause, which, of course, consists in keeping them off the pasture where they get the ingredient that produces salivation.

V.

How Some People Get Rich

Have you ever stopped to think how much money other folks have, and how very easily they got it? Thousands of people are called "lucky," because they have big incomes. Do you know how they got rich? Pick any of these "lucky men" and in each case you will find that some years ago they learned how to make a little money do a whole lot of work, and they now enjoy the benefits.

The lucky people who have plenty of money have found how to make their money work for them, how to make their money make more money, and keep on making more money all the time.

Why don't you do the same?

There is no use expecting to get rich by placing your savings in a bank where you will get **THREE CENTS ON EVERY DOLLAR** every year. If you know of rich people you cannot point one instance where they got rich on putting the money in the bank.

Have you ever stopped to think that you could, with the money you have, build up your capital in very few years, and then be a rich man—a lucky man?

Will you let me tell you how to do it? Will you let me give you some good advice?—advice that you don't have to take unless you are satisfied that it is good advice.

It won't cost you anything to read this advertisement through. I am quite positive that you will understand my proposition. You will see how plainly money can be made if you have the right opportunity.

A Financial Opportunity

The story of the Golden Kennels and Poultry Co., Limited.

By **J. R. Cote, President and General Manager.**

I have been raising chickens and dogs all my life as a fancy. Two years ago I saw the opportunity for establishing a large plant, and I gave the whole of my time to the business, giving up every other business.

During the first season, with \$1,000 spent in advertising, I sold enough chickens, dogs and eggs for hatching to clear \$16,500 in 8 months, and all this done by turning over the money made out of the business. It proved that I struck it right in time.

POULTRY.—No person who is at all well informed will dispute the claim that the poultry business in both Canada and the United States is the most important industry. As a matter of fact, it is the most important, not only in this, but in every other civilized country, for poultry and eggs are much esteemed the world around as a highly nutritious food. The entire industry rests solidly on the actual value of poultry and eggs as food, and will endure as such as long as mankind exists.

The raising of chickens for breeding purposes and the selling of eggs for hatching is one of the branches, deriving from the unlimited demand for high-class poultry. You see small breeders of high-class poultry all over the country, and if you talk with them you will soon find out that they make money.

From the start I took a unique method of selling. I am dealing with farmers, who are the best class to sell to. Farmers have money in the fall after they have sold their crops, but at other times, principally in the spring, many a farmer would go without pure-bred eggs unless he could buy them from me **ON A YEAR'S TIME.** I build up my business by selling everything I raise on a year's time, settled by a lien note.

Farmers are used to buying on time. They buy plows, harvesters, hay loaders, and, in fact, everything on credit. Why not

sell them eggs, chickens and dogs on credit?

ABOUT PROFITS.—We sell our eggs for hatching at 20 cents a piece. We can point out several large egg plants who are paying 10% on their investment who do not get 20c. a dozen (not a piece) all the year around. So if there is money to sell eggs at 20c. a dozen, there ought to be quite a large profit by selling our eggs at **TWENTY CENTS FOR EACH AND EVERY EGG SHIPPED.**

This spring we shipped over \$21,000 worth of eggs. We could have shipped three times as much, because we refused more orders than we filled, but we could not supply any more than 106,000 eggs for hatching.

There is good money if you sell chickens at 40 cents a piece. Many farmers don't get more than 25c. a piece for young birds. We sell all we can raise at \$3.00 for pullets and \$5.00 for male birds, and we get sometimes very big prices for one single bird.

We have on walk with farmers over **ONE HUNDRED COLLIE BITCHES.** Those are all good pedigree and registered bitches. As a rule a bitch will raise on an average 6 pups a year. Some will raise 9, but we want to put it down at an honest estimate, which is rather lower than the average. It costs \$5.00 to raise a pup until he is fit to ship. We sell some pups for \$10, some \$25, some \$50, and even get \$250 for a dog, but, as a rule, we will average \$25.00 on the total shipments. You can see the margin of profits left.

As to demand, the orders are always coming in faster than I can fill them, and that is the reason why I want to increase my capital by selling some of my treasury shares.

I honestly believe that, if I can secure the cash capital necessary to keep the stock and increase our plant, I can sell 500,000 eggs for hatching next spring, and on that item alone, not counting the chicks and the dogs, we would clear \$75,000, which is only 15c. each egg; I leave 5c. for cost of production, advertising and losses. This gives you an idea of the possibility for making money.

My Plant—I have the largest plant of its kind in the world. The plant can be seen. The farm is 2 miles east of the City of Chatham. Forty buildings, with a flooring space of 25,000 square feet, costing \$16,000, can turn out 25,000 chicks, 500,000 eggs, and 2,500 collie pups, and with that output, the profits paid to our shareholders would satisfy anybody, even those that always expect to get what is nearly impossible to get.

My Company—My company is incorporated with a capital of \$100,000, divided into 20,000 shares, of \$5.00 at par. I sold my plant, stock, notes, good will for \$35,000, and have sold so far about \$10,000 worth of shares amongst my customers and friends, and I have about 600 shareholders living all over Canada and the States. I thus have for sale 11,000 shares, at \$5.00 at par, which will bring in \$55,000, sufficient amount to carry us and enable us to double our money in a very short time.

My Offer to You To-day—I will sell you one, two, five, ten or 100 shares, or more if you want them, at \$5.00 a share at par.

I should not be a bit surprised if those shares paid dividends as high as 100% in the not far distant future; consequently, a few dollars invested now in my Company will enable you in the near future to draw a regular income from the large profits of the Company as they are earned.

I can truthfully say to you that you have an opportunity to become interested in the largest

plant of its kind in the world, which is a monopoly; and, remember, that it is by no means an experiment, as the business has been successfully worked up from a little breeding stock, for pastime and pleasure, into the largest in the world, and this has been worked out of the profits made in the business only.

It may be a new proposition altogether, but study my offer. Just figure that if I was able to clear \$16,500 in eight months out of a small stock, and with limited means and little advertising, just think of the immense profits this company will pay its shareholders, once its business will be established all over the world.

Do you know why I want to sell the balance of the shares? I want to have enough money to sell and keep my customers' notes in our safe. I don't intend to pay any bank 6% interest on some poor fellow who puts his money there and gets **THREE CENTS EVERY YEAR.** I want to have enough money to buy all the stock that we will need to fill orders, if we cannot produce enough to fill orders. I am like every other man, ambitious, working hard to make money, and anxious to have the largest success possible, and I know that as soon as you will become interested in my company, I know you will like it, and I know that you will also like to get the fat dividends we will pay yearly.

ALL YOU HAVE TO DO is to fill the blank for as many shares as you want to buy, and to send same to my address at once with your remittance, either by check, money order, registered letter or bank draft.

J. R. Cote, Chatham, Ontario, Canada:

I hereby apply for and agree to take and subscribe for..... shares of the par value of FIVE DOLLARS of the capital stock of THE GOLDEN KENNELS AND POULTRY COMPANY, LIMITED. I hereby enclose the sum of..... Dollars, being payment of Five Dollars per share on the above shares. Send me a receipt, and also a stock certificate, as soon as the stock will be allotted to me, to the following address:

NAME

ADDRESS

Now, don't delay; don't put this off. Better sit down right now and think the matter over. Study my proposition for all she is worth. If there is some especial information you want to know about, write me, I will be glad to hear from you and reply to your inquiries. I have no high-toned circulars or pamphlets to send, because I have such a good proposition to make that I prefer to make it and let you decide on the merits of my offer, which is really a financial opportunity for everybody who has a few dollars and desires to make his money work for him. Address all letters to

J. R. COTE, CHATHAM, ONTARIO, CANADA.



Essentials of good bread are just three--common sense, a good oven and Purity Flour. Produced entirely from the choicest Western Canada Hard Wheat. That's why Purity Flour makes most delicious bread with least trouble.



Sold Everywhere in The Great Dominion

WESTERN CANADA FLOUR MILLS CO., Limited
Mills at Winnipeg, Goderich and Brandon

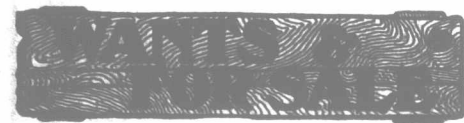
GOSSIP.

The management of the International Live-stock Exposition, to be held this year at Chicago, Dec. 1st to 8th, have secured the services of the noted breeder of Herefords, Mr. Arthur P. Turner, of The Leen, Pembridge, Herefordshire, England, as judge of grade and cross-bred bullocks, and the awarding of the bullock championship.

The dispersion sale of the Aberdeen-Angus herd of C. H. Gardner, of Galesbury, Illinois, on August 14th, was a successful event, the 55 head sold averaging \$200.80. The 13 bulls made an average of \$317.75; the top price, \$2,000, being realized for the three-year-old, Vala's Rosegay, bred by Mr. Gardner, and purchased by F. L. Sullivan, Afton, Iowa. The highest price for a female, \$615, was paid for Imp. Equality of Heatherton by M. R. & S. E. Lantz, Garlock, Ill.

ANNANDALE HOLSTEINS.

No man in the pure-bred cattle breeding business in Canada is better or more favorably known throughout the length and breadth of this continent than Mr. Geo. Rice, of Tillsonburg, Ont. Twenty years ago he established what is now one of the most noted herds of Holstein cattle in America. At present, owing to the unprecedented demand for Annandale-bred Holsteins, the herd is considerably reduced in numbers, there being only about 26 milking cows, but among them are such gilt-edged producers as the famous Calamity Jane, with her seven-day record of 25 lbs. butter; a daughter, Calamity Jane 2nd, with a record of 19 lbs.; another daughter, Calamity Jane's Pauline, with a three-year-old record of 17 lbs. 5 ozs.; Canary Starlight, 21 lbs. at four years; a daughter of hers with a four-year-old record of 20 lbs.; Rosaline Hacker, four-year-old record of 431 lbs. milk, 18 lbs. butter; Collette Rhea, 441 lbs. milk, 19 lbs. butter; Daisy Texal, three-year-old record of 18 lbs.; Corinne Albino De Kol, two-year-old record of 208 lbs. milk, and 13 lbs. butter; Lady Alice of Avondale, 18 lbs. butter, and thus we might go on. The milk of nearly all these cows showed by official test from 4 to 4.2 per cent. of butter-fat. There are about 12 young bulls coming on, nearly all of them the produce of the above cows, and about 20 one- and two-year-old heifers, the two-year-olds being all in calf. The stock bull is Prince Posch Calamity, sired by Sir Pieterje Posch, whose dam, Alta Posch, at two years and eleven months gave 566.2 lbs. milk in a week that tested 3.7, and made 27 lbs. 1 oz. butter, and whose grandam, Aaltje Posch, at ten years, made a record of 23 lbs. 6 ozs. in seven days. His dam is Calamity Jane, whose public performances are too well known to need any comment here. Her sire, Nigger, was out of Hilton Maid 2nd, who, at nine years old, gave 73 lbs. of milk a day, and her dam, Imp. Kate Edge, in eight years, produced eight calves, and over 100,000 lbs. of milk. It will thus be seen that this great bull's dam and sire's dam have official records averaging over 26 lbs. of butter in seven days. His predecessor was Brookbank Butter Boy, whose dam and sire's dam have official records of 22 lbs. butter in seven days. The yearly milk production of this herd, as the official records show, is from 12,000 to 18,000 lbs. per cow, that net Mr. Rice in cash over \$200 per month. Three years ago, when Mr. Rice took over the Tillson farm, many of his friends predicted failure, but the following figures show how far they were astray: Last year his milk brought him \$2,400; hogs, \$1,500; pure-bred cattle, \$4,000, besides sundries, as potatoes (of which he grows a large quantity), strawberries, apples, etc. This year, the crops are away above the average. The 40 acres of corn is certainly a wonder, presenting a phenomenal growth, while the grain and root crops are a pleasure to look on. Mr. Rice makes a large profit out of his hogs, having on hand at the time of our visit about 200 Yorkshire grades, all running in paddocks on which is sown rape. As soon as one crop is eaten down, the hogs are changed to another, and in a few days a new growth shoots out, and is again ready for pasturage, which struck us as being an idea in hog-raising quite original, and a very profitable one too.



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

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

ALBERTA FARMS. Regular snaps. Prices right. Terms easy. Write to-day. Hulbert & Foster, Strathcona, Alberta.

FOR bargains in Alberta lands, write Featherstonhaugh & Tobin, Leduc.

FARM lands from \$5 to \$15 an acre. C. E. A. Simonds, Leduc, Alta.

GENUINE bargains, Alberta lands. Write, and call when you come. Austin M. Fuller & Co., Strathcona.

HERDSMAN wishes position. Nine years experience with pure-bred dairy herds. Good milker. Herdsman, care of Advocate, London.

IDEAL wheat lands in Sunny Southern Alberta. Write before buying. Call when you come. Geo. C. Millar, Tabor, Alberta.

IMPROVED farms for sale in the Edmonton district. Candy & Co., Edmonton, Alta.

ONE hundred acres for sale. Tenth concession, King Township. All cleared. Condition, buildings, fences, good. Particulars. J. Hunter, Holly Park.

SCOTCHMAN—42, married, family of five, desirable situation. Practical farmer, life-experience of stock-raising; steady and trustworthy; house required, near school preferred; state particulars and privileges. James Brodie, Byron, Ont.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

BLACK Minorca and Banded Plymouth Rock cockerels and pullets for sale. Black Minorcas, nearly all sired by champion 1st St. Louis cock, and out of grand prizewinning hens, and great winter layers, \$2 up. Banded Rocks, pure Satham strain, \$1 up. T. A. Faulds, 11 Victor St., South London, Ontario.

COCK—Single comb White Leghorn cockerels and hens, bred for heavy laying, \$1 each, if taken at once. Address: Jas. L. McCormack, Hamilton, Ont.

BANDS, MARKERS & BOOKS
All bands for Poultry, Pigeons, Rabbits, Cattle, Sheep & Hogs.
PRINTING AND CUTS
We print all Farm and Home notices and cut them in any shape and size. Monarchs and other notices printed.



More Money for Your Grain
If You use my Chatham Fanning Mill
Pay Me as It Saves For You

You can get a Chatham Fanning Mill and pay for it as it saves for you. I sell on liberal long time terms to all responsible parties. You can get first price for your grain if you clean it with a CHATHAM FANNING MILL. It will weigh more to the bushel. A CHATHAM FANNING MILL takes Cockle and Oats out of Wheat, or any one kind of grain from another. It takes all chaff, weed seed and withered kernels out of seed-grain. You don't get "mixed crops" nor "sow weeds" if you clean your seed with a CHATHAM FANNING MILL. It will save you money and become a source of profit, for you can sell seed grain to others instead of buying it yourself. A CHATHAM FANNING MILL will clean Barley, Wheat, Oats, Timothy, Clover, Millet, Flax, Peas, Beans, Grass Seed, Alsike, Blue Grass, Red Top, Buckwheat, and everything of this kind.



Address all mail to
MANSON CAMPBELL CO., Ltd.
Dept. 5B, Chatham, Ontario.

SASKATOON
AND SASKATCHEWAN.

Free from Stone, Scrub or Alkaline

CHOICE PRAIRIE LANDS

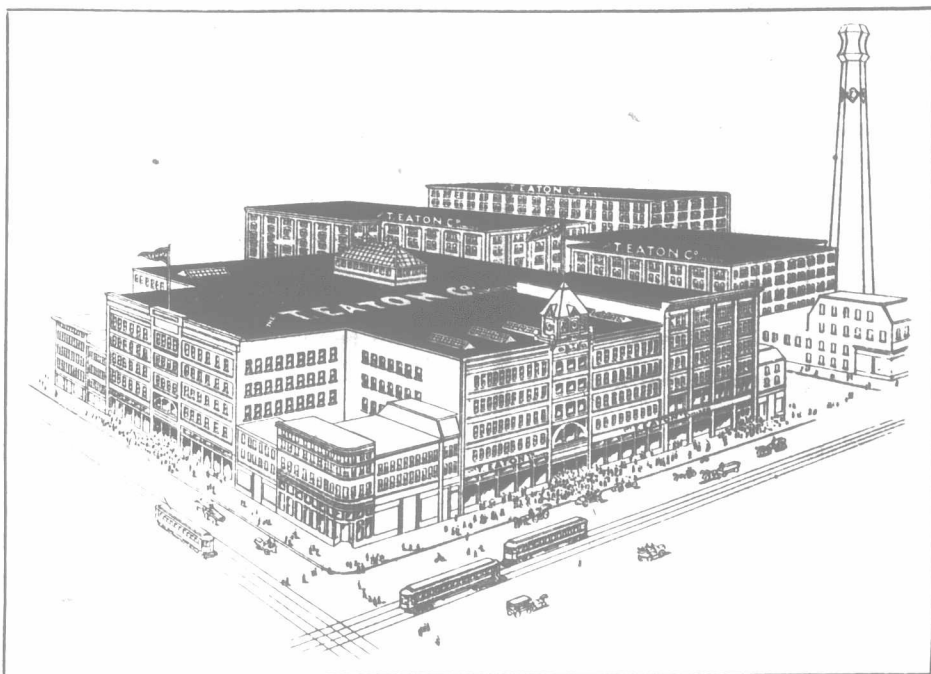
Close to Town and Railroad

CROP PAYMENTS ON EASY TERMS.

J.C. Drinkle & Company
SASKATOON, SASK., CANADA.

Canada's Greatest Store

Cash and One Price to All



Satisfaction Guaranteed or Money Refunded

MAIL ORDERS FILLED PROMPTLY

You need not visit this great store in order to take advantage of the many opportunities to buy all your personal needs and household necessities. By

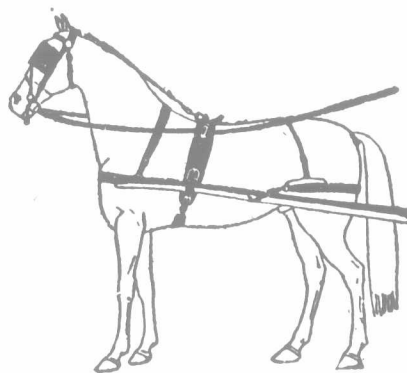
Buying Through Our Mail-order Department

you can enjoy all the privileges that visitors to the store obtain. The goods we sell are exactly the same, at the same price, as offered over our counters. Our Catalogue describes and illustrates many of these lines. We will send you a copy if you desire it. Write to-day for it.

Special Single Buggy Harness.

No. A 105. This is our Special Single Buggy Harness, and is made up from No. 1 stock. The best and cheapest harness on the market to-day, and at this low price we fully guarantee it.

Best harness ever offered for the money. Description.—Bridle— $\frac{3}{4}$ -inch box loops, scrolled blinds, chain front, neat nickel rosettes, over-check. Lines $\frac{3}{4}$ x 1 inch, all back or half russet. Breast collar—Wide single strap, well curved out and felt lined, with single-strap neck strap. Traces— $1\frac{1}{2}$ -inch, sewn to breast collar, doubled and stitched at ends. Saddle—Swinging bearer style, 3-inch tree, full padded patent leather skirts, leather lined, 1-inch sewn bearers. Shaft tugs—1-inch, with billet, box loops. Bally bands—Single strap, $1\frac{1}{4}$ -inch inside, 1-inch outside, with keepers to slide. Breeching— $1\frac{1}{2}$ -inch body, side straps $\frac{3}{4}$ -inch, hip strap, $\frac{3}{4}$ -inch crupper, flaxseed stuffed. Mountings—Nickel on composition or imitation rubber. Price, **\$12.00.**

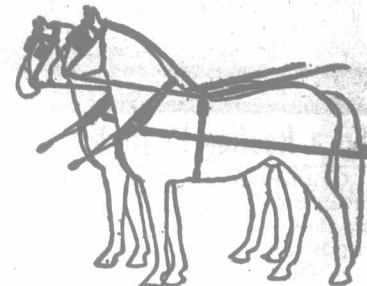


Our No. 36—Light Double Driving Harness.

Be Sure to Send Size of Collars—No. 105 1-2.

A very stylish little harness at a very low price.

Bridle.— $\frac{3}{4}$ -inch box loop checks, neat patent leather blinds, over-check, chain fronts, neat rosettes. Collar and Hames—Half patent collars, full nickel hames, $1\frac{1}{4}$ -inch box looped hame tugs. Traces— $1\frac{1}{4}$ -inch double and stitched. Pads—Light with neat housings, scalloped back strap with flaxseed stuffed crupper. Lines—All black or half russet, good length. Pole straps— $1\frac{1}{4}$ -inch, with $\frac{3}{4}$ -inch martingales combined. Mountings—Nickel on composition or imitation rubber. Price, **\$27.00.**



Mountings—Genuine rubber, **\$32.00.**

TORONTO

THE **T. EATON CO., LIMITED**

CANADA.

GOSSIP.

Seed wheat of tested and approved varieties is advertised for sale by the old and reliable house of John A. Bruce & Co., Hamilton, Ont., also rye, timothy, hairy vetch and crimson clover.

Henry Arkell & Son, Arkell, Ont., write: "We have just received from England our annual importation of Oxford Down sheep, through the agency of our own commissioner, Jno. Milton, of Marshall, Mich. Mr. Milton secured for us two extra fine yearling ewes, one being a Royal winner, bred by Mr. Harlick. In yearling rams, we obtained two from the famous flock of Mr. R. S. Hobbes. These rams, competent judges are of the unanimous opinion, are about the best that have been imported into Canada for some years. Five of our lambs, im-

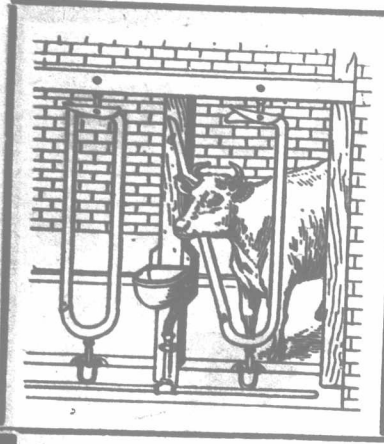
ported by Milton, were bred by Mr. Treweeke, and they are possessed of admirable quality. We also have purchased from Robert Miller, Stouffville, three of the Royal-winning lambs—one ram and two ewe lambs. These were bred by Mr. Geo. Adams, winning the first premium wherever exhibited in England, and they have the unique feature of not only being excellent in quality, but also being remarkably large for their age.

GREENWOOD HOLSTEINS.

Fifty head of large, model-typed, heavy-producing Holsteins make up the Greenwood herd, the property of Mr. David Jones, whose model dairy farm, "Greenwood," lies about three miles from Caledonia, G. T. R., and about 15 miles south-west of Hamilton. This splendid

herd is headed by the richly-bred bull, Count of Maple Hill 2243, bred by G. W. Clemons, St. George, sired by Count Mink Mercedes, a bull that won first prize at Toronto four years in succession, dam Kaatje De Boor 3rd 1822, whose three-year-old record is 10.33 lbs. of butter-fat in seven days, and her four-year-old record is 347.25 lbs. milk and 13.19 lbs. butter-fat in seven days. Her full sister, Kaatje De Boor 2nd, five years old, has a record of 445.2 lbs. milk, and 19.32 lbs. butter-fat in seven days. Her grandam, Kaatje De Boor (imp.), at fourteen years of age, milked 63 lbs. a day, that tested 3.08 on grass alone. None of the females at present in the herd have been tested, but a number of them have given from 60 to 65 and 70 lbs. of milk a day, and others, sold to parties that afterwards got them off-

cially tested, took a high standing in the Advanced Registry, all of which goes to show that this herd, as rich producers, stands second to very few in the country. At present for sale are five young bulls and a number of two- and three-year-old heifers, among which are prize-winners and those capable of making things interesting in any company. Mr. Jones is also somewhat extensively engaged in breeding Yorkshires. At present there are about a dozen brood sows, the bulk of them of Oak Lodge breeding and an ideal-typed lot. The stock boar was bred by D. C. Flatt, from imported stock, and is hard to fault. Indeed, parties wanting Yorkshires would do well to correspond with Mr. Jones, as there are a large number of both sexes to select from, and he is absolutely reliable. Address, Caledonia P. O., Ont.



MODERN STABLE FITTINGS

Indorsed by Leading Stockmen Throughout the Dominion.

RUSH'S ROTARY U BAR STEEL STANCHION is without a doubt the best cow tie in the world.

Cheaper to install, and gives cows greater freedom than chains. No partitions necessary, therefore the stable is light and airy, consequently more healthful.

OUR GALVANIZED STEEL WATER BOWL, fitted with brass valve, has no equal for strength, durability and general utility.

The water supply is regulated automatically, so that there is a constant supply of fresh water of even temperature before the animals.

They are easily and cheaply installed, and they will increase returns from your stock fully fifteen to twenty per cent.

BEATH'S FEED AND LITTER CARRIER enjoys the reputation of being the best.

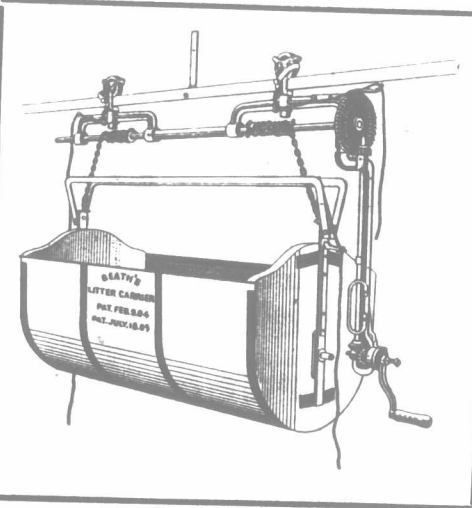
This Carrier has solved the problem of removing the manure from your stable at a minimum of expense.

A boy 8 to 10 years old will do as much with our Litter Carrier as two men can do with wheelbarrows. The load can be dumped on wagon or spreader and drawn to the field at once. This saves one handling.

Our Catalogue No. 16 tells all about our complete line of Stable Fittings. Write for it now.

The METAL SHINGLE & SIDING CO., Limited

Preston, Ont.



Granite ROOFING

Judge a Roofing By Its Weight

The durability of a roofing depends on the amount of good stuff that is put into it. Granite Roofing contains more material to the square yard than any other roofing on the market, its weight per roll being nearly double that of the ordinary three-ply roofing. Its top surface is stone, thoroughly embedded into its composition. This makes it unnecessary to use paint or coating to protect the top surface, and saves the annual expense for maintenance, which is so big an item with most roofs. Any one lay it.

Granite Roofing is so heavy, so strong and so reliable, that it is used for large permanent buildings, as well as for light sheds and farm structures.

Let us send you a Free Sample and demonstrate how different Granite Roofing is from the other kinds.

Eastern Granite Roofing Co., New York Chicago St. Louis

For Sale by RUFUS R. GAGE, Hamilton, Ont.

You Can't Cut Out

A BOG SPAVIN or THOROUGHPIN, but

ABSORBINE

will clean them off, and you work the horse same time. Does not blister or remove the hair. Will tell you more if you write. \$2.00 per bottle, delivered. Book 4-C free.

ABSORBINE, JR., for mankind, \$1.00 bottle. Cures Varicose Veins, Varicocoele, Hydrocele, Ruptured Muscles or Ligaments, Enlarged Glands, Allays Pain. Genuine mfd. only by

W. F. YOUNG, P. D. F., 46 Monmouth Street, Springfield, Mass.
Canadian Agents: LYMAN, SONS & CO., Montreal, Que.

GOSSIP.

SALE DATES CLAIMED.

Sept. 7th.—J. A. Cochrane, Compton, Que., at Sherbrooke, Shorthorns.

October 10th.—T. H. Medcraft & Sons, Sparta, Ont., Shorthorns and Shropshires.

October 12th.—Scottish Shorthorns, at Inverness, Macdonald, Fraser & Co., Perth.

October 19th.—J. R. Johnson, Springfield, Ont., imported Clydesdale fillies.

October 22nd.—Capt. T. E. Rolson, Ilderton, Shorthorns.

October 23rd.—H. J. Davis, Woodstock, Shorthorns.

Jan. 9th, 1907.—W. C. Edwards & Co., Rockland, Ont., annual sale, Shorthorns.

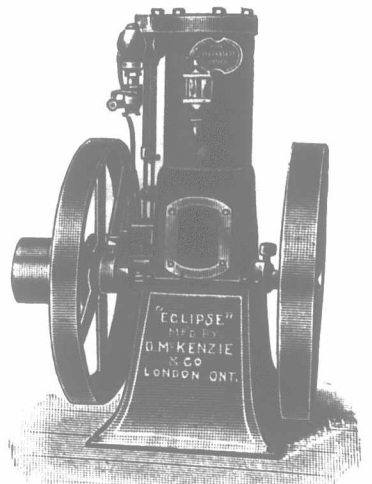
The auction sale of Jersey cattle, advertised by Mr. B. Lawson, Crumlin, to take place in London, on Friday, Sept. 14th, is a rare opportunity to secure Jerseys, bred-for-butter, at buyer's price. Two notable cows in the herd are: Spot Cash Ella 4th, just four years old, that recently dropped a nice heifer calf. This cow never was dry since her first calf was born. This is her fourth calf—all heifers. One year ago she gave birth to twins. She is a prize for anyone to own, as pretty as she is good. Also in this sale is Cream Cup's Pride, sweepstakes winner at London, first as a yearling and two-year-old, and second in aged class, one year ago. Mr. Lawson states that the herd of 10 cows averaged last year over \$80 each from the sale of butter, saying nothing of the skim milk and the value of the calves. Milk of these cows will all be tested for butter before the sale. The heifer calves are sired by Columbine's Coronation King, whose dam was imported. These cows are all guaranteed sound.

SALES OF PURE-BRED SHEEP.

A large number of important sales of pure-bred sheep have been held in England recently. At the dispersal sale of Mr. Edwin Ellis' celebrated Summersbury flock of Southdowns, the whole 630 head were disposed of at high prices. The highest prices for shearing rams were 70 gs., given by His Majesty the King, and 65 gs., given by Sir T. Gooch, of Wrentham, Sussex. Six-teeth ewes fetched £15 10s.; shearing ewes, £14; two-teeth ewes, £8, and full-mouth ewes, £11. The average for 615 breeding sheep was 45 19s. 11d. Shearing ewes averaged 45 17s. 3d., and shearing rams, £24 8s. 5d. At the Cirencester ram sale Mr. James T. Hobbs' Oxford Down shearing rams averaged £16 17s. 9d., as against £13 7s. 9d. last year, prices ranging up to 41 gs. Mr. James Horlick's rams from Cowley Manor averaged £11 18s. 6d., the highest price being 24 gs. Mr. George Adams' Oxford Down ram lambs were sold at Oxford Fair at an average of £11 13s. 6d., the highest price being 32 gs. Mr. Brassey's Oxford Down shearing rams averaged £12 18s., highest price 30 gs. Messrs. Bryan sold up to 40 gs.

At the sale and letting of Hampshire Down ram lambs, the property of Mr. Cary Coles, Winterbourne Stoke, one was let to Mr. Flower at 205 gs., and another to Mr. A. F. T. Drake at 120 gs. The average of those let was £82. For the ram lambs, prices ranged up to 60 gs.; the average was £21 10s. Mr. R. Coak's Devon Longwool rams averaged £16 16s., the highest price being 36 gs. At Mr. H. Q. Stephens' sale of Hampshire Down ram lambs, the average was £13 1s.; highest price, 55 gs. Mr. J. A. K. Falconer's average for Hampshire Downs was £8 4s. 6d.; Mr. J. Goldsmith's, £7 10s.; the Dunley Manor flock, £11 2s.; the Marquis of Winchester's, £8 4s. Messrs. J. & S. Treadwell's Oxford Downs averaged £12 13s. 3d., one making 50 gs. At the Chichester South-down sale, the highest price was 105 gs. for one of the Duke of Richmond's rams, the average being £22 2s. 6d. Lieut. Colonel Hammond's averaged £8 18s.; Mr. J. Tompkins', £17 10s.; Earl Cadogan's, £9 0s. 7d.; the Duke of Devonshire's, £9 9s. Mr. T. P. Buxton's Hampshire Downs at Wates Place averaged £13 11s.; highest price, 105 gs. for one let to the Marquis of Winchester. At Lord Rothschild's sale and letting of Hampshire Downs, a ram lamb was let at 60 gs., and the top price for those sold was 42 gs., the average being 21

ECLIPSE HIGH-GRADE Gasoline Engines



MANUFACTURED BY
D. MCKENZIE & CO'Y.
London, Ontario.

AGENTS WANTED.

LARGE ENGLISH YORKSHIRES.—We have a limited number of choice young pigs for sale, bred from our choicest sows, and got by the imported boars, Dalmeny Joe 13777 and Broomhouse Beau 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses, and sweepstakes over all breeds or grades. We guarantee satisfaction in all mail orders. Joseph Featherston & Son, Streetsville.

More Harvest Help Wanted—Manitoba and Saskatchewan.

Although all the Provinces in Eastern Canada have contributed a large number of laborers to assist in harvesting the tremendous wheat crop of Canada's Western Provinces, there is a great demand for more laborers.

With the improved machinery, and the men already sent, the crop will be cut, but the demand is for laborers to assist in the threshing and the movement of the grain to the elevators.

Between 15,000 and 20,000 laborers have gone west; 5,000 to 10,000 more are required.

There will be a low-rate excursion from South-western Ontario on September 5th, from the north-western section, September 7th, and from the northern and eastern sections on September 8th.

Through second-class tickets are sold at \$12.00 to Winnipeg, and on arrival there, the laborer is met by Government representative of the farmers, and when he has contracted to work, he is furnished by the railway with a free ticket to the nearest station to the farmer he is to work with. On arrival at that station he deposits his certificate with the agent, and when he is ready to return after he has been working 30 days, the farmer he has been engaged with makes a verification to that effect on his certificate, and the agent issues ticket from that station back to the starting point at rate of \$18.00.

It is expected a very large number will take advantage of these excursions to spend a few weeks in the West, and acquaint themselves with the conditions in that country. This is an opportunity to have an outing, and make something besides expenses.

Anyone wanting further information, write to C. P. R. Passenger Department, Toronto.

Labor Day

Holiday Rates on C. P. R.

Single fare for the round trip will be in effect for Labor Day, between all stations on the Canadian Pacific Railway east of Port Arthur, to points on connecting lines in Canada, and to Buffalo and Detroit. Tickets good going Saturday, Sunday and Monday, September 1, 2 and 3, returning until and on Tuesday, September 4, 1906. Tickets and full particulars at any C. P. R. ticket office.

"Do you think that the automobile will displace the horse?" asked the conversational young woman. "It will," answered the nervous young man as he sized down the road, "if it ever hits him."

JUST THE VERY PIANO OFFER

YOU'VE BEEN LOOKING FOR

Here's an opportunity to purchase a piano at a very low price. A chance to bring into your home an instrument which will "cheer you up" when you feel sad, "soothe" you when harassed and tired. No more will you have to go visiting to hear your favorite pieces played. Home will be a thousand times

brighter and more cheerful. Piano will pay for itself many times over in the enjoyment it will bring into your home.

If you prefer an organ, we can please you, too. Both organs and pianos are included in this big

ACCUMULATION SALE OF ORGANS AND PIANOS

Pianos and organs offered in this Accumulation Sale are what we've taken as part payment in exchange for celebrated Nordheimer Pianos.

They have all been thoroughly overhauled in our factory, and are guaranteed by us.

Another offer like this may not come your way again for months to come.

It's only when we've accumulated a sufficiently large quantity of these "used" pianos and organs that we hold an Accumulation Sale, and clear them out at exceedingly low prices. Such an accumulation now exists. And, as we have pressing need of the space occupied by these instruments for our fall stock, we have an added incentive for a rapid clearance. Therefore you'll find

PRICES ARE REMARKABLY FAVORABLE

So favorable that we advise immediate purchasing if you desire one of these pianos or organs.

You can rely on every piano or organ being exactly as represented. For sixty-six years we've been famous as the square-deal piano house, and we intend to maintain our reputation.

Mail orders receive the same careful consideration as if you were here in person. Correspondence solicited.

If instrument you receive is not exactly as represented, ship it back to us at our expense. Could anything be fairer than that?

When ordering by mail, kindly give number of piano or organ desired. Suggest you also make a second choice, in case the first choice happens to be sold before we receive your order.

Below you'll find a list of these exceedingly low-priced pianos and organs. Any further information you desire will be furnished on request.

UPRIGHT PIANOS.

1. Mason & Risch, 7½ octaves, handsome mahogany case..... \$190
2. Heintzman & Co., 7½ octaves, walnut case. In good condition. Regular price \$450. Sale price..... 200
3. Gerhard Heintzman, 7½ octaves, walnut case. Practically as good as new. Regular price \$450. Sale price..... 225
4. Marshall & Wendell, Albany, N. Y., 7½ octaves, handsome mahogany case; splendid tone. Regular price \$400. Sale price..... 250
5. Haines & Co., New York, 7½ octaves, mahogany case; up-to-date; very handsome. A snap for someone. Regular price \$450. Sale price..... 275
6. Haines & Co., New York, 7½ octaves, walnut piano, as good as new. Regular \$375. Sale price..... 275
7. Lansdowne, 7½ octaves. Made for and guaranteed by the Nordheimer Piano Co. Slightly shop-worn. A snap at..... 280
8. Nordheimer, 7½ octaves, oak case; been in use a few months in our warerooms for trying music. Regular \$350. Sale price..... 290
9. Nordheimer, 7½ octaves, walnut case; very best tone. Will be appreciated by first-class musician or teacher. Tone as good as new. Regular price \$500. Sale price..... 325

SQUARE PIANOS.

10. Gilbert, 6 octaves..... \$ 40
11. Glen, 6½ octaves..... 55
12. Jennings, 7 octaves..... 80
13. Thomas, 7 octaves..... 85
14. Hardman, 7 octaves..... 85
15. Knabbe, 7½ octaves..... 140
16. Nitschke, 7½ octaves..... 95
17. Weber, 7 octaves..... 100
18. Steinway & Sons, 7½ octaves..... 175
19. Haines Bros., 7 octaves..... 125
20. Chickering, 7½ octaves..... 150
21. Heintzman & Co., 7½ octaves..... 125

ORGANS.

22. Bell, 5 octaves, high back, walnut case..... \$25
23. Karn, 5 octaves, high back, walnut case..... 25
24. Karn, 5 octaves, high back, walnut case..... 30
25. Bell, 5 octaves, high back, walnut case..... 30
26. Bell, 5 octaves, high back, walnut case..... 35
27. Dominion, 5 octaves, high back, walnut case..... 35
28. Dominion, 5 octaves, high back, walnut case..... 40
29. Goderich, 6 octaves, walnut case, high mirror back..... 50
30. Bell, 6 octaves, walnut piano case with nice mirror..... 60
31. Rowe, 7 octaves, walnut piano case..... 65
32. A special new organ made for ourselves, with resonant chamber, 6 octaves, walnut piano case with mirror in back. Has a pipe-like tone. Regular \$125. Sale price..... 90

We are not exhibiting at the
WESTERN FAIR
but are arranging for an elaborate display in our **Concert Hall, 188 Dundas St., London**, during Fair Week. Make this your headquarters. We'll look after your grips and parcels.

NOTICE THE FOLLOWING LIBERAL TERMS:

Instruments under \$50—\$5 cash and \$3 per month. Instruments between \$50 and \$100—\$7 cash and \$5 per month.
Instruments between \$100 and \$200—\$10 cash and \$6 per month. Instruments over \$200—\$15 cash and \$7 per month.
Ten per cent. allowed for cash in one full payment. Freight prepaid within 100 miles of London. Send all orders to

NORDHEIMER'S, LIMITED,

188 Dundas Street.

J. J. O'CALLAGHAN, General Manager.

LONDON, ONT.

GOSSIP.

SMITH & RICHARDSON'S CLYDESDALE IMPORTATION.
Saturday, Aug. 4th, was another big exporting day, says the Scottish Farmer. The steamer sailing was the Marina, of the Donaldson Line. She carried a large number of Clydesdales and other horses for different buyers in different parts of the Dominion. The largest number of Clydesdales on board were in the hands of Messrs. Smith & Richardson, Columbus, Ont. They had 14 stallions, seven of which were from Messrs. A. & W. Montgomery's stud, at Netherhall and Banks, and seven from the Dargavel stud of Mr. Peter Crawford. The Montgomery lot were by the leading breeding horses of the day, including the H. & A. S. first-prize horse, Moncrieffe Marquis (9953), whose stock are well and favorably known on both sides of the sea; the champion, Baron's Pride, and the three noted premium horses, by him, Up-to-Time (10475), Baron Robgill, and Baron Mitchell; Mr. Park's celebrated breeding horse, Mar-nium, sire of the champion, Rosadora, and many other prizewinners; and two are by the H. & A. S. champion horse, the great Prince Thomas (10262). Amongst these seven horses are the produce of mares by the Cawdor-Cup champion, Prince Alexander (8899), the dual Cawdor-Cup champion, Royal Gartly

(9844), the H. & A. S. first-prize horse, Darnley's Last (6663), M'Nair's Good Hope (2146), and the unbeaten champion horse, Prince of Carruchan (8151). Two of the horses bought at Dargavel were got by the noted Baron o' Buchlyvie (11263); a third was by that excellent breeding horse, King o' Kyle; a fourth by the Dumfries & Fyvie premium horse, Royal Edward, one of the most promising sires among the younger horses of the day. Amongst them also are horses out of the pick of mares got by leading sires. This is one of the best shipments made by Smith & Richardson. They seem to have got into a very good trade, and are buying a high-class type of horse for the Canadian market.

The attention of breeders and farmers is called to the advertisement, in this issue, of the dispersion sale, by auction, on October 10th, of the useful herd of Shorthorns belonging to Messrs. T. H. Medcraft & Sons, of Sparta, Ont., together with a selection from the herd of Messrs. W. G. Sanders & Son, of St. Thomas. The Medcraft herd is headed by the grand young red yearling bull, Sunbeam's Champion =54686=, a son of the Toronto and Winnipeg champion, Prince Sunbeam (imp.), and out of imported Scottish Rose 2nd =38109=, by Lovat Champion. He is one of the best

young bulls we have seen for many a day. Straight, level in his lines, full in crops and brisket, smooth in his shoulders, thick-fleshed, a good handler, with a handsome masculine head, he is of the right type; his breeding is of the best; he has won first-class honors in district shows, including sweepstakes as best bull any age or breed, and his first crop of calves are exceedingly promising. The females of breeding age are bred to him, or have calves at foot, and they are a good useful lot in fair breeding condition, with no special fitting. Included is the imported roan Scotch-bred cow, Veronica, by the Duthie-bred Marksman, a Missie, by Scottish Archer, and his dam by William of Orange. Mary Wilkes, by Young Abbotsburn's Heir, by the World's Fair champion, is another of the good ones, whose two charming red daughters, by Imp. Favorite (83469), are good enough for show material, if fitted. Besides these are some excellent representatives of the good standard Scotch Syme family that has produced so many prizewinners. Other useful dual-purpose families, topped by first-class Scotch-bred sires, are represented, many of them heavy milkers, and all of good type. The young cows and heifers from the herd of Messrs. Sanders & Son are bred to the excellent red imported bull, Village Earl =55048=, by Moonstone, by the great

sire, Royal Star, and are a smooth, straight, typical lot, bred from deep-milking and good-feeding families, while the red bull calves and heifers, nearing a year old, got by him, speak well for him as a sire, being of the approved type, thick, blocky, with grand heads and handling quality. The Shropshire sheep (70 head in all) to be offered at same time, if not previously disposed of privately, are a grand good lot, the 20 imported yearling ewes, in nice field condition, being the best lot for the number we have seen brought out—full of style, quality and finish, while the yearling rams, ram lambs and ewe lambs are a choice lot, some fit to show and win. See the advertisement and apply for the catalogue.

TRADE TOPIC.

CEMENT BRICK, BLOCKS, FENCE POSTS are coming more and more into use for building and fencing, and are giving universal satisfaction. Notice the advertisement in this issue of the London, Concrete Machinery Company, manufacturers of cement brick, block and post machines, sill and lintel moulds and concrete mixers. Write them for descriptive catalogue and price list.

CREDIT AUCTION SALE

At the farm of **T. H. MEDCRAFT & SONS, Sparta, Ont.**,
eight miles from City of St. Thomas, on

WEDNESDAY, OCTOBER 10th

Their entire herd, consisting of

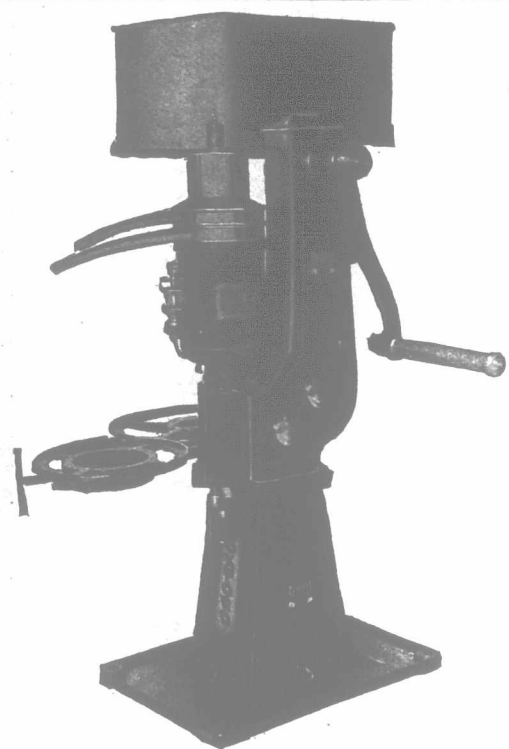
36 HEAD OF SHORTHORNS

Including the red yearling sweepstakes bull, Sunbeam's Champion =59886=, son of the Toronto champion, Prince Sunbeam, Imp., and Scottish Rose 2nd. Imp. All females of breeding age in herd have been bred to or have calves at foot by this grand young bull. Also, at same time and place, a selection of eight head from the herd of W. G. Sanders & Son, St. Thomas, consisting of young cows and heifers and three young bulls, the females all of deep-milking strains, bred to or having calves by the choice imported bull, Village Earl =55048=. Also, if not previously sold privately, **70 PURE-BRED SHROPSHIRE SHEEP**, including 20 choice imported shearing ewes and a lot of good, shearing rams, ram lambs and ewe lambs. Teams will meet trains morning of sale, as indicated in catalogue, at St. Thomas, G. T. R., C. P. R., Wabash and Pere Marquette. Telephone to house.

TERMS: 11 months' credit on approved notes, 6 per cent. per annum off for cash. For catalogues apply to

Auctioneers **CAPT. T. E. ROBSON,
JOHN D. LOCKE,
R. H. LINDSAY.**

**T. H. MEDCRAFT & SONS,
Sparta, Ont.**



FARMERS!

When buying a cream separator you should see to it that you are getting a machine that skims good. That is easy to wash and turn. That has interchangeable ball-bearings, and has no hair-catching spindles or hand-catching gears. The

OXFORD

has all those good points, and having no exposed gears or parts is perfectly safe even for small children. You will make a serious mistake if you buy before seeing the up-to-date **Oxford**.

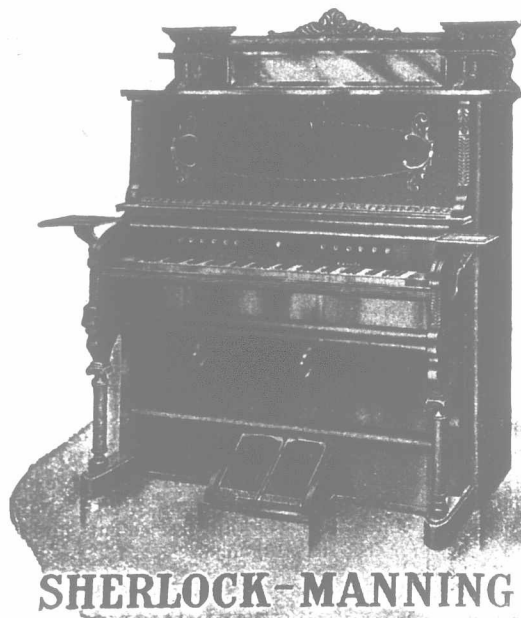
WRITE FOR CATALOGUE.

See us in Dairy Building, Toronto Exhibition.

**Farmers' Mfg. & Supply Co.
Limited
DURHAM, - ONT.**

Sherlock-Manning Organs

AT THE FRONT



SHERLOCK-MANNING

WRITE FOR NEW CATALOGUE.

**The Sherlock-Manning Organ Co.
LONDON, ONTARIO, CANADA.**

To have been first proves antiquity. To have become first proves merit.

**GOLD
MEDAL
SHERLOCK-
MANNING
ORGANS**

have become leaders.

QUESTIONS AND ANSWERS. Miscellaneous.

COMPUTATION OF TIME.

I hired a man for five months. He started to work on the 2nd of April. When is his time complete? L. L. J. Ontario.

Ans.—1st September.

SPECKLED TROUT.

J has a spring creek on his farm. Its source is on said farm.

1. Can he lawfully place a trap in the creek (during the spawning season) to catch the fish for breeding purposes?

2. What is the law governing private fishery owners? READER. Ontario.

Ans.—1 and 2. Write to the Deputy Commissioner, Fisheries Department, Parliament Buildings, Toronto, for a copy of the regulations.

SOW FAILING TO SHOW CESTRUM.

A young sow pig had one litter, and never came in season again. What could be the cause, or could anything be done to get her to breed again? E. M.

Ans.—Some injury to the uterus at the birth of her litter may have caused it to close and fail to perform its natural functions. It is not likely that she will breed again, and we are unable to suggest any treatment that would be helpful.

SIR JOHN A. MACDONALD AND HON. ALEX. MACKENZIE.

Please tell me where I could get the lives of the Right Hon. Sir John A. Macdonald and of the Hon. Alex. MacKenzie, once Prime Ministers of Canada, and what price would each be? S. H.

Ans.—Memoirs of Sir John A. Macdonald, in two volumes, by Joseph Pope, publishers J. Durie & Sons, Ottawa, Ont., and Hon. Alex. MacKenzie, His Life and Times, by Wm. Buckingham and Hon. Geo. W. Ross, publishers Rose Pub. Co., Toronto, Ont., would probably be the most satisfactory. As to price, etc., write to publishers.

A DEFECTIVE ENGINE.

A bought a second-hand traction engine from a company, who claimed it to be in perfect running order, and they also said they would send a man with A who understood it, and would drive it home for him. A paid half down on it, and started for home, with company's man driving it. On the way home something broke, and as A did not know what was the matter with it, he refused to take it. The company did not guarantee it, but as it was not out of their men's hands yet, should they not pay for the break, and put it in shape again at their expense? Ontario.

Ans.—We think so.

SALT FOR STEERS ON GRASS.

Is salt beneficial or injurious to cattle fattening on grass? I understand some large feeders will not use it. H.

Ans.—The best experimental data to which we can refer will be found on page 1282 of "The Farmer's Advocate," issue of Aug. 16th, wherein is an account of some trials with dairy cows at the Wisconsin Agricultural Experiment Station. It was found that after periods varying from sixty days to six months, according to the individuality of the cow, a marked injurious effect in milk flow, condition and general health began to manifest itself in the cows from which salt was withheld, and before the year was up, some of the cows had to be given salt to save their lives. The need of salt was greatest in the case of the heaviest milkers, and greater when the cows were stalled than pastured. It was thought that, perhaps, dry cows or steers might subsist quite a while without salt, without suffering much inconvenience. However, it seems that a supply of chlorine is demanded by the animal system in excess of the moderate amount contained in the food consumed, and, on the whole, we believe it is wise to supply even steers with all the salt they want, giving it at frequent intervals, or keeping it always before them. The notion that salt is injurious arises, we presume, from an unproved theory that much water drinking depletes the system and debilitates with the production of acid.

A "MONTH."

What constitutes a month with reference to hiring help? I hired a farm hand last month, for a month. He began work on the morning of 17th of July. I expected him to work till evening of August 16th before his time was up. But on the evening of 15th, he insisted his money was due him because he had worked for 26 days. Was he right? If so, if a man is hired for four months, must he work only four times 26? The labor question is complicated enough without such difficulties as this arising.

A CONSTANT READER.

Ontario.

Ans.—You were quite right. The "month" of the contract meant a calendar month, and the man should, accordingly, have worked on the 16th of August.

ABATING A NUISANCE.

A bought farm seven years ago. At corner of lot, on property sold to C, adjoining A, by B, is situated a cheese factory and pigpens. Now, the manure from these pens has been running across the corner of A's farm, and has practically ruined about one acre of land. Can A collect damages for last six years, as first year A had a crop of mangels on said ground, but could not raise anything since, owing to it being too wet all the time and too rich, A having notified C to stop the flow of manure across his farm this year? Who is responsible, C, who owns the factory, or D, who owns the hogs, or both? Ontario.

Ans.—We think that you are entitled to have the nuisance put a stop to, and also to damages, and that you are in a position to obtain such relief by an action; but, in view of your long delay and what would seem to have been acquiescence on your part, we do not think that you could recover damages to anything like the extent you suggest. Your cause of action is apparently ripe as against C, but it would appear to be advisable to notify D also to discontinue the thing objected to and include him in any action.

GOSSIP.

Meadowbrook Stock Farm lies in the county of Haldimand, three miles from Hagersville Station, G. T. R. The owner, Mr. J. H. Snell, is one of that noted county's most progressive farmers, particularly along the lines of pure-bred stock breeding, Shorthorn and Jersey cattle and Yorkshire hogs being his favorite lines. The Shorthorns, numbering about a dozen, are a splendidly-selected lot, bred and built for heavy producers at the pail, which they certainly are. As yet, Mr. Snell is not offering any for sale, as he is working up his herd. The Jerseys all belong to the old noted St. Lambert strain. They are an extra nice lot, being very large, of true dairy type, and carry ideal udders. As with the Shorthorns, Mr. Snell would rather increase than diminish their numbers this year. The Yorkshires are what Mr. Snell points to with pride just now, and well he may, as a better lot of brood sows it would, indeed, be difficult to find—nearly all of them prize-winners. One of the choicest is Summerhill Bloom 3rd 6307, by Look Me Over, dam Summerhill Hollywell Daisy 3rd (imp.), by Hollywell St. David, a sow of great scale and beautiful finish. Some of the others are daughters of hers, and the get of Summerhill Knight 6th 6318. The present stock boar is Imp. Dalmeny Topsman, bred by Earl of Rosebery, sired by Barrowfield Topsman, dam Dalmeny Long Lass, by Ruddington King David 5th. He is a boar of wonderful strength of build, exceptionally heavy bone, and very long and even, but shows to best advantage in his get, which leave nothing to be desired in their type. Just now, Mr. Snell is offering a number of both sexes, but is particularly strong in young sows; a number of which are ready to breed—extra choice ones. Parties ordering from him may depend on getting exactly what is represented. Address, Hagersville P. O., Ont.

The Prizewinning Butter

For years at the leading agricultural fairs has been salted with WINDSOR SALT—that FINE, DRY, PURE, CLEAN Salt—that all-salt, strong-salt that never cakes, but DISSOLVES QUICKLY and WORKS IN EVENLY.

Windsor Salt betters the butter—and KEEPS it better.

You can find no other Salt so economical—no other Salt that goes so far, or does the work so well. Every grain of

WINDSOR SALT

Is a perfect crystal—fresh in savor as the hour it came from the salt-well. It gives a delicious taste to butter—so subtle you do not think of SALT, but only of the delicate, satisfying taste.

Make up your mind—now—to no longer spoil your butter with coarse, bitter, badly-put-up Salt—use what has helped the prizewinners to win—what's not good enough for them is not good enough for YOU.

Windsor Salt OUGHT to cost more than other brands—but it sells at the same price.

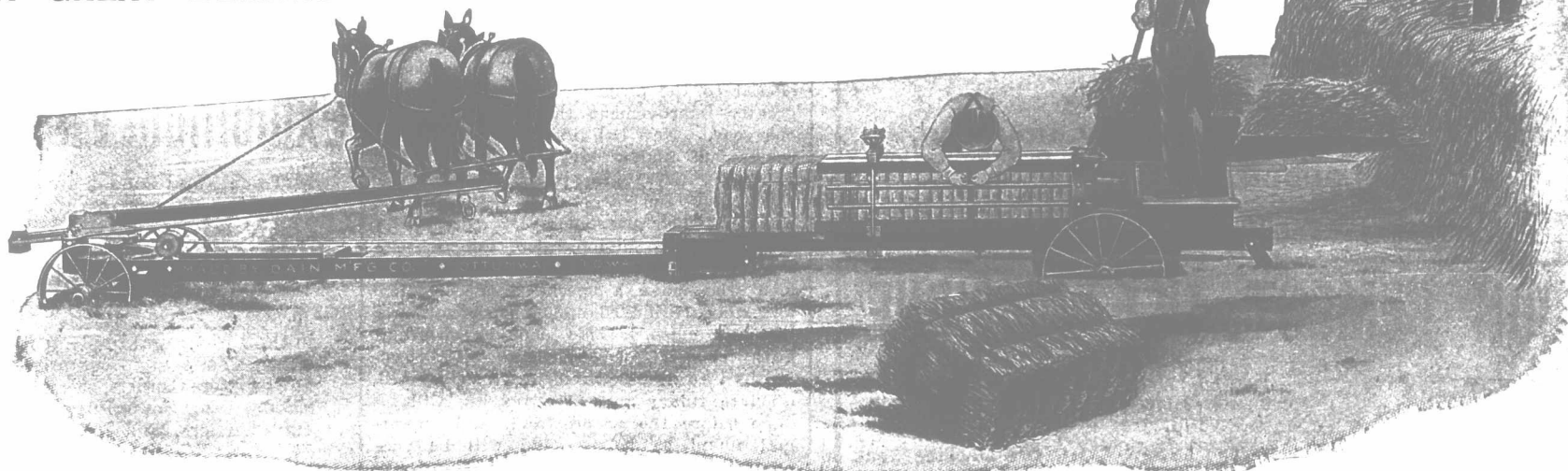
This perfect Salt is also best for table use.

Ask Any Dealer.

THE GREAT DAIN HAY PRESS

Shown at Toronto and Ottawa Fairs.
Stronger and of greater capacity than ever.

**PRESSED HAY
IN GREAT DEMAND**



DAIN PULL-POWER BALING PRESS.

The only Pull-power Press. Full circle. Two feeds to round.
No breaks. Fully guaranteed. Automatic Tucker insuring smooth bales.

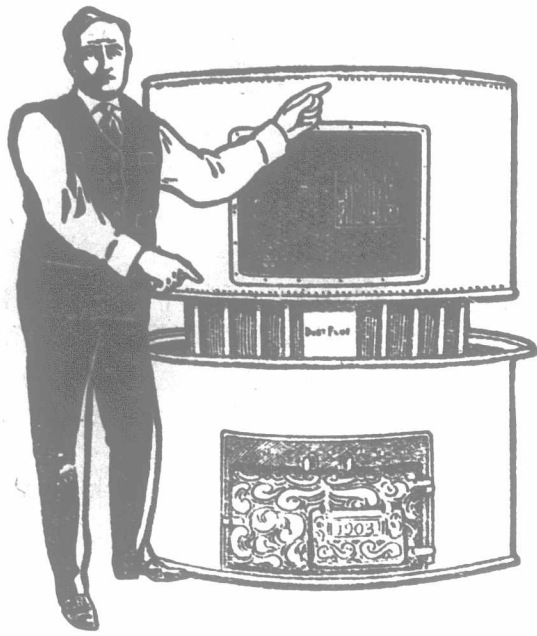
12 to 16 tons general day's work. Easy on team. Easily set to stacks or barns. Two or three wires. Always ready for business.

COME AND SEE US.

The Dain Mfg. Co., of Iowa
PRESTON, ONTARIO.

THE FAIRCHILD COMPANY
WINNIPEG, MANITOBA.
Agents Manitoba and Western Provinces.

When Writing Advertisers Please Mention Farmer's Advocate



It's a "Hecla" Patent

And no other Furnace has it.

FUSED JOINTS are to be found only in Hecla Furnaces. In ordinary furnaces the joints between the steel and the cast iron parts are made with bolts and cement. Such joints are soon pulled apart by the unequal expansion and contraction.

In the Hecla this joint is made by fusing the two materials together at a white heat. This joint is everlasting and will never leak gas, dust or smoke.

"Hecla" Furnaces are the only ones with FUSED JOINTS—the only means of having a house free of dust, smoke and gas.

Send me a rough plan of your home, and I will send you an estimate of the cost of installing the proper "Hecla" Furnace. Also a copy of new catalogue of Hecla Furnaces. Write to-day "Clare's Furnace Builder," care of

CLARE BROS. & CO., Limited, - - PRESTON, Ont.

CANADIAN PACIFIC

TORONTO EXHIBITION

SINGLE FARE \$3.40 LOW RATES \$2.55

Toronto and Return.

Toronto and Return.

EVERY DAY

Monday, Aug. 27, to Saturday, Sept. 8, inclusive.

Aug. 28 and 30, Sept. 1, 4 and 6.

ALL TICKETS GOOD TO RETURN TUESDAY, SEPT. 11, 1906

For tickets and full particulars see

W. FULTON,

City Ticket Office, C. P. R.

or

LONDON, ONT.

J. HOUSTON,

Agent, C. P. R. Station.

LONDON CEMENT TILE MACHINE



Every farmer knows that the London cement two-piece tile is the best drain tile in the world.

If you have a London Machine you can make your own tile at \$5.50 per thousand; they are worth everywhere one-half more than clay tile.

Make tile spare hours, and have them when and where you need them. The price of the London Tile Machine is within reach of every farmer. We are the only makers of this class of machine. Patents applied for. Send for descriptive catalogue. We also make the famous

- LONDON CEMENT BRICK MACHINES.
- LONDON CEMENT BLOCK MACHINES.
- LONDON CEMENT FENCE-POST MOULD.
- LONDON CEMENT SILL AND LINTEL MOULD.
- CONCRETE MIXERS, ETC.

If you attend the Toronto Exhibition, do not fail to see our exhibit immediately east of Machinery Hall.

THE LONDON CONCRETE MACHINERY CO'Y.

28 Redan St. H. POCOCK, Manager. LONDON, ONT. U. S. Factory: AUBURN, IND.

GOSSIP.

Western lambs reached the \$8 mark at Chicago last week. What's the matter with the sheep trade.

Mr. D. M. Watt, St. Louis Station, Ont., writes: "My Ayrshire cows are doing nicely. They have all freshened in; have had a nice lot of calves which will be for sale. Pearl Stone of Glenora is also in fine condition, and is leaving excellent stock. Also my yearling bull, Ralph Connor of Spring Hill, is a promising young animal, which will be hard to beat as a yearling. Parties wishing to see this herd will do well to attend the Sherbrooke and Ottawa exhibitions. If all is well, they will be shown at both of these leading exhibitions. I am also offering for sale some fine large yearlings and a few two-year-old heifers due to freshen November 1st to December 15th, bred from high-class dams, which are heavy milkers with fine vessels and good large teats and robust constitutions. Parties wanting to improve their herds will do well to come and inspect this herd, or write. Nothing but first-class stock sold to those who buy through corresponding. All stock guaranteed to be what they are represented, if not, they can be returned to the farm at my expense."

Mr. A. D. McGugan, of Glenora Stock Farm, Rodney, Ont., in sending change of advertisement, writes: "I am offering the choicest lot of Lincoln ram lambs I have ever bred. They are strong and well covered, and have that fine lustrous wool that characterizes the Dudding sheep. They are just in good growing condition, in fine shape for work in the flock, and at a time when Dudding Lincolns are breaking the world's record for prices, and the call for sheep is heard everywhere, rams of such breeding and quality should find ready sale. I am offering them at very reasonable prices. I also have for sale three young Short-horn bulls fit for service. They are grand specimens of the modern Scotch Shorthorns—large and smooth, with extra good handling quality. Two of these, a red and a roan, are from very heavy milking dams; one with a record of 56 lbs. of milk per day. The other, a red, is from an imported Roan Lady cow, and is the right kind for a herd header. I am over-stocked, and am offering these bulls at sacrifice prices. The Berkshires I am offering are of the right kind—the utility bacon hog—and the price quoted is but very little higher than they would bring at the packing-house."

The Central Canada Fair directors have ever catered to the wants of the livestock men. This year there has been no exception. Indeed, the inducements offered to the farmer and breeder show a greater improvement than in any previous year. New buildings, accommodation rearranged and a large addition to the premium list are testimony of the anxiety of the directors to please this class of their patrons. By a readjustment of the conditions also, the amateur will not be obliged to compete with the men who make a specialty of breeding and who are looked upon as professionals in their class. This should encourage both classes of breeders. The best judges to be secured in America will officiate this year. The judging will be done before the grand-stand, and no animal found to be unsound will be permitted to compete. As usual, the directors have provided a highly creditable programme of specialties to please the amusement loving patrons of the great fair. In front of the grand-stand there will be hurdle races, hurdle jumping, chariot races, Roman standing races, trotting races for most generous purses, running races and a balloon ascension and other specialties. Elsewhere there will be vaudeville performances, with the best specialties that money can secure. One of the days of the week there will also be a great championship lacrosse match between the Capitals and Shamrocks. The night entertainment will consist of a magnificent production of the popular comic opera, "The Gingerbread Man." The large new theatre hall erected on the grounds for such purposes. Certainly, the Ottawa Fair will provide a splendid holiday outing for all classes of people. The dates are September 7th to 15th.

The Results of Weak Blood

TIRED BRAIN AND BODY AND LANGUID, WORN-OUT FEELINGS—CURE IN

Dr. Chase's Nerve Food.

In the spring the blood is lacking in the red corpuscles wherein is found the life-giving principles which put snap and energy into the system—making the body active and the mind alert.

For lack of red corpuscles in the blood, the lungs are weak, the action of the heart feeble, the stomach fails to properly digest the food, the liver, kidneys and bowels become sluggish and inactive.

Dr. Chase's Nerve Food overcomes these conditions because it contains the very elements of nature which go to increase the number of red corpuscles in the blood.

These ingredients are so combined in this great restorative as to act mildly and gently on the system, instilling new vigor and vitality into the blood and nerves and through these mediums reaching with a beneficial influence every vital organ of the body.

It is interesting to note your increase in weight from week to week while using Dr. Chase's Nerve Food; 50 cents a box, at all dealers, or Edmanston, Bates & Co., Toronto.

Clearing Sale by Auction

OF REGISTERED AND GRADE

JERSEY CATTLE

WILL BE HELD

FRIDAY, SEPT. 14th, 1906,

at Dyer's Hotel, Dundas St., London, Ont., 1/2 mile east of Fair Grounds. Street cars pass the door. Sale to commence at 10 o'clock sharp. A number of registered cows, fresh, and a number due to calve in January next—all young animals, from 2 to 7 years.

TERMS: Four months' credit on approved notes, or 1 per cent. off for cash.

B. LAWSON, Crumlin, Ont. THOS. CLARK, Auctioneer.

Exhibition Visitors

At Toronto and London are cordially invited to visit the exhibit of the

METAL SHINGLE & SIDING CO., OF PRESTON, ONT.,

in the Agricultural Implement Building. The exhibit comprises Feed and Litter Carriers, Tanks, Stanchions, Water Bowls, Pumps, Troughs, Hay Carriers, and Metal Shingles, Sidings and Ceilings.

SPRING GROVE STOCK FARM Shorthorn Cattle and Lincoln Sheep



First herd prize and sweepstake, Toronto Exhibition, 3 years in succession. Herd headed by Hot Scotch 52696, champion bull Western Fair, 1905, and White Hall Ramsden, son of the champion White Hall Sultan (Imp.). High-class Shorthorns of all ages for sale.

AUCTION SALE OCT. 22, 1906. Also prizewinning Lincolns. Apply T. E. ROBSON, - Ilderton, Ont.

FOR SALE—Pure Shropshire Ram and Ewe Lambs. Born from 15th March to 15th April. Price from \$7 to \$10, including pedigree. Also fine St. Lambert Jerreys—all ages—male and female. Prices right. Write for particulars. H. E. WILLIAMS, Sunnylea Farm, Knowlton, P. Q.



Best for Wear "Clarke's" Mitts

Nothing but the best hides and skins are used in Clarke's mitts.

Expertly tanned and finished in our own factory. Nothing better on the market to-day.

Our celebrated "Horsehide" mitts are genuine horsehide—not cowhide masquerading under the name of horsehide, as is usually the case.

Very strong and tough. These gloves will stand more hard wear than any other glove made. Heat and wet proof. Soft and pliable, too. Exceptionally neat fitting, warm and comfortable.

Also make mitts from Piccary hog—one of the toughest leathers—mule-skin, buck, elk, sheep, and all other leathers suitable for mitts.



You Receive Full Value for Your Money When You Buy "Clarke's"

A silvery-looking nugget may or may not be worth what you are told it is. But the Government stamp on a coin is a guarantee of the exact value of the piece of silver.

Now, leather articles, unstamped, are in the nugget class as far as knowing what they are worth. Unless you know a great deal about hides and skins, you could very easily have a nicely tanned and dressed cowhide mitt palmed off on you for a genuine horsehide. Wouldn't know the difference—until after wearing it awhile.

To protect ourselves and customers, we stamp every pair of **Gloves, Mitts, Moccasins, etc.**, exactly what it is.

"Clarke's" stamp is a guarantee that you will receive full value for your money.



The unstamped, unknown value Nugget

Stamped Coin, showing exact value

Well Made "Clarke's" Gloves

Every pair of Clarke's Gloves are tanned from the raw hide, and made up in our own factory.

Every step, from the unpacking of the raw hide to the shipping of the complete articles, is performed under our own watchful supervision. No detail small enough to be skimped. To the smallest stitch everything is done with the utmost neatness and accuracy. That's why "Clarke's" gloves don't go to pieces quickly like others.

Clarke's horsehide gloves—not cowhide—are our best working gloves. Heat and wet proof. Strong and durable. Soft and pliable. Easy and neat on the hands.

Wear Like Iron "Clarke's" Moccasins

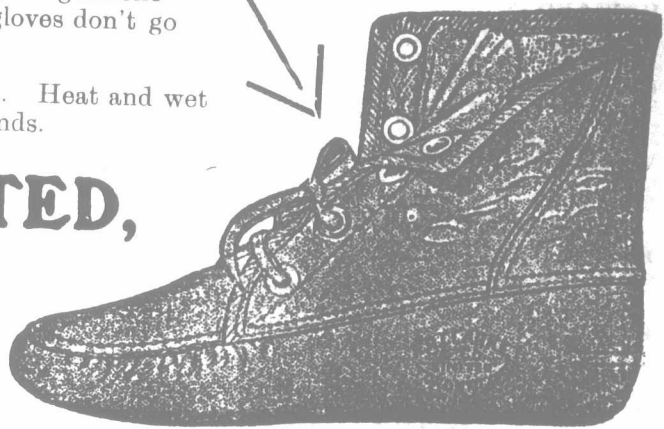
"Clarke's" bullhide moccasins are made from real bullhide. Thick and heavy, they wear like iron. Heat and wet proof. Will stand scalding, scorching, etc., without hardening.

"Clarke's" moccasins are extra value, too. We do not buy our leather as other moccasin-makers do, but tan it ourselves from the raw hide. And because we tan the leather ourselves it is better, more carefully done than tanneries usually do it—which means "Clarke's" moccasins are superior-looking, superior-wearing articles. Besides, we save the tanner's big profit, and hand over to you the advantage in extra value.

For Sale By the Most Enterprising Dealers Everywhere.

A. R. CLARKE & CO., LIMITED, Toronto, Canada.

Tanners and Makers of All Kinds of Leather Gloves, Mitts, Moccasins, etc., for Outdoor Wear.



GOSSIP.

MAPLE HALL SHORTHORNS.

Thirty-five head of strictly high-class animals make up the Maple Hall herd, the property of Mr. David Birrell, Greenwood P. O., Ont.—Pickering Station, G. T. R.; Claremont, C. P. R. Forty years ago saw the foundation of this now noted herd, and no herd in Canada, imported or Canadian-bred, can show a grander array of top sires on the pedigrees of every animal than this herd, as every pedigree has from four to six of the following noted sires at the top: Indian Chief (imp.), a Cruickshank Victoria; Premier Earl (imp.), another Cruickshank Victoria; Duke of Lavender (imp.), a Cruickshank Lavender; Royal Member (imp.), a Cruickshank Nonpareil; King James (imp.), a Kinellar Maid of

Promise; Vensgarth (imp.), a Cruickshank Victoria; Blue Ribbon (imp.), a Rosemary; Clan Campbell (imp.), a Clementina; Royal George, another Kinellar Maid of Promise; Lewis Arundal (imp.); Pride of Morning, a Cruickshank Clipper; Scottish Hero, a Missie; Prince Horace, a Princess Royal; Gravesend; William of Orange, and the present stock bull, Royal Prince (imp.), bred by S. Campbell, Kinellar, sired by the great prizewinner, Emancipator, dam Golden Drop 9th, by Gravesend. Royal Prince has proven himself a sire of a very high order, his calves being very thick, low-down, and even, and were the highest-priced calves sold in Canada last year. A perusal of the breeding of the females of the herd shows that the herdbooks contain nothing richer, as thirteen of them belong to that grand old family, the Crimson Flowers; five to Cruickshank Butterfly family; two to that best-of-all

strains, the Cruickshank Duchess of Glosters, while the others are Shepherd Rosemarys, Mayflower Maids and Minnies. All are in splendid condition. Among the younger ones are a number of heifers, one, two and three years of age, that are certainly a grand lot, and, if put in show shape, would take a heap of beating in any show-ring, any of which are for sale. There are also on hand two yearling bulls and some younger ones. The younger ones are: White Prince 57303, by the present stock bull, Royal Prince, dam Duchess of Gloster A, by King James (imp.), grandam 36th Duchess of Gloster, by Indian Chief. As his name would indicate, he is a white one, and individually he is a cracker. The other is Rowellan -61602-, red, sired by Royal Prince, dam Crimson Fuchsia 19th, by Clan Campbell (imp.), grandam Crimson Fuchsia 5th, by Imp. Indian Chief. This bull is

a rare good one, and should be at the head of some herd, as his breeding is unsurpassed, and his form that of the thick, level, straight kind. If in need of something extra choice, look up Mr. Birrell, as his stables always have that sort.

TRADE TOPIC.

AGENTS FOR ECLIPSE GASOLINE ENGINE.—D. McKenzie & Co., London, Ont., report a great demand for their Eclipse Improved Gasoline Engines. The engine has been on the market for the past nine years; and the firm state they have hundreds of testimonials from users of their engines from all parts of the continent. The Eclipse is a wonderfully complete, compact and simple engine. The company have still a little territory uncovered. It would be well for agents to get control of this engine at once.

THE
F. C. B. C.

FOREST CITY BUSINESS & SHORTHAND COLLEGE, London Y. M. C. A., stands for high-grade work in Business and Shorthand. Catalogue explains our position fully. A postal will bring it. College reopens Sept. 4th.
J. W. WESTERVELT, Principal.

EARLY FALL SACRIFICE SALE

of

Square and Upright PIANOS

The lists do their own talking. Make any comparisons you like. You have not found such great values—no, not in all Canada—an exceptional opportunity for mail-order customers.

Square Pianos.

STODDARD , New York—Square Piano, octagon legs, 64 octaves; a good practice piano, and can be exchanged later at same price on a more expensive one.....	\$ 65
DUNHAM , New York—Square Piano, with octagon legs, 7 octaves, light rosewood case; in good condition. A first-class practice piano, and will give good satisfaction.....	75
STEPHENSON , Kingston—7½ octaves, carved legs, Square Piano, with 4 round corners, top moulding and serpentine base. This is an A1 instrument, and is excellent value at.....	119
A. E. BAUS & CO. , New York—Light rosewood case, with carved legs and lyre, oversiring scale, 7½ octaves, serpentine base. An A1 instrument in every respect, and first-class value at.....	121
HEINTZMAN & CO. , Toronto—Carved legs, square rosewood case, in excellent condition, oversiring scale, 7 octaves. One of our own well known make, and will give excellent satisfaction, at.....	140

Upright Pianos.

JENNEYS & SON , New York—Cabinet Grand, 7½ octaves, 3 carved panels in top door, swing music rack, dark wine-colored case; a piano that will give satisfaction. Regular price, \$375; special at.....	\$219
STANDARD , Toronto—Cabinet Grand, in walnut case, with continuous music rack, 7½ octaves, 3 pedals, nicely decorated top door, Boston fall; in first-class condition; fully guaranteed. An A1 value at.....	225
R. S. WILLIAMS —Upright Cabinet Grand, in oak case, solid panels, 7½ octaves. This piano has been thoroughly overhauled, and is in first-class condition, and will give good satisfaction, and is first-class value at.....	235
MASON & RISCH —Upright Piano, in dark wine-colored case, hand-carved panel in top door, 7½ octaves, 3 pedals. This is one of their best upright pianos, and has been thoroughly overhauled, and is in first-class condition in every way. Regular price, \$450; special at.....	250
PRINCE , Toronto—Beautiful Cabinet Grand, in mahogany case, with 7½ octaves, nicely decorated top door, Boston fall, full-length music rack, 3 pedals. A piano that has seen very little use, and sells regularly at \$375; practically new and fully guaranteed. Excellent value at.....	255
HOWARD , Cincinnati—Large-sized Cabinet Grand, with full metal plate, 7½ octaves, full length music rack, Boston fall, 3 pedals, including orchestral attachment, susceptible of mandolin, banjo, and harp effects, etc., fully guaranteed, and first-class value at.....	245
HEINTZMAN & CO. —Cabinet Grand, ebonyized case, 7½ octaves, 3 pedals, hand-carved panels in top door, swing music rack. This instrument is in A1 condition, and is one of our own make and fully guaranteed. Regular price, \$475; special at.....	275
WEBER , New York—Walnut Case, Cabinet Grand. This is a beautiful instrument in every way, and is made by one of the best-known manufacturers in the United States; has hand-carved panels, 2 music racks, 7½ octaves, 3 pedals; is fully guaranteed, and would sell now at \$600. A pleasure to any musician; special at.....	300
HEINTZMAN & CO. —Upright, with Boston fall, continuous music rack, beautifully decorated top door, 7½ octaves, 3 pedals: an instrument that would be a credit to any drawing-room and a pleasure to a musician; almost as good as new, and fully guaranteed. Regular price, \$475; special at.....	325
STEINWAY & SONS , New York—Light rosewood case, with plain panels, 7 octaves, an A1 article in every way. This cost originally \$800, and is as good as new, having been thoroughly overhauled and fully guaranteed; a credit to the manufacturers; special at.....	385

Easy Terms of Payment.

Square pianos under \$100—\$ 5 cash and \$3 per month.
Square pianos over \$100—\$10 cash and \$4 per month.
Upright pianos under \$250—\$10 cash and \$6 per month.
Upright pianos over \$250—\$15 cash and \$7 per month.

Discount of 10 per cent. for all cash with order.

Should these terms be not agreeable, wire your selection at our expense, and it will be set aside until terms can be arranged satisfactorily. Handsome stool and drape with each instrument, and freight paid to any point in Ontario, and proportionate amount to other provinces.

Ye Old Firme of

HEINTZMAN & CO., LTD.
115-117 King St., West, Toronto, Ont.

When Writing Advertisers Please Mention Farmer's Advocate

GOSSIP.

AN UNLUCKY EDITOR.

A Nevada editor is in trouble because he recently published an obituary article concerning a man who had made a fortune as a promoter of mining interests. The tribute was headed, "Death Loves a Shining Mark," but the printer made it "Mining Shark." Three husky sons of the deceased gentleman survive him. Some editors have horrible luck.

KING'S HORSES AND KING'S MEN FOR OTTAWA FAIR.

Word comes from Ottawa that not only the famous horses belonging to our good King Edward, the Peacemaker, are to be seen at the Central Canada Fair at Ottawa in September, but also a number of His Majesty's men are to be features of the show. Arrangements have been completed with the famous Second Life Guards to render delightful programmes at the exhibition in the Capital. The Life Guards Band is not surpassed by any musical organization in the Old Land, and it is the favorite band of King Edward. The King graciously consented to allow it to leave England and visit Canada, and the Central Fair directors at great expense have secured the band to play at the fair next month. The many thousand patrons of the great Central Canada Fair will doubtless appreciate the progressiveness of the directors in securing this organization for their great holiday outing.

BELGIAN HORSE-BREEDING.

American Consul-General George W. Roosevelt reports, from Brussels, Belgium, that during the past few years horse-breeding has become one of the most lucrative resources of farmers in the Belgian Province of Brabant. The year 1905 was especially noticeable for the great activity in the sale of breeding animals, especially animals 4 and 5 years old, which readily sold at exceptionally high prices. A good draft gelding brings from 1,800 to 2,500 francs (\$347.40 to \$482.50). Full-grown animals are rare, and horse dealers find considerable difficulty in procuring horses four and five years old.

Animals for breeding purposes have greatly increased in value, and even young colts just weaned easily bring from 1,000 to 1,500 francs (\$193 to \$289), as much, if not more, than was formerly paid for a full-grown stallion. Stallions of good pedigree and form now bring fancy prices, 20,000 to 30,000 francs (\$3,860 to \$5,790) being obtained.

THE HILLHURST DISPERSION.

Breeders and farmers wanting to secure Shorthorn cattle of high-class breeding and quality, should bear in mind the dispersion sale, on Sept. 7th, of the Hillhurst herd of Mr. Jas. A. Cochrane, Compton, P. Q., to take place on the exhibition grounds at Sherbrooke during fair week. Hillhurst Farm having been sold, the entire herd is being disposed of, and should prove an attractive offering to those who are looking for bargains. There are in the herd first-class representatives of the best Scotch-bred families that are so popular with the some of the grand dual-purpose English families that are so popular with the farmers in that country, giving a big bucket of milk, as well as raising calves that make the best feeding and selling bullocks. These are big, buxom cows, having capacity for breeding the best feeding sort of cattle, and their produce by Scotch-bred bulls make an ideal farmer's class of cattle, good for both beef and milk production.

The grand young red cow, Lovely of Pine Grove 3rd, whose pedigree graces the first page of the catalogue, was first and champion at Sherbrooke last year, is a daughter of the great Cruickshank Village bull, Village Champion (imp.), and she is due to calve before the sale to Golden Carol, the typical son of the Duthie-bred Golden Drop Victor, one of the best bulls ever imported to Canada. The roan Cruickshank Brawith Bud cow, Ruby of Pine Grove 4th, sired by the great Missie bull, Marquis of Zenda, bred by W. S. Marr, will be due to produce in October to Golden Carol, and should be a very attractive number, as is also her full sister the 5th a red 3-year-old, due to calve in October. Missie Maid 2nd, a roan 2-year-old daughter of Marquis of Zenda, is a member of the famous Missie tribe, and is due to calve

before the sale. Then there is a richly-bred three-year-old Mina, Pine Grove Mildred 6th, by Marquis of Zenda, with a calf at foot by Golden Carol.

A striking feature in the catalogue is that so many of the cows have or will have calves, or will be due very soon, showing that they are regular breeders. A good calf soon helps to pay for the cow. The eight young bulls, including the show bull, Golden Carol, and the red Cruickshank Butterfly bull, Broad Scotch, from imported sire and dam, should prove attractive to those breeding bulls of high-class beef breeding or those from deep-milking strains to head dual-purpose herds.

RIVERSIDE HEREFORDS.

One of the best-equipped stock farms in Ontario is Riverside Farm, situated in Simcoe County, five miles from Coldwater Station, G. T. R. The new C. P. R. station on the Toronto-Sudbury line is only a short distance from the buildings, being built on the farm. In the herd at present are an extra choice lot of 42 head of thick, straight-lined, heavy-fleshed Hereford cattle, many of them weighing 1,600 lbs. The main foundation cow of the herd was Geranium 3rd 483, bred at the O. A. C., sired by Picture 2nd 421, dam Geranium, by the champion bull, Imp. Cassio, grandam Imp. Gerty. From this foundation, mainly, the present herd originated, the get of Tenderden 526 and Senator 854. The bulk of the young things now in the herd are the get of the Massive 2,360-lb. bull, Captain Jack 1380, winner of first at Toronto, got by Christopher 1274, dam Brenda 4th, by Actor. Among his get for sale are six young bulls from six to ten months old, an extra choice lot, as the invariable custom on this farm is to use the knife on all young bulls that do not come up to the standard, a custom that could be followed to advantage by breeders all over the country, as, without a doubt, too many of poor type are kept for breeding purposes, simply because they have a pedigree, the owners not seeming to realize that the inferior ones are worth more as steers than for bulls, besides the bother of keeping them in stables. The present stock bull is Cherry 8th of Ingleside, bred by H. D. Smith, sired by Bourbon Ingleside, dam Sylvan 4th of Ingleside. He is a bull of ideal form, and his calves are coming just about right. The owners of this splendid herd are Messrs. J. A. & D. C. Lovering, young men prominent in business circles, particularly in the lumbering trade, in which they have been eminently successful. During the last year they have shipped Herefords to different points in Ontario, Quebec and the Maritime Provinces with complete satisfaction in every case. Write them, to Coldwater P. O., Ont., or see their herd at their home.

A CLEAN RECORD.

It is a pleasure to us to refer our readers to the advertisement of the Western Real Estate Exchange, of London, which appears in this issue of "The Farmer's Advocate." Through the liberal use of printer's ink and the fair and square methods employed in conducting business, this firm is known throughout the length and breadth of Canada. As an evidence of their sincerity, we may quote a statement made by the president, Mr. Tennant. Said Mr. Tennant: "We do not expect to get for owners more than their property is really worth, but we do claim that by our methods of doing business the full and fair price of property can be obtained in a reasonable time. We devote our time, money and ability to selling and exchanging those properties which are really for sale, and to attain this end, employ over 200 agents." This is a most reasonable statement, and explains why the Western Real Estate Exchange is working to-day for clients secured when they first embarked in business.

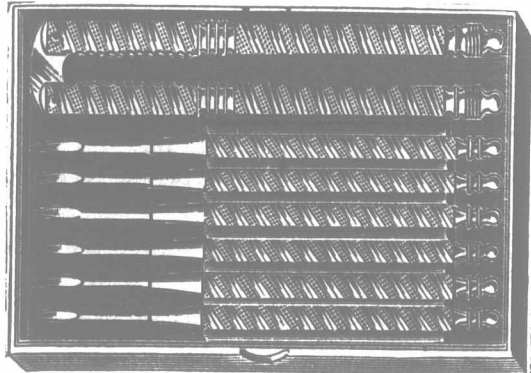
AXTELL, 2.12, DEAD.

Axtell, 2.12, the famous trotter and sire of trotters, that was sold for \$105,000 soon after taking his record of 2.12 as a three-year-old, died at Warren Stock Farm, near Terre Haute, Indiana, Aug. 20th, of spasmodic colic, aged 17 years.

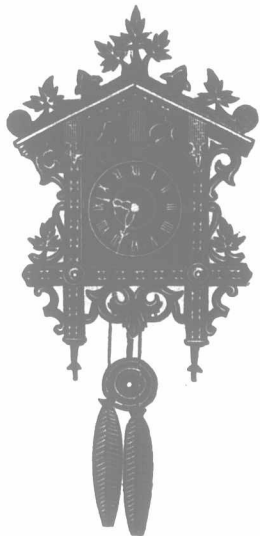
COMFORT SOAP "IT'S ALL RIGHT."

USE IT—For your own sake.
USE IT—For the soap's sake.
USE IT—For the sake of the premiums.

"COMFORT" is a pure, sweet, wholesome soap, dealing sudden death to dirt, without harming either tender hands or delicate fabrics. For wash-day, and every other day, you'll find it the quickest, easiest, CLEANEST soap you ever used. Take advantage of our liberal premium offers—cut the Trade Mark from every "Comfort" wrapper, and save them to exchange for any of the handsome articles in this list that may please your fancy.



Nut Set.—Consisting of pair of crackers and half dozen picks in box, as shown, silver plated serpentine pattern. New and popular. Free for 100 Comfort Trade Marks, or for 25 Trade Marks and 25c.



Cuckoo Clock.—New and popular. Dark walnut case, cottage style, carved trimmings, inlaid ornamentation, enamelled white wood hands and dial figures, day clock, hour and half hour call (cuckoo comes out every half hour), body 20 inches high and 14 inches wide, dial 5 inches, heavy chain and cone weights. This is a beautiful clock. Packed and shipped F. O. B. For 25 Comfort Trade Marks and \$4.00.



Boy's Watch.—Open faced, nickel case, hinged back, stem wind and set. Thoroughly tested. Gentlemen's regular size and as good a timer as father's. For 25 Comfort Trade Marks and \$1.00.



50 Comfort Trade Marks, or 10 Trade Marks and 15c.

Lady's Open Face Silver Watch.—Coin silver case, embossed front and back, hinged back, inside case, stem wind and set, fancy dial, hour, minute and second. For 25 Comfort Trade Marks and \$3.00.



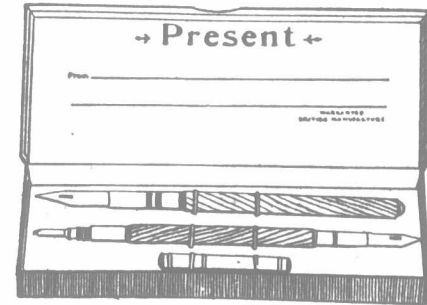
This fine Razor, fully guaranteed by us to give entire satisfaction. Free for 100 Comfort Trade Marks, or 25 Trade Marks and 25c

Splendid Fountain Pen.—One of the very best made. For 400 Comfort Trade Marks, or 25 Trade Marks and \$1.00.



This fine pair of 6 inch scissors free for 50 Comfort Trade Marks, or 25 Trade Marks and 10c.

Very useful **School Set** in a nice case, for 50 Comfort Trade Marks, or 10 Trade Marks and 15c.



Girls' School Bag, with handle to carry. For 100 Comfort Trade Marks, or 25 Trade Marks and 25c.

Boy's School Bag, with strap to go over shoulder. For 100 Comfort Trade Marks, or 25 Trade Marks and 25c.



Junior League Base Ball. For 50 Comfort Trade Marks, or 10 Trade Marks and 15c.



This fine **Mouth Organ** for 50 Comfort Trade Marks, or 10 Trade Marks and 15c.

A handsome **Leather Purse**, embossed, assorted patterns reliably made in the latest style, free for 100 Comfort Trade Marks, or for 25 Trade Marks and 25c.

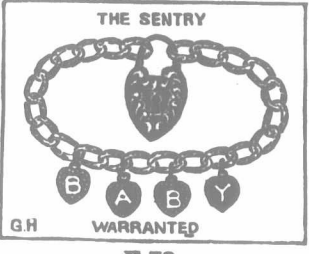
Shopping Satchel. Large size, 7 x 5 inches; of handsome black leather, with purse inside to match. Free for 200 Trade Marks or for 25 Trade Marks and 50 cents.



B 46—Circle Brooch Pin. Warranted ten years. Each pin contains 14 stones. Your choice of emerald, ruby, turquoise and Rhine stones, combinations. Sent for 50 Trade Marks, or 5 Trade Marks and 10c.

S 1—Gold Filled Dagger Stick Pin.—Warranted to wear ten years. Sent for 25 Comfort Trade Marks, or 5 Trade Marks and 10c.

F 78—Sterling Silver-plated, chased, Curb Chain Bracelet, for the little ones. Has four heart-shaped bangles, each engraved with initial, the combination spelling the word "Baby." Free for 50 Comfort Trade Marks, or 5 Trade Marks and 15c.



"Comfort" Doll.—Life size (8 feet high), pattern doll, unbreakable, and so light the smallest child can carry it. Head, hands and feet finished in colors; body dressing alone required. Full directions for making. 50 Comfort Trade Marks, or 5 Trade Marks and 15c.



Adjustable Shawl Strap.—This Adjustable Shawl Strap will fit any sized parcel—firmly made—a great convenience. Free for 50 Comfort Trade Marks.

TABLE SILVERWARE.

Every housekeeper who delights in nice tableware should take advantage of these offers. Every piece of silverware offered as a Comfort Soap premium is honestly made, with a fine heavy plate that will last wonderfully well. 6 **Silver-Plated Teaspoons** of pretty shape and popular design, free for 100 Comfort Trade Marks, or for 25 Trade Marks and 25c.

6 **Silver-Plated Dessert Spoons**, extra heavy and fine finish, for 25 Comfort Trade Marks and 50c.

6 **Silver-Plated Tablespoons**, extra heavy and fine finish, for 25 Comfort Trade Marks and 50c, or free for 200 Trade Marks.

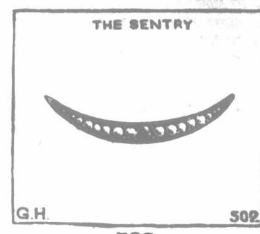
6 **Silver-Plated Forks**, splendid value, for 25 Comfort Trade Marks and 50c, or free for 200 Trade Marks.

6 **Silver-Plated Knives** of standard quality and tasteful design, for 25 Comfort Trade Marks and 75c.

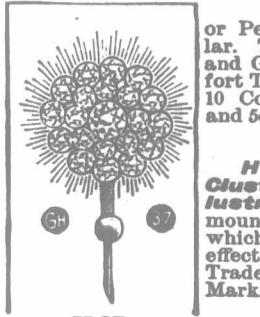
A 37.—**Gold-Plated, Hand-Painted, Enamelled Beauty Pin.**—3 pins to each set. The set sent for 10 Trade Marks. State color wanted.

T 30—Necklace, suitable for misses or babies. Has turquoise pin-head pendant suspended from each chain. Free for 50 Comfort Trade Marks, or 10 Trade Marks and 15c.

502—Solid Gold-Filled Crescent Brooch.—13 very choice imitation pearls, with turquoise stone in centre. This is a gem. 100 Comfort Trade Marks, or 10 Trade Marks and 25c.



59—3 Stones in Clover Leaf Setting.—Choice of Brilliants, Rubies, Turquoise, Amethysts, Emeralds or Pearls. Very popular. Two sizes—Ladies and Gentlemen's. 25 Comfort Trade Marks alone, or 10 Comfort Trade Marks and 5c.



H 37—Rhine Stone Cluster Hat Pin, full of lustre. The cluster is mounted on spiral spring, which gives it an elegant effect. Sent for 100 Comfort Trade Marks, or 25 Trade Marks and 25c.

Write us for a complete catalogue of the handsome premiums we offer. We will send it free of charge, and in it you will find a most tempting assortment of Jewellery, Silverware, Pictures, Books, Music, and Ornamental Trinkets to choose among.

DIRECTIONS FOR MAILING TRADE MARKS.

Cut out the necessary number of Trade Marks, as shown here, from your Comfort Soap wraps, and mail them to us with a note, telling exactly what you want. Fifty Trade Marks, with a note, can be mailed for a two-cent stamp, and don't fail to write your name and full address quite clearly. If sending more than 50 Trade Marks, just cut out the centre of the Trade Mark as shown (No. 2), and reduce weight, saving postage.



IN SENDING MONEY.

Amounts under \$1.00 may be sent in stamps or postal note. Larger sums should be forwarded by P.O. Order, Express Money Order, Bank Draft, or Registered Letter. We cannot be responsible for money sent in unregistered letters. This list of premiums is offered for a limited time only. We reserve the right to withdraw any article enumerated, in which case you may make another choice. Address all letters, Money Orders, Trade Marks, etc., to

COMFORT SOAP, TORONTO.

THIS WASHER MUST PAY FOR ITSELF

A man tried to sell ME a horse once. He SAID it was a fine horse and had nothing the matter with it. I wanted a fine horse. But I didn't know anything about horses much. And I didn't know THE MAN VERY WELL EITHER.

So I told him I wanted to TRY the horse for a month. He said, "All right, but PAY ME FIRST, and I'll give back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse WASN'T "All right," and that I might have to whistle for my money if I once parted with it. So I didn't BUY THE HORSE, although I wanted it badly. Now THIS set ME thinking.

You see, I make Washing Machines—the "1900 Junior Washer."

And I said to myself, lots of people may think about my Washing Machines as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell ALL my Washing Machines by mail. (I sold thousands of them that way already.)

So, thought I, it's only fair enough to let people try my Washing Machines for a month before they pay for them, just as I wanted to TRY THE HORSE.

Now I KNOW what our "1900 Junior Washer" will do. I know it will wash clothes WITHOUT wearing them, in less than HALF the time they can be washed by hand, or by any other machine.

When I say HALF the time I mean HALF—not a LITTLE quicker, but TWICE as quick.

I know it will wash a tub full of very dirty clothes in SIX minutes. I know no OTHER machine ever invented can do that in less than twelve minutes, without wearing out the clothes.

I'm in the Washing Machine business for keeps. That's why I KNOW these things so surely. Because I have to know them, and there isn't a Washing Machine made that I haven't seen and studied.

Our "1900 Junior Washer" does the work so EASY that a child can run it almost as well as a strong woman. And it DOESN'T WEAR the clothes, nor fray edges, nor break buttons, the way all OTHER washing machines do.

It just DRIVES SOAPY WATER CLEAR THROUGH the threads of the clothes like a Force Pump might.



If people only knew how MUCH hard work the "1900 Junior Washer" SAVES every week for ten years—and how much longer their clothes would WEAR, they would fall over each other TRYING to buy it.

So said I to myself, I'll just do with my "1900 Junior Washer" what I wanted the man to do with the horse. Only I won't

WAIT for people to ask me; I'll OFFER to do it first, and I'll "make good" the offer every time. That's how I sold thousands of Washers.

Let me send you a "1900 Junior Washer" on a full month's FREE trial! I'll pay freight out of my own pocket. And if you don't want the machine AFTER you've used it a month, I'll take it back and pay the freight THAT way, too. Surely THAT'S fair enough, isn't it?

Doesn't it PROVE that the "1900 Junior Washer" must be all that I say it is? How could I make anything out of such a deal as that if I hadn't the FINEST thing that ever happened for Washing Clothes—the quickest, easiest and handiest Washer on Earth. It will save its whole cost in a few months in WEAR and TEAR on clothes alone. And then it will save 50 cents to 75 cents a week over that in Washerwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it OUT OF WHAT IT SAVES you. If it saves you 50 cents a week, send me 50 cents a week till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Now, DON'T be suspicious. I'm making you a simple, straightforward offer that YOU can't risk anything on anyhow. I'm willing to do all the risking myself! Drop me a line to-day, and let me send you a book about the "1900 Junior Washer," that washes Clothes IN SIX MINUTES. Or I'll send the machine on to you if you say so, and TAKE ALL THE RISK MYSELF.

Address me this way:
J. C. BACH, Manager of the "1900" Washer Co., Dept. 20, 355 Yonge St., Toronto, Canada.

Don't delay. Write me a post-card NOW, while you think of it.

DON'T FAIL TO SEE OUR EXHIBIT IN THE MANUFACTURERS' ANNEX BUILDING, TORONTO EXHIBITION

HORSE HIGH

All No. 9 Wire

BULL STRONG

All No. 9 Wire

PIG TIGHT

All No. 9 Wire

Peerless Woven Wire Fence

The fence to buy is the fence that will turn any kind of stock and last the longest. When we say that fence is the Peerless Woven Wire Fence we have plenty of good reasons why. We want you to know we have a fence that is horse high, bull strong, pig tight. That means a fence made of material that is genuine in quality and so constructed that it will stand double the strain ever required of it. That's the Peerless. The makers of

nor sidewise, making the most rigid, solid and firm fence possible to build. Big, heavy galvanized hard steel wire perfectly uniform in size is used throughout. It's the economical fence, the life-time fence—the fence upon which you can always rely. Let us send you more reasons why—a post card will bring you our fence book that's full of good common sense fence advice—fence facts that will save you money. It's free, address

The Banwell Hoxie Wire Fence Co., Ltd., Dept. B, Hamilton, Ont.

IT'S ALL IN THE LOCK WILL TURN ANY KIND OF STOCK

Save all your Cream

U. S. Separator is biggest money maker because it gets more cream than any other. Holds World's Record for clean skimming, and can be easily regulated to skim thick or thin cream as you desire. Cream represents cash—you waste cream every day if you are not using a

U. S. CREAM SEPARATOR

Has only 2 simple parts inside bowl—easily and quickly washed. Low supply tank—easy to pour milk into—see picture. All working parts inclosed, keeping out dirt and protecting the operator. All parts accurately made, automatically oiled and light running. Many other exclusive advantages, all fully described and finely illustrated in our big, handsome, new catalogue. Write for copy today, do it now while you think of it. Be sure to ask for catalogue number 110, and address

Vermont Farm Machine Co.,

Bellows Falls, Vt.

Prompt deliveries of U. S. Separators from warehouses at Auburn, Me., Boston, N. Y., Toledo, O., Chicago, Ill., LaCrosse, Wis., Minneapolis, Minn., Sioux City, Ia., Kansas City, Mo., Omaha, Neb., San Francisco, Cal., Portland, Ore., St. Louis, Mo., Montreal, Que., Hamilton, Ont., Winnipeg, Man. and Calgary, Alta.

Address all letters to Bellows Falls, Vt.

445

GOSSIP.

R. H. Harding writes: "My Dorsets have done exceedingly well this season. The lambs, although young, promise to be the best lot I have ever raised. They are sired by the Chicago champion ram. I have a few nice Shorthorn heifers in calf to Dainty Count that I will sell at a bargain, if taken soon. I hope to meet my old friends at Toronto and other leading fall fairs in the near future."


BONNYCASTLE'S SHORTHORNS.

One of the oldest-established Shorthorn herds in Ontario is that owned by Mr. Chas. Bonnycastle, Campbelford P. O. and Station, on the G. T. R. branch, between Peterborough and Belleville. The herd at present numbers 60 head of Claras, Miss Ramsdens, and others, tracing to Imp. Anchovy 2101. The present stock bull is the Bruce Mayflower, Pride of Day 55192, by the Fortuna bull, Merry Master 50594, a son of the Marr Roan Lady bull, Merryman (imp.), dam Morning Sunshine (imp.), by Pride of Morning. His predecessor, and the sire of nearly all the younger things, was Red King 2nd 41746, a Crimson Flower, by Riverside Stamp 23539, dam Crimson Edith, by Crown Prince 19637. This bull proved himself a splendid sire, and it certainly was a loss to send him to the block. Among the younger things for sale are nine yearling heifers, six two-year-olds, three three-year-olds and about twenty calves, bred on the above Scotch and dual-purpose lines, among which are some extra good ones, and every one calculated to do good for their owners. The three three-year-olds are Miss Ramsdens, and three of the others—a calf, a one- and a two-year-old—are out of the Clara-bred Imp. Countess 5th, a daughter of the great Challenge. In bulls, there are three yearlings and a few younger ones. The yearlings can be bought very right, and they are the sort that is needed all over the country. The Cotswolds number about 55 head, an extra large, well-covered lot. This season's crop of lambs are growing grandly, and later will all be for sale. In Berkshires, there is on hand a few about ten weeks of age. Mr. Bonnycastle reports trade as very satisfactory; enquiries from near and afar continually coming in for stock, and sales are frequent.

ROSE COTTAGE SHORTHORNS.

The Shorthorn herd that of late years has pretty nearly won the pennant in the production of high-class prizewinners is Rose Cottage herd, the property of Mr. H. K. Fairbairn, whose P. O. and station is Thedford, on the Sarnia division of the G. T. R. The phenomenal success of scions of this herd as prizewinners is mainly due to the superior impressiveness of the grand old stock bull, Royal Prince, bred by the Watt Bros., sired by Imp. Royal Sailor, dam Minnie of Linden 2nd (a Crimson Flower), by Imp. Lansdowne. Individually, he is one of the very deep, thick-fleshed, short-legged sort—an ideal type of the up-to-date sort. His lieutenant in service is Sir Tatton Sykes, a Roan Duchess, sired by Sir Tatton 28797, dam Lady Minto of Brookdale, by Maxim, a son of Imp. British Flag. This bull is the sire of a rare nice yearling heifer that bids fair to equal the illustrious \$2,500 heifer, Queen Ideal, that was bred in this herd. She is out of Matchless 16th. Another half-sister, and a beauty, is a red six-months-old heifer, by Royal Prince. The breeding cows represent the Crimson Flower, Rosalind, Matchless, Village Maid families, and the tribe that has produced so many high-class show animals, the Maids of Sylvan, which trace back to Lady Fanny (imp.). As a sample of the many high-priced and show animals bred by Mr. Fairbairn, we mention Fair Queen, the many times grand champion; Queen Ideal, first prize and junior champion several times; the bull calf, Marksman, that sold for \$500; the heifer, Florence, that sold for \$250, also the bull and three of his get, and the cow and two of her progeny that won first at Toronto last fall. For sale are several heifers from one to three years of age—crackers, every one—and several young bulls from six to nine months of age, one a full brother to Queen Ideal, and a winner sure. This is an exceptionally nice offering, as the past success of the herd guarantees.

Fistula and Poll Evil



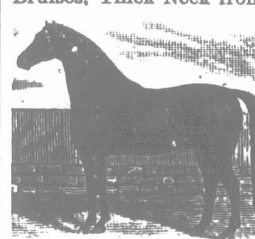
Any person, however inexperienced, can readily cure either disease with Fleming's

Fleming's Fistula and Poll Evil Cure

—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.

FLEMING BROS., Chemists,
45 Church Street, Toronto, Ontario

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 blistering. 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. Fredrick A. Page & Son,** 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: **om J. A. JOHNSTON & CO., Druggists,** 171 King St. E., Toronto, Ont.

The Repository

BURNS & SHEPPARD, Props.



Ger. Simcoe and Nelson Sts., Toronto

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

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

Shire Horses



We breed the very best and soundest, which from birth are kept in their natural condition, neither forcing nor overfeeding for showing purposes. Canadian buyers visiting England are invited to call and see what we have.

No fancy prices, and all delivered free Liverpool landing stage. Correspondence invited.

Station: Aithorp Park, L. & N.-W. Ry.

JOHN CHAMBERS & SONS,
Holdenby, Northampton, England

THE HAYES BULLETIN

DEVOTED TO
ASTHMA & HAY-FEVER.

No more blind horses—For Specific Ophthalmia, Moon Blindness and other sore eyes. **BARRY CO., Iowa City, Iowa,** have sure cure.

Advertise in the Advocate

GOSSIP

Mr. John Racey, Jr., Lennoxville, Que., breeder of Shorthorn cattle, Shropshire sheep, Berkshire pigs, writes: "Our this year's crop of calves are by Nonpareil Victor 2nd =34634= and Frosty Morning =44973=; the latter is by Imp. Joy of Morning; the former is, as his name implies, a Nonpareil, and a well-bred one. We are well pleased with his calves. As a rule, they are smooth and thick-fleshed, yet growthy. We recently sold to Mr. Arthur Ward, of Lennoxville, Que., the young bull, Grange Champion, by Nonpareil Victor 2nd, at thirteen months of age, whose weight, without any forcing, was 1,100 lbs. Our Shropshire lambs are principally by a big, growthy son of Imp. Marauder, and are a very nice lot, having good size and form, and are mostly well covered. We hold them at very reasonable prices. Their dams are by such rams as Miller's 4214 (imp.), Mansell's 8 (imp.), Windsor 157268, Miller's 2995, and others. We have sold our boar pigs, but have a few sows still on hand, and expect some fall pigs later on."

PLASTER HILL SHORTHORNS, LINCOLNS AND BERKSHIRES.

For a great many years, Haldimand County, Ont., has been noted, and rightly so, as the home of many herds of high-class pure-bred cattle, and, although it has amply deserved the honor, no small amount of that honor is due to the high standing of Plaster Hill herd, the property of F. Martindale & Son, the owners of Plaster Hill Stock Farm, beautifully situated on the banks of the Grand River, a short distance from the village of York, and five miles south of Caledonia, G. T. R. This excellent herd now numbers about 40 head of Julius, Lavinias, Duchess of Clarence, Mayflowers, Victorias, Beautys, Maras and Waterloo Daisys, headed by the massive, low-down, heavy-fleshed bull, Bandolier 40106, bred by John Miller & Sons, Brougham, sired by Sirius (imp.), dam Red Bessie 2nd (imp.), by Emancipator. Bandolier has proven one of the most potent sires in the country, a number of his get being prizewinners, and, almost without exception, his progeny are developing into the thick, even sort so eagerly sought after. His lieutenant in service is Marquis of York 61680, bred by W. C. Edwards & Co., sired by that prince of sires, Imp. Marquis of Zenda, dam Bessie, by Imp. Scottish Knight. He is a roan yearling, and a rare good one, thick, smooth and even, and will be sold well worth the money. The females are up-to-date, the bulk of them being of the thick, level-backed, short-legged kind, and nearly all the cows are dairy workers of a high order, several being daughters and granddaughters of that great cow, Waterloo Daisy, winner of first prize at World's Fair, Chicago, and having to her credit a seven-day butter record of 18 lbs. In the herd at present is Bella of York, Rosella 2nd and Oneida Maid 2nd, that have made 11 lbs. of butter in seven days. Many in the herd are milking from 45 to 50 lbs. of milk a day, and, contrary to the general belief, these cows are as good types of the thick sort as can be seen anywhere. For sale are eight heifers from one to two years of age, a mighty nice lot, and several heifer calves, also six bulls from four to eleven months of age, and one yearling, out of a Waterloo Daisy cow, and by Bandolier.

The Lincolns are as good as the breed produces, the lambs showing phenomenal growth, and are for sale as well as a number of one- and two-shear ewes.

The Berkshires are of the same high class as the other stock, the Martindales believing that the best is just as easily and cheaply raised as common ones. The stock boar is a son of Imp. Stratton Kingclere, and out of Imp. Kingston Rose. His type is perfect, and he is choke-full of quality. The sows are of the same high order, true to type, heavy boned and large. For sale are young stock of both sexes. Write the Messrs. Martindale, to York P. O. You can depend on what they tell you.

Gombault's Caustic Balsam

The Worlds Greatest and Surest
Veterinary Remedy
HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.
Supersedes All Caustery or Firing. Invaluable as a CURE for

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REMOVES
BUNCHES or BLEMISHES, SPLINTS, CAPPED HOCK, STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINARY REMEDY
Always Reliable. Sure in Results.



None genuine without the signature of **The Lawrence-Williams Co.**
Sole Agents for the U.S. & CANADA. CLEVELAND, O.

THE BEST FOR BLISTERING.
I have used GOMBHAULT'S CAUSTIC BALSAM quite a good deal, and for a blister it's the best I ever used. I wish your remedy every success.
CHAS. MOTT, Manager,
Mayfield Stud Farm, Leesburg, Va.

CURED CURB WITH TWO APPLICATIONS.
Have used your GOMBHAULT'S CAUSTIC BALSAM to cure curbs. I blistered it twice, and there is no sign of it any more. The horse is as good as ever.—**DAN SCHWES,** Evansport, Ill.

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TORONTO, ONT. CLEVELAND, OHIO.

HODGKINSON & TISDALE,

BEAVERTON, ONT.



Importers and Breeders of Clydesdale and Hackney Horses. We have on hand at present the choicest specimens of Clydesdale fillies in Canada, also a few extra fashionably-bred young Clyde stallions. People wanting good ones should see these before buying. Our farm, "Simcoe Lodge," is situated near Beaverton, on James Bay and G. T. Railways. Long-distance 'phone No. 18. Visitors will be met at Beaverton on notification.

T. H. HASSARD

Millbrook, Ont.




My latest importation comprises 40 head of Clydesdales, Percherons and Hackneys from the most noted sires in Scotland, France, and England. They are an exceedingly choice lot, combining size, style, action and quality. Intending purchasers will consult their own interests by seeing this lot. Prices and terms to suit.

MILLBROOK STATION AND P.O.

My New Importation of


Clydesdales & Hackneys



Have just arrived in their own stables. I want to point out to the breeders of Ontario, Manitoba, British Columbia, that without doubt I have the best consignment of Clydesdales and Hackneys that I have ever handled. Combining size, action and quality, I think I am quite safe in saying that they are the best lot ever brought by one importer to Canada. My Clydesdales consist of stallions aged 2, 3, 4 and 5 years. Fillies aged 1, 2 and 3 years. Hackneys are 2, 4 and 5 years old. Many of them were prizewinners this year and last in some of the leading shows in Scotland and England. Parties wishing anything in my line will save money by seeing my stock and getting prices before buying elsewhere.

THOS. MERCER, MARKDALE, ONTARIO.

DUNROBIN CLYDESDALES.



14 imp., 5 Canadian-bred; from 1 to 5 years of age. The get of such cracks as Everlasting, Acme, Mains of Airies, Goldfinder, Prince of Roxborough, Olympus, Royal Blend, Up-to-Time, Sentry, Rozelle, and Carbineer. All three years and over in foal. A high-class lot, with size and quality. Will be sold worth the money.

DONALD GUNN & SON, BEAVERTON P.O. & STN.
A number of choice young Yorkshires, both sexes. Phone connection.

HARVEST HELP WANTED

\$12 Going **\$18** for
Trip Return



in Manitoba
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GOING DATES—

- SEPT. 5** Stations south of, but not including main line, Toronto to Sarnia, including Toronto.
- SEPT. 7** Main line Toronto to Sarnia and Stations north, except north of Cardwell Junction and Toronto on North Bay Section.
- SEPT. 8** From all points Toronto and east to and including Sharbot Lake and Kingston, and north of Toronto and Cardwell Junction on North Bay and Midland Divisions.

One way second class tickets will be sold to WINNIPEG only. Representative farmers, appointed by Manitoba and Saskatchewan Governments, will meet laborers on arrival at Winnipeg. Free transportation will be furnished at Winnipeg to points where laborers are needed. A certificate is furnished when each ticket is purchased, and this certificate, when executed by farmer, showing that laborer has worked thirty days or more, will be honored from that point for a second class ticket back to starting point in Ontario, at \$18.00, prior to Nov. 30th, 1906. Tickets will be issued to women as well as to men, but will not be issued at half fare to children. Tickets are good only on special Farm Laborers' trains. For full particulars see nearest C.P.R. ticket agent, or write C. B. Foster, D. P. A., C. P. R., Toronto.

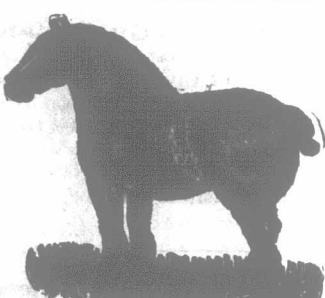


30 PERCHERONS

Also Shires, Hackneys and Clydes and 12 Percheron Mares (3, 2 and 1 year old) have just arrived with our new importation from Scotland, England and France, of high-class stallions and mares. Many of them prizewinners in their native lands. Bred by the best breeders. Percherons, blacks and grays, weighing 1,600 to 2,000 pounds. Shires at two years old weighing 1,700 pounds. Clydes, bays and blacks, 4 and 5 years old, weighing 1,800 to 2,000 pounds, bred by the best in Scotland. Our Hackneys are bays and chestnuts, combining size, quality and breeding that cannot be beaten. These horses can be seen at Toronto and London fairs, and all for sale at reasonable prices.

HAMILTON & HAWTHORNE, Simcoe, Ont.

88 miles south-west of Toronto on the G. T. R.



GRAHAM BROS.

"Calmbrogie," CLAREMONT,

IMPORTERS OF

HACKNEYS and CLYDESDALES

Established 30 years, and winners at all large shows in Canada and United States. Best of stock always on hand for sale. New importation of Royal winners just arrived.



Graham & Renfrew's CLYDESDALES and HACKNEYS

Our Clydes now on hand are all prizewinners, their breeding is gilt-edged. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge Street cars pass the door every hour. Phone North 4483.

GRAHAM & RENFREW, BEDFORD PARK, ONT.

42 Imp. Clydesdale Fillies and One Stallion



Just arrived from Scotland, representing the blood of Scotland's greatest sires; one, two and three years of age. Several of them in foal. A number of them Old Country winners. Size and quality was my standard. They are all for sale at living prices.

Geo. A. Brodie, Bethesda P. O., Stouffville Sta.

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CLYDESDALES AND FRENCH COACHERS, IMP.



Scottish and Canadian winners at the leading shows of both countries. The Clydes represent the blood of such noted sires as Baron's Pride, Up-to-Time, Royal Favorite, Ethiopia and Acme. They combine size, quality and action. The French Coachers are a big, flashy, high-stepping lot, and are winners in both France and Canada. Our prices are right, and our horses as good as the best. Long-distance telephone.

ROBT. NESS & SON,

Howlok, Quebec.

When Writing Please Mention Advocate

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office.

"THE NEW EARTH: A Recital of the Triumphs of Modern Agriculture in America," by W. S. Harwood, is a popular, enthusiastic, clearly-printed and neatly-illustrated recital of the achievements of scientific agriculture in the United States (instead of "America," as the sub-title erroneously reads). The work is for the most part an exposition and appreciation of the results attained by the agricultural experiment stations, agricultural colleges and bureaus of the National Department of Agriculture of the Republic. Among the subjects touched upon are the relation of the physical and chemical properties and the bacteriological content of soils to their adaptability to various crops; the improvement of the soil by inoculation with nitrifying bacteria; the improvement of grains, fruits, etc., by breeding and selection, with a special chapter upon Luther Burbank, the Californian "wizard"; the discovery and use of enemies of insect pests; modern forestry; modern dairying; animal breeding and feeding; reclamation of desert areas by irrigation and by "arid farming" with grains and vegetables specially adapted to dry climates; foods: their relative nutritive values, and their adulteration; co-operation amongst farmers in buying and selling. The intense patriotism of the author, at time verging upon "spread-eagleism," will be readily pardoned by his Canadian readers, themselves, for the most part, very patriotic, but suggests the possibility of a more-detailed and, perhaps, more-profound work upon the same subject—the triumphs of modern agriculture—from an international standpoint. The book will be an inspiring one to put into the hands of the boy who finds farm life dull or believes it narrow or unprofitable. Order through this office; price, \$1.75, postage extra.

GOSSIP.

ARLINGTON SHORTHORNS AND LEICESTERS.

Three and a half miles from Hagersville Station, G. T. R., is the splendid home of Mr. John Lishman, a young man rapidly coming to the front as a breeder of Shorthorn cattle and Leicester sheep. The Shorthorns represent the Britannia, Waterloo Daisy and Lavinia strains, all noted for their extra dairy qualities, one of them, Daisy Princess 45902, by Kinpliar of York 24504, being a granddaughter of the Chicago World's Fair winner, Waterloo Daisy, that had a seven-day butter record of 18 lbs., and she is not only a wonderful producer herself, but is a show cow of no mean order. Her two-year-old daughter, by Bandolier 40106, is another extra good one that has a calf at side, by the old stock bull. Daisy Princess is now suckling an eight-months-old bull calf, by the stock bull, that is a good one, and being from such a rich-producing family should prove a profitable sire. Another good one is Britannia 42nd, by Isabella's Heir 19550, that has a yearling and an eight-months-old daughter, both by Imp. Rosicrucian, and a pair of show heifers they are. Lady Gill 36152, by Ring-leader 15514, is a Lavinia-bred cow, and is the dam of a three-year-old and a yearling heifer and an eight-months-old roan bull calf that is a cracker. All told, this is a splendid bunch of up-to-date Shorthorns. The main stock bull, and the sire of most of the younger ones, is Christopher's Heir, by Imp. Christopher, dam Britannia 34th, by Earl of Goodness 20th 8269. He is an extra thick, well-balanced bull, and an excellent sire. His lieutenant in service is President 59533, by Imp. Rosicrucian of Dalmeny, dam Rose of the Valley 21647, by Baron Evenlode. He is a roan yearling, bred by James Douglas, Caledonia, a rare good kind—low down, thick, mossy and even. The Leicesters are an extra good lot. Representatives of this flock have won at all the leading Canadian shows, and among this season's lambs are certain winners. For sale are ram and ewe lambs. Address, Hagersville P. O., Ont.



SYNOPSIS OF CANADIAN NORTH-WEST

HOMESTEAD REGULATIONS.

ANY even numbered section of Dominion Lands in Manitoba, Saskatchewan and Alberta, excepting 8 and 36, not reserved, may be homesteaded by any person who is the sole head of a family, or any male over 18 years of age, to the extent of one-quarter section of 160 acres, more or less.

Entry may be made personally at the local land office for the district in which the land is situated.

The homesteader is required to perform the conditions connected therewith under one of the following plans:

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

(2) If the father (or mother, if the father is deceased) of the homesteader resides upon a farm in the vicinity of the land entered for the requirements as to residence may be satisfied by such person residing with the father or mother.

(3) If the settler has his permanent residence upon farming land owned by him in the vicinity of his homestead, the requirements as to residence may be satisfied by residence upon the said land.

Six months' notice in writing should be given to the Commissioner of Dominion Lands at Ottawa of intention to apply for patent.

W. W. CORY,

Deputy of the Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.

TALKING PARROTS

From \$5 up. Shipped safely to any point by express. Write for price list. We make specially low prices to get these birds in all parts of Canada to advertise.

COTTAM BIRD SEED
38 Bathurst St., London, Ontario.

BROXWOOD HEREFORDS.

A few choice bull calves from my imported stock.

R. J. PENHALL, NOBER P. O., ONT.

THE SUNNYSIDE HEREFORDS

Twelve high-class bull calves and 4 yearling and 2-year-old bull, we will place at a price that will move them quick. Some choice cows and heifers are yet left for sale. Address: A. F. O'NEIL, Maple Grove P. O. or M. H. O'NEIL, Southgate P. O. Iderton Sta., L. H. & B.; Lucas Sta., G. T.

FOREST VIEW FARM HEREFORDS

Four bulls from 8 to 18 months old; prizewinners and from prizewinning stock. Several heifers bred on the same lines; choice individuals, for sale. JOHN A. GOVENLOCK, Forest Sta., and P. O.

HEREFORDS—We are now offering a few thick, smooth young bulls and a number of females—a low-down, even, beefy lot. If in want of something extra good, correspond with us. We can please you. J. A. LOYERING, Coldwater P. O. and Sta.

Aberdeen-Angus bull for sale, Black Diamond, No. 826, 3 years old this spring. A good individual and extra stock-getter; has never been beaten in showing. Price reasonable. Also one Chester White boar, old enough for service. A. G. SPAFFORD, Compton, Que.

PURE SCOTCH

SHORTHORNS

Herd bulls: Imp. Prime Favorite -45214-, a Marr Princess Royal.

Imp. Scottish Pride -36106-, a Marr Rean Lady.

Present offering
2 imported bulls.
15 young bulls.
10 imported cows with heifer calves at foot and bred again.
20 one- and two-year-old heifers.

Visitors welcome. New catalogue just issued.

W. G. PETTIT & SONS, Freeman, Ont.

Burlington Jct. Sta., Long-distance telephone in residence.



SHORT HORNS.

We have for sale several young heifers and cows, which we are offering at a bargain; also two young bulls, one by Derby Imp, our noted bull. Young Derby Co., Box 856, Owen Sound, Ontario.

MAPLE HILL STOCK FARM—Scotch Shorthorns of the best families. Young stock for sale of either sex, sired by the gray-breast bull, Wanderer's Star -58585-. Wm. G. Elliott & Sons, Guelph, Ont.

Galt Sure Grip Shingles



are made of best galvanized steel, and will not rust; are more quickly laid than any other, and are **fire, lightning and storm proof**. Our shingles grip tight, lie close, do not warp, and when properly applied will outlast any other roof. **Best roof made to-day.**

Worth knowing more about.
Write for Catalogue and Classic Kids Booklet.
This is the Sheet Metal Age.

GALT ART METAL CO., Ltd.
GALT, ONT.

WITH OUR

STOCK WATERING BASINS



You have a constant, pure and even-temperature supply of water for your cattle. They prevent disease contagion.

They are strong, durable and easy to install.

They are made of cast iron, and either coated or galvanized.

Write for prices to

C. RICHARDSON & CO., Box 500. ST. MARY'S, ONT.

WHITMAN'S "WORLDS" LARGEST & MOST PERFECT GUARANTEED TO ALSO LARGE LINE FIRST CLASS SEND FOR WHITMAN AGRI. CO.

VICTORIOUS IN USE THE WORLD OVER

STANDARD "BALING PRESSES" LINE IN AMERICA. HAVE NO EQUAL AGRICULTURAL MACHINERY CATALOGUE. ST. LOUIS, MO.

Received the **GRAND PRIZE**, highest award, on Belt and Horse Presses, World's Fair, St. Louis.

Shorthorns

ARTHUR JOHNSTON

Greenwood, Ont.,

- Offers for sale, at moderate prices,
- 7 Imported Cows and Heifers (calves at foot).
 - 11 Yearling Heifers (all Scotch).
 - 2 Yearling bulls, including a Marr Clara.
 - 1 Crimson Flower, and One Daisy.

KENWOOD STOCK FARM.

SHORTHORNS.

Headed by (Imp.) Jilt Victor—45187—, 10 grand young bulls; also heifers; from imp. and home-bred cows, for sale. Choice Lincoln sheep; Berkshire and Tamworth hogs offered.

HAINING BROS., Highgate, Ont. Kent Co.

SHORTHORN BULLS

FOR SALE

1 roan calf, 15 months old, of the Duchess of Gloster family.
1 roan, two years old, from imp. sire and dam.
Also a number of good registered Clyde mares.

JOHN MILLER, Brougham, Ont.

Advertise in the Advocate

SHORTHORNS AND BERKSHIRES.


For sale: 2 very fine pure Scotch bulls fit for service; also 2 boars of bacon type fit for service, and grand young sows bred to imp. boar. 25 males and females (Berks.) 2 and 3 months old.

S. J. PEARSON, SON & CO.,
MEADOWVALE, ONT.
Stations: Streetsville and Meadowdale, C. P. R.

Shorthorns, Clydesdales and Shropshires.

In Shorthorns we have 100 head to select from, of both sexes and all ages. No fancy prices asked. Several choice young Clyde mares and fillies 75 Shrop. lambs of both sexes. Small profits and quick returns is our motto.

EDWARD E. PUGH,
Claremont P. O. and Station.
Telephone connection.



J. BRYDONE.
Breeder of pure Scotch Shorthorns. Breeding females imported. Headed by the pure Cruikshank (Duthie bred) bull, Sittytown Victor (Imp.)—50083— (87337). 11 young bulls from imp. dams for sale. Prices reasonable. Telegraph, Telephone, R. R. Sta. and P. O., Milverton.

For Sale: Scotch Shorthorn

Young bulls and heifers.

H. K. FAIRBAIRN, THEOFORD, ONT.
Rose Cottage Stock Farm.

BONNIE BURN SHORTHORNS
For immediate sale: Two 2-year-old heifers, safe in calf; four bulls, two of them out of imp. dam. All by imp. sire. Shropshires, both sexes—lambs and shearlings. Berkshires, both sexes, by imp. sire and dam. D. H. Russell, Stouffville P. O. & Sta.

ARLINGTON Shorthorns and Leicesters.—Present offering: 4 choice young bulls (8 mos.) and 2 heifers rising 2 years. Sired by imp. Trout Creek Guard and Christopher's Heir, Vol. 20. All out of heavy-producing dams. An extra choice lot. Also ram and ewe lambs.
John Lishman, Hagersville P.O. & Sta.

GOSSIP.

\$3,000 FOR A BERKSHIRE BOAR.
F. W. Morgan, of Wisconsin, recently purchased, from James Qurollo, of Missouri, the Berkshire boar, Lord Bacon, for \$3,000. It was from the same breeder that A. J. Lovejoy & Son, Roscoe, Ill., bought the now famous sire, Masterpiece, which, after two years' use in their herd, they sold to W. S. Corsa, Illinois, for \$2,500. Lord Bacon is a grandson of Masterpiece, and is described as a most promising pig. The price paid for him establishes a new record for the breed.

HODGKINSON & TISDALE'S CLYDESDALES AND HACKNEYS.

The old-reliable firm of Hodgkinson & Tisdale, of Simcoe Lodge, Beaverton, Ont., the well-known importers and breeders of Clydesdales and Hackneys, are again to the front with a bunch that is just a little better than they have ever had together before, which is saying a great deal, for no firm in the business has won so many prizes at Toronto on Canadian-bred horses as they. Still at the head of their stud is the grand-quality stallion Royal Baron, the champion son of Baron's Pride, grandson of Mount Royal, and great-grandson of Golden Treasure. Few horses have as brilliant a show record as Royal Baron. Before coming to Canada, he won second at the Royal, first at the Highland, and at Aberdeen same year. First and championship at the Highland next year. In Canada, he won 1st at Toronto, two years; 1st at Ottawa, one year, and 1st at International, Chicago, one year, and is still in show shape and bloom. Last year a filly of his got won first at the Royal and H. A. S. S., and we expect to see his get win this year in Toronto. Royal Prince (3802) is a bay five-year-old, by The Royal Standard, dam Highland Queen, by Imp. Warrior, grandam imported, by Lord Erskine. He is a big, flashy horse, with a stylish top, on perfect underpinning, but is never seen at his best until he goes, and such action! MacKenzie 4798, a bay two-year-old, by Imp. Foremost, dam Royal Princess, by The Royal Standard (imp.), grandam Imp. Queen's Own, is a large, smooth, even-quartered and handsome colt, having abundance of quality, and will get his share of the ribbons this fall sure. In females, there is Imp. Fifeshire Lass, Vol. 29, two years old, by Time Enough, dam by Mains of Airdies. She is large, full of Clydesdale character, has style and quality, and moves like a machine. She won second at Gatehouse and Sanquhar, and third at Kilmarnock this year. Silver Queen is a bay two-year-old, by Royal Favorite, dam by Baron's Pride. She was never shown in Scotland, but is one of the very smooth-quality kind, on ideal legs and feet, and will, no doubt, come well up at the leading shows this fall. Her full sister is Queen's Maid, a brown yearling, a top-notch all over, has size, style, action and quality, and it will take a cracker to beat her. In Canadian-bred mares is Dulcis 6175, bay two-year-old, by Imp. Foremost, dam Moss Rose, by Imp. Blucher, grandam by Boydston Boy. She is an extra good filly, hard to fault, and acts remarkably well—a show filly. Minnie, by Imp. Lewis Gordon, dam by Imp. Blucher, is a bay, a very thick-fleshed mare, on short legs, and has lots of quality. She has a horse colt, by Royal Baron, that we look to win this fall, as he is certainly a rare good one.

In Hackneys, at the head is the model aristocrat, Storm King 180, a brown, five years old, by Imp. Lord Rosebery, dam Imp. Trinkett, by Fireaway. Last year, he won fourth at Toronto in a very strong class. He is a perfect type of the up-to-date Hackney, and a wonderful stock horse, as his colts are crackers all around. Wild Cherry 240 is a brown four-year-old, by Imp. Squire Rickell, dam Imp. Wild Mint, by Confidence. She won second at Toronto last year, which is all that need be said of her individuality or action. She has a filly colt, by Storm King, that is good for sore eyes to look at—a perfect little picture. Look up these horses at Toronto Exhibition. They are for sale, and you can depend on a square deal with this firm. The farm is connected with long-distance phone No. 18, Beaverton, Ont.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Orb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser
describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists,
45 Church Street, Toronto, Ontario

GEORGE D. FLETCHER,

Breeder of Scotch Shorthorn Cattle and Yorkshire Pigs.

Our herd comprises such noted Scotch families as Orange Blossoms, Missies, Crimson Fuchsinas, Nonpareils, Mysies, etc., and is headed by the noted Duthie-bred bull, Joy of Morning, which sold for \$2,000, and also won first prize at Dominion Exhibition, Toronto, 1903. Some choice young bulls for sale from four to eight months, also females. We have a few choice Yorkshires of either sex, five months old, from imp. sire and dam. Will be sold easy.

BINKHAM P. O., ONT. ERIN STATION AND TEL.

JOHN GARDHOUSE & SONS, Highfield P.O., Ont.

Breeders of Scotch and Scotch-topped Shorthorns, Lincoln and Leicester Sheep and Shire Horses.

A good selection of young stock of both sexes always on hand for sale. Scottish Prince (imp.), Vol. 45, at head of herd. Royal Albert (imp.), 20857, at head of stud. Farms 24 miles from Weston, G. T. B. and C. P. R., and electric cars from Toronto.

BELMAR FARM SHORTHORNS

10 bull calves.
16 heifers under two years.

All of the choicest breeding and practically all of show-yard quality. You can buy anything in the herd at a reasonable figure.

JOHN DOUGLAS, PETER WHITE, JR.,
Manager, Pembroke, Ont.

SHORTHORN BULLS

and HEIFERS

Sired by the Scotch bull, Scottish Lad 45081 FOR SALE.

S. DYMENT, Barrie, Ontario.

Glover Lea Stock Farm SHORTHORNS

FOR SALE: Choice bull calves by Golden Cross (imp.). All dark roans. Some from imported sire and dam. Visitors met at Ripley station.

R. H. REID, PINE RIVER, ONT.

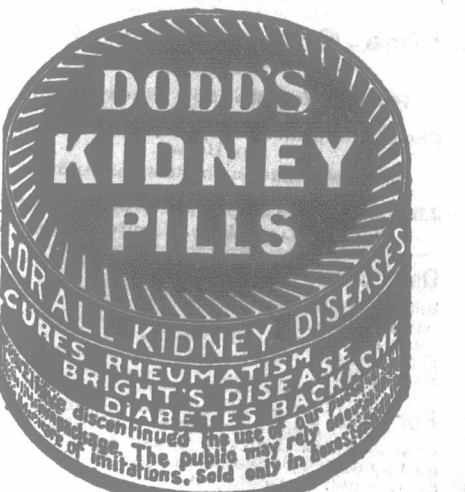
Ripley Station, G. T. R.

SPRING VALLEY SHORTHORNS.
Herd headed by Imp. Bepton Chancellor—40850—(78286). A choice lot of females, mostly with calves at foot or safe in calf. Also a good six-month-old bull calf. Inspection and correspondence invited.

KYLE BROS., Ayr P.O.
Ayr, G. T. R.

A little girl, whose father was a photographer, was taken for the first time to a court-room when a case was being tried. On returning home she was asked concerning what she had seen and heard. Her description of the judge's charge was this:

"The judge made a long speech to the jury of twelve men, and then he sent them into a dark room to develop."



DODD'S KIDNEY PILLS

CURES ALL KIDNEY DISEASES

RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

Continued in use of our medicine. The public may rely on our medicine. Sold only in bottles.

"THE BREED THAT FIRST MADE HILLHURST FAMOUS."

Great Dispersion Sale

OF

Hillhurst Farm Shorthorns

The farm having been sold, the entire Shorthorn herd will be closed out by auction on

FRIDAY, SEPTEMBER 7th, 1906

On the Fair Grounds of the Great Eastern Exhibition, **SHERBROOKE, P. Q.**

33 females (four with calves at foot), 8 bulls and bull calves, comprising six picked Scotch heifers, bought at W. C. Edwards & Co.'s 1905 sale, imported English and Canadian milking families, chiefly of the Scotch-Bates breeding now so popular in Great Britain. Several high-class show animals are included.

CAPT. T. E. ROBSON, } Auctioneers. Catalogues on application.
G. H. KERR & CO., }

Jas. A. Cochrane, Compton, P. Q.



SCOTCH SHORTHORNS

9 heifers, yearlings. 4 bulls, yearlings.
29 heifers, calves. 27 bulls, calves.

All out of imported sires and dams.
Prices easy. Catalogue.

JOHN GLANCY, Manager. **H. CARGILL & SON,** Cargill, Ont.

Maple Shade Shropshires AND CRUICKSHANK SHORTHORNS.

We offer about thirty extra good yearling rams of our own breeding, among them some ideal flock headers; also a few home-bred yearling ewes. Twenty imported yearling rams and thirty imported ewes the same age. Bred by Buttar, Farmer and other breeders of note in England. All are for sale at moderate prices.

JOHN DRYDEN & SON, Brooklin, Ont.
Stations: Brooklin, G.T.E.R. Myrtle, C.P.R. Long-distance telephone.

Westside Shorthorn Herd and Border Leicester Flock.

All Registered in the Herd and Flock Books of Great Britain.

We invite all interested to inspect the cattle and sheep on this farm. The Shorthorns are long-tried families, tracing to the pioneer herds of Scotland through channels of repute. The Border Leicester flock is one of the oldest in Scotland, and embraces blood of the highest breeding. Selections for Sale. Visitors from the States and Canada will be cordially welcomed.

A. Cameron & Sons, Westside Farm, Brechin, Scotland.

CEDARDALE SHORTHORNS



For immediate sale: Four young bulls and a few heifers, a nice thick, well-put-up lot, and bred on heavy-milking lines. Will be sold cheap.

DR. T. S. SPROULE, M.P., Markdale, Ont.

Shorthorn Cattle and Lincoln Sheep

Shorthorn bulls, cows and heifers for sale at greatly reduced prices for the next 60 days. om

J. T. GIBSON, Denfield, Ont

Pine Grove Stock Farm.

Breeders of

High-class Scotch Shorthorns.

Choice Shropshire Sheep, Clydesdale and Hackney Horses.

Herd catalogue on application. Address:

JAMES SMITH, Supt., Rockland, Ont
W. C. EDWARDS & Co., Limited Props. om

Oak Grove Shorthorns—Present offering: Several imp. cows, heifers and young bulls, all sired by Imp. Nonpareil Duke and out of imp. dams; also the stock bull, Imp. Nonpareil Duke, a choice offering. Prices right. **W. J. ISAAC,** Cobourg Station, Warwood P. O.

For Sale—The stock bull, **Queenston Archer—48896**, by Derby (Imp.) dam Veronice (Imp.) by Brave Archer (Imp.); also a number of choice Shropshire ram lambs at reasonable prices.
BELL BROS., Bradford, Ont.

MAPLE GROVE SHORTHORNS



Imp. and Canadian-bred.

Males and females, as good types as the breed produces. With breeding unsurpassed.

C. D. Wager,

Enterprise Stn. & P.O., Addington Co.

R. A. & J. A. Watt, Salem, Ont.
Elera Station on the G. T. and C. P. Ry. Home of the first and third prize aged herds, Canadian National, Toronto, 1905. Mayflower grand champion Toronto and Winnipeg, 1904-05; Olga Stamford, grand champion New York State Fair, 1905; Gem of Ballechin, grand champion Toronto, 1903; Tiny Maude, reserve senior champion Toronto and Winnipeg, 1905; Mildred's Royal and other leading winners. A choice number on hand to make your selection from at all times.

Plaster Hill Shorthorns and Lincolns



About a dozen heifers from 6 to 24 months of age, 7 young bulls from 6 to 15 mos. of age. The low-down, thick sort, Lincolns of both sexes, and a few Berkshires.

F. Martindale & Son, York P. O. **Caledonia Station.**

SHORTHORNS



Shropshires and Berkshires. For sale: One yearling bull, several choice calves. Ram and ewe lambs. A few young sows.
JOHN RACEY, JR., Lennoxville, Que

GOSSIP.

Bonnie Burn Stock Farm lies in the County of York, one-half mile north of Stouffville Station, G. T. R. The owner, Mr. D. H. Rusnell, for a number of years, has been actively engaged in the breeding of pure-bred stock, and, although it has been our privilege on numerous occasions to visit this splendid farm, our recent visit has convinced us that Mr. Rusnell is not resting on his oars, as improvement all along the line was plainly discernible. Shorthorns, Shropshires and Berkshires are the favorites here. The Shorthorns number 20 head of Meadow Flowers, Minas, Strawberry and Lavinias, among which are some extra nice, thick, smooth ones, and others that show by their large, well-developed udders and fat, thrifty calves, that at the pail they are capable of making a name for themselves. For sale are two two-year-olds, out of Lavinia-bred dams, and got by Royal Stamp, a son of Imp. Sittytton Hero, and in calf to Rustic Lad, a son of Imp. Rustic Chief. Here are a pair of heifers well worth looking after. Also, there are four young bulls from nine to fourteen months of age, two of them out of Imp. Mina, 6th, and got by Imp. Golden Beau; the other two are by the same sire, and out of Meadow Flower dams. In Shropshires for sale are twelve shearling ewes, and a few older ones, about a dozen ewe lambs, one shearling, and one two-shear ram, and a number of ram lambs. These represent a splendid bunch. In Berkshires are one sow ready to breed, and eight younger pigs of both sexes, from imported sire and dam.

ENGLISH CATHOLIC BOYS AND GIRLS.

The Catholic Emigration Association, of England, whose headquarters in Canada are at St. George's Home, Hintonburgh, Ont. (a suburb of Ottawa), have placed out, either for apprenticeship or adoption, during the last twelve months about 800 children; the boys on farms, and the girls in domestic service. Their records show that of the children placed during the past five years, of whom detailed particulars are filed and tabulated, only four per cent. of the boys and seven per cent. of the girls turn out satisfactory. This term is adopted to designate those who change their places a number of times, and who are difficult to settle, and does not mean that their characters are necessarily bad. Where a boy or girl shows a bad or depraved character, he or she is deported, rather than retained in the country to be a menace to the good name which others are endeavoring to keep up.

While the Association recognizes that all children are not equally satisfactory, they require an employer who may have an unsatisfactory child in his care to return such child to the Home, when they will replace the same at their own expense, rather than subject it to treatment which might be construed into cruelty or undue harshness.

Recognizing that during the time elapsing between the annual visits to every child, some may be receiving unnecessarily hard treatment, the Catholic Emigration Association welcome information which may be furnished them on these matters, and treat with strict confidence such communications, at the same time taking immediate action upon the same.

Forms of application, containing full information for the guidance of those applying for children, are readily sent on application to Mr. Cecil Arden, Hon. Agent, St. George's Home, Hintonburgh, Ont., and full enquiries are made regarding each applicant before a child (boy or girl) is committed to their care. The Association has always a number of boys to place out, but fewer girls, though their applications for girls exceed, by some two or three hundred per year, those for the boys.

Mr. John Miller, Bramham, Ont., breeder of Shropshire and Cotswold sheep, who makes a change in his advertisement, is offering for sale over 100 head of shearling ewes (some bred and imported), also an extra good lot of yearling rams and ram lambs of both breeds; some of each fitted for breeding.

Does Your FOOD Digest Well?

When the food is imperfectly digested the full benefit is not derived from it by the body and the purpose of eating is defeated; no matter how good the food or how carefully adapted to the wants of the body it may be. Thus the dyspeptic often becomes thin, weak and debilitated, energy is lacking, brightness, snap and vim are lost, and in their place come dullness, lost appetite, depression and languor. It takes no great knowledge to know when one has indigestion, some of the following symptoms generally exist, viz.: constipation, sour stomach, variable appetite, headache, heartburn, gas in the stomach, etc.

The great point is to cure it, to get back bounding health and vigor.

BURDOCK BLOOD BITTERS

Is constantly effecting cures of dyspepsia because it acts in a natural yet effective way upon all the organs involved in the process of digestion, removing all clogging impurities and making easy the work of digestion and assimilation.

Mr. R. G. Harvey, Ameliasburg, Ont., writes: "I have been troubled with dyspepsia for several years and after using three bottles of Burdock Blood Bitters I was completely cured. I cannot praise B.B.B. enough for what it has done for me. I have not had a sign of dyspepsia since."

Do not accept a substitute for B.B.B. There is nothing "just as good."

GREENGILL HERD

of high-class

SHORTHORNS



We offer choice Scotch bulls and females, representing such families as Duchess of Gloster, Village Girl, Rosebud, Orange Blossom, Mysie, Victoria, and other popular families, either imp. or Canadian-bred.

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

SHORTHORNS AND LINCOLNS.



Present offerings: 4 choice young bulls 9 to 14 months; also a few good heifers, Lincolns, descended from the best English stocks.

JOHN LEE & SONS, Highgate, Ont.
40 miles west St. Thomas, on M.C.R.R. & P.M. Ry.

Glenoro Stock Farm

SHORTHORNS AND LINCOLNS.

Three grand young Scotch bulls ten months old at prices low enough to sell at sight. Twenty very choice Dudding-bred ram lambs at very reasonable prices. Write at once if you want a flock header. A pair of good Berkshires, four months old, for \$25 if taken before Sept. 10th. Long-distance Telephone.

A. D. McGugan, Rodney, Ont.

Pleasant Valley SHORTHORNS

We are offering several high-class young bulls from first-class (imp.) bulls and from imp. and Canadian-bred Scotch cows; also young heifers of various ages, with good Scotch breeding.

GEO. AMOS & SON, MOFFAT, ONT.
Farm 11 miles east of Guelph on G. & G. R.
One-half mile from station.

GLENAVON STOCK FARM

Shorthorns and Lincoln Sheep

I have one Shorthorn bull calf, with imported cross near the top, and a registered Lincoln ram, which I will sell cheap, or will change rams.

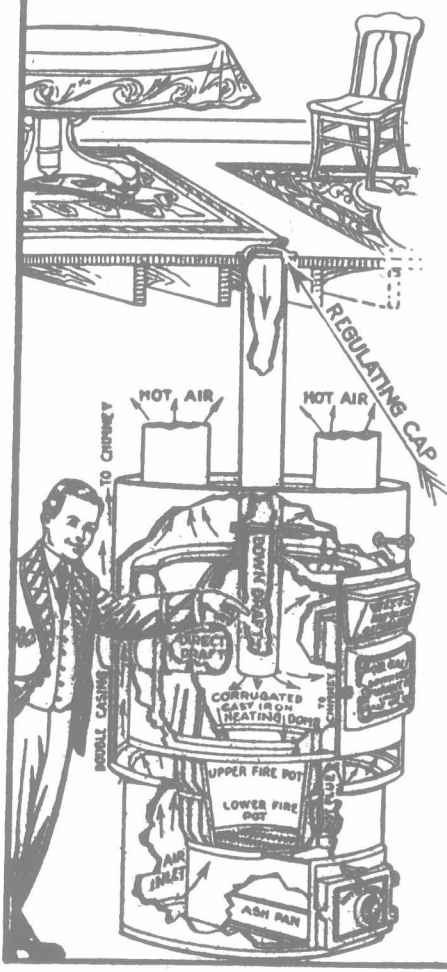
W. B. ROBERTS, Sparta P.O.
Station: St. Thomas, C.P.R., M.C.R., G.T.R.

SCOTCH-TOPPED SHORTHORNS

Young stock of both sexes for sale, sired by Scottish Baron (Imp.). Prices reasonable.

H. GOLDING & SONS, Thamesford, Ontario.

The Down Draft Furnace makes Heating easy.



It is the new idea in furnace construction that does it.

The Down Draft Principle.

By this principle the air is brought down a pipe through the dome of the furnace to within eight inches of the coal. The fire burns from the top, and owing to the pressure all gases and soot are burned, and it does not permit the heat to be sent up the chimney, as is the case with other furnaces.

Every particle of heat is extracted from the fuel.

Heavy Corrugated Cast-Iron Dome, which doubles its heating capacity and durability.

It is especially adapted for burning Soft Coal, which it does with great economy—no other furnace will do this. The heat-saving devices of this furnace will lessen your fuel bill 15 to 30%. Do you recognize what a saving this is?

It costs no more to have it than any other. Write for Catalogue and information.

The Down Draft Furnace Co.,
LIMITED,
GALT, ONT., CANADA.

GOSSIP.

MAPLE LANE STOCK FARM.

Maple Lane Stock Farm lies in the county of Ontario, one and one-half miles south of Claremont, on the C. P. R. The owner, Mr. Edward E. Pugh, is one of that noted county's most extensive breeders of pure-bred stock, his specialties being Shorthorn cattle, Clydesdale horses and Shropshire sheep. The Shorthorn herd is one of the largest in the Province, numbering over a hundred head, made up of the following well-known strains: Beautys, Miss Simmers, and Minnies, all noted for their excellent milking qualities, and being for a great many years Scotch-topped, are an exceptionally profitable strain of cattle for the ordinary Canadian farmer, combining, as they do, rare milking qualities with big, heavy, level bodies, making them moneymakers, not only as beefers, but as dairy cows also. At Present for sale are a large number of females, and, as might be expected in so large a herd, some rare good ones can be picked out, and as Mr. Pugh is asking no fancy prices, this is a grand opportunity for picking up a foundation for a dual-purpose herd. There are also a few young bulls coming on that cannot fail to give good results to the fortunate purchaser. In Clydesdales, there are several young mares of the kind so eagerly sought after these days, all either registered or eligible for registration; big, well-built animals with just the right kind of feet and legs. The Shropshires are a typical lot—big, strong-boned, and well covered. This season's crop of lambs, of which there are about 75, will all be for sale, and are the get of a Cochrane-bred ram. Make a note of this, as sheep are good as gold these days, and hard to get, as the demand is greatly in excess of the supply. Write Mr. Pugh, to Claremont P. O. He is reliable, and you can depend on what he says.

Lost Strayed or Stolen—One Cow

That is about what happens each year for the man who owns five cows and does not use a Tubular cream separator. He loses in cream more than the price of a good cow. The more cows he owns the greater the loss. This is a fact on which Agricultural Colleges, Dairy Experts and the best Dairy men all agree, and so do you if you use a Tubular. If not, it's high time you



did. You can't afford to lose the price of one or more cows each year—there's no reason why you should. Get a Tubular and get more and better cream out of the milk; save time and labor and have warm sweet skimmed milk for the calves. Don't buy some cheap rattle-trap thing called a separator; that won't do any good. You need a real skimmer that does perfect work, skims clean, thick or thin, hot or cold; runs easy; simple in construction; easily understood. That's the Tubular, and there is but one Tubular, the Sharples Tubular. Don't you want our little book "Business Dairymen," and our Catalog A. 188 both free? A postal will bring them.

The Sharples Separator Co.
West Chester, Pa.
Toronto, Can. Chicago, Ill.

White Hall Shorthorns
Missies, Cecilians, and Lady Victorias. 4 young bulls, 7 heifers, and a few older females. Bred right and will be sold right.

N. A. Steen, Meadowvale P.O. and Station, Peel Co.

GREEN GROVE SHORTHORNS
Fairy Queens, Urys, Floras, Claretts, Isabellas, Rose of Autumns, Village Girl. Females of all ages 3 choice young bulls. Prices right. Breeding unsurpassed.

W. G. MILSON, Goring P. O. Markdale Station

Shorthorns Leicesters
An offering of an extra choice lot of bulls and heifers, of all ages. Leicesters: Yearling and ram lambs and ewes of all ages, of the best breeding and quality.

W. A. Douglas, Caledonia Station, Tuscarora P. O.

Shorthorns, Cotswolds and Berkshires.
For sale: 2 yearling bulls, young cows yearling heifers and calves. In Berkshires, a number of young things about 3 months old. In Cotswolds, about 20 lambs.

CHAS. E. BONNYCASTLE, P. O. and Stn. Campbellford, Ont.

ROCK SALT for horses and cattle, in ton and car lots
Toronto Salt Works, Toronto

Glen Gow Shorthorns—Our present offering is 9 bulls, from 6 to 14 months of age, sired by Imp. Ben Loman and Imp. Joy of Morning, and out of imp. and Canadian bred cows. Also a number of very choice heifers. No fancy prices asked. Long distance telephone.

WM. SMITH, Columbus, P.O. Brooklin and Myrtle Stns.

Brown Lee Shorthorns—Present offering is 3 young bulls from 9 to 15 months old, a nice straight, good-doing lot, sired by Blenheim Stamp; also females of all ages, daughters of Imp. Sir Christopher and Imp. Beacon. Prices very reasonable.

DOUGLAS BROWN, Av. P. O. and Station

MAPLE LEAF STOCK FARM
4 Choice Young Bulls for Sale. Also some cows and heifers, and prizewinning Berkshire pigs. Terms reasonable.

ISRAEL GROFF, Alma P.O. & Stn., G.T.R.

J. Watt & Son SHORTHORNS

A number of extra good young cows for sale, three of them each raising a nice heifer calf; also a number of yearlings, just bred

SALEM P.O. Elora Stations, G.T.R. and C.P.R.

MAPLE + GROVE + STOCK + FARM
Scotch and Scotch-Topped SHORTHORNS

Present offering: Two choice nine-months-old bulls, by Captain Mayfly 2nd; also young cows and heifers at very reasonable prices. For particulars write to

L. B. POWELL, Elmira Stn. and Tel. Wallenstein P.O.

C. Rankin & Sons, Wyebriidge, Ont.
Importers and Breeders of SHORTHORN CATTLE and OXFORD DOWN SHEEP.

FOR SALE—Females and bulls, of all ages from noted Scotch families.

ROWAN HILL SHORTHORNS
Herd bull for sale: Greengill Archer, imp., 45184, as some of his heifers are of breeding age, and herd is not large enough to keep more than one bull; also a few young bulls and heifers.

A. DUNCAN & SONS, Carlisle, Ont.

MAPLE HALL SHORTHORNS
For immediate sale are two yearling bulls—one a Crispin Fuchsis, the other a Duchess of Gloster; both by Imp. Royal Prince, and both herd headers. Also a number of heifers that are strictly high-class. Send for catalogue.

DAVID BIRRELL, Greenwood P. O. Pickering, G. T. R. Claremont C. P. R.

D. Bartlett & Sons, Smithville Ont.
Breeders of Shorthorns and Dorsets. For sale: Young cows and heifers at all ages. Dorset shearlings and lambs of both sexes, of choice quality, suitable for show purposes, at moderate prices. P. O. and Station: Smithville, Ont.

SHORTHORNS, LINCOLNS & OXFORD DOWNS
Herds headed by imp. Royal Prince and imp. Abbotsford Star. For sale: Nine bulls, six months to one year, three from imp; dams and imp. sires; also females. Oxford Down sheep and Barred Rock cockerles. John McFarlane & W. H. Ford, Dutton, Ont., Elgin County

Shorthorns Have several good ones for sale between 5 and 10 months old. Also a few heifers at very reasonable prices, bred to sons of Imp. Royal Sailor and mp. Wanderer's Last.

J. R. McCallum & Sons, Iona Stn., Ont.

COURT HILL SHORTHORNS.

Court Hill Stock Farm is the property of Mr. John Brydone, and lies in the county of Perth, a couple of miles from Milverton Station, on the G. T. R. line, between Stratford and Palmerston, and is the home of one of the choicest herds of Shorthorns in Ontario. The stock bull is the Cruickshank Violet-bred Imp. Sittyton Victor, bred by Duthie, sired by the Missie bull, Merry Morning, dam Sittyton Violet, by the great William of Orange, grandam Violet Maid, by the Brawith Bud bull, Gondomar, great-grandam by Roan Gauntlet, a grandson of Champion of England, fourth dam by Senator, and fifth dam by the redoubtable Champion of England. It will thus be seen that this bull carries the blood of practically everything that has made Scotch Shorthorns famous, and his get shows the royal breeding in their thick-fleshed forms and mossy coats. Of the females, thirteen are imported, namely, Lancaster Rose 4th, by Oom Paul, dam by Goldfinder, grandam by Gravesend; Lady Bella, by Bounding Willow, dam by Master of Ravenswood; Lauretta Girl, by Sturdy Prince, dam by Prince of Fashion; Lottie, by Prince of Sanquhar; Marg 7th, by Paragon; Aggie 2nd, by Paragon; Heiress 2nd, by Morello; Dandy Lustre, by Morello. Strathallan Daisy, Vol. 21, is a Canadian-bred cow, by Edward 7th, dam Daisy of Strathallan 14th, by Barmpton M. Taken all together, this makes one of the choicest-bred herds in the Dominion, while several of them are show cows of a very high order, and, strange to say, this year all but one of them had bull calves, which are all by the stock bull, and many a day has passed since we have seen so nice and even a bunch together. No more fashionable pedigrees can be found than several of these young bulls possess, and their superior individuality stamps them as gilt-edged herd headers. They are all for sale, and will certainly go quick; therefore, parties wanting one should look after them without delay. Write Mr. Brydone, to Milverton P. O., Ont.

HOLLYMOUNT SHORTHORNS

Pure Scotch, imported, and the get of imp. stock.
25 HEAD
Anything for sale, 5 young bulls. Breeding gilt-edged and unsurpassed. A few heifers. Prices right.

W. J. Thompson, Mitchell P. O. & Sta.

High-class Shorthorns

The well-known Duthie-bred bull, Scottish Bean (imp.) (86099), by the great Silver Plate, formerly at head of E. A. & J. A. Watt's herd, now heads my herd. Young stock usually on hand for sale.

N. S. ROBERTSON, ARRFRIOR, ONT.

A. EDWARD MEYER, Box 378, Guelph, Ont.

Scotch Shorthorns.
The Sunny Slope herd comprises Cruickshank Bellonas, Mysies, Villages, Mayflower Buds, Broadhooks, Bruce Augustas, Mayflowers, Campbell Bessies, Urys, Minas, Claretts, Kilblean Beautys. Herd bulls: Scottish Hero (imp.) (90066), a Shethin Rosemary, and Chief Ramsden—(82548)—a Miss Ramsden. Correspondence solicited. Visitors welcome. Long-distance phone in house.

SHORTHORNS
Imp. Keith Baron 86050. Six young bulls from 10 to 18 months old. A lot of 2-year-old heifers in calf and a few young cows. A bunch of heifer calves, cheap.

Just now: One pair of matched geldings 5 and 6 years old; show team.

JAS. McARTHUR, Goble's, Ont.

Riverview Shorthorns and Oxfords
Shorthorns represent Crispin Flowers, Athelstan, Lady James and Roses.

We have for sale three yearling bulls and some spring calves, also a few females. A thick, straight, mossy lot. Also some Oxford Down ram lambs.

Peter Cochran, Almonte P. O. and Station.

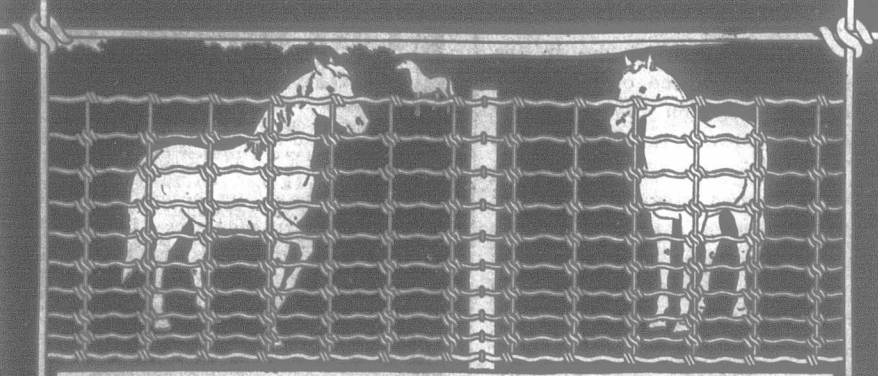
Queenston Heights SHORTHORNS

I am offering extra value in yearling and two-year-old heifers. Bull calves that will make high-class sires. Straight Scotch.

HUDSON USHER, Queenston, Ont.

Shorthorn Bulls—Imp. Scottish Peer—40494—4 years old, sure, and a good sire. Also 3 excellent young bulls of his get, and an 8-year-old Clyde stallion. Come and see, or address.

JAMES SNELL, Clinton, Ont.



IDEAL WOVEN WIRE FENCE

When you build fence, you ought to be thinking of permanent improvements. Tinkering does not pay. Fences made of light wire, and wires that break rather than give when it gets cold; fences that an unruly animal could break through; fences not properly stayed—these are not paying fences. It takes only a glance at the Ideal fence to see that it is the right kind. It is made of No. 9 hard steel wire from top to bottom, and is heavier and stronger than any fence on the market. Remember, it costs no more to dig your post holes, set your posts, stretch your fence and staple it when the heavy Ideal fence is used than for a light, flimsy article. And notice how the Ideal fence is locked at every crossing. It is heavily galvanized to keep off rust. It will adapt itself to the greatest extremes of heat and cold, and always present a handsome, well stretched appearance. You do not buy poor cattle because it does not pay, and you cannot afford to buy a light, cheap fence for exactly the same reason. It pays to study the matter over thoroughly before you buy any kind of a fence. We have prepared a little book that will tell you all about Ideal fence. It gives fence pointers and details that we cannot give here. Write and let us send it to you. A postal will do; write to-day.

McGregor-Danwell Fence Co., Dept. B, Walkerville, Ontario.

THE TIE THAT BINDS

Use Standard Fence, All Nos. Hard Steel Wire.

THE STANDARD WIRE FENCE CO. OF WOODSTOCK, LIMITED.

WOODSTOCK, ONT.

Agents Wanted.

THE TIE THAT BINDS

Don Jersey Herd AYRSHIRES

Our Jerseys rank second to none in Canada. Now offering choice bull calves, bred from prizewinning stock. The best is none too good for you.

D. DUNCAN, Don, Ont. Near Toronto.

Brampton Jersey Herd For sale: 10 bulls, from 6 to 18 months old, descended from St. Lambert or imported stock; also females of all ages. For full particulars address: **B. H. BULL & SON, Phone 68, Brampton, Ont.**

HIGHGROVE JERSEY HERD. Our present offering is: a few choice heifer calves from 1 to 8 months old, which, considering quality, will be sold reasonable.

ROBT. TUFTS & SON, Tweed P.O. & Sta. Hillview Herd of Prizewinning AYRSHIRE CATTLE. All animals bred and carefully selected for size, constitution, long teats and deep-milking qualities. Select animals of both sexes for sale at reasonable prices. For further information and prices write **A. KENNEDY & SON, Hillview Stock Farm, Vernon, Ont. Winchester Station, C. P. R.**

SHANNON BANK STOCK FARM FOR AYRSHIRES AND YORKSHIRES Young stock of both sexes for sale from imported stock. **W. H. TRAN, Cedar Grove, Ont. SPRINGBROOK AYRSHIRES.** Gave over 7,000 lbs. of milk, testing 3.9 per cent. butter-fat, during 1905. For sale: One bull 4 years old, Comrade's Fancy of Glenora 18790; bull calves of this year; also females of all ages. **W. F. STEPHEN, P.O. Box 163, Huntingdon, Que.**

AYRSHIRES FROM A PRIZEWINNING HERD Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON, Campbellford Stn. Menie P.O., Ont.**

Stockwood Ayrshires for Sale. — Have some nice yearling heifers, also a few two-year-olds due to freshen in Nov. and Dec. Write or call and see them. **D. M. WATT, ST. LOUIS STATION, QUE.**

Maple Cliff Dairy and Stock Farm Breeders of Clydesdale Horses, Ayrshire Cattle, Berkshire and Tamworth Pigs. Young stock for sale at all times. **R. REID & CO., Hintonburg, Ont. Farm adjoins Central Experimental Farm.**

The famous Reford Herd at St. Anne de Bellevue, Que., now owned by Sir William C. Macdonald.

Several yearling bulls for sale; also a number of bull calves. Quality and appearance extra good, bred from the best milking strains, noted for robust constitution and large teats. For particulars apply to

MACDONALD COLLEGE St. Anne de Bellevue, Quebec.

AYRSHIRES—Choice stock of either sex, different ages, for sale. Prices reasonable. For particulars apply to **N. DYMENT, Hickory Hill Stock Farm, Dundas Stn. & Tel. Clappison, Ont.**

Ayrshires and Yorkshires We always have on hand choice animals of above breeds, of any desired age. Prices reasonable. Write us before buying. Intending purchasers met at Hoard's. **Alex. Hume & Co., Menie P. O.**

IMPERIAL STOCK FARM HOLSTEINS A prizewinning herd of imported, officially tested stock. Bulls of all ages for sale, also a few cows. **W. H. SIMMONS, New Durham, Ontario.**

"GLENARCHY" HOLSTEINS We have for immediate sale several young bulls and a number of young females, that for ideal type and superior quality, backed up by gilt-edged breeding, are unsurpassed. **G. MACINTYRE, Renfrew P. O. and Stn.**

Maple Glen Holsteins—Three sons of Sir Altra Posch Beets whose grandam holds world's largest official record for her age, and grandire has over 60 tested A. R. O. daughters—the most by any bull on record. Brother of Aggie Cornucopia. Secure the best. **C. J. GILROY & SON, Glen Buell, Ont.**

Grove Hill Holsteins—Herd contains 55 head a number of which are in the advanced registry. Our stock bulls have all been backed up by high records. Present offering: Several young bulls and a few females. **F. R. MALLORY, Frankford P. O. and Sta., C. O. R.**

Springbrook Holsteins and Tamworths Will exhibit Holsteins at Toronto. Come and see my stock, and compare quality and prices. Some choice young bulls to offer. A number of Tamworth boars and sows of all ages for sale. **A. C. Hallman, Breslau, Ont., Waterloo Co.**

COSSIP.

The Broncho is a wonderful pacing mare. At the Cleveland Grand Circuit meeting recently she lowered the race record for three consecutive heats, time 2:03, 2:03½, 2:02½. This makes an average of just 2:03, which displaces the previous best, which stood to the credit of Star Pointer, by a quarter of a second to the heat. She reduced the record for pacing mares in a race, and, in all, about eight world's marks were broken in the performance. At Decatur, Ill., on August 11th, she paced a mile against time in 2:02, lowering the record she made at that track last year.

IMPORTED CLYDESDALES.

Mr. John A. Boag, Ravenshoe, Ont., had eight head of Clydesdales on board the S.S. Marina, sailing from Glasgow, Aug. 4th—six fillies and two colts. He had one stallion from Mr. Peter Crawford, Dumfries, got by the splendid breeding horse, Baden-Powell, sire of the Glasgow-prize horse, Memento. He had a two-year-old filly from Messrs. A. & W. Montgomery, Kirkcudbright. She was got by the great breeding horse, Mar-mion, and bred in the Doune district. A capital two-year-old from Mr. David Logan, Hightown, was got by Dunure Castle, and four superior animals—three fillies and one colt—were got from Mr. Alex. Fleming, Raith, Bothwell. The colt was got by Good as Gold, out of a mare by the H. & A. S. first-prize winner, Rosedale, which had the Duke of Hamilton's and other premiums. One of the fillies was by the Lesmahagow premium horse, Baron Alister, which stood first at the Royal. The other two were uterine sisters from a Prince of Galloway (8919) mare—the one being got by the Lesmahagow premium horse, Frivolity, and the other by the well-known Glasgow, Dumbarton, and Hamilton premium horse, Sir Simon.

Mr. Harry G. Boag is a new shipper. He had three stallions from Mr. Peter Crawford, and three fillies from Messrs. A. & W. Montgomery, Kirkcudbright. His stallions were the well-known Sir Lachlan (10460), Erskine's Hero (11700), and The Nobleman (12770), a son of the great Hiawatha (10067), the most outstanding champion Clydesdale of modern times. The fillies were a well-bred lot, one of them being got by Royal Gift, out of a mare by the Rhins of Galloway premium horse, Ornament, and descended from an excellent tribe of mares on Clendrie.

MORE CLYDESDALES AND PERCHERONS FOR CANADA.

Mr. T. H. Hassard, Millbrook, Ont., had on board the Marina, sailing from Glasgow, Aug. 4th, twelve Clydesdales, and almost as many Percheron horses, the latter bought in France. Four of the Clydesdales, chiefly mares, were bought from Mr. Walter S. Park, Hatton, Bishopton, and eight stallions were secured from Mr. Peter Crawford, Dargavel, Dumfries. In Mr. Park's contribution, there were three first-class mares, viz., the mare bred by Mr. Ritchie, and got by the noted premium horse, Elator, which was first last year and second this year at the Greenock Show; also the celebrated Kintyre champion mare, Nora of Baraskomel, by the great Sir Everard, recently owned by Mr. Robert Renwick, Buchley, and, in his hands, first at Kirkintilloch and Shettleston this year; and, third, the first-class three-year-old mare, by Prince of Airies, which was first this year at Bishopton Show. It is seldom, says the Scottish Farmer, three such mares are exported, and with them Mr. Hassard will be rather a hard nut to crack at the autumn fairs in Canada. The stallions from Dargavel were a good, useful lot, with good backs and ribs, and like selling easily in Canada. Among them were horses by the Cawdor Cup champion, Prince Alexander (8899); two by the celebrated prize horse, Baron o' Buchlyvie (11263), whose stock were winning strong at Perth on Saturday; one by the handsome big Sir Edward horse, Sir Lachlan; one by Empire Castle, which we rather think was lost at Ayr; another by the good breeding horse, Hill-head Chief, and the last by the well-bred horse, Crown Derby. These horses are out of mares by sires as noted as their own, including Royal Garty, Darnley, Flashwood, and horses of equal reputation for breeding purposes.

Standing Offer

Good always, everywhere. **\$100 Reward**, for any lameness, curb, splint, founder, distemper, etc., (where cure is possible) that is not cured by **TUTTLE'S ELIXIR**

Greatest horse remedy in the world. **Tuttle's Family Elixir** invaluable for human bruises, pains, rheumatism, etc. Send for free 100 page book, "Veterinary Experience." The perfect horseman's guide. Every disease symptom and its treatment.


TUTTLE'S ELIXIR CO.,
66 Beverly Street, Boston, Mass.
Canadian Branch, 32 St. Gabriel St., Montreal, Quebec.

Cows from the ANNANDALE HOLSTEIN HERD

Have won during the past show season at Ottawa first and sweepstakes on cow, first on 3-year-old, first on 2-year-old class. At Guelph (dairy test) first and sweepstakes on cow, first and second in heifers. At Chicago (National) first and sweepstakes on cow, also second-prize cow second and third on 3-year-olds, second on 1-year-old heifers, and a host of other prizes (different cows at different shows)

Bull calves, 4 months and under only, for sale from great dams and greatest of sires. Buy young if you want them from Annandale Stock Farm.

GEO. RICE, Tillsonburg, Ont. HOLSTEINS FOR SALE



Four imported and home-bred bulls, from 8 to 12 months old; also our entire crop of springbull calves, from week old up, sired by the grandly-bred imp. bull, Sir Howitje B. Pietertje, whose dam record is over 82 lbs. milk in one day, and from great-producing cows of the most fashionable strains. Can spare a few cows and heifers, from one year up; 75 head to select from. Cheese 13c. Don't delay if you want one from this herd.

H. E. GEORGE, Grampton, Ont. WOODBINE HOLSTEINS

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

A. KENNEDY, Ayr, Ont.
Ayr, C.P.R.; Paris, G.T.R.

A FEW HOLSTEIN BULLS

fit for service, for sale at reasonable prices. Choose females, all ages, if you are willing to pay good prices for good stuff, write me.

G. W. CLEMONS, St. George, Ont. Lyndale Holsteins. For Sale A number of bull calves from one to four months old, out of Record of Merit cows, and sired by Beryl Wayne Paul Concordia, whose four nearest dams have official butter records averaging 22 lbs. 11 oz. each. **BROWN BROS., LYN, ONT.**

Centre and Hill View Holsteins

We have four yearling bulls left which we will sell at reduced price to quick buyers; from good producing strain; our own raising. Sold out of females at present **P. D. EDE, Oxford Centre P. O., Woodstock Station, C. P. R. and G. T. R.**

MAPLE GROVE HOLSTEIN-FRIESIANS

For Sale: Three bull calves, sired by Lord Wayne Mechthilde Calamity, and all out of Advanced Registry cows. Apply **WALBURN RIVERS, Folden's Corners. QUEEN CITY HOLSTEINS**

If you would like to purchase a young Holstein bull whose sire's dam has an official record of 550 pounds of milk and 26 pounds of butter in seven days, write to **R. F. HICKS, Newton Brook P.O., York Co.**

Holsteins at Ridgedale A few choice bull and heifer calves on hand for sale, sired months. Write for what you want, or come and see them. Shipping stations: **Port Perry, G. T. R. and Myrtle, C. P. R. Ontario Co. R. W. WALKER, Uxela P.O., Ont.**

MAPLE PARK HOLSTEINS Home of the great Sir Pietertje and Posch families. Schmitz, son of Annie Schulling, testing 4.8% butter-fat officially, and grandson of the best milk stock bull, **S. MACKLIN, Guelph, STREETSVILLE.**

Greenwood Holsteins and Yorkshires For sale: A number of choice bulls from one to eighteen months, and a few choice females of all ages. **D. Jones, Hintonburg, P. O. and Sta.**



Cooks and Bakes perfectly at the same time

There is not another range built in which the heat may be regulated so that you can bake in the oven and cook on the top at the same time without spoiling one or the other.

But you can do both equally well at the same time on the Pandora, because its heat is not wasted and is at all times under the simplest, most positive control.

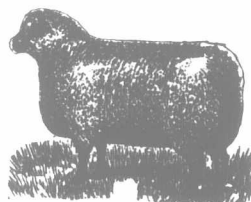
If you do the cooking of your household you can appreciate exactly what this means.

McClary's Pandora Range

Warehouses and Factories: London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B., Hamilton

Shropshire & Cotswold Sheep

SCOTCH SHORTHORNS and CLYDESDALES



Choice ram and ewe lambs. Also 50 shearing ewes for sale. Apply to

JOHN BRIGHT, Myrtle Station, Ontario

CLAYFIELD STOCK FARM

Farmers, look! Look! Think where your interest lies. Sheep are the best paying animals on the farm. We now offer from the champion flock of

COTSWOLDS

rams and ewes of all ages. Stud rams a specialty, including our new importation that has just landed, consisting of Cotswolds and Hampshires, the best that can be purchased in England. Several prizewinners in the lot.

J. C. ROSS, Prop., Box 61, Jarvis, Ont.

BROAD LEA OXFORDS.

Present offerings are 28 ranch shearing rams, seven shearing ewes, one show ewe four years old. Will also book orders for ewe and ram lambs from imported ram.

E. B. Stations: Mildmay, G. T. E., Teeswater, O.P.E. W. H. ARKELL, Teeswater, Ont.

DORSET HORN SHEEP and SCOTCH SHORTHORNS

The latter representing the Nonpareil, Miss Ramsden, Missie and Gloster families exclusively, and the former comprising mere Royal winners and more St. Louis prizewinners than any other flock in the world. Stock for sale always on hand.

JOHN A. MCGILLIVRAY, North Toronto, Ontario

Southdowns

New importation of rams and ewes on offer; also home-breds by Royal prizewinning imported rams. COLLIES—Puppies by imported Hollywood Clinker.

Robt. McEwen, Byron, Ont. Long Distance Phone.

FARMER'S ADVOCATE "Want and For Sale" Ads. bring good results. Send your ads. and you will soon know all about it. The Wm. Weid Co. Ltd., London, Ont.

HAVE JUST IMPORTED THE BEST LOT OF

Shropshire RAMS AND EWES, ALSO Cotswold Rams and Ewes

THAT I HAVE EVER OWNED. Will quote close prices on application. ROBERT MILLER, Stouffville, Ontario.

Farnham Farm Oxfords.

We have some extra good yearling rams for flock headers, all sired by imported ram. We also have 50 yearling ewes and 100 ram and ewe lambs. These are principally sired by our famous imported ram.

HENRY ARKELL & SON, ARKELL, ONT. Guelph, G. T. R. Arkell, C. P. R.

FAIRVIEW SHROPSHIRE RAMS

The flock is retired from fall-fair showing. It took the lead for 22 years. 25 good to choice yearling rams and 30 first-class ram lambs now offered. Sires: Champions and producers of winners. Dams: Many of them imported, and all choice. Do you need a moderate priced flock-header? If so, come, or write for circular and quotations to

JOHN CAMPBELL, Woodville, Ont.

Sheep Breeders' Associations.

American Shropshire Registry Association, the largest live-stock organization in the world. Hon. John Dryden, President, Toronto, Can. Address correspondence to MORTIMER LEY-ERING, Secretary, Lafayette, Indiana.

We Want HIDES SKINS, WOOL

Our advice is. Consign to us at once while we can pay present very high prices.

E. T. CARTER & CO., TORONTO.

SHROPSHIRE

Good young rams and ewes FOR SALE.

W. D. MONKMAN, Bond Head, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

WIDTH OF HORSE STALLS.

What is considered the best width for horse stalls? G. T. A.

Ans.—Five feet is sufficient for any except very large horses, for which six feet is better.

FORWARDING BY EXPRESS.

I would like to send a mixed barrel of provisions, fruit, etc., to my sister in one of the suburbs of Manchester, Eng. I want that barrel to reach her without any charges at the other end. Are the carriers supposed to deliver the goods direct to the home? F. W.

Ans.—See you local express agent. Any express company will forward and deliver the parcel, charges prepaid.

FLY REPELLANT FOR COWS — POTATOES ROTTING.

1. What may be applied to dairy cows to keep away flies?

2. Our early potatoes are rotting badly. Would you advise digging at once, or leaving in the hills until fall?

Ans.—1. Several recipes for keeping flies off cows were given on page 1068, of "The Farmer's Advocate," issue of July 5th. Probably about the best one, all things considered, is the following, recommended by Prof. Dean, of Guelph: Fish oil, one-half gallon; coal oil, one-half pint; crude carbolic acid, four table-spoonfuls. Mixed, and applied to all parts of the cow, except the udder, once a week.

2. The proper course to pursue in this case depends upon the cause of the rotting. If it were due to fungus, which causes late blight, the wisest plan would be to defer digging for a time, till the infected tubers had died and saved the trouble of digging. It is scarcely likely that your potatoes would be rotting from this cause thus early in the season. More probably they are suffering from the bacterial infection which produces wet or brown rot, or may be they are simply undergoing the ordinary process of decay common to all vegetation. In either of the latter cases it would be best to dig at once, and store in a cool, dry place.

CREAM WILL NOT WHIP.

We have a part Jersey cow that has been milking about four months, and gives splendid milk. We put the milk in a creamery can, and set it in the refrigerator; let sit twenty-four hours before skimming. The cream rises well, but will not whip, though I have tried skimming it lightly, and other times have skimmed it somewhat heavier, but, in either case, the cream whips to butter. During the winter months, the cream whips all right. (Mrs.) C. E.

Ans.—The fat globules in the milk of Jersey cows are very large, consequently the cream both rises and churns very rapidly, though much more readily in the case of some cows than in the case of others of the same breed. In summer, when the weather is warm, and the feed (grass) succulent, the cream is more churnable than in winter, and the cream from a fresh-milk cow is also more churnable than that from one that has been long milking. These facts go to account for the fact that your cream can be whipped successfully in winter, but not in summer. We would advise you to try letting the cream get rather old, say twenty-four hours old before whipping; then beat very rapidly. There are special glass cream-beaters, which will successfully whip cream that an ordinary egg-beater will merely churn.

At the auction sale, on Aug. 7th, of a draft of Shorthorns from the herd of W. H. Earles, Milwaukee, Wis., the 44 head sold averaged \$206, the highest price, \$730, being realized for the roan six-year-old cow, Sappho, by Prince Armour, purchased by the Flynn Farm Co., Des Moines, Iowa. The second highest price, \$525, was paid by W. I. Wood, of Ohio, for Rosa Fame 2nd, a roan, eight-year-old cow, sired by Imp. Royal Member, and bred by H. Cargill & Son, Cargill, Ont.



Kidney Disorders

Are no respecter of persons.

People in every walk of life are troubled. Have you a Backache? If you have it is the first sign that the kidneys are not working properly.

A neglected Backache leads to serious Kidney Trouble.

Check it in time by taking

DOAN'S KIDNEY PILLS

"THE GREAT KIDNEY SPECIFIC." They cure all kinds of Kidney Troubles from Backache to Bright's Disease.

50c. a box or 5 for \$1.25 all dealers or

THE DOAN KIDNEY PILL CO., Toronto, Ont.

Lincolns are Booming

We have only a few more ewe and ram lambs and breeding ewes for sale. We have seven choice young bulls, Scotch-topped, and a grand lot of heifers and young cows for sale at reasonable prices. Write or come and see us.

F. H. NEIL & SONS, LUCAN, ONT. Telegraph & B.R. station.

COTSWOLD SHEEP

From one of the largest breeders in the home of the breed. We have bred the prizewinners at the leading English shows. Address:

W. HOULTON, Broadfield Farm, Northleach, Glos. ENGLAND; or S. HOULTON, Calgary, ALBERTA, Canadian representative.

For Sale: Registered Pedigree SOUTHDOWN RAMS

One 2 years old, one aged. Owner has used them two seasons. Good stock-getters and from imported stock. Address:

HUGH A. ALLAN, "KNOLL FARM," Pointe Claire, P. Q.

Canadian Agents for the Original McDougall's Sheep Dip & Cattle Dressing

Imported direct. Price: Imperial pints, 35c.; imperial half gallon, \$1.25; imperial gallon, \$2.25. Sold by druggists, or charges prepaid on one-gallon tins. THE WORTHINGTON DRUG CO., Toronto, Ontario.

Dorset Sheep, Shorthorn Cattle

Specialties. Choice young stock for sale. R. H. HARDING, "Mapleview Farm," Thorndale, Ont.

COTSWOLDS

Some good shearing ewes and ewe lambs, and a few choice ram lambs, right type, for sale. Prices moderate.

E. F. PARK, Burgessville, Ont.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs.

Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, or Harrieston, Ont.

Hampshire Sheep For sale: rams (imported and home-bred), yearlings and lambs. Correspondence or inspection invited. FREEBORN BROS., Denfield Station and P. O.

Suffolk Sheep

JAMES BOWMAN, Elm Park, Guelph SHROPSHIRE

Can sell about 20 Ram Lambs. Mostly by an Imp. Butlar-bred ram.

GEO. HINDMARSH, Missa Craig, Ont

Leicesters

A grand lot of one and two-shear rams and ram lambs, also ewes of various ages.

Mac Campbell, Harwich P. O., Ont.

CHESTER WHITE SWINE

and Shropshire Sheep. 15 yearling ewes and a fine lot of spring lambs. Write for prices.

W. E. WRIGHT, GLANWORTH, ONTARIO

For Sale: 3 Poland-China Boar Pigs

Two months old Also one sow. F. S. Wetherall, Cookshire, Que.

Weak Men! Try This



IT COSTS YOU NOTHING UNTIL CURED

Prof. O. S. Fowler, in his work on the treatment of nervous diseases, says: "Sufferers little realize how far they are restorable, yet they seek relief in wrong directions, for medicines cannot cure this class of disease, but, on the contrary, they almost universally prove injurious. They are no more adapted to reach these cases than a dose of ipecac or jalap is to assuage a mother's grief for the loss of her darling babe, for the disease, being largely local, the restoratives must be applied directly to those prostrated parts; and, since electricity is undoubtedly the instrumentality of all life, it necessarily follows that this element constitutes Nature's own most potent remedy in these diseases when rightly applied."

The first impulse of a man who discovers that he is afflicted with a degeneration of one of the important functions of the body is to plunge into a drug store and purchase a box of pills or a bottle of some patent medicine. Failing to get more than temporary relief from this, he next consults his doctor, who is probably of the old school, and sticks to the old methods. He writes a prescription, which more than likely calls for the same drugs contained in the patent medicine the patient has already taken. Next, the patient comes to the conclusion that this doctor didn't diagnose his case right, and he goes to another, with the same result, and so on until his stomach and nerves are wrecked. Nature gives us electricity with which to build up vitality. Electricity is the life of the nerves, and every organ depending upon them, and DR. McLAUGHLIN'S ELECTRIC BELT is the most scientific, up-to-date and economical way of applying it.

Dear Sir,—Regarding permanency of results obtained through the use of your Belt, I must say that I am perfectly cured. I have before this informed you of my complete cure, and since then I have always attended to my every-day work without losing one minute. All this I owe to your Belt, and you can now, and I will also, assure every one in need of treatment, that your Belt is the means of obtaining a sure and true cure.—Yours truly, Arthur Morency, Hallow Cove, Que.

MY BELT can be used for hours at a time, thus allowing the weakened nerves to absorb the current. It will pour electric life and force into your body while you sleep, warming and vitalizing the nerves and blood, and invigorating every vital organ. It has attachments for both men and women, by means of which the current can be applied to any part of the body. IT CURES NERVOUSNESS, FAILING VITALITY, BACKACHE LUMBAGO, RHEUMATISM, SCIATICA, INDIGESTION, CONSTIPATION, STOMACH, KIDNEY AND BOWEL TROUBLES, and, in fact, any and all of the many human ills which are now successfully treated with electricity by the most learned and scientific physicians in the world.

If you are sceptical, all I ask is reasonable security for the price of the Belt, and pay when you are cured.

FREE BOOK—If you cannot call, then fill out this coupon, mail it to me, and I will mail you free, sealed and in plain envelope, my Book, which contains many things you should know, besides describing and giving the price of the appliance, and numerous testimonials. Business transacted by mail or at offices only—no agents.

Now, if you suffer, do not lay this aside and say you will try it later. Act to-day—NOW.

Put your name on this coupon and send it in.

DR. M. S. McLAUGHLIN, 112 Yonge Street, Toronto, Canada.

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

Name

Address

Office Hours—9 a.m. to 6 p.m.; Wed. and Sat. until 8.45 p.m.

NEWCASTLE HERD OF TAMWORTHS and Shorthorns.—We have for immediate sale several choice boars ready for service, and sows bred and ready to breed, together with a lot of beautiful pigs from two to four months old. Also a few choice heifers in calf to Donald of Hillhurst No. 44690, and a few nice bull calves and heifer calves. All correspondence answered promptly. Daily mail at our door, and prices right. Colwill Bros., Newcastle.

Mount Pleasant Herd of Tamworths and Heistons.—A large herd of choice pigs of all ages on hand. Mount Pleasant type of hogs are profitable breeders and ideal bacon hogs. Pairs not akin. Herd headed by Colwill's Choice No. 1348. Won sweepstakes and silver medal at Toronto, 1901-2-3. Also a few bulls. Bertram Hoskin, The Gully

Tamworths and Dorset Horn Sheep.—A choice lot of pigs of different ages and both sexes. Some fine shearing rams and ewe lambs. JAMES DICKSON, Orono, Ontario, "Glenairn Farm."

Meadowbrook Yorkshires
Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dalmeny Topman. Everything guaranteed as represented.
J. H. SNELL, HAGERSVILLE P. O. & STATION.

Glenhodson Yorkshires.
Sows bred or ready to breed. Young pigs from three to six months old. Pairs not akin. Satisfaction guaranteed.
GLENHODSON COMPANY, Myrtle Station, Ont. Long-distance phone at farm. Lorne Foster, Mgr

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

Yorkshires!
Have some grand spring litters farrowed in Feb., Mar., April, May from A1 stock. Will sell at living prices. L. HOOEY, Powle's Corners P. O., Fenelon Falls Station.

IMPROVED YORKSHIRES.
Large
Choice young stock from prizewinning stock for sale.
GEO. M. SMITH, HAYSVILLE, Ont.

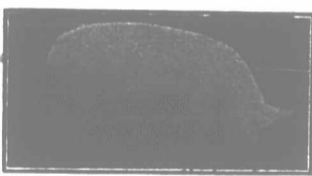
ELMFIELD YORKSHIRES
Have a few young sows 7 months, bred and ready to breed; also some young pigs weaned from imp dam and sire. G.B. MURPHY, HAYSVILLE, Ont.

BERKSHIRES

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

HILLCREST HERD OF ENGLISH BERKSHIRES
Sires in use: Concord Triumph 13303, got by Perfection (imp.) 9801, possibly the best sire in Canada to-day. Stoll Pitts' Winner (imp.) (12185), first at the Royal. On hand, young sows, sired by Concord T., bred to Stoll Pitts' W. These are choice and lengthy.
JOHN LAHMER, Vine P.O., Ont.

LARGE ENGLISH YORKSHIRES



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

D. C. FLATT & SON, Millgrove, Ont.

LARGE WHITE YORKSHIRES



Have just landed a fine importation of young boars and sows from noted herds in Britain, combining size, length and quality; many of them being of different breeding to any hitherto imported, and all are offered for sale, together with a number of choice Canadian-bred pigs. Imported sows can be furnished in pig. Write:

H. J. DAVIS, Woodstock, Ont.

Morrison Yorks. and Tams.



on hand, for sale. Are both sexes of both breeds. Bred from prizewinners and extra choice. Prices right.
Charles Currie, Morrison P. O., Schaw Sta., C. P. R.

Rosebank Berkshires

Young stock from six to eight months, bred by Maple Edge Doctor and other prize sires. Some choice sows bred and ready to farrow. Express prepaid.
W. H. BARKES, JR., CHURCHILL P. O., HAYSVILLE, Ont.

MONKLAND YORKSHIRES

Imported and Canadian-bred.
We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right.
JAS. WILSON & SONS, FERGUS, ONT. G. T. R. and C. P. R. Long-distance Phone

Oakdale Berkshires

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

Ohio Improved Chester Whites

100 Pigs to Offer of the long, deep, heavy sort. Breeding stock selected from the most noted families, with a view to size and quality. Booking orders for choice spring pigs; also a few fall pigs for sale. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe arrival guaranteed.
H. E. GEORGE, Crampton, Ont.

Glenburn Herd of YORKSHIRES

Now on hand, a number of sows, 5 and 8 months old, for spring farrow; also a large number of September sows and boars. Booking orders for spring pigs.
DAVID BARR, JR., Box 1, Renfrew, Ont.

Fairview Berkshires

Bred from imported and Canadian-bred sires and dams, and bred on prize-winning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to imp. boars.
HENRY MASON, SCARBORO P. O. Street cars pass the door.

QUESTIONS AND ANSWERS. Miscellaneous.

CHOLERA IN CHICKENS AND TURKEYS.

The heads of my chickens and turkeys get a dark red; their eyes swell, and the body swells, and they have cholera. They stop feeding, and seem to be very thirsty. They live for eight or ten days thus, and grow so weak that they die. I have been feeding boiled wheat and shorts, and they can run all over the fields. W. J.

Ans.—We are inclined to think our inquirer has answered his own question correctly. The symptoms point to cholera. When this disease makes its appearance in a flock that has free range, it is almost impossible to control. Strangle and burn all diseased birds, and house the remainder in restricted quarters, removed, if possible, from the old range. Infection takes place usually through food or drink that has been fouled by discharges of diseased birds. The germs also gain entrance to the body by inhalation of dust in infected coops which have not been properly disinfected. Blood and flesh of diseased birds eaten by others will communicate the disease. Pigeons, sparrows and other birds may spread the contagion when the disease is present in a neighborhood. Avoid, if possible, all these dangers of infection. Disinfect runs and houses with a five-per-cent. sulphuric acid solution. Disinfect water for drinking and other purposes with a teaspoonful of napceol in each two-gallon bucketful. Give any birds showing a suspicious looseness of the bowels a three-drop dose of spirits of camphor made into a small pill with bread crumbs and a little sugar. Administer twice daily for three or four days. Prof. Elford reports good results at the Government poultry stations from the use (as a preventive) of a teaspoonful of sulphocarbonate of zinc to a gallon of drinking water, used for several days.

LAYING CEMENT STABLE FLOOR — PLAN OF STANCHIONS.

1. Would you, or some of your many readers, give, through the medium of your very valuable paper, a good plan for laying cement floor in cow stable and putting in stanchions? What thickness should the floor be made? What kind of cement is best for that purpose, also price per barrel, best method of mixing, and how often, and what proportions?
2. Would also like some good plan for wooden stanchions, dimensions, etc.

ANS.—1. Cement stable floors should be about three inches thick. Having the ground levelled and firm, set up three-inch scantlings on each side of the strip of floor to be laid, being careful to have the upper edge of scantlings perfectly straight, and exactly where you want the surface of the floor to be. Mix thoroughly dry Portland cement and gravel in the proportion of 1 to 8; wet, and again mix; fill level with top of scantlings, and scrape smooth with the edge of a board resting on scantlings. After ramming firmly, the surface will be about half an inch lower than before. Next, mix, as before, cement and clean sand, one to three, fill up the half-inch space; again scrape level with the edge of a board, and smooth with a trowel.
2. We have seen very satisfactory wooden stanchions made of 2 x 4 Norway pine scantling. This is quite strong enough for any animal. In the case we have in mind, both upper and lower frames for holding stanchions were also made of the same size of scantling. The rigid half of stanchion, four or five feet long, was fastened at both top and bottom by being bolted between two scantlings running horizontally on edge. The swinging half was made a little thinner at the ends so as to play easily in space between scantlings, and was fastened at the bottom by a single bolt, and at the top by a U-shaped loop of heavy wire. This wire was fastened on the upper side of top pair of scantlings by a couple of staples in such a way that the loop end rose and fell freely. The upper end of swinging stanchion was cut slanting so that when pushed into position it raised the wire, which then fell behind and held it. T. B.

Limitation in thought will certainly produce limitation in possession.