

J. H. Griedale
Exp. Farm, Ottawa
24 Feb 20, 1901

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.
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VOL. XXXV. LONDON, ONTARIO. JULY 20, 1900. WINNIPEG, MANITOBA. No. 506

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CONTENTS OF THIS NUMBER.

	PAGE.
MANITOBA CROP CONDITIONS	383
HOLD ON TO SOME OF THE HOGS	383
THE GREAT INCREASE IN GRASS ACREAGE	383
THE GRAIN HARVESTING	383
MR. RUDDICK RETURNS TO HIS FIRST LOVE	384
THE INSTITUTE MEETINGS	384
MR. J. A. RUDDICK (ILLUSTRATION)	384
THE NEW INSECTICIDE	384
SCALY LEGS IN FOWLS	384
A DRESSING FOR RINGWORM	384
FIELD MARSHAL LORD ROBERTS (ILLUSTRATION)	385
HEROES OF THE SOUTH AFRICAN WAR	387
FROM CANADA	387
THE GOOD ROADS MOVEMENT	387
HOW THE PER CENT. OF FAT IN MILK AFFECTS THE YIELD OF CHEESE	387
OUR SCOTTISH LETTER	388
BARON'S CROWN (ILLUSTRATION)	388
DETERMINING AGE OF STOCK BY DENTITION	388
CLYDESDALE STALLION, McBAIN (2270) (ILLUSTRATION)	388
COMMANDERS OF THE EMPIRE IN SOUTH AFRICA (ILLUSTRATION)	389
THE CREAMING OF MILK	391
VILLAGE HERO - 14312 - (ILLUSTRATION)	391
DOMINION ENTOMOLOGIST EXAMINES THE GRASSHOPPER DISTRICTS	391
A TESTIMONIAL AND A TRIP	391
THE CHAMPION PLOWING MATCH	392
THE SUBSOIL PACKER	392
THE OLD AND THE NEW HOME OF PETER THOMPSON, MIAMI, MAN. (ILLUSTRATION)	392
THE 1899 GRAIN CROP	392
DATES OF SUMMER FAIRS	392
FREE FROM MANGE	392
HOMEMADE CHEESE	393
GOLDEN MEASURE - 26055 - (72615)	393
A BLACK BEETLE DEVOURING POTATO VINES	393
NOTES OF THE BLYTH PLOWING MATCH	394
A COMFORTABLE HOMESTEAD. A. WRIGHT, PLUM COULEE, MAN. (ILLUSTRATION)	394
HAMOTA PLOWING MATCH	394
THE HOME OF J. G. WASHINGTON, NINGA, MAN. (ILLUSTRATION)	394
VERDEN PLOWING MATCH	394
WHY STRIPPINGS ARE SO RICH IN CREAM	394
AN INTERNATIONAL SHORTHORN SALE	395
THE EVER POPULAR HORSE	395
QUEEN OF THE LOUANS (ILLUSTRATION)	395
A GOOD BARN IN A WHEAT SECTION (ILLUSTRATED)	396
GIVE THE FOWLS EXERCISE	396
WATER OR NO WATER?	396
EGGS IN COLD STORAGE	396
FATTENING CHICKENS IN COOPS AND IN YARDS	396
BUTTER - FROM THE STABLE TO THE TABLE	397
WHERE DAIRY BREEDS DIFFER	397
MAKING LATE SWARMS PROFITABLE, ETC.	398
SHEEP AT THE ROYAL SHOW	398
JUDGE - 23419 - 131238 (ILLUSTRATION)	399
GOLDEN LAD	399
TO TELL THE AGE OF A HORSE	399
CALE FEEDING	399
STOCK JUDGES AT THE WINNIPEG INDUSTRIAL	399
IGNORANCE IS FOLLY	399
YEARLING HEREFORD HULL, REX OF INGLESIDE (ILLUSTRATION)	400
FIRST INTERNATIONAL GOOD ROADS CONGRESS (ILLUSTRATED)	401
A PINK-DRIVING PUNCH	401
MORE BIOGRAPHICAL NOTES OF O. A. COLLEGE GRADUATES	401
ROYAL DUKE (ILLUSTRATION)	401
KINGSTON TWINE FOR THE WEST	401
QUESTIONS AND ANSWERS: - VETERINARY: PROBABLY TUBERCULOSIS; LAME FILLY; LAME MAKE; INDIGESTION WITH BLOATING IN COW; BONY ENLARGEMENT ON CANNON BONE; LARVAE; INDIGESTION IN CALF; PROBABLY TUBERCULOSIS IN FOWLS	402
MISCELLANEOUS: PERENNIAL VETCH; BE "MARE KICKS" OVER TONGUE	402
FARM GOSSIP	402
CHATTY STOCK LETTER FROM CHICAGO	402
HOME MAGAZINE	
FAMILY CIRCLE	403
THE QUIET HOUR	404
"SHADY MEADOW" (ILLUSTRATION)	404
THE CHILDREN'S CORNER	404
PUZZLES	405
GOSSIP	406, 407, 408, 409, 410, 411, 415, 416, 418
NOTICES	408, 415
ADVERTISEMENTS	381 and 382, 406 to 420

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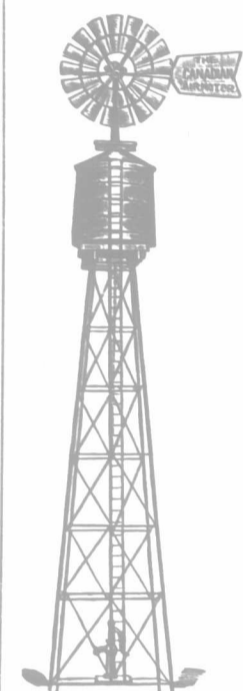
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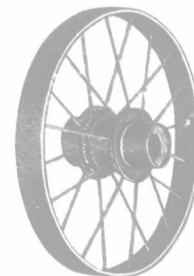
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Liabilities.....	219,073,809.03	Total Insurance in force.....	1,054,416,422.00
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Income, 1899.....	53,878,200.86	Insurance Declined.....	34,054,778 00

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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXV.

LONDON, ONT., AND WINNIPEG, MAN., JULY 20, 1900.

No. 506

Manitoba Crop Conditions.

The excessive drought which prevailed throughout the wheat sections during the growing months was broken by general rains the last few days of June and the early part of July. The conditions on the average farm, however, are entirely exceptional, and it were the veriest guesswork to prophesy on the results of the harvest at this date. With the soil heated above ordinary temperature, and in fine mellow condition, the abundant moisture and July warmth will cause a marvelously rapid growth, and in cases where the rains came before the grain was headed out, the results will certainly be far better than could have been hoped for. Unfortunately, however, much of the wheat was headed out at 5 or 6 inches in height before the rains came, and consequently one could find immediately after the rains, in many fields wheat headed out and other plants just starting from seed sown at the same time. Much of the straw will of course be short, too short to make sheaves, but if even six or eight bushels of fairly good wheat can be secured per acre it may yield as much profit as an ordinary 20-bushel crop. The cost of harvesting, threshing, twine, etc., will be little, and the price per bushel in all likelihood will be near the dollar mark. In '86, which was an extremely dry season, the writer harvested a crop of wheat which only yielded 6 bushels per acre and was so short that it was necessary to fasten willow brush to the binder reel in order to sweep the grain on to the platform. The binder attachment was taken off the binder and an arrangement like a box put in its place, provided with a door hinged at the top and manipulated with an iron rod in the same way as the "butter" on some binders is regulated. By this means as soon as the box is filled with heads it can be dumped out in windrows.

The rains have in many districts greatly helped the hay crop and have improved pastures everywhere so that the live-stock and dairy industries are greatly benefited and stock will doubtless be in better condition this fall than usual. The conditions during the early part of the season in the ranching districts of Alberta were particularly favorable, the stock wintered well and export shipments commenced early in July, with cattle fatter than last fall. Throughout Eastern Alberta and Saskatchewan there was plenty of moisture throughout the growing season, and crops in these districts are fully up to the average.

Hold on to Some of the Hogs.

A great rush of hogs have been coming forward for the past couple of months. The market price was well sustained during the greater part of the time. A year ago there was a dearth of hogs. Tons of dressed pork was imported to supply the local demand. People have been rapidly breeding up again, but the prospective crop failure compelled everyone to unload. Hundreds of sows, well forward in pig, have been slaughtered, and there is every probability of another hog famine next year. Those who can possibly supply feed will almost certainly be well paid by holding on to their hogs and not joining in the rush to unload at any price.

It is officially estimated that the wheat crop of India is 181,000,000 bushels, against 238,000,000 bushels last season, and 227,000,000 bushels, the average of five years past.

Unofficial reports from the Paris Exposition state that many first and other prizes have been captured by Canadian fruit, as well as the Grand Prize for the forestry, fish, game, mineral and agricultural exhibits.

The Great Increase in Grass Acreage.

One of the most encouraging items referred to in the Manitoba Government crop report of June was the great increase in the acreage sown to cultivated grasses, from less than 2,000 acres in 1880 to 5,000 acres this year. Every farmer who takes the trouble to study out the soil conditions realizes the necessity of getting root fiber and humus back into the soil which has been worn-out by constant cropping and summer-fallowing. The past spring has demonstrated more emphatically than ever the importance of root fiber in the soil in order to prevent drifting, but it has been an unfavorable season for grass seed. Where sown early, the seed, in most cases, was killed by the excessive heat and drought. Where, from one cause or another, the grass seed was not sown until the rains came, a good catch may be looked for. It seems now generally to be conceded that in this country of light average rainfall it is well to sow all grass seed pretty deep. Putting them in with a drill gives good results on most lands. Throughout the lighter soil districts of the western half of the Province and in the Territories it seems that the grasses all do much better when sown by themselves without any nurse crop, but in the heavy, moister soils of the eastern half of the Province they do equally well sown with a crop. This, of course, saves a year, and where it proves satisfactory it is the much more economical way of seeding down. A good many have had successful catches by mixing the grass seed with the wheat and sowing with shoe drill.

The Grain Harvesting.

The hay crops in most parts of Ontario and the Eastern Provinces has been a fair average one, though in some districts, where the drought of last summer was prolonged and severe, the young clover plants were burnt out, and the yield of the older meadows has been light, while in Manitoba, owing to the lack of rain during the spring months, the hay crop will return a low yield. It is therefore probably correct to describe the crop on the whole as a light one, and the deficiency in this class of fodder for stock feeding emphasizes the importance of harvesting the grain crops, which in all the provinces except Manitoba, we are glad to know, are fairly good, at such time and in such manner as to secure, if possible, a good quality of both straw and grain. Straw that is cut before the grain is fully ripe, and saved with little exposure to rains, may be profitably utilized for feeding purposes, especially when chaffed and mixed with ensilage or pulped roots; and when the supply of hay is short there is the greater need to make use of straw in this way. Of course, weather conditions and probabilities have to be taken into account in harvesting operations. A wet season makes it difficult and sometimes impossible to manage the cutting and curing satisfactorily, but in average harvest weather as we get it in Canada, it is, we believe, the settled opinion of most successful farmers that it is true economy to cut all classes of grain before they become fully ripe. The grain, if cut while in the dough state and while there is some sap in the straw, will continue to draw nourishment from that supply, and will ripen in the shade of the stook with less shrinkage than if allowed to stand till dead ripe, and will take on a fresher color, while it can also be handled with less loss from shelling, and the straw will be much more valuable for feeding purposes on account of having been cut and cured with a good percentage of the sap in it. If from want of drainage or other causes parts of a field are later in ripening than others, of course judgment must be exercised in harvesting, and it may be necessary to allow the more forward portions to get fully ripe before the backward parts can be safely cut, but in favorable weather a safe

average may be struck, and if a considerable part is on the green side it will be wisdom to set the binder to make smaller sheaves or to bind them less tightly than in a more uniformly ripe crop; but to avoid the danger of its musting in the mow, care should be observed to have the straw well dried before it is stored, as musty straw is of even less value for fodder than overripe straw, and the color of the grain is apt to be injured by the heating in the mow or stack.

The importance of early harvesting in the Northwest, or the cutting of the grain as soon as it is reasonably fit, is emphasized by the liability to damage from early frosts in those provinces, and the lesson has been pretty thoroughly learned there from experience. In the provinces in which fall wheat is grown and it is desired to follow a crop of barley or peas with wheat, it is important to get the first crop off the ground as early as possible in order to have the land plowed and worked down to a fine tilth before sowing, taking advantage to cultivate and harrow after every rain to conserve the moisture and prepare a favorable seed-bed. As it not infrequently happens that the last of the harvest runs into unfavorable weather, the wise farmer will push the work whenever the crop is fit and get it safely stored as soon as possible. There is a sweet sense of satisfaction in having the crops safe in barn or stack even if the weather continues fine, but that feeling is happily intensified when a rainy season follows, and the farmer reflects on what might have been had he taken things easy and failed to make the best use of the time. On the other hand, long weeks of weary work and a wasted crop may be the price paid for indifference, if the golden days in which they might have been secured are allowed to pass without being improved as they might have been. Canadian harvest weather is, as a rule, less fickle than that of most countries, but the weather is an uncertain quantity even in Eldorado, and cannot long be safely trusted, and the injunction, "Do with your might what your hands find to do," is never more timely than during the harvest days.

A writer in an English contemporary points out that fewer horses were imported from Canada during May than during a corresponding month for the past six years, but they were of first-class quality and brought higher prices. The diminution in numbers is perhaps due to the large numbers gone from Canada this year direct to South Africa for use in the war. In this connection we notice that one of the Toronto *Globe's* correspondents calls attention to the excellent service rendered by the Canadian horses at the front, where their stamina and intelligence have enabled them to sustain to a very marked degree the unusual strain put upon them, their powers of endurance being notably superior to many others under similar circumstances.

The prospect for the summer fairs coming in this month and next are certainly very encouraging, all things considered. The Winnipeg and Brandon exhibitions will doubtless be especially well attended, and others in proportion. The welcome rains of the last few weeks, although belated, have done a vast amount of good and have served to brighten the outlook for crops and stock very materially. The fact that in most sections the commencement of harvest will be later than usual will afford leisure to attend the fairs, where useful lessons may be gleaned from the exhibition of stock and other products of the farm, and where, by comparing notes with each other on the best methods of managing crops and stock under varying circumstances, farmers may be materially benefited. The energy and enterprise displayed by the managers and directors of these exhibitions deserves encouragement, and should meet with the appreciation of the people, at least to the extent of attending and thus adding their quota towards meeting the expenses incurred.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

PUBLISHED BY THE WILLIAM WELD COMPANY (LIMITED)

EASTERN OFFICE: CARLING STREET, LONDON, ONT.

WESTERN OFFICE: MCINTYRE BLOCK, MAIN STREET, WINNIPEG, MAN.

LONDON, ENGLAND, OFFICE:

W. W. CHAPMAN, Agent, Fitzalan House, Strand, London, W. C., England.

1. THE FARMER'S ADVOCATE is published on the fifth and twentieth of each month.
2. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical, and reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
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Address—THE FARMER'S ADVOCATE, or THE WILLIAM WELD CO., WINNIPEG, MANITOBA.

Mr. Ruddick Returns to His First Love.

On this page we give a lifelike portrait from a recent photograph of Mr. J. A. Ruddick, who has just returned to Canada to take a position in the dairy branch of the Dominion Department of Agriculture, after an absence of two years in New Zealand, where he occupied the position of Dairy Commissioner. His retirement was due to the ill-health of Mrs. Ruddick on that Island and the offer of a tempting position in the public dairy service at Ottawa. We notice by the *New Zealand Mail*, that prior to his departure he was tendered a complimentary farewell banquet, at which it was stated that he took with him the good wishes of every dairyman in the country. On that occasion he was presented by the New Zealand Dairy Factory Managers' Association with a beautifully embossed and illuminated address enclosed in a case made of New Zealand wood, expressing very great regret at his departure and referring to the gratifying success which had attended his untiring efforts in advancing the dairy interest. Acknowledgment was specially made of the benefits derived by those engaged in this industry there from his fine experience, sound sense, and valuable advice, while the local reporters who then dairy products stand in Britain is a creditable testimony to the efforts to remove obstacles which stand in their way as regards the production, improvement, and shipment and distribution of these products. Some members of his staff escorted him to the coast, and a number of them accompanied him on his way, and a number of papers and magazines were subscribed to in his honor.

The Institute Meetings.

The series of Institute meetings held in June and the first week of July appear to have called out rather slim attendance. Probably the disheartening crop conditions existing at the time had a good deal to do with the partial failure. At some points the notice given had not been long enough. However, as this series is in a sense an inaugural one, introducing a new system whereby the Agricultural Societies are to take over the work of the Institutes, better things may be hoped for in future.

SOUTHERN MANITOBA.

The speakers in Southern Manitoba along the Deloraine branch were Mr. D. Munro and Rev. W. A. Burman. Meetings were held at 9 points. The attendance has generally been small, partly owing, perhaps, to the notice having been so short. Mr. Munro spoke on dairy farming and fodder crops; Mr. Burman, on soil moisture, weeds and insects.

At *Deloraine* the meeting was very small, but some few ardent spirits had come several miles to be present, and appeared to be greatly interested. Several specimens of Rocky Mountain locust were found three miles south of the town, but very little damage is reported. Crops have suffered greatly from drought as elsewhere, and many will be a complete failure. Some, however, bid fair to give a moderate yield under the influence of recent rains.

At *Boissevain*, Mr. McQuade, the energetic secretary, took the chair. The attendance of farmers was small, but the presence of a number of senior scholars from the public school gave a fair sized audience and added interest to the meeting. It is a pity this practice is not more common. The attendance at such meetings of our boys and girls could not but be beneficial to them.

At *Killarney*. Notices not having been sent out here, it was not until late in the afternoon that a



MR. J. A. RUDDICK.

small company was got together, when they were addressed by Mr. Munro alone. As considerable attention is being given to stock-raising here, his theme was very appropriate, and seemed to be fully appreciated by those present.

At *Cartwright*. Good arrangements had been made here. A meeting of the Agricultural Society was held, with a fair attendance. The President, Mr. McKenzie, took the chair. A good discussion followed the addresses. Next morning the annual plowing match was held on the farm of Mr. Ganby. The competition was very keen and great interest was manifested. Such gatherings must be very useful to the farming community.

At *Crystal City* gave a small but interested audience, the President of the F. Institute in the chair. Considerable discussion followed, especially on the fodder question which is this year assuming very serious importance.

At *Pilot Mound* but little interest was evinced. Perhaps the slim attendance was due to the meeting being in the evening. The meeting was not a failure, yet it scarcely reflected credit on the agriculturalists of Pilot Mound.

At *Wanitani*. The meeting here was on Saturday evening; Mr. W. Baldwin, President, in the chair. Music was furnished by the piper, Brown. The attendance was about 25. There was some interest manifested, but here again there seems need of more activity if the meetings are to really be of use.

At *Mosley* had a fair attendance, though the day, being a public holiday (Dominion Day), was not propitious. For this Mr. Gilechrist, the energetic secretary, deserves all credit. Though the number was not large, yet it promised good fruit in future, and interest in the subjects discussed by the speakers.

At *Neudorf*. A small meeting was held at Neudorf, Mr. Simpson in the chair. The attendance was very small, but the meeting was not a failure.

men deeply concerned in the matters referred to.

Regarding the series of meetings generally, it may be said that the subjects assigned the speakers are very live subjects in the district covered. Dairying and fodder crops were never of such vital importance there as this year, and it is quite clear that the districts having cattle, hogs, etc., will this year have the advantage. As to conservation of moisture, it is obviously a very appropriate topic this season, as is also that of weeds. A full line of these can be found now in almost any district. As to insects, the speakers found great damage done to crops by ant-worm, and to some extent by what would appear to be the frit-fly. Recent rains have greatly improved the appearance of the crops in this section.

Messrs. D. A. Stewart, Pilot Mound, and George H. Greig, of FARMER'S ADVOCATE, Winnipeg, attended several Farmers' Institute meetings the last week in June. The meetings as a rule were not largely attended, but those present included many of the representative farmers from each locality, and marked interest was displayed in the subjects taken up. Meetings were held at Morris, Beausejour, Selkirk and Bird's Hill. Mr. Stewart at some of the meetings spoke on "Dairying," describing in detail the organization and work of the Fairplay Creamery near Pilot Mound, which is one of the most successful creameries in the Province. At other points Mr. Stewart spoke on tree planting for shelter belts and ornament, giving from his personal experience advice as to the best varieties and the best way of handling them. He strongly recommended the more general introduction of shelter belts and wind-breaks, not only for the protection of farm buildings, but in order to break the force of the winds and thus to lessen the evaporation of soil moisture and assist in preventing soil drifting.

Of the trees most highly recommended were the native maples, Russian poplars and native spruces.

Mr. Greig spoke on soil cultivation and grass, urging the necessity of deeper and better plowing, the advisability of better methods of cultivation to prevent drifting and the evaporation of soil moisture, and also strongly urged the necessity in all the older districts of the use of manure and of seeding down to grass in order to restore the root fiber which by constant cultivation had been worn out of the soil. At other points he took up the subject of "Noxious Weeds," dealing with the nature of plant growth, the names and characteristics, and best methods of eradicating the most troublesome varieties of weeds in the districts visited.

The New Insecticide.

GENTLEMEN,—In reply to your enquiry as to whether green arsenoid is superior to Paris green for the treatment of leaf-eating insects, I beg to say that up to the present I have not considered it wise to recommend any substitute for Paris green. This material is now so thoroughly well known by farmers and fruit-growers that there is no difficulty in getting them to use it upon trees and other crops liable to be attacked by foliage-eating insects. Green arsenoid is one of several compounds which have been lately introduced, and which certainly are valuable insecticides. They differ principally from Paris green in their chemical composition, the omission of acetic acid making it possible to produce them at a slightly lower figure without injuring their insecticidal qualities. I can quite understand that the makers of arsenoid poison might claim that this material is better than Paris green. It is slightly cheaper, and appears to remain in suspension a good deal longer than Paris green when mixed with water. It has, too, the bright green color of Paris green, which is a safeguard against its being mistaken for less dangerous compounds when left about by careless people. Green arsenoid is apparently very similar, if indeed it is not identical with arsenite of copper. Yours very truly,

J. FLETCHER, Entomologist and Botanist, Central Experimental Farm.

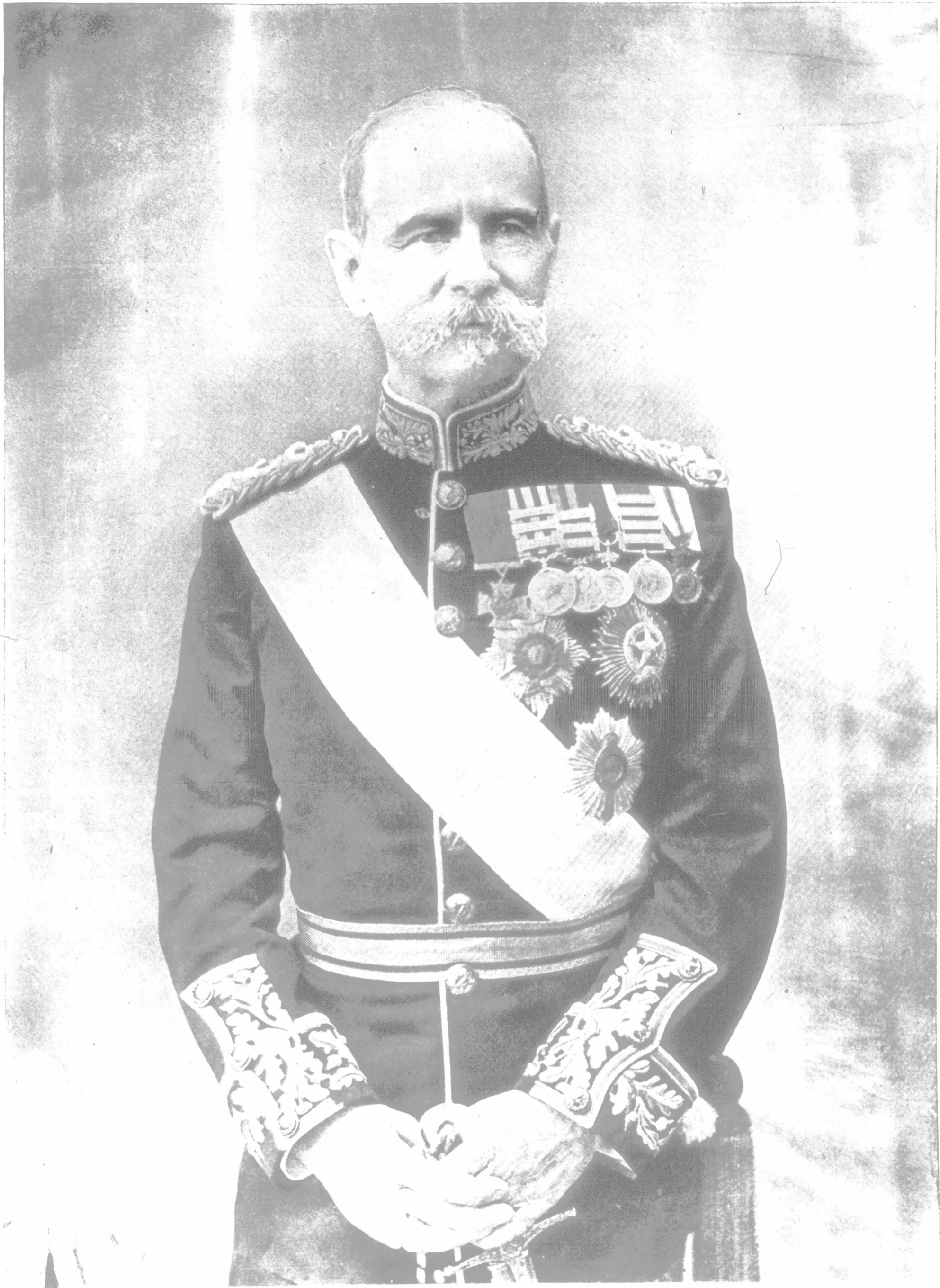
Scaly Legs in Fowls.

This trouble is usually caused by the chicks or fowls sleeping in filthy quarters. It is also caused by a small parasite which works underneath the scale of the leg. I have seen fowls with scaly legs that were twice their natural size. If the legs of each fowl were anointed once each month with equal parts of sweet oil, kerosene oil, and alcohol, they would never become scaly, but would remain in a fine healthy condition. A good remedy is lard and kerosene oil, equal parts; add enough pulverized sulphur to make a paste, then apply this to the legs and bandage them, leaving the bandage on for a week. If at this time the scales are not all healed off, repeat the application of the same ointment, as it is a sure cure. The bandage may be sewed on, so that it cannot be scratched off by the patient.

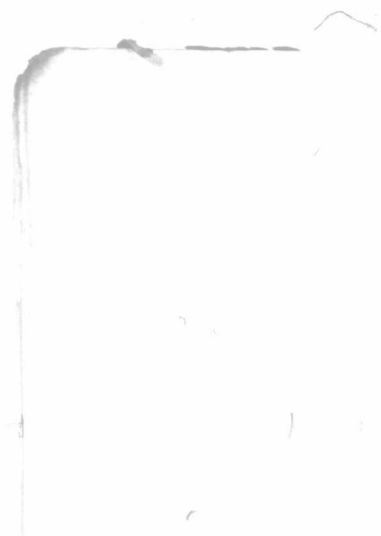
Moose Jaw. H. B. S.

A Dressing for Ringworm.

There are cures without number for ringworm. A remedy which has been recently tried with success by one of our correspondents consisted of five parts each of lard and oil of tar and one part of flowers of sulphur. These were blended into an ointment and applied every three or four days—always, however, after first washing the affected parts of the body with soft soap and tepid water, well rubbed in with a common dandy brush.



FIELD-MARSHAL LORD ROBERTS, COMMANDER-IN-CHIEF OF THE BRITISH FORCES IN SOUTH AFRICA.



Heroes of the South African War.

No war in which Great Britain has ever been engaged has excited throughout the Dominion of Canada such a keen and general interest as the struggle with the combined forces of the Transvaal and the Orange Free State (two republics so-called), leagued for the domination of South Africa, and the perpetuation of an oppressive and corrupt oligarchy. The Transvaal had been accorded the right of self-government, subject, however, to the suzerainty or permanent rights of Great Britain, but for many long years they have subjected the thousands of British subjects in the country (called Outlanders) to gross injustice, imposing heavy taxes upon them, but denying them the right of franchise or any practical voice in the conduct of the country's business. President Paul Kruger, of the Transvaal, by frequent promises that were never fulfilled, and an unexampled course of duplicity and procrastination, as the official record of his dealings with Sir Alfred Milner and the British Government clearly show, gained years of time, and was all the while secretly preparing for war by the purchase of arms and munitions, and the hiring of foreign officers to drill the Boer population. A millionaire many times over, and using the funds of the Transvaal for this purpose, he was able to do this most effectually, and when fully ready he invaded British territory, and, as our readers are aware, found the British authorities wholly unprepared with forces in Cape Colony. President Steyn, of the Orange Free State, an ambitious and designing man, cast in his lot and forces with the Transvaal.

The war began officially at 5 p. m., October 11, 1899, the hour fixed by the Boers for the British to comply with their ultimatum and "get." The next day the Boers captured an armored train and at once began their march on Kimberley and Mafeking. The first British victory was when the Boer position on Talena Hill was captured on October 20, and the first important gain was the success of General French in ejecting the Boers from Elandsplaagte. Small actions continued daily until October 30, when the Boers captured two British battalions at Nicholson's Nek. General Buller arrived at Cape Town on October 31. The following day the Boers invaded Cape Colony. On November 2, Ladysmith was isolated and bombarded, and Colenso was evacuated by the British garrison. Naauwpoort and Stormberg were also evacuated by the British. On November 9, the Boers attacked Ladysmith, but were repulsed with heavy loss. On November 15, the Boers wrecked an armored train and captured one hundred British troops. From November 23 to December 11, Methuen went from disaster to disaster, losing heavily in taking the Boer position at Magersfontein, in which action General Wauchope was killed. December 15, Buller made his advance on Tugela, and the result was tragic. The casualties of 1,100 shocked and discouraged the whole British Empire. December 18, Lord Roberts was appointed Commander-in-Chief in South Africa, with Lord Kitchener as Chief of Staff. Before these two valiant soldiers reached South Africa the British won several small victories. General J. P. D. French forced the Boers from Colesberg. Lieutenant-Colonel Pilcher won a small victory at Sunnyside. The Boer attack on Ladysmith was withstood under the leadership of the brave General White, at a cost to the British of fourteen officers killed and twenty-seven wounded, one hundred and thirty-five men killed and two hundred and forty-four wounded. Buller tried again to cross the Tugela. The Boers captured a part of his command. General Warren retreated from Spion Kop after terrible losses, and the troops recrossed the Tugela. On February 5, Buller failed in his attempt to relieve Ladysmith. The turning point in the war was February 12, when General French started on his forced march for Kimberley, which he reached and relieved on February 15. The 123 days' defence of Kimberley had been directed by Hon. Cecil Rhodes and Col. Kerwiche. On Feb. 16, General Cronje was leading the Boer retreat, and was being pursued by General Kelly-Kenny. Cronje's forces took their stand in the river-bed near Raadsberg. By this time Lord Roberts had caught up with the fighting. On February 27, Cronje surrendered his forces, numbering 1,080. The next day, February 28, Ladysmith was relieved, by persistent fighting, Gen. Buller having brought his campaign to a successful close. The town had been fiercely besieged for 122 days.

The general forward movements were begun on March 1. Bloemfontein surrendered with little resistance. Other towns were easily taken, and the British flag was raised over the Orange Free State, and its name changed to the Orange River Colony. On May 17 the relief force entered Mafeking, which had stood the siege of two hundred and sixteen days, under that heroic and resourceful soldier, Col. Baden-Powell. The defence of Ladysmith, Kimberley, and Mafeking constitute some of the most glorious pages in the history of heroism. On the Queen's Birthday, Lord Roberts entered the Transvaal. Thence his march to Pretoria was marked by a few small fights, but by no important battles. On May 29, President Kruger fled from Pretoria, and on June 5, Lord Roberts and the British forces marched into the Boer capital. The war is still going on in

guerilla fashion, under two Boer generals, DeWet and Botha.

The army that did this work was the largest Great Britain ever put in the field. Her forces now number over 200,000. There were 152 guns. There are no reliable statistics from the Boers, but at best it is not thought that they had more than one-third as many troops in the field as the British.

The wave of sympathetic and enthusiastic patriotism that swept through Canada, from the Atlantic to the Pacific, was an inspiring revelation to great numbers of lethargic individuals upon that score, and culminated in the sending of Canadian contingents to the front for the defence of Queen and Empire, imparting an intense personal interest in thousands of Canadian homes that would not otherwise have been realized. Our readers will therefore appreciate the two full-page engravings which we give in this issue, of a number of the most conspicuous personalities in the campaign, first being naturally that of General Lord Roberts of Kandahar, familiarly known as "Bobs," easily the foremost figure of the campaign, a life-long soldier who served with distinction in India, Afghanistan, Abyssinia, and South Africa. The second page contains portraits of seven of the most prominent British commanders and five gallant officers in the Canadian forces. The Transvaal conflict, like other wars, has swept away paper and parade reputations, and brought new men to the front. An exception must be made, however, for that exceptional leader, Lord Roberts, who made better time to Pretoria than on his famous march to Kandahar. Buller (who took part in the famous Red River expedition in his earlier career), Methuen and Gatacre were to rush the campaign to a speedy close, but we know what happened, and how that such fighters as French, Baden-Powell, and Macdonald ("Fighting Mac," the hero of the masses) came into prominence.

From Canada.

Mother and Queen, from the golden West,
We offer in love at the foot of thy throne,
All we can give thee, our dearest and best,
Flesh of our flesh and bone of our bone
Take them, Queen of the brave and free,
They come in their love to die for thee.

Mother and Queen, from farm and mart,
From bank and factory, hill and plain,
They gather in love for a noble heart,
To lighten its sorrow and bear its pain
Take them, Queen of the brave and free,
They come in their love to die for thee.

Mother and Queen, our homes were bright
And pure as the air of the sunlit north,
But tears have darkened the woman's sight
Since the day that the brother and son went forth—
Take them, Queen of the brave and free,
Who come in their love to die for thee.

Mother and Queen of the spotless throne,
Lady and Lord of the sea and land,
Thou makest our far-born sons thine own
By the tender clasp of a woman's hand
Take them, Queen of the brave and free,
They come in their love to die for thee.

Mother and Queen, from the strong glad West,
From the rivers and plains where our children roam,
We give thee our dearest, our bravest and best,
Take them, Queen of our heart and home—
Asking no bounty, favor or fee,
They come in their love to die for thee.

Quebec. FREDERICK GEORGE SCOTT.

The Good Roads Movement.

The good roads question is one towards which there is a rapid change of sentiment being felt throughout Canada and the United States of America. People are apparently awakening to the fact that while all waterways and railways—the chief arteries of transportation—are receiving attention in keeping with the progress of the age, the country roads or lesser arteries in many sections are being practically left as they were years ago, or the work done upon them in many instances is done by men without knowledge of the correct principles of road building, and with material and conditions quite unsuited to the purpose for which it is used. Why apathy should have reigned so long on the part of farmers and others using roads and streets in regard to a matter that touches so many is not easily understood, unless it be that what is everybody's business is nobody's business, whereas the chief transportation lines are monetary concerns, conducted on business principles. The importance of a country road being in the best possible condition, consistent with its needs, is no less than if it were a private or company concern, since its utility begins and ends with the perfection with which it fulfils its function. All transportation is a tax, and the better the means of transportation the less does the tax become. For instance, the farmer in one district, living adjacent to a properly constructed highway that remains firm and in good condition for hauling heavy loads at all seasons, can deliver his potatoes at the market for 1 cent per bushel, whereas another farmer, living a similar distance from town, but having to drive over a turnpike of poor quality, cannot deliver his potato crop for less than 4 or 5 cents per bushel. The difference in cost of haulage is nearly a tax that may render potato-growing in one case profitable and in the other a non-paying industry. The same principle holds good in hauling milk to creameries or cheese factories. The tax upon the producer bears a relationship to the condition of the roads over which the produce is hauled.

Not only do good roads reduce the tax from

extra cost of transportation, but they by other ways relieve depression in rural communities, for we have abundant proof that land values have risen and that the farmers are more prosperous and happy in those localities where the roads have been subsequently improved. It is also a fact in these localities the farmers are the strongest advocates of good roads. Among the many results following improved highways, besides increased land values, are the following: Better country homes in improved lawns, neater surroundings, inside comforts, etc.; improved school buildings and yards; it will hasten free mail delivery and bring libraries and helpful lectures nearer to all country people, since it practically reduces the distance to town. Such an improved condition of things does not alone benefit the citizen of the country, as his bettered condition and improved tastes will create a demand for more manufactured articles such as the townsman has to sell. It is therefore reasonable to conclude that the burden of road improvement should be distributed alike on all citizens of a country, whether they be townsmen or rural inhabitants. It has been carefully estimated that over 90 per cent. of every load hauled by railroad, steamboat or express must be carried in a waggon or truck over a highway. We need no more convincing proof than this to indicate that all cities, manufacturers, corporations and laborers are interested with the farmer in the great problem of rapid and economic road improvement.

Turning to the social side of the question, it may fairly be stated that the condition of country roads has a power in the development of mental and moral culture. The railway and telegraph lines are the great modern civilizers of the world, but they are limited in their spheres of usefulness because in many cases they do not reach the farm, the home, the country schoolhouse and the church. The common road is the connecting link between these, and without it the progress of a widespread civilization must of necessity be greatly retarded. They are the foundation-stones upon which the superstructure of society is erected, and upon which its symmetry, beauty and stability must rest. Neighbourhoods, counties and states separated from each other by the barriers of practically impassable roads, in their loneliness degenerate into a condition of moral stagnation, from which it is difficult to arouse them to a common and mutual interest and understanding. Prof. Shaler, of Harvard University, says: "It is doubtful indeed whether a sound democracy, depending as it does on close and constant interaction of the local life, can well be maintained in a country where the roadways put a heavy tax on human intercourse." It is true that many of the roads of Canada and the United States are not such as to stifle human intercourse between rural citizens living apart, and between rural citizens and town dwellers; at the same time, a vast improvement may be made in these particulars by a systematic undertaking of the matter, directed understandingly along permanent, uniform and correct lines of operation. Within the last few years, and largely through the energetic efforts of the Ontario Good Roads Commissioner, Mr. A. W. Campbell, there has developed a rapidly-growing sentiment favoring a change from the old system of statute labor, directed by local pathmasters, to a system of taxation expended under the direction of qualified men trained in the principles of road construction. As time goes on, it seems reasonable to suppose that the old crude system will have passed out, giving place to a system of road construction and road repair scientifically correct, governed in extent with the needs of the road and the intelligence of those appointed to conduct the work. These are some of the thoughts and suggestions that come to us from our observations of the movement and from ideas thrown out at the recent International Good Roads Congress held in Port Huron, Mich., a summarized report of which appears elsewhere in this issue.

How the Per Cent. of Fat in Milk Affects the Yield of Cheese.

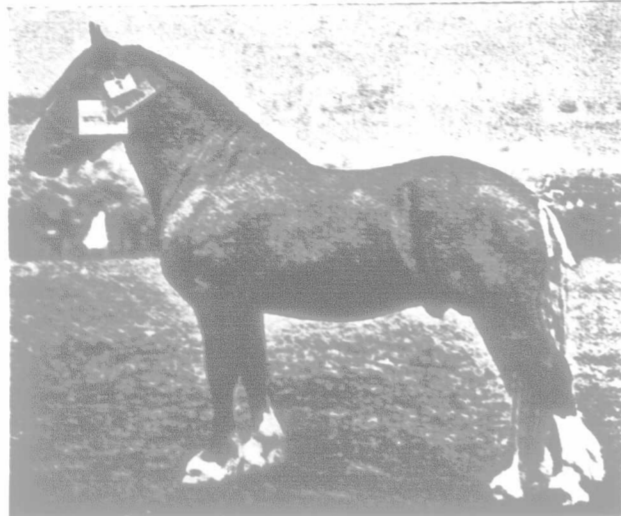
There are many who maintain that it is just to "pool" or divide money among patrons of a cheese factory according to the weight of milk. The following tests, conducted in the dairy department of the Ontario Agricultural College, by Prof. H. H. Dean, show how far from justice this plan is:

Three hundred pounds of milk, testing 4.35 per cent. fat, produced 31 1/2 pounds of green cheese, and 23 1/2 pounds of cured cheese. On the same day and under the same conditions of handling, as far as possible, 300 pounds of milk, testing 3.15 per cent. of fat, produced 27 1/2 pounds of green, and 26 pounds of cured cheese. A difference of one and two-tenths per cent. in the fat made a difference of seven pounds in the yield of cured cheese from 300 pounds of milk, or at the rate of 2 1/2 pounds per hundred pounds of milk. At 8 cents per pound of cheese, it makes a difference of about 18 cents per 100 in the value of this milk for cheesemaking.

Another good illustration will suffice. This time we had two vats of milk, 300 pounds in each, one of which tested 4 per cent. fat and the other 3.1. The yield of cured cheese from the former was 30 1/2 pounds, and from the latter 26 1/2, a difference of 4 1/2 pounds. We have numerous instances where the difference is as great or greater than in the cases cited, which goes to show that all milk should be tested as it comes to the factories, and the proceeds of sales divided according to its cheesemaking value, and not according to its bulk.

Our Scottish Letter.

The great events of the past fortnight have been sales of Shorthorn cattle in England, and the Agricultural shows at Edinburgh and York. Fortunately, the plague of foot and mouth disease has been stayed, and no further outbreak has been reported for some weeks. The disease is still raging in the Argentine, and all importations of live cattle from that quarter have for weeks past been prohibited. South American cattle owners were much in evidence at York, and indicated that in the South American republic they made no attempt to stamp out the disease; such a policy would be hopeless; they simply let it run its course. Great Britain and Ireland are fortunately situated for stamping out disease when it appears, and preventing its importation. The policy of the Board of Agriculture in this has been fairly successful, and it is gratifying to think that we have had no outbreak of cattle disease



BARON'S CROWN.

Two-year-old Clydesdale stallion. First at Castle Douglas, Edinburgh, and the Royal Show, 1900.

in Scotland for many years now. The recent outbreaks have all been scheduled in the south-east of England, and especially in the grazing and non-breeding county of Norfolk.

The boom in Clydesdale horses does not seem to be very lively, and we expected to have seen more buyers before this date. Several, however, have now arrived, and there is likely to be a little trade done. Mr. Neil Smith, Brampton, Ont., is sailing to-day with a few well-bred animals, and Mr. Ness, from Howick, Que., with Mr. Black, has arrived. Mr. N. P. Clarke, the noted breeder in Minnesota, has also entered an appearance, so that there will be some trade done before the season is over. The Hackney boom has also slackened off, and alike in England and in Scotland nothing exciting is taking place.

THE ROYAL SHOW.

The show at York had a good tone about it, but it was not in the horse department that life was specially manifested. The best section was that for Hunters, but the best horses there came from Ireland. Yorkshire is a very horsey county, and it is also the greatest county in England, being in extent very nearly the size of Scotland. It is the home of three distinct types of horses—the Cleveland Bay, the Yorkshire Coach horse, and the Yorkshire Hackney, which differs a little in type from the Norfolk Hackney. The Cleveland Bay was almost extinct as a breed when the show last visited York in 1883. The breed then only mustered one representative—a solitary stallion; this year they made quite a good display, and were numerous represented. This revival is undoubtedly due to the founding of the Stud Book and the patronage of several wealthy gentlemen, notably Mr. H. C. Stephens, M. P., of Cholderton, Salisbury, Wilts., a long way from Yorkshire. Considered in themselves, the Cleveland Bays can hardly be regarded as ideal horses. They are well colored, having consistently bay-colored bodies and black legs, they have considerable weight of bone, and sound feet and pasterns, and they move fairly well, but do not appear to have much action or great speed. They have long bodies, which characteristic tends to make their quarters and neck seem short, and many horses have heads which suggest greater brain power. As chariot horses in the old days before railways were in vogue, they counted, being strong and stout and able for heavy work, but unless they can be utilized now as factors in making weighty brougham horses by being crossed with the Hackney, or in making heavy weight hunters by being crossed with the English hunter, it does not appear that they can be of much use in the modern world. In some respects they are probably superior to the Cleveland Bay, but they are not so numerous. The breeding of American horses has been a great success, and the American horse has been introduced into the American market, and it is not surprising that it has been so successful in crossing them with the English horse.

The Yorkshire Hackney is a breed which has been modified by the introduction of the English Hackney, and the Royal, they are a very good breed, and the Cleveland Bay, but they are not so numerous. The Yorkshire Hackney is a breed which has been modified by the introduction of the English Hackney, and the Royal, they are a very good breed, and the Cleveland Bay, but they are not so numerous. The Yorkshire Hackney is a breed which has been modified by the introduction of the English Hackney, and the Royal, they are a very good breed, and the Cleveland Bay, but they are not so numerous.

some, upstanding horses than were in evidence at York, and after looking at them, it is more impressed on our minds than ever that the Hackney, if wisely looked after, has in him the possibility of making the best carriage horse in the world. But the 11.2 animal must be discarded, and so must also be the theory that the Hackney is a saddle horse and should be bred for riding shoulders. Our observation is that the men who speak about the Hackney being a saddle horse are men who do not ride. The action of the Hackney is seen at its best in leather, and the sooner the idea that he is the universal light-legged horse is abandoned the better.

The Yorkshire Hackney differs a little from the Norfolk cob, but mainly in respect of quality of bone and sweetness of formation. It is not a distinction in respect of type so much as in respect of taste. The Yorkshire man wants fineness and wearing quality, the Norfolk man likes a bit more substance, and usually he has a bit more hock action. The Yorkshire man can give you plenty sensational action in front, but when all is said the majority of harness show horses amongst Hackneys have come out of Norfolk. The hock action of some of these horses tracing from D'Oyly's Confidence 158 is remarkable, and you can scarcely see this action without finding Confidence blood in the pedigree. These views are regarded as extremely heretical in certain quarters, but without hock action, the extravagant front action of the Hackney is of small value in getting to market. The champion Hackney stallion at York is named Bonny Danegelt and was got by the champion Royal Danegelt out of Dorothy 18, by Denmark 177. His breeder and owner is Sir Walter Gilbey, Bart., who has written much on the subject of horse-breeding. Mr. George Wilson, Cedar House, Garton, had the reserve with the young horse Rodasor, a son of the champion Rodasor. The champion mare was Mr. Harry Livesey's lovely Orange Blossom, by the fine stallion Connaught 1453; Mr. Henry Moore taking reserve with the filly Lobelia.

Cattle of all classes made a creditable display both at Edinburgh and the Royal, and there were some curious reversals of form between the two shows. Shorthorns at Edinburgh were championed by a good two-year-old heifer owned by the Earl of Rosebery, K. G., which came far from getting to the top at the Royal. She is a good roan specimen, but rather faulty behind. The champion bull in the Shorthorn class at the Royal was Her Majesty the Queen's Royal Duke, a wonderfully level, well-fleshed animal, with a grand coat and good frame, but not too attractive about the head. He was also champion at the Royal Dublin show in spring. The reserve was H. R. H. the Prince of Wales' Pride of Collynie, which stood second in the class to Royal Duke, and deserved his honors. The Queen bred her own bull from Scottish blood, but Pride of Collynie was bred by Mr. Duthie, and was the best bull of his age in Scotland last year when owned by Mr. James Durno, Jackstown, Rothie-Norman. He was first at the Highland, and was there bought for the Sandringham herd by Mr. Beck, the Prince's manager. These are a pair of prime young bulls, and it would take a deal of money to buy them. The female champion of the breed came all the way from Cornwall. She is Mr. W. J. Hosken's Countess of Oxford XIV., a strikingly handsome red cow with a splendid head, good back and ribs, and great bag of milk. Her bull calf, New Year's Gift, was second in the yearling class, and had he been first no one would have been robbed. The reserve female champion was Mr. Joseph Harris' Empress XII., from Calthwaite Hall, Carlisle. She was first amongst the three-year-old heifers, and is an amazingly sweet, level, red animal, showing true feminine character in the head, beautifully ribbed, and just a shade faulty at the tail root, or she could not be beaten at all.

There was a really good show of other breeds of cattle. The Highlanders were out in force, and there was no breed more admired. They excelled in their walking gait, going over the ground with a long, stately tread which left nothing to be desired. They could teach all other breeds how to walk. The Earl of Southesk had the male champion with the Ensay bull, Laoirch, a magnificent yellow, which has never been beaten; and the champion female was a three-year-old heifer from the celebrated fold of Mr. T. Valentine Smith at Ardtornish, in Argyleshire, which stood second at the Highland last year.

Aberdeen-Angus cattle are rapidly extending their domain in England, and the show of these was first-class. The leading prizes, however, came to cattle bred in Angus. Three of the bulls in the older class, the first, second and fourth, were bred by Mr. Patrick Chalmers, of Aldbar, Brechin, and got by the bull Enthusiast of Ballindalloch. The third was the bull Rosador, bred at Ballindalloch; and owned by Mr. Dyson Perrins, of Ardross, in Ross-shire. The first and second were respectively champion and reserve champion of the breed, and they are full brothers. The first, Diaz, owned by Mr. W. S. Adamson, of Careston, is the younger of the two, and a very fine specimen of the breed, except that he is a shade square across the hindquarters. The second, Delamere, owned by Mr. Alexander McLaren, Auchmagie, Ballinbrig, is a very good bull and a great favorite. He is a bit older than the first, and has done some winning in his own country. The third, the young gentleman as a breeder, is Mr. James Duke, of Ballinbrig, who has bred the first and second yearling bulls, of his own breeding, and the Earl of Strathmore had the first and second yearling heifers; while the first two-year-old heifer, Sabrina of Hayston, owned by Mr. Bainbridge, was bred by Mr. James Whyte in the same county of Angus or Forfar. She was first at Perth in spring.

Galloways gave a capital account of themselves, and the prizes in this section were extremely well distributed. No exhibitor got more than one first prize, and none of the old-time men were in front, new men getting a look in with excellent cattle. These were Messrs. Henry Graham, Quarryhill, Wealsgate, Cumberland; David Brown, Lower Stafford, Auldgirth, Dumfries; Robert Jefferson, Rothersyke, Egremont, Carlisle; R. T. Scott, Drumhemprey, Corsock, Dalbeattie; and Robert Wilson, Kilquhanity, Dalbeattie. The quality of the Galloways was excellent, and they deserved their popularity.

Determining Age of Stock by Dentition.

Nowadays, when early maturity is being so much cultivated in the case of all breeds of stock, the dentition of farm animals shows much more variation than was usual in the old days, when animals were not forced to a finish at anything like the high rate of pressure which has of late years been indulged in. One of the consequences of this high-pressure system of feeding has been that the leading show-promoting bodies—such as the Smithfield Club, the Royal, and other agricultural societies—have found it necessary to lay down special rules for the determination of the ages of such animals as are exhibited at their shows. The Royal Dublin Society, in common with the other leading agricultural bodies, has found it necessary to adopt certain regulations in this direction. We append herewith details of "tooth marks" which will be considered as indicating the ages of cattle, sheep, and pigs at the forthcoming winter show at Ballsbridge:

CATTLE.

Cattle having their central permanent incisors cut will be considered as exceeding one year and six months.

Cattle having their central permanent incisors fully up will be considered as exceeding one year and nine months.

Cattle having their second pair of permanent incisors fully up will be considered as exceeding two years and three months.

Cattle having their third pair of incisors cut will be considered as exceeding two years and eight months.

Cattle having their fourth pair (corner) permanent incisors fully up, and their anterior molars showing signs of wear, will be considered as exceeding three years.

SHEEP.

Sheep having their central permanent incisors cut will be considered as exceeding ten months.

Sheep having their central permanent incisors fully up will be considered as exceeding twelve months.

Sheep having their third pair of permanent incisors cut will be considered as exceeding nineteen months.

Sheep having their third pair of permanent incisors fully up, and the temporary molars shed, will be considered as exceeding twenty-four months.



CLYDESDALE STALLION, McBain [2270].

OWNED BY JOHN R. BARKIN, MELROSE STOCK FARM, HAMOTA, MANITOBA.

Sheep having their corner permanent incisors well up, and showing marks of wear, will be considered as exceeding three years.

PIGS.

Pigs having their corner permanent incisors cut will be considered as exceeding six months.

Pigs having their permanent tusks more than half up will be considered as exceeding nine months.

Pigs having their central permanent incisors up, and any of the first three permanent molars cut, will be considered as exceeding twelve months.

Pigs having their lateral permanent incisors shed, and the permanent appearing, will be considered as exceeding fifteen months.

Pigs having their lateral permanent incisors fully up will be considered as exceeding eighteen months. *Farmers Gazette.*



COMMANDERS OF THE EMPIRE IN SOUTH AFRICA.

BRITISH COMMANDERS. 1. Gen. Sir Redvers Buller, V.C., G.C.B., etc. 3. Gen. Sir George Stewart White, V.C., G.C.B., etc. 4. Gen. Lord Kitchener of Khartoum, K.C.B., K.C.M.G.
6. Major General Hector Archibald Macdonald, C.B., D.S.O., A.D.C. 7. Major General Robert Stephen-Smith Baden-Powell. 8. Major General Sir Archibald Hunter, K.C.B., D.S.O. 11. Major General J.D.P. French, Commanding Cavalry Division.

CANADIAN OFFICERS. 2. Lt. Col. O'Hara, Commander Royal Canadian Infantry. 3. Lt. Col. Buehan, Second in Command Royal Canadian Infantry. 9. Lt. Col. Steel, Commander 2nd Canadian Horse. 10. Lt. Col. Lessard, Commander Mounted Rifles. 12. Lt. Col. Drury, Commander Royal Canadian Artillery.



The Creaming of Milk.

In considering the various methods of separating cream from milk, it is well to bear in mind the composition of normal milk. We speak of it as being composed of water, fat, and solids not fat. Cream consists of the fat globules mechanically mixed with more or less milk. Skim milk, if the separation has been complete, consists of the water of the milk and the solids not fat. Butter-fat is lighter than the solids-not-fat of milk, and this explains why there is a more or less complete separation of the fat from the milk in the form of cream when milk is allowed to stand for any length of time, while the heavier portion, or skim milk, settles to the bottom. Butter-fat exists in the milk in the form of tiny fat globules, varying in size from one thirty-thousandth to one ten-thousandth of an inch in diameter. The smaller the fat globules, the larger the relative amount of surface when compared with the volume, and the greater the resistance offered by the milk in comparison with their buoyancy. Other things being equal, the heavier the liquid in which these fat globules float, the more rapidly and more completely will the separation take place. In the case of milk, however, those conditions which make the skim milk heavier, make it at the same time thicker and more viscous fluid, so that with the increase of specific gravity, tending to aid the separation, there seems to be an increased thickness of the fluid, tending to retard it. And thus we see how the composition of milk comes to have such a practical bearing upon the problems of creaming.

The method of creaming milk which is still most practised is probably the old "shallow-pan" system, where milk is set in shallow pans or earthen vessels and allowed to stand at the temperature of the room until, by the action of gravity, the lighter portions of the milk find their way to the top of the vessel in the form of cream, and the heavier parts, or skim milk, sink towards the bottom. True it is that very good butter can be made from this system of creaming, but it has its serious disadvantages. On account of the large space required for setting the milk, it is difficult to find a place where suitable conditions may be maintained. In any case, it is clear that the milk should be set in a room where the atmosphere can be kept perfectly pure and the temperature under control. See to it that no direct currents of air or draught be allowed to strike the surface of the milk, as it will cause evaporation and leave the cream in a thick, leathery, lumpy condition, and if not broken up well, by pouring through a fine strainer, will cause white specks in the butter, from the fact that the lumps of hard cream will not take coloring matter as readily as the rest of the cream.

On many farms we find that too often the milk is set in a part of the kitchen, pantry or cellar, for lack of a suitable milk room, and the use of these rooms for the cooking of food or the storage of food, fruit and vegetables, renders them wholly unfit for the keeping of milk. A clean, sweet, well-ventilated cellar makes an excellent place for setting milk, but care should be taken not to allow contamination from food that may be stored there. The temperature of such milk room should be maintained at about 58 to 60° F., if possible, as it has been found by experiment that this is the temperature at which the most efficient skimming is obtained. Shallow pans should be allowed to stand 24 hours in summer and 36 hours in winter before skimming. Even with the most favorable conditions for the shallow-pan method, the loss of fat in the skim milk is excessive, especially in the fall of the year, when many of the cows in the herd are "strikers." The average per cent. of butter-fat in the skim milk from shallow pans was found by the Michigan State Agricultural College to be a trifle under 1% (.98%). In a test from 17 farms, in seven cases it was above this figure, averaging 1.5%, while in the ten cases where the loss was less than 1%, the average was .63%.

By the cold, deep-setting method, we mean the system now very commonly used where milk is allowed to stand in some form of deep can of small diameter, set or submerged in cold water. This system takes up less room, less surface exposed to the atmosphere, less liable to contamination from foul odors, and gives a sweet cream; but if not very carefully carried out and well managed, the loss in the skim milk is excessive. The difference between the specific gravity of the cream and that of the milk is made greater by cooling. The lower the temperature to which the milk is cooled, and the more rapidly it is cooled to that temperature, the more readily does the separation of the milk and cream take place. Where a low temperature has been maintained, it is not necessary for the milk to stand longer than 24 hours, and both cream and milk may easily be kept sweet until time of skimming. The ripening of the cream can then be controlled and the skim milk fed to calves or pigs while still sweet. If properly handled, there is less loss of fat in the skim milk than with the shallow pans. It is essential to have the milk set at a temperature of at least 45° Fahr., and preferably 40° Fahr. If not kept at this low temperature, the loss of fat may be very great. A case came to the writer's notice re-

cently, when a farmer brought a sample of skim milk to be tested, which showed 2.1% of fat, according to the Babcock test. This is about two thirds of the total fat contents of average quality milk. When asked where he set the milk, he explained that he set it in shotgun cans in cold water, and changed the water once or twice during the 24 hours. The weather being quite hot, the water soon became warm and lost its effect, with the above result; whereas, if he had maintained a temperature of 40 to 45° Fahr., the loss would probably not have exceeded two-tenths of 1%.

The apparatus used in the deep-setting method need not be expensive, and may consist simply of shotgun cans set in a coal-oil barrel sawed off to the proper depth. The water should always be kept cold, at a temperature below 45°. If water at this temperature cannot be had, ice must be used. It is important that the milk should be cooled as rapidly as possible; therefore, the colder the water surrounding the cans the better.

Recently-made trials at the Michigan State Agricultural College, in which the milk of a herd, divided into separate lots and set in deep cans with the water at different temperatures, gave the following results:

	Temperature, Degrees Fahr.	Average per cent. fat in skim milk.
Milk set in water at.....	32-36	.19
Milk set in water at.....	40	.36
Milk set in water at.....	50	.84
Milk set in water at.....	58-60	.84
Milk set in running water at.....	58-60	.84
Milk set in open air at.....	62	1.40

These results go to prove the statement above the colder the water the better. From this, too, it seems to be safe to conclude that unless the water used be cold, the shallow pans furnish a more efficient method of creaming than the deep setting. Furthermore, best results are obtained by setting milk as soon after milking as possible, but the loss due to a slight delay in setting is not excessive if the water is at a low temperature when the milk is set. A certain amount of milk was divided, at the



VILLAGE HERO - 14342 -
OWNED BY AND USED FOR SEVERAL YEARS IN THE HERD OF WALTER LYNCH, WESTBOURNE, MANITOBA.

Agricultural College mentioned above, into three equal lots, one of which was set immediately, one a half hour later, and the third, half an hour later still, the water in all cases being at the same temperature, and the milk never above 36° Fahr. The following are the results:

	Average per cent. fat in skim milk.
Milk set immediately after milking.....	.216
Setting delayed half an hour.....	.25
Setting delayed one hour.....	.26

Setting the milk in water above 50° Fahr., and afterwards cooling the water down to 40° or below, will not prevent the loss. It is absolutely necessary that the water be cold at the beginning.

For any farmer who has a herd of from six to eight cows and upwards, the cream separator furnishes the most satisfactory method of getting cream from milk. The machine consists of a very rapidly revolving bowl, into which a continuous stream of whole milk runs, and out of which continuous streams of cream and skim milk come. The centrifugal force generated by the rapid whirling of the bowl causes the skim milk, or heavier part of the milk, to travel outwards, or away from the center, and the cream, being lighter, is forced or travels toward the center of the bowl, each being delivered into its respective receiver placed over the top of the bowl. The operation is purely mechanical. The main objection to the separator is its first cost, but it is evident to all that the increased yield of butter will soon pay for the machine. Some of the advantages of the separator over the shallow-pan and cold deep-setting methods of creaming are: (1) loss of fat in skim milk is reduced to a minimum (usually from .95 to .1 per cent.); (2) produces a better and more uniform quality of cream; (3) insures purity of product; (4) removes disease germs and enhances the keeping quality of the butter; (5) saves the cost of utensils and the space required for their accommodation; (6)

saves the cost and handling of ice needed to keep the milk sweet; (7) skim milk is in good condition for feeding purposes.

In the use of a separator, three points should be carefully watched and regulated, viz., the speed of the bowl, temperature of the milk, and the feed of the milk to the machine. With the same machine, and all other conditions the same, a greater loss of butter-fat must be expected when the separator is not run up to speed, when the milk is below a certain temperature, or when more than a certain amount of milk is run through in a given length of time.

In conclusion, a few hints about setting up and operating a cream separator may not be out of place. To give a separator the necessary stability, it should be fastened to a solid floor. The top of the machine should stand level in all directions, and the frame should be screwed or bolted firmly to the floor. Before starting the separator, all parts should be thoroughly clean, and all bearings well oiled, and oil cups free and in working condition. Special attention should be given to the oil that is used. With each machine that is sent out by the makers is sent a can of oil of a quality that has been found by experience to best answer the purpose. Such can be obtained from the selling agents of the machine. No other should be used. After separating is completed, flush out the bowl with a small quantity of pure warm water or a little skim milk, remove power and allow the speed to run down of its own accord. Never attempt to stop the bowl by applying any kind of brake, as it soon injures the bearings. Wash all parts of the separator thoroughly first in lukewarm water and afterwards scald in boiling water or with steam, and place in a clean, dry atmosphere. T. A. WIANCKO, Churchbridge, Assa. Buttermaker.

Dominion Entomologist Examines the Grasshopper Districts.

Dr. Fletcher, Dominion Entomologist, Ottawa, accompanied by Mr. Hugh McKellar, of the Department of Agriculture, recently visited the districts lying around Stockton, Treesbank, Aweme and Douglas, where the Provincial Government have been encouraging the farmers to use every effort to destroy grasshoppers by what had been found the best means in the Western States, in some parts of which they have occurred in injurious numbers for years.

Dr. Fletcher spoke in commendation of the energetic measures which had been adopted by the Department of Agriculture. He found that hopper dozers, constructed under the supervision of the Provincial Government, had been used faithfully by most of the farmers, and on the whole had given satisfaction. Where two or three men on adjoining farms had worked in unison, the results were most marked.

Besides the use of hopper dozers, the well-known poisoned-bran remedy had been used by a few with good effect. A machine for killing the locusts with burning coal oil was also noticed, and was claimed to have been useful. Dr. Fletcher says that the insects were still injuriously abundant in many places, and although much scattered, would doubtless yet do much injury to crops. The late rains will help very much by producing vegetation on the prairies, which will to a large measure draw the grasshoppers off from the wheat. It was pitiful to go through the country and see hundreds of acres stripped bare. The exceptional drought this spring and summer, he considers the chief cause for this loss. The warm spring caused the eggs to hatch early, and the young insects early move from the stubble fields, where they hatch, to the farmers' crops, the most succulent vegetation to be found.

When asked "What can be done?" the Doctor said that the only means now to adopt was to poison the grasshoppers, wherever abundant, with Paris green or some other form of arsenic mixed with bran. This was best done by moistening a little bran and then shaking over it and mixing thoroughly the poison, or if arsenic were used it must be dissolved in water. One pound would be sufficient to poison fifty pounds of bran. It is well to mix a pound of sugar with the bran, as it will make the poison adhere to the bran better. The mixture should be placed around the crop to be protected. This mixture has been found most useful in California in protecting vineyards. The most important thing of all, however, is for farmers to know that the greatest prevention from injury next year is to plow down every stubble field this autumn, or early next spring. A great source of danger is going to be the fields which are not reaped this year on account of the small crop this year. These fields will be resorted to for egg-laying in preference to the prairie, and must be attended to or trouble may be expected.

A Testimonial and a Trip.

President James Mills, of the Ontario Agricultural College, has gone on a trip to Great Britain and the Continent of Europe, during which he will visit the leading agricultural colleges and experimental institutions. Prior to leaving, he was presented with a purse of money from a number of Farmers' Institute officers and others, expressive of their appreciation.

The Champion Plowing Match.

The 5th of July was a glorious day—a red-letter day, in fact—for the Province of Manitoba. It was not, however, exactly calculated for a picnic day: rain beginning to fall soon after 10 o'clock, and intermitting showers continued for over 24 hours.

The second annual provincial plowing match, held under the auspices of the Brandon Farmers' Institute, in connection with their great annual picnic, was in consequence of the rain somewhat interfered with. The picnic itself was not the success it usually is, but everyone felt satisfied, even if it interfered with a few hours' amusement.

Thomas Sissons, Fred Thornton, foreman of the Experimental Farm, and William Anderson, Brandon, were the judges, and their task was no easy one. Only walking plows, 14-inch, were in competition. Below we publish the score-card in full:

Table with 4 columns: Name, Straightness, Feering, In and out at end, Depth and width of Furrow, Evenness of Top of land, Finish, Covering Weeds, and a final score column.

The Subsoil Packer.

SOME FURTHER EXPERIENCES.

In our issue of July 5th appeared several letters from practical men, giving briefly their experience with the use of the subsoil packer. The vital importance which attaches to the conservation of soil moisture in the western country makes this one of the most important topics to every agriculturist, and the evidence of practical farmers is most valuable.

IT PAYS TO USE THE PACKER.

It pays to use the packer. I use it on spring plowing every day as we plow. On summer-fallow we use it in the same way, and I would do the same on fall plowing, but last fall I was tight run to get my plowing finished, and did not pack until this spring, after I had harrowed three times and sown the wheat. This season is not a fair test, but I must say the wheat is the better for the packing.

Glenwood Municipality, Man.

PREFERS THE DISK ON HEAVY LAND.

To the Editor FARMER'S ADVOCATE, Winnipeg.

Regarding the subsoil packer, I don't think the packer nearly as useful an implement with us as it would be on very light soil, or where inclined to drift. I found it best right after the plow, on old land, while the ground is moist from being fresh turned up.

Langford Municipality, Man.

PARTICULARLY USEFUL ON MANURED LAND.

I am much pleased with the work done by the subsoil packer this season. On land that is not very old, where there is a good deal of sod in it, we have a pony drawing one section of harrow alongside of the gang plow, thus giving the land one good stroke of the harrow.



THE OLD AND THE NEW HOME OF PETER THOMPSON, MIAMI, MAN.

with the seeder. Manured land thus treated is made quite firm and solid, entirely overcoming the difficulty of manured land drying out; and it is also very noticeable that land upon which the packer has been used carries the binder much easier than land not packed.

Sifton Municipality.

THE PRINCIPLE SHOULD BE UNDERSTOOD.

To the Editor FARMER'S ADVOCATE:

As to the benefits of the subsoil packer, for this implement I cannot speak too highly. I have used it with entire satisfaction as far as I have experimented. To get the best results from this implement, use as soon after the plow as the moisture of the ground will permit.

below, whereas if this is harrowed first to close the top and firm it a little, the packer will then carry it down as it passes over. Deeper plowing may be made more firm by first harrowing, but more load must be used to drive it down.

WM. J. ELDER.

Cornwallis Municipality, Man.

THE PACKER SHOULD FOLLOW THE PLOW.

To the Editor FARMER'S ADVOCATE:

I think the most effective way of using the packer is to use it immediately after plowing, following the plows at all times. I do not think it is particularly beneficial on manured land. I consider it necessary to harrow after the packer; if it is summer-fallow, harrow, right after the packer has finished, crossways.

Daly Municipality, Man.

The 1899 Grain Crop.

Following is the report of Chief Grain Inspector David Horn for the twelve months ending June 30, 1900. It shows the best record, both in quality and quantity, in the history of the West; 86.26 per cent. of the wheat is classed in the higher grades.

Table showing WHEAT statistics: CARS (AT 800 bush. per car.) and Bushels. Includes categories like Extra Man. hard, One hard, Two hard, etc.

Table showing OATS statistics: CARS (AT 1,200 bush. per car.) and Bushels. Includes categories like One white, Two white, Two mixed, etc.

Table showing BARLEY statistics: CARS (AT 1,000 bush. per car.) and Bushels. Includes categories like Three extra, Number three, Rejected, etc.

Table showing FLAX statistics: CARS (AT 900 bush. per car.) and Bushels. Includes categories like No. 1, No. 2, Rejected, etc.

Dates of Summer Fairs.

Table listing dates for various fairs: Winnipeg Industrial (July 23rd to 28th), Minnedosa (July 30th and 31st), Brandon (July 31st to Aug. 3rd), etc.

Free from Mange.

As a result of the Medicine Hat Stock Growers' Association round-up we are face to face with the fact that there is very little cattle mange in the country. The news is good news. The round-up was ridden by Dr. J. Hargrave, V. S., in the employ of the Government to look out all mangy cattle and send them to the dipping station for treatment.

Homemade Cheese.

A. P. Stonewall, writes:—"Will you please publish an article in the *ADVOCATE* on homemade cheese, and answer the following questions:

- "1. How much milk will it take to make an 8-lb. cheese?"
- "2. The best way to prepare the milk for the rennet?"
- "3. The best way of preparing the curd ready to press?"
- "4. Pressing, and how long it should be pressed, and best way to cure the cheese?"

The above enquiry was submitted to Dairy Superintendent Murray, who answers as below:

The homemade cheese question is continually brought to attention by the numerous statements in reference to the quality; and, in fact, all the points on which cheese is judged. Complaint is made, not only of homemade cheese, but of all the cheese produced in this Province, of its not being properly cured. The makers are seemingly noted for selling green cheese. This condition is, in a large measure, due to the buyers, and until cheese is bought strictly upon its merits and paid for accordingly, this practice of selling half-cured cheese will continue.

Not enough attention is being paid to the condition of the milk when it reaches the factory, and the amount of acid developed in the milk before setting seems to be an unknown factor in many cases. I strongly recommend the use of the Monrad or the Marschall rennet test. The latter is the surest, especially for beginners, although it uses a trifle more of milk. Full instructions come with each of these tests, so a detailed description will be unnecessary at this time. The amount of acid developed in the curd before drawing the whey should also receive a great deal of consideration, as this factor has also been neglected by many makers, and the amount of dry acid developed after drawing and piling the curd.

Time and space prevent a lengthy discussion of these topics, but Professor Deckers' "Cheesemaking" covers this ground most satisfactorily, and can be recommended as a handbook for cheesemakers. [This work may be obtained through this office.—Ed. F. A.] Greater attention must be given to cleanliness and the handling of the milk before it reaches the factory. A thorough aeration and cooling is necessary to remove the animal heat and bring the milk into good condition for the maker. When cheese has been removed from the press, it has little more than passed the half-way point of making a first-class article, and many improvements in the curing rooms must be made before the standard by which cheese is judged in Eastern Canada will be reached in this Province.

In reference to the following list of questions, which cover the entire process of cheesemaking as completely as any four questions could, I should advise the writer to take a course at the dairy school, as *experience* is absolutely necessary to make a good cheese, and this article condenses the work that takes several weeks at the Manitoba Dairy School and a number of lectures to cover thoroughly, and which I consider almost too short, except for experienced cheesemakers:

1. How much milk will it take to make an 8-lb. cheese? The general rule is one to ten. One pound of cheese to ten pounds of milk, which would take about eighty pounds of milk. The amount of cheese per hundred pounds varies greatly, according to the amount of butter-fat—the more butter-fat, the more cheese.
2. The best way to prepare the milk for the rennet? Special care should be taken to cool and aerate the milk, in order to dispel the animal heat and any bad odors and gases. The milk, when in good condition, should be warmed to 86 degrees Fahrenheit, and a small amount of lactic acid should be developed, but the milk should not be sour. I advise the use of the Monrad or the Marschall rennet test for determining this point. The color, diluted in about a quart of water or milk at 86 degrees Fahr., should now be added, if color is used, generally at the rate of one ounce to 1,000 pounds of milk, and thoroughly stirred, in order to be evenly distributed. The milk is now ready for the rennet, and I recommend the use of rennet procured of Chris. Hansen's Laboratory, Little Falls, New York, or of any of the dairy supply houses. Generally use about three ounces of rennet per 1,000 pounds of milk diluted in water, or, in case tablets are used, one tablet per 100 pounds of milk. Dissolve the tablets in water at 86 degrees about fifteen or twenty minutes before using. Stir the rennet quickly and thoroughly into the milk, and then pass the dipper over the surface to stop the agitation. The milk should coagulate in from twenty to thirty minutes ready for cutting, which can be determined by inserting the index finger into the curd and moving it slowly forward; the break should be clean over the finger. Use a horizontal curd knife—first, lengthwise of the vat; then the perpendicular knife crosswise, then lengthwise, which produces cubes about half an inch

square or less. Stir very carefully for about fifteen minutes, until the cubes become nicely healed. Then apply the steam, or warm up, which is known as cooking the curd, at about a rate of two degrees every five minutes until a temperature of 96 or 98 is reached, which must be determined by your conditions. After cooking, stir steadily for about twenty minutes, or until the whey is expelled and the cubes begin to firm up or become "shotty." Take some curd, squeeze dry, and apply to a hot iron, not hot enough to burn the curd, but hot enough so that when the curd is pressed against it and drawn away, it will show fine silky threads about an eighth of an inch long. More than this produces a sour cheese. When it reaches this point, the whey should be drawn, the curd placed in a sink or upon racks in the bottom of the vat and stirred for five or ten minutes, or until all of the free whey is removed, and then allow it to mat for fifteen minutes. This somewhat overreaches the second question, but we now reach the

3. The best way of preparing the curd ready to press? After the curd is well matted, cut it into strips about six or eight inches wide and sixteen or eighteen inches long, and turn these over once before piling. Care should be taken to prevent the curd from becoming cold, as it will become soggy; the acid does not develop properly, and the curd does not knit well when put to press, if too cold. Pile and then turn these strips every fifteen minutes until they have been turned three times, or until the hot iron test shows threads from an inch to one and a half inches long. The curd is now ready to mill, and a curd mill should be used that cuts the curd evenly, ready for the salt, and does not mash or tear it and lose the butter-fat. Stir about five minutes before adding the salt, unless the flavor is very good, when the salt may be added at once at the rate of about 2½ pounds of salt to 1,000 pounds of milk or 100 pounds of curd. Add the salt in three applications, and stir it thoroughly until it

of handling must vary according to the condition of the weather, the time of year, and condition of the milk. Practice and careful study alone fit the cheesemaker to master these varied conditions.

C. A. MURRAY, Dairy Superintendent.

A Black Beetle Devouring Potato Vines.

In many parts of the Province, potatoes have been attacked by a black beetle, a perfect stranger to most people. They are from ¼ to ½ of an inch in length, slender, and very lively. They have also attacked caraganas and garden peas; in fact, their favorite food consists of vetches and any of the pea family. The damage done by the blister beetle (*Epicauta pennsylvanica*) is not generally very extensive, as very often they leave a patch suddenly and go elsewhere. They are natives and seldom appear in numbers, but judging from their life-history, given below from the 1886 bulletin of the Minnesota Experiment Station, compiled by Prof. Otto Luggler, we may conclude that the abundance of grasshoppers this year accounts for the appearance of so many of these black beetles. It may be consoling to those who this year have suffered, to know that almost all species of blister beetles, including this black one, pass their larval state in the egg case of one of the grasshoppers. Having devoured the contents, he changes into a vegetarian beetle and demands his pay for services performed in ridding the earth of thirty or more embryo grasshoppers. If by reason of numbers the friendly beetle becomes dangerous, a spray of Paris green and water, 175 gallons of water to 1 pound of Paris green, will effectually check his depredations.

The history of these blister beetles is a very interesting one. While very destructive to a number of cultivated plants besides the potato, as for instance beans and vetches, they are so only in their winged stage. Their young or larva are decidedly beneficial, as they eat nothing but the eggs of grasshoppers. This is the reason that blister beetles are always more numerous in years following a dry season, as dry seasons are greatly in favor of grasshoppers. Whenever grasshoppers are numerous we find that blister beetles increase in numbers, and as the adults have a very good appetite, but no grasshopper eggs, they destroy a large amount of foliage. In my attempts to grow a number of foreign species of vetches for fodder plants, these beetles have been a great nuisance; they would devour the leaves of such plants just about as fast as they appeared above ground, and only a thorough dusting with poison could save them. The beetle would find such vetches even if surrounded and almost covered and hidden by other plants. As blister beetles are more or less gregarious, they cause much injury to the plants they select for food. They seem to be very stupid, at least they do not use their wings as readily to escape as other insects, and being voracious feeders, they can, if absolutely necessary, be killed by an application of Paris green or London purple. Yet if the damage they cause is not too great, they should not be killed, because their offspring are such great friends to the farmer, assisting him most effectually against the destructive grasshopper. Nor can they multiply beyond a certain degree, even if the adults have ample food, because their larva have to depend upon the number of eggs deposited by the grasshoppers, and if this supply of eggs is small the resulting number of blister beetles is also small.

These beetles have a peculiar life-history. The female deposits a large number of eggs in a cavity of the soil. These eggs in hatching produce long-legged and very active larva, which run about like hunting dogs until they discover the whereabouts of the eggs of grasshoppers. Having discovered them, the larva is not slow to devour one or a few of them. This done, it throws off its old skin, and being now surrounded by plenty of food, the former useful long legs are no longer required and they are replaced in the new skin by rudimentary ones. As these larva destroy more eggs than they eat, they are, of course, very beneficial, and blister beetles, though themselves very destructive, should be protected on account of their beneficial larva.

We have several species of such blister beetles, but all have essentially the same habits. They have received this name because they produce blisters upon a delicate skin, being, in fact, closely related to the Spanish fly so well-known in former times, and even now as a very important means to draw blisters. Our blister beetles can be used for the same purpose and are bought by manufacturing chemists. *Bulletin No. 43, Minn. Exp. Station.*

An Ontario (N. Y.) Co. sweet-pea grower says: "Instead of driving two lines of brush, as for the garden peas, we drive one stake every few feet between the plants in the center of the row. Heavy cord is then run on each side of the plants, giving it a twist around each stake and tying on every other one to prevent slipping. It is necessary to add new lines as the plants grow. Binder twine will answer for the purpose very well."



GOLDEN MEASURE = 26057 (72615).

IMPORTED SHORTHORN BULL AT HEAD OF THE HERD OF JOHN E. SMITH, BRANDON, MAN.

becomes mellow and loses the gritty feeling. It is now ready to press.

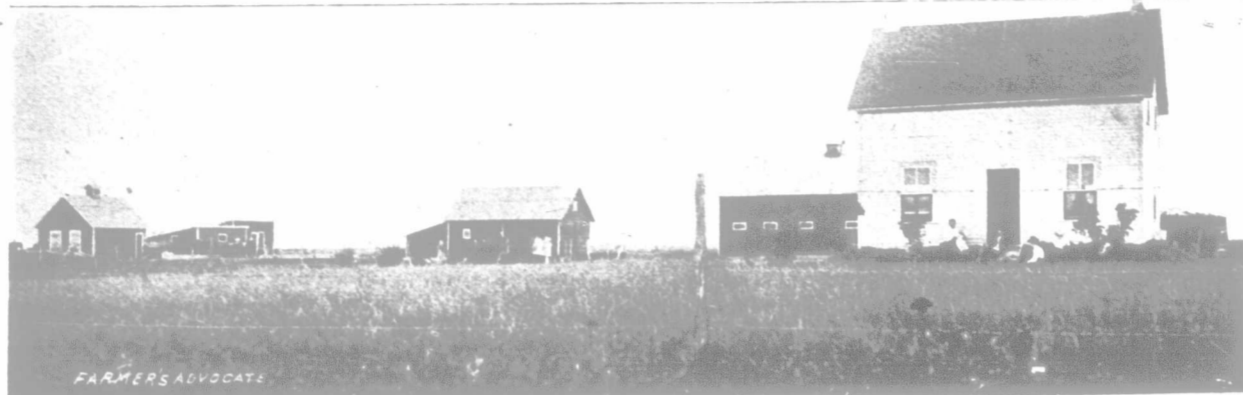
1. Pressing, and how long it should be pressed, and the best way to cure the cheese? When putting cheese to press, the bandage should be clean and carefully cut to the proper length. It may be purchased from dairy supply dealers or made of good cheesecloth, and caps for the ends or circles should also be used. Divide the curd evenly so as to have the cheese of uniform size, and for homemade cheese, about ten pounds seems to give the best satisfaction and also sell the best. Put the curd to press at from 78 to 82 degrees Fahrenheit, and put on sufficient pressure to start the remaining whey running in a small stream. Add a little pressure every ten minutes for about an hour, then remove the cheese from the hoop, pull up the bandage to remove any wrinkles, and dress them neatly and put back to press. Tighten it up several times during the next twenty or twenty-two hours, which is generally long enough to press. It is well to remove the cheese in the morning and turn them in the hoops and put them to press again for three or four hours, as it produces a better shaped cheese. The cheese is now removed to the curing room, which should be used for this alone, and placed upon a flat, level board wider than the cheese. The room should be well built, door and windows double and well fitted, in order to control the temperature, which always should be between 60 and 68 degrees Fahr., best at 65. Turn the cheese each day and keep the atmosphere of the room moist by the use of dampened cloths, so placed as to be continually moist. The cheese should be kept in such a curing room at least a month, and longer if possible.

This is a general outline to follow in cheesemaking, but experience is absolutely necessary in order to make a uniform cheese every day, as the method

Notes of the Blyth Plowing Match.

To the Editor-FARMER'S ADVOCATE:
 A very noteworthy and encouraging fact connected with the match was that the great majority of the competitors had engaged in previous contests, not a few being veterans of distinction. No fewer than twenty had been first or second prizemen in their classes. First honors have been well distributed this year, W. Turner Carrol being gold medalist in the men's 14-in. class, and winning the John Deere plow (\$20) presented by Handley & McLeod; William Croy, Brandon, winning the P. Payne gold medal, with Wilmot Rankin's \$20 bedstead; John Mayhew, Wawanessa, gaining T. O. Fowler's \$35 silver cup and \$15 prize; I. M. Ross, Wawanessa, winning Nabron & Shewan's silver cup, with Sylvester's Moline plow (\$22). The three

of the match for next year's use. It seems to me that the present score card could be beneficially altered. The "width of land," for which five points is given, is of no real use. It was adopted at the inception of the work, when there were two strike outs and two finishes. Now there is only one strike out and one finish, and straightness, as well as depth and width of furrow, fully takes up the points. There is a growing feeling that in its place, *time* should be inserted, and perhaps added to. There is a reasonableness in this. The man that can finish his land an hour sooner than his next competitor, and does equally good work, is entitled to distinct merit and reward in the shape of points. To my mind, what is to be aimed at and encouraged is that the work be done pretty much in the usual everyday style on the farm. Of all the competitors that earned one's admiration in this respect was



A COMFORTABLE HOMESTEAD. A. WRIGHT, PLUM COULEE, MAN.

remaining championships of the boys', the young men's and the 12-in. gang class, respectively, going to Blyth, won by Geo. Elder, Allan Tran, and John Tully Elder. The boys' work, which was highly commended last year, was of high merit, their average score surpassing that of any of the other classes except the 16- and 18-in. class, where the highest distinction was attained. Contrasting the boys' with the young men's under 21, they were one-half point ahead in straightness, and fully equal with them in ins and outs, depth and width, evenness of top and width of land, the young men beating one-half a point in the feering, and two points in covering of weeds. In all points these two classes are ahead of the 12- and 14-in. gangs. To them, indeed, may be added the men's 14- and 16-in. walking plow class, although the absence of score cards prevent, for the present at least, certain accuracy. The young men's work, too, was such as to call forth the praise of the spectators and judges alike. Marked improvement is shown over last year's work; the champion, Allan Tran, beating Fred Terry, last year's champion, with 84 points, against his score 65; the average of the class being 76. It is to be regretted that the number of competitors in this class remains so long stationary. Some extra inducement should be offered in this and the boys' class to increase the number of contestants. Boyhood is the time to make good plowers, and, indeed, good everything else, and the number should be largely increased, if not doubled, by a consolation prize of one dollar to the boys at least, and why not to the young men likewise? The money would be well spent if the result suggested could be attained. Special mention should be made of the excellence of the work done by George Elder and Allan Leslie in the boys' class—the first making full points in ins and outs and in evenness of land, while he scored only one point less in straightness and depth and width of furrow; the latter making full marks in feering and evenness of top of land, with only a point short each in straightness and depth and width of furrow, taking second place for covering weeds. The only other full marks were made by John Mayhew, Wawanessa, in evenness of land and covering of weeds. The champion scores of 73, 71, 81, 82, 74, 71 and 86 for men's 14- and 16-in., young men's class, boys' class, 12- and 14-in. gang and sulky, respectively, is very suggestive. How is it that the young men and boys beat all the other classes except the sulky. Certainly in most of the classes there is ample room for improvement, and this can only be reached by the regular habit of prize plowing at home, from which would accrue most profitable results. The question of how best to raise the work a notch higher should be practically discussed at this juncture of the work. In common with other competitive examinations, a percentage of marks limiting prizewinning should be tried, at least in the men's classes. Would a minimum of 50 per cent. not stimulate practice and improvement in all the classes? There certainly is not nearly as much merit or credit in work where the points are below that, as most contestants would desire. A less valuable help in the furtherance of the work would be the score cards, and every competitor should be given one, and he get his scores. The score cards should be given to the competitors as help in their work.

Next year's match should be held on a more level than this year's, and the work should be done in a more regular way. The work it will be seen, is due to the fact that the assistance of the revision of the score cards.

W. Guild, Kenmay, a man that will undoubtedly take a first place if he sticks to it a little longer.

The prizes continue numerous and most attractive, \$331 being distributed among the seven classes, exclusive of gold medals and silver cups. Every prize was just what it was represented to be; the honor and credit of the donors and officers, and the future prosperity of the match, was thus guarded and assured to the utmost. The work of the judges was most painstaking and thorough. With most of the judges from a distance, the officers have done much to take away all reasonable dissatisfaction in awards. Every year the work of the judges becomes more difficult, and if the movement is to expand and be very successful, it will be largely owing to the competent and impartial work of well-qualified judges, most effectually aided by contestants who are masters of their work and who depend more on the exact and intelligent use of the rule than on any cocksureness of the eye, which the wisest and the most experienced will admit is deceiving in more matters than the sizing up of a furrow.

Hamiota Plowing Match.

The annual plowing match, under the auspices of the Hamiota Agricultural Society, was held on June 27th, two miles South of Hamiota, on the farm of James Park. The weather was favorable, the land in good condition, the 22 competitors did excellent work, the judges gave satisfaction, and the attendance was large and general enthusiasm and satisfaction prevailed. The score card was used as at other matches, the judges being Messrs. W. C. Croy, Brandon; Thomas Speers, Oak Lake; and S. B. Munn, Lothair. The average work was of high merit, the scores running high throughout.

In the men's walking class, J. Sutherland, Brandon, won with a score of 90; while in the boys' class



THE HOME OF J. G. WASHINGTON, NINGA, MAN.

under 16, Leslie Wisner, of Oak Lake, who also won last year, and this year at Oak Lake plowing match, was first here, with a score of 89 points. The boys in the younger class did remarkably good work throughout. The prize list stands as follows:

Gang plow—Allan E. Ross, Brierwood; D. McKee, Hamiota; and R. Felstead, Hamiota.

Sulky plow—F. Houck, Hamiota; John Strachan, Logoth; and H. Coldwell, Oak Lake.

Men's walking—J. Sutherland, Brandon; George Croy, Hamiota; and A. Atkinson, Hamiota.

Young men's walking—Wm. Whyte, Hamiota; A. Croy, Brandon; and J. M. Fraser, Hamiota.

Boys' walking—Leslie Wisner, Oak Lake; D. McKee, Hamiota; and George Croy, Hamiota.

Viriden Plowing Match.

The annual plowing match under the auspices of the Viriden Agricultural Society and Farmers' Institute was held on June 27th, on the farm of J. Joslin. The adjoining groves on the farm of Major Hosmer made an ideal spot for the picnic and social gathering in connection with the match. About 1,000 people assembled to witness the contest, and at the close of the match speeches were made by the mayor of Viriden, Mr. D. McDonald, and Hugh McKellar, chief clerk of Department of Agriculture, the latter speaking on grasshoppers, their habits, characteristics, etc. Although the ground was a little hard, good work was done. The judges were: In 14-inch plows, Messrs. Wright and Goodwin, of Oak Lake; in 16-inch plows, Messrs. P. Milliken and James Lothian, of Pipestone; and for teams, Messrs. Wm. Stephens and Wm. McDonald, of Viriden. The judging was done by score-card, under the following classifications: Straightness, 15; feering, 15; in and out at ends, 10; depth, 5; width of furrow, 5; evenness of top of land, 5; covering weeds, 30; finish, 15. As will be seen by reference to the scores used at some of the other matches (see last issue of the ADVOCATE), there are some slight differences in details. A little talk over the respective merits of these score-cards in the columns of the ADVOCATE would doubtless result in improvements for succeeding years. Read Mr. Noble's comments on the score-card of the Blyth match elsewhere in this issue. The prizes in the several classes were awarded as below:

Class I.—Boys under 18 years old; 14-inch walking plows—1st, J. McLeod, 65 points; 2nd, W. Sprout, 63 points.

Class II.—Open to all; 14-inch walking plows—1st, J. Stott, 89 points; 2nd, D. Gunne, 79 points; 3rd, W. Reed, 78 points; 4th, F. Milburn, 71 points; 5th, F. W. B. Chapple, 66 points.

Class III.—16-inch walking plows—1st, D. Evans, 86 points; 2nd, D. Forsythe, 84 points; 3rd, F. W. Chapple, 76 points; 4th, F. Haskett, 71 points; 5th, H. Harper, 70 points.

Class IV.—Gang plows—Wm. McIntosh was the only entry in this class.

Class V.—Sulky plows—1st, W. Beeley, 81 points; 2nd, A. Reid, 76 points; 3rd, J. Johnston, 70 points.

Best groomed team in boys' class—Wm. Sprout.

Best groomed team, men's class—J. Craig.

Best handled team—D. Evans.

Highest score made with Canton Clipper plow—Guinn.

Highest score made with Moline plow—D. Evans.

Highest score made with Verity plow—J. Stott.

Highest score made with Cockshutt plow—a tie between D. Forsythe and W. Beeley.

Why Strippings Are so Rich in Cream.

Many explanations have been given of the reason why the "strippings"—or that portion of the milk which is last drawn from the udder—is the richest in butter-fat. One of the most generally accepted explanations is that the butter-fat, being of such a low specific gravity as compared with the watery portion of the milk in which it floats, has a tendency to rise to the upper portions of the udder, just as it does when the milk is set for cream raising. When the cream so rises, it naturally follows that it will be the last to come away in the operation of milking.

That there is a very marked difference in the quality of milk first drawn from the cow, as compared with that which comes away towards the finish, was clearly shown by an experiment carried out some time ago by a well-known dairy expert. This gentleman found that while the average percentage of butter-fat in the first half pint of milk withdrawn from a cow worked out to only 1.32 per cent., the butter-fat in the strippings, or the last half pint, amounted to over 9 per cent. There was

hardly any difference in the percentage of the other solids present in the last drawn as compared with the first drawn milk.

Dr. Wm. Saunders, Director of the Experimental Farms, has recently returned from the Maritime Provinces, Quebec, and Western Ontario, and received reports from the far West. He reports they generally light in Ontario and the East, almost a culture in Manitoba and Eastern Assinboia, but heavy in Alberta and British Columbia.

Fall wheat is irregular, and not likely to yield an average of more than 15 bushels per acre, as a result of drought, winter-killing and Hessian fly. Spring wheat is heading much on short straw in Ontario and Quebec, and in the Maritime Provinces it is healthy, but backward in Manitoba and Eastern Assinboia half a crop is expected. In Saskatchewan, Alberta, and British Columbia, a full-risped-looking crop

promises a good yield of grain, but light straw in the eastern half of Canada. A fair return is looked for in Manitoba and Assinboia, and a heavy yield in British Columbia. The same may be said of barley. Peas are looking unusually well in Ontario, Quebec, and Maritime Provinces. Few are grown in the West.

An International Shorthorn Sale.

The announcement in our advertising columns in this issue of the approaching great sale at Chicago of sixty head of high-class imported and Canadian-bred Shorthorn cattle from the noted herd of Mr. W. D. Flatt, of Hamilton, Ont., including a considerable number of the prizewinning animals at the leading shows of Great Britain and Canada in the last two or three years, is an occasion of such unusual interest as to call for more than casual comment.

There has been no time in the last half of the century when the need for the distribution in America of cattle of the class embraced in this offering was greater than at present. A distinct shortage of cattle of the beef type all over the continent is an acknowledged feature of the situation, while the market prices, present and prospective, for beef cattle and for breeding stock are such as to inspire confidence and a feeling of safety on the part of breeders in setting full sail to the breezes that blow and are likely to blow for some years in the stockman's favor. These cattle were bred or purchased and imported by Mr. Flatt at great cost, his ambition being to hold, as he does, a prominent place in the front rank of American breeders of Shorthorns on the basis of the superior individual excellence of the animals found in his herd, and to this end, in the selection of his latest importations, in no case has the price been allowed to intervene in the attainment of his object. In many instances, indeed, we are assured it was only by the intervention of influential and skilled diplomatists that the wealthy owners were induced to name a price, the instructions being to promptly close a bargain when that point was reached, though the figures were in some instances such as would have staggered a man of less nerve or weaker faith in the future of the breed. In the purchase of these cattle, Mr. Flatt had no intention of offering them for sale at this time, his object being rather to make a selection from them and from his home herd for exhibition at the leading shows in Canada and the United States as an advertisement, and afterwards to retain them in his herd, trusting to the permanency of the demand to pay for them through their progeny, but at the earnest solicitation of leading Shorthorn breeders he has been induced, in the interest of the breed, to offer them at public competition at a time and place which, through the participation of Canadian and American devotees of the cosmopolitan "red, white and roans," appears to be opportune and fitting to make a success of the venture and a record for the breed. If such be not the outcome, it will not be the fault of Mr. Flatt, who has spared no expense in getting together and presenting in fine condition what we have no hesitation in pronouncing as unquestionably the best collection of cattle that has ever been offered at public sale in America from the standpoint of individual merit and good breeding combined. We are conscious that this is saying a great deal, but we speak advisedly, from a personal knowledge of the record, and in the light of observation and experience gained in half a century of close acquaintance with the breed and the breeders.

It is rarely that the opportunity offers in any country to bid at a public sale for a cow in her early prime that has been twice a first prize winner at the Royal Show of England, and is a regular breeder, nursing her own calves and doing it well; but such a cow is included in this offering, as well as an in-calf 2 year-old heifer from the same herd and family, which was being fitted for the Royal this year, and it is confidently believed by those who have seen the winners that she would have taken first place there had she not been claimed for Canada before the event. There are also many others in the collection which were prizewinners at prominent shows in Scotland and England, where competition is quite as keen as at the Royal, and where none but toppers can win. In the list of the imported animals catalogued for the sale there are numerous sons and daughters of noted prizewinning bulls, which are the sires of prizewinners in profusion, and some of the females are in calf to Royal champions, as well as being the daughters and granddaughters of championship winners.

A noticeable and regrettable feature of the public sales of Shorthorns held in America this year and last has been the lack of high-class bulls available, a fact which has reflected on the average prices realized for the offerings. This will not be the case in Mr. Flatt's sale, as a really strong force of meritorious young bulls are included, among which are the two grand 2 year-old sons of ex-Premier Greenway's champion bull, Judge, which were alternately first and second prize winners at Canada's leading fairs last year, and which, while well-nigh perfect in symmetry of proportions and full of quality, have size to match and will each tip the scales at over a ton before the day of sale. Only the will to meet the wishes of prominent breeders that the offering of bulls should be made a strong one

has led to the decision to catalogue the favorite stock bull, imported Golden Fame, now in his 3-year-old form, and just at the time when his calves by their excellence are attesting his prepotence as a sire. He has been considered too valuable as a breeder to justify loading him with flesh for the showing, and he has been freely used in the herd, but he is in fine condition, standing well on his legs and true in all his lines, and in the light of his success as a breeder is worth to-day at least four times the sum of the plucky bid which secured him for the Trout Creek herd only two and a half years ago, when the revival of trade was dawning, and the price paid was a record one in Shorthorn sales for a decade on this side of the sea. The younger imported bulls are a uniformly good lot of most desirable type, full of quality, and promising to grow into show bulls.

The Canadian contingent of females includes the sweepstakes cow at the three greatest shows in Ontario last year, and her half-sister of the same age, who has been alternately placed first and second to her in their class in the showing each year since they were in the calf list, while another half-sister, all being daughters of imported Royal Sailor, stood a worthy second at Toronto as a yearling in 1899. The charming heifer illustrated on this page, a model of bovine perfection, and an outstanding first as under a year in strong competition around the circuit of shows above referred to last year, is one of the plums in the offering, and will meet the expectations of the most exacting. Remembering that it is freely granted on both sides of the international line that to win first or second honors at Toronto in the Shorthorn class as a rule stamps the winner as good enough to "go up head" in any contest in the camp of the red, white and roans on this continent, some idea may be formed of the caliber of Miss Canada as personified in the make-up of this sale list. We risk little in venturing the

same and constitution are happily combined with quality, smoothness and finish in the highest degree. This is just as all sensible breeders know and have long known in their hearts, or their better judgment it should be, and we congratulate Shorthorn breeders the world over on the dawn of a day in which pedigree prejudices and color fads and fancies are dying and men are looking for substance rather than shadows. These remarks are in no sense an apology for the pedigrees of Mr. Flatt's cattle, but are rather commendatory, for those who want Scotch, and the best Scotch only, can find it in the catalogue to their heart's content, while those who want something better than Scotch and only Scotch will find just what they are looking for, with just enough Scotch to make them better. Nor need we apologize for the colors, for those who are not yet sufficiently enlightened to have gotten over the absurd prejudice that calls only for "red and all red" may have it here put up in precious parcels, while those who are willing to take the winning color, not because it is roan, but because quality and thickness of flesh so generally go with that color, will find rich roans galore and to the Queen's taste.

The phenomenal lists of prizes hung up by the Fair Associations and Breeders' Associations in the United States and Canada this year, representing the largest amounts of money ever offered in America, excepting, perhaps, at the World's Fair, make this a peculiarly favorable opportunity to equip and strengthen show herds, not only for this year's contests, but also for the Pan-American Exposition, which is to signalize the opening of the twentieth century, and as all the leading exhibitions in both countries are wide open, they may well be regarded as international events, as is also this sale, and we trust that Canadian breeders will see that the plums do not all find a home on the other side of the line. We are willing to believe there is sufficient enterprise among Canadian breeders to bring a fair share of them back to Canada. We are very sure that if any other Canadian breeder were offering such cattle at Chicago, Mr. Flatt would have the ambition to secure at least one or two of them, as he has been a liberal buyer at many sales in the Dominion. Nothing could give a breeder a better advertisement than to be a buyer at this sale, and nothing could do more to give Canada a better standing with the United States. The question of distance cuts little figure in this affair, as Chicago is quite as near to Canada as to many of the States which are likely to be represented at the sale, and as the consent of the Minister of Agriculture has been obtained, that animals purchased at the sale may return to Canada on the tuberculin test which has been made to admit them into the United States, there are no regulations to hamper or detain them, but parties attending the sale may bring their purchases home with them, and we hope to see Canadian breeders in strong force participating in the international Shorthorn tournament in the city by the lake on the seventh of August. Further reference to the sale list will be found in the Stock Gossip columns in this issue.



QUEEN OF THE LOUANS.

First-prize Shorthorn heifer under a year, at Toronto, London and Ottawa Exhibitions, 1899.

TO BE INCLUDED IN W. D. FLATT'S CHICAGO SALE, AUG. 7TH. (See Gossip, page 106.)

opinion that the verdict of breeders on the day of sale will be that these Canadians, in conformation and quality, measure well up to the standard of the best that are produced in any country, while their breeding is in the purple, being descendants of the best of imported ancestors from the home of the breed.

An inspection of the cattle and a review of their pedigrees and description in the catalogue shows that Mr. Flatt, in his breeding and selections, while recognizing and fully appreciating the undoubted value of the best individuals among Scotch-bred cattle in the evolution of the most approved type of Shorthorns of the present day, has shown the courage of his convictions, gained by personal observation of British and Canadian herds and showings, which are that the best individuals are not as a rule produced by a slavish following of narrow lines of breeding, but by a judicious blending of the blood of the best obtainable of all good sorts. It was on this principle that the late Mr. Cruickshank proved his genius as a breeder in producing the type of cattle which brought him fame and fortune, and though in the latter days of his breeding operations, by force of a combination of circumstances, he was led to confine himself to narrower limits, it is an open secret that with all his extraordinary intuition he had reached a point where he was perplexed by these limitations, feeling that a new departure was needed if the individual excellence of his cattle were to be maintained. But it remained for others, ardent admirers of his life work, but with a freer hand, to make the move it was well understood his ripe judgment would have approved, and the satisfactory result may be plainly seen in the character of the cattle that are winning in the British show-yards of to-day, and in the magnificent collection listed for the Flatt sale, in which size,

The Ever Popular Horse.

The Chicago *Horseman* says: "As many as 40,000 were out last Saturday to see the Derby, which prompts the daily *Journal* to sagely remark that the time will never come when one-tenth as many people will be attracted to see horseless carriages race for any sum, however large. The annual parade through Grand Boulevard and Washington Park was the most gorgeous of any that have taken place. The array of fine horses was beyond question larger and better in every way than any that have preceded it. Those who imagine that the horse has lost one whit of his popularity would have come to their senses had they seen it. Now and then a wheezing, rattling automobile broke in upon the beauty of the spectacle, driver and occupants running a two-mile gauntlet of derisive jeers. The presence of the machines only served to emphasize the nobility of the horses with which they mingled."

In an editorial review of the Dairy Service in New Zealand, in connection with the appointment of Mr. J. A. Kinsella as Dairy Commissioner, *The New Zealand Dairy Messenger* sums up the situation in the following paragraph: "To put the whole position in a nutshell, we may say that the two most important desiderata of the Dairying Service to secure the end desired—an output unsurpassed for quality in any part of the world—are brains and backbone, and we are confident neither of these qualifications will be lacking in the new Commissioner, whom we now congratulate upon his appointment."

A Good Barn in a Wheat Section.

It is encouraging to see such stock barns as shown in the accompanying cut, and to read letters like that of Mr. S. Martin, living, as he does, right in the center of one of the great wheat sections. His finding that "I can keep more stock every year and grow as much wheat as I ever did" is most important, and should be seriously pondered over by every farmer whose land is "too good for a stock farm," for as surely as the practice of growing all wheat and returning nothing to the soil is continued in, so surely will failure and disaster come.

The necessity of returning vegetable fiber to the soil is yearly becoming more apparent, and this can be done only by applying manure or growing grass. The latter seems the most practical way of supplying the soil with root fiber to prevent drifting and to get the soil back into the best mechanical condition. Once a man has grass land, stock-raising will follow as a natural consequence. The manure can be utilized and a regular rotation adopted. In the illustration is shown the engine house, for the protection of the 25 h. p. traction engine, which is utilized, when not threshing, for chopping grain and cutting straw and oat sheaves. For the latter purpose a 200-foot rope connects over a pulley with the large-sized cyclone straw cutter in the barn loft, the engine house being over 90 ft. from the barn. The barn itself is 100x50 ft., with 16-ft. posts, double boarded throughout, and all studs, rafters, etc., are 2x6 stuff, there being 60,000 feet of lumber and 52,000 shingles used in the construction of the barn. For the horse stable 32x32 ft. is cut off at each end of main barn, with close-board partition, a 16-ft. passageway through the center, with a roller door dividing horse stable from cattle stable. This doorway enables a team to drive right through when drawing out manure. The stable holds 11 horses. The floor is of cement in the horse stable, but no flooring underneath cattle being well bedded, the liquid is all absorbed in manure. A 25-barrel water tank stands in the center of barn. Excellent and abundant water is obtained at a depth of 26 feet, a sand-point being forced down to the water, and it is drawn up by an 8-ft. wind-mill, which pumps for all the stock and the engine. A carrier track extends full length of the barn, slings being used for unloading straw, sheaves and wild hay, with perfect satisfaction. As to his feeding operations, Mr. Martin speaks for himself in the following letter:

The main part of the barn is 32x100 ft., with lean-to 18 ft., which makes the building 100x50 ft. One end is the horse stable, 32x32 ft., leaving balance of main part 32x68 ft., in which I feed 25 to 30 steers (dehorned), loose, and 20 hogs running among steers. The horse stable is cleaned out every day, and all manure and bedding scattered in where the steers and hogs run. This is all the bedding they get, and they keep clean. The hogs have a self-feeder; are fed dry chop and supplied with water in a trough. I have never had hogs do as well as those handled the past winter in this way, as they get plenty of exercise, and it was dry and warm. They work over all the manure. Stock handled in this way make the best of manure, and it can be handled at the least cost. Near spring, when it gets too high for the mangers, we drive wagon right through barn, haul direct to fields and spread. The lean-to holds about 60 calves, all loose; with pen in one corner for newly-calved ones. A few hogs are let run in here to work over manure. All chop fed to cattle is mixed with cut straw or oat sheaves, as I find that when fed without cut feed some eat faster than others, and scour. There are 25 windows in this barn; large ones to the south, east and west, and small ones to the north. I am a strong believer in sunlight, and have not had any lice on cattle in this barn, and have not put any preventive on them. Breeding cattle are kept loose in another barn, nothing being tied up but the milk cows. My experience in feeding cattle is that they do far better loose than tied, keep cleaner and stand shipping better. Also, buildings can be put up for a good deal less money, and the stock can be attended to a lot easier. I live in a good wheat district, where land is valuable, and find that by fencing my land, rotation of grass, growing rape on my fallow, also oats and corn for fall pasturing, instead of cattle losing on the bare fall pasture what they gain in summer, I have them go into winter quarters fat, and by using all my straw and returning manure to the land, I can keep more stock every year and grow as much wheat as I ever did.



A GOOD BARN IN A WHEAT SECTION. S. MARTIN, ROUNTHWAITE, MAN.

space to exercise, and when they can have this healthful and agreeable recreation, are seldom troubled with disease. It is not absolutely necessary that fowls should have unlimited range to do well and be profitable, for they seldom go beyond reach, unless forced to seek for their living. However, ample space is needed for walking, jumping and scratching, and if they get this, and the place is kept clean, pure and fresh, they will do well.

Water or No Water?

It is a fact that a good many young birds are raised in a natural manner without water, and it is by no means a necessity for young chickens. A good many of their ailments may be traced to bad water. Milk, as has been frequently pointed out in these columns, is very good for young chickens—it is food and drink too; but water is merely a liquid that quenches thirst. Even the most fanatic teetotaler has never found any other virtue in it. When there is no milk to spare for the chickens (and milk is generally most abominably scarce in the country) it is best to give them no water to drink for the first fortnight or three weeks at least. Their food for this period consists almost entirely of damped meal. It must be rather more moist, that is all. A certain proportion of moisture they also get off the grass. The danger of water is simply that they are prone to drink a surfeit of it, and this is avoided by withholding it as a liquid and giving it in the food. As they grow older and eat a certain amount of whole corn, water is necessary, but should be given with moderation—that is to say, a little at a time. It is a good plan to mix meal into it, and make a thin gruel, especially for very hot weather, when chickens, like ourselves, have a craving to swallow any liquid in larger quantities than is wise. C. D. L., in *English Farmer and Stock-breeder*.

Eggs in Cold Storage.

HOW THEY ARE KEPT BY THE MILLION FOR USE IN THE WINTER MONTHS.

Half a million dollars represents approximately the value of the eggs being placed in the cold storage warehouses of Kansas City this season. The season is now at its height, and before the close about 120,000 cases, each containing thirty dozen

eggs, will be laid away for next winter's use. Last spring about 80,000 cases were stored in Kansas City warehouses.

There are many interesting details in egg handling which are but slightly known to the average consumer of eggs. Few people realize the number of different hands an egg passes through on its journey to the dining-room where it is eaten, in the city. Candling eggs is an important feature of the storage season. It is a simple process of holding an egg to a light in a dark room, for the purpose of determining its quality. Handlers, who store eggs, have learned by experience the necessity for eliminating all except the largest, cleanest and freshest eggs from cases which are to be carried in storage for several months. Charles A. Moler, head candler at Arnou's, has from ten to thirty men working under his direction throughout the season. The candling room is long and narrow, with benches fitted up around the wall. At short intervals electric lights are strung from the ceiling.

The room has no windows and the lights are so constructed that only a ray of light is admitted. Standing before the light a workman examines each egg by holding it up to the light. If the ray shines through the egg clearly it is all right as far as quality is concerned. Cleanliness and size are two important conditions to be reckoned, and eggs must meet all the requirements before they will be accepted for storage. The attention paid to candling has increased each season. A few years ago the only candling rooms in Kansas City were small inclosed spaces in the rear of commission houses, where only one man could work at a time. Now many men consider egg candling their regular trade, and experts are well paid for their care and efficiency. No one can tell whether they have candled their work until next winter, when the eggs are taken out of storage. The overlooking of a spoiled egg may cause the eggs of the whole case to be spoiled, and a case of bad eggs would spoil the reputation of the candler.

When eggs have been candled and selected for storage, they are packed in wooden cases, they are stored in a cool place, and a temperature of 31 degrees Fahrenheit is maintained. They are held in storage until next winter.

Fattening Chickens in Coops and in Yards.

The custom commonly practiced by English and French chicken fatteners, and also recommended by some of the Canadian poultry-fitting experts, is to confine the birds in small coops. The Maine Agricultural Experiment Station, in their bulletin, No. 61, describes an experiment that deals with the fattening of chickens for market, in which they claim to have found that close cooping is less profitable and more troublesome than maintaining them in small flocks with restricted runs. Ten coops of four chickens each were fed as confined birds. Each coop had 16 by 21 inches of floor space, with slatted sides. The chickens used in the test were raised under similar conditions and from the same hatch. They were 130 days old at the commencement of the test, and all were pure-bred Barred Plymouth Rocks, White Wyandottes or Light Brahmans. Four chicks were placed in each coop, and fed on thick raw porridge made by mixing meal with cold skimmed milk, making it thick enough so that it would drop, but not run, from the end of a wooden spoon. The meal mixture employed was made up by mixing 100 pounds of corn meal, 80 pounds wheat middlings, 50 pounds fine ground oats, and 40 pounds fine animal meal. They were fed all the porridge they would eat twice each day. The troughs were removed and cleaned in half an hour after the commencement of each meal. They were constantly supplied with water.

Feeding was commenced August 24th, 1889, and continued until Sept. 28th—35 days. The birds were weighed at the end of each week. They consumed 477 pounds of meal and 81 gallons of skimmed milk. The 40 cooped chickens weighed at the commencement of the test 147.9 pounds, and at the close 237.1 pounds, gaining an average of 2.23 pounds per chicken, live weight. The quantity of dry meal required to produce a pound of gain was 5.94 pounds.

On the day that the feeding of the cooped birds was commenced, twenty of their mates were put in a house 9 by 11 feet in size, with an attached yard 30 feet square. They were fed for the 35 days on the same grain mixture with milk as those confined in the small coops. The 20 birds weighed at the commencement of the test 66.6 pounds, and at the close 116 pounds, making an average gain of 2.47 pounds each. The quantity of dry meal required to produce a pound of gain was 5.52 pounds. In these tests, total and individual gains and cheaper flesh were secured from the birds with partial liberty than from those in close confinement. The labor was less in caring for the yarded birds. The cooped birds were very quiet, and did not appear to suffer from confinement. When dressed, all the carcasses in both lots were even, well formed, and handsome.

In another test, made for the purpose of noting the effects of age, and the development and fleshing of chickens, it was incidentally shown that there is no advantage in very close confinement. This test included 40 chickens closely confined in coops and fed 34 days, and 20 chickens confined in house and small yard, and fed 35 days.

Financial Results. Taking the sixty cooped and uncooped birds together, and considering the gains in flesh, and the cost of the food used, enables us to form opinions as to the advisability of selling chickens from the range when in growing condition, or specially preparing them for higher-priced markets.

If these birds had been dressed without fattening at the commencement of the feeding test, and had shrunk the same per cent, that they did when slaughtered, they would have yielded 165.5 pounds of dressed meat, worth, at 13 cents per pound, \$21.51. At the close of the test they dressed 272.7 pounds, and were sold at 15 cents per pound net, yielding \$40.90. This shows that their value was increased by fattening, \$19.39. The increase was probably more than this amount, as it was found in other tests that the percentage of shrinkage in dressing lean chickens was greater than in fat ones. Thirteen cents was as much as the unfattened birds would have sold for slowly, while the fattened ones sold quickly in the same market at fifteen cents per pound. They were very much improved in quality by fattening. The flesh was white and soft, and when roasted, the thighs were soft, juicy and free from strings.

The amount of the dry food used was 750 pounds, and cost \$7.91. The skimmed milk was 140 gallons, worth \$2.80, making the total food used worth \$10.71, which amount taken from the increased value of the chickens leaves a balance of \$8.68 gain on the sixty birds; an average increase of a little more than 14 cents on each one above the cost of food used.

The quality of the well covered, soft-fleshed chickens, if they are not too fat, is so much superior to the same birds not specially prepared that they will be sought for at the higher price. The dairy farmer is especially well prepared to carry on this work, as he has the skimmed milk, which is of the greatest importance in securing yield and quality of flesh.

Butter -- From the Stable to the Table.

A CONDENSED SYNOPSIS OF THE PREVIOUS ARTICLES.
BY MISS LAURA ROSE.
THE STABLE.

Before starting to build, consider well the plan, making every part of the building converge toward two essentials, the comfort of your cows and your own convenience. It pays to put up a good building, as it takes less feed to keep the animals. Have good floors; walls with a still-air space, and tight-fitting doors and windows. Fresh air and sunshine are as necessary to the good health of cows as to human beings. Make ample provision for the proper admittance of both. Have the water troughs and mangers constructed as to be easily kept clean. Do not forget to whitewash the stable at least once a year; it cleanses and brightens.

THE DAIRY COW AND HER FEED.

In selecting a herd, consider the purpose to which you intend putting the milk. If it is to be converted into butter, have cows which give a fair average amount of rich milk. Have a standard and discard all animals which cannot come up to it. It is not asking too much to demand that each cow give 6,000 lbs. of 3.6% milk, or, in other words, between 250 and 300 lbs. of butter. A cow's ability to secrete milk may be partially judged from her general appearance, but the weigh scales and Babcock tester are by far the most reliable test. Many good cows are stunted in their milk production owing to not being liberally fed. To make milk, she must have plenty of the proper kind of food. In summer nothing is better than good pasture and a little meal. It is well to provide against drought by having some green crop to cut. For the bulky part of the ration in winter nothing is cheaper and better than silage. It sustains the flow of milk and keeps the cows in a healthy condition; but, remember, it must be of No. 1 quality, or it will taint the milk. As milk is 87% water, a cow should have all the water she cares to drink, and it is important that it be pure.

MILKING TIME.

If the anatomy of the cow and the secretion of milk were better understood by those who have the care and milking of the cows, the returns from the dairy would be greatly increased. Milk is largely manufactured just while the cow is being milked, and her surroundings and treatment powerfully influence both the quality and quantity. Assure the cow that you are her friend, ever kind and thoughtful of her comfort, and she will show her love to you by making all the milk she possibly can. The draughty floor, the poor feed, the nasty blow, the tantalizing horn fly, the nagging dog, rob the milk pail. These are things which can be remedied. Cows should be milked quickly, in a pure atmosphere, by the same person, in the same place, at the same time, and with dry hands. Milk out the last drop if you want to prolong the milking period.

THE CREAMING OF MILK.

Where one or two cows are kept and shallow pans will likely be used, the milk should be strained immediately, and the pans set in a cool room where the air is fresh and sweet. Avoid having a draught over the milk. It makes a thick crust on the cream. Skim at the end of 24 or 36 hours in summer, allowing it to stand longer in winter. Always skim before the milk thickens.

Deep cans are to be preferred to pans, but it is useless to use them unless one has a good supply of ice. To do thorough creaming with the deep cans, the milk should be strained into the cans and placed in water as soon as possible after milking. See that there is plenty of ice in the tank, so as to reduce the milk quickly to 45 or below. The milk should stand 24 hours in summer, and from 36 to 48 hours in winter.

The ideal way of getting the cream from the milk is with a separator. They are fast coming into general use, and while lessening the labor, they increase the profits from the dairy. In buying a machine, get one of fair capacity, easy to run, and easy to clean. Set it up in a clean, well-ventilated place, convenient to the cows and calves, so as not to carry the milk far. Have the foundation firm, the machine well oiled, and always get up speed slowly. Wash the machine thoroughly after each time of using.

PASTEURIZING, RIPENING AND GENERAL CARE OF CREAM.

If from any cause there is a taint on the milk, due to feed or unfavorable surroundings, pasteurize the sweet cream, which will largely drive off the objectionable flavor. To pasteurize, heat the milk to 160°, in water at 180°. Hold at that temperature for twenty minutes, then cool down. Cream treated in such a way needs a starter, otherwise it would be too long in ripening. Add to it some good flavored sour cream, buttermilk or skim milk. Hold at from 60 to 65°, stirring frequently; cool to churning temperature, when the cream has a mild acid taste and shows signs of thickening. If the cream be raw, I prefer adding a little sour cream or

milk to the first skimming and holding the cream at a low temperature than allowing it to sour without aid at a high temperature. Always cool separator cream before adding it to the cream crock. Keep the cream can covered. Do not let your cream get overripe, stir right to the bottom of the cream can each time fresh cream is added. You have largely under your own control the flavor of your butter by the proper management of your cream.

CHURNING, SALTING AND WORKING.

The churns should have no washers or workers inside. Scald and cool, then pour in the cream through the strainer dipper. The temperature for churning will depend on the richness of the cream, the quantity in the churn, the time of the year, etc. Try to have rich cream; do not fill the churn over half full, better only a third full, then churn at that temperature which brings butter in nice granular form in thirty minutes. Poor cream means a high temperature, and not such an exhaustive churning. Too quick churning invariably means a considerable loss of butter in the buttermilk. In using butter color err on the pale side. Revolve the churn from 70 to 80 times in the minute. Stop churning when the granules are the size of wheat grains. If butter comes with the first drawn buttermilk, it is a reliable sign the butter is not sufficiently gathered. Give the butter but one washing, with plenty of water.

If salting in the churn, allow one ounce to each pound of butter, and let the butter remain in the churn two or three hours, then take out and work, salting in the worker only ½ ounce per pound is required. If you have not a lever worker, make up your mind you will do without one no longer. Work by pressure only, avoiding a sliding motion. When but little moisture shows on the butter, and the body is close and the color even, the butter is sufficiently worked. Butter for packing should be washed twice, salted a quarter of an ounce heavier, worked twice, put into new or perfectly cleansed crocks or tubs, and the tops covered with parchment paper and a salt paste.

THE PACKAGE AND MARKETING OF BUTTER.

Exercise the greatest care and neatness in finishing the butter for market. The brick-shaped pound prints are the most convenient—they pack well and cut nicely for the table. When freshly wrapped, they should weigh 16½ ounces, the half ounce allowed for shrinkage. Use only the best parchment paper, wetting it in clear cold water before putting it on the butter. Let the butter reach the consumer as soon as possible after making. When regular, good paying private customers can be had, it is probably the best way to dispose of the butter. Educate them to rely on the quality of your butter and your promptness in delivery. If you dispose of your butter on the market, see that the package, the basket, the butter cloth, and, I might add, your own appearance, is beyond criticism. These things are all noticed by the purchaser. When we consider that 90% of the cows give good milk, and then likewise consider how much inferior butter is placed on the market, does it not show a lack of skill and care on the part of buttermakers. Let each of us do what we can to improve this valuable product of the dairy, and make Ontario noted, both at home and abroad, for her excellent butter.

O. A. C., Guelph, Ont.

Where Dairy Breeds Differ.

It has been well said that there is no such thing as a "best" cow. The remark applies to dairy cattle as well as to other classes of stock, and its explanation is not far to seek. Different districts and different localities have different requirements, for while in one place a farmer may find it advisable to sell his new milk in a town, and, therefore, may find it to his advantage to obtain as large a quantity as possible without any special reference to the percentage of butter-fat and solids which it contains; his brother farmer elsewhere, less favorably circumstanced in regard to markets, may find it necessary to resort to the conversion of his milk into butter or cheese, and in such cases he must not alone aim at attaining only a large yield of milk, but a large yield of milk of good quality.

There are "cows" and "cows" from the dairyman's point of view. Holsteins and Ayrshires, which are noted for the heavy yields of milk which they produce, are so highly prized in cheesemaking districts because of the fact that though the milk which they yield does not contain a very high percentage of butter-fat, it is comparatively rich in other solids, and these other solids play a very important part in the manufacture of cheese. Jerseys, on the other hand, are noted for the remarkable richness of their milk in butter-fat, and though there are among them many large milkers, yet as milkers pure and simple they stand, as a rule, somewhat lower down on the list than the Ayrshires and Holsteins; but where milk is paid for on the basis of its butter-fat content, which is the only fair system, the Jerseys give a good account of themselves. Kerries and Dexters are also noted for the exceptional richness of their milk, and in this respect they stand next in order to the Jersey. One great point in favor of the Kerries and Dexters is, that not alone is their milk very rich, but they are capable of producing large quantities of it. It is doubtful if there is any other breed of cattle in the world which, weight for weight, will produce as large a yield of milk as a Dexter cow of a good milking strain.

Making Late Swarms Profitable, Etc.

It is getting a little late for swarming now, but likely several colonies will swarm yet. It is the custom of many beekeepers to hive new swarms on a new stand at all times of the year; and while this is often profitable in the early part of the season, it is often ruinous, so far as a crop of surplus honey is concerned, where practiced the latter part of the honey harvest. As the season advances, a different plan is needed from that used during June. The plan is this: As soon as a swarm is seen issuing, take six frames filled with foundation, and also two wide frames of sections, putting the same in a box or hive which is convenient to carry; and at the hive from which the swarm is coming take the frames from the box and place them down by the hive. As soon as the swarm has mostly ceased coming out, the hive is opened, and all of the frames of brood and honey, with the adhering bees, taken out and placed in the box, after which the two wide frames of sections are placed, one at each side of the hive, and the six brood frames put between them. The hive is now rearranged and closed.

There is no trouble about the bees leaving the combs. If the weather is warm, and there are many bees on the frames, about a third of them are shaken off in front of the hive, when the box is placed in the shade a rod or two away, so the bees from the swarm will not find it when being hived, which is the next thing to do: hiving them in the rearranged hive on the old stand. If the weather is cool, or but few bees are on the combs of brood, omit the shaking off, for it will want all of the bees to keep the brood in good condition. They are taken to a hive which has been placed where the colony is to stand, and arranged in it the same as they were in the old hive; and after tucking them up all warm and nice, they are left till the next morning. At any time during the forenoon of the next day they are given a virgin queen, or a queen cell just ready to hatch, and in this way there is no trouble with after-swarming, for the bees feel so poor at this time that they are glad of anything in the shape of a queen, the flying bees that were taken with the combs of brood having gone back to the old stand with the swarm. If the delay of giving the queen is longer than eighteen hours, this formed colony often becomes so strengthened by the rapidly-hatching brood that they will destroy the queen-cell, or kill the virgin queen, and after-swarming will be the result. Do not give them a laying queen unless you wish a prime swarm from the colony in from eighteen days to three weeks, for the bees will surely use her for such swarming if the honey harvest continues for that length of time.

By this plan a powerful colony is secured on the old stand, which will do as much, if not more, in the sections, than they would if they had not swarmed; for a new swarm will work with a vigor rarely known to bees under any other circumstances. In ten days, if the honey harvest continues, sections are given to this colony, which has rapidly increased to such from the combs of brood carried in the box; and as the young queen has now commenced to lay, the bees will at once go into the sections, often giving a fair yield of honey; yet the main yield will come from the new swarm, as they have at least one-third more bees than they would had they been hived on a new stand, all of the field bees returning to this place. The bees returning from the combs of brood and the fields all work with a will together; and as the harvest is at its height also, and the brood-chamber contracted, the storing of honey goes on in the sections at a rapid pace, such colonies often giving from 50 to 100 pounds of "fancy" honey to their keeper, while, if hived on the old plan, little save partly-filled or empty sections would be the result.

If the hive is left as we now have it till winter, the bees are not liable to have sufficient stores; so when the harvest of white honey begins to draw to a close, the sections are taken from the sides, which were placed there at the time of hiving (if they have not been taken out filled before), and the combs necessary to fill out the hive are used to take their places. In this way the bees will fill these last for winter; and should a fall yield occur they will often have some extra stores to spare to help out any weak colony that may be short. The partly filled sections which may thus come from the sides are taken from the wide frames and placed with those which are on top, when the bees will finish them, if the honey season does not drop off too suddenly; or they can be kept and used for "bait" sections the following year.

There are various ways of keeping over these best sections so that they can be nice and clean, ready for use when wanted, such as extracting the honey from them and then placing a lot over some strong colony for the bees to lick the remaining honey off, when they are stored away in a clean, dry place till wanted. Or they can be uncapped and set over some colony short of stores till the honey is carried below. It is a better plan to set the whole lot in the cellar or some dark room, when on a pleasant day the door is opened, giving the bees of the apiary access to them, when, at night, I find them all cleaned up, with very few combs gnawed, provided we give the bees access to them at the right time, so that night comes at about the time the bees have the honey carried away. *Doolittle, in Gleanings.*

Sheep at the Royal Show.

SPECIAL NOTES.

The representation of sheep at the Royal Show, at York, will rank as one of very considerable merit and high quality, and it is very gratifying to be able to say that very many of the pick of England's best have been secured for Canadian and American flocks.

Leicesters. Of this breed, there were thirty-nine entries in five classes, which were throughout all breeds, except where otherwise stated, for two-shear rams, yearling rams, three ram lambs, three yearling ewes, and three ewe lambs. We have seen this breed better represented in the yearling ram class; but for old rams and yearling ewes the entries were of very high merit. Mr. G. Harrison won the champion prize of the breed with a wonderfully symmetrical ram, which was first at last year's Royal, at Maidstone, a ram thoroughly typical of his breed, as were the whole of the entries. From his specially well-bred flock, Mr. E. F. Jordan came in for premier honors in yearling rams, and was also, besides other minor honors, second and R. N. for champion with a particularly good two-shear ram. Another very excellent flock provided the winning pen in the ram lamb class, namely, Mr. J. J. Simpson's.

Cotswolds.—This breed made one of the best exhibits it has done for some years, the feature of the classes being not so much their numbers (for these only amounted to twenty-two for the five classes), but its high and characteristic merit, more especially those uniformly excellent entries from the world-renowned old flock of Messrs. R. & W. T. Garne, who led in four out of the five classes, the only one wherein he did not win being that for yearling rams, whose winner came from Mr. Russell Swanwick's, a flock whose repute is of the highest, and whose winner was a particularly grand type of a ram, though Messrs. Garne, who came in for second honors, pressed him very close indeed. A word of commendation is justly due to Mr. W. Houlton for the excellence of his exhibits, more especially in the ewe class, wherein he secured the second prize.

Lincolns.—An entry of fifty-six was made in the six classes open to this breed, the additional class being for a pen of five rams, in which Mr. Henry Dudding's noted old flock was an easy first with a pen of thoroughly typical and characteristic rams, with wonderfully even fleeces of fine wool. A very good pen, typical of the noted flock at Nocton, property of Messrs. Wright, came in for second honors, whilst a well-matched and grand pen of Mr. Tom Casswell's came in third, being closely pushed by a most typical and evenly-matched pen, both in regard to size and character, from Mr. J. E. Casswell's. A class of five old rams was a first-class one, Mr. Tom Casswell's old flock being rightly placed in the first place with a remarkably grand ram of fine masculine character and type. Messrs. G. E. Dean & Sons were second with a ram whose merit and quality was thoroughly typical of their noted flock. The yearling ram class was a grand one, but its winner was outstanding, being a ram of the highest merit, perfect symmetry, and having an excellent fleece. This ram came from Mr. H. Dudding's flock, and won the champion prize of its breed, being accounted by many present as being fully equal to that noted ram from the same flock which occupied a similar place, and which, sold two years since, realized no less than \$5,000. Next him came a grand ram with splendid head and even fleece from Messrs. Wright, of Nocton, whose second exhibit also filled fourth place, thus proving the high excellence of this flock, which secured second and fourth in so large a class. The third-prize ram came from Mr. Henry Dudding's flock, and is specially deserving of notice, from the fact that he was of very high merit, particularly in respect to his grand fleece. Space will not permit details being given of those more than excellent pens from the flocks of Messrs. J. E. Casswell, J. Pears, and H. Smith, which secured barren honors. In yearling ewes, a pen of the highest merit and quality—which, by-the-by, are coming to Canada—won hands down for Mr. Henry Dudding. Messrs. Wright's wide, deep and fine pen being a good second, beating Mr. H. Dudding's second pen because they were rather more evenly matched, though, if the ewe for ewe, we should have preferred Mr. Dudding's pen. Typical pens from Messrs. Wright, of Nocton, and Dean & Sons were also noted. Mr. Wright's pen of yearling ewes was particularly deserving of notice, both ram and ewe, being of a grand type, and in the ram class, Mr. Wright's pen was placed second, and in the ewe class, Mr. Wright's pen was placed first. The ram class was a grand one, and in the ewe class, Mr. Wright's pen was placed first. The ram class was a grand one, and in the ewe class, Mr. Wright's pen was placed first.

The entries in the shearing class were of high merit, and Mr. J. T. H. ...

well's old flock went second in the old ram class with a ram of good masculine type and symmetry, whilst this same exhibitor came in third in the shearing class with a ram of specially high merit and good fleece, the second place in this class being filled by a grand ram of excellent character from the well-known and highly-reputed flock of Mr. H. W. Stilgoe. Mr. J. C. Eady had a pen of highly meritorious rams in this class, and secured no more than they deserved by being placed R. N. and C. In the shearing ewe class, this latter exhibitor, as has been the case for the past three years, easily secured both first and second awards with six ewes of the grandest merit and type. Mr. W. J. P. Reading was easily the fore for ram lambs, and Mr. W. A. Treweeke took a similar position for ewe lambs which give great promise of future excellence.

Shropshires. in six classes, one being given it for five yearling rams, made an entry of 105, of which 85 were present. As a whole, there was scarcely a more uniform or even section of sheep in the show, and it must be a real satisfaction to the breeders of this variety of sheep to find so very large an entry and one of so high an average of merit present. The old ram class was a thoroughly good one, Mr. R. P. Cooper taking precedence with a fine ram of excellent merit, bred by Mr. D. Buttar; Mr. A. E. Mansell closely following him with one bred by Mr. J. Bowen-Jones, which was of a real grand type and had a most typical head. A large number of other breeders both in this and the following classes of this breed were noticed by barren honors; in fact, but a very small percentage of the large entry failed to secure the notice of the judges in some degree or other. Mr. A. E. Mansell, who owns one of the best and most typical flocks of this breed, showed the high merit thereof by reason of his great victory in a wonderfully strong class of yearling rams, as both first and second prizes went to sheep of his breeding, which were typical of the breed in the highest sense of the term. An almost equally good ram from Mrs. M. Barrs' secured third honors, and one from Mr. R. P. Cooper's flock filled the R. N. Again, in the pens of five yearling rams we found an exceptionally grand entry, and the per-

a grand all-round good ram; and one of H. R. H. the Prince of Wales was R. N. His Royal Highness in the yearling class secured second honors, as the sheep were placed by the judges, but ought really to have gone first, for the Sandringham ram beat the other one hollow in walking and in other respects, the winner being a ram bred by the late Mr. J. J. Colman and exhibited by Mr. Jeremiah Colman, which was of good quality in respect to flesh and fleece, but could not move as a ram should do. A moderate sheep of Mr. Courtauld's came in for third honors, and a typical ram of high quality from Mr. C. R. W. Adeane's flock was R. N. The yearling ewes were a class of high merit, and the Earl of Cadogan's pen, which have won at most of the shows during the present year, led the way once more, though that most excellent pen of the Pagham Harbor Co.'s which came in for second honors were considered by many breeders their superior in respect to type, character, and heads. The ram and ewe lamb classes were not strong; in fact, there exists very great difficulty in finding good ram lambs or ewe lambs of this breed this year. Mr. C. R. W. Adeane led in ram lambs, Col. McCalmont came in for second honors with lambs more masculine and better developed. Mr. Whitaker Wright led in the ewe lamb class with an exceptionally fine pen of young lambs, but the other entries were of no special merit.

Hampshire Downs.—An entry of sterling merit was made by this breed, whose breeders are, perhaps, the most energetic lot of men for pushing their breed abroad, as will be seen by their advertisement that regularly appears in this paper. The old ram class was a thoroughly good one, more especially the two rams that won first and second honors respectively for Messrs. Carey Coles and J. Flower, two of the foremost breeders of this grand breed. The yearling ram class was one of the largest and best we have seen of the breed for many years, and though by the judges' award Mr. J. Flower was placed second, there was a pretty general consensus of opinion that his ram was more typical and of better quality than the ram to which premier honors and championship went, which came from the flock of Lord Rothschild's, a flock which, we may remark, is one of great merit and quality. Mr. R. W. Hudson's ram was third, and he will be heard of in your country in the autumn fairs. He has merit, type and quality. Mr. J. Flower without doubt was clearly right in being placed first and second for ewes. Which of the two pens was best would be hard to say, they were all grand ones. Mr. Hudson here again came in for third honors with a grand pen, but a bit overfed. The ram lamb class was one of especial merit, more particularly the pen which won first for the Earl of Carnarvon, and that which took second for Mr. J. Flower. Both of these pens were so excellent and even that it was really a hard matter to tell which ought to have been first. A most typical and valuable pen from Mr. T. F. Buxton's flock came in for third honors, a position to which their grand character and even merit fully entitled them. Mr. J. Flower secured deservedly the first prize in ewe lambs with a grand pen, the Earl of Carnarvon being again very close up as second, and a grand even pen, with good conformation and symmetry, from Mr. Carey Coles, secured third honors.

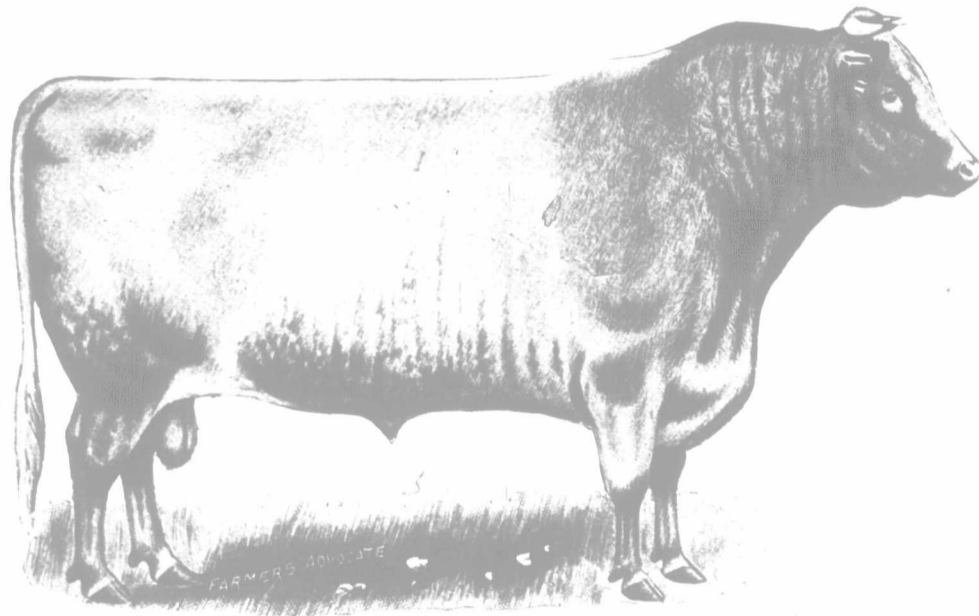
Suffolks.—This is a breed not largely known in your country, but one which produces very excellent mutton. Their entry was most typical of their breed, and of high merit. The Earl of Ellesmere was the principal winner.

Border Leicesters. A grand entry was made by this breed, and we feel sure that those who are interested therein could not but be most satisfied with its large and full classes of so high an average of merit. In the older classes, the Right Hon. A. J. Balfour, M. P., took premier honors throughout, though his entries were strongly pressed for their position in the yearling ram classes by two grand rams from Mr. J. E. Nicholson, the best of which was certainly very close up if not better than the winner, having more scale and better rumps. Mr. J. Twentyman led in a good class of ram lambs, and Mr. McIntosh took similar honors in the ewe lamb class.

Wensleydales are another breed of sheep not much known in your country, but one which produces mutton and wool of very high-class merit. The entry was thoroughly typical of the breed, and of high quality and merit, the leading winners being the executors of Mr. T. Willis, Lady Henry Bentick, W. Cleasby, and Jas. Rhodes.

Kent or Romney Marsh. This is one of those breeds which, if it were tried in your country, would be of great value, especially in marsh lands. Its merits are great hardiness and freedom from fluke or foot rot. The entry, for which only classes for yearling ewes and rams were provided, was a first-class one, Mr. F. Neame and Mr. A. Amos won for rams, and Mr. W. Millen for yearling ewes.

Dorset Horns. This breed, in its two classes, made a moderate entry only, Mr. W. R. Flowers winning for rams, and Mr. E. C. Attrill for yearling ewes.



JUDGE =23419= 131238.

Champion Shorthorn bull at Winnipeg Industrial Exhibition, 1898. PROPERTY OF HON. THOMAS GREENWAY, CRYSTAL CITY, MANITOBA.

which won first honors for Mr. P. A. Muntz, M. P., were, especially three of them, rams of the grandest character, and were particularly noticeable on account of their scale and masculine type. Next them came another well-matched and typical pen, from Mrs. M. Barrs' flock, which were in every sense worthy of the honor accorded them. A lengthy and very typical pen from Mr. W. F. Inge secured the third place in this strong class, and Mr. David Buttar, with one of the best matched pens in the same, came in for R. N. Their place would have been higher up had they been better in their skins. A strong class of ram lambs from Mr. A. E. Mansell's flock was again to the fore with six excellent lambs, this breeder securing the first and second places. Their equal certainly would be hard to find. A very true and well-matched pen of Mr. P. L. Mills' was R. N. This latter breeder should have won in the yearling ewe class, as his pen was one of the best and most typical we have seen for some time, but the judges thought otherwise, and this ideal pen was placed second to a pen of very high merit and quality from Mr. W. F. Inge's flock, Mrs. M. Barrs again coming in for the third award. The ewe lamb class formed a very counterpart of Mr. P. L. Mills' excellent pen of yearling ewes, mentioned above, in his pen of lambs placed at its head, an honor their great merit fully entitled them to, Mr. A. E. Mansell being second, and Mrs. Barrs R. N.

Southdowns made an entry of high merit and quality, and it was generally considered that in the making of the yearling ram class the awards were made fully in accord with what they should have been, as there were many high-class and meritorious entries in the class. Mr. C. R. W. Adeane secured first honors with a fine typical ram from the Pagham Harbor Co., coming in for the highest merit,

Cheviots.—The entry of this breed was larger and better than we have seen at the Royal for many years. Mr. John Elliot won in both ram classes with especially grand specimens of the breed, whilst Mr. John Robson did the same for yearling ewes.

Black-faced Mountain.—A grand display of this breed was made, its picturesque character and long wool making it one of the most interesting classes of the show. The best flocks being included in the entries, great interest was taken in the judging by those who are interested in this breed. The executors of T. Dargue won in the old ram and yearling ram classes, and Mr. J. Vickers in that for the yearling ewes.

Herdicks made a small entry of three, which were typical of their breed; and the *Welsh Mountain* breed were most creditably represented.

W. W. C.

Golden Lad.

IN-AND-INBREEDING.

The Jersey bull, Golden Lad, was undoubtedly a great sire; there have been and are upon the Island just as good. It must be remembered that he stood for service on the Island longer than any other bull, and was owned by a gentleman, Mr. Francis Le-Brocq (a "cattle merchant," as the dealers are called here), who had excellent opportunities for inducing the farmers to use him. I am told many a close trade was settled by giving the service fee of his bull, who, it must be confessed, was never a popular show bull. However, that was nothing against him as a breeder; I mention it to show that his popularity as a show bull in the beginning was owing more to circumstances than personal attractions. However, he was out of a good dam to begin with. His chief merit as a sire was in getting good fore udders, and this accounts for his daughters being so successful in the showing.

I have always complimented the Island breeders on their common sense in not getting Golden-Lad crazy. Even now there is little or no difference in the price of Golden Lad blood over any other good family, except in a few cases. They do not follow any particular family or breeding to any extent—at least not to the extent of in-and-inbreeding, as we so often do at home, on the principle that you cannot have too much of a good thing. The absence of this theory on the Island has, I believe, been the salvation of the race.

I always regret to see here any tendency toward in-and-inbreeding. I am positive we have made some awful mistakes in America and Canada in the style of breeding so universal there. It comes about principally from our extensive habit of tabulating pedigrees. I must admit that the name of Golden Lad twice in a pedigree looks to most people twice as attractive as seeing it there but once, and some of us are not satisfied with this, but must breed a double grandson of Golden Lad to a daughter or double granddaughter of Golden Lad. This is simply tabulated pedigree breeding business and has no sound principle of breeding to sustain it. It builds up a beautiful-looking pedigree, and usually produces an ugly-looking specimen of a cow.

I say this because I feel personally responsible for the introduction of Golden Lad blood into America, and I still say all I ever claimed for it—that it should remedy a very general defect in the conformation of the udders on our side; but I want to put in this counter-plea now, because I see the tendency at home is to "go in" for Golden Lad blood, as we have for some other families.

Many of the letters I receive at home ask for sons or double grandsons and daughters of Golden Lad. That is, in some cases, the only stipulation, which means that the owner would rather have an inferior double grandson or daughter of Golden Lad than a better animal at the same or less money. I don't presume anyone would admit this. I mention this to show the tendency of some of our people at home who go in for pedigree breeding regardless almost of merit, and entirely regardless of results beyond the looks of the thing on a tabulated sheet.

I have lately witnessed two examples of breeding for improvement that demonstrate what I have so often pointed out in the *Jersey Bulletin*—i. e., the great Cruickshank family of Shorthorns in Scotland and the great Jersey herd of Lord Penbrook in England; their principle in breeding has been the same. This celebrated family of Shorthorns to-day outclasses the Bates and Booth, and brings the highest prices. The originator, a Scotchman, came to England and bought a good cow wherever he found her—Bates or Booth, or whatever she might be—pedigree was a minor consideration. He took them home and has selected and bred on this principle until, as I said, he has the grandest Shorthorns in the world. Other men went in for Bates, others for Booth pedigree! pedigree! If he was a Booth man he paid £500 for an inferior Booth sooner than £100 for a superior animal that was not a Booth. Where are the Booth and Bates pedigree builders to-day? They are no longer in the race with a Scotch farmer who breeds to a good Shorthorn.

Lord Penbrook has accomplished the very same thing in the very same way in breeding Jerseys. He can show the best herd of Jerseys in the world bred by the owner. Let those choose pedigrees who will; take my advice, if you are a beginner, and hew out your own line. I speak from years of experience and very extensive observation. *E. S. Price, in Jersey Bulletin.*

To Tell the Age of a Horse.

To tell the age of any horse. Inspect the lower jaw, of course. The six front teeth the tale will tell. And every doubt and fear dispel.

Two middle "nippers" you behold Before the colt is two weeks old. Before eight weeks, two more will come; Eight months, the "corners" cut the gum.

Two outside grooves will disappear From middle two in just one year. In two years, from the second pair; In three, the corners, too, are bare.

At two, the middle "nippers" drop; At three, the second pair can't stop. When four years old, the third pair goes; At five a full new set he shows.

The deep black spots will pass from view At six years, from the middle two. The second pair at seven years; At eight, the spot each "corner" clears.

From middle "nippers," upper jaw. At nine the black spots will withdraw. The second pair at ten are white; Eleven finds the "corners" light.

As time goes on, the horsemen know. The oval teeth three-sided grow; They longer get, project before Till twenty, which we know no more.

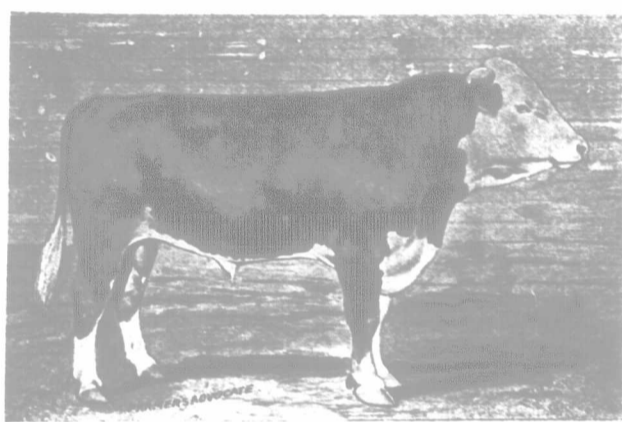
King's Co., P. E. I.

P. D. BOWLEN.

Calf Feeding.

The dairy cow should never suckle her calf for more than three days. Some advocate taking the calf away as soon as dropped.

It should be remembered, however, that the power to give milk is the result of stimulation and maternal instinct. It frequently happens that the calf is unable to consume all the milk produced immediately after it is dropped. The result is a portion is left in the udder. This, of course, produces inflammation and other troubles of this organ. It fails to stimulate the activity of the milk gland to its utmost capacity, and soon results in a deterioration of the milk flow and a loss of the natural inherent secretory function of this organ.



YEARLING HEREFORD BULL, REX OF INGLESIDE. PROPERTY OF J. E. MARPLES, DELEAU, MANITOBA.

The cow should be milked out each time after the calf has had a moderate supply.

After the third day, take the calf away and feed for two weeks or so on whole milk, then on warm skim milk and adjuncts, chiefly flaxseed gruel. The milk must be fed at animal heat, between 98 and 100 degrees Fahrenheit. The calf should early be taught to eat a mixture of dry meal and fodder. In the dairy, the object is a rapid growth of muscle, but not fat. Equally good calves can be grown on skim milk and adjuncts as on whole milk, and at much less expense when properly managed. The calves should be handled constantly from the beginning to make them gentle. Handle the udder parts in the heifer, and thus stimulate the flow of blood to these parts, directly increasing the activity of the glands and developing the milk-producing organs to the fullest extent. Breed at about eighteen to twenty months, so that the calves may be dropped at from twenty-seven to twenty-nine months. Breeding too young is detrimental to the mother, for she cannot develop properly and support a foetus at the same time, and a stunted heifer will make a cow deficient in stamina.

The calf should first be thoroughly licked by the dam. This clears the skin of effete matter and materially aids the circulation. It is very important that this be done, as the calf is in a weakened condition, and this aids in the development of its strength. After it is done, the calf may be removed without suffering. In all instances, it should receive the first milk of colostrum. This contains properties that are purgative in nature, and clears the alimentary canal of materials that otherwise might cause congestion of the various digestive organs. If you remove the calf from the dam as soon as dropped, and fail to give the colostrum, disastrous results may follow. In glancing at the composition of colostrum milk, it is seen to be comparatively low in water, high in solids, abnormally high in casein and albumen, low in sugar and high in ash. It is thus especially adapted to the needs of the young and growing animal.

Those who have handled calves have been astonished by the rapid growth and strength displayed by young animals several days after birth. The

colostrum milk is the best means of providing the animal with the requisite food for growth and development. This matter must therefore receive due consideration when weaning calves and raising them by hand. Calves may be taught to drink from the pail by manipulation with the fingers, but the calf-feeders—tin pails or cans with rubber teats—are better, provided they are kept scrupulously clean. The muscular act of sucking induces a flow of saliva that aids digestion. The calf will then suck quite as readily as from the udder of the cow. This prevents its gorging itself and producing scours and other intestinal troubles. Should these result from careless feeding, they can be remedied by the addition of lime water and by feeding in such a manner that the animal will have to take the milk slowly, so that it will become thoroughly mixed with the saliva and other digestive juices and properly assimilated.

Stock Judges at the Winnipeg Industrial.

The live-stock judges at the Winnipeg Industrial are as follows:

Light and Heavy Horses.—J. A. Craig, Professor of Animal Husbandry in the Agricultural College, Ames, Iowa.

Beef Breeds of Cattle.—John Davidson, of Ashburn, Ont.

Dairy Breeds of Cattle.—A. C. Hallman, New Dundee, Ont.

Milk Test.—C. A. Murray, Provincial Dairy Superintendent.

Sheep and Swine.—Thomas Teasdale, Concord, Ont.

Bacon Hogs.—J. D. Mitchell, pork packer, Winnipeg.

Poultry.—G. D. Holden, of St. Paul, Minn.

Dogs.—John Davidson, Munro, Mich.

Dairy Products.—G. L. McKay, Professor of Dairying, Agricultural College, Ames, Iowa.

Grain.—Messrs. Spink & Horne.

Ignorance is Folly.

A CREAMERY SHOWS WHAT INTELLIGENT FEEDING AND BREEDING WILL DO FOR THE FARMER.

A creamery reports that for a year just passed it has paid one patron \$00 per cow for each cow milked in a herd of 16, and five of the number were heifers milking with first calf. To another patron it paid \$25 per cow in a herd of 20, and to another \$17 per cow in a herd of 13. The latter herd is not to be considered in our remarks, for the cows were allowed to "rough it," and no man who pretends to dairy farming will so handle his cows. The \$25 herd were given good roughage and grain in abundance; were warmly stabled and kindly treated. The \$00 herd were bred on the dairy farm, fed a balanced ration, and otherwise treated about as their \$25 neighbors. The cows of each herd were neighbors, belonged to farmers of the same community, kept on the same kind of land and the climatic conditions were identical.

What produced the difference in the earnings of these cows? It was the difference in the owner. The feeder of the \$00 cows was a student. He studied the questions of breeding a good cow, what and how to feed and care for her. He read a dairy paper, read and filed away for future reference bulletins from Agricultural Colleges, and studied a book on "Feeds and Feeding," which cost him \$2. He owned and operated a Babcock test and scales. Being convenient to his milk can in the barn, the weight of each cow's milk night and morning was recorded. In payment for this exercise of brains he received \$35 more per cow from his milk for the year than did his neighbor. A profitable dairy was the reward for his study.

The \$25 man used to laugh at his \$00 neighbor and call him a book farmer, saying that he'd see the day when he could better afford to spend his time in the cornfield rather than with his cows, but that time seems farther off than ever. The \$25 man didn't believe in studying dairy questions. He knew a cow would give plenty of milk on any kind of feed; all she required was plenty of it. He knew that it didn't pay to pump warm water for the winter drink, and he was very sure that the weighing and testing business was a humbug and unnecessary. The result is pitiful. The man received \$25 each per year from his cows in milk. It was \$5 per head more than the feed cost. He and his children worked and tugged all summer making feed for those cows and realized a mere pittance for their trouble.

The \$25 man is grumbling dairying don't pay. His test does not suit him and the butter-fat prices are too low. It is impossible to make that man see that the creamery is not to blame for his condition. His is a plea of dissatisfaction, and so it will be ten years from this time.

The milk from each of these herds was handled in the same creamery and the butter packed at the same time. It went into the common market and sold at the same price. For one man the creamery made a living profit and allowed him money besides; for the other it paid little for feed and trouble, yet the fault lay not with the creamery. The \$00 man was a dairy man; the \$25 man ran a steer dairy. He wouldn't take a year's subscription to an agricultural paper as a gift. He would do nothing to educate himself. The low results from his herd was his punishment for his ignorance. *New York Produce Review.*

First International Good Roads Congress.

In connection with the annual festival of the League of American Wheelmen, there was also held in the City of Port Huron, Mich., the first International Good Roads Congress. The festival resolved itself into athletic competitions and other forms of jollification, but the Good Roads Congress was held for business and was participated in by men alive to the importance of the subject and ambitious to hasten the movement towards a general and successful issue. The Congress was called together and largely arranged for by Mr. H. S. Earle, Chief Consul, Michigan Division L. A. W., Detroit,



FIG. I.—SANDY STREET OVER WHICH THE MODEL ROAD WAS BUILT.

Mich. The meeting was presided over by President Martin Dodge, Director Road Enquiry, Washington, D. C. The secretary of the movement is E. C. Davidson, secretary and manager of the Roadmaker Publishing Co., Port Huron. The gathering was not large, but representative, there being present some eighty delegates from various States and Canada, the representatives from the latter country being Andrew Patullo, M. P. P., Woodstock, and A. W. Campbell, Provincial Road Commissioner, Toronto. The Congress was held on July 2nd and 3rd, the proceedings of the first day being the inspection of and instruction on a sample road under construction under the direction of E. G. Harrison, U. S. Road Expert, Washington, D. C. The road consisted of a half mile of macadam put down on loose sandy soil that is never good except after a rain and then only for light vehicles. A line of street railway occupied the center of the street, and the macadam road was put down only on one side of the track. Fig. 1 shows the condition of the street on the side not treated. The notched markings were made by the wheels of the traction engine that was used to haul the metal (broken stone) from the crusher to the road-bed. The stone crusher was at work at the end of the road and beside the railroad, where the stone had been brought by rail from farming lands some distance out. The crusher used is a modern pattern, fitted with a convex jaw so as to prevent the possibility of flat stones going through without being broken into desirable size. The stone is crushed to a size that will pass through a two-and-a-half-inch ring, and screened into three grades: coarse, one and a half inch, and fine screenings and dust.

In preparing the sandy road-bed for the material, it is moistened and rolled with a ten-ton traction roller until it is firm and uniform. There is next put down a ridge of moist adhesive clay along the outside edges of where the macadam road is to be built. The next operation is to put down four inches of the two-and-a-half-inch stone. On this a light dressing of screenings or sand is spread and moistened, and the rolling commenced. Fig. 2 shows the clay ridge on the left side of the stone, also the four inches of broken stone before being rolled. As the rolling is continued more screenings are applied until three inches have been put on. This is moistened and rolled until the spaces between the particles are filled so thoroughly that the pieces cease to creep, or move or give way before the roller as it passes over. Fig. 3 shows the portion of road rolled into this condition. When finished the road will slant a half-inch to the foot towards the ditch, and the clay ridge will be removed so that the water will readily shed itself from the surface.

After having viewed the road in its various stages of completion, the company was addressed by the road expert, E. G. Harrison, who explained that the Federal Government does not undertake to build roads, but it dispenses information as to the proper way of doing the work, both by literature and by object lessons in various places, such as this piece of road under construction. The effort is made not to teach, but to show a method whereby all roads must be made, and rather to explain how to make a good road, than to insist on building with the material at hand, or to be guided by their disposal. It was explained that the first thing necessary is to get such drainage as will carry the water quickly away from the road bed, an open ditch may answer if it is kept clean and has a good outlet, but a tile drain answers much better. The next move of importance is to secure a prepared firm foundation. The traffic wear and weight on such a road

is enormous, so that a foundation under to that for a building is necessary. Soil of any sort that is clay or sand is suitable, so long as it is firmly compressed, to the extent that all the tiny voids between the fine particles are pressed out. The broken stone is then put on and rolled until they are locked and interlocked to such an extent that the whole is bound firmly together. Mr. Harrison strongly opposed putting coarser stones in the bottom than those two and a half inches in diameter, as this size settles uniformly, whereas larger stones laid under this size tend to shift and work upward by the action of frost and traffic. It was explained that the top layer of chips and dust, when rolled in a moist condition forms into a waterproof roof, and after a few months becomes set similar to cement. It requires judgment to decide when sufficient material has been added and when sufficient rolling has been given, as, where the water line is only a short distance from the surface, excessive rolling causes it to rise to the road-bed in sufficient quantity to cause a weakening of the foundation. The cost of this form of macadam road varies from \$2,500 to \$2,800 per mile, according to the accessibility of material, the cost of labor and other varying circumstances. It is estimated to cost from \$1,100 to \$1,200 per mile apart from the material employed.

A programme of speeches.—The second day of the Congress was given over to a programme of addresses in the City Auditorium. Mr. Earle introduced the proceedings by a few remarks in which he expressed his pleasure at being able to address the citizens of two countries that permit the burden of teaching to rest on their shoulders. He referred to the great change in sentiment towards the question. The opposing forces of a few years ago are changing to a demanding power for faster work in good road construction than can be furnished.

President Martin Dodge, in his chairman's address, referred to the magnitude of the undertaking of making the good roads needed. He expressed a hope that there would soon be forthcoming State and United States aid, to the extent of a portion at least of the great expense necessary. The work so far has been done by localities, while a more general system and general tax is necessary. It was pointed out that a move in this direction is going forward since the Philadelphia National



FIG. II.—ROADBED WITH FIRST LAYER OF BROKEN STONE, BEFORE BEING ROLLED.

Convention and other national conventions have introduced a movement towards assisting road improvement. At the conclusion of the chairman's remarks, a number of gentlemen representing various occupations were asked to give reasons why they were interested in good roads.

The Farmer.—Mr. A. E. Palmer, Kalkaska, Mich., a dairy farmer, claimed to belong to a class not yet well educated along the line of good roads. Mr. Palmer claimed to farm for financial success, and therefore needed all the equipment necessary to facilitate his occupation. Facing the question of road improvement, we should ask ourselves not what would good roads cost, but will they pay a dividend. It was claimed that the cost of transportation is a heavy tax, and the better the condition of the roads the less will be the burden of this taxation. Since the produce of the farm has to pass over country roads on the way to other lines of transportation, the condition of the rural highway should compare favorably with the state of other lines of transportation. Such expensive roads as Macadam or Telford are rarely necessary, but a radical improvement in our roadmaking system is much needed.

Mr. Palmer contended that if country roads were put in a condition passable at all seasons, the boys and girls of the country could more easily obtain Central or High School education. Good roads, too, will add greatly to the value of real estate, and make agriculture more profitable by reducing the transportation tax. A spell of bad weather makes an unimproved road useless, whereas a proper road is practically in the same perfect condition at all seasons. In the course of his remarks, the statute labor system was rather severely scored. Mr. Palmer pointed out that the average pathmaster is neither a good roadmaker nor a manager of men. Under a system of taxation and appointed road commissioners, it is not too much to expect four times as much work done as is now the case, and not only that, but what is done will be done properly, with the least expenditure, and a large piece

of road is made this year it can be continued from there next year, instead of doing and undoing, as is frequently the case under statute labor. Among other advantages from good roads, they will serve to keep boys on the farm by making it possible for them to drive out with clean horses and clean buggies when and where they wish. Good roads will bring about free mail delivery, which will stimulate mental activity and bring more farmers into the prominence they are entitled to. Good roads will inspire farmers to improve the lawns and paint their houses and barns, which will develop a truly patriotic spirit, as well as greater culture and refinement. The result will be to transfer comfort and elegance from the city to the country, the natural place for it. In concluding his remarks, Mr. Palmer pointed out that the cost of transportation is a heavy tax, and the result of the proposed improved system will be to eliminate the burden rather than increase it by the tax that so many people fear.

Manufacturer.—Mr. H. M. Leland, of Detroit, represented the manufacturer in telling why that class of the community is interested in the subject of good roads. The first point made was that the manufacturers invariably build their factories on a well-paved street, as they realize the cost of hauling raw and finished material over soft or otherwise poor roads. Mr. Leland had prepared a paper, but cancelled considerable of it in order that he would not overstep his due time limit. The advancement made by the American nation was referred to, and compared to their enormous percentage of bad roads. Manufacturers are directly interested in good roads, since following them will come an increased demand for more bicycles, automobiles, buggies, roadmaking machinery, and many other classes of goods. Since good roads will increase the value of property and make farmers more prosperous, they will buy more and more of the classes of goods that tend to give comfort and happiness. Every home and hamlet will be enabled to purchase more and more of the products of the manufacturer. Mr. Leland contended that road improvement should go side by side with education, also with railway and harbor improvement. Comparing good and bad roads, Mr. Leland instanced a case in which 16,000 pounds was hauled 4 miles by 4 mules in 1½ hours, at a cost of 15 cents per mule per mile, making a total cost of 90 cents for hauling the load. At the end of 4 miles of good road 5,000 feet of bad road was encountered, over which the hauling of the 16,000 pounds required 10 mules and 7 men for 9 hours, at a cost of \$89.80. Mr. Leland concluded that it is ridiculous to consider road improvement along correct principles as expensive.

Medical. E. B. Smith, M. D., of Detroit, in speaking from the standpoint of a physician, claimed that good roads are good for doctors as well as for their patients, as they shorten the time in which it takes to reach them, also make the trip much less wearing on the physician. Good roads will in this way increase happiness by improving health. In order to show the effects of riding on rough roads, Dr. Smith called attention to a well-known disease that is invariably found among stage drivers as a result of constantly driving over rough roads. He also pointed out that medical men are coming to the conclusion that much of the nervous diseases and premature aging of the women in the country are indirectly due to riding over rough country roads. The nervous system of the human body was likened to a telephone system, which is easily put out of order by jarring. Another point made in favor of good roads was that improved roads meant better drainage, which goes far to improve the sanitary condition of a country.

Good Roads Movement in Ontario.—Mr. Andrew



FIG. III.—PORTION OF ROAD ALMOST FINISHED.

Patullo, M. P. P., Woodstock, Ont., who was one of the first men in Canada to agitate for an improved system of roadmaking, pleased his audience with a review of the movement during the last seven years, at the beginning of which time the first Good Roads Association was formed in Ontario. At the commencement of the movement much injury was done to the cause by speakers who were too aggressive and theoretical, inasmuch as the undertaking was made to appear altogether too expensive. As time went on, however, A. W. Campbell, C. E., was discovered to be the proper man to give instruction in road building, and the office of Good Roads Commissioner was created, with Mr. Campbell as its officer. For some time

Mr. Campbell did a faithful but somewhat discouraging work of addressing meetings and giving instruction against both active opposition and stolid indifference. The real merit of the cause, however, in time appealed to thinking men, until during the last few years there has been an increasing demand for Mr. Campbell's services in addressing meetings of fruit-growers, dairymen and other classes of farmers, who realize that a better system of roadmaking is much needed, and that Mr. Campbell is the proper man to impart the instruction. In all, Mr. Campbell has addressed over 500 public meetings, with one result that fully 300 municipalities have purchased roadmaking machinery, whereas only a few years ago such a machine was not thought of in Ontario, except the plow, pick, shovel and scraper. The town of Woodstock prides itself on owning a road roller, stone crusher, and machine grader. The town of Windsor has appropriated \$200,000 for street improvement. These and many other centers are realizing that good roads mean profit, while bad roads means ruinous loss. Mr. Patullo claimed to be able to see the abandonment of statute labor in Ontario, and the construction of all roads on correct principles. The speaker recommended the plan of having properly-qualified road engineers appointed over certain townships, districts or areas, and maintaining his services so long as he does his work properly. When such a system becomes general, with proper financial support in the form of taxation, our roads will gradually improve along permanent lines.

How to Obtain Good Roads was the subject assigned to Mr. A. W. Campbell, Provincial Road Commissioner, who contended that less talking and more action was necessary. What was left for the Congress to do was to resolve themselves into an organization for work. Most of people have become convinced that good roads are better than bad ones. The change from poor to good roads must be gradual, without attempting to bring about a sudden transformation. In Ontario, for years has been spent annually \$4,000,000 in money and labor without system, organization or management. Such an extensive expenditure for such an important work should be made under the best and uniform direction. In order to secure good roads the old system of many pathmasters, with as many ideas of doing the work, must be done away with. What is needed is organization and a conclusion as to the best system to follow. It is not desirable that a rule be made to apply to the construction of all roads, but rather that the correct principles of road-making be applied in the making of roads to fill their desired purpose and with the material at hand and the finances at command. The object should be to have all work done with a united and definite purpose.

Following Mr. Campbell, the meeting was addressed by W. H. Moore, St. Louis, Mo., who contended that every voter should be able to write his name and own \$150 on which he pays a tax. What is needed is organization, education, agitation and legislation. Mr. Moore advocated State aid for road building. It was pointed out that in the United States there was spent last year for improvements in rivers and harbors \$25,000,000 of public money, whereas the 3,500,000 miles of country roads received \$8,000 all told. In order that country roads get their due share of appropriation, thorough organization is needed, such organization as is common in election campaigns. The efforts of such organization should be directed towards gaining the sympathy and support of the two great political parties. Then and not till then will the matter of improved roads receive its due attention.

Good Roads—Why! How! What! When! Where!—was spoken to by H. S. Earle, Chief Consul, Michigan Division L. A. W. As the time of the Congress had been nearly exhausted when Mr. Earle was called upon, he was compelled to abbreviate his remarks. In answer to why? it was claimed that because we should. This is to be accomplished by taxing every property into a general road fund. The farmer will put in his dollar along with the city man's dollar, which goes to the improvement opposite his farm. The other farmers put in their dollar in the same way, with the result that each man has not only the good road opposite his own property to drive over, but he has a good road all the way to his market town. Mr. Earle recommended the use of convict labor and unemployed men, properly directed under a correct system. He contended that it was not true that the world owes every man a living, but it does owe every man an opportunity to make a living.

Resolutions Adopted.—1. Whereas the United States Government in the earlier days of the Republic espoused the cause of road improvement by building and maintaining national roads, and whereas aid has been given to the Western railroads both by land grants and bonds, and whereas it is the well-established and long established practice of the general government to aid in transportation over water by deepening the rivers and har-

bors and the water communication between the great lakes, therefore be it resolved: That the same liberal policy be extended to the overland transportation upon the common highways of the people, and that every reasonable aid should be extended by the United States Government and State Government to reduce the cost of transportation upon these highways.

RESOLVED.—That the good work heretofore accomplished by the Office of Public Road Enquiries of the United States Department of Agriculture should be extended as rapidly as possible, and that every State in the Union should be reached not only by the literature published by that office, but by public addresses and object-lesson roads, produced by the most skillful experts in the most economic and scientific manner.

RESOLVED.—That State and local associations for the encouragement of road improvement should be formed in all parts of the country, and that members of Congress should be requested and urged to further increase the annual appropriation to be devoted to this purpose.

2. Whereas, one of the great questions of the present day is how to improve our public highways, and in its discussion we are confronted by another, to wit: What is the best way of utilizing our prison labor so as not to come violently in contact and in competition with honest and free labor in any of the several branches of industrial pursuits; now therefore be it

RESOLVED.—That we, the first International Good Roads Congress, do wish to declare that we are in favor of utilizing to the utmost possible extent prison and convict labor in preparing road material and placing same on the highways, so far as it can be done without interfering with good government and honest labor.

3. **RESOLVED.**—That we recognize the deep interest manifested by the Southern Railway Co. and

More Biographical Notes of O. A. College Graduates.

Since we were not able to give biographical notes of all the members of the 1900 O. A. C. graduating class in our last issue, we continue the list herewith:

A. J. WAGG, B. S. A.,

was born at Goodwood, Ontario Co., in 1876. The following spring his parents and family moved to



C. M. READE, B. S. A.

Manitoulin Island and bought a farm. Mr. Wagg resided there until the opening of College in 1896. He took two years at College, passing all examinations and obtaining his diploma at the close of the second year. He then went to work in a cheese factory in Norfolk Co., remaining there until the Guelph Dairy School opened in Jan., '99. He took the full Dairy Course, passing all examinations with first-class honors and obtaining second place in the Proficiency list. In May of the same year Mr. Wagg took charge of a cheese factory at Bar River, in Algoma District, until the College opened in the fall of '99, when he returned to complete his course. In the final exams for B. S. A. degree he took first place in special subject, taking first-class honors in the honor subject, "Dairying," and in "Bacteriology." Mr. Wagg is now running a creamery at Mindemoya, Manitoulin Island.

C. MOORE READE, B. S. A.,

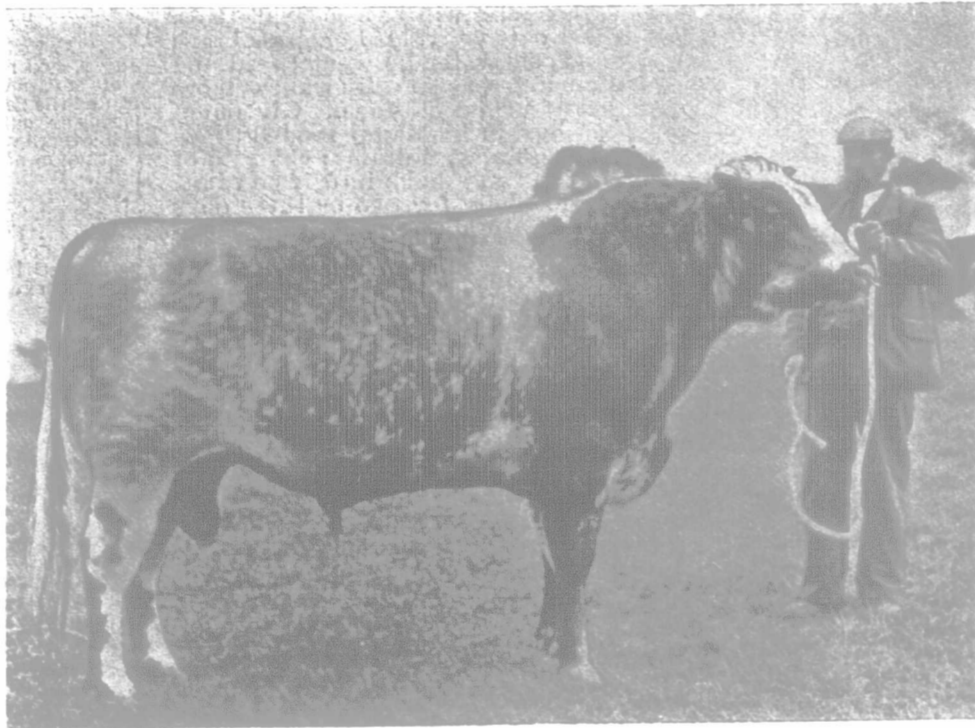
was born at Markham, Ontario, December 17th, 1877. Toronto, however, very soon became his home, and there he received his early training in the Wellesly public school. Ever since his early youth he has had a liking for nature-study and country life. In 1893 he made an agreement with a farmer at Leamington, Ontario, and was initiated into farming through the straight and narrow gate. In October, 1895, he entered the College, and received the Associate diploma in June, 1897. In September, 1899, Mr. Reade joined the present graduate class and took the Biological option. It is his intention to further improve himself in biological work. He has accepted an assistantship in zoology, under Professor Reighard, of the University of Michigan, and will begin work with him in September, but at present is assisting at the Guelph College in bacteriology.

G. A. MacINTYRE, B. S. A.,

was born in Renfrew, Jan. 26th, 1879, of Scotch parentage. His grandparents were among the earliest settlers in this part. Previous to going to Guelph, Mr. MacIntyre spent one year in Renfrew High School, taking English and Science. He has always worked at home on the farm, with the exception of last summer, which was spent in the Renfrew creamery, that he might be qualified to make dairying his specialty in the graduating year. At present Mr. MacIntyre intends to pursue dairy farming. His father is a breeder of Holstein cattle, and he intends devoting his attention along that line.

Kingston Twine for the West.

A despatch from Kingston, Ont., states that Prof. Jas. W. Robertson, of the Department of Agriculture, has gone there to superintend the shipment to the Northwest of over 100 carloads of binder twine. The twine will be carried by steamers from the Penitentiary to Fort William, and thence sent to distributing points in Manitoba and the Northwest over the C. P. R., a rate equal to that of carrying grain having been secured. Professor Robertson will go west with the consignment. The twine, it is said, will be sold to farmers at actual cost by agents of the Department, who will journey west for this purpose.



ROYAL DUKE.

First prize and champion at the Royal Show, 1900.
PROPERTY OF HER MAJESTY THE QUEEN.

other railway interests in sending representatives to this convention, and we most earnestly indorse the importance of their suggestions in having the leading highways of the State constructed and improved so that they will run at right angles to railroads, and thus facilitate most cheaply the means of communication between the railways and the common roads of the country.

A committee consisting of Hon. Martin Dodge, Director Office Road Enquiry; Andrew Patullo, President Ontario Good Roads Association; and Col. Carl Moore, of St. Louis, Mo., was named for the purpose of conferring with the Executive Committee of the Inter-State Good Roads Association with a view to effecting a permanent national or international organization in the interests of better roads.

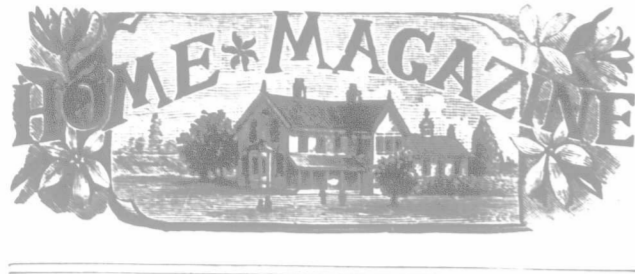
The Congress closed with a hearty vote of thanks to Mr. H. S. Earle, chief consul, Mich. Division L. A. W., for his efficient and faithful work in bringing together the convention.

A Pin-Driving Punch.

SIR, The following is a description of a handy little tool called a pin driver, used for driving the pins out of any old building when tearing them down. It is made as follows: Take a piece of iron or steel about one foot long and 1/2 in. in diameter, and make a hole in the one end to fit over the pointed end of the pin and drive with a hammer.

Ontario Co., Ont. W. M. WILLIAMS.

When you get older,
My son, you won't bet
On a theory till you have tried it;
For Nature is coy,
And she likes to upset
Your scheme when you think you've applied it.
—Rural New Yorker



THE BIRD ON ITS JOURNEY.

BY BEATRICE HARRADEN.

It was about four in the afternoon when a young girl came into the salon of the little hotel at C— in Switzerland, and drew her chair up to the fire.

"You are soaked through," said an elderly lady, who was herself trying to get roasted. "You ought to lose no time in changing your clothes."

"I have not anything to change," said the young girl, laughing. "Oh, I shall soon be dry."

"Have you lost all your luggage?" asked the lady, sympathetically.

"No," said the young girl; "I had none to lose." And she smiled a little mischievously, as though she knew by instinct that her companion's sympathy would at once degenerate into suspicion!

"I don't mean to say that I have not a knapsack," she added, considerably. "I have walked a long distance—in fact, from Z—"

"And where did you leave your companions?" asked the lady, with a touch of forgiveness in her voice.

"I am without companions, just as I am without luggage," laughed the girl.

And then she opened the piano, and struck a few notes. There was something caressing in the way in which she touched the keys; whoever she was, she knew how to make sweet music; said music, too, full of that undefinable longing, like the holding out of one's arms to one's friend in the hopeless distance.

The lady bending over the fire looked up at the little girl, and forgot that she had brought neither friends nor luggage with her. She hesitated for one moment, and then she took the childish face between her hands and kissed it.

"Thank you, dear, for your music," she said, gently.

"The piano is terribly out of tune," said the little girl, suddenly; and she ran out of the room, and came back carrying her knapsack.

"What are you going to do?" asked her companion.

"I am going to tune the piano," the little girl said; and she took a tuning-hammer out of her knapsack, and began her work in real earnest. She evidently knew what she was about, and pegged away at the notes as though her whole life depended on the result.

The lady by the fire was lost in amazement. Who could she be? Without luggage and without friends, and with a tuning-hammer!

Meanwhile one of the gentlemen had strolled into the salon; but hearing the sound of tuning, and being in secret possession of nerves, he fled, saying, "The tuner, by Jove!"

A few minutes afterward Miss Blake, whose nerves were no secret possession, hastened into the salon, and, in her usual imperious fashion, demanded instant silence.

"I have just done," said the little girl. "The piano was so terribly out of tune, I could not resist the temptation."

Miss Blake, who never listened to what anyone said, took it for granted that the little girl was the tuner for whom M. le Propriétaire had promised to send; and having bestowed on her a condescending nod, passed out into the garden, where she told some of the visitors that the piano had been tuned at last, and that the tuner was a young woman of rather eccentric appearance.

"Really, it is quite abominable how women thrust themselves into every profession," she remarked, in her masculine voice. "It is so unfeminine, so unseemly."

There was nothing of the feminine about Miss Blake; her horse-cloth dress, her waistcoat and high collar, and her billycock hat were of the masculine genus; even her nerves could not be called feminine, since we learn from two or three doctors (taken off their guard) that nerves are neither feminine nor masculine, but common.

"I should like to see this tuner," said one of the tennis-players, leaning against a tree.

"Here she comes," said Miss Blake, as the little girl was seen sauntering into the garden.

The men put up their eye-glasses, and saw a little lady with a childish face and soft brown hair, of strictly feminine appearance and bearing. The goat came toward her and began nibbling at her frock. She seemed to understand the manner of goats, and played with him to his heart's content. One of the tennis-players, Oswald Everard by name, strolled down to the bank where she was having her frolic.

"Good-afternoon," he said, raising his cap. "I hope the goat is not worrying you. Poor little fellow! this is his last day of play. He is to be killed to-morrow for *table d'hôte*."

"What a name!" she said. "Fancy to be killed, and then grumbled at!"

"That is precisely what we do here," he said, laughing. "We grumble at everything we eat. And I own to being one of the grumpiest; though the lady in the horse-cloth dress yonder follows close upon my heels."

"She was the lady who was annoyed at me because I tuned the piano," the little girl said. "Still, it had to be done. It was plainly my duty. I seemed to have come for that purpose."

"It has been so confoundedly annoying having it out of tune," he said. "I've had to give up singing altogether. But what a strange profession you have chosen! Very unusual, isn't it?"

"Why, surely not," she answered, amused. "It seems to me that every other woman has taken to it. The wonder to me is that anyone ever scores a success. Nowadays, however, no one could amass a huge fortune out of it."

"No one, indeed!" replied Oswald Everard, laughing. "What on earth made you take to it?"

"It took to me," she said, simply. "It wrapped me round with enthusiasm. I could think of nothing else. I vowed that I would rise to the top of my profession. I worked day and night. But it means incessant toil for years if one wants to make any headway."

"Good gracious!" he said, smiling at the little girl. "A few months," he said, smiling at the little girl.

"A few months," she repeated, scornfully. "You are speaking the language of an amateur. No; one has to work faithfully year after year; to grasp the possibilities, and pass on to greater possibilities. You imagine what it must feel like to touch the notes, and know that you are keeping the listeners spellbound; that you are taking them into a fairyland of sound, where petty personality is lost in vague longing and regret."

"I confess I had not thought of it in that way," he said, humbly. "I have only regarded it as a necessary everyday evil; and to be quite honest with you, I fail to see now how it can inspire enthusiasm. I wish I could see," he added, looking up at the engaging little figure before him.

"Never mind," she said, laughing at his distress; "I forgive you. And, after all, you are not the only person who looks upon it as a necessary evil. My poor old guardian abominated it. He made many sacrifices to come and listen to me. He knew I liked to see his kind old face, and that the presence of a real friend inspired me with confidence."

"I should not have thought it was nervous work," he said.

"Try it and see," she answered. "But surely you spoke of singing. Are you not nervous when you sing?"

"Sometimes," he replied, rather stiffly. "But that is slightly different." (He was very proud of his singing, and made a great fuss about it.) Your profession, as I remarked before, is an unavoidable nuisance. When I think what I have suffered from the gentleness of your profession, I only wonder that I have any brains left. But I am uncorruptable."

"No, no," she said; "let me hear about your sufferings."

"Whenever I have specially wanted to be quiet," he said—and then he glanced at her childish little face, and he hesitated. "It seems so rude of me," he added. He was the soul of courtesy, although he was an amateur tenor singer.

"Please tell me," the little girl said, in her winning way.

"Well," he said, gathering himself together, "it is the one subject on which I can be eloquent. Ever since I can remember, I have been worried and tortured by those rascals. I have tried in every way to escape from them, but there is no hope for me. Yes; I believe that all the tuners in the universe are in league against me, and have marked me out for their special prey."

"All the what?" asked the little girl, with a jerk in her voice.

"All the tuners, of course," he replied, rather snappishly. "I know that we cannot do without them; but good heavens! they have no tact, no consideration, no mercy. Whenever I've wanted to write or read quietly, that fatal knock has come at the door, and I've known by instinct that all chance of peace was over. Whenever I've been giving a luncheon party, the tuner has arrived, with his abominable black bag, and his abominable card which has to be signed at once. On one occasion I was just proposing to a girl in her father's library when the tuner struck up in the drawing-room. I left off suddenly, and fled from the house. But there is no escape from these fiends; I believe they are swarming about in the air like so many bacteria. And how, in the name of goodness, you should deliberately choose to be one of them, and should be so enthusiastic over your work, puzzles me beyond all words. Don't say that you carry a black bag, and present cards which have to be filled up at the most inconvenient time; don't—"

He stopped suddenly, for the little girl was convulsed with laughter. She laughed until the tears rolled down her cheeks, and then she dried her eyes and laughed again.

"Excuse me," she said; "I can't help myself; it's so funny."

"It may be funny to you," he said, laughing in spite of himself; "but it is not funny to me."

"Of course it isn't," she replied, making a desperate effort to be serious. "Well, tell me something more about these tuners."

"Not another word," he said, gallantly. "I am ashamed of myself as it is. Come to the end of the garden, and let me show you the view down into the valley."

She had conquered her fit of merriment, but her face wore a settled look of mischief, and she was evidently the possessor of some secret joke. She seemed in capital health and spirits, and had so much to say that was bright and interesting that Oswald Everard found himself becoming reconciled to the whole race of tuners. He was amazed to learn that she had walked all the way from Z—, and quite alone, too.

"Oh, I don't think anything of that," she said; "I had a splendid time, and I caught four rare butterflies. I would not have missed those for anything. As for the going about by myself, that is second nature. Besides, I do not belong to anyone. That is its advantage, and I suppose its disadvantage; but at present I have only discovered the advantages. The disadvantages will discover themselves!"

"I believe you are what the novels call an advanced young woman," he said. "Perhaps you give lectures on woman's suffrage, or something of that sort?"

"I have very often mounted the platform," she answered.

"In fact, I am never so happy as when addressing an immense audience. A most unbecoming thing to do, isn't it? What would the lady yonder in the horse-cloth dress and billycock hat say? Don't you think you ought to go and help her drive away the goat? She looks so frightened. She interests me deeply. I wonder whether she has written an essay on the feminine in woman. I should like to read it; it would do me so much good."

"You are at least a true woman," he said, laughing. "For I see you can be spiteful. The tuning has not driven that away."

"Ah, I had forgotten about the tuning," she answered, brightly; "but now you remind me, I have been seized with a great idea."

"Won't you tell it to me?" he asked.

"No," she answered; "I keep my great ideas for myself, and work them out in secret. And this one is particularly amusing. What fun I shall have!"

"But why keep the fun to yourself?" he said. "We all want to be amused here; we all want to be stirred up; a little fun would be a charity."

"Very well, since you wish it, you shall be stirred up," she answered; "but you must give me time to work out my great idea. I do not hurry about things, not even about my professional duties; for I have a strong feeling that it is vulgar to be always amassing riches! As I have neither a husband nor a brother to support, I have chosen less wealth, and more leisure to enjoy all the loveliness of life! So you see I take my time about everything. And to-morrow I shall catch butterflies at my leisure, and lie among the dear old pines, and work at my great idea."

"I shall catch butterflies," said her companion; "and I too shall lie among the dear old pines."

"Just as you please," she said; and at that moment the *table d'hôte* bell rang.

The little girl hastened to the bureau, and spoke rapidly in German to the cashier.

"Ach, Fraulein!" he said. "You are not really serious?"

"Yes, I am," she said. "I don't want them to know my name. It will only worry me. Say I am the young lady who tuned the piano."

She had scarcely given these directions and mounted to her room when Oswald Everard, who was much interested in his mysterious companion, came to the bureau, and asked for the name of the little lady.

"Es ist das Fraulein welches das Piano gestimmt hat," answered the man, returning with unusual quickness to his account-book.

No one spoke to the little girl at *table d'hôte*, but for all that she enjoyed her dinner, and gave her serious attention to all the courses. Being thus solidly occupied, she had not much leisure to bestow on the conversation of the other guests. Nor was it specially original; it treated of the shortcomings of the chef, the tastelessness of the soup, the toughness of the beef, and all the many failings which go to complete a mountain hotel dinner. But suddenly, so it seemed to the little girl, this time-honored talk passed into another phase; she heard the word "music" mentioned, and she became at once interested to learn what these people had to say on a subject which was dearer to her than any other.

"For my own part," said a stern-looking old man, "I have no words to describe what a gracious comfort music has been to me all my life. It is the noblest language which man may understand and speak. And I sometimes think that those who know it, or know something of it, are able at rare moments to find an answer to life's perplexing problems."

The little girl looked up from her plate. Robert Browning's words rose to her lips, but she did not give them utterance:

"God has a few of us whom He whispers in the ear;
The rest may reason, and welcome; 'tis we musicians know."

"I have lived through a long life," said another elderly man, "and I had therefore had my share of trouble; but the grief of being obliged to give up music was the grief which held me longest, of which perhaps has never left me. I still crave for the gracious pleasure of touching once more the strings of the violoncello, and hearing the dear, tender voice—singing and throbbing, and answering even to such poor skill

as mine. I still yearn to take my part in some of those, and be one of those privileged to play Beethoven's string quartets. But that will have to be in another incarnation, I think."

He glanced at his shrunken arm, and then, as though ashamed of this allusion to his own personal infirmity, he added hastily:

"But when the first pang of such a pain is over, there remains the comfort of being a listener. At first one does not think it a comfort; but as time goes on there is no resisting its magic influence. And Lowell said rightly that 'One of God's great charities is music.'"

"I did not know you were musical, Mr. Keith," said an English lady. "You have never before spoken of music."

"Perhaps not, madam," he answered. "One does not often speak of what one cares for most of all. But when I am in London I rarely miss hearing our best players."

At this point others joined in, and the various merits of eminent pianists were warmly discussed.

"What a wonderful name that little English lady has made for herself!" said the major, who was considered an authority on all subjects. "I would go anywhere to hear Miss Thyra Flowerdew. We all ought to be very proud of her. She has taken even the German musical world by storm, and they say her recitals at Paris have been brilliantly successful. I myself have heard her at New York, Leipzig, London, Berlin, and even Chicago."

The little girl stirred uneasily in her chair.

"I don't think Miss Flowerdew has ever been to Chicago," she said.

There was a dead silence. The admirer of Miss Thyra Flowerdew looked much annoyed, and twiddled his watch-chain. He had meant to say "Philadelphia," but he did not think it necessary to own his mistake.

"What impertinence!" said one of the ladies to Miss Blake. "What can she know about it? Is she not the young person who tuned the piano?"

"Perhaps she tunes Miss Thyra Flowerdew's piano!" suggested Miss Blake, in a loud whisper.

"You are right, madam," said the little girl, quietly. "I have often tuned Miss Flowerdew's piano."

There was another embarrassing silence; and then a lovely old lady, whom everyone revered, came to the rescue.

"I think her playing is simply superb," she said. "Nothing that I ever hear satisfies me so entirely. She has all the tenderness of an angel's touch."

"Listening to her," said the major, who had now recovered from his annoyance at being interrupted, "one becomes unconscious of her presence, for she is the music itself. And that is rare. It is but seldom nowadays that we are allowed to forget the personality of the player. And yet her personality is an unusual one; having once seen her, it would not be easy to forget her. I should recognize her anywhere."

As he spoke, he glanced at the little tuner, and could not help admiring her dignified composure under circumstances which might have been distressing to anyone; and when she rose with the others he followed her, and said stily:

"I regret that I was the indirect cause of putting you in an awkward position."

"It is really of no consequence," she said, brightly. "If you think I was impertinent, I ask your forgiveness. I did not mean to be officious. The words were spoken before I was aware of them."

She passed into the salon, where she found a quiet corner for herself, and read some of the newspapers. No one took the slightest notice of her; not a word was spoken to her; but when she relieved the company of her presence her impertinence was commented on.

"I am sorry that she heard what I said," remarked Miss Blake; "but she did not seem to mind. These young women who go out into the world lose the edge of their sensitiveness and femininity. I have always observed that."

"How much they are spared then!" answered someone.

Meanwhile the little girl slept soundly. She had merry dreams, and finally woke up laughing. She hurried over her breakfast, and then stood ready to go for a butterfly hunt. She looked thoroughly happy, and evidently had found, and was holding tightly, the key to life's enjoyment.

Oswald Everard was waiting on the balcony, and he reminded her that he intended to go with her.

"Come along then," she answered; "we must not lose a moment."

They caught butterflies; they picked flowers; they ran; they lingered by the wayside; they sang; they climbed, and he marvelled at her easy speed. Nothing seemed to tire her, and everything seemed to delight her—the flowers, the birds, the clouds, the grasses, and the fragrance of the pine woods.

"Is it not good to live!" she cried. "Is it not splendid to take in the scented air? Draw in as many long breaths as you can. Isn't it good? Don't you feel now as though you were ready to move mountains? I do. What a dear old nurse Nature is! How she pets us, and gives us the best of her treasures!"

Her happiness invaded Oswald Everard's soul, and he felt like a schoolboy once more, rejoicing in a fine day and his liberty, with nothing to spoil the freshness of the air, and nothing to threaten the freedom of the moment.

"Is it not good to live!" he cried. "Yes, indeed it is, if we know how to enjoy."

They had come upon some haymakers, and the little girl hastened up to help them. There she was in the midst of them, laughing and talking to the women, and helping them to pile up the hay on the shoulders of a broad-backed man, who then conveyed his burden to a pear-shaped stack. Oswald Everard watched his companion for a moment, and then, quite forgetting his dignity as an amateur tenor-singer, he too lent his aid, and did not leave off until his companion sank exhausted on the ground.

"Oh," she laughed, "what delightful work for a very short time! Come along; let us go into that brown chalet yonder and ask for some milk. I am simply parched with thirst. Thank you, but I prefer to carry my own flowers."

"What an independent little lady you are!" he said.

"It is quite necessary in our profession. I can assure you," she said, with a tone of mischief in her voice. "That reminds me that my profession is evidently not looked upon with any favor by the visitors at the hotel. I am heartbroken to think that I have not won the esteem of that lady in the billycock hat. What will she say to you for coming out with me? And what will she say of me for allowing you to come? I wonder whether she will say, 'How unfeminine!' I wish I could hear her!"

"I don't suppose you care," he said. "You seem to be a wild little bird."

"I don't care what a person of that description says," replied his companion.

"What on earth made you contradict the major at dinner last night?" he asked. "I was not at the table, but someone told me of the incident; and I felt very sorry about it. What could you know of Miss Thyra Flowerdew?"

"Well, considering that she is in my profession, of course I know something about her," said the little girl.

"Confound it all!" he said, rather rudely. "Surely there is some difference between the bellows-blower and the organist."

"Absolutely none," she answered; "merely a variation of the original theme!"

As she spoke she knocked at the door of the chalet, and asked the old dame to give them some milk. They sat in the *Stube*, and the little girl looked about, and admired the spinning wheel and the quaint chairs and the queer old jugs and the pictures on the walls.

[TO BE CONTINUED]

THE QUIET HOUR.

Members One of Another.

"It was only a sunny smile,
And little it cost in the giving;
But it scattered the night
Like morning light,
And made the day worth living.

A Living Unity.

St. Paul's statement that the members of a body
are united so closely together that "If one member
suffer, all the members suffer with it; or one member
be honored, all the members rejoice with it," gains new force
in the light of some recent scientific experiments.

feeling in the same thoughtful fashion. Are we
letting such opportunities slip by us unheeded?

"We can all do more than we have done.
And not be a whit the worse;
It never was loving that emptied the heart,
Nor giving that emptied the purse."

May I suggest one more thought, and that is the
comforting truth that death cannot break this living
unity. Dear friends who have passed out of
our sight are still with us, members of the one
body. We may not be able to speak to them, but
we can speak to Christ, and He is in closest com-
munion with them. HOPE.

An Apron Worth \$50,000.

There has recently come to light an apron—prob-
ably the most exquisite example of needlework ex-
tant—that busied the fingers of hapless Mary,
Queen of Scots, during her long imprisonment, and
served to divert her mind from the impending doom
at the block. The fallen sovereign—all hope
gone—centered her interest upon it during
the latter part of her long confinement, and
created the masterpiece of needlework. Just be-
fore her execution she secreted her prized apron
under the lining of one of her robes, which kept her
treasure safe until recently the garment was ripped
apart. Its history has since been fully authenti-
cated through letters written by the ill-starred
Queen to a friendly ambassador at Paris, who
smuggled the materials out of which it was wrought
into her dungeon. By strange chance the apron
came into the possession of an American, who has
refused \$50,000 for it, and has also declined \$5,000
for the privilege of unraveling a single stitch to
learn its secret, which is a mystery to all the ex-
perts. Its owner has consented, however, to its
reproduction in large size in the June Ladies' Home
Journal.

complete restfulness to the whole scene which is
charming. This is one of those "tireless" pictures,
if we may so name it. Imagine the rich and varied
tints in this shady meadow! Imagine the lux-
ury of lying in its friendly shelter, forgetting for
a time life's worries, whilst drinking in the
loveliness of nature, the grandeur of God's work!



DEAR CHILDREN,

You will be glad to hear that the "Lookout Regi-
ment" is still growing. Names of new recruits are:
Edith Bowman, Hilda Bowman, Frank Manners,
Lillian Robson, Minnie Dickson, Alfred Johnson,
John Graham. This competition closes at the end
of August, but I hope to announce another before
long, open to all who have enlisted. In the Adv-
ocate for June 20th you will find full directions for
this first competition. All letters should be
addressed to Cousin Dorothy, Box 92, Newcastle,
Ont. If you have sent for a badge and have not
received it, let me know. Letters sometimes go
astray, and I don't want any of you to be disap-
pointed. I hope you are all enjoying the holiday-
time, and are reasonably careful not to eat too
much green fruit. Green apples may be very nice,
although tastes differ on that point, but the medi-
cine you have to take afterwards is not so pleasant.

Talking of medicine, did you know that many of
the animals are pretty good doctors, and take medicine
when they need it, with-
out making half as much
fuss as you children often
do? When bees are not
very well they suck pieces
of dogwood, poplar, wild
cherry, or hickory, and
soon cure themselves. Dogs
have found out that grass
is a good medicine. Cattle
with the "scratches" have
been known to cover the
painful parts with a mud
poultice, and then stand
still until it has dried,
when it acts as a healing
plaster. Hunters some-
times declare that they
have seen elephants plug-
ging shot holes with mois-
tened clay. Cats will go
miles, when they are feel-
ing "under the weather,"
for a dose of catnip. A
gentleman was once out
hunting rabbits, after a
snowstorm, when he saw
his house-cat making her
way with difficulty
through the deep snow.
He wandered why she
came so far from the warm
kitchen on such a cold
day, so he followed her,
and then scratched
in the snow until she found a bunch of catnip,
which she began to eat. That cat had cer-
tainly great faith in the power of medicine.
When dogs, cats, and other animals lick their
wounds, it not only keeps them clean, but also
helps to cure the sores. Do you remember a poor
beggar, spoken of in the Bible, who had no friends
but the dogs? They came and "licked his sores."
Probably they were trying to do all they could to
help him. Sometimes an animal has a wound on its
back, out of reach; then some good Samaritan in
the shape of a fellow dog, cat or monkey will step
in and doctor it by licking the injured parts.



"SHADY MEADOW."

What Troubled Pat.

An old Irish laborer walked into the luxurious
studio of a New York artist and asked for money to
obtain a meal, as he was too weak to work. He
was given a quarter and departed. One of the
young lady art students who was present said:
"Mr. M., can't we sketch that old man?" M. ran
out and caught him, and said: "If you want to
make a dollar, come back. The young ladies want
to paint you." The Irishman hesitated, so M. re-
marked: "It's an easy way to make a dollar." "Oj
know that," was the reply, "but Oi was awonderin'
how Oi'd git th' paint off."

A letter has been received from a farmer's
daughter relating to the article, "Her Money Mak-
ers." If we remember rightly, the chief point of
discussion was whether time or means could be
found for theatres, concerts, operas, etc., and we
might mention that Wagner operas (which were
mentioned) are very expensive. —ED. HOME DEPT.

"Shady Meadow."

A wonderful charm lies in this picture. The
perspective is very fine, and we can peer
and peer into the depths of the noble trees and
imagine that the shady meadow is infinite. This
is especially noticeable to the right of the picture.
What a thoroughly contented air has that wise-
looking cow! Some of her companions are still
grazing in the distance, but she has evidently come
here for a rest, and, perhaps, to work out some
of her problem regarding matters of moment
to her. Perhaps the sly thing knew that a
certain shady spot was going to be taken,
and she had accordingly made a pretty addition to the fore-
ground. Some of the cows may have a little
of the "bee's wisdom." Well,
it is a good thing to have a touch of

She went about three
miles and then scratched
in the snow until she found a bunch of catnip,
which she began to eat. That cat had cer-
tainly great faith in the power of medicine.
When dogs, cats, and other animals lick their
wounds, it not only keeps them clean, but also
helps to cure the sores. Do you remember a poor
beggar, spoken of in the Bible, who had no friends
but the dogs? They came and "licked his sores."
Probably they were trying to do all they could to
help him. Sometimes an animal has a wound on its
back, out of reach; then some good Samaritan in
the shape of a fellow dog, cat or monkey will step
in and doctor it by licking the injured parts.

Several years ago there was a big ape in St. Louis
that had to be kept in a cage by himself, because he
was so wicked. A board partition divided the cages.
One day he discovered a crack, and soon made it
larger with his sharp teeth and strong fingers.
Then he put his paw through the opening and
caught a smaller monkey, which he severely injured.
A keeper nailed a board over the hole. One of the
nails was very long, and came right through. Soon
after, the big monkey was dashing about his den in
a fit of anger, when he ran against this nail and
scratched his shoulder pretty badly. He stopped at
once and examined the hurt with his fingers, then
he went to a corner of the cage where there was a
box of clean sawdust and pressed a handful on the
bleeding scratch. The sawdust soon stopped the
bleeding, and also covered the wound, keeping it
safe from the attacks of flies. Don't you think he
showed great cleverness in using to such good
purpose the only remedy within reach? But if he
had only been as good as he was clever, he wouldn't
have got hurt at all. Here are some verses called
"The Bee's Wisdom," which are pretty, even
though they may not be founded on fact, for I have
heard that some honey is poisonous.

Said a little wondering maiden
To a bee with honey laden.
"Bee, at all the flowers you work,
Yet in some does poison lurk."

"That I know, my little maiden,"
Said the bee with honey laden;
"But the poison I forsake,
And the honey only take."

"Cunning bee, with honey laden,
That is right," replied the maiden;
"So will I, from all I meet,
Only draw the good and sweet."

Well, I must say good-bye now, wishing you all
a very happy holiday. Your loving friend,
COUSIN DOROTHY.

Travelling Notes.

LEAVING AUSTRALIA.

Someone says, "Parting is such sweet sorrow," but it seems to us that partings are all sorrow, and we don't see exactly where the sweetness comes in, however much we may desire to see loved ones again, and feel that we are—although still so many thousands of miles away—coming home; yes, to part from Australia was a wrench. It would be utterly impossible to describe adequately all the loving kindness we have met with. No words can paint it; so let it suffice that it is a beautiful, glowing remembrance which can never die in our hearts, but will bloom and bloom again with unfading radiance.

After leaving our relatives in South Australia, we passed a few days in Melbourne and Sydney, which gave us a further view of those important places. Certainly Sydney, to us, is the most interesting of the chief cities. In some respects, the palm may be given to Melbourne, whose public buildings are, perhaps, more imposing, but the picturesque surroundings of Sydney, its magnificent harbor especially, place it first in interest and beauty. Whilst in Melbourne, we had a delightful excursion to one of those lovely hilly districts where the fern trees luxuriate over everything and make the landscape a glorious vision of beauty. We stayed the night in a lonely, but comfortable, hotel, The Hermitage, right in the mountains. Oh, but it was lovely indeed! We then returned by coach-and-four and train. When shall we ever see such ferns again as one sees in Australia?

It seems as though Sydney possesses all the requisites for an ideal home. A city of beautiful buildings and streets, with numerous advantages, and surrounded by the loveliest seaside and riverside resorts. Hawksbury River has been called "The Rhine of Australia." There are also highland residences within a few miles, which are much resorted to in the very hot seasons, and where the breezes are said to be most invigorating. Only about ten miles from Sydney is a most popular resort, "Manly," where the scenery is beautiful. It is worthy of mention that the "Australia" is not only Sydney's best hotel, but is considered by experienced travellers to be the most comfortable and luxurious, with the best service of any hotel in America or Europe! This is high praise, when one thinks of the veritable palaces which are the "Australia's" rivals on both continents. But it is not always size which tells in these matters, as old travellers well know. It is interesting to note also that the prices are absurdly low, as compared with those we are accustomed to. We quote the prices of this magnificent hotel alone (including all meals), and for convenience we quote prices in dollars and cents: single rooms from about \$3 a day, double rooms \$7 a day, suite of rooms \$10 a day. The Hotel Metropole and others of this high class are equally moderate, whilst the others, including good boarding houses, range from about 70 cents to a dollar a day, and less by the week. Remember that the first prices quoted are for hotels which in the larger cities of America would be from \$5 to \$10 or even \$20 a day. Although the difference is noticeable in all, it is chiefly so in these higher-priced hotels. After a couple of days in Sydney, we bid a final adieu, and left Australia's hospitable shores with a heavy heart. To cheer our journey home we have with us a fine young cockatoo, just learning to talk: some dear little love birds, some magpies, and a lovely pink jubah, and some of these (certainly the cockatoo) will go home with us, and make acquaintance with a rather different climate to the one in which he flies about in the forest with his particular friends, the parrots, and others. And so we sailed away in the good ship Warrimoo out of lovely Sydney harbor. Good-bye, good-bye.

Our Library Table.

"THE LIFE OF D. L. MOODY." The death of so celebrated a man has naturally brought forth several biographies of his life, which will be read with deep interest. In his special sphere, Dwight L. Moody stood out unique, enduring a truly wonderful man—of such deep earnestness of purpose, such marvellous eloquence that none could hear him and be unimpressed. The volume before us is by J. N. Hallock, D. D., and others, and gives an intimate insight into his fine character. Published by Poole Publishing Co., Toronto.

"HER LADYSHIP'S ELEPHANT." D. D. Wells. Anyone who is on the lookout for a thoroughly amusing book should not pass this by, for if it cannot cause irresistible laughter through its intensely amusing situations, we don't know of any book which *can*.

Recipes.

EGGS, CHEESE AND TOAST.

This is decidedly novel, and by no means difficult or expensive to make. Take some slices of bread, toast them, butter thickly, and cut into squares, and on each square put a quarter of a hard-boiled egg. Melt in a pan on the fire any pieces of dry, hard cheese you may have; season with a little salt, pepper, and mixed mustard. Pour this over the egg and brown before a clear fire. Serve hot. This is a good way to use up old pieces of cheese which are too hard to be eaten in the ordinary way.

RHUBARB JELLY.

Should not be made earlier than June. Cut, not break, the stalks from the roots, wash and slice, add a very little water, cook until soft, and strain through cheese-cloth, squeezing lightly. For every pint of juice allow a pound of granulated sugar. To every quart add the juice and rind of half a large lemon. Boil briskly fifteen minutes, meanwhile heating the sugar in a shallow pan in the oven. It should be very hot, but not scorched. Skim out the peel, add the sugar, stir, and when it boils briskly, turn into jelly glasses, set on a folded towel wrung from cold or warm water. All jelly should be exposed to the sun twenty-four hours, protected with mosquito netting. A thin covering of melted paraffine is a sure preventive of mold.

TOMATO JAM.

Scald, peel and slice the tomatoes. Use two pounds of sugar to one of tomatoes, boil together until well thickened, then add one tablespoonful of white ginger, the juice and peel of two lemons, for every three pounds of tomatoes. Cook until very thick, skimming off the froth as it rises. Before putting into jars remove the lemon peel.

RHUBARB.

Allow "pound for pound." Cut the stalks in rather small pieces, add the sugar, and let stand several hours, or until the juice is extracted. Turn off the liquor and boil until it thickens, put in the rhubarb and let simmer until done.

CHERRY.

Weigh the cherries before removing the stones. Stone them and boil them until the juice is nearly evaporated; add half a pound of sugar for each of fruit. Add also a pint of red currant juice for each six pounds of cherries, and half a pound of sugar for each pint of currant juice.

GOOSEBERRY CUSTARD.

Boil a quart of gooseberries in half a pint of water, add a piece of butter the size of a walnut. Boil the gooseberries quickly, and when soft, pulp them through a sieve. Add three-quarters of a pound of sugar, and the yolks of four eggs. Stir over the fire till thick, but do not allow the berries to boil. Serve in custard glasses or a glass dish.

Seizing Their Opportunities.

The manner in which American boys have grasped the opportunities that have come to them, and have made others for themselves, is interestingly told by *Success*. We select two instances and present them to our readers, with the request that they remember that opportunities wasted cannot be regained, and leave us the poorer because we have rejected them.

Only thirty-five years ago, in a sleepy little town in Maryland, a boy of twelve was hired, at a dollar and fifty cents a week, to run errands and keep the ink bottles filled in a merchant's office. The town was Cumberland, and the boy was George L. Wellington. For six years the little chap performed all the duties of the position, finding time also to practice penmanship and to study bookkeeping. The merchant happened to be a director in the Second National Bank in the same town. One day a vacancy existed in a clerkship in the bank. The merchant recommended young Wellington, "the best boy I ever had around the place," as he termed him, and he was appointed. From a clerk he became the teller at twenty-one, and soon after he was appointed treasurer of his county. On the fourth day of March, 1897, he took his seat as a United States Senator. The other Senator from Maryland, Arthur P. Gorman, congratulated his colleague warmly, and reminded him that he too had gone to work, at the age of twelve, at a salary almost equally small, not as an office boy, but as a page of the Senate in which both are now members.

"This theory about fish being brain food is all nonsense."

"Why do you say so?"

"Because the greatest number of fish are eaten by the very people who are idiots enough to sit out all day waiting for them to bite." *Brooklyn Life*.

There was a piece of cold pudding on the lunch table and mamma divided it between Willie and Elsie. Willie looked at his pudding then at his mother's empty plate.

"Mamma," he said earnestly, "I can't enjoy my pudding when you haven't any." *Take Elsie's*, *Life*.

Officer: I understand that you and Private Peterkins were calm and collected when the explosion occurred at the powder magazine.

Pat: Well, I was calm, but poor Peterkins was collected.

Puzzles.

The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c; 3rd, 50c.

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 31st of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.

1—NUMERICAL-ENIGMA.

I am composed of 22 letters.
My 19, 17, 9, 11, 16 is a guard.
My 22, 8, 6, 14 to incite to evil.
My 18, 12, 3 to fondle.
My 2, 7, 20, 5, 13 quality of enraging hate.
My 4, 15, 21 is a bird.
My whole is a good motto. FLO.

2—CHANGE OF VOWEL.

(Example: same, some.)
Her gifts were many. She could make good pies.
To mix great ones of dough was her delight.
And then her bread was always sure to rise.
Her cake was lovely and her biscuit right.
And she could write, no matter what the theme.
She ever gave one something good and new.
Her letters cheered one like a sudden gleam.
There almost seemed some magic in her two.
And she could sew; with nearly faultless taste
She'd fashion bonnets, trim and snip and THREE;
Dressmaking too; she'd never cut to waste.
Her perfect fits were beautiful to see.
And she had wit; loved for it and repartee;
With learned divines on ologies could talk.
And yet her husband sighs—how selfish men can be—
This gifted woman never darned a sock! F. L. S.

3—P.

Niebert a reworrob orn a rendle eb.
Orf anol fot essol hobt isleft dan finder.
Dan wongbirro skull het geed fo bandhuryrs. F. L. S.

4—DROP VOWEL. HIDDEN NAME SENTENCE PUZZLE.

1. G-v-m-b-l-l-b-l-f-b-r-s.
2. T-l-ndr-w-l-b-qn-ck.
3. -d-r-t-l-f-th-br-wn-m-s-b-r-d-n.
4. Y-u-r-f-l-f-v-s-s-n-y-o-s-l-y-l-d-f-x.
5. G-r-s-h-p-p-r-s-s-m-d-ly-l-d-ght-n-j-m-p-s.
6. Th-r-b-b-r-t-d-th-v-r-m-s-ry-l-w-and-thn-r-b-b-d-h-m-f-b-s-g-l-d.
7. Th-m-s-t-r-d-s-n-t-w-sh-t-m-r-y-r-pl-s-r.
8. H-sh-wr-th-l-l-fr-n-th-l-z-y-s-d-rry-wk-n-s.
9. -str-ck-th-d-g-w-th-th-fr-sh-v-l-l-n.

Each sentence contains the name of a girl.
Take a word from each sentence and form a sentence containing all the letters of the alphabet. IKE ICELE.

5—OBLIQUE.

(Reads the same down and across.)
1, a letter; 2, in the E. Indies, an umbrella; 3, an E. Indian lady of high rank; 4, the south-east wind; 5, in Hindustan, a Mohammedan learned in the law; 6, sluggishness; 7, rubbish of mines; 8, in Arabia, a wise man; 9, a fruit; 10, to attack as a crowd; 11, a letter. ROLLY.

6—CROSSWORD.

In paid, but not in borrow,
" wait, " sorrow,
" aid, " help,
" bark, " yelp,
" day, " night,
" peace, " flight,
" bake, " cook,
" water, " brook,
" rest, " sleep,
" high, " deep.

The whole, in history, gives a name
Where the Beaver's Sons achieved great fame.
NOTA BENE.

7—BEHEADINGS.

Behead to be indebted, and leave a pronoun.
Behead a river, and leave a useless plant.
Behead a tree, and leave a wind instrument.
Behead a sentence, and leave a person under a guardian.
Behead to be destitute, and leave an insect.
Behead improperly, and leave a young woman.
The beheaded letters will form a city in Canada. FLO.

Answers to June 20th Puzzles.

- 1 The dictionary.
- 2
c
h
a
s
e
c
h
a
m
p
a
c
e
3—As sets,
a
s
p
e
r
e
a
r
e
- 4 Patent.
- 5 Pink, a part, faint, dead, stamp—Paris.
- 6 Life.
- 7 Tides reversed it.

SOLVERS TO JUNE 20TH PUZZLES.

"Diana," Lizzie Conner, "Ike Icele," Sila Jackson, "Flo," M. R. G.

ADDITIONAL SOLVERS TO JUNE 5TH PUZZLES.

M. R. G., "Ike Icele," Sartor, Lizzie Conner, Sila Jackson.

COUSINLY CHAT.

Lizzie C.: I think most, if not all, the puzzlers are like your self in not knowing any of the cousins. You have done well this quarter.

Nota Bene: You did not comply with all our rules the first time you sent puzzles. We will use all that are suitable for our column.

Sila J.: You were very close to the winners, and would perhaps have secured a prize had you not missed the first issue of the quarter. You have still a chance for the special prize, which will soon be awarded.

The prizes for April, May and June are awarded as follows:

For original puzzles—1st and 2nd, Howard Mills (Rolly), Malakoff, Ont.; and G. J. McCormac (Ike Icele), St. George's, P. E. I. equal; 3rd to E. L. Sawyer, Toronto, Ont.

For answers—1st to M. R. Griffith, London; 2nd to Miss Lizzie Conner, Hyde Park, Ont.; and 3rd to Miss Helen McQueen (Diana), Salem P. O., Ont.

Sila Jackson and "Ike Icele" were the closest competitors in this contest. Those trying for the special prize should be particular to send answers to both the July numbers, as this issue closes that contest. Get your work in early.

ADA ARMAND.

SECOND ANNUAL SALE

HIGH-CLASS SHORTHORNS

FROM THE TROUT CREEK HERD OF W. D. FLATT, HAMILTON, ONT.,

DEXTER PARK, UNION STOCK YARDS, CHICAGO,

Tuesday, August 7th, 1900.

60 IMPORTED AND HOME-BRED SCOTCH SHORTHORNS.

Including 20 imported young cows in calf or with calves at foot; 20 imported heifers, served by noted bulls in Britain, or by high-class imported bulls in Canada; 6 choice imported bulls, one to three years old; 5 imported bull calves; 2 home-bred bull calves; 2 first-prize Canadian-bred two-year-old bulls, of first-class Scotch families; 10 choice prize-winning Canadian-bred cows and heifers. This is admittedly the best consignment of high-class Shorthorns ever offered at public sale in America, and comprises

Show Bulls and Show Cows

that will be sure winners, and are regular breeders. Also heifers and bull calves FIT TO WIN in first-class company. Cattle purchased at this sale will return to Canada on the tuberculin test which has been made to admit them into the U. S. Catalogues will be sent on application to

Col. F. M. Woods, W. D. Flatt, AUCTIONEER, HAMILTON, ONT.

GOSSIP.

W. D. FLATT'S GREAT SHORTHORN SALE. A great event is foreshadowed by the announcement of the forthcoming disposal of 60 head of valuable imported and home-bred Shorthorns at Chicago, on the 7th of August. Inasmuch as the collection comprises undoubtedly the best collection of Shorthorns ever presented at public sale on the American continent, and the offering is made at a time when cattle of this character are wanted as never before, and at the place where of all others the stockmen of America can most conveniently congregate. The limits of space make extended reference to individual animals in the list impracticable, and condensation imperative, so that we can in these lines make but brief mention of a few of what appeared to us, on a hurried inspection, to be the most outstanding numbers in this remarkable consignment.

Beginning with the bulls, and taking them in the order of age, we find at the head of the list imported Golden Fame, of the favorite Kinellar Golden Drop family in his 3-year-old form, having been the chief stock bull in service in the Trout Creek herd for the last two years. The pick of a choice importation, and the son of one of the best cows in Aberdeenshire, having for his sire the magnificent prize bull at Perth, the second highest priced bull of his year at the sales, and a son of the great Cruickshank show bull and sire, Dauntless, Golden Fame's propensity as a sire, as seen in the uniform excellence of the character of his calves, comes to him honestly in the line of individual excellence by inheritance. Sound, smooth and straight in all his lines, evenly covered with a good quality of flesh, standing squarely on legs of the best texture, and taking also into account his success as a tested sire, it is doubtful if he could be duplicated in Britain to-day for less than \$5,000, and we can well believe it is only the desire to make the offering of bulls a strong one in the interest of the breed that has induced Mr. Flatt to include him in the sale. The massive roan home-bred 2-year-old bulls, Royal Banner and Royal Standard, sired by Judge of the 1st prize of imported Royal Sailor, from F. M. Willard, and of a Kinellar Mink dam, a first-prize imported sire, a yearling, and champion point at the Windsor Exhibition in 1899, were accompanied at the three principal shows in Canada by their sire, standing first and second in 1897 and 1898, and were the grandly covered cows, and their daughters, of the greatest quality of any we have seen, and which will undoubtedly be a valuable addition to any herd. The massive roan home-bred 2-year-old bulls, Royal Banner and Royal Standard, sired by Judge of the 1st prize of imported Royal Sailor, from F. M. Willard, and of a Kinellar Mink dam, a first-prize imported sire, a yearling, and champion point at the Windsor Exhibition in 1899, were accompanied at the three principal shows in Canada by their sire, standing first and second in 1897 and 1898, and were the grandly covered cows, and their daughters, of the greatest quality of any we have seen, and which will undoubtedly be a valuable addition to any herd.

and walking like a winner. A number of the heifers in the importation were served by this bull in quarantine and since, which will add in no small measure to their value. A chip of the old block is J. I. Marengo, a roan 10-months son of the Royal champion Marengo, undoubtedly the greatest in Great Britain to-day as a show bull and sire, having a show record of 7 championships and over 30 first prizes. The dam of this youngster is pronounced the best breeding cow in the Ruddington herd of Mr. Philo L. Mills, and is of Mr. Bruce's favorite Mayflower family, from which has come a host of winners. He has length, depth and width, combined with the best quality of flesh and hair, and proclaiming himself a show bull from the word go. Another magnificent young bull catalogued with his dam is Magnolia, a roan 9-months son of Solferino, one of Marengo's best sons, and out of Roan Bess, of the Upper Mill Bridesmaids, by Mr. Duthie's great Star of Morning, a Royal and Highland Society winner, whose blood carries weight wherever found, producing wide-ribbed, thick-fleshed cattle like himself. This is one of the best bull calves, if not the very best, that has been imported in recent years, and his dam, a first-prize winner in Scotland, sold for 110 guineas when a yearling, is one of the very best in this great importation. Our King, a red-roan bull calf of November last, in catalogue with his dam, is another capital son of Solferino, and of Our Queen, by Denmark, winner of many prizes, including 1st and championship over all breeds at Inverurie in 1896. Sharon Duke 10th is a handsome red 10-months-old son of Lordly Archer, half-brother to Marengo and Brave Archer, recently imported by Mr. Kelly, of Ohio, at a cost of \$8,000. The dam of this bull is a Renick Rose of Sharon, bred from one of the fine cows of that tribe taken to England some years ago, and the Scotch cross has evidently nicked well, as this is a bull of excellent type and quality. British Prince, a red 6-months calf, is a promising son of Proud Star, bred by Duthie and sired by Star of Morning, his dam being a Miss Ramsden, by Masterpiece, of the Missie family, by the Sittytion-bred Athabasca. Still another red B. C. of fine quality and promise is Cairnmore, coupled with his dam in the list, a 4-months son of the Cruickshank bull, Clifton, of the Cicerly tribe, and out of Queen Mary, a first-prize and sweepstake winner at the Royal Northern, by Clan Alpine, a Sittytion Clipper. Of strong, substantial and thrifty bulls by Scotch-bred sires, and from deep-milking dams, are the red yearling Holywell Victor, bred by Sanders-Simco, St. Ives, and sired by Count Valiant, a highly bred Cruickshank Victoria, and his dam, the Countess, a big, suppy 3-months calf by the same sire, Nonpareil bull, imp. Royal Member of the Kinellar.

of the same family, selected from the same herd, that will doubtless divide the crowd at least equally in the contest for precedence. She is red, a young but a big 2-year-old, having just passed her second birthday in this month, big, but with not a suspicion of coarseness, sweet-faced and fine of head and neck, and smooth as a peach all over, but with breadth of back and fullness of girth in amazing degree for so young a heifer. She is indeed a marvel. She was in training for the Royal this year and competed in judges' who saw the winners say she would have won hands down, but Mr. Rothschild's steward was worried into pricing her, and she was claimed for consignment to Canada. What makes her more valuable is that she is believed to be safe in calf to the Duthie-bred President, who defeated Bapton Emperor at Oxford last year, a great honor, and she comes from a deep-milking and prize-winning dam, her mother having defeated Bructer Queen, the first-prize cow at Windsor last year. Cornelia, a red 2-year-old, bred by Gordon of Newton, at Cruickshank Clipper, by the Highland champion, Corner Stone, dam by a son of the Royal champion Mario, by Field Marshall, granddam by Star of Morning, and in calf to the Royal champion, Marengo, and due the day after the sale, reads like a romance, but it is a living reality, and she is one of the best individuals in the outfit. Mr. Cruickshank's closest friends claim that the Cruickshank's are his favorite family, and this one is true to the type. Fair Duchess, a roan 2-year-old, bred by Fletcher of Rosehaugh, from one of Lord Lovat's favorites, of the Sittytion Broadhook's tribe, which produced the Loch Champion, one of Mr. Duthie's favorite stock bulls, bought at \$1,000, is "all wool and a yard wide." She has size, substance and quality in close combination, and is in calf to a son of Marengo. Her sire, Watchfire, was a Highland Society winner, while her grandsire was Merry Archer, by Scottish Archer, and six of the ten highest priced bulls at the Scotch spring sales were of her family. Matchless 18th, the sweepstakes female of Canada's leading shows last year, is only 4 years old, has been a winner from calfhood, and is nursing her second calf, a red 3-months heifer. This champion is a Cruickshank Matchless, by the Marr-bred Royal Sailor, by the Spicey bull, Sea King, and his dam by William of Orange. She is big enough, and as smooth as they are made, has nice cow character, is a deep milker, and has a look and a way of usefulness that should win favor wherever she goes. The Duke of Richmond's Lily of the Valley 17th is number 16 in the catalogue (arranged alphabetically), but ranks close up among the best individually. She is a son-sie roan 2-year-old, with a lovely head and neck, with perfect cutting, shoulder plates, a grand back and quarters, deep-ribbed, and full of the best quality of flesh. She is a daughter of the Marr Missie bull, Mungrave, by the Sittytion Clipper Criterion, and is in calf to Primate of Delmeny, one of the choicest bulls in the importation. Roan Bess, a 3-year-old, bred by Gordon of Newton, a daughter of Star of Morning, and her dam by Prince of Fashion, is one of the Upper Mill Bridesmaids, was a first-prize winner in Scotland, and sold for 110 guineas as a yearling at the Newton sale. For quality of flesh and hair, covering of back, and breedly character, she excels, while as a breeder she has made a grand success in producing the elegant roan bull calf, Magnolia, dropped in October, of which a Scottish critic says: "He is regarded as quite an exceptional calf, having well-laid shoulders, great width of back and loin, rare under line, and wonderful symmetry set off to great advantage by his beautiful covering of hair." Queen Mary, a roan 3-year-old, three times a first-prize winner in Scotland, and twice a cup winner as best Shorthorn in the show, is a daughter of the Sittytion Clipper bull, Clan Alpine, selected to head the Campbell herd at Kinellar. She is low down, broad topped, and has the quality and character of the best of the roan bull calf in Canada bred by Clifton, a Sittytion Clipper, and a show bull, bred by Marengo, and her dam a daughter of the Primate of Delmeny as a son of the Earl of Rosebery, and full in all parts, and of a fine character. Collingwood, a roan 2-year-old, bred by Nonpareil

Lord Ruff, now in service at Trout Creek, a capital son of the celebrated bull, Cap-a-Pie, of the Augusta family, a prizewinner at the Royal Northern, champion at Udney in 1897, and the sire of many good things. The dam of Lord Ruff is a Kinellar Roan Bessie of remarkable scale, a deep milker, and a grand breeder. The catalogue comprises representatives of nearly all the favorite families, and daughters of over a score of the most noted Scotch-bred sires of Britain and Canada, including Marengo, Star of Morning (four of whose daughters are listed), Pride of Morning, Morning Star, Rising Star, Merry Mason, and Crabstone, by William of Orange; Star of Lancaster, by Star of Morning; Touchstone, Corner Stone, and his son, Sittytion Secret; Nonpareil Victor, Lordly Archer, Sittytion Seal, Prince of Fashion, Mungrave, Royal Sailor, and Golden Fame, a galaxy of stock sires unequalled in the universe. Prominent in the list of imported cows and heifers, of which special mention may be made, is the charming roan 4-year-old Mayflower 4th, bred by Mr. Turner, of Portsoy, Scotland, and purchased from Mr. Leopold de Rothschild, of Ascot, England, winner of 7 first prizes at the leading shows in Britain, including first at the Royal Show as a 2-year-old and as a 3-year-old. She was sired by Resident by a son of Scottish Archer, out of a Princess Royal by William of Orange, and her dam was also by a son of William of Orange, out of Bright Belle, who was the dam of several noted bulls, including Brave Archer, recently sold for \$6,000. If Mayflower 4th is not the flower of the flock, she is right in the front rank, and we are free to confess we would a little rather take her for better, for worse, as a show cow and a breeder, than any other of the score and a half of show things in the list. Her symmetry of form, sweetness of character, spring of ribs, thickness and quality of flesh, breedly look, true outline, and general make-up, leave nothing to long for, and then she is making such a record as a breeder. She is nursing now her own handsome 6-months heifer calf, by Magistrate, a son of Deane Willis' famous breeding bull, Count Lavender, and of Moon Daisy, by Captain of the Guard, and is in fit condition to go into the showing and win, and it is a way she has, for her last year's calf, which she also nursed while she herself was winning at the Royal, is winning first prizes at prominent shows in Britain this year. But despite all her charms there is another charmer, namely Mayflower 5th, of the same family, selected from the same herd, that will doubtless divide the crowd at least equally in the contest for precedence. She is red, a young but a big 2-year-old, having just passed her second birthday in this month, big, but with not a suspicion of coarseness, sweet-faced and fine of head and neck, and smooth as a peach all over, but with breadth of back and fullness of girth in amazing degree for so young a heifer. She is indeed a marvel. She was in training for the Royal this year and competed in judges' who saw the winners say she would have won hands down, but Mr. Rothschild's steward was worried into pricing her, and she was claimed for consignment to Canada. What makes her more valuable is that she is believed to be safe in calf to the Duthie-bred President, who defeated Bapton Emperor at Oxford last year, a great honor, and she comes from a deep-milking and prize-winning dam, her mother having defeated Bructer Queen, the first-prize cow at Windsor last year. 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Victor (sire of Messrs. Cargill's \$1,500 bull, Golden Drop Victor), is one of the very best of the Upper Mill Missies that has ever come to America. She is blocky, smooth, well filled in her quarters, and does credit to the family which produced Marengo and many other noted sires and prizewinners. Coronet, a beautiful roan yearling, bred at Newton, is a daughter of the champion Cornerstone, for whom Mr. Gordon refused \$5,000, and her dam is a daughter of Mario 2nd, by the Royal champion, Marengo. She is such a heifer as is difficult to buy in Britain, and like most in the catalogue, was intended for a place in the herd to produce more of her kind. Delmeny Nonpareil, bred by Earl of Rosebery, a handsome roan 2-year-old of the favorite Cruickshank Nonpareil family, by Sittytion Seal, Sittytion Secret, bred by Mr. Duthie, and sired by the Bravely Bud bull, Roan Robin, is rich in the blood of the best of the Kinellar and Cruickshank bulls, and is smooth, level and well-balanced, and in calf to Primate of Delmeny. From the choice herd of Earl of Rosebery also comes Gladys, a comely red 4-year-old daughter of Mr. Duthie's favorite cow, Glad Welcome, of the Wimple tribe, and by Prince of Fashion by Scottish Archer. She is of fine type and quality, and has a handsome red bull calf by Primate of Delmeny, and is again in calf to Lord Ruff. A quartette of Canadians which well claim admiration are: Mildred 14, Dora of Stamford, Ury, and Queen of the Louans. The first two are well-known Toronto winners, by Royal Sailor, the sire of the sweepstakes cow, Matchless 18th, and Mildred 14th has more than once won over the champion, and is considered by many good judges the better of the two. Queen of the Louans, by the grandly bred Cruickshank Victoria bull, Golden Victor, won first without a struggle at Toronto last year, in the strongest class of calves under a year ever seen in Canada, which virtually means the best ever seen on this continent. She is perfect in symmetry, sweet in character, fine in quality, and simply irresistible in her charming personality. Ury is a beautiful red 2-year-old representative of the Kinellar tribe of that name and a daughter of Indian Wave, a son of the Sittytion Victoria bull, Indian Chief, a most successful sire of prizewinners. A typical trio of red Cruickshank Clippers is the grand Gordon-bred Red Ruth, a Scottish prizewinner, by Star of Morning, and her daughters, Naomi's Ruth, by Touchstone (sire of the champion Cornerstone), and Naomi's Sister, by the Royal champion, Marengo. Still another strikingly useful young Gordon-bred cow is the red-roan 3-year-old Rosalind, by Star of Morning, and her dam by the Marr-bred Monticello, bred on similar lines with Marengo. She is thick-fleshed, and of the approved type. Space forbids further reference to the scores of good things unnamed in this necessarily partial review, among which are many highly meritorious matrons, all in their prime, and breeding regularly, as well as a lot of excellent young things of similar breeding to those mentioned.

Mr. Flatt is certainly to be congratulated on this splendid collection of cattle, which represent a heavy investment, and which we only wish were all remaining in Canada, but since they are to be submitted to the salesman's hammer, we hope the breeders of the Dominion may claim a share of them by putting in some last bids.

HORSEMEN! THE ONLY GENUINE IS COMBAULT'S CAUSTIC BALSAM. GENUINE WITHOUT THE SIGNATURE OF THE LAWRENCE-WILLIAMS CO. The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC or FRIING. Impossible to produce scurf or Itch. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

CONTAGIOUS ABORTION HAS BEEN CURED BY WEST'S FLUID In several of the finest herds of prize stock in the country; but as it would injure the reputation of the breeders, they will not give written testimonials. These statements are facts. Write for circular on this disease, specially prepared by a V. S. Headquarters for "STANDARD" Sheep Dip. Manufacturers: The West Chemical Company, Agents Wanted, in TORONTO, ONT. Dalgety Bros. 463 King Street, London, Can. Have come over to the homeland by steamer, Tritonia, which sails on 12th inst. for a fresh importation of CLYDESDALES, SHIRES, AND PERCHERONS. Will return about September, with 2000 stallions, all ages. Watch for their later ads.

Canadian War Painting.

How to Obtain a Reproduction of A. H. Hider's Masterpiece, The Surrender of Commandant Botha to the Canadian Mounted Infantry.

The splendid services performed in South Africa by the Canadians have won the world's admiration, and demonstrated that in the sons of the Dominion the Empire has soldiers as fine as ever marched under Marlborough or Wellington.

None of the regiments in South Africa has won more fame than have the contingents from Canada. The first contingent, originally a body of more than one thousand men, but sadly reduced in numbers since it has been in the field, has become a veteran battalion, and its achievements have merited the highest praise from Lord Roberts and from all. The Mounted Infantry and the Artillery from Canada have proved themselves no less efficient in every action in which they have been engaged, for Canada is a country which produces men of the finest type for service in the field.

At Paardeberg, where the gallant Major Arnold met death unflinchingly, Canadians were placed by Lord Roberts in the post of honor side by side with the famous Gordon Highlanders, and covered themselves with glory, being nearest the Boers when General Cronje surrendered. In the relief of Mafeking the Canadian Artillery by a forced march won its way gloriously to the front, under the eyes of all the world. At Kroonstadt, in the advance from Bloemfontein, at Heilbron, at Pretoria, at Sand River, everywhere that they have had fighting to do, the Canadian Infantry, the Canadian Mounted Infantry, Strathcona's Horse, and the Canadian Artillery—all our brave boys have acquitted themselves like heroes. Many of those gallant hearts that beat so high when the cheering thousands bade them Godspeed as they sailed from Canada's shores now lie still forever in lonely graves on the other side of the world under African skies. Their memories will ever be cherished among the most precious national heritages of the people of Canada. When the survivors return and are welcomed home with joyous acclaim, the unreturning ones will be silently present too, and their silent presence will be an influence that will never cease to be felt in the national life as a prompting to the highest patriotism and the most self-sacrificing devotion to the preservation of those British liberties which make our country a land worth living in and dying for.

To every Canadian heart, to every Canadian home, the deeds of our brave soldiers speak with an irresistible thrill of patriotism and pride. Where could the painter's brush find more stirring subjects? Knowing how strong the general demand is for a worthy picture of some characteristic feat of the Canadians in South Africa, the Manitoba *Free Press* has secured the painting by A. H. Hider, of the surrender of Commandant Botha and his forces to the Canadian Mounted Infantry. Reproductions of this magnificent work of art, a picture 18x24 inches in size, carefully made in fifteen (15) colors, by a process which gives all the values of the original with wonderful fidelity, are offered as a premium by the *Free Press*, Winnipeg. This reproduction is a work of art of fine, high quality, which is only to be seen to command instant admiration and hold attention. The canvas is filled with action, and a great sweep of rolling veldt is brought within its limits, so admirably has the painter rendered the distance. It is on the figures of Commandant Botha and the officer of the Canadian Mounted Infantry and his orderlies, in the foreground, that the attention of the beholder is centered. Military men have studied the painting minutely and pronounced it faultless in every detail. Worthy of special note are the horses, which are magnificently painted, and will do much to enhance the already widespread fame of Mr. Hider as a painter of horses. Aside altogether from its historic value and its patriotic interest, it is a masterpiece which no lover of art will be willing to be without, and which every one who secures will doubtless prize.

Any person sending 50 cents to the *Free Press*, Winnipeg, will receive the *Free Press* from date to the end of 1900 and a copy of this splendid picture. The picture will be mailed, carefully tubed, postage paid. To the first thousand who take advantage of this offer will be sent, in addition, a map of South Africa, 30x22 inches in size. This map is sold in the bookstores in Winnipeg for 40 cents. It is one of the most comprehensive and best maps published, and should be found in every Canadian home. On it may be traced the movements of our troops, their weary, though glorious, marches may be followed, the points at which they battled and won renown marked. The *Free Press* unhesitatingly makes the claim that a more liberal offer has never been made by a Canadian publication. Figure the value of the offer for yourself.

Weekly *Free Press* from date to end of 1900 \$1.00
Map of South Africa 40
Reproduction of A. H. Hider's painting, Surrender of Commandant Botha to Canadian Mounted Infantry 4.00

Total \$5.40

The three will be sent postage prepaid to any address in Canada for 50 cents.

The *Free Press* controls the sale of this picture; it will be ready for delivery almost immediately; the supply of maps is limited. To the first thousand ordering the *Free Press* the picture and the map will be sent. If you are not amongst the first thousand you will receive the *Free Press* and the picture. Send your order at once if you wish to be amongst the first thousand.

GOSSIP.

MR. S. DYMENT'S SHORTHORNS AT ALLANDALE, ONT.

Within a stone's throw of the village of Allandale may be seen the extensive stock farms of Mr. S. Dymont, whose enterprise has led him into the purchase of a few select Shorthorns, and laying the foundation of what promises to become a herd of considerable importance within the near future. Mr. Dymont is on the alert for choicely-bred females whose conformation will merit his approval. When in that vicinity in June, we were accompanied by the proprietor and his herdsman over the various pasture plots, and viewed the stock on hand, and we must confess that Mr. Dymont is exercising considerable judgment in his selections and breeding operations at the very outset. A few months ago the stock bull, Aberdeen Jock 21563, by Aberdeen (imp.), and out of Lady Mara, by imp. Vice Consul (and tracing to Maid of Honor, by imp. Lord York), was selected to head the herd. Aberdeen Jock is a massive red bull 4 years old, that was selected from the herd of John Miller & Son when a yearling, and employed by Mr. Bell, giving an opportunity of seeing his stock, which was very satisfactory. At our visit we found him in the grass plot near the buildings with the cows, and for an animal of his weight it would be hard to equal him in activity. He carries a wealth of natural flesh which can only be bred there, is straight in his lines, has well-developed loin and quarters, and is supported on an excellent set of underpinnings; his head and horns denote character of a high order. Mr. Dymont has a good bull in this animal, and we wish him success with him. Upon examining pedigrees of the females, we found many lines of breeding, and as space will not allow mention of each, we must confine ourselves to a few. The 3-year-old Ora Duchess, by Indian Duke, a son of the noted imp. Indian Chief, and out of Dorothy by Rufus, and running to the famous Wildame tribe, is a young cow of great quality and development. She has a broad, level back, deep, well-sprung ribs, and, for one of her size, is remarkably free from coarseness. She has a splendid young bull calf at foot by Sir Adolphe, a son of imp. Albert Victor, and will be bred to Aberdeen Jock. We also noted a smooth, useful type of cow, Bonnie Gill, by Rufus, and out of Bonnie Brae 19979, and her red daughter by Indian Duke, and in them we saw marked evidence of dairying qualities; Lorna Doone, by Albert Victor, by Gravesend, dam Valkyrie 29102, her sire tracing to Snell's imp. Golden Drop cow, which fetched the handsome sum of \$1,225, and her daughter \$1,000, under the hammer. Mr. Dymont has four of this strain, and there are few if any better sorts. They are a uniformly well made, prolific tribe, with a good quality of flesh and fine breed character. A few of Aberdeen Jock's youngsters of either sex are on hand, and one cannot but be impressed by their uniformity in character and conformation. One extra choice bull calf will undoubtedly be heard from in public at some future period, if he does not make his bow in public as a calf this year. Upwards of 25 head are already on hand, with more to follow, as many of the cows are due to calve this autumn, and a strong herd will be maintained on the farm.

Free Admission



Can be obtained by purchasing (\$5) five dollars worth of our goods, as follows:

BRANDON EXHIBITION

- 10 pounds Empress Pure Indian Tea (or 10 pounds 35c. Japan, or 10 pounds 35c. Mixed Tea), \$3.50; 5-pound tin Crushed Coffee, \$1.25; 1-pound tin Gold Label Baking Powder, 25c.—Total, \$5.00.
- 10 pounds Tea as above, \$3.50; 2 tins Gold Label Baking Powder, 50c.; 2 eight ounce bottles Lemon or Vanilla Extracts for \$1.00.—Total, \$5.00.
- 10 pounds of Tea as above, \$3.50; four tins of Gold Label Baking Powder, \$1.00; balance of \$5.00 in Coffee or Flavoring Extracts.
- 10 pounds of Tea as above, \$3.50, and balance of \$5.00 in Gold Label Baking Powder, Coffee, Flavoring Extracts, Seeded Raisins, and Cleaned Currants, assorted as you like.
- 15 pounds of Empress Pure Indian Tea (at 35c. a pound); 15 pounds 35c. Japan Tea, or 15 pounds 35c. Mixed Tea for \$5.25. If you prefer, take 15 pounds of 10c. Tea for \$6.00; or 15 pounds of In-dia Black Tea for \$7.50.

These goods are all special brands put up under our own labels, and we make this offer for the purpose of introducing our goods, and because we know they will give perfect satisfaction.

The articles will be put together in one or more strong parcels if desired, so they can be carried conveniently, and will be delivered free to any place in the city. Tickets will be good for admission to the Fair, either during the day or evening, as you prefer.

In buying these goods you do so on the understanding that if you are not satisfied that you have saved 5c. to 25c. per pound on the Tea, according to the price, or if the goods are not perfectly satisfactory in every way, they can be returned at our expense, and your money will be refunded immediately.

Write, mentioning this paper, and we will mail you our catalogue, quoting prices on good groceries, FREIGHT PAID TO YOUR STATION.

SMITH & BURTON,
GROCERIES AND CROCKERY. BRANDON, MAN.

THE STEVENS MANUFACTURING CO'Y,

Manufacturers of

The Stevens Portable and Traction Engines and Separators

ALSO

ERTEL VICTOR HAY PRESSES, STEVENS WAGONS, CHALLENGE SLEIGHS.

FOR FURTHER INFORMATION CALL OR WRITE TO

THE STEVENS MANUFACTURING CO.

124 Princess Street, Winnipeg, Man. P. O. BOX 657.

IT PAYS TO

Advertise in the Farmer's Advocate

Winnipeg Business College,

CORNER FORT ST. AND PORTAGE AVE.,

Winnipeg, Man.

The only complete Business School in Western Canada.

Premises

Were specially designed and fitted up for Business College work. The lighting, heating and sanitary arrangements are the very best. Everything is modern throughout. The location, cor. Fors St. and Portage Ave., is directly opposite the Queen's Hotel, one block from cor. Portage Ave. and Main St., the business center of the city.

Teachers and Instructors :

Teachers and instructors — nine employed in the different departments; each one a specialist in his work.

Courses of Study :

BUSINESS COURSE.
Bookkeeping, Bus. Arithmetic, Commercial Law, Mensuration, Correspondence, Business Penmanship, Spelling, Practical Grammar, Business Forms, Business Practice and Banking.

SHORTHAND AND TYPEWRITING COURSE.

Pitman's Shorthand, Typewriting, Spelling, Correspondence, Practical Grammar, Punctuation, Penmanship, Letter Filing, Letter Copying, and General Office Work.

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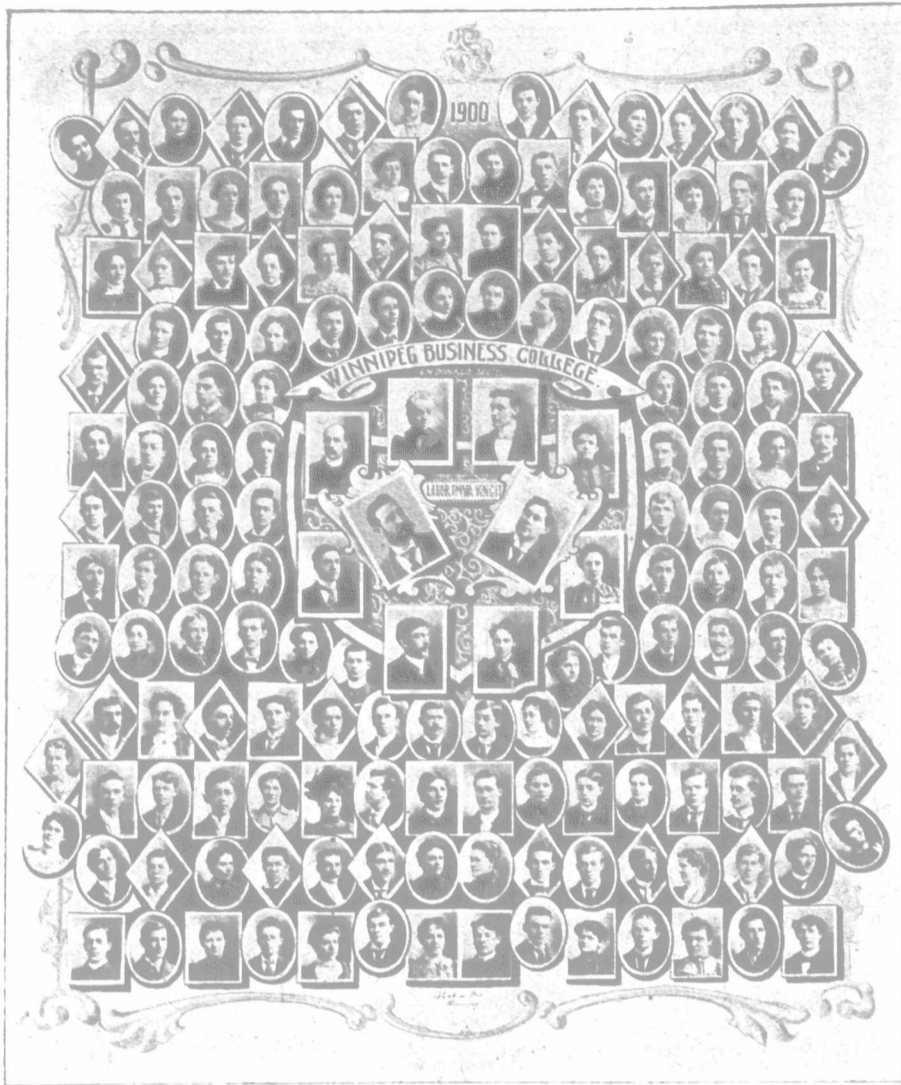
Britons Remember, best patriotic song, 40 cts. We keep the largest and best assorted stock of sheet music and music teachers' supplies in Western Canada. Our prices are the lowest, and our **Musical Instruments** are thoroughly reliable. Send for one of our \$7.00 talking machines, the Columbia Graphophone. **BARROWCLOUGH & CO.,** 470 Main Street, Winnipeg, Man. Mention this paper.

NOTICES.

The *Free Press*, Winnipeg, are making a unique subscription offer to those taking the *Weekly Free Press* from date to the end of 1900. The offer, as explained in another column, is claimed by the *Free Press* is the most liberal ever made by a Canadian publisher.

The Cutting of Hay and Straw.

The practice of cutting hay and straw for feeding purposes, and the latter for manure, has not had the attention which it deserves from the farmers of Manitoba and the Northwest Territories. Many farmers of the older Provinces deem this an absolute necessity, but the abundance of feed naturally keeps the Western farmer from considering any means of economizing, or improving its condition as feed. In some sections the Western farmers are getting pretty well into the stock-raising business, which without doubt is the safest and in the end the most profitable way of farming, and the only kind which will stand the test of time, as the land, instead of being impoverished, as is the case in grain-growing alone, will become richer and more valuable than at present. Straw and hay cut together make excellent feed for stock in winter, and the necessity of using straw as feed will be more apparent this year than usual, owing to the short crop of hay. Many consider a mixture of straw and hay cut together better feed than uncut hay, as the cut material is in a better state for mastication, and the amount of hay saved by this means is apparent to all. Straw cut and left in heaps will rot readily in about a year's time from the action of the weather, and make excellent manure. Cut straw also makes excellent bedding for buildings, which are necessary to stock on the farm. A well built with cut straw, and a roof of cut straw, will not only keep the stock warm and comfortable, it will also keep the buildings dry and comfortable. The amount of straw saved by this means is apparent to all. Straw cut and left in heaps will rot readily in about a year's time from the action of the weather, and make excellent manure. Cut straw also makes excellent bedding for buildings, which are necessary to stock on the farm. A well built with cut straw, and a roof of cut straw, will not only keep the stock warm and comfortable, it will also keep the buildings dry and comfortable. The amount of straw saved by this means is apparent to all.



THE MANAGEMENT, FACULTY AND PART OF THE STUDENTS OF WINNIPEG BUSINESS COLLEGE, WINTER TERM OF 1900.

Our Record from 1st September, 1899, to 1st June, 1900—9 Months.

We placed in business offices in Winnipeg and Western towns, direct through our office, 140 of our students. This does not include those of our students who had positions promised them or those who through their own efforts or that of their friends secured situations.

CIRCULARS GIVING FULL INFORMATION FREE.

G. W. DONALD, Secretary.

ALL LIVE DEALERS should make it a point to see the Armstrong Exhibit of up-to-date Carriages, and their new Cutter Styles for the coming Winter, in Carriage Building, Exhibition Grounds, Winnipeg, during the Fair.

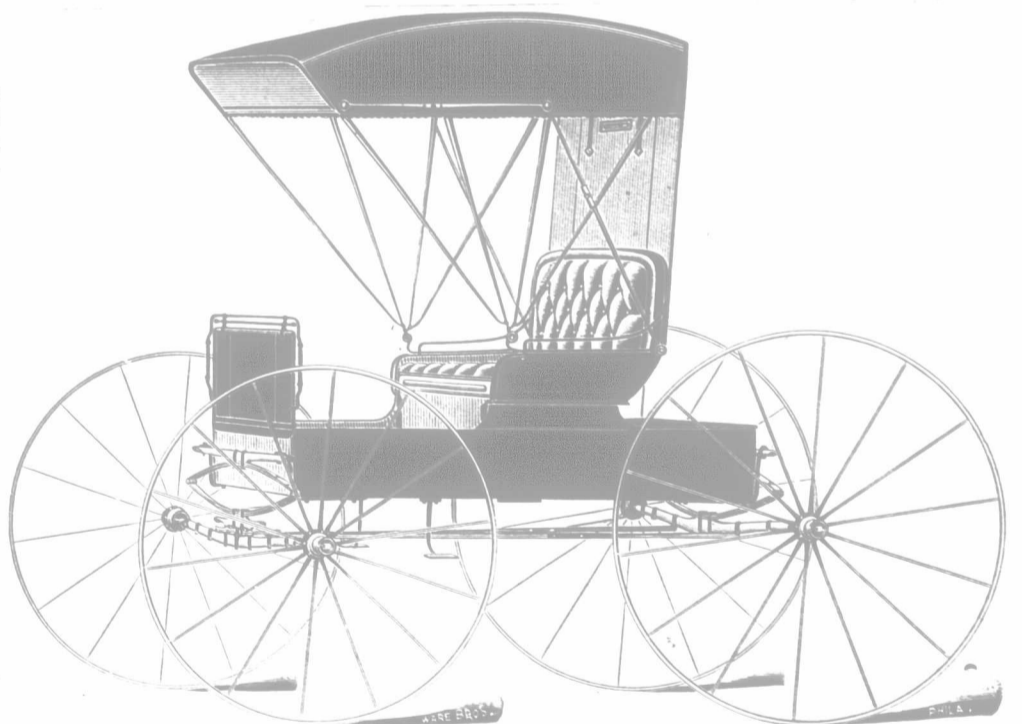
Inspect our Rubber-Tired Buggies, with Thousand-Mile Axles, Rubber-Head Springs, and all latest improvements.

J. B. Armstrong Mfg. Co.,

LIMITED

(The Guelph Carriage Goods Co.),

GUELPH, CANADA.



GOSSIP.

Prof. Roberts, of Cornell University, publishes some figures which go to show that the fertilizing value of the manure made by a sheep in a year is \$3.17.

Lord Inshbery's advent into Clydesdale breeding has been hailed with much acclaim in North Britain, as things are rarely done by halves when the primrose colors have to be carried either on a race course or in the showing. The carrying off of the championship at Edinburgh for fillies by a yearling angus well for the future of the Dalmeny Stud.

GOLDEN MEASURE.

The imported Short horn bull, Golden Measure 29057 (29058), illustrated in this number, and owned by Mr. John E. Smith, of Brandon, was bred by Mr. Duthie, of Colynie, sired by Golden Count, who was bred by Mr. J. Deane Willis from the famous Cruickshank bull, Count Lavender, and the favorite Sittyton cow, Gwendoline. The dam of Golden Measure is Mistletoe 9th, of the grand old Missie family, in the herd of Mr. Marr, of Uppermill, which produced the Royal champion, Marengo, and many other prizewinners in Britain. Mistletoe 9th was got by Scottish Archer, the sire of Marengo, and her dam was by the renowned Walden of Orange. From this it will be seen that Golden Measure is one of the very best bred bulls of any country and his breeding is telling

Young People,

prepare for the active duties of life by taking a course in the Winnipeg Business College. It will fit you to do business for yourself, or to earn your living in the employ of others. In the past eighteen years thousands of young people have been started on a successful career in life by a course with us. What we have done for them we can do for you.

From S. J. DRAKE, Cashier of the Ontario Mutual:

"My present position, which I have held for over four years, was obtained through the agency of the College; and I may say that the knowledge I gained there of Bookkeeping and Business Practice was immediately put into practical use."

From MISS S. L. KERR, in charge of W. J. Hammond's office:

"I have found every part of my Business Education of benefit to me. It would have been impossible for me to have spent either my time or my money to better advantage than in taking up your Shorthand and Business Course."

From MISS LORENA CHEVRIER, in the office of the Manufacturers' Life Ins. Co.:

"From my personal experience I may say that the course of instruction given in Shorthand and Typewriting is thoroughly practical and well fitted to enable the student to perform with accuracy and speed the duties his position requires him to fulfil."

From A. M. MATT, in the office of the Berlin Portrait Co.:

"The time and money that I spent while taking a course in the Winnipeg Business College has already been well repaid in fitting me for the position that I now hold."

From F. D. LEWIS, who holds a responsible railway position:

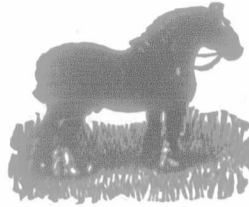
"Since I studied in the Commercial Department of the Winnipeg Business College I have obtained a good position with the Chicago, Milwaukee & St. Paul Railway Co., with better prospects in view for the near future, which I would have been unable to secure had I not taken a course at your College."

From J. E. TYSOE, in the office of the Frost & Wood Co., Ltd.:

"I am pleased to state that I have found my College course has been of the greatest service to me, as it has been largely owing to my having attended the College that I obtained my present position, the Manager evidently having a high opinion of the College."

PLEASE MENTION FARMER'S ADVOCATE.

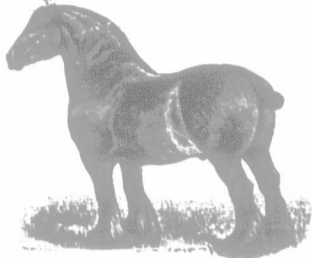
Clydesdales and Shorthorns.



Young stallions, bulls, and heifers. Herd headed by Best Yet—14371—and Minthorn—21881—, bulls bred by Hon. John Dryden and H. Cargill & Son. PRICES ON APPLICATION. D. McBeth, Oak Lake, Manitoba

J. E. SMITH

Has received from Ontario a shipment of twelve Shorthorn bulls, which are for sale. Also for sale a number of home-bred heifers, sired by Lord Stanley II. = 22280 = and Golden Measure (imp.) (72615) = 26057 =, and the Clydesdale stallion, Prince Charles (imp.). These, being the best that money and experience could buy, are required to maintain the high reputation of the stock of the Beresford and Smithfield Farms. Come and see the stock, or write for what you want, to



For sale, a number of Clydesdale mares and fillies, all registered; will be served by Prince Charles (imp.). All animals for sale, except the stock bulls, Lord Stanley II. = 22280 = and Golden Measure (imp.) (72615) = 26057 =, and the Clydesdale stallion, Prince Charles (imp.). These, being the best that money and experience could buy, are required to maintain the high reputation of the stock of the Beresford and Smithfield Farms. Come and see the stock, or write for what you want, to

J. H. SMITH,
P. O. Box 274. Smithfield Ave., BRANDON.

SHORTHORNS



Masterpiece = 23750 =, by imp. Grand Sweep, out of an Indian Chief dam, at head of herd. Imp. Large Yorkshires for sale.

JAMES BRAY,
LONGBURN, MAN.

D. FRASER & SONS,
EMERSON, MAN.

Breeders and importers of Durham Cattle, Shropshire and Southdown Sheep, and Pure-bred Poland-China Pigs a specialty. Young stock for sale.

Shorthorns 4 Heifers and 2 Young Bulls. Choice ones of Royal Sailor breeding, also Admiral, their stock bull. Also imported **CLYDESDALE STALLION.** A. & J. CHADBOURN, Ralphton, Man.

SHORTHORNS, YORKSHIRES AND TAMWORTHS.

Stock of all ages and both sexes, at prices according to quality. Auction sales of farm stock undertaken. Improved farm and wild lands for sale in the Winnipeg district. Correspondence solicited.

W. G. STYLES,
Sec. 12-13-I. West, Rosser P. O., C. P. R.

SWEETSTAKES HERD OF LARGE ENGLISH BERKSHIRES

WINNIPEG INDUSTRIAL EXHIBITION, 1899.



Herd headed by Perfection (4760), Proud Victor (4001), Prince (4000). A choice lot of young sows fit for breeding; a nice lot of September pigs, both sexes. Booking orders for spring pigs, boars or sows, not akin. Address or call on

R. MCKENZIE,
Maple Lodge Stock Farm. HIGH BLUFF, MAN.

Bulls! Bulls! Bulls!

We have 9 young Shorthorn bulls, home bred, and recently imported from some of the best Eastern herds. All fit for service. We are quoting prices down in order to dispose of the lot as quickly as possible. A few good sows for sale cheap, to farrow May and June. B. P. Rock eggs, \$1.50 per setting of 15. Roland, N. P. R.

ANDREW GRAHAM,
Pomeroy P. O.

THREE BULLS

Fit for service, the best I ever offered, for sale. Also some fine two-year-old and year-old heifers.

GEORGE RANKIN, Hamiota, Man.

IN WRITING
PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

We are indebted to Mr. Frank Pedley, Superintendent of Immigration, Ottawa, for copies of the very useful Descriptive Atlas of Western Canada, and the Canadian Atlas, for use in schools, issued by the Interior Department. The Descriptive Atlas contains good-sized, well-printed maps of the Canadian Provinces, and much useful data regarding the resources of the country.

Mr. Jos. Wilding, of Norwood Bridge poultry yards, Winnipeg, reports that he is largely increasing his stock of poultry, and he has now the following breeds: Houdans, White Wyandottes, Minorcas and White Plymouth Rocks, Pekin Ducks, and Bronze turkeys are also kept. The Safety incubator has been used this season with great success; the young birds have come active and strong, and are maturing rapidly. Old and young birds from these yards will be exhibited at Winnipeg and Brandon at the summer exhibitions.

The shipment of thoroughbred Galloway cattle purchased last winter in the Old Country by Manager Andrews, of the Canadian Land and Ranch Co., arrived at the Stair farm on Monday, after a trip which, between travelling and quarantine stoppage, occupied about four months. The shipment consists of twelve bulls and two heifers, and they are without doubt the finest output of thoroughbred cattle ever put on the ranges. Mr. Ellis, manager of the Stair farm, under whose care they will be handled, says they are an exceptionally fine lot, and have arrived in good condition. Two thoroughbred Hereford bulls were also in the shipment. They were unloaded at the Crane Lake farm.—*Medicine Hat News.*

Messrs. D. Fraser & Sons report under recent date that their celebrated old Thoroughbred stallion, Disturbance, died, at 24 years of age. He was, up to within a few moments of his death, in his usual fine form and vigor, death having been caused apparently by the bursting of a blood vessel. This grand old horse was bred by John Dymont, Jr., Orkney, Ont., sired by Terror, son of Ruric, dam Lucy, by Wagner Joe. He was 15.2 hands high, and at his best weighed about 1,175. Mr. Fraser states that he held the running record for the American continent for 10 years for three-quarters of a mile, time 1.15; and the mile record for the Dominion for 15 years, time 1.43, being unbeaten until '98, when the record was lowered by one of Seagram's horses at Toronto. Many of his get have made records, and several of his sons are sires of the present day. It is about five years since he was imported to Manitoba by the Messrs. Fraser, and since that time he has been used extensively on various classes of mares with almost invariably satisfactory results, he being a very prepotent sire, always giving his get his own fine quality and smoothness. A number of very excellent colts by him are now running the pasture at Lake Louise stock farm. As will be remembered by every visitor at the Industrial Exhibition for the past few years, Disturbance and his colts have been prominent winners. Although he had reached "good old" age, still his loss will be felt, not only by his owners, but by many who had patronized him.

At the Hope Farm, near St. Jean, Manitoba, owned by Wm. Martin, President of the Northern Elevator Co., is maintained the largest herd of pure-bred Galloways in Western Canada, there being in the neighborhood of 90 head of pure-bred on the farm. The farm is a large one, including many hundreds of acres of cultivated land, but with a full realization of the necessity of establishing a grass rotation in order to keep the soil filled with root fiber and humus, Mr. Martin early laid the foundation of his herd of "blacks." Although no importations have been added to the females of the herd for a number of years, the quality and breed character has been well sustained, many of the animals in the herd to-day being of exceptional merit, lengthy, deep-bodied, strong-constituted cows. Two of the largest and handsomest, perhaps, are Marjuta and Guinevere. Black Beauty and Lady Stanley make a pair of very handsome three-year-olds, which, along with the cows above mentioned and some yearlings, two-year-olds and calves, will be shown this year at the Industrial. The bull last in service was Drumlin, from Macrae's herd at Guelph. To head the herd, however, an importation from Scotland was landed at the farm about the first of July. This young bull, Waterloo 7558, was calved in February, '99, bred by the Rev. Thomas Rain, Hutton Manor, Lockersly, sire Winsome, by Cauty 2nd of Hutton. This young bull is one of the largest, smoothest and best Galloways of his age which it has been our fortune to see. Just landing from quarantine, he was in excellent condition, has good length, deep, well-sprung ribs, full in heart-girth and deep in flank, particularly smooth over the hind quarters, with well-packed thighs, and standing well on his legs, with a beautiful head and neck, a fine coat of hair and a good quality of skin. The use of this bull on the herd is bound to prove a great acquisition. All the young bulls have been sold this past spring, the Canada Land & Ranch Company having taken all the young bulls that were left from the winter sales, and they have also secured 10 bulls from this year's calf crop.

ANOTHER HACKNEY STALLION FOR CANADA. Graham Bros., Claremont, Ont., have recently added to their stud the handsome and typical 3-year-old Hackney stallion, Stampede, purchased from Mr. Mitchell Harrison, Chestnut Hill, Pa., at a cost of \$1,000. He is a son of Wildfire, and his dam is the Confidence mare, Lady's remorse, and he is said to be one of the best sired by old Wildfire, being distinctly on the coach type, with elegant shoulders, a clean neck, hand-somely turned body and quarters, and superior underpinning. In addition to his carriage-horse conformation, he is a big, bold actor, and altogether the stamp to sire high-priced carriage horses.

A CORRECTION IN BRANDON PRIZE LIST. Intending exhibitors of horses should note the following correction in the condition regarding entry in the draft and agricultural classes at Brandon:

To the Editor FARMER'S ADVOCATE. We would be obliged if you would call the attention of your readers to the draft and agricultural horse class in our prize list, classes four and five, in which there is a condition "not pedigreed." This should read "not necessarily pedigreed." Yours truly, F. J. Clark, Manager.

Birch Hills Stock Farm.
IMPORTANT AUCTION SALE.



At the above farm, near

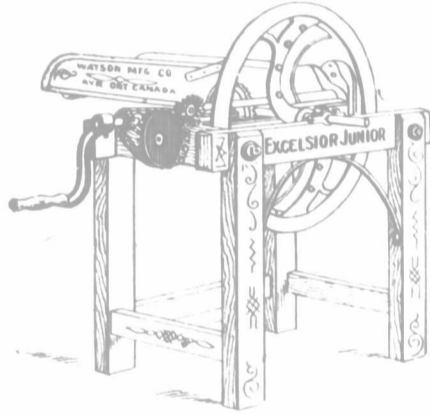
Yorkton, Assa., on August 8th, 1900,

Mrs. E. E. Greenall will offer for sale the whole of her pure-bred stock of Shorthorns, viz.: 17 cows, with calves; 12 bull calves; heifer calves; 5 three-year-old heifers, in calf; 3 two-year-old heifers, and 7 yearling heifers. The foundation stock purchased from Dr. F. C. Sibbald, "The Briars," Sutton West, Ont. Such noted sires as Royal Barrington, Duke of Athol, Butterfly Duke, Mazurka Duke, and The Dandy have been used in the formation of this herd. Six horses, harness and buggy; McCormack mower, rake, wagons, etc. Particulars to follow. The implements are all new.

Parties coming to the sale by train on Tuesday evening will be conveyed to place of sale on Wednesday morning. Circumstances compel Mrs. E. E. Greenall to go home to England. Correspondence solicited.

TERMS—Two months' credit will be given on approved joint notes, payable at Union Bank of Canada, Yorkton.

C. J. McFARLINE, Auctioneer, **STEPHEN TOYE, Manager,**
YORKTON, ASSA.



You Need 'em This Year . .

Watsons have 53 years' experience in this line, and have the goods to meet any case.

SLEIGHS

11 Sizes and Styles.

1900 Goods. All New.

FULL LINE OF

Grinders, Crushers, Root Pulpers,

Horse Powers, Jacks, Fanning Mills.

MR. DEALER :

We have a winter line that defies competition, and is a money-maker. See us before you contract.

JOHN WATSON MFG. CO., LTD.,
134 Princess St., WINNIPEG.

GENERAL AGENTS GRAND DETOUR PLOW CO. GOODS.



PIONEER HERD OF SHORTHORNS

Won the gold medal at the last Winnipeg Industrial Exhibition; also first for bull and two of his get, first for cow and two of her progeny, and numerous prizes for individuals. They were bred right here, and I can usually show a few generations of their ancestors, and am always pleased to show them.

WALTER LYNCH, Westbourne, Man. P. O., Railway and Telegraph.

ELMWOOD STOCK FARM.

Scotch Shorthorns for Sale:

grand young bulls and heifers, got by imported Scotch sires, and out of extra good cows, by imported bulls.

H. O. AYEARST,
MIDDLEBURGH, MAN.

PLEASE MENTION FARMER'S ADVOCATE.

PROGRESSIVE PEOPLE USE IT.

Windsor Salt

Produces better article; brings higher price. Pure, economical to use.

The Windsor Salt Co., Limited,
WINDSOR, ONTARIO.

PLEASE MENTION FARMER'S ADVOCATE.

"PRAIRIE HOME STOCK FARM."

Bull- and heifer-records
Judge 23119 and Imp. October 28858



Yorkshire and Berkshire Swine,
Clydesdale Stallions and
Shropshire Sheep,
Shorthorn and Ayrshire Cattle.

THOS. GREENWAY, Proprietor, in
JAMES YULE, Manager, Crystal City.

FOR SALE:

The Shorthorn bull,
Knight of Lancaster [27753]
(Vol. 15, got by Knight of Lancaster (Imp.) 117101,
dam Missie 112nd (Imp.). Also 4 fine bull calves and
two heifer calves, sired by Knight of Lancaster.
Will be at Winnipeg Fair. Inspection invited.
G. & W. BENNIE,
Castleberry, Man.

THORNDALE STOCK FARM,
MANITOU.

JOHN S. ROBSON, PROP.

Females of all ages
FOR SALE.

Write for particulars.

Shorthorns and Berkshires.

BREEDING AND
QUALITY RIGHT.
Write or call for prices.
3 nice young bulls
for sale now.
R. L. LANG, Spruce Bank Farm, OAK LAKE, MAN.



POPLAR GROVE
HEREFORDS
THE LARGEST HERD
IN CANADA.

STOCK OF ALL
AGES FOR SALE.

J. E. MARPLES,
DELEAU, MAN.

For—

Galloways

APPLY TO

T. M. CAMPBELL,

Hope Farm, St. Jean Baptiste, Manitoba.

For sale: 20 Cows and Heifers, all with
calves, and some registered Shorthorn cows and heifers with
calves.
THOS. SKINNER,
Kupewa, Assa.

STEEL BROS., Glenboro, Manitoba,
BREEDERS
OF Ayrshire Cattle.

Choice young stock for sale. 24-25-30

JERSEY BULLS

2 high-class Jersey Bulls for sale.
Also farm lands.

H. R. REYES, Elm Midway, Man.

Rare Chance
Apply to winners for Winnipeg's
best Industrial yet held. Our
prize is a pair of bulls of some bargain
price. See our bulls and speak
to J. H. BOND & SONS, Bellamy, Man.

LEICESTERS!

A. D. GAMMA,
BRANDON, MAN.

S. J. & CO.,

S. J. & CO.

FOR SALE
Wool bonded by
Wiltred

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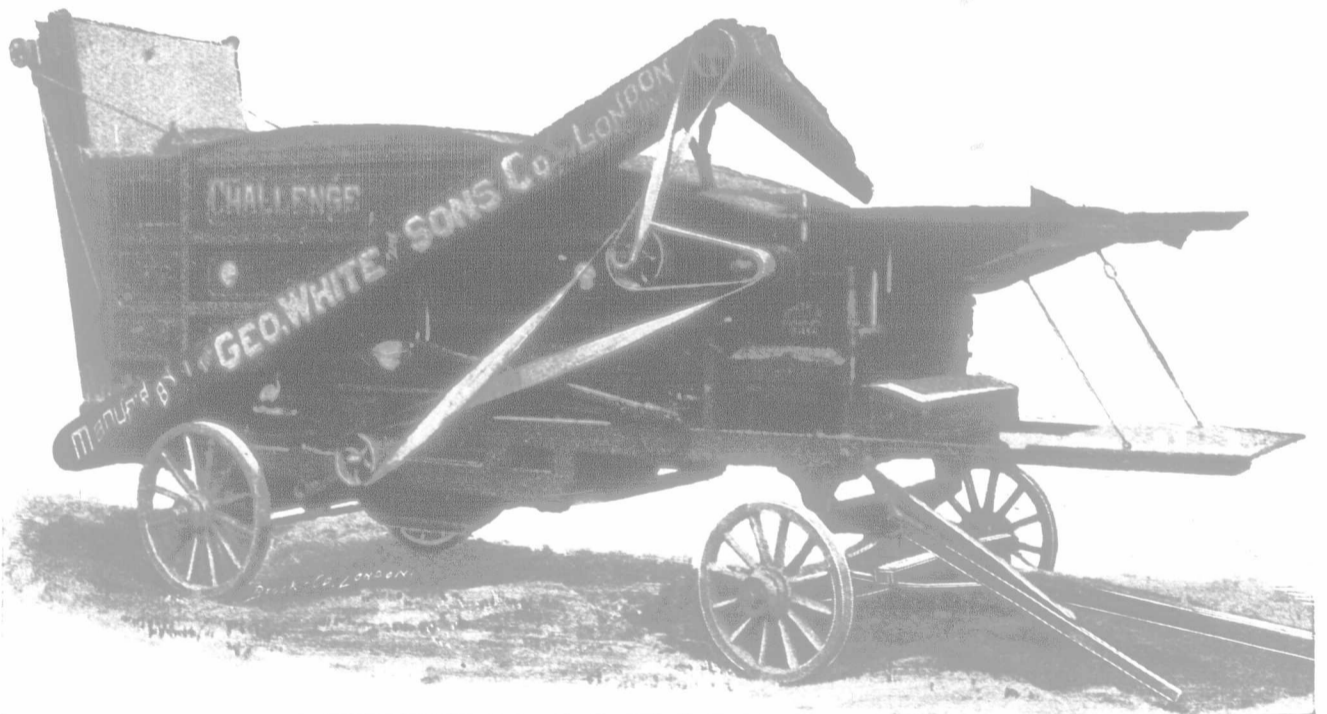
SEE THE WHITE
Threshing Machinery Exhibit at Winnipeg Fair.

Locomotive pattern Straw-burner Traction,
14, 18 and 22 H. P.



We sell Challenge Threshers | that stay sold. We sell Engines and Threshers that are built
Advance Threshers | and Engines | to suit the country. Write for circular.

We sell Return-tube Portable and Traction Engines that
will burn straw, wood or coal equally well.



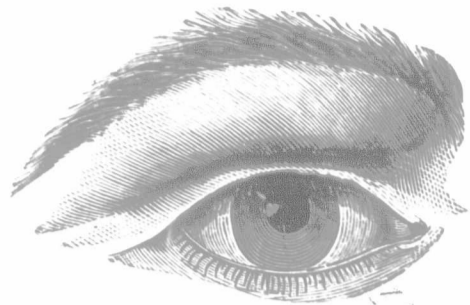
THE GEO. WHITE & SONS CO., LTD.,
LONDON, ONTARIO, CANADA.

John S. Robson, Thorndale Stock Farm, Manitou, reports his Shorthorn herd as having done particularly well this year. He reports 11 Shorthorn calves for this year, with a few more cows to come in. In the lot are one pair of twin heifers. He says they are the best bunch of calves he has ever had in any one year. The stock bulls, Royal Judge and Bismarck, are turning out very satisfactorily good, strong, heavy bulls of their age. Mr. Robson also reports that owing to the dry season he has mowed up all his timothy sod. Bromo grass sod, however, made a light crop of hay.

Mr. A. J. Turner, proprietor of the Badreggan Farm, Millville, Alta., in a letter to this paper says: "I intend exporting a pair of 'Prince Grandeur' Shorthorn bulls, and a pair of 'Prince Grandeur' registered as 'Prince Grandeur' and 'Princess Grandeur' to the United States."

RADFORD FOR —
SIGNS

Tel. 1246 475 MAIN ST., WINNIPEG.



Do not be misled by having your eyes examined and fitted by so-called doctors who have never taken the practical instructions to enable them to correct the defects in the eyes. They are only transient, and when you wish to find them in three months, where are they?

We have been established 21 years, and carry a stock of all kinds of specs. and eyeglasses to suit all people.

No charge for examining the eyes.

Send for test card to fit your eyes.

W. R. Inman & Co.,
OPTICIANS,
WINNIPEG.

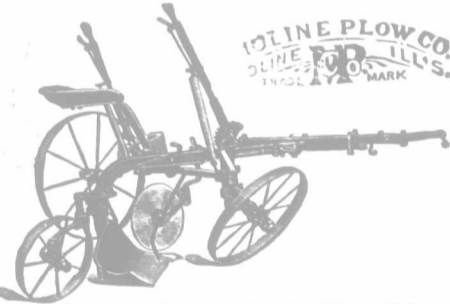
BLACK MINORCAS.

Young stock for sale — some beauties. Satisfaction guaranteed.

A. M. ROBERTSON, KEEWATIN, ONT.

Norwood Bridge Poultry Yards,
WINNIPEG, MAN.

Breeder of high-class S. C. B. Minorcas, Houdans, and White Wyandottes; also Bronze turkeys, Pekin Bantams, Pekin ducks. Young stock for sale of all varieties. Write or call.



The Good Enough Sulky Plow

CAN NOT BE BEAT.

The Price will please you and its work will surprise you!

Write for illustrated circular. It will pay you.

MINNESOTA MOLINE PLOW CO.
Winnipeg, Man.

IT'S A WINNER.

So is our

Ideal Flax note-paper and envelopes

120 sheets of paper with 100 envelopes, mailed for 60 cts.

This is only one of the many supplies we offer. We carry a full stock of office, school, municipal supplies. Write us for catalogue. Our store is "value."



The FORD STATIONERY CO.,

One door north of P. O.

P. O. Box 1273. 407 Main St., Winnipeg.

Under New Management.

D. W. BEAUBIER, PROPRIETOR.

Newly furnished throughout. All modern conveniences. Most centrally located hotel to the business part of the city.

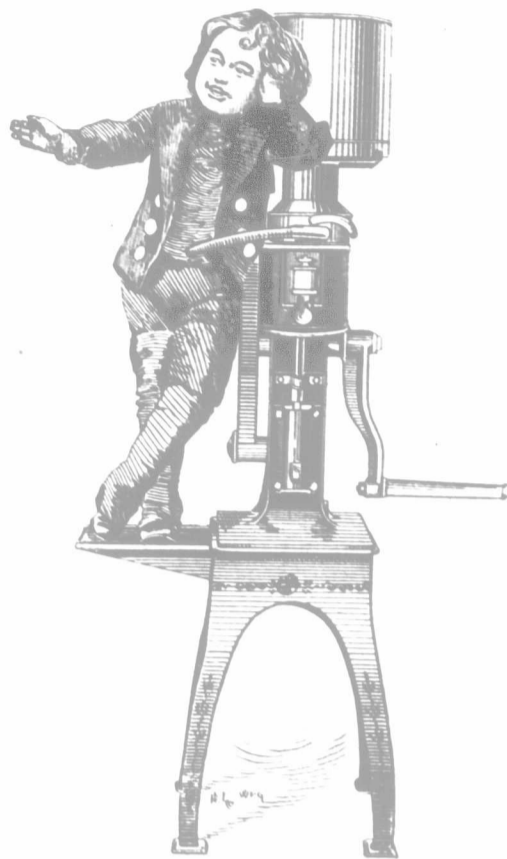
PALACE HOTEL.

Accommodating porter meets all trains. Open day and night. Good stabling in connection. Rates, \$1 per day. Eighth St., BRANDON, MAN., near Rosser Ave.

PLEASE MENTION FARMER'S ADVOCATE.

Alpha Cream Separators

NEW 20TH CENTURY, improved, with increased capacity, surpasses anything ever produced by "The De Laval Cream Separator Co." It is manifest from the unlooked-for demand, notwithstanding every subterfuge of their rivals. Anything answering to the name of a Cream Separator will not satisfy the intelligent dairymen of the "Great West" any longer, who are improving their product every year. Even now grocers are asking for "Cooking" butter. Last year they were asking for "Table" butter with limited success. This change for the better means thousands of dollars to dairymen every season. The demand will increase as the quality improves. Who wants to use the "Cooking Class?" Even the long-suffering boarder will look for the boarding house where fine butter is used. This will and can be produced by proper outfits and clean handling of milk and cream. See what an expert says about the Alpha:



Department of Agriculture

MANITOBA.

Winnipeg, 16th April, 1896

JOHN HETTLE, Esq.,
AGENT "DELAVAL" SEPARATOR,
BOISSEVAIN, MAN.

Dear Sir,

At your request I submit the following in regard to the work done by the "DeLaval" Separator, Baby No. 3.

We have had the Separator at work in the Dairy School all winter, and by repeated tests, it has separated most successfully over 800 pounds of milk per hour, although it is only guaranteed to do 600 pounds per hour. One of these many tests goes to show that 837 pounds of milk was put through the Separator in one hour and two minutes. When 600 pounds was put through in an hour, the skim milk tested but a trace of fat. When 837 pounds was put through in the hour and two minutes above mentioned, the skim milk tested .02 per cent. of fat. I have no hesitation in saying that your Separator is all that could be desired as a Cream Separator. The simplicity of its construction is a guarantee of its being handled successfully by even an inexperienced man.

Yours truly,

C. C. Macdonald

Dairy Superintendent.

DAIRY OUTFITS ARE FURNISHED BY

The Canadian Dairy Supply Co.,

236 KING STREET, WINNIPEG.

GOSSIP.

In writing to advertisers mention the "Farmer's Advocate."

In commenting on the prices of range steers, the Medicine Hat News says: "Most of the sales are by the pound, weighed at the new stock yards. The prices offered are \$1.40 to \$1.50 per cwt. for steers, and \$2.75 per cwt. for cows."

The dispersion sale of the fine old herd of Berkshires, long maintained by Mr. J. Pittman King, at North Stoke, Wallingford, England, took place on June 25. The first fifty animals sold averaged \$7, the highest price being 21 guineas for a 2-year-old cow, bought by Mr. Barnes. Young boars brought as high as 10 guineas each.

Messrs. Sampson & McNaughton own a beautiful ranch in the valley of the Bow River,

a few miles west of Calgary, upon which they run a fine herd of about 175 pure bred Short horns, of which 106 are breeding cows. They recently completed a sale of 30 young bulls, at very satisfactory figures, to R. Cuckburn, Great Falls, Montana.

At the annual sale of Shorthorns and Shropshires from the herd and flock of the Prince of Wales, at Sandringham, June 23rd, the highest price for a cow was 290 guineas, for Miss Rose, a red 3-year-old cow, bought for the Queen's herd. The next highest was 290 guineas for Spring Rose, bought by Sir John Gilmour. Kingmaster, a roan 8-month-old, was the highest priced bull, 200 guineas, and goes to South America. Crystal Quality, a roan 2-year-old, went to the same buyer at 100 guineas. The highest priced Southdown ram was purchased for Canada at 52 guineas, for the flock of Senator Drummond, at Pointe Claire, Que.

Breeder of Berkshire swine in Canada, as well as in the United States, will learn with regret of the death of Mr. M. K. Prime, of Osceola, Iowa, which occurred on June 30th, in his 79th year. He was a good judge and a successful breeder of high class Berkshires, and was a man of kindly nature, and a firm friend. The business will be continued by his son, Geo. S. Prime, who has had charge of the herd for the last few years.

LORD ROSEBERRY SOLD.

Graham Bros., Claremont, have sold the great Hackney stallion, Lord Roseberry, winner of first prize and the championship of the class at the Toronto Industrial last year. Only a long price, it is safe to say, induced Graham Bros. to part with a horse of such grand character and so popular in the stud during the past season.

WHAT'S IN A NAME?

WELL, A GOOD DEAL, PROVIDED IT IS THE RIGHT NAME.

THE FAIRCHILD COMPANY, LIMITED,

Have a pretty good name, for instance, and goods bought from them mean the very best in their line that money can buy. No GOOD DEALER can afford to overlook the following lines if he would have the best sellers in the market, and no GOOD FARMER can afford to overlook them if he wants to use the best on his farm:

The John Deere Plow represents 60 years' experience in plowmaking. It has no equal.

The Wilkinson Plow is a good seller, and has established an enviable reputation for itself.

The Moline Wagon The lightest-running and best-constructed wagon on the market.

The Milner Wagon The best wagon made in Canada.

OUR LINE OF

BUGGIES, ROAD WAGONS, SURREYS, CARTS, ETC.,

Manufactured by the Canada Carriage Co., cannot be equalled for finish, durability and general excellence. Our general line of

HARROWS, SCUFFLERS, LAND ROLLERS, WHEELBARROWS, HARNESS, GRAIN CRUSHERS, STRAW CUTTERS, HORSE POWERS, DISC GRAIN DRILLS, ETC., ETC.,

will be found very complete and of a standard of excellence not to be found elsewhere.

When visiting the city call at our showrooms, 156 PRINCESS STREET, and let us show you the goods.

The Fairchild Company, Limited, WINNIPEG, MANITOBA.



LISTER'S Alexandra and Melotte CREAM SEPARATORS

Are good Machines.

If any Buttermaker tells you that our Separators will not furnish as rich cream as any other, just make enquiry and you will find that he is a paid agent of some other make of separator. We welcome fair competition, but when we encounter falsehood it is our duty to expose it.

Red Deer, Alta., N.-W. T., June 13th, 1900.

Mr. Wm. Scott, Manager for E. A. Lister & Co., Ltd.:

Sir, I have received the Separator safely, and got it set up and run it for one week now, and I am very glad to say it is giving the greatest satisfaction. I think the Melotte Separator is the best machine made, as it runs so easy, requiring no power at all hardly, and likewise separating so much more milk than other machines. I think that it is the most perfect machine which can be made. I hope you will excuse me not sending the notes before, as I have been trying to see what I could do regarding what I wrote to you about before, and I have seen for myself that the agent of the De Laval machine told me an untold regarding the Melotte Separator, as I took a test out to the creamery of cream and milk, and made them test it while I was there, and it tested 135 (the number which I told Mr. Frack that it was from my new machine, and I think you will finally see how the machine made such a high test, and I am glad to say that he had got to be careful. I could make the new separator as best as high as I like, so I don't think I shall have any more to say, and that the Melotte will bear a better name after this. I am very glad to see it working, and I think it is the best machine I have ever seen. The De Laval round here are sorry now they are not using it, and I am perfectly satisfied with the separator. I am, Sir, your obedient servant, EDWIN PLUMBE.

BRANTFORD GALVANIZED STEEL WINDMILLS



STEEL KING PUMPING MILL. Made in 8, 10, 12, 14 and 16 feet sizes.

For Power and Pumping.

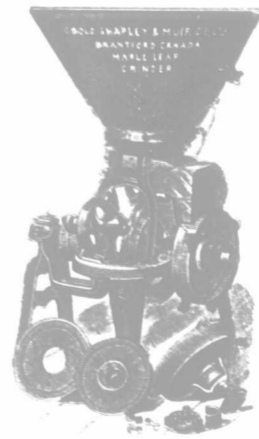
Fitted with Patent Inter-changeable Steel Roller and Ball Bearings.

Sprocket Drive. Gears Not Used. The Fastest Running. The Most Powerful. Angle Steel Frame.



IDEAL POWER MILL. Made in 12, 13, 14, 15, 16 feet sizes.

Satisfaction Guaranteed. Will Last a Lifetime.



BRANTFORD MAPLE LEAF Grain Grinders

TWO SIZES FOR ANY POWER.

No. 1 has 10 inch burrs. No. 2 has 8 inch burrs.

Both have ball bearing burr plates, relief springs and shake feed.

Grind fine and fast with least power. All ways guaranteed. A trial given. Thousands in use.



SEND FOR NEW ILLUSTRATED CATALOGUE.

Cockshutt Plow Co.,

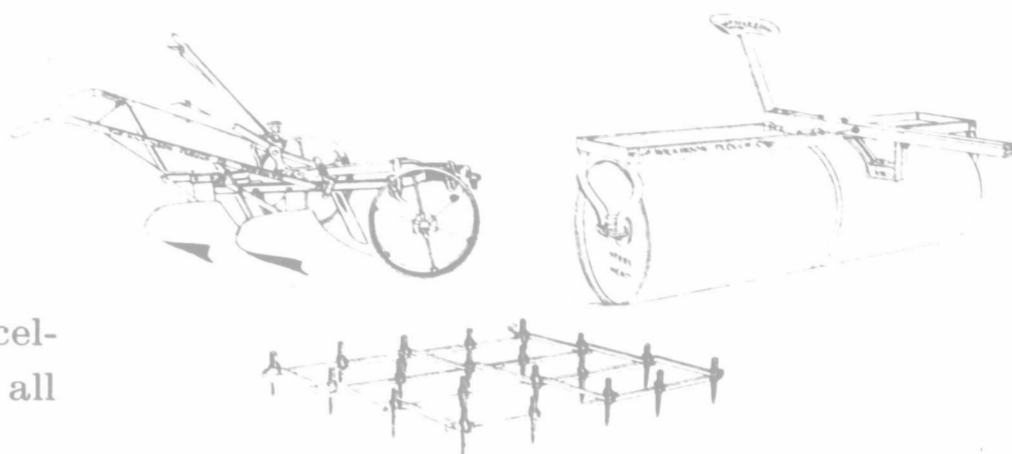
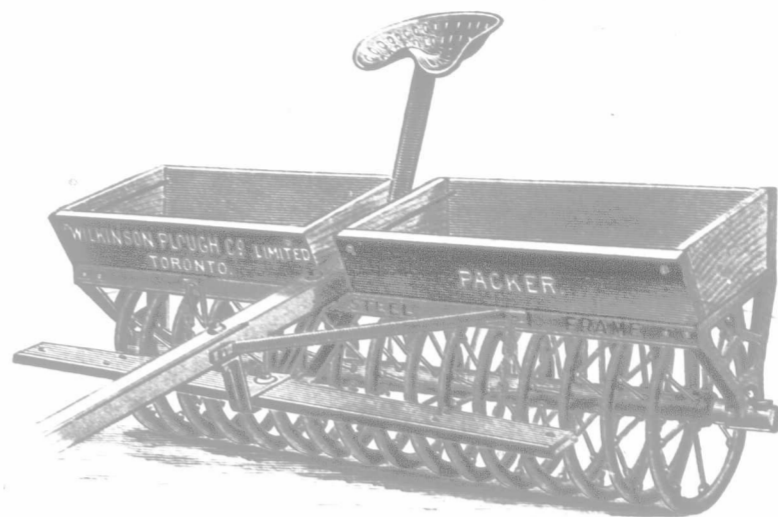
Agents for Manitoba and N.-W. T.

Limited.

WINNIPEG, MAN.

232 KING STREET, WINNIPEG, MANITOBA.

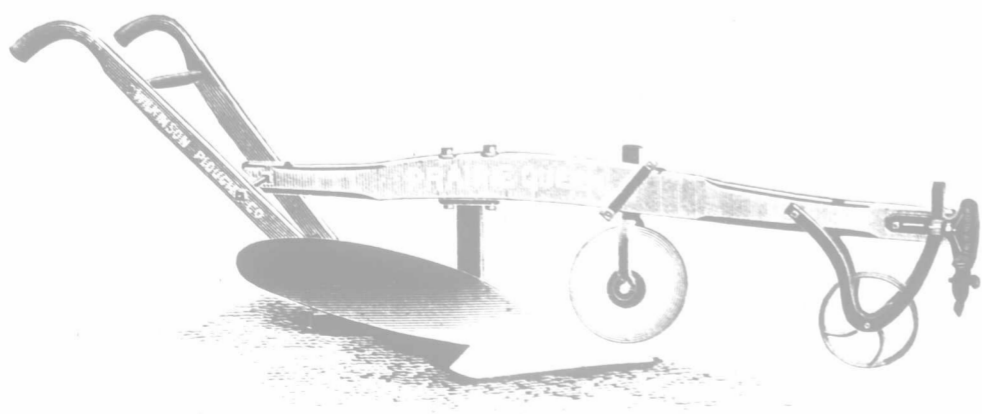
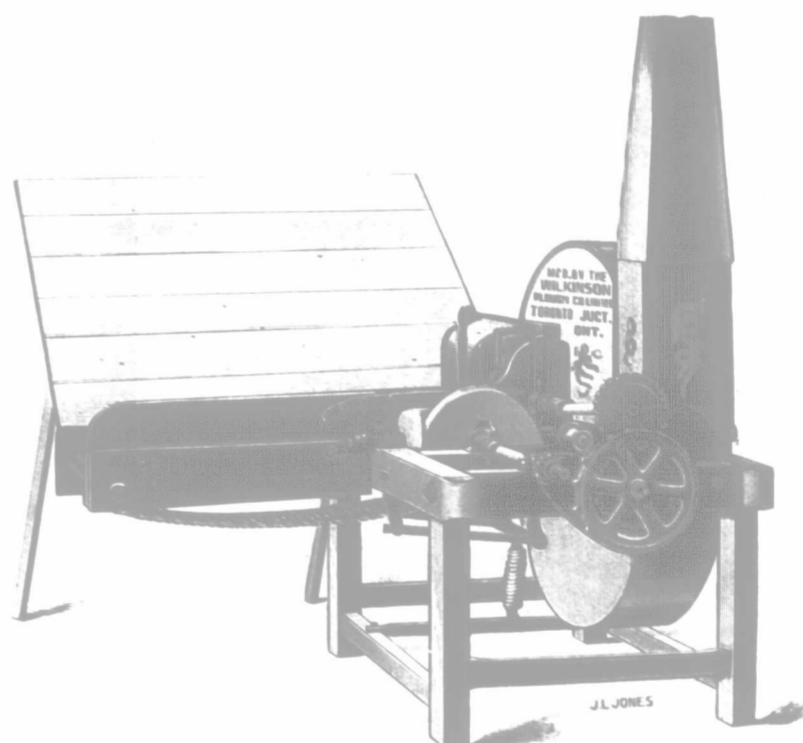
When You Thresh, Cut Your Straw:



Mixed with hay, it is an excellent feed and you want all your feed.



HERE is a machine which is guaranteed to cut as fast as any threshing machine can thresh. Six years' experience to prove that there are no stops and no repairs. Burning feed is waste. Cutting feed is money found.



WILKINSON PLOUGH

CO., Ltd.,



TORONTO.

THE PROVINCIAL
Mutual Hail Insurance Co.

Incorporated in 1891 by **OF MANITOBA.** [Manitoba Government.]

PRESIDENT: *John Renton, Farmer, Deloraine.* VICE-PRESIDENT: *C. J. Thomson, Farmer, Virden.*

The Original Hail Insurance Co.

MANAGED BY THE FARMERS THEMSELVES.

During the nine years of its existence, this Company has paid about **ONE HUNDRED AND TWENTY THOUSAND DOLLARS** for losses sustained by farmers by hail storms. The assessments have ranged from 12 cents to 25 cents per acre, which is the maximum that can be charged. The average amount paid for losses has been \$5.50 per acre for total loss, and at the same rate for partial losses.

BOARD OF DIRECTORS FOR 1900.

T. L. MORTON, Farmer, Gladstone. F. SCHULTZ, Farmer, Baldur.
JOHN RENTON, Farmer, Deloraine. J. MOLLAND, Farmer, Glendale.
C. J. THOMSON, Farmer, Virden. H. B. BROWN, Farmer, Morden.

ROBERT STRANG, Managing Director, WINNIPEG.

LOCAL AGENTS AT ALL PRINCIPAL POINTS IN THE PROVINCE.

David Maxwell & Sons,
ST. MARY'S, ONT.

PATENTED
**STEEL ROLLER BEARINGS
IMPROVED STEEL FRAME**

And combined Foot and Lever Drive, improvements you will not find on other churns. Do you want the best? Then don't purchase until you see it. Sold by the leading wholesale houses in the Dominion.

No.	CAPACITY.	Churns from
0	6 gal.	1 to 3 gal. cream.
1	10	1 to 5 "
2	15	2 to 7 "
3	20	3 to 9 "
4	26	4 to 12 "
5	30	6 to 14 "
6	40	8 to 20 "



CANADIAN DAIRY SUPPLY COMPANY,
236 KING ST., WINNIPEG, MAN.

Agents Manitoba and the Territories.

**COMPLETE
REORGANIZATION.**

The Manitoba Farmers' Mutual
Hail Insurance Co.

A MUTUAL Hail Insurance Co. of the farmers, for the farmers.

CROP ACREAGE ONLY INSURED. REMUNERATION \$5.00 PER ACRE

Limit of assessment reduced to **Four per cent.** (equals 20 cents per acre). **\$2,000,000 Insurance in force.** Good reliable local agents wanted. Correspondence solicited.

Address: **W. C. GRAHAM, MANAGER, BOX 672, WINNIPEG.**

The Union Mutual Life In. Co.,
of Portland, Maine.

**STEAMSHIP
Tickets**

...to the Old Country, or sending ... apply to nearest railway or ticket ... and prepaid tickets

PLEASE MENTION

"DOMINION" PIANOS AND ORGANS



HAVE been before the public for thirty years, and are in use to-day in 60,000 Canadian homes. If you want a piano or organ that is above criticism, get a "DOMINION." For catalogues address



THE "Dominion" Organ and Piano Co., Limited, Bowmanville, Ont.

Maw's Poultry Farm, Winnipeg.

BREEDS BEST STRAINS OF UTILITY BREEDS.

Thoroughly acclimatized and best adapted to our climate. Have for sale stock and eggs of Mammoth Bronze Turkeys, Toulouse Geese, Imperial Deep-keeled Pekin Ducks, English Rouen Ducks, White Wyandottes, White Leghorns, Silver Laced Wyandottes, Light Brahmans, Hero Strain Plymouth Rocks. Homing Pigeons from best imported Belgian stock, same as used by the army for carrying messages from beleaguered cities. Large illustrated catalogue, giving list of prizes and medals won at all leading exhibitions, with prices, description and pedigree of stock mailed free on receipt of address. I am Northwest agent for the celebrated **CYPHERS INCUBATOR AND BROODER.** Mr. Cyphers is the discoverer and patentee of the diffusive principle in artificial incubation, thus saving the lives of thousands of chicks that die in the shell in ordinary incubators. It is asbestos-coated and perfectly fireproof. Supplies and regulates its own moisture, and so simple a child can operate it with success. Write for particulars.

OGILVIE'S PRIZE

WINNIPEG EXHIBITION.

BEST Three Loaves Homemade Bread made from

Ogilvie's Flour

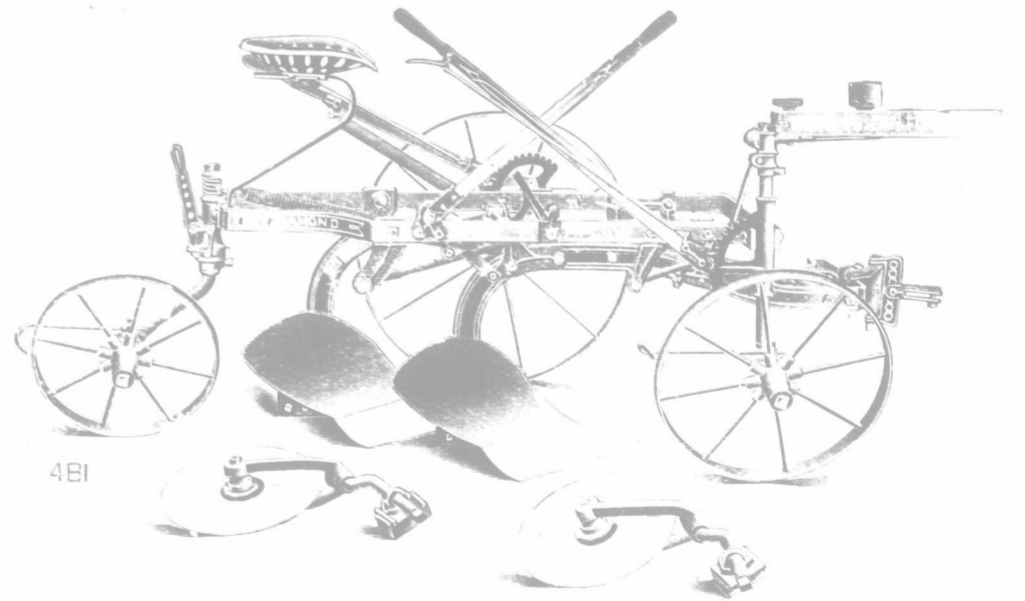
1st PRIZE, \$25.00. 3rd PRIZE, \$7.00.
2nd " 15.00. 4th " 3.00.

EVERY VISITOR TO THE WINNIPEG EXHIBITION

Who is interested in farm implements will be compelled to admit that the

P. & O. Canton Diamond Plow

Is far and away the leader of anything ever constructed in the plow line.



"P. & O. CANTON DIAMOND PLOW."

Our line of goods will be on exhibition, and it will be an exhibit worth seeing. The famous "P. & O. Canton Line" has long been the favorite in Manitoba and the Northwest Territories, and it still holds its place at the front.

Parlin & Orendorff Co.,
CANTON, ILL.

Johnston & Stewart,
AGENTS,
WINNIPEG, MANITOBA.

"POST" FOUNTAIN PEN

SOMETHING THAT EVERY MAN, WOMAN, BOY AND GIRL NEEDS.

It is a wonderful tribute

to the greatest invention in fountain-pen construction of the age.

THE PRICE OF THE POST IS \$3.00. IT CANNOT BE PURCHASED ELSEWHERE THIS PRICE ANYWHERE.

The patentee has a hard-and-fast agreement with the trade and agents that \$3 shall be the lowest retail price. By a special agreement we are in a position to make

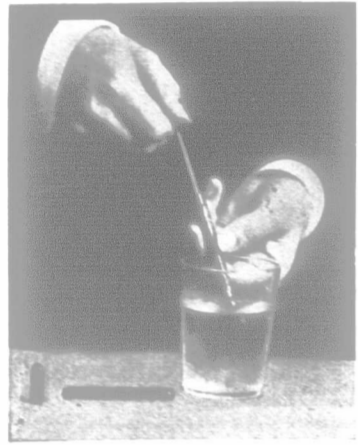
A Great Offer: We will send one of these pens to anyone who sends us three new subscribers, accompanied by \$3.00 in cash.



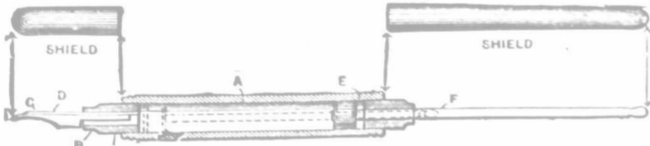
General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting: "The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge sooner. "I have tried every pen of the kind on the market, and now unhesitatingly give the preference to the Post. It not only feeds itself with less care, but has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

Lew Wallace

To show our confidence in this pen, we will send you one on trial for a week upon receipt of \$1.00, which, if not entirely satisfactory, you can return to us and we will refund you the \$1.00 paid us. If satisfactory, you must send us the names and addresses of the three new subscribers and \$2.00 additional cash.



This only self-feeding and self-cleaning pen manufactured in the world. To fill the pen, put the nib in ink and draw the piston rod up. To write, put the nib in water and draw the piston rod backwards and forwards a few times.



A. Barrel; B. Nozzle; C. Pen; D. Feed; E. Plunger; F. Rod.



The world's greatest singing evangelist, who has thrilled thousands and tens of thousands, now raises his voice in praise of the Post Fountain Pen.

Mr. Sankey sends the following characteristic letter: "I have used the Post pen for some time, and have had great satisfaction with its use. It never fails or gets cranky. One can at least have clean hands by using the Post, whatever the heart may be."

Frank Sankey

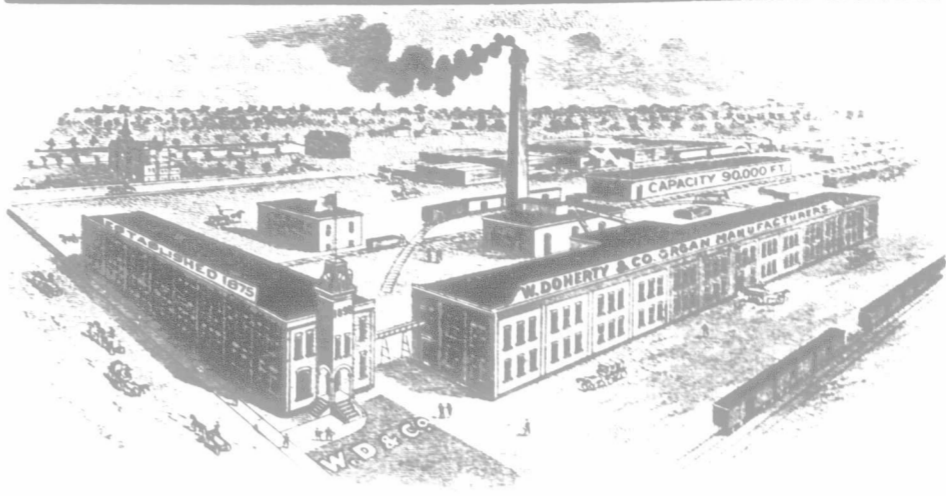
ADDRESS—

The William Weld Co., Ltd., Winnipeg.

WM. GRAINGER & SON'S SHORTHORNS.

Among those who were fortunate enough to be well-equipped with Shorthorn breeding stock when the rise in prices came, we know of few who were found in better shape than Messrs. Wm. Grainger & Son, Londonboro, Ont. It will be remembered that Mr. Grainger furnished one of the Shorthorn cows to the dairy test at the World's Fair, Chicago, which was selected by the commission as being not only a superior dairy cow, but one of the best to be found in the Province. It has always been Mr. Grainger's aim to maintain the standard of excellence established by that noble cow, and to-day may be found a long string of worthy descendants of the same tribe, the Fair Maid of Atha, whose hardy, prolific and excellent dairy qualities she transmitted to her progeny to a most remarkable degree. It is easy to tell a good milking cow by the calf she suckles, and we have frequently found not one, but two good ones being reared at one udder at Messrs. Grainger's. The herd is made up of 14 cows and heifers, 3 heifer calves, and the stock bulls, and in the breeding of the former such sires as Golden Nugget and Truce Bearer must receive the credit for much of the heeding qualities in many of the matured females, and as the bulls were personally selected by Mr. Grainger with a view of maintaining the dairy qualities of the herd, this feature has not suffered by their employment. Among the younger females we saw a very superior young cow, Britannia Lass 3rd, a daughter of Britannia Lass 2nd, and by Beau Ideal, the present stock bull. She is thick and well-matured young cow, and even though she had long well-sprung ribs, and a broad even back, and well-developed quarters, she is an all-round good young cow, of which any breeder might well be proud. We also saw a pair of choice yearlings out of Red Prince,

2nd and Britannia Lass, that are full of good quality and Shorthorn character. We cannot pass the young bulls without giving favorable notice, and first, we wish to briefly state that the yearling, Look at Me 3222, by Beau Ideal, and out of Kitty Clay by Golden Nugget, has surprised us in his development. He has grown all over, carrying the strong features of the Strathallan and Golden Drop tribes, from which he has descended, with a splendid head and horn. His full brother, a year younger, has also started in the right direction, and at his age will compare very favorably in development and quality with the best. In all we were shown seven young bulls under a year, and they are perhaps the best bunch Beau Ideal has sired on the farm in one season. Many of them are worthy of much greater praise than our space will allow, while the sire keeps his form and holds his ribs quite equal to former years. To follow Beau Ideal, the firm purchased from Messrs. W. & J. Dunsell, Richmond Hill, the young bull, Golden Eagle 2993, by Golden Measure 3992, and out of Isabella 14th 1391, and in his selection Mr. Grainger has evidently acted wisely in placing a member of so worthy a family at the head of his herd. The Isabella has always been noted for their thickness of evenly distributed, mellow flesh, and uniformity of quality. To this tribe is due much credit for the high standing of Canadian Shorthorns, and this family has produced many of the worthy ones. Golden Eagle 2993 produced the champion Money 14th 14th and Deacon Study, both of slow but sure and the right sort. We would be pleased to receive an application to see Mr. Grainger's Shorthorn stock, at no distant date. It is a privilege to obtain any one of the best of the breed, and we will be glad to receive the firm's order.



D. Doherty & Co. ORGAN

MANUFACTURERS.

Clinton, Ontario, Canada.

The Largest Reed Organ Factories in Canada.

Established 1875.

Send for Catalogue.

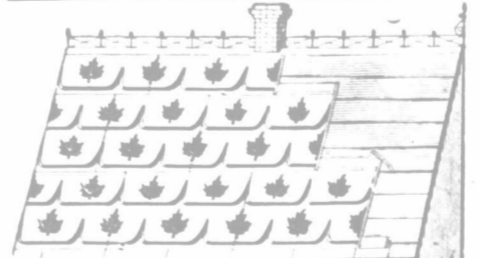


At a draft sale of Shorthorns, from the herd of Lord Feversham, June 16th, cows and heifers averaged £19 17s. 5d., and bulls £28 3s. The highest prices were 230 guineas and 225 guineas respectively for Duchesses of Rivaux 2nd and 3rd.

Mr. James Dalgety, of Messrs. Dalgety Bros., 403 King St., London, Ont., left his home on July 9th, to take the ocean steamer, Tritonia, for the Old Land, for an importation of from 20 to 30 stallions, all ages, of Clydesdales, Shires and Percherons. This firm has done a big trade in high class horses during the last few years, and the coming shipment will consist of horses of the same high character. They will reach home early in September. Watch for their advertisement.

Mr. W. H. Gibson, manager of the Huntleywood Farm for Hon. G. A. Drummond, Pointe Claire, Que., writes to say that their South-down flock is in very fine condition. The spring lambs are an extra good lot. A three-months-old lamb, that has had no grain since going out to grass, weighed 36 pounds. The Dexter Kerry cattle feel quite at home. Recently a two-year-old bull and yearling heifer were shipped to Mr. Geo. Wilson, Dundurn, Assa., N. W. T. See Huntleywood advertisement in this issue.

A Model Pea Harvester. There are many ways of harvesting a crop of peas, but no other that we have seen so satisfactory as with Tolton Bros.' pea harvester, made by Tolton Bros., Guelph, Ont. This machine gathers up all the vines, cuts them at a stage of ripeness to make first-class fodder; it does not shell out and waste grain, and the work is done easily and rapidly.



"SAFE LOCK" METAL SHINGLES THE KIND THAT ARE WEATHERPROOF COST LITTLE MORE THAN WOOD SHINGLES AND ARE LIGHTNING AND FIRE PROOF ASK FOR FREE SAMPLES METAL SHINGLE & SIDING CO. PRENTON, ONT.

LIGHTNING WELL MACH'Y PUMPS, AIR LIFTS, GASOLINE ENGINES THE AMERICAN WELL WORKS AURORA ILL. - CHICAGO - DALLAS, TEX.

GOSSIP.

W. G. PETTIT & SON'S IMPORTED SHORTHORNS EXPECTED HOME IN AUGUST.

While calling upon Messrs. W. G. Pettit & Son, at Freeman, Ont., recently, a member of the FARMER'S ADVOCATE staff was informed that the firm expected their recently imported Shorthorn cattle home from quarantine about August 23rd. Mr. Pettit is busily engaged in the preparation of a catalogue of his herd, which will be ready about August 1st, in which he is introducing the new feature in Shorthorn catalogues, of announcing the name of both sire and dam, a feature which will simplify very materially the tracing out of pedigrees, as he believes it is important that the breeder of a dam should be given as that of a sire. The importation was personally selected from the large herds around Aberdeen, and comprise some 51 head, 16 of which are bulls of various ages, particulars of which will be given later.



A case of lump jaw in your herd means immediate loss; it may mean the infection of the rest of your herd; it may result in the distribution of the germs all over your pastures. All loss and danger can be positively averted by prompt use of

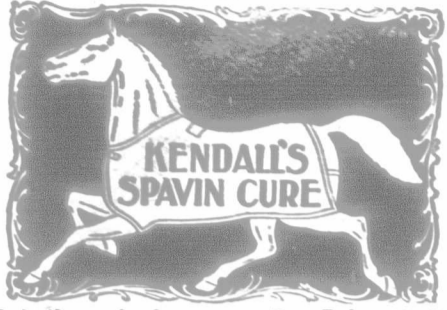
Fleming's Lump Jaw Cure

The only radical cure known. Is endorsed by the most prominent ranchers and shippers of the continent. Easy to use. Is applied externally. One to three applications cures. Leaves jaw sound and smooth. Cannot harm in any way. One bottle usually cures two or three ordinary or one severe case. Price \$2.00. Sold by druggists. Can be sent anywhere by mail.

Money cheerfully refunded if the remedy ever fails. FREE: Some important reports and an illustrated treatise on Lump Jaw. Write for them. FLEMING BROS., Chemists St. George, Ont.

PLEASE MENTION FARMER'S ADVOCATE.

Spavins, Ringbones, Splints, Curbs, and All Forms of Lameness Yield to

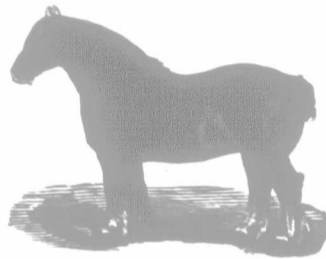


Works thousands of cures annually. Endorsed by the best breeders and horsemen everywhere. Price, \$1.48 for \$5. As a liniment for family use it has no equal. West Lorne, Ontario, Can., Dec. 14, 1898.

THORNCLIFFE Stock Farm

The largest stud of Clydesdales in Canada, headed by the Champion Stallion of all ages,

"LYON MACGREGOR."



Stallions and Colts

From the best blood in Scotland and Canada. Ayrshire bulls and heifers from imported stock. Jersey heifers and bull calves, sired by the prize-winning bull, Distinction's Golden. Best milking strains, with good teats.

ROBT. DAVIES,

Thorncliffe Stock Farm, TORONTO.

Important to Breeders and Horsemen, Eureka Veterinary CAUSTIC BALSAM.



A reliable and speedy remedy for Curbs, Splints, Spavins, etc., etc., in Horses, and Lamp Jaw in Cattle. See pamphlet which accompanies every bottle, giving scientific treatment in the various diseases. It can be used in every case of veterinary practice where stimulating applications and blisters are prescribed. It has no superior. Every bottle sold is guaranteed to give satisfaction. Price 75c. per bottle. Sold by all druggists. Guaranteed remedy for sterility in cows, with full instructions. Price, \$2. Prepared by THE EUREKA VETERINARY MEDICINE COMPANY, London, Ont.

Rosedale Stock Farm.

CLYDE AND SHIRRE HORSES. SCOTCH SHORTHORNS. LEICESTER SHEEP.

A choice lot of Dunster cows and rams with superior quality and good blood is obtainable. Mr. J. M. Gardhouse, Highfield P. O., Mableton, Ont. Tel. W. 185.

Bonnie Burn Stock Farm

Shorthorn Cattle and Herd Book sheep for sale at farmers' prices, if taken at once. Also Cotswold sheep.

JAS. DORRAN, SEBINGVILLE, ONT.

Shorthorn Cattle

Young stock

GOSSIP.

At the sale of surplus animals from the herd of Shorthorns owned by Mr. Richard Booth, of Warlaby, held near the Royal Show yard at York during the week of the show, twenty-three head were sold at an average of £18 6s. The highest price paid for a female was 15 guineas, and for a bull 15 guineas.

The steady advance of the chestnut color, amongst Hackneys in particular, was a subject of much comment at the Royal Show at York, and it is not surprising that it was so, in some of the classes every competitor was of that shade of color.

MORE CLYDESDALES FOR CANADA.

Mr. Neil Smith, of Brampton, Ont., sailed from Glasgow June 22nd with five Clydesdales, three of which—two colts and a filly—were purchased from Messrs. A. & W. Montgomery and a colt was purchased from Mr. David Gilchrist, Ballevain, Campbelltown. One of the former's Marquis of Millfield (10813), another is a yearling by Good Gift (10564), out of the Garbraig Parley mare, and the filly is by the Glasgow champion horse Gold Mine (9540). The Ballevain colt is by the famous Prince of Fashion, which stood second to Prince of Albion (6178) at the H. and A. S., Glasgow, in 1888, and the sires of all the others were first-prize stallions either at Glasgow or the Highland Society, and, in the case of Good Gift and Gold Mine, they were first at both shows. Marquis of Millfield is a big colt by Prince of Millfield, out of the noted prize mare Ellen Terry, by Flashwood (3994). From Mr. Wm. Taylor, Park Mains, Renfrew, was purchased the well-bred colt, Coyton, by Mr. Kilpatrick's big horse, Ethiopia (5750), and a well colored, good horse every way. Mr. Smith has bought well-bred, big horses, which ought to do him some good.

SUMMARY OF OFFICIAL TESTS OF HOLSTEIN-FRIESIAN COWS RECEIVED IN THE MONTH OF MAY, 1900.

Thirty-nine tests made of thirty-seven cows were received, approved and recorded. They were invariably for periods of seven consecutive days, made by representatives of Experiment Stations. The butter is estimated first on the basis of the 80 per cent. rule, by which all the World's Fair estimates were made, and second by the 85.7 per cent. rule uniformly used by all Experiment Stations.

Of full-age cows, ten records were made, averaging as follows: Age, 8 years 2 months 12 days; commencement of test, 41 days after calving; milk 389.6 lbs., butter-fat 13.108 lbs.; butter 80 per cent. fat, 16 lbs. 6.2 ozs.; butter 85.7 per cent. fat, 15 lbs. 4.7 ozs.

Of cows between four and five years old, nine records were made, averaging as follows: Age, 4 years 6 months 27 days; commencement of test, 33 days after calving; milk 350.3 lbs., butter-fat 12.503 lbs.; butter 80 per cent. fat, 13 lbs. 14.1 ozs.; butter 85.7 per cent. fat, 14 lbs. 13.2 ozs.

Of cows between three and four years old, six records were made, averaging as follows: Age, 3 years 5 months 21 days; commencement of test, 24 days after calving; milk 347 lbs., butter-fat 11.288 lbs.; butter 80 per cent. fat, 11 lbs. 1.8 ozs.; butter 85.7 per cent. fat, 13 lbs. 2.7 ozs.

Of cows less than three years old, 14 records were made, averaging as follows: Age, 2 years 1 month 26 days; commencement of test, 26 days after calving; milk 255.3 lbs., butter-fat 9.54 lbs.; butter 80 per cent. fat, 11 lbs. 14.8 ozs.; butter 85.7 per cent. fat, 11 lbs. 2.1 ozs.

S. HOXIE, Superintendent, Yorkville, Y. V., June 1, 1900.

SCOTCH SHORTHORN BULLS AND HEIFERS HERD ESTABLISHED IN 1872.

Such sires as imported Royal George and imported Warfare have put us where we are. Imported Blue Ribbon now heads herd.

A. & D. BROWN, ELGIN COUNTY, ONTARIO.

H. SMITH, - Hay, Ont.

Shorthorn Cattle.

Two good roan bulls and a fine bunch of heifers FOR SALE. Exeter Station on G. T. R., half a mile from farm.

Hillhurst Farm.

ESTABLISHED 1861.

Scotch Shorthorns.

SCOTCH HERO AND JOY OF MORNING.

BRED BY W. DUTHIE, COLLYNIE.

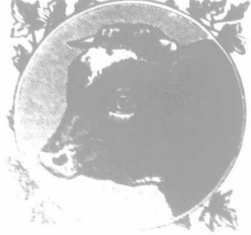
Oldest Stud of Hackneys in America. Shropshire, Dorset Horn and Hampshire Down Sheep.

M. H. COCHRANE.

Hillhurst Station, Compton Co., P. O.

SPRING GROVE STOCK FARM

Shorthorn Cattle and Herd Book sheep for sale at farmers' prices, if taken at once. Also Cotswold sheep.



SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. The Baron at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON,

DENFIELD, ONT.

SPRINGBANK FARM.

Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

Maple Lodge Stock Farm

ESTABLISHED 1854.

SHORTHORNS—An excellent lot of young bulls, and a special value in young cows and heifers in calf to our imported Knuckle Duster.

LEICESTERS—Imported and home bred—the best.

ALEX. W. SMITH,

MAPLE LODGE P. O., ONT.

Shorthorns for Sale.

12 FEMALES, from 1 to 7 years old, descended from Red Knight (5512), Hopeful (58003), Crown Prince (10637), Canada (19336), and Riverside Stamp (2358), on a Crimson Flower and Stamford foundation. All in good breeding form.

WM. SHIER,

SUNDERLAND, ONT.

5-- Shorthorn Bulls--5

From 9 to 15 months. Also a few choice yearling and 2 yr. old heifers, among which are grand, thick-fleshed and choicely bred animals, mostly solid red colors. Speak quick, for they will not last long.

STOUFFVILLE STATION, G. A. BRODIE, G. T. R. BETHESDA, ONT.

Pure Scotch Shorthorns for Sale.

Two bulls and fifteen months old, and three two-year old and two one-year-old heifers. All right. Good ones. Meadowdale station, C. P. R. S. J. PEARSON & SON, Meadowdale.

R. & S. NICHOLSON

SYLVAN P. O., PARKHILL STATION.

Scotch Shorthorns, imp. and home-bred.

The Imp Clipper bull, Chief of Stars, heads the herd. Eight extra good 2-year-old heifers for sale, in calf to Chief of Stars (7215). Inspection invited.

Scotch Shorthorns.

100 head to select from. Imp. Diamond Jubilee = 18861, at the head of the herd. Eight grand yearling bulls, and cows and heifers of all ages of the most approved breeding.

T. DOUGLAS & SONS,

Strathroy Station and P. O. Farm 1 mile north of the town.

HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.

We are offering 3 young bulls for sale, of first-class quality, and AI breeding.

Wm. Grainger & Son, - Londonboro, Ont.

Herefords for Sale.

Three or four one-year-old bulls. Cows and heifers.

The Plains Farm, Arkell; Moreton Lodge, next the O.A.C. College; containing 200 to 250 acres each.

The F. W. Stone Stock Co., Guelph, Ont., Can.

75 HEAD Herefords

High quality. Early maturing. Prizewinners. Producers of many makers in the feed lot.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue.

H. D. SMITH, COMPTON, QUE.

Wm. Willis, NEWMARKET ONT.

Jersey Cattle (St. Lamberts).

Some fine young bulls for sale at farmers' prices, if taken at once. Also Cotswold sheep.

GLEN ROUGE JERSEYS.

WILLIAM ROLPH, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right.

FOR SALE:

Jersey bulls from tested and prizewinning dams and sired by our champion bull. They are fit to head any show and dairy herd. Also a number of young A. J. C. C. cows, and a few unregistered cows and heifers, grand family cows. Write now for prices, stating what you want.

R. H. BULL & SON, Brampton, Ont.

G. T. R. & C. P. R. Stations, 20 miles from Toronto

JERSEY CATTLE

That will put

Money in your pocket.

MRS. E. M. JONES,

Brockville, Ontario, Can.

Box 321.

OWING TO DROUTH

will sell five Holstein-Friesian heifers, two or three years old, for \$350. Fine animals, of rich breeding, and bred to the great butter-bred bull, Johanna Rue 2nd's Paul de Kol (21721), at head of our herd. Also bull calves at reduced prices. Fine chance to start herd of pure-breds.

SOUTH SIDE FARM CO., ST. PAUL, MINN.

BROOKBANK

Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred.

GEO. RICE,

Oxford Co. Currie's Crossing, Ont.

MAPLE HILL HOLSTEIN-FRIESIANS

Three Yearling Heifers, sired by Colanthus Abbeker 2nd, and in calf to Daisy Teake's King (brother to Daisy Meake's Queen, the great test and show cow).

Three Bull Calves, sired by De Kol 2nd's Paul de Kol Duke, the great butter-bred bull; dams, the fine show cows, Lady Akkrum 2nd, Cornelia Artis, and Midge Morton.

G. W. CLEMONS, St. George, Ont.

3 Holstein-Friesian Yearling Bulls FOR SALE.

Prices right. Apply to

WILLIAM SHRRING, Sebringville, Ont.

Maple Glen Stock Farm.

The home of officially tested, Advanced Registry dairy test and showing-winning HOLSTEINS. A grandson of the herd of 84, 1314, of Carman Sylvia now for sale. Price is in keeping with breeding and performance.

C. J. GILROY & SON,

Brockville, on C. P. R. or G. T. R. Glen Buell, Ont.

WE WANT TO SELL A FEW

Holstein Heifers, coming 2 years old

THEY are of the richest and most productive strains, fine individuals, and bred to as good bulls as there are living. We have a few bull calves and yearling bulls also for sale.

HENRY STEVENS & SONS,

LACONA, OSWEGO CO., N. Y.

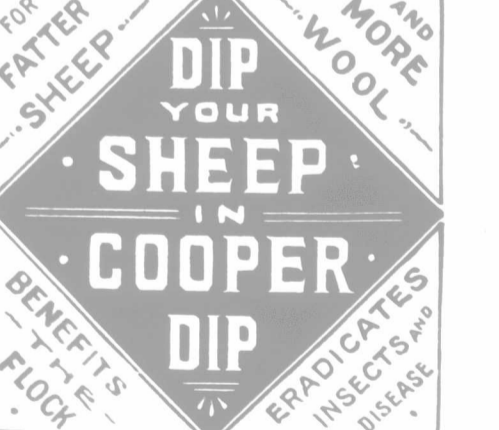
SHOW AYRSHIRES FOR SALE.

As we are not going to show any cattle at the fairs this year, we will sell the imported prize-winning bull, Napoleon of Auchenbrain, champion and head of first prize herd at Toronto, 1898. Also first class 2 year old bull and three choice bull calves of last fall. These are all fit for the showing, as we kept them for that purpose. For prices and particulars come and see, or write.

St. Anne de Bellevue, Quebec

Farm close to St. Anne Station, Quebec

G. T. R. & C. P. R., 20 miles west of Montreal



Used and endorsed by Hon. John Dryden, Minister of Agriculture, Toronto, and leading breeders everywhere.

Superior to all liquid Dips.

25c per gal. 50c per 100-gal. \$2.00. If druggist cannot supply, send \$1.75 for 100-gal. pkt. to

EVANS & SONS,

Montreal or Toronto.

Premises application to—

COOPER & NEPHEWS,

142 Illinois St., Chicago.

Write for pamphlet

ENSILAGE CUTTER B. 6

With Slow-Speed Pneumatic Elevator (Blower).

This machine is the result of years of experiment and work upon Corn Cutters and Blowers. Most of the Blowers upon the market have given only partial satisfaction, and that only under specially favorable conditions, and even now they are far from being a success. In order to produce wind enough they have to run at a speed that is dangerous, and that racks the machine and wears it out very fast. The B. 6 machine will cut and elevate from five to ten tons of corn per hour while running 300 revolutions per minute. No other Cutter and Blower will do this. Have a suspicion of Blower Cutters that require high speed; they are apt to become ugly and kill a man or two while throwing themselves into the air at the surrounding country in pieces.

"The B. 6 Cutter arrived and our customer is highly delighted with the way the machine works. The machine is a 'Daisy.' C. W. WOODRICK & McESTER, South Woodstock, Jan. 15th, 1900.

"I received my note all right, and like my cutting box (B. 6) fine. I cut quite a lot of corn, and it works splendidly. I have cut straw nearly all winter, and my customers like it well." JOHN SIMPSON, Mooresville, March 12th, 1900.

Send Catalogue, letters of recommendation, and any information given on application.



J. FLEURY'S SONS, AURORA, ONTARIO.
Medal and Diplomas for plows at World's Fair, Chicago.

Strong, durable, cheap. The only "Hinge" Stay. Write for circular and prices.

AGENTS WANTED.
THE
Strathy Wire Fence Co.
WELLAND, ONT.

SHOWING HINGE MOVEMENT OF STAYS UNDER PRESSURE STAYS CANNOT BEND & WILL SPRING BACK TO PLACE WHEN PRESSURE IS REMOVED.



H. CARGILL & SON,

CARGILL, ONTARIO.

The largest herd of Imported Scotch Shorthorn Cattle in Canada.

SEVENTY-SIX HEAD IMPORTED DURING 1899.

13 BULLS. 63 FEMALES.

All imported females of suitable age bred before leaving Scotland. Catalogue free. Correspondence or personal inspection invited. Address as above, Cargill Station half a mile from barns, on Grand Trunk Ry.; 70 miles north-west of Guelph.

W. G. Pettit & Son, FREEMAN, ONT. Importers and Breeders of Scotch Shorthorns and Shropshire Sheep

OFFER FOR SALE: 1 imported bull, extra good; 3 imported cows, with calves at their side and 2 calves; 6 home-bred bulls, from 3 to 15 months; 10 home-bred cows and heifers. All of breeding age. Have been bred to imported bulls. Our Shropshires have wintered well, and our lambs this season are a strong, healthy bunch. 3 rams carried over from last season are in good shape. Correspondence or personal inspection solicited. Catalogues on application.

Burlington Junction Station and Telegraph Office, G. T. R., within half a mile of farm.

W. G. Edwards AND COMPANY, IMPORTERS AND BREEDERS
Laurentian Stock and Dairy Farm, Pine Grove Stock Farm, ROCKLAND, ONTARIO.

Ayrshires, Jerseys, Shropshires, Berkshires
Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Fawn's son 2nd of St. Anne's heads the Jerseys. The young stock are all from time-tried dams.
A. E. SCHRYER, Manager.

Scotch Shorthorns and Shropshires.
The imported Missie bulls, Marquis of Zenda and Scottish Pride, at the head of herd, assisted by British Knight. We have a few extra good young bull calves that will be ready for the coming season.
JOS. W. BARNETT, Manager.

We can be reached either by steamboat, the C. P. R., or C. A. R.; the C. A. R. making connection with the G. T. R. at Coteau Junction. Rockland is our station on all lines.

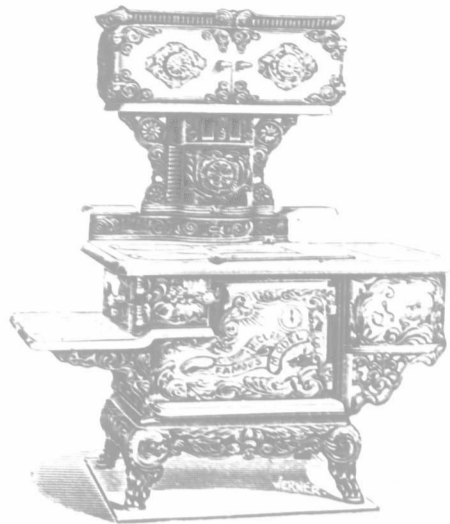
Ayrshires, Guernseys, Yorkshires and Shropshires are our leaders.

ALL high-class, pedigreed stock. Those desirous of purchasing thoroughbred animals should write for particulars at once. Orders booked now in rotation for present and future deliveries. Address:
ISALEIGH GRANGE FARM, Danville, Quebec.
J. N. GREENSHIELDS, PROP. T. D. MCCALLUM, MGR.

Maple Cliff Dairy and Stock Farm. Breeding of **FOR SALE:**
AYRSHIRES. 1 yearling and 10 bull calves from 2 to 5 months old.
TANWORTHS. 10 yearling and 10 8 months old, and sucking pigs.
BERKSHIRES. Breeding orders for young pigs.
R. REID & CO., Hintonburg.
Farm 1 mile from Ottawa. Electric cars stop at farm.

SAVE FUEL BY USING A

FAMOUS MODEL RANGE FOR WOOD.



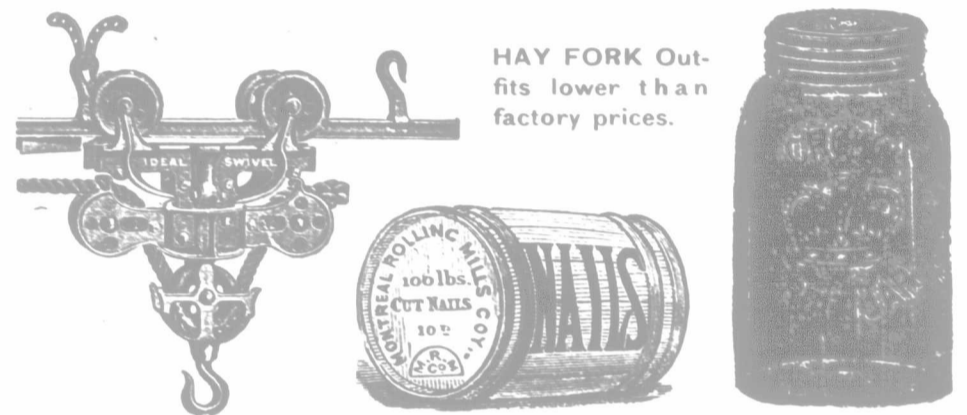
THERMOMETER in oven door shows exact cooking heat for pies, cakes, bread, etc.
VENTILATED OVEN allows of a constant circulation of pure warm air.
STEEL OVEN BOTTOM (that cannot crack or warp) heats oven quickly.
CEMENTED BOTTOM causes even baking of food.
ASBESTOS OVEN FRONT prevents heat escaping.
EXTRA HEAVY FIRE EXPOSED PARTS, SECTIONAL FIRE-BOX LININGS AND STOVE TOP THAT CANNOT WARP.

CAN BE FITTED FOR COAL IF REQUIRED.

THE McCLARY MFG. CO.,

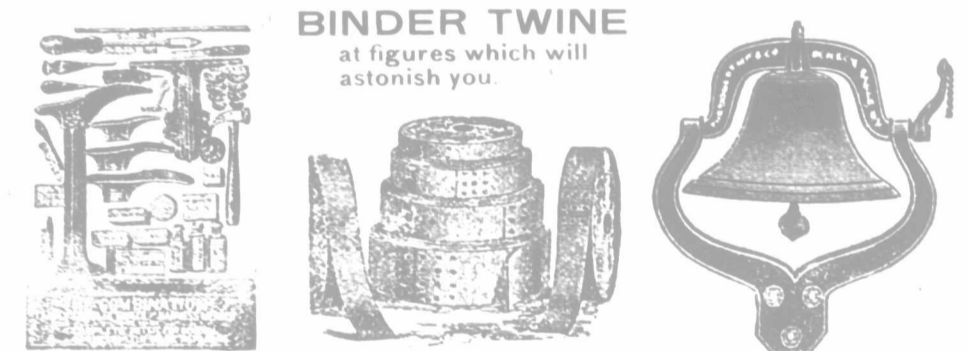
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HAY FORK Out-fits lower than factory prices.

THRESHERS' SUPPLIES, such as Belting, Oils, etc. Best quality at small figures.
WIRE NAILS, 3 to 6 inches, only \$3 per keg.
COMBINATION COBBLER'S AND TINKER'S OUTFIT. No person should be without this useful set of tools: only \$2.
FRUIT JARS, made of heavy glass. Pints, 60c; quarts, 70c.; 1-2 gals., 80c. per doz.
FARM AND CHURCH BELLS in large variety.
40 lb. Farm Bells, \$1 75
50 " " 2 25
75 " " 3 00
100 " " 4 50



BINDER TWINE at figures which will astonish you.

Wilkins & Co., 166 & 168 King St., E., Toronto.

Government Analysis.

LABORATORY OF INLAND REVENUE,
OFFICE OF OFFICIAL ANALYST,
Montreal, April 8, 1895.

"I hereby certify that I have drawn, by my own hand, ten samples of the

St. Lawrence Sugar Refining Co.'s

EXTRA STANDARD GRANULATED SUGAR, indiscriminately taken from ten lots of about 150 barrels each. I have analyzed same and find them uniformly to contain:

99⁹⁹/₁₀₀ TO 100 per cent. of pure Cane Sugar, with no impurities whatever."

(Signed) **JOHN BAKER EDWARDS, Ph. D., D.O.L.,**
Prof. of Chemistry and Public Analyst, Montreal.

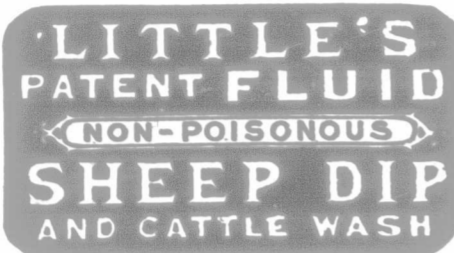
Maple Cliff Dairy and Stock Farm. Breeding of **FOR SALE:**
AYRSHIRES. 1 yearling and 10 bull calves from 2 to 5 months old.
TANWORTHS. 10 yearling and 10 8 months old, and sucking pigs.
BERKSHIRES. Breeding orders for young pigs.
R. REID & CO., Hintonburg.
Farm 1 mile from Ottawa. Electric cars stop at farm.

Ayrshire Bull Calves of 1899
One bull 5 months and young calves 2 to 3 weeks, from some of our best imported cows. Will sell at reasonable prices. Address:
ROBT. HUNTER,
Manager to W. W. Ogilvie. LACHINE RAPIDS, QUE.

Ayrshire Bulls: Write J. YULL & SONS, Carleton Place.

For special prices on Ayrshire bulls from 1 1/2 years to 6 months. Four over 1 1/2 months fit for service, from special milking stock. Sired by prize bull, Jack of Burnside - 1681 - also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks. -om

SHROPSHIRE SHEEP AND CHESTER WHITE SWINE.
WM. E. WRIGHT, GLANWORTH, ONT.



THE ORIGINAL Non-Poisonous Fluid Dip
Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

For sheep. Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.
Cattle, horses, pigs, etc. Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.
Prevents the attack of Warble Fly.
Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective
Beware of imitations.

Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET.
Robert Wightman, Druggist, Owen Sound.
Sole agent for the Dominion. -om



Sheep Dip AND ANIMAL WASH.
A NON-POISONOUS LIQUID DIP.

Kills Ticks, Kills Red Lice, Heals Wounds.
Greatly Improves quality of WOOL.
For Horses, Cattle, and Pigs. Removes all insects. Thoroughly cleanses the skin.

Leading "STOCKMEN" endorse it as the CHEAPEST and most EFFECTIVE "Dip" on the market.

SOLD BY ALL DRUGGISTS, 50 cents PER QT. CAN.
Special rates in larger quantities.
MADE ONLY BY

THE PICKHARDT RENFREW CO., LIMITED,
STOUFFVILLE, ONT.

Shropshire Rams and Ram Lambs

Established in 1881
PLEASE MENTION THE FARMER'S ADVOCATE

GOSSIP.

FAIRVIEW SHROPSHIRE.
Mr. John Campbell, Woodville, Ont., writes: "My nephew will land at Quebec, if all goes well, with our annual importation of Shropshires early this month (July). He has notified me that a very choice lot is coming from the flocks of the well-known leading breeders, Messrs. A. E. Mansell and H. Williams. He advises me that the importation is sure to please. Our home flock has thriven well this season. Plenty of good fresh grass, lots of rape and vetches from June 15th, and good health, have put the flock in nice bloom. All being well, we will show at Toronto, the eighteenth year in succession, and probably at other fairs. I will not now add a word as to what our exhibit will be, but customers can rest assured that good Shropshires will be found in our pens, and that the Fairview flock's reputation will not suffer from comparisons."

SHORTHORNS AT THE ROYAL.
Following is the prize list of the Shorthorn class at the late Royal Show at York:
Bulls, calved in 1886 or 1887: 1, H. R. H. Prince of Wales (Stephanos); 2, J. Handley (Lord James Douglas); 3, Duke of Northumberland (Highland Blizzard).
Bulls, calved in 1888: 1, H. M. the Queen (Royal Duke); 2 and 3, H. R. H. Prince of Wales (Pride of Collynie and Crystal Quality).
Bulls, calved in 1889: 1, Duke of Northumberland (Royal Norman); 2, W. J. Hosken (New Year's Gift); 3, Lord Tredegar (Prince Albert).
Cows, in milk or in calf, calved in 1884, 1885 or 1886: 1, W. J. Hosken (Countess of Oxford 11th); 2, D. H. Mytton (Silence); 3, W. Bell (Lady Clara 3rd).
Heifers, in milk or in calf, calved in 1887: 1, J. Harris (Empress 12th); 2, W. Heaton (Daisy 4th); 3, Captain W. H. O. Duncombe (Warrior Queen).
Heifers, calved in 1888: 1, H. M. the Queen (Rose of Sharon); 2, J. Harris (Pansy 2nd); 3, H. Dudding (Lady 21st).
Heifers, calved in 1889: 1, Lord Tredegar (Lassie 3rd); 2, Lord Middleton (Lady Waterloo B. 2nd); 3, Captain W. H. O. Duncombe (Ruby Robe).

PRIZE LIST OF SHEEP AT THE ROYAL AT YORK.
Border Leicester.—Two-shear rams: 1, Right Hon. A. J. Balfour; 2, W. Bell; r and he, J. Best. Shearling rams: 1, Right Hon. A. J. Balfour; 2 and 3, J. E. Nicholson; r and he, J. Twentyman. Pen of three ram lambs: 1, J. Twentyman; 2, T. McIntosh; r and he, J. E. Nicholson. Pens of three shearling ewes: 1, Right Hon. A. J. Balfour; 2, R. Taylor; 3, T. McIntosh; r and he, T. Winter. Pen of three ewe lambs: 1, T. McIntosh; 2, Right Hon. A. J. Balfour; r and he, J. E. Nicholson.
Coltsheads.—Two-shear rams: 1 and 2, R. and W. C. Gae; r, Wm. Houlton. Shearling rams: 1, R. Swanwick; 2, R. and W. T. Garne; 3, Wm. Houlton. Pen of three ram lambs: 1, R. and W. T. Garne; 2 and r, R. Swanwick. Pen of three shearling ewes: 1 and 3, R. and W. T. Garne; 2, Wm. Houlton; r and he, R. Swanwick. Pen of three ewe lambs: 1, R. and W. T. Garne; 2, R. Swanwick.
Linnons.—Two-shear rams: 1, T. Casswell; 2, S. E. Deane and Sons; r, J. M. Strickland. Shearling rams: 1 and 3, H. Dudding; 2, R. and W. Wright; r and he, R. and W. Wright. Pens of five shearling rams: 1, H. Dudding; 2, R. and W. Wright; 3, T. Casswell; r and he, J. E. Casswell. Pens of three ram lambs: 1, R. and W. Wright; 2, John Pears; r and he, S. E. Deane and Sons. Pens of three shearling ewes: 1 and 3, H. Dudding; 2, R. and W. Wright; r and he, J. Pears. Pen of three ewe lambs: 1, R. and W. Wright; 2, S. E. Deane and Sons; r and he, S. E. Deane and Sons.
Oxford Downs.—Two-shear rams: 1, J. T. Hobbs; 2, J. and S. Treadwell; r, J. T. Hobbs. Shearling rams: 1, J. T. Hobbs; 2, H. W. Stilgoe; 3, J. and S. Treadwell. Pen of three ram lambs: 1, W. J. P. Reading; 2, H. W. Hobbs; r and he, G. Street. Pen of three shearling ewes: 1 and 2, J. C. Eady; 3, W. A. Treweeke. Pen of three ewe lambs: 1, W. A. Treweeke; 2, R. W. Hobbs; r and he, W. J. P. Reading.
Shropshires.—Two-shear rams: 1, R. P. Cooper; 2, A. E. Mansell; r and he, J. Harding; he, Mrs. Maria Barrs. Shearling rams: 1 and 2, A. E. Mansell; 3, Mrs. M. Barrs; r and he, R. P. Cooper. Pen of five shearling rams: 1, P. A. Muntz; 2, Mrs. M. Barrs; 3, F. W. Inge; r and he, D. Buttar. Pen of three ram lambs: 1 and 2, A. E. Mansell; r and he, P. L. Mills; he, Mrs. M. Barrs. Pen of three shearling ewes: 1, W. F. Inge; 2, P. L. Mills; 3, Mrs. M. Barrs. Pen of three ewe lambs: 1, P. L. Mills; 2, A. E. Mansell; r and he, Mrs. M. Barrs.
Southdowns.—Two-shear rams: 1, C. R. W. Adams; 2, Pagham Harbor Company; r and he, H. R. H. the Prince of Wales. Shearling rams: 1, J. Colman; 2, H. R. H. the Prince of Wales; 3, G. Courtauld. Pens of three ram lambs: 1, C. W. R. Adams; 2, Colonel H. B. L. McAlmont; r and he, T. Miles. Pens of three shearling ewes: 1, Earl Cadogan; 2, Pagham Harbor Company; 3, Duke of Richmond and Gordon. Pens of three ewe lambs: 1, W. Wright; 2, Earl of Ellesmere; r and he, G. Courtauld.

Huntlywood Southdowns & Dexter Kerry Cattle
Flock of 300 head, imported and home bred. Selected from the flocks of H. R. H. the Prince of Wales, the Duke of Richmond and Gordon, and the late Mr. Colman. We are now offering for sale rams, ewes and lambs; also a Dexter Kerry bull calf, by imp. Bantam 257, champion R. A. S., Manchester. Apply to
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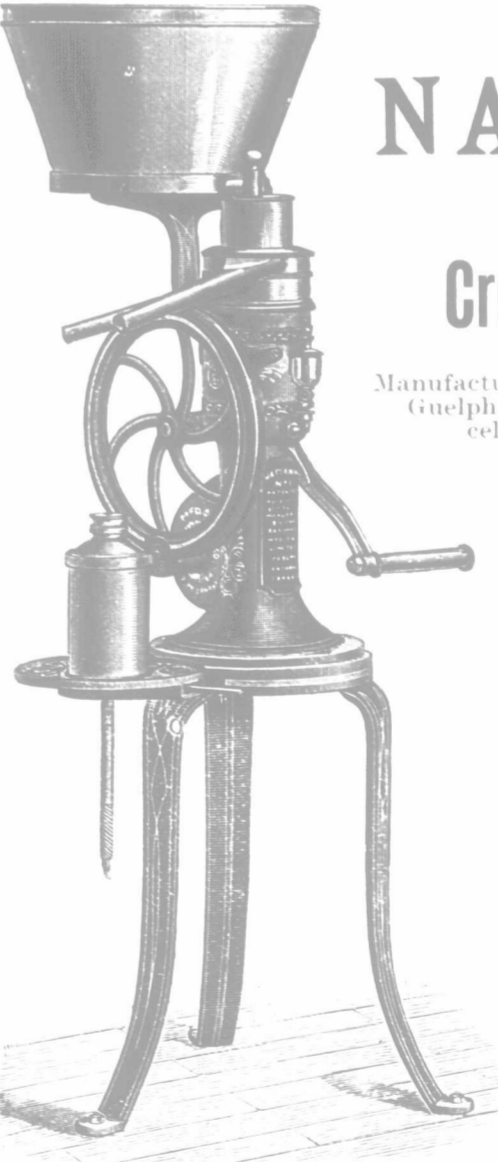
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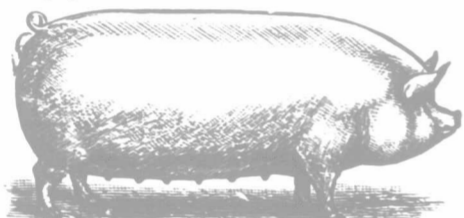
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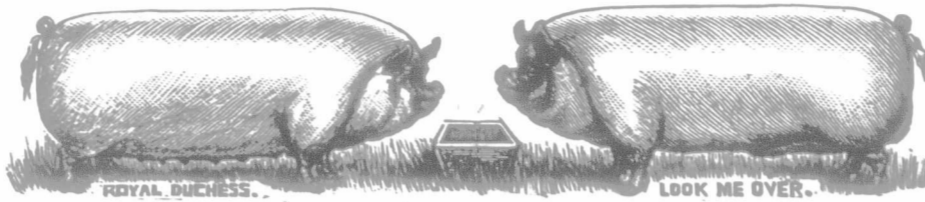
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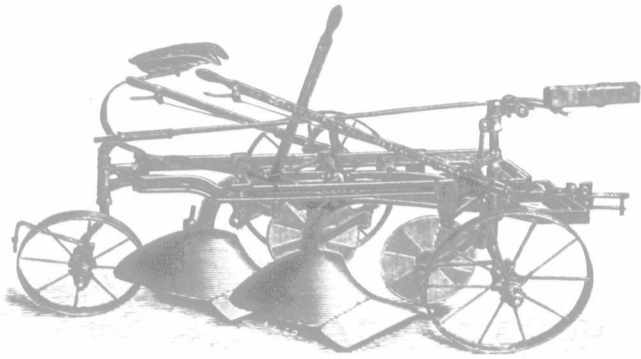
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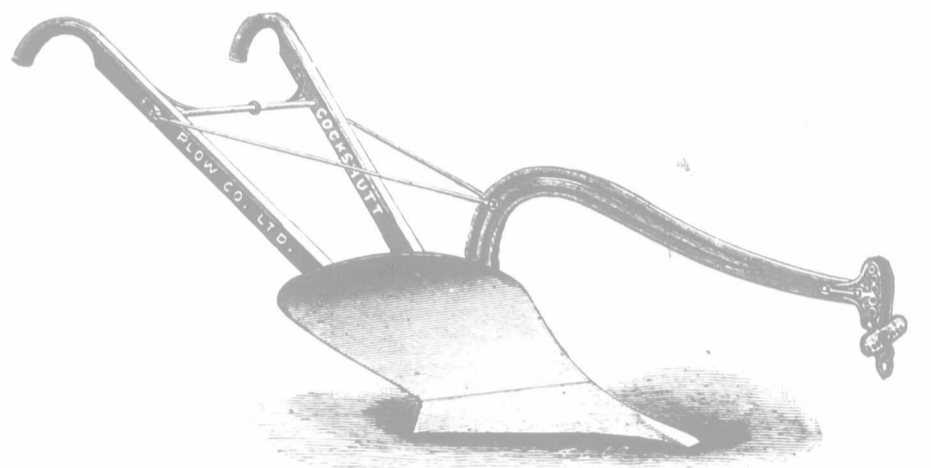


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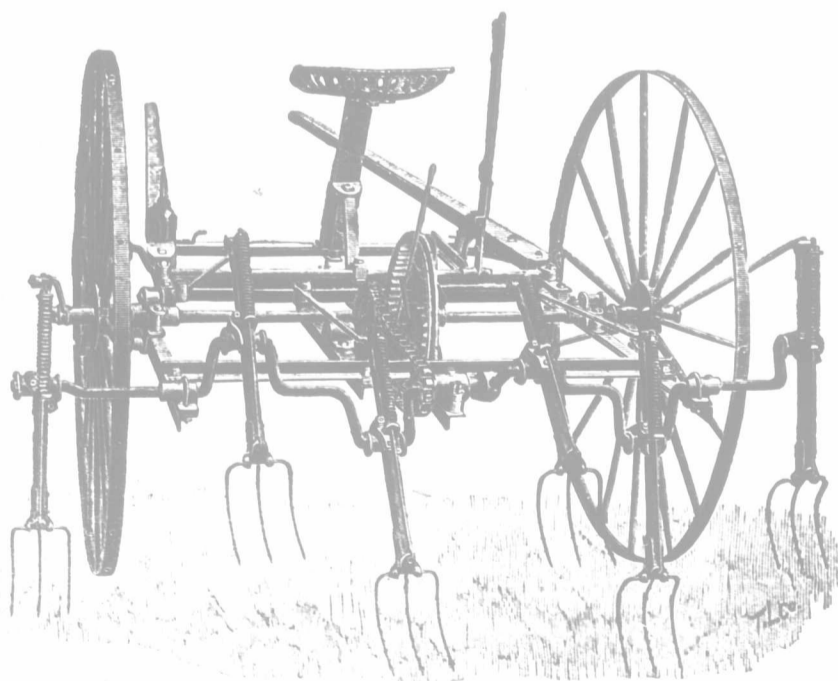
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