

are sure to command success. There is a steady

Demand for Labourers

all throughout the Province. White labourers are preferred, but the scarcity of these causes great numbers of Chinamen to be employed. Farm servants are paid from 4s to 6s per day, with rations, and Chinamen from £3 12s to £4 per month, also with rations. Ten hours per day, or sixty hours per week, are supposed to be the hours of labour, but in busy times the rule is from sun-up to sun-down, without any extra remuneration. Emigrants going to British Columbia are best to take ship to Montreal, a steerage passage for an adult costing £4, children from five to twelve half-price, under five years of age free. Thence they go to Vancouver by the Canadian Pacific Railway. The railway fare is £7, the distance between Montreal and Vancouver being nearly 3000 miles. Rations are supplied free on shipboard, but on rail passengers have to purchase their own food, facilities for which are given at suitable stations on the route. The whole distance from Britain to Vancouver, nearly 6000 miles, occupies about eighteen days. In concluding this letter, I would return my best thanks to Mr De Wolf, a large and successful rancher and fruit grower in the Valley of the Chilliewack, who afforded me most valuable information as to the prospect and capabilities of the land for farming purposes. Mr De Wolf met us by mere chance when being ferried across the Fraser River, and on learning that we came from Scotland surprised us by asking if we knew the firm of Messrs Thomson & Sons, proprietors of the *Courier* and *Weekly News*, Dundee, when we were proud to confess ourselves the representatives of a firm so well and favourably known, even at the very gates of the Orient.

VISIT TO VANCOUVER ISLAND.

ITS AGRICULTURAL FEATURES.

INTERESTING STATISTICS.

CHINAMEN IN AMERICA.

(From the *Dundee Courier* of October 17.)

Mr Andrew Osler, the *Courier's* Agricultural Commissioner to America, writes:—

Putting up all night in a commodious wooden hotel in the little town of Chilliewack, I asked a waiter to have my boots blacked and ready for me in the morning. He looked indignant at the request, but showed me a shed outside where I got blacking and brushes and performed the operation myself. This was the first Canadian hotel in which they refused to do the shining process, but when in the States I found that the blacking of boots was not included in the hotel arrangements, there being separate establishments for hairdressing and boot-blackening. At Chicago I went into a barber's shop, the floor of which was actually paved with real silver dollars, and got my boots "shined" by a darkey whose fingers sparkled with gold rings, and who charged me 25 cents for the operation. But to return to Chilliewack. After breakfast, who should step into the room but our quondam friend Sandy Macdonald? He told us he had his buckboard at the door, and would drive us to a jetty on the Fraser, where we would get on board a flat-bottomed steamer, propelled by a single broad paddle wheel in the stern, and be steamed to New Westminster. When going along to the jetty

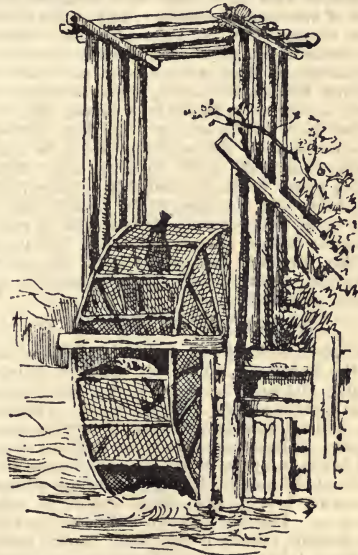
Sandy pointed out a piece of pasture ground which showed

A Perfect Sward of Clover,

and explained that about twenty years ago he accidentally got a large section of the timber part of his ranch burned. He got a parcel of clover seed, the first ever sown in the province, and strewed it amongst the ashes, where it struck root, and has flourished luxuriantly ever since. On the steamer there were about three score of cattle being conveyed to the fat market at Vancouver. They were mostly shorthorn and Hereford grades, would weigh about 10 cwts. on the hoof, and were in what we at home would call good store condition. I was told by a local dealer that they would realise about £11; they were merely grass fed. A good many carcasses of calves were hanging in the hold of the boat, and they appeared to be well fed and good weights. I was told they had all been sucklings. The general cargo of the boat was Timothy hay, which was being sent to Victoria, where it would bring from £2 10s to £3 per ton. Stepping off the boat at New Westminster, where there was a commodious, well-equipped harbour, we went straight to the Government Land Office, where we were courteously

Received by the Crown Agents,

who kindly gave us all the information in their power, and showed us round the town. I have already said the chief industries of this city are its lumber mills and salmon canning establishments,



SALMON WHEEL ON COLUMBIA RIVER.

nearly all the tinned salmon imported into Great Britain coming from here. From New Westminster—or, as it was formerly called, the Royal City—we went by electric railway to the enterprising City of Vancouver, a distance of 12 miles, up and down some very steep gradients, in little over half an hour. From Vancouver, which is the terminus of the Canadian Pacific Railway, we crossed the Gulf of Georgia, on the magnificent steamer Premier to the great city of Victoria, the capital of the province situated in the south east extremity of the Island of Vancouver. Victoria has a population of 25,000, is principally built of granite, and contains many

spacious and lofty blocks of buildings, its public and municipal buildings and private residences being remarkable for their magnificence. It has altogether a distinctly British appearance, but there are in its whole streets occupied by Chinese, the strangely decorated and arranged shop windows of which have a unique Oriental appearance. It has already become a famous residential resort for wealthy people of the colder part of the Dominion; as, on account of the warm Japanese current striking its shores, it has a climate similar to that of Penzance in England. The principal harbour is that of Esquimalt, which has long been the rendezvous of the English squadron in the North Pacific, and contains naval storehouses, workshops, graving docks, &c. On the occasion of our visit a number of British men-of-war were anchored in the harbour. Next day we had a long drive in a circuit of twenty miles around the city, and were delighted with the advanced

Appearance of Agriculture

which met our gaze on every side. The country has more the appearance of a well-tilled Scottish rural district than anything I have seen in all America. The farms are not large, but the fields are neatly and squarely laid out, and well fenced. The dwellinghouses, although of wood, are substantial and comfortable, and the farm erections are suitable for the holdings. All crops suitable to a temperate climate similar to that of Great Britain are grown very successfully. Sown grasses and clovers also grow, and hold well, so that a system of alternate husbandry and mixed farming similar to our own has been adopted. Since I came home the Agricultural Department of the Government of Canada have sent me their 1892 report for British Columbia, which contains very accurate statistics as to yields of crops, &c., and I find that last year's averages for the Island of Vancouver were:—Wheat, from 30 to 45 bushels per acre; barley, 30 to 35 bushels; oats, 50 to 60 bushels; peas, 40 to 45 bushels; potatoes, 180 to 200 bushels; and turnips, 20 to 25 tons per acre. The average prices were:—Wheat, 30s per qr. of 8 bushels; barley, 23s per qr.; oats, 20s per qr.; peas, 30s per qr.; and potatoes, £3 10s per ton. Cattle, horses, sheep, and pigs are reared in great numbers, and, although

The Grading of the Cattle

did not seem to me to be so judiciously attended to as on the mainland, still, they appeared to be well fed, and, although rough and scrubby, they were big and carried a good deal of flesh. Horses are light, active, and hardy, but somewhat unsymmetrical. Farmers are beginning to grade them up with Clydes and percherons, the Clyde grade being considered the best. Sheep are of an altogether nondescript breed, and stand much in need of grading up. Pigs are excellent sorts, and are fed to great weight, indeed it has been forced upon me from what I have seen of Canadian pig breeding and feeding that old country farmers might well take a lesson from their Canadian cousins in this line of business. Attached to every farm is a systematic and well laid out orchard of fruit trees and bushes, which are said to yield a prodigious crop, up to the value of £40 or £50 per acre, and from what I saw I can well believe it, for to my eyes the trees appeared literally laden with fruit. The area of land in the island capable of being cultivated is not by any means extensive, neither does it seem to me to be of such a deep, rich texture as that which I have already described on the mainland, but, the great bulk of the soil being of sharp loam upon a gravelly subsoil, is well adapted to yield a rapid and grateful response to the

Abundant Rainfall

which prevails there. As the system of alternate husbandry provides abundance of food for the house feeding of stock during winter, a good supply of farmyard manure is made and carefully applied to the land, which keeps it in good heart and good cropping condition. I was greatly obliged to Mr Higginson, Crown timber agent, who accompanied us all the way from New Westminster to Victoria and back, and who furnished me with reliable statistics as to the price of land in the district around Victoria. Land about ten or twelve miles from the city having partial clearing and fair improvement (that is fair housing and fencing) is worth from \$50 (£10) to \$75 (£15) per acre. Nearer to the city it is worth more, and unimproved land about three miles from the city is worth \$150 (£30) to \$200 (£40) per acre. Wild lands (unimproved) not farther than ten miles from the city are worth \$40 (£8) to \$50 (£10) per acre. The island is about 270 miles in length, and from 30 to 50 miles in breadth. It lies out from the western shores of North America about

80 Miles in the Pacific Ocean.

Its situation to the New World bears a great resemblance to the situation of Great Britain to the Old World. It lies in just about the same latitude, and just as the climate of Great Britain is tempered by the warm waves of the Gulf Stream, so is it tempered by the warm waves of the Japanese current. Its whole outline is boldly picturesque and beautifully diversified by mountain precipices, hills, dales, and lakes. It is in general thickly wooded, but many open grassy plains occur well fitted for cultivation and pasture. There are no rivers of any consequence but springs are abundant, and these forming into small streamlets, trickle down the mountain side and water the valleys below. Coal of very good quality is abundant, and the mines of Nanaimo give employment to great numbers of workpeople, these mines being the chief source of the coal supply for the mainland as well as for the numerous steam vessels which ply on the Pacific. Owing to the great influx of Chinamen to all the Western States and provinces of America, labourers are abundant and easily procured. It seems somewhat strange that none of these Chinamen ever think of settling upon the land, or of making for themselves a permanent home, their whole aim being to work for wages, and earn as much as will be sufficient to maintain them. When they go back to their own country they are parsimonious and thrifty, and live very cheaply, a small dish of coarse rice or paddy, as it is called, being considered by them a luxurious diet. No old men are to be seen

Among the Chinamen,

all going home after being a certain length of time in the country. Even the bones of those who die are exhumed after a time and sent back to China for burial. They are a diminutive, puny-looking race, but are said to be wiry and steady, but to those accustomed seeing a gang of Scotch or English navvies bending their backs to their short-handled shovels, and going at their work with energy and will, the sight of a gang of Chinese navvies, with their long-handled shovels, and upright backs, has a rather slovenly and off-putting appearance. Indeed, white labourers are always preferred, and rated accordingly, the average rate of farm labourers' wages being, for white, 4s per day, with board, and Chinese the same money, without board. Large numbers of Chinamen are employed as laundrymen, at which business they are said to be adepts, and do the work very cheaply. Any shirts which I got washed when out

West were done by Chinamen, the charge being 10 cents a shirt. I made inquiry into the cost of clothing on the West Coast, but as the price of suiting varies considerably according to the quality of cloth chosen it would be invidious to give any average as to the cost of a suit. However, as a general rule it may be stated that woollen goods are from 25 per cent. to 50 per cent. dearer than at home; cotton goods, off and on, about the same as at home; and boots and shoes 30 per cent. dearer.

AGRICULTURAL PESTS OF BRITISH COLUMBIA.

A GOOD SUPPLY OF VENISON.

DISEASES AMONG LIVE STOCK AND PLANTS.

AN ESTIMATE OF THE FARMERS' POSITION.

(From the Dundee Courier of October 24.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Having dwelt at considerable length on the amenities and advantages of British Columbia and Vancouver Island from an agricultural point of view, I now intend in this letter to mention a few of the pests and troubles which the farmers have to contend against in this province. The worst evil of all, and the one which seems to give them the most bother, is the

Plague of Wild Horses.

These are bred in large numbers in the forests along the foot hills of the great mountains, and coming down to the cultivated districts in droves of several hundreds tear up, tread down, and destroy the growing crops, eating up the sweetest and best of the pastures, and enticing, and even driving away by force, the settlers' tame horses along with them, when they soon become wild and as difficult to capture as though they had never been handled. By shooting and otherwise the settlers might soon thin down these herds of wild cayuses, but generally the Indians capture them when foals, brand them with their own mark, and then let them go free, after which were any one to capture and tame them the Indian whose mark they bore would be sure to claim them. For a settler to shoot a branded horse is penal, and he also lays himself open to be mulcted for the price of the animal. The settlers are unanimous in insisting that drastic measures ought to be adopted to extirpate this pest, and they recommend legislative enactments fixing a date, say a year hence, when everybody in the province must have all horses belonging to him gathered in, after which horses roaming at liberty will be under the ban of destruction. Further, it is recommended that a general round up be then organised to carrol up all the wild horses, and either have them captured or shot.

Ravages of Wolves.

Complaints are loud about the destructiveness of coyotes, small wolves, supposed to be a breed between the common wolf and the fox. These are sly, cunning creatures, and very destructive to lambs, pigs, and poultry. They are also reported as destroying newly dropped calves. A bounty is given by the Government for their heads, shooting and poisoning being the usual means of destruction. Common wolves, generally known as timber wolves, are numerous in the mountains, and during winter come down in hungry bands amongst the

settlements, and are the terror of sheep owners, cattle and even horses sometimes falling a prey to their carnivorous propensities. The Government encourage their destruction by bounties, and the settlers periodically organise great battues and hunt them down or drive them back to their fastnesses in the mountains. Of all wild animals the bear is perhaps the most dreaded, all kinds of domesticated quadrupeds falling a prey to his powerful clutches. He is said to have a great predilection for pork, and does a great deal of mischief in the outlying settlements. With his mischievous paws he soon undermines or knocks down the strongest walls of the pens where the pigs are confined, and, gaining access, makes short work of the herd. A story is told of a rancher at Simikameen, whose pigs came rushing into the house followed by a huge black bear, so fearless do the bears become when in search of their favourite diet. The rancher got out of a window, but subsequently shot the bear. Whenever a bear is known to be in the low country he is relentlessly

Hunted and Shot,

ingeniously devised traps being also set for his capture. He is a keen object of sport, a bear being considered one of the most honourable trophies of the chase, and, his skin being a valuable peltry, he is constantly being hunted by Indians, and thus, every man's hand being against him, either for destruction or profit, this pest is not increasing. Lynx and panthers are not widely distributed in the province, but where they do exist they are very destructive to sheep. About Cowichan panthers are somewhat numerous, from ten to fifteen having been killed during the last twelve months within a radius of two miles. The settlers suggest that the Government bounty for their destruction should be raised to £5 or £6 a head for a few years to encourage sheep-raising. The skunk, a quadruped of the weasel family about the size of a cat, is very destructive to poultry. Last year a settler in Okanagan had 200 fowls killed by one skunk in a single night. The only way to avoid damage by them is to build henhouses that they cannot enter. The skunk is a most nauseous stinking animal, and depends very much for defence against its enemies on an excessively fetid fluid which is secreted in glands near the anus, and which when assailed it squirts forth with considerable force. It is almost impossible to remove the odour from clothes, and so loathsome is it that dogs flee at once and rub their noses on the ground till they bleed. The odour of even a dead skunk has been known to cause a nausea to the inmates of an apartment with closed doors and windows at the distance of 100 yards. Coons, weasles, minks, gophers, and moles also exist in the province, but are not reported as being extra destructive.

Deer are Plentiful,

and when they come down in large numbers are very destructive to fruit trees, peas, and garden crops. Nevertheless these are not looked upon as mitigated evils, and the settlers are often more pleased than otherwise to get a visit from them. A good supply of venison is at all times a very desirable adjunct to a settler's larder, and it very seldom happens that a British Columbian farmer is without a good supply. Many people shoot the deer at night by the aid of a torch or a miner's lamp, the animal's position being betrayed by the glitter of its eyes. Only one cannot always be sure that the eyes belong to a deer. Rabbits and Arctic hares are also to be found, but, except that during snowstorms they are apt to girdle or bark fruit trees, they are not looked upon as a pest. Amongst birds magpies and blue jays are

reported as great pests. They destroy all kinds of fruit, especially the best kind of apples, pecking holes in them, which cause them to decay. They are also very destructive to potatoes, digging them up and carrying them away. In fact, these birds are always in mischief, but powder and shot keeps them in subjection, so that they need not necessarily be allowed to increase. Insect pests are more numerous than in the old country, wire-worms, caterpillars, grasshoppers, cutworms, potato bugs, turnip fleas, wasps, mosquitoes, gad-flies, botflies, sheepticks, aphids or planthouse or apple tree borers, onion maggots, &c., being amongst the most common.

Plant Diseases

are quite common, and sometimes cause great loss, potato blight and rot, smut of potatoes, smut in grain, peach yellows, gooseberry mildew, pear-leaf blight, black scab on apples, mildew on peas, &c., being amongst the worst pests. The Government, however, are at much pains, and spend a great deal of money in employing experts to inquire into the cause of these diseases, discovering the preventives and remedies, and disseminating the discovery of these cures amongst the farmers. For potato blight a spraying with the Bordeaux mixture is recommended. The mixture consists of four pounds of copper sulphate (blue vitriol), six pounds of freshly slacked lime, and twenty-two gallons of water. For smut in grain one pound of blue vitriol is recommended to be dissolved in a pailful of hot water, and sprinkled over ten bushels of wheat. Should a large amount of smut be detected in the grain required for seed the solution is made stronger—double the quantity of bluestone being used. Another cure is to soak the seed grain for fifteen minutes in a salt brine of the usual strength for pickling pork—that is, as strong as float a fresh egg. For gooseberry mildew experiments conducted last summer have resulted in the discovery that the most successful treatment is with sulphurate of potassium, spraying the bushes at an early date with one half ounce of this substance dissolved in a gallon of hot water. For black scab in apples and pears the following mixture is recommended:—Into an ordinary vessel capable of holding a gallon or more put two ounces of carbonate of copper and one quart of ammonia (ask your druggist for strong ammonia). When the copper is completely dissolved pour the mixture into a barrel, and add twenty-five gallons of water. The solution is then ready for use. Spray all over the tree with a syringe or force pump.

Diseases Amongst Horses, Cattle, and Sheep

are not so prevalent as at home. Still, there are some ailments which affect animals and give scope for the exercise of the skill and science of the veterinary surgeon. Glanders in horses and hog cholera in pigs are reported as the most serious contagious diseases existing in the province. Whenever an animal is discovered to be affected with any of these complaints it is at once slaughtered and the carcase burned. Last year fourteen horses, one mule, and one hundred and sixty-three hogs were discovered affected, and ordered to be slaughtered. Cases of distemper and epizootic diseases are reported as prevailing amongst horses in some districts. No contagious diseases are reported as existing amongst cattle, but red water jump jaw, puerperal fever, and lung worm in calves sometimes carry off a few of them. Fluke, scab, and rot sometimes affect sheep. Weeds are a great bother to British Columbian farmers, the geniality of the climate and the great fertility and productiveness of the soil seeming to foster their

rapid growth and spread them all over the country. The Canadian, Scotch, and sow thistles are reported to be the most noxious and persistent. Foxtail, sorrel, burdock, millet, dock, groundsel, nettles, fire weed, wild chicory, wild buck wheat, wild oats chickweed, wild mustard, wild parsnip, oxeye daisy, wild sunflowers, Chinese turnip, dandelion, camomile, and wild carrot or golden rod are all more or less troublesome. Pig weed, lamb's quarter, tumble weed, and stink weed are most noxious weeds and difficult to eradicate, and by their great productive powers, if neglected, soon spread to an alarming extent. So cognisant is the Government of the great danger of allowing weeds to propagate that very

Stringent Laws

have been enacted compelling settlers to keep them in check. But in spite of the long array of troubles and pests enumerated, I do not imagine for a moment that British Columbia is in a worse plight with regard to any of them than any other newly-settled country possessed of such a genial productive climate and other natural facilities; indeed, with the exception of the wild animal pest, no worse than our own island of Great Britain. Her insects, fungoids, and other plant diseases may be quite as numerous as ours, or even more so, but she has the advantage of us in having the Government carefully investigating into the causes of these pests, and prescribing the means of prevention and cure. How valuable it would be to us if our Government would adopt some such measures. She has the advantage of us in the keeping down of weeds, seeing that Government compels their annual destruction—a measure we stand very much in need of. Her cattle are very much healthier than ours, being subject to no infectious disease whatever, and, indeed, to no other kind of disease worth mentioning. Wild animals may be in excess as compared with our country, but the destruction of these is encouraged by liberal bounties from Government, and as the province gets settled up, so will these animals be extirpated or retire back into the mountains, and give the settlers no trouble. Taking, then, the Province of British Columbia and the Island of Vancouver, with their advantages and troubles as a whole, the former being certainly in advance of those of Great Britain, and the latter not much, if any, worse, it becomes

A Matter of Taste and Opinion

whether our farmers are better to continue as large tenants here, or go out and become small proprietors there. The money required to stock and carry on a farm of 200 acres here, would purchase and run an estate of 50 acres there, and as I have already shown, 50 acres judiciously laid out and attended to there, would bring in as much money annually as 200 acres would here, and dispose of the question of rent altogether.

IN THE NORTH-WEST TERRITORIES.

THE GREAT PRODUCTIVE WHEAT BELT.

(From the Dundee Courier of October 31.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Having in my last four letters dealt pretty conclusively with British Columbia and Vancouver's Island, I will now leave the shores of the Pacific Ocean, and, commencing my homeward-bound journey, will ask my readers to come in imagination with me over the Rocky

Mountains. Amongst their eastern slopes we will for some time to come roam in fancy over the almost boundless prairies, broken only in their monotony by an occasional bluff or summer-dried coolie, and until not many years ago the uninhabited hunting grounds of the uncivilised red men and the home of the wild bison, or American buffalo, the latter now altogether extinct, and only telling the tale of their recent existence by their trails and wallows, which are yet everywhere visible on the green sward, and by their bones, which meet the eye of the traveller on every hand, bleaching in the sun, and the former, judging by statistics, fast following in their wake to be also soon an extinct race. If any one will turn up a map of North America printed about the beginning of the present century, they will observe a vast portion in the middle of that Continent lying north towards the Arctic Seas marked "unknown," and it is this great district, then scarcely known to Europeans, and now known as the north-west territories of British America, that we have to deal with. These territories are bounded on the west by the watershed of the Rocky Mountains, which divide them from the province of British Columbia, on the south by the international boundary line, which divides them from the United States, on the north by the waters of the Arctic Seas and Hudson's Bay, and on the east by the provinces of Ontario and Quebec. But though adjoining to, and indeed bounded by the two latter named provinces, yet they are separated from them by a vast extent of forest lands, which for many years proved an insuperable barrier to the westward march of the white men, the first British subjects to penetrate the north-west provinces, having reached them by way of Hudson's Bay. This great extent of forest lands was for long known as

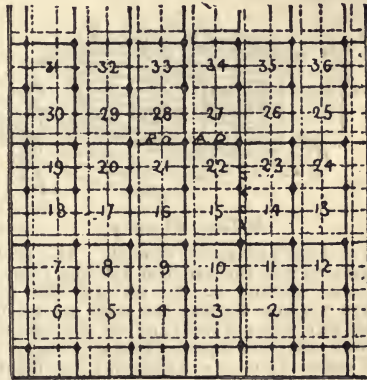
The Back Woods of America,

and extend from the north shores of Lake Superior to the Arctic Seas, with an average breadth of 800 or 1000 miles, and it is from the western boundary of this great forest, and from that to the Rocky Mountains, that the north-west provinces of British America are situated. They contain the provinces of Manitoba, with an area of 73,956 square miles; Assinibioia, 89,535 square miles; Keewatin, 282,000 square miles; Saskatchewan, 107,092 square miles; Alberta, 106,100 square miles; and Athabaska, 104,500 square miles, or all combined nearly nine times the size of England and Scotland put together. Keewatin and Athabaska lie far to the north, and are becoming famous for the richness of their mines, and also supporting a large population of Indians and half-breeds in hunting for fur-bearing animals; but as these districts are as yet beyond the scope of present cultivation, my investigations did not lead me in their direction, my travels being directed through the provinces of Manitoba, Assinibioia, Alberta, and Saskatchewan, all these being situated within what is known as the great productive wheat belt. The whole country is surveyed and divided into

Townships,

i.e., a tract of country six miles square, containing 36 sections of one square mile each. These sections are all numbered consecutively from 1 to 36, and for the convenience of settlers each section is subdivided into quarter sections of 160 acres each. Sections 11 and 29 in each township are set aside for school purposes, and are known as school lands. Sections 8 and 26 in each township belong to the Hudson Bay Company. The even-numbered sections are set apart by the Government as free grants to settlers, and the odd-numbered sections

are set apart for sale. For twenty-four miles along each side of the great lines of railroads the odd-numbered sections have been granted to the railway companies as inducements to them to extend their lines into hitherto unsettled districts, and in such cases the lands are usually offered to the public at reasonable rates. Free homesteads of 160 acres

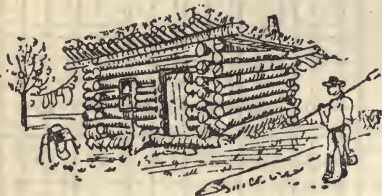


each may be obtained by any person (male or female) who is the sole head of a family, or by any male who has attained the age of 18 years, on either of the following conditions:—(1) By making entry and within six months thereafter erecting a habitable house and commencing actual residence on the land, and continuing to reside on it, for at least six months in each year for the three next succeeding years, and doing reasonable cultivation during that period; or (2) by making entry for the land, cultivating it for three successive years, so that at the end of that period not less than 40 acres be under cultivation, residing for at least six months in each year during that time within a radius of two miles of the homestead, and erecting a house upon the homestead and residing in it for three months next preceding the application for patent; or (3) by making entry, and within six months from the date thereof commencing the cultivation of the homestead, breaking and preparing for crop, within the first year not less than five acres, cropping the said five acres, and breaking and preparing for crop not less than ten acres in addition, and erecting a habitable house thereon before the expiration of the second year, and thereafter residing thereon and cultivating the land for at least six months of each of the three years next prior to the date of application for patent. The only

Charge for a Homestead

of 160 acres is the entrance fee of \$10, equal to £2 sterling, and to induce parties to settle on the land the following bonuses are offered by the Government to those taking up land within eighteen months of their arrival in the country, viz:—\$10 to the head of a family, \$5 for the wife and each adult member of the family over twelve years, and a further sum of \$5 to each adult member of the family over eighteen years of age taking up land within the specified period. To those who actually wish to become settlers there is no difficulty whatever implied in these homestead duties. In every district in the North-West there are yet thousands upon thousands of acres upon which the settler can make choice of his farm where no updigging of roots is necessary or unearthing of stones, the land

being a green level sward. The plough, with two light horses or team of oxen, is sufficient in most cases to do the breaking, nor is the obligation of erecting a habitable house an undertaking which need frighten settlers, as it may be of the most simple and primitive description, the erections being for the most part of wool, a sufficient supply of which is given by the Government free. For a single man



A Log Shanty

is the cheapest and easiest erected. It is made of logs squared with the axe, laid the one above the other and notched at the corners, the spaces between the logs forming the walls are carefully clinked with pieces of wood and are then plastered over with clay, and if properly done the shanty is as warm and comfortable as a stone and lime building. The entire work can be done by the settler himself, although it would be as well to get the assistance of some one who knows about the work, the only outlay will be for the windows and planks for the floor and door and also the nails, the entire cost need not be over £2. For a married man a log-house is to be preferred. With the assistance of some one acquainted with the business and handy with tools the settler can in a couple of weeks finish the house, making it warm and comfortable. Such a house in size, say 12 feet by 16, can be divided into two bedrooms upstairs and a kitchen and sitting-room downstairs, the lowest cost of such



a building would be simply the cash outlay on boards and nails for flooring, doors, partition, and gables with four windows, and might be done for £10. In parts where timber is scarce,

A Better Style of House

can be built with sawn timber, with two rooms measuring 18 feet by 12 feet, for £24. Or a four roomed frame house, say 16 feet by 20, two bedrooms upstairs and kitchen and sitting-room below, will cost about £60. This is an average house, and will accommodate any ordinary family. Stables, barns, and other outhouses can be readily erected by the settler himself, the wood for these, as well as for fencing, being also supplied free. Should a settler desire to own a larger estate than the 160 acres given to him as a free grant he can generally purchase as much as he wants alongside, which, except in exceptional cases, such as vicinity to a town or the existence of valuable minerals, is generally offered by the Government at 12s per acre on easy payments spread over a number of years. Large areas of country called Indian

reservations have been set aside for the exclusive use of the Indians. These are oftentimes the best of the land, and as the Indians are restricted from the powers of sale, they cannot be purchased by or settled upon by white men. It oftentimes happens however, that the Indians desert these reservations, when, if they remain vacant for a specified period, they are advertised for sale by public competition, and the proceeds devoted for the benefit of the red men.

MORE ABOUT THE NORTH-WEST TERRITORIES.

EDUCATIONAL FACILITIES.

THE GAME LAWS SIMPLIFIED.

PRIMITIVE ROADMAKING.

POSTAL AND POLICE SYSTEMS.

(From the Dundee Courier of November 7.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—

Throughout the length and breadth of the North-West Territories the facilities for education are very superior, schools are already plentiful in all thickly-settled districts, and in any newly-settled locality any three ratepayers, two of whom shall be heads of families, may form themselves into a Committee to secure the erection of a school district, and may petition the Lieutenant-Governor for such erection, and, on his approval of the scheme, a poll of the ratepayers for or against it shall be taken. If the majority is favourable, the erection of the district into a school district will be forthwith declared. A school district must comprise an area not more than five miles in breadth and length, and must contain not less than four resident heads of families, and ten children of school age, which shall mean between the ages of five and twenty. The school shall be managed by a Board of Trustees, elected by the ratepayers, and it shall be the duty of the Trustees to select and acquire a suitable school site, as near as possible to the centre of the district, to engage a competent teacher, to have custody of all school property, and to make such assessment on real and personal property within the district as may be necessary to defray all lawful expenses connected with the

Management of the School.

Government aid is paid to every school organised under this ordinance as follows:—A grant of 75 per cent. of the teacher's salary to every school employing a teacher holding a first-class certificate from the Board of Education of the North-West Territories; a grant of 70 per cent. to a teacher holding a second-class certificate; and a grant of 65 per cent. for every teacher holding a third-class certificate. The balance is paid out of the proceeds accruing from the 1280 acres of land set aside in every section for school purposes, and if that should prove insufficient, an assessment is imposed to raise the necessary amount. No fees are charged from the children of ratepayers for attendance, but a small fee, only amounting to a few pence annually, may be charged for the attendance of those children whose parents are not ratepayers. All teachers are subjected to a rigid examination before being certificated and allowed to teach, and the schools are regularly and systematically visited and reported upon by a very efficient staff of inspectors. In addition to the public schools, collegiate institutes are provided for higher

education. These are maintained and governed in much the same way as the public schools. Although throughout the Dominion there is no established form of religion and no State-aided Churches, still the spiritual welfare and the education of the people are well provided for. Churches have been built and ministers placed in them in every populous centre, the ministers being chosen and paid by the people themselves. Presbyterianism is the most common form, but churches of all denominations are to be found, Episcopacy and Roman Catholicism being quite common.

The Game Laws

are very simple, no game license or gun license being required by any one whose residence is in the Territories, but a license of £5 is required by all persons not domiciled therein. The guest of a resident may obtain a permit free of charge for a period of three days. No description of game may at any season be shot, hunted, or taken on a Sunday, and trapping of any species of wild fowl, grouse, &c., is prohibited. Close time during which animals cannot be destroyed is as follows:—Deer, from 1st January to 1st October; grouse, prairie chickens, pheasants, and partridge, 1st December to 15th September; woodcock, plovers, and snipe, 1st January to 1st August; wild duck, sea duck, &c., 1st May to 1st September; otter, beaver, musk rat, and sable, 15th May to 1st October; marten, 15th April to 1st November. Offences against the Act shall be punished upon summary conviction on information or complaint before a J.P. or Police Magistrate. Lakes are very numerous throughout the North-West Territories, and the country literally swarms with water fowl, such as ducks, geese, &c. The prairie chicken, a fowl about the size of our pheasant, is also found in great numbers on the prairie. The buffalo has altogether disappeared, but bears can yet be found in the more secluded parts, as also can timber wolves and lynx. There are no wild horses east from the Rockies, all the numerous bands of these animals being tame and belonging to the settlers, and branded with their own mark. It is a very serious offence to allow a stallion to go at liberty on the prairie.

Roadmaking

is very far behind in almost all parts of the Territories. Coating with metal is never resorted to. Any making the roads get is in the way of formation, and is called macadamising, but there is very little of that. All the repairs they get is by statute labour, each settler or labourer being obliged by law to give so many days' work of himself and his teams annually. In our country, where our climate is so moist and our soil so soft, the roads, under such a lax system, would soon be impassable. But there the dry weather which prevails during summer, and the hard nature of the soil, renders them where there is a good deal of traffic as hard as iron and very smooth, and during

winter, when they are covered with snow and frozen over, they are very good indeed for sleighing purposes.

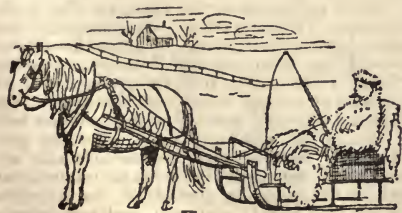
For a few weeks both in the spring and the fall of the year, however, when the weather is soft, they are very bad and almost impassable. Where slews or swamps have to be crossed large trees are laid down close together. This system of road-making is called corduroy, and, although it is rough and uncouth, it bears up the wheels of the vehicles and the feet of the horses, and answers the purpose very well. Roads are laid out parallel to each other, 66 feet being the breadth allowed by law. There is one mile distance between the north and south roads, and two miles distance between the east and west roads.

The Postal System

of Canada extends to every village and hamlet in the land. The ordinary rate in the Dominion and between Canada and the United States is 1½d per ounce, or fraction thereof, and to and from the United Kingdom 2½d per half-ounce. The newspaper postage in Canada is nominal, and there are parcel, sample, and book posts at cheap rates. The money order system is similar to that in operation in the United Kingdom. The commission charged on local orders ranges from 2 cents (1d) for 4 dollars (16s) to 50 cents for 100 dollars (£20). Money orders are also issued payable in the United Kingdom on the same terms as those charged on similar orders issued in Great Britain payable in Canada. The telegraph system is in the hands of public companies chartered by Act of Parliament, and the rates are moderate. For a message sent by me from the town of Vancouver—the farthest west town on the mainland of British America—to Dundee the sum charged was 7s 6d. The telephone is also in very active operation in most of the towns and cities of Canada, and is used to a very great extent, the number of telephone messages sent yearly being about 64 millions. For the maintenance of law and order a force called

The Mounted Police

is employed. This force consists of 50 officers and 1000 men. The headquarters are at Regina, and there are stations at all the principal towns and centres in the North-West. A thorough system of discipline prevails, and the men being all young, able-bodied, and active, and mounted upon splendid horses, this force has been found to be very efficient. Applicants for the force must be between the ages of 22 and 40, of thoroughly sound constitution, and must produce certificates of exemplary character. They must be able to read and write the English or French languages, must understand the care and management of horses, and be able to ride well. The term of engagement is five years, and the rates of pay are as follows:—Constables—First year's service 50 cents per day; second year, the same, with 5 cents per day added for good conduct; third year, the same, with 10 cents added for good conduct; fourth year, the same, with 15 cents added for good conduct; fifth year, the same—that is, 50 cents per day—with 20 cents added per day for good conduct, equal to 5s 10d per day. Members of the force are supplied with free rations, a free kit on joining, and periodical issues during the term of service. The minimum height is 5 feet 8 inches; minimum chest measurement, 35 inches; and maximum weight, 175 lbs. Married men will not be engaged. The colour of the uniform is a bright scarlet, with long top boots and spurs, cartridge belt round waist, and rifle. The men look very smart.



A SETTLER IN HIS SLEIGH.

University Degrees.

Each of the principal Universities of the Dominion grants degrees to students who have passed the qualifying examinations for physicians and surgeons, and no person is permitted to practise without a license from the provincial medical boards. The privilege is generally granted without examination to holders of diplomas or degrees in medicine and surgery from British Universities; and certificates obtained by teachers or schoolmasters in the United Kingdom are available in Canada when endorsed by the Minister of Education in the Province in which the holder desires to reside. The foregoing rules, regulations, and conditions apply equally to all the North-West Provinces of Canada. In my next letters I will take up the districts I visited in detail, and describe their grain-bearing and stock-producing capabilities.

ALBERTA AND ITS RANCHES.

THE PROVINCE AND ITS INDUSTRIES.

AGRICULTURAL FEATURES.

A VISIT TO ELBOW PARK RANCHE.

(From the Dundee Courier of November 14.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—

The provisional district of Alberta, situated at the base of the Rocky Mountains, embraces an area larger than that of Scotland, England, and Wales put together. Up to 1883 it had no direct communication with Manitoba or Eastern Canada, the postal service being then through the United States. The construction of the Canadian Pacific Railway, however, ushered in a new era, and it has now direct postal and railway communication with all parts of the world. Alberta is bounded on the north by the district of Athabasca, on the south by the international boundary line, on the east by the provisional district of Assiniboia, and on the west by the summit of the Rocky Mountains. It includes in its 107,000 square miles every variety of forest and stream, grazing and agricultural lands, with deposits of gold, coal, iron, and petroleum. Alberta is divided into two judicial districts, known as Northern Alberta and Southern Alberta. The northern district extends from the northern boundary of Alberta to Mosquito Creek, fifty miles south of Calgary, and the southern district extends southwards from Mosquito Creek to the United States boundary line. A Judge of the Supreme Court presides over each district, the Judge for the northern district residing at Calgary, and the Judge for the southern district

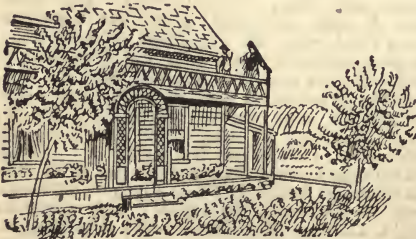
living at Macleod. Alberta was, however, formerly divided into three districts—Edmonton, Calgary, and Macleod—and as such they are still better known. The Edmonton district comprised all that part from the northern boundary of Alberta to a point on the Red Deer River, about 100 miles north of the town of Calgary. The principal town in the province is

Calgary,

which was established in 1883 on the advent of the Canadian Pacific Railway. It is situated almost in the centre of the district which bears its name. It nestles in a sheltered valley in the triangle formed by the rivers Bow and Elbow immediately at their confluence, and is surrounded on three sides by the waters thereof, and walled in on either side by high precipitous banks. The present population is put at nearly 5000, and it is doubling itself every two or three years. It has good hotel accommodation, good public schools, one high-class school, Protestant and Roman Catholic private schools, five churches, one public hospital. There are two electric light systems. Its water supply is obtained by pumping with steam from the River Bow. It has good sewage arrangements, and large and complete stores of all kinds of merchandise. The town is the distributing centre for a very large district of agricultural lumbering and mining country around. Within the last two years two new lines of railway have been constructed, and connect with the Canadian Pacific station at the town. One extends 200 miles north to Edmonton on the North Saskatchewan River; the other extends south to the Macleod ranching and Lethbridge coal mining districts near the United States boundary. A good supply of coal is also obtained from Anthracite and Canmore, situated in the Rocky Mountains, and, indeed, the whole district is underlaid with coal, and new mines are in the course of being opened up. Large lumbering industries have been established in the district, and ponderous sawmills are in active operation in the town, which provide a good supply of sawn timber, boarding, and scantling for house-building purposes, the making of furniture, and other necessary purposes. The trees from which the timber is obtained are cut by great

Armies of Lumberers in the Rocky Mountains,

dragged by oxen to the rivers, and floated down to the sawmills for perhaps two or three hundred miles. Most of the buildings are of brick. There is a good clay field near the town, and the bricks are burned in a kiln close by. A good many of the houses are of wood, and quite a large number are built of stone and lime, which are handsome and substantial. At a short distance from the town, a large slaughtering establishment and refrigerating stores have been erected, and thence the carcasses are sent in refrigerator cars by railway to the eastern markets, or westwards through the Rockies to the British Columbia towns. To the west, and within good view of the town, are the Rocky Mountains, ever beautiful, awe-inspiring, and majestic beyond description. Between these mountains and the town are the Foothills, extending northwards and southwards for a distance of 500 miles, with an average breadth of 100 miles. The valleys and hillsides, studded with numerous belts and clumps of wood and scrub, affording good shelter, and watered with innumerable rills and creeks, which take their rise in the mountains, comprised the choice feeding grounds of the American bison less than twenty years ago, and now re-echo to the soft music of the lowing herd and bleating flock. Arrived at Calgary on our eastward journey



FARM HOUSE AND GARDEN NEAR EDMONTON.

we resolved to lie over for a day or two on purpose to inspect the numerous ranches of cattle and horses in the surrounding district. Having made our arrangements before retiring for the night, next morning a police waggon, drawn by a pair of spanking bronchos, and driven by a mounted policeman in scarlet uniform, drove up to the door of the hotel. Accompanied by Mr Thomson, homestead inspector, as guide, we were driven away in the direction of

The Ranches,

which lie between the Bow and the Elbow. The day was splendid, although somewhat hot, the temperature at mid-day being 105 in the shade. Nevertheless the air was exhilarating and bracing, so that we felt no discomfort, it being entirely devoid of that heavy sultry feeling which makes a much lower heat in the old country so ill to bear. The soil for some distance around the town is thin and barren, with many stones of a whiteish colour lying about and protruding from the surface, and appearances would indicate that at some previous period inundations from the adjoining river had washed away the soil and left it bare and unproductive. Soon we reach higher ground and the soil becomes better, being covered at this season of the year with a pretty abundant vegetation of prairie grass, all brown and withered to the consistency of well cured hay, which provides a good nutritious bite for the numerous herds of cattle and horses which we see everywhere around here. On the higher grounds, which we soon reach, there is a great scarcity of water, and not many cattle are to be seen, but bands of horses, each numbering many hundreds, are frequently seen. Horses can travel much farther to water than cattle can, and cover a much more extensive area of country in search of their food. Bye-and-bye we come in sight of Elbow Park Ranch, and are passed by Mr Robinson, the proprietor, who has been at Calgary on business, and is driving at a great pace a splendid trotting broncho stallion in his buckboard. A word or two in passing, and we got a cordial invitation to pay him a visit. We followed on as hard as we were able, but though our redecoated driver plied the whip with a willing hand, we were soon left far behind.

Elbow Park Ranch

lies along the north bank of the Elbow River, which separates it from the Sarce reservation of Indians on the south side. Mr Robinson reports the Indians as quiet inoffensive neighbours. The Ranch is subdivided into large fields well-fenced, several of which are ploughed and seeded with oats, but as the district we are now in lies far up amongst the Foothills, grain seldom ripens, and is cut green for winter feed for stock, natural hay not being abundant here. Mr Robinson keeps about 800 horses on Elbow Park Ranch, and 1000 cattle on another ranch twelve miles farther up the Foothills.



HORSE RANCHING.

His cattle are shorthorn grades, which do well. He thinks, however, that they grow rather too much to bone, and to obviate this he intends to use Hereford bulls, which he believes will breed animals with a finer quality of bone, and more easily fed. His mares are mostly of the broncho breed, with a number of Ontario Clydes amongst them. He has four entire stud horses just now, which are kept in loose boxes same as at home. One is an old roan-coloured Shire, which has done good service, and left his mark on the stud. Another is a four-year-old pure-bred Clydesdale by Lord Erskine out of a Prince of Wales mare. This animal is said to be own brother to Lord Ailsa. He is a very good specimen of the breed, and is offering to breed well. The third is a pure English thoroughbred, and the fourth is a grade between a broncho and a thoroughbred, the latter being famed for getting fast-trotting roadsters. Mr Robinson has a good deal of housing about his premises, but only sufficient to house the winter-calved cows and weanlings. The whole herd of cattle and horses are wintered outside, being supplied in stress of weather with rations of oaten hay. Mr Robinson's death-rate among cattle is very low. Last year it was as low as 4 per cent. He is quite sure

No Pleuro-Pneumonia

exists in the province, and says that the atmosphere is so pure and dry that no lung disease of any description could be contracted, and that broken-winded horses brought from the eastern provinces, and let loose upon the prairie, soon recover, and become all right. Steers are kept to four years of age, and run from 1400 to 1700 lbs. on the hoof, and generally sell at 3½ cents per lb., or from £10 to £13 per head. To send live cattle from here to Montreal costs \$12 (equal to £2 10s) per head, and from here to Vancouver, on the west coast, costs \$15 (equal to £3) per head. Thus to bring oxen from Calgary to Glasgow would cost from £5 10s to £6 per head. Superior, well graded, good sized team horses bring from £15 to £25 each, and ordinary small-sized cayuse or ponies bring from £5 to £10 each. Having been invited by Mr Robinson to enter his domicile, we were shown the pedigrees of several of his Clydesdale horses. The documents signed by Mr MacNeillage, Glasgow, testified to their being genuine. After getting some valuable information as to the ranching business of the country generally, and being treated to a libation of mountain dew from the old country, we bade him a reluctant goodbye, and went away to inspect several other ranches in the same district, a description of which will form the subject of my next letter.

VISIT TO A KINCARDINESHIRE MAN.

A FARMER'S DAIRY.

THE HOUSING OF LIVE STOCK.

A NOVEL METHOD OF FENCING.

AGRICULTURAL PESTS.

(From the Dundee Courier of November 21.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Continuing our drive from Elbow Park Ranch, our next halt was at the ranch of Mr M'Pherson, a Scotsman from Banchory, Kincardineshire. Mr M'Pherson is a married man whose wife (a Scotswoman), three sturdy sons, and a daughter all reside with him on the ranch. He came to America in 1856, located in Ontario for a number of years, and came west to

Calgary some years ago. He keeps about a score of graded shorthorn cows and their followers. His wife superintends the dairy and makes butter for the Calgary market, the price for which runs from 10.1 to 15d per lb. Two-year-old steers sell up to £8 each. Mr M'Pherson has very good housing accommodation, and puts up his cattle in bad weather, feeding them with oaten hay and prairie hay, of which he is careful always to have a good supply. He keeps two Clydesdale horses—at least, he calls them Clydes, although I am doubtful of their purity, they being only middling sorts. His sons travel them through the district in the season, the fees charged being from £2 10s to £3 per foal, nothing being charged if there is no foal. He says they are badly bothered with timber wolves, which destroy quite a number of calves. Prairie wolves, or coyotes, are numerous, but do no harm, except occasionally amongst poultry. Near here is

A Cheese Factory

where a man and a boy are employed. The man attends to the working of the dairy, and the boy drives round with a waggon each morning, taking up the cans of milk from the farmers, and delivering them at the dairy, and taking back to them the whey and other bye products of the milk. Each consigner's milk is weighed on arrival at the dairy, and a careful record kept. The dairy is managed by a Committee of farmers in the district, who sell the cheese and divide the proceeds amongst the consigners, according to the quantity of milk delivered. The charge for working the dairy is 1d per lb. of cheese made. The average price of cheese at Calgary for the past few years has been 5½d per lb. Our next visit was to Mr Cullen, Springbank, the place taking its name from a good cool, natural spring of water, which rises at the foot of a bank a little way below the house. He keeps a good herd of shorthorn cattle, which he sells at two years of age fat, generally killing them himself, and selling the dressed carcass. The average weight is 760 lbs., the price usually obtained being 2½d per lb., or £8 per head. He grows oaten hay, and feeds his stock liberally during winter. He has extensive housing, and keeps his cattle in during bad weather, maintaining that all ranchers ought to be compelled

To Shelter Their Cattle.

His houses are built of great trees laid upon each other, and notched at the corners, poles being laid across the roofs, and the whole being covered with a certain thickness of straw, and clayed over. This makes a somewhat uncouth but perfectly comfortable domicile for stock. He keeps a good number of Berkshire pigs, splendid sorts, which have the run of a paddock with water, and are fed with grain and skim milk. His wife manufactures large quantities of butter, which sells freely at 10d to 1s 3d per lb. We had tea here, and I can vouch for the excellent quality and sweetness of the butter. I was surprised to find it so firm with the temperature approaching 110 degrees in the shade, but got my eyes opened in an unexpected manner. The supply of butter on the table being somewhat short, Mrs Cullen asked her son to replenish the dish. He shoved back his chair, and, lifting a trap door in the floor right beneath his chair, went down a stair to a cellar and brought up an ample supply of firm, cool, delicious butter. During summer this cellar is useful as a cold storage, and in winter potatoes and other commodities perishable by frost are placed. Mrs Cullen, like all other ranchers' wives, bakes all her own bread, and it was as good and palatable as though the loaves had come from the hands of a practical baker. She says that owing to the nutritive qualities of the prairie grass the

Milk is Much Richer

in butter fat than it is farther east the country, and that 21 lbs. milk will make 1 lb. butter whereas it requires 28 lbs. milk in Ontario. The land here is mostly all sold or taken up by settlers, but several of them would sell out if they got suitable offers. One farmer I met has 640 acres well fenced and partly broken, with good house, barn, and stable. He would sell at \$10 or £2 per acre. He has also 640 acres pre-empted alongside, unbroken and unfenced, which could be purchased at 12s per acre. This land is quite an average of the soil of the locality. The district being situated within easy reach of the Rocky Mountains, where abundance of timber can be got for the cutting down and hauling, the fencing of the fields has been well attended to, all the ranches in the district being well enclosed. The fencing is of a kind not often seen farther east. Two posts about 5 feet long are crossed within 6 inches of the top, notched, and bolted together. The posts are not driven into the ground, but merely set on the surface, quick rotting being thus obviated. Strong logs 15 feet long are set into the cross on top, and form the upper rail of the fence, three or four other logs being nailed down one side of the posts or trestles. This forms a very substantial, durable, and most efficient fence. The district all around here is terribly

Over-run with Gophers.

Indeed, to such an extent have they increased that they are looked upon as the worst pest the settlers have to contend against. The gophers are small animals, about the size of a squirrel, of a light colour, and bushy tail, which they carry over their backs just in the manner of a squirrel. These animals burrow in the ground like rabbits, and increase with amazing rapidity. Every green blade is a prey to their rapacity, and where they are numerous they eat the grass as bare as a mown lawn, and work immense destruction to cornfields. During the spring months, when food is scarce, and when they will eat anything laid down to them, the settlers destroy them with poisoned grain, the poison being supplied by the Government. All along the way we drove we saw them in myriads, sitting on their hindquarters with their heads erect, and staring at us until we were within a few yards of them, when they would pop into their burrows, and were safe. Hawks and kestrels are their greatest enemies, and on that account these birds are carefully protected. We saw

A few Rabbits

in this district. The rabbit seems to be a non-descript sort of animal, having some resemblance to the rabbit, some to the hare, and some to the kangaroo, and having no great resemblance to any of the three. It does not burrow, but will take refuge in a hole if hard pressed. It is about the size of our mountain hare, and runs with a sort of leaping, springing motion like the kangaroo. Garter snakes exist in the district, but they are perfectly harmless. I was told there were rattlesnakes, but nobody that I met had ever seen any of them. On the way back to Calgary we came along the ridge of a high mountain bluff, on which the grass was rank and uneaten, and were told it was too far from water to be frequented by either cattle or horses during the drought of summer, but that on the arrival of the rainy season, when the slews and coolies would be filled with water, innumerable herds of horses and cattle would find their way there, and luxuriate upon the rich grass converted on its feet into well-made and nutritive hay. We arrived at Calgary about dusk, and although our team of

bronchos had pulled the heavy waggon containing the five of us along Indian trails that never had got the slightest shadow of making or repairing for a distance of sixty or seventy miles still they were as fresh and lively as when we started, and pricked up their ears, and bowled us along without the least sign of fatigue, showing that they are

Of Good Bottom,

and very hardy and durable. They were of the common, rough, scrubby breed, rough in their hind-quarters, and having nothing to admire about them so far as their symmetry was concerned. Still they would make good, useful cab horses, and could be bought in any number at from £10 to £15. Arranging with our driver to hitch up another rig for us on the morrow to drive us to the Macleod ranching district, we retired to our hotel.

IN THE MACLEOD RANCHING DISTRICT.

INTERESTING EXPERIENCES.

A HORRIBLE INDIAN FESTIVAL.

A FINE GRAZING COUNTRY.

PROFITABLE DAIRY FARMING AND PIG-KEEPING.

AN AWKWARD PREDICAMENT.

(From the Dundee Courier of November 28.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—We put up for the night in the principal hotel in Calgary, and next morning, after getting a splendid breakfast of porridge and milk—the porridge made out of rolled oats, which we greatly relished—we sauntered along the street to find the Post Office in hopes of getting news from home. Every morning all the time we were away, whatever town we were in, we did the same, but found to our disappointment and chagrin that letters were like angels' visits, few and far between. The morning was fair, but the sun was obscured by a dense haze or mist, and to me it looked as if it was going to be a great downpour of rain, but we were told by the people of the place that the darkness proceeded from a bush fire in the mountains, and sure enough we then remembered that two days before, when coming east through the Rocky Mountains, we had passed through a great forest of fine timber all ablaze, and this was the smoke, more than a hundred miles away, that was enshrouding the district as if in a thick fog. Betimes our red-coated jehu drove up to the door of the hotel, and, our party being now augmented by some gentlemen farmers from Ontario, Mr Thomson, homestead inspector. Calgary, also hitched up his team of cayuse in his backboard for our accommodation, and, as it afterwards turned out, it was lucky for us that he did so. We

Started South

in the direction of the Macleod ranching district, and not far from the town we crossed the Elbow River on a substantial wooden bridge. I was seated on the dickey beside the driver, and for a time I must confess I saw very little of the country around, my attention being engrossed with the bad behaviour of our team of bronchos. They had only been once or twice in harness before, and were a pair of as wild, untamed demons as I ever sat behind. They had never been shod, and appeared as they had been very little handled. I soon saw it

was to be a regular fight for mastery between the driver and them, but I saw at the same time that he kept cool and collected, and that he was a stout, resolute young fellow who knew his business well. So he kept them well in hand, and sometimes by coaxing, sometimes by a good application of whipcord, he managed them admirably. He told me one of them would make a good horse, but the other was a mean skunk, and the sooner he was shot the better, nor would it have taken much to have made him carry out his threat. I knew he had his shooting-irons with him, and I would not have been a bit surprised though he had dropped the savage brute in his mad career. Evidence that such things are sometimes done was not wanting, for we passed four dead horses by the wayside that morning. On the way out we met a great number of Indians, who had been at

The Annual Sun Dance

farther east the country, and were returning to the Sarcee Reservation, about 10 miles south-west from Calgary. First came the bucks, riding along ahead like gentlemen. They had neither saddle nor bridle, only a loop of a small rope attached to the nether jaw of the horse, and a piece of skin laid upon the horse's back as a substitute for a saddle. I observed that they mounted the horse from the opposite side as compared with ourselves. The boys were in charge of the bands of loose horses. They were mounted on horseback, and were armed with short-handled long-tongued whips which they used very dexterously. Last of all came the squaws, who had charge of the camp furniture and papooses, their mode of conveyance being called a traivoie. Long poles are attached to both sides of the horse, and the ends trail far behind. The small ends of the poles are crossed over the horse's neck and fastened there, and immediately behind the horse a hammock or wicker basket is strung between the poles. Into this hammock the children and all their worldly possessions are packed. The old ladies were seated astride the horses, and urged them along at the hard gallop, and, although the children were getting

A Rough, Jolting Ride,

they were laughing and crowing with great glee, and seemed to be enjoying it very much. A number of foals whose mothers had the misfortune to be in the traivoies were running alongside, and accompanying the cavalcade were a number of dogs, which they breed and rear for food in times of scarcity. These barked quite furiously at us in passing. Their herd of horses were of a somewhat mean order, small, droop-rumped creatures that would not draw above from £2 to £4 when at their best. They are, however, a hardy, mettlesome race, and will stand any amount of work and hardship. They are of all shades of colour—blacks, browns, greys, sorrels, chestnuts, and cream-coloured. Cream or lavender is the favourite, but chestnut is the most common.

The Indian sun dance is a horrible annual festival, and as I had a description of it from an eye-witness a recital of it will not be uninteresting. It takes place about the end of June or the beginning of July, when the whole Indians, male and female, for twenty or thirty miles round, gather to the place appointed, and pitch their camps in the vicinity. First a hole is dug in the ground, then the largest tree to be found within easy distance is cut down, hauled, and the stump end placed in the ground. An outer wall is then made, with many similar ones at regular distances. From these to the large centre-post rafters are strung. Then the whole is covered with green foliage, a large doorway being left open on the east

side facing the sun. When they are engaged hauling the trees to the sun lodge, three or four well-mounted bucks will drop their lariats over the stump end, the other end of the rope being attached to the horses' weatherlock. Then off they go, legs going, arms flying, laughing, shouting, and yelling, followed by a number of others, who discharge numerous shots among the leaves of the fallen tree and in the air to drive away the devil. The

First Part of the Dance

is the presenting of six virgins by the head chief to the sun as a token of the moral standing of the tribe. Then follows the making of braves, only one being made at a time. He, by a pre-arranged plan, finds his way to a place at the west side of the tepee, occupied by the medicine men, who perform the transformation act. While this is going on they are hidden from view. Suddenly the candidate for honours appears on the scene, a most perfect demon painted most hideously. Each aspirant wears different colours, and is almost nude. On either side of the breast can be seen two cuts, with blood oozing therefrom. Through these a skewer is passed, and between the shoulder blades a similar cut and skewer are seen. From the centre pole hang two light ropes, generally strips of untanned hide, a loop at the end of each. These loops are placed over the skewers on the breast, and a large turtle shell is hung by a cord from the skewer on the back. A whistle is then placed in his mouth, and the tom-toms strike up a hideous kind of music. Then the young man's father, friend, or relative steps forward, and every sound is silenced when he, in a continued flow of native eloquence, relates much of the young man's past, predicts his future, tells of his brave ancestors and their deeds, and ends by

Calling upon the Great Spirit

to protect him always. And now the real business begins. The tom-toms again strike up, the candidate keeping time to them with the whistle in his mouth, and beating time with his feet. He gradually creeps closer to the centre pole, and, bending himself back till his body reaches an angle of 45 degrees, the whole weight being now supported by the particles of skin under which the skewers pass, he, hopping up and down to the time of the tom-toms, moves along in a quarter circle. The skin on the breast is now stretched away from the flesh like a piece of elastic, and on he goes bobbing and whistling, when suddenly the skin on the breast gives way, and down he falls, but suddenly springs to his feet like a jumping deer, and stalks majestically away, and takes his place among the fighting men of his nation. Only those who successfully pass through this ordeal can take a place among the braves. Should they fail or faint they are squaws, and not considered fit to associate with the men of the council. All this time we have been bowling southwards at a great pace, up and down, over the east and west spurs of the Foothills. There are big ranches here, and all along the way is a fine grazing country, and one which affords almost perfect shelter for stock in the winter season, for, no matter which direction the wind blows from, it is an easy matter to find a lea corner behind the rugged rises or amongst the numerous clumps of wood which everywhere abound. Water is also plentiful, for in the hollow of every valley between the ridges is a stream or creek which, taking its rise in the Rocky Mountains, has an everlasting supply, even in the driest summers, from the melting of the snow. Generally speaking, there is not much cultivated land around here, and on a ranch proper the plough is seldom put into requisition, but on

Dairy Farms,

a great many of which we pass, where, perhaps, from twenty to thirty cows, with their followers are kept, a good extent of land around the homestead is cropped, generally with oats. The altitude is, however, so high—3500 feet above the level of the sea—that the ripening of the grain is very precarious, and no dependence is placed on it as a marketable commodity. Any grain that is reaped is gristed and fed to the pigs, and, along with the skim milk, makes splendid hogs, averaging from 20 to 30 stones per dressed carcase, and selling at 3½d to 4d per lb. Thus, the feeding of pigs is very remunerative, and from fifty to a hundred are kept upon every farm. The great bulk of the crop is, however, cut green, and converted into oaten hay, which makes good winter feeding for the dairy cows. The dairy industry, too, pays very well, for, considering that the land is obtained or held for little or nothing, and considering also that from 10d to 15d per lb. is readily obtained for the butter (quite as much as at home), and 5½d for cheese, such an industry must be far more profitable than in Britain, where high rents have to be paid for the land, and the cost of working is very much greater. Continuing our drive through scenes of this kind, we reach the open prairie, where no cultivation is to be seen, and where houses or homesteads are from six to ten miles apart. The whole district is

One Unbroken Expanse

of grass and flowers, with an occasional patch of low scrub, composed of Saskatoon bushes, on which a most delicious fruit, about the size of a gooseberry, called the Saskatoon berry, grows in great plenty. This is the berry which the Indians mix amongst their pounded meat in the making of pemmican, and which gives the compound such a delicious flavour. The vegetation is mostly composed of buffalo and bunch grass, which affords very nutritive feeding to the numerous large bands of horses and cattle which we see all round here. Traces of the extinct buffaloes are seen on every hand, trails deeply indented in the surface—just like sheep walks on our home pastures—all leading in the direction of watering-places, to which the buffaloes had wended their way in Indian file to quench their thirst. Numerous buffalo wallows, where the bulls had, in their playful moods, scooped out circular hollows with their fore feet and horns, and numerous skeletons lying where they had fallen victims to the murderous rifles of the Indian hunters, shot down in thousands for the sake of their skins, all testify to the vast numbers in which these bovines had existed at no distant date, although the place that knew them now knows them no more. We were now out of sight of all human habitation, and speeding at a great rate along a declivity where there was no trace of a roadway or trail. Just as we had descended the north bank of a summer dried coolie, and had struck the ascent of the southern bank, the spokes of one of the wheels of

Our Char-a-banc Collapsed

like the ribs of an umbrella in a gale of wind, and we were all thrown out upon the grass. Hastily picking ourselves up, feeling ourselves all over to ascertain if any bones were broken, and being satisfied that no personal damage had been sustained, we burst into a hearty laugh at the somewhat awkward predicament we were in. No house was within sight, we did not know where to find one, and our hotel was 35 miles behind us. We all concluded, therefore, that we were in for a night's camping out, which, so far as the weather was concerned, would have been no great hardship. But unfortunately we saw more serious troubles in

store. We had no provisions with us, except, indeed, a small refection of the liquid element which experience had taught us never to be without, in order to counteract the bad effects of the alkali with which the drinking water was generally impregnated. Worse than all, the mosquitoes were paying us most assiduous attentions, so much so, that it became a matter for calculation how much of us would be left if we were to be food for them for a whole night. However, we resolved to make the best of a bad bargain, and how we got out of the fix will be related in my next letter.

A VISIT TO QUORN RANCHE.

COW-BREAKING EXPERIENCES.

A "ROUND UP."

THE COWBOYS OF CANADA.

(From the Dundee Courier of December 5.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—In my last letter I finished by relating the breakdown of our conveyance out on the prairie far away from any human habitation, 35 miles south from the town of Calgary, amongst the foot hills of the Rocky Mountains, and how we expected we would have to camp out all night. We were holding a pow-wow amongst ourselves as to what we were to do, when Mr Thomson, homestead inspector, drove up, and took us out of our difficulty. He had his buckboard (a four-wheeled machine to carry two persons), to which was hitched a team of hardy chestnut cayuse. He informed us that Quorn Ranche was not very far away, but that a river (Sheep Creek) lay between us and it, and he advised that we should all proceed in the direction of the ford, and he would ferry us over one by one with his buckboard. He asked me to jump up beside him, telling the others to follow in his trail, the marks of the wheels being easily discernible amongst the rank grass. Accordingly, I was set down on the south side of the river, and he turned back to do the same service to the others. I got upon a trail, and followed it on alone until I came to

Quorn Ranche.

On approaching the buildings the first thing that attracted my attention was a stalwart, good-looking young fellow, 6 feet 2 inches at least, quenching his thirst at a pump which stood in the yard. Thirst is contagious (at least I believe so), and stepping up to him I asked if the water was good, and got the answer, "Very weak, sir, very weak." I said that might be amended by-and-by, but I was sorry I did not have my pocket pistol with me just then. I gave him my card, and we got into conversation, when he told me that he was the grandson of an Irish Baronet whose name I am not at liberty to mention, and that he had friends in Pofarshire in good positions, to whom he asked me to present his compliments on the first opportunity. Dick was very pleased to see a Scotsman, and in the absence of the manager did all he could to show me ranche life. He and another man were engaged

Breaking in a Cow,

and a most laughable farce it was. The milk on the ranche had run short, and a cow that was suckling a calf, and had never been handled before, was brought into the carrol. When I arrived she was jammed up between a wall and a big gate or door, and they were busy buckling hobbles upon her feet. Her four feet were then strapped so closely together as would just allow her to take short steps, but be unable to run. Two lariats were then thrown over

her horns, and she was relieved from her confined position. Dick walked before with the end of one lariat in his hand, and the other man walked behind and held on by the other lariat. Then Dick led her forward, and when she attempted to go too fast the other man held her back, and she had rather a bad time of it between the two. She was awfully fierce, and struggled and bellowed most desperately, pawing up the soil with her forefeet, and even lying down in her endeavours to get free. Often she attempted to charge her guards, but her every movement was watched and checked, and she had to submit. After a time they led her into the byre, where she was tied up and given

Her First Milking Lesson,

the hobbles preventing her from kicking the operator. Half-a-dozen big, powerful hounds were lying about the premises; they were of a grizzled grey colour, quite as tall as staghounds, but double their weight. They are kept for the purpose of hunting down the timber wolves which come from the mountains in great numbers, and would do a vast amount of damage amongst the stock if not scared and kept back by the hounds. Bears sometimes come down from the mountains, and the hounds are sent after them, but, strong though they be, they are no match for Bruin, and one stroke from his powerful paw would kill the best of them. They are therefore taught not to attack him in front, but to molest him in the rear by biting his heels, which causes him to turn in self-defence, and by this means he is detained until the cowboys come up and despatch him with rifles. There are 96,000 acres of land upon Quorn Ranche, which is leased from the Canadian Government at

A Halfpenny per Acre.

The stock consists of 1200 horses and 2000 cattle. When stocking the ranche the company purchased and imported 300 good upstanding carriage mares from Ireland, and purchased, regardless of cost, ten first-class thoroughbred stallions from England. The stallions are kept in loose boxes same as at home, and are well fed and attended to, a thoroughly practical English groom having been engaged and taken out to superintend these duties. The horses were all shown out to us, and I admired them very much. "Eagle's Plume" is considered the best. He is breeding remarkably well, and his offspring, both male and female, are greatly in demand for breeding purposes. When his services are let a fee of \$100 is charged. "Acrostic" is also a splendid sire. He was imported from England in 1884 after winning the Ascot Hunt Cup. But it is invidious to individualise where all are so good. Such excellent parents cannot fail to breed well, and the colts of the Quorn Ranche are fast becoming famous throughout Canada, and at the annual draught sales are much on demand. A great many of them go for remounts to the Mounted Police, the average price at four years of age being £25. Mr Thomson volunteered to drive me over the ranche, and, Dick having saddled and mounted his bucking broncho, we sallied out for

A Round-Up.

We passed through some beautiful glens of really excellent pasture. It was brown and withered, to be sure, as all the grass on the prairie is at this season of the year, nevertheless it was plentiful and nutritious, as the horses, with their sleek, glossy coats, and actually rolling in fat, and the cattle, all thick fat, amply testified. The sward is composed of buffalo and bunch grass, both very nutritious, and well mixed with pea-vine, a herb something like our Scotch tare, with leaves and pods almost similar. It is a sweet, nutritious plant, much relished by horses, and of excellent feeding

qualities. After proceeding some miles Dick gave a shrill whistle, upon which two mounted cowboys made their appearance from a clump of wood about a mile distant. He signalled some instructions to them, when they again disappeared, and shortly afterwards a great mottled

Band of Horned Cattle

came in sight, descending from the crest of a bluff far away on the right. We drove on to meet them, when Dick displayed some splendid horsemanship in rounding them up, his long whip with a terrible crack swishing along the sides of any obstreperous bullock that tried to break away from the band. At last they stood in a bunch, perfectly subdued and quiet, but they had an unsettled glitter in their eyes and a wild, untamed look about them, which intimated that they were ready to make a stampede on the slightest opportunity. There were three hundred four-year-old beef steers in the band—big, strong, thick-fleshed animals, a little rough in the bone perhaps, and not exactly the kind that would sell at the highest price per hundredweight here, yet withal good fleshers' beasts, the majority of them showing evident signs of careful grading up. They were all shorthorn grades, or Durhams, as they are called out West. According to my judgment, they would weigh about 12 cwt. on the hoof, and they were sold the day before I was there at £8 sterling per head. Fourteen cowboys are kept on the ranche during summer and ten during winter. Cowboys they are called, but if these are

The "Boys" of Canada

I wonder what like they will be when they are men—six feet every one of them, with great development of bone and muscle, hardy, active, young fellows all, and, oh! such splendid riders. This is the class of men from which Buffalo Bill picked his Broncho Busters who so astonished the natives of this country some two years ago, and how different they are from the befringed and long-haired genus which we have so often read about.



A "BRONCHO BUSTER" RIDING A BUCKING HORSE.

Why, these fellows have actually linen collars, and clean ones, too, peeping out from above their jumpers! They wear blue overall breeches and blue jumpers, and the only signs that betray their occupation are the big felt hats, and the lariats hanging in a neat coil from their big saddles.

Speaking about bucking horses, it is a remarkable fact that all the native horses contract this vicious habit, and even the offspring of imported horses, if brought up on the prairie, are all more or less addicted to it. When going at full speed they will stop all of a sudden, with their forefeet firmly planted before them, head down, and back arched. Then they will leap up with all fours off the ground, with their back arched and rigid, and their heads almost touching the ground, and unless the rider have a thoroughly secure seat he is sure to be thrown. So thoroughly secure, however, are these cowboys' seats in the saddle, and so excellent horsemen are they, that the wildest horse on earth cannot pitch them off, and these broncho busters are never more at home or more in their element than when mounted on the back of one of those vicious bucking bronchos.

MORE ABOUT RANCHING.

"POT LUCK" AMONG THE COWBOYS

HOW SOME RANCHES ARE MANAGED.

CANADIANS AS CATTLE-BREEDERS.

(From the Dundee Courier of December 12.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—

The cowboys on Quorn Ranche are paid an average rate of £6 per month, with rations. The value of the rations is not easily computed, but from what I saw I have reason to believe they live on the best the land can produce. They had no idea that we were to pay them a visit, and were in no way prepared for us, but asked us in to get a share of their dinner. We therefore got "pot-luck" as it were, and a better spread table no one need desire to sit down to, a whole leg of a heavy, well-fed calf being roasted, followed by rich, delicious puddings and fruit. A special cook from England is engaged. He is a married man, and in conversation with his wife, who sat at table with us, she told me she had not seen another woman for two years. There is a good deal of carrol accommodation about the ranche, and a few sheds, but the shedding is only meant for a few exceptional animals, such as milch cows, broken horses, and weaklings of either species, so that the whole herd of cattle and horses may be said to be

Wintered Outside.

It is said that, owing to the warm chinook winds from the Pacific coast, the snows never lie deep, and that stock have never any difficulty of obtaining their food; but, even granting this to be the case, I hold it is downright cruelty to animals to keep them outside with the thermometer oftentimes down as far as 30 degrees below zero, and I am sure the death-rate would be considerably reduced were shelter provided during night, and such quantities of natural hay put up as would be a bite to the stock during heavy storms. There need

be no difficulty in obtaining plenty of hay, as any portion almost of the prairie would yield a heavy swathe with a mowing machine, so that the hay would cost no more than the labour expended on the curing. I am aware that

Ranching in America

just now is reported as being far from lucrative, and this knowledge made me most careful to inquire very minutely into the facts and prospects concerning the ranches. I am thoroughly convinced that they ought to yield a good profit, and if they do not there is something very far wrong with the management. Upon Quorn Rancho 25 acres are allowed to summer and winter each head of cattle beasts; the land would keep far more, in fact, it looks as if it were never eaten. The object, however, is to keep the grass rough and rank so that the stock may have no difficulty in getting at it amongst the snow. But, even allowing this large area, as the rent of the land is only one cent per acre, that is only one shilling and a halfpenny each beast costs for keep annually, and if kept till four years old, the cost of the food he has eaten all the days of his life only amounts to four shillings and twopence. If at this age he is worth £8, as just now they really are, surely it is impossible that the balance can all be frittered away in management and attendance. From what I learned, however, the management of too many ranches is

From the Billiard Table

of the hotel, perhaps some hundreds of miles away, and when that is the case it is little wonder though things go to the bad. But let a man with the necessary capital take up a rancho on his own account, and look after his own interest with as careful an eye as stockholders do in this country, then I have no hesitation in saying that I know of no investment that would pay better. To follow up this subject still farther, and see what relation the production of beef in the M'Leod district bears to its production in the old country, I may mention that to bring a steer from Calgary to Montreal by rail, a distance of 2200 miles, would cost £2 10s; ocean freight from Montreal to Glasgow, £2; food and attendance by the way, say, £1 10s, or perhaps £2—amounting to £6 10s altogether, which, added to £8, the value of the 12 cwt. steer before starting, makes his cost £14 10s, or 24s per cwt. live weight. So that, seriously speaking, I am not of opinion that we in this country have seen the worst in regard to the reduction of the value of our home production of beef by the importation of Canadian-fed cattle. It may be that just now our home animals are worth more per live cwt. than the Canadians are, seeing they are finer bred, but that is a defect which will soon cure itself. The very difference in value, as evidenced in our London and Glasgow markets, is showing the Canadian breeders the great necessity there is for

High-Grade Breeding,

and certainly they are upon the high road to attain that object, seeing that quite as high-class and finely-bred sires are being used in almost every herd as there are at home. It is only, however, by the rancho or prairie cattle bred upon those illimitable and almost free grazings, that I have fears of our home markets being flooded and prices still further reduced. In Ontario and other settled districts where cattle have to be kept upon the products of cultivation, I am not of opinion that they can be produced and sent here at cheaper rates

than have been prevailing for some time past. But we in this country, by our short-sighted policy of refusing to admit the cheap Canadian stores, are rejecting the only chance we have of holding our own against the ranchers, and giving the Ontarians an opportunity, of which they are not slow to avail themselves, of purchasing western stores and putting them up to feed upon their cheap grains, and be able to send the finished article to our markets and sell it at such prices as we in this country, with our dear-rented land, can never contend against. It seems to me that the prairies of America are pre-eminently adapted for producing the raw material—that, in fact, the bones and frame must be built up and formed of cheaper materials than we have at our command; and that our home products, which are ever so much more costly and valuable, must be devoted to the production of beef alone (not bones), which is really the commodity which constitutes the value of the animal. Our inspection of Quorn Rancho accomplished, we began to bethink ourselves about how we were to get

Back to Calgary,

which lay due north nearly forty miles distant. We learned that about ten miles due east there was a railway running north and south between Calgary and the coal mines at Lethbridge, and that a train was due at Okotox Station at 9 p.m. which would take us to Calgary. There was no spring conveyance of any kind about the rancho, the manager having the only one belonging to the place away with him; but Dick made a cowboy hitch up two heavy farm horses into the farm wagon to drive us to the station. It had four wheels but no springs, and the horses were yoked abreast with pole between. The horses had to be driven at a hard pace to get to the station in time, and as there was seldom any semblance of a road the ride was rough in the extreme—rougier by far, I am quite sure, than an Indian travois would have been. Darkness began to set in, and just as we were nearing Okotox an engine passed south the line. We wondered what could be the meaning of an engine going south just as our train was expected from the south, and when we got to the station we found the officials

In a Quandary

about it also. They had no telegraphic connection by which they could discover the cause, but thought there would be a breakdown somewhere in the south. There was no help for us but wait on, but, unfortunately, there was no waiting-room to wait in, and as we could get no intelligence as to when the train would come in we could not leave the station to seek shelter. Fortunately there was a store not far away kept by Mr Patterson, who, at one time, was a shoemaker in a village near Montrose, Forfarshire, and afterwards a farmer on Donside, Aberdeenshire. We stepped into the store to make some small purchases, and soon discovered that Mr Patterson and I had several mutual acquaintances in the old country, and talking about them soon made us fast friends. Mr Patterson says there is a better chance of a man getting on in the world out there than at home, and if one is steady and industrious he is sure to succeed. A great proportion of Mr Patterson's store business is done by barter with the farmers around, and in this line he has been fairly successful. At five o'clock in the morning the train arrived, and with right goodwill we responded to the conductor's cry "All aboard," arriving at Calgary at 7 a.m., making twenty-four hours that we had been away on our M'Leod Rancho inspection tour.

EN ROUTE FOR EDMONTON.

RAILWAYS AND RAILWAY TRAVELLING.

FARMING IN RED DEER COUNTY.

AN INFLUX OF SETTLERS.

TROUBLE WITH THE REDSKINS.

(From the Dundee Courier of December 19.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Our train from Okotox took us into Calgary at 7 a.m., and was due to start to Edmonton, whither we were bound, at 9 a.m. So we went to our hotel and had breakfast, and after packing up our baggage again proceeded to the station. Shortly the conductor's cheery announcement, "All aboard," warned us to take our seats. Edmonton lies 196 miles straight north from Calgary. On leaving the latter city the route is for some distance east the main line of the Canadian Pacific Railway (the C.P.R., as it is called). Leaving the main line, we cross the Bow River, and then the track trends in a north-east direction so as to get to the eastwards of the rolling spurs of the foothills. It then proceeds almost in a straight line northward over a country almost as level as a billiard table. We frequently cross rivers of considerable size, all flowing eastwards to join the Saskatchewan on its way to Hudson's Bay, but even the rivers do not detract from the levelness of the prospect, there being no valleys along their sides, the waters having merely cut a deep gully for a channel through the soft soil, and these being generally spanned by steel girders,

The Railway Track

is continuous along the flat surface with scarcely any cuttings or embankments. This line had been remarkably easy and cheap in its construction, a ditch merely being excavated on each side, and the soil taken out of it thrown upon the track and levelled. The ties or sleepers were then laid upon the soil, and the rails fastened to them with spikes, with no metal chairs such as we have in our home railways. I thought the construction very inadequate and unsafe, but it is the same throughout all America, and, in my opinion, in all that great Continent there is scarcely a mile of railway that our Board of Trade would allow a train to run upon. I understood before going to America that their speed of travelling was much faster than ours at home, but my experience is that it is very much slower. To travel the 196 miles from Calgary to Edmonton took us from 9 a.m. to 9 p.m., being a speed of barely 14 miles an hour, and even when travelling with the express upon the main lines we could never calculate upon a greater speed than 25 miles an hour. Nor are they particular in keeping up to their advertised time. The first thing passengers do on going into a station is to examine the blackboard in the booking-office window. Occasionally it will be written with chalk

"Train on Time,"

but oftener it will be marked several hours behind time. One morning when on the main line at the income of daylight I was awakened by the unusual stillness that prevailed. I dressed, and went out, and found the engineers busy cooling a hot box on one of the axles of the engine. There was no station or house of any description in view, and I had a good time of it for two whole hours picking strawberries on the prairie before the conductor's "All aboard" told me they were again ready to

start. Such delays would certainly not be tolerated at home, and in contrast to their rate of speed how different I found it on my first railway journey on my arrival home when travelling by the Flying Scotsman between London and Dundee. The distance of 434 miles was covered in ten hours, including two half hours spent by the way to allow of passengers taking refreshments. For some distance north of Calgary the surface vegetation has a white sickly appearance, and to a casual observer looks as if it had been attacked with mildew. There is, however, no mildew about it, the white appearance being caused by a thick growth of a weed called wormwood or sage, a plant having medicinal qualities and an acrid, bitter taste. This weed is not eaten by stock, and where it prevails to any extent it detracts very much from the value of the pasture. Large areas of the great plains in the drier districts are much overrun with it, and my opinion is that

Settlers should be Careful

not to locate themselves where it is prevalent. As we go north the wormwood weed gradually becomes thinner as the soil becomes thicker, and as we approach the district of the Red Deer River it disappears altogether, and the verdure assumes a green and luxuriant appearance. Up to this time we have not observed many herds of stock, but we have passed many rich hay meadows, where the farmers are busy with mowing machines securing large quantities of hay. In many places several machines are following each other, and on the same day, only a few hours after being cut, the teamsters come along and pitch, haul, and build it into monster ricks, which are drawn to a head in such a manner as to be safe from drawing water without any thatching. In the district through which we have been passing there are not many homesteads to be seen in the vicinity of the track, the settlers having mostly located a little bit farther west amongst the rolling spurs of the foothills, where nicely sheltered spots have been fixed upon for the erection of the buildings, and in most cases also the stock have been kept up amongst the foothills, so as not to destroy the hay on the plains. But whenever the hay crop is all secured, cattle and horses in almost incalculable numbers will be let down to luxuriate upon the rich herbage to be found there.

The Red Deer County

may be said to extend from 46 miles north of Calgary to 30 miles north of the Red Deer River, some 80 miles in extent, and extending east and west of the Calgary and Edmonton Railway from 10 to 15 miles, containing one and a quarter million acres of splendid agricultural land. The first 20 miles of this stretch of country north and south, or from Scarletts to the Lone Pine, is undulating prairie, free from brush, and well adapted for the growth of cereals, and it is said that roots wherever tried do well. From the Lone Pine north for 60 miles the country is park-like, dotted over with groves of spruce and poplar, and interspersed with numerous rivers, creeks, lakes, ponds, and hay sloughs. The principal rivers are the Red Deer, the Little Red Deer, the Medicine, and the Blindman—the first a mountain stream of 150 yards' average width, and a pure spring water; all the others originate in spring lakes along the line of the foothills, but some distance east of them. Many of these streams, or rivers as they would be called here, afford good water power, and sawmills are in active operation at every convenient centre. Up to within two years ago, when the railway was built, comparatively few settlers were to be found here, but its fame having gone forth settlers are

fast crowding into it. Even from the States

Farmers Are Coming In

great numbers to take up land here. Every male, if he be eighteen years of age, and a woman, if she be the sole head of a family, gets 160 acres of land from the Government for nothing, and if the settler breaks up a few acres annually for the first three years, and builds a habitable house on the holding, he gets his patent papers, and the land belongs to himself and his heirs for ever. Millions of acres around here are lying waste waiting to be sold, so that a newcomer has plenty of scope from which he can take his own choice in selecting a quarter section, and if he wants more than a quarter section (160 acres) he can purchase any quantity alongside at 12s 6d per acre, payable in instalments, spread over eight or ten years. This section of country is not what is properly known as a ranching country. The snow, often falling to the depth of 18 inches, and remaining for weeks together, endangers stock that are left to depend solely upon what they can procure for themselves, but for stock held in such numbers as can be housed or shelled and fed when occasion requires, it is

Unsurpassed on the Continent.

The grass is rich and abundant, the water is plentiful and pure, and wood for the erection of shedding and fencing is cheap and convenient. From Government statistics put into my hand I find the following yields recorded:—

Variety.	Bushels Per Acre.	Lbs. Per Measured Bushel.
Wheat, Defiance and Ladoga, ..	42	63
White barley,	55	56
Black barley,	35	70
Oats, Sandwich,	70	46
Oats, White Egyptian,	65	48
Oats, New Welcome,	60	48
Peas,	30	66
Flax,	23	60

Potatoes 400, and Turnips 600 bushels per acre.

The fuel problem is solved by the fact that, in addition to this district being fairly well wooded in all parts, and the upper waters of all the rivers being lined with dense forests, extending far up among the foot hills of the Rocky Mountains, the entire district is reported by the geological survey to be underlaid with coal of excellent quality, though no workings are yet opened. The Calgary and Edmonton trail is a beautiful and natural road running through the centre of the Red River district for 80 miles. The recent expenditure of the Territorial Assembly in bridging the streams has made it a very excellent traffic road. Branching off from the main road are numerous trails, convenient to any section of the district, and the firm smooth face of the country allows the settler to make a road with ease in any direction that suits his convenience.

Towns are Springing Up

at almost every railway station. Some of them already contain several thousands of a population. These town sites are all surveyed and laid out in uniform squares and streets before any houses are allowed to be built, so that uniformity and convenience in the embryo city is provided for and maintained. Some of these towns are being built where good sized timber, principally poplar, at present grows. The wood is being cut down and cleared off the streets, and around the houses groves and rows of trees are left standing, a row of nice comely trees being left along each side of the street. Thus those young towns will be well sheltered, and provided with excellent avenues and boulevards, which towns of the growth of centuries might envy. Just as I was finishing this article

the post handed in some letters to me from America. One of the Crown agents tells me there is every appearance of trouble with the redskins in British Columbia. At the fall Assizes just finished two Indians were tried for murdering a white man, convicted, and sentenced to death. No fault was found with the justice of this sentence, but immediately after when a white man was tried for murdering an Indian, found guilty of manslaughter, and condemned to twelve years' penal servitude,

a Howl of Indignation

got up amongst the Indians at the leniency of the sentence. Amongst those who watched the case with great interest was an old Indian chief who had been a friend of the murdered Tom. When the sentence was pronounced he became very angry, and, turning to the Chief of Police, expressed his indignation thus—"Twelve years in Skookum House for killing one Indian. Too bad, too bad. Next time white man kill Indian, Indian know what to do. He no live to get twelve years in Skookum House. Indian murder, he have to die; white man murder, he have to die too."

IN THE RED RIVER DISTRICT.

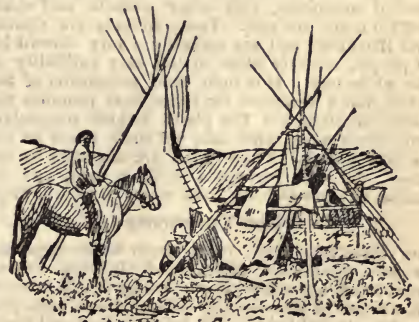
VISIT TO AN INDIAN RESERVATION.

TYPICAL REDSKINS.

UNITED STATES FARMERS GOING NORTH.

(From the Dundee Courier of December 26.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—As we steam northwards over the plains of the Red River district we observe a large train loaded exclusively with cattle following close behind us. There seems to be no block system in vogue on the railways here, for this train is never far behind us, and comes close up at the stations at which we stop. I went back at one station, and had a look at the cattle. They were mostly cows and heifers, and some stockers. They were all horned, and flaked red and white. They did not seem to be particularly well-bred, but in one car were a number of shorthorn young bulls, fairly good sorts. These cattle were from British Columbia, and were the property of some settlers recently arrived between Red Deer and Edmonton. The same party had brought through about 100 horses, and were herding them on the prairie on very good grass that belonged to nobody, and was costing them nothing. We crossed Battle River, and entered



BAROE INDIAN CAMP.

An Indian Reservation

governed by three chiefs—Samson, Ermine Skin, and Bobtail. The land appeared excellent, as indeed the land on all the Indian reservations generally is. We saw very little cultivated land on these reservations, but great plenty of cayuse and some cattle. The cayuse were for the most part mere ponies, but a few of the young ones were bigger and better sorts, indicating that some weak endeavours were being made to improve the breed. The cattle were big, but fearfully rough and scrubby; the worst I saw in all my travels. They would, however, be excellently adapted for draught, being big of bone and strong muscled, and, as the work oxen which I saw in the possession of the white settlers in the neighbouring districts bore a strong resemblance to those cattle, I have no doubt but that the most of them are purchased from the Indians. The grading system now practised by mostly all the whites, tending to diminish the size of bone and increase their fattening proclivities, renders the cattle bred by them less suitable for draught purposes. A lot of these Indian cattle got upon the track and scampered before us with their

Tails Hoisted Like Flags

for a long distance. Our driver slowed the train and screamed incessantly with his whistle, but it was a long time before they gave in and cleared out of our way. At Wetaskwin Station we see a lot of samples of grain in the straw hung up for show.



BLACKFOOT BRAVE.

These were very tall and rich in the ear, and gave us some idea of the richness of the country we were coming to. Wetaskwin in the Indian language signifies the hill of peace, and takes the name from a knoll near the station where a treaty of peace was concluded between the Indians and the white men. There were a great many Indians on the platform offering pipes fashioned of pipe-stone, beaded mocassins, and other trinkets, and sham buffalo horns for sale. These Indians are Chrees and Blackfeet, and are certainly a very shrewd lot of people, entirely alive to the easy gullibility of the white race. It is their clear perception of the white man's weakness for relics that prompts the astute gentlemen of the plains to load themselves with these wares and take up their stand at the railway station. These pipes are imported by the gross, and cost perhaps a shilling each, and the Indians charge at least from seven to ten shillings.

The Crowfoots

are straighter and more finely-built men and women than the majority of Indians we encountered, and time was when they struck terror to the hearts of those daring settlers whose enterprise and hardihood led the way into this vast and fertile territory. They are tame enough now though, and

those for whom Cooper's novels have had an early charm find room in their hearts for regret and disappointment that the blanketed nondescripts standing with outstretched palms, these frowzy beggars, are the real material from which the novelist built his red-skinned hero. A bevy of young squaws attract our attention. These are certainly the



SQUAW SPECTATORS.

best-looking representatives of the red race we have yet seen. It may be that the chiefs in the Tepee camp below the station are astute enough to select the best-looking girls for this expedition. They run along beside the cars holding out their hands and reiterating the word "money," of which they seem to have a good understanding. Many kind-hearted passengers throw these damsels small silver coins, for which they scramble and fight in a most unseemly fashion. Soon they are left behind, and attention is again drawn to the large herds of ponies grazing on the rich grasses that stretch away on each side of the track from east to west, and through grazing lands and herds of horses, foaled and bred where they now roam wild, the train rushes for the next couple of hours. Each pony bears his owner's brand, and he is as safe almost though he wanders a hundred miles from home as though penned in by a six-foot fence. Again the country undergoes a change. We have left the Indian reservations behind us, and have reached a district open for

White Settlers,

and though it was only opened up two years ago by the construction of the railway, it is already dotted with farmhouses and other buildings. A good deal of land is under wheat, and the crops appear good. Square black blocks every here and there indicate where farmers are breaking up the prairie. The district is thickly interspersed with clumps of timber, which afford good shelter, but there are plenty of open plains, where the settler can put in his plough, with neither tree, scrub, nor stone to interrupt its course. Hundreds of farmers from the United States are coming north and taking up land round here about. They say they are tired of a country where the average of wheat-taking one year with another is not over 13½ bushels, and prefer to come to a country where they expect never to reap less than 30 bushels an acre, and sometimes 50. They say they were borne down with taxation in the States, but which they will almost be entirely exempted from in Canada; that, although

The Winters

are more severe, they find the climate more salubrious and healthy than the States. They also say that the Government of the Dominion is much more equitable than that of the United States, and that life and property is safer in the north-west territories of Canada than in any other part of the world they know. As we pass northwards lakes and ponds become very numerous. These are beautiful expanses of water, surrounded by wood-

lands, and literally swarming with ducks of every description, geese, swans, and innumerable other species of waterfowl that I don't know the name of. Prairie chickens, startled by the onward rush of the train, arise on each side of us in myriads, all proving that it is a splendid country for sportsmen. The district has a park-like look, and with its grand old woods and broad expanses of meadow, with browsing herds half-hidden amongst the luxuriant herbage, reminds a native of the old country of the princely avenues surrounding the castles and manors of our aristocratic proprietors, the only blur to the landscape being frequent broad strips through the woods, where the tall trees stand forth like signal poles against the sky, dead, bare, and branchless, marking the track where the fire fiend has swept along.



SPOTTED-TAIL'S PRIME MINISTER.

VISIT TO EDMONTON.

RAILWAY EXTENSION IN THE NORTH-WEST.

AN EXCITING ADVENTURE WITH HOTEL PORTERS.

A SUTHERLANDSHIRE SCOTSMAN'S GREETING.

ACROSS THE SASKATCHEWAN.

(From the Dundee Courier of January 2, 1894.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—We are now at Edmonton, a town of considerable importance built on the banks of the great North Saskatchewan River. Only two passenger trains arrive there weekly (on Mondays and Thursdays), and two leave weekly (on Tuesdays and Fridays). So we got there on Thursday evening, and had to stay until Tuesday morning, which gave us good time to inspect the town and the country around. The principal part of the town is built on the very brink of the perpendicular banks of the river, and as the Railway Company have failed as yet to bridge the river, and have constructed the station on the south bank, a new town is fast springing up around the station, and a good deal of jealousy exists between the owners of property and town lots on the different sides of the river. Certainly the

Railway Company have the making or the marring of the success of either side in their hands. Should they persist in refusing to bridge the river, and carry the railway into the north town, the enterprise of the settlers is sure to direct itself to the south side, and the future town will develop itself there. But should the river be bridged soon, the old town would retain its present high prestige and increase. Over and again the Railway Company have been petitioned

To Extend Their Line

across, and there are hopes they will shortly do so, but the hesitation to decide is retarding the onward progress of both sides, owing to the uncertainty as to which of the towns is likely in the future to be of the greater importance. Last summer a proposal had been made, and surveys were being taken with the intention of building a bridge for the construction of an electric railway to connect the old town with the station. Much dissatisfaction and disappointment were sustained by the route through the Kicking Horse Pass being fixed upon by the Canadian Pacific Railway Company for the construction of their line, it being fully expected that the main line would have been brought from Winnipeg, up the Prince Albert and Battleford Valleys, along the banks of the Saskatchewan, through the town of Edmonton, and along the old Mackenzie trail, piercing the Rockies by way of the Peace River Pass. This route would have opened up a richer district of country, and developed the resources of the North-West Territories in a greater degree, but the object of the railway company in building this track was to obtain the nearest and speediest route between the Atlantic and Pacific Oceans irrespective of the best mode of developing the agricultural resources of the North-West. However, there are yet hopes that the Prince Albert Railway will before long be extended to Edmonton, and, once that is so, the construction of a line through Peace Pass to British Columbia is only a matter of time. Edmonton has water

Communication to Winnipeg,

and a number of steamboats carry passengers and freight during the summer months by way of the Saskatchewan and Lake Winnipeg, but the route is so circuitous, and so beset with bars of rock, rapids, and shallows, that navigation is very dangerous. As the resources of the North-West are opened up, however, there is no doubt whatever that western enterprise will improve the way, and make navigation safe for fair-sized vessels, and then Edmonton will have direct communication with the Atlantic by way of Hudson's Bay. There are 198 miles between Edmonton and Calgary, and until the branch line of railway was opened two years ago all the traffic was carried over the old Indian trail between these towns by bullock waggon, and during winter by bob-sleighs. The Government have bridged all the rivers except the Red Deer, which is crossed either by a ford or by a ferry raft. But before the advent of the main line of railway to Calgary eight years ago the whole traffic to Winnipeg was by bullock waggon. The journey going and coming occupied three months. Little wonder though the great agricultural capabilities of the district lay long in abeyance.

Beset by "Liveried Gentlemen."

A great crowd of passengers occupied the train by which we travelled, and when we arrived at the station a very busy scene presented itself. A great number of carriages, some with four horses, and some with two, were waiting to convey passengers to the old town on the north side of the

river, and hotel porters crowded the platform soliciting patronage, making a perfect Babel of noise in shouting the name of the hotel they represented. Amongst the most importunate were the representatives of the Victoria and the Albert. When I got to the small platform at the rear end of the car, with a valise in each hand, a dozen liveried gentlemen gathered round, all grasping at my grip-sacks, and shouting "Victoria," "Albert," &c., &c. I declined to give up my property, and ordered them to clear out, but one fellow, more importunate than the others, barred my way, and, extending his arms, looked as if he was going to hug me, grip-sacks and all. I saw verbal remonstrance from me was of no use, so glancing for the position of his toes, I let myself down two steps at a time not over gently, and my full weight (and that is no joke) coming full force on his corns, made him clear out in a couple of hurries. If he screamed before, he howled then to a different tune, and hopped away with his paw in his hands. As I reached the end of the station platform a respectable-looking old gentleman extended his hand, and recited in a dramatic attitude, "My foot is on my native heath, and my name is Macgregor." This turned out to be Donald M^rLeod,

A Sutherlandshire Scotsman,

who had gone out nearly fifty years ago in the employment of the Hudson Bay Company, and had made his pile, he having a good deal of property in the town, besides several farms in the neighbourhood. Donald had been apprised of our coming, and had come to the station to give us a welcome, and his quotation from "Rob Roy" was his mode of introducing himself. We got into a carriage drawn by four spirited horses, and were driven away in the direction of the old town, and, of course, had to be ferried across the Saskatchewan. The great river, 200 yards broad and very deep, runs in a gorge between perpendicular walls 200 feet deep, cut out by itself in the soft clay. A zig-zag carriage road has been cut down the wooded banks at each side. This road is very steep and very rough, a great part of it being corduroy, *i.e.*, paved with great trees laid side by side across the roadway. Down this incline we went at a break-neck pace, having a regular race with some other vehicles also laden with passengers, all striving who would be first at the ferry, the launch being wrought on the principle of "smiddy room," first come first served.



A Saskatchewan Ferry Boat.

To work the launch a strong steel rope is pitched from cliff to cliff some distance above the ferry, on which runs a wheel with a hook. From the hook to the launch are two smaller ropes, one being attached to each end. When the launch is laden and about to start, the ropes are manipulated with hard tackle, and the head of the launch is drawn up until it presents an angle of about 45 degrees to the run of the river, and the downward sweep of the water, bearing upon the side, forces it across, the wheel on the cross ropes preventing it from being swept down the river. In returning, the opposite

end of the launch is drawn up stream, and the force of the water, bearing on the other side, propels it in the contrary direction. Provided the ropes are sufficiently strong, this is quite an efficient and

Cheap Mode of Transit.

There are three such ferries wrought on the same principle within a short distance of the town, and for the working of which the lessees have to obtain a license from Government. On the rail of each launch a bill is attached on which, printed both in the English and French languages, is a copy of the license, and also the rates of charges and rules of the ferry. The river was quite thick and muddy when we were there, it being in flood, caused by the melting of the snows in the Rocky Mountains, and we were told that all summer it would continue in the same state, but that in the fall it would diminish in volume and the waters become as clear as crystal. In this state it would continue until the summer thaws again swelled it into flood.

AGRICULTURAL FEATURES OF EDMONTON DISTRICT.

A SOIL OF INEXHAUSTIBLE FERTILITY.

ABUNDANCE OF TIMBER.

THE STAPLE AGRICULTURAL PRODUCTS.

PRODIGIOUS YIELDS OF CROPS.

(From the Dundee Courier of January 9.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Around Edinonton the soil is a black vegetable mould, from one to three feet in depth, overlying a light coloured marley clay subsoil twelve feet in depth. This rests on a blue clay which is broken at irregular intervals by water-bearing seams of sand or gravel, and by beds of coal of varying thickness. There is practically no stony or sandy soil except in isolated or outlying localities. This soil is not only exceptionally fertile to commence with, but has practically an inexhaustible fertility. If the black mould were worked out there would remain the twelve feet of marley clay underneath, which is almost equally fertile, and can never be wrought out. Of course, the land is the better for good tillage, and manure as well, but instead of there being a continued battle as in the best parts of Great Britain to keep up the fertility of the soil, necessitating the bringing in of extraneous manures, this land can be kept at the highest pitch of fertility for ever merely by good cultivation, and returning to it the refuse of what is taken from it. The difference the staying power of the

Fertility of the Soil

makes to the farmer, whether at home or abroad, cannot be over-estimated. It is the difference between wealth and poverty. The farmer who settles on a farm in a region where the soil lacks depth may do well for a time, but as the years go

his land after going up to a certain pitch in value invariably declines as it becomes worked out, for the simple reason that the farm consumes too much according to the amount it produces. The result is disappointment and loss. How many localities can be pointed out all over the Dominion where settlers went in on light, quick-producing land, and spent the best years of their lives in making in their homes, only to find that their land had become worthless through exhaustion, and that, therefore, their lives had been wasted. On the other hand there were those who went on deeper and more difficult land to reclaim and work, and found a veritable gold mine, which, by keeping up its fertility, while wealth and the conveniences of civilisation grew around it, continually increased in value and made wealthy the owners almost in spite of themselves. This is

The Kind of Land

that the Edmonton district has to offer to settlers to a degree not attained by any other part of the North-West territories that I visited—where a man may take up a farm and be satisfied that his children's children will find it as fertile as he did—where a man having once driven his stakes need never require to pull them up. The surface of the country is very gently undulating except where cut by the deep valley of the Saskatchewan or the lesser valleys of its tributaries. Woods and prairies alternate irregularly. In some parts there are large plains free from timber, and in others considerable stretches of wood lands composed of large trees. Towards the North and West the proportion of wood increases until at about 60 miles distance, the forest region is reached. Towards the South and West the proportion of plain increases until, at a distance of from 75 to 150 miles, the woods entirely disappear and the great plains are entered upon, extending without a break to the Gulf of Mexico. The great distinguishing feature of the Edmonton district as compared with other sections of the North-West is the abundance of timber. Nearly half of the whole surface of the Edmonton district proper is covered with large or small woods.

The Effects of Forestry

on the climate of a country are nearly all beneficial, such as more equal distribution of rainfall. This is one of the most important points to be considered. Then, again, evaporation from the soil is very much reduced. There is a vast difference between the condition of the bare soil on the open prairie and the soil of the glades intervening between these wooded groves, the belts of wood preventing the strong force of the winds with their great evaporating power. Nor can the beneficial effect to live stock, produced by the frequent occurrence of these shelter belts, be over-estimated. The timber of the district is chiefly poplar in the agricultural sections, with large forests of spruce and tamarack to the West and North. The poplar, both white and black, grows large and straight, and makes excellent building logs. The grey willow grows to a very large size in some places, becoming a tree rather than a bush, and makes capital rails for fencing. The spruce of the district is very superior, both in size and quality, and forms very good lumber, suitable for all purposes of building for which pine is ordinarily used. The River Saskatchewan above Edmonton drains a spruce-bearing area of 150 miles, ensuring a supply of timber for many years, and making lumbering one of the most important of Edmonton industries. The staple

Agricultural Products

of the district are wheat, barley, oats, potatoes, cabbages, and all other hardy vegetables, cattle and dairy products, hogs, sheep, horses, and poultry. In the production of all these articles I am quite sure that I am within the mark when I say that Edmonton is not excelled in all the North-West Provinces. The wheat marketed at Edmonton during the past winter brought a higher price per bushel than that marketed at any point in Manitoba, and Edmonton took first prize for grain in the straw over strong competition from all parts of the territories at the Winnipeg Industrial Exhibition in 1891. It is now an ascertained fact that the nearer we approach to the northern cultivation of wheat the quality becomes the better, and Edmonton being the most northerly district in the Dominion where cultivation is carried on to any considerable extent, the quality of the wheat grown there is of the highest marketable grade, being small in the pea and very hard, and containing more gluten and less starch than wheat grown further south. It brings a higher price in the British markets than the wheat from any other district or country, and higher even than the produce of our own soils. It cannot be denied, however, that the district is occasionally (perhaps once in ten years) subject to

Early Frosts

which, when they occur, considerably deteriorate the quality of the wheat. But, as the trend of the land is downwards as we go north, and as the warm Chinook winds passing through the Peace River Pass temper the climate, frosts are not so common as they are much further south, and not so frequent as they are further east the country. Besides, the district is almost entirely exempt from the scourge called "cooking," which so often and so disastrously blights the wheat crop in the States. Fifty bushels of wheat are often reaped per acre, and it is no uncommon thing to grow forty bushels upon first breaking, and, taking the average of a few years, thirty-five bushels per acre may be put down as the general yield. A vast difference this from the average of the United States, which for the last ten years has only run thirteen-and-a-half bushels per acre. Still, as early frosts do sometimes injure the wheat crop before harvesting, experienced farmers advise not to put one's whole dependence upon this crop, but to divide the risk by having a portion of the farm in oats and barley. Oats grow prodigious crops, often yielding from eighty to a hundred bushels and even more per acre, less than sixty being considered a poor crop, the weight per bushel running from 33 to 50 lbs. Barley has yielded sixty bushels an acre, and two-rowed barley, such as the English market demands, grows to perfection around Edmonton, and is considered

A More Certain Crop

than either wheat or oats, as, owing to its early ripening habits, it is rarely or never nipped with August frosts. Edmonton is situated in what is known as the great fertile wheat belt, and, in my opinion, it has been most deservedly named, for never in all my travels, whether at home or abroad, have I witnessed such prodigious and rich crops of wheat, barley, and oats as I did there. And even though no crop had been upon the ground the soil would have spoken for itself. Never in my experience did I see a soil so rich in all the requisites for crop-growing purposes as the soil around Edmonton.

THE ATTRACTIONS OF EDMONTON.

ITS MINERAL RESOURCES.

GOLD PROSPECTING OPERATIONS.

ANGUS "DODDIES" ON THE RANCHES.

RELATIVE MERITS OF GALLOWAYS AND WEST HIGHLAND CATTLE.

A REMARKABLE INCIDENT

(From the Dundee Courier of January 16.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—

All around Edmonton the country is thickly wooded with Balm of Gilead poplars, and as the town is increasing very fast, the land has been surveyed and laid out in regular street blocks. The wood along what are to be the streets of the future is being cut down and roadways formed, the walks at the sides being floored with boarding. The trees on the squares where the buildings are to be are left growing, so that builders will have their choice of leaving whatever number of trees they wish around their houses. The result will be that even the new streets will be interlined and the houses surrounded with stately groves of timber, which will afford good shelter, and give even the new town a park-like boulevard appearance. Perhaps the greatest disadvantage Edmonton at present labours under is the want of a good water supply. As I said before, the town is built on the very brink of the perpendicular cliffs of the great Saskatchewan, 200 feet deep. This great gorge completely drains the country for a great distance from each side of the river, so that there are

No Natural Springs,

and wells would have to be dug to the level of the river before water could be touched. Pumping from the river would be an easy matter, but for six months of the year, that is during summer, the water in the river is thick and muddy by the melting of the snow on the mountains, and altogether unfit for domestic purposes. Water carts are employed to bring the water from a distance and distribute it in bucketfuls to the householders. The town has an electric light system of which the people are justly proud, the dynamo being driven by a powerful steam engine placed down at the edge of the river. Fuel is abundant and cheap; any quantity of firewood can be obtained from the surrounding country at little more than the cost of cutting and hauling. Besides, the district is all underlaid with coal, seams of which jut out all along the banks of the river, and at low water the inhabitants have nothing more to do than hew out their year's supply and cart it home. Several coal drifts have been run in right below the town, and as these drifts extend to just above the level of the river no plant whatever is necessary for hauling the coal to the surface. Consequently the supply is very cheap, the usual price being 10s per ton. The subsoil of the whole district is permeated with

Gold Dust.

A good show is obtained wherever the soil is excavated to any depth, and at low water a great number of people find employment in washing for gold along the bed of the river. When I was there

the volume of water was just beginning to fall, and this industry was just commencing. I stood several hours beside a party of prospectors who were just commencing operations. They were getting a good show, but not in sufficient quantities to encourage them to prosecute their labours, but as the river fell so as to enable them to get deeper into its bottom they knew they would be more fortunate. The banks buy the gold dust from them, and each prospector can usually calculate upon making the value of \$3 daily. Petroleum had been struck shortly before I was there, about thirty miles north from the town, and I met Mr Gordon Cumming with a party of prospectors on their way to inquire into this discovery, with the intention of commencing operations for working the oil if the information proved correct. Mr Cumming is the principal partner in Quorn Ranche in the M'Leod district, which I have already described, and he has another ranche in the Edmonton district stocked with

Aberdeen-Angus Cattle,

which he told me suited the country very well. He said he had a steady demand for the bulls bred upon this ranche, and that these when graded with the native cattle gave the best possible results. I could quite corroborate this, for upon several ranches which I inspected in Edmonton district where Aberdeen-Angus bulls were being used the offspring were very superior. It must be understood, however, that in this district the cattle are housed during winter, and hand-fed with prairie hay and gristed grain, and to this fact, I believe, may be attributed the great success of the Angus doddies. There can be no denying the fact that where ordinary care is given to shelter and feed, no finer or better breed of cattle can be found than the North of Scotland black skins. Still I think that other breeds might prove better rustlers, and where the stock are left exposed to the inclemencies of the weather and extremes of temperature, and have to find their food and gather it for themselves from off the prairie, the Galloway or West Highland breed might suit the country better. For one thing they have a thicker, heavier coat of hair, and are better fitted to resist the cold. And, moreover, a hide heavily coated with thick, wavy hair is likely to be an article of considerable mercantile value in the future, to take the place of the buffalo robes so much sought after, but now quite unobtainable.

The Breeding of Galloways

with coats suitable for this purpose is sure to be one of the great aims with ranchers in the future. But still, although the Galloway might be better fitted than the Angus for supplying an imitation buffalo robe, I cannot help thinking that the West Highlander would supply a skin better than either of them, that as a rustler he would be far superior, and as a beef producer would prove equal to the best. The great bulk of cattle in this district are shorthorn grades, and although pains are being taken to improve the breed a great deal has yet to be done before they come up to our home breeds. Some knowing ones out there insist that the finer they are graded up the worse they are fitted for the country; that the native scrubs are acclimatised, and stand the winter better than any other breed; that they are cunning enough always to seek a lea corner during a storm; and that a scrub cow will do what no other breed will—stand between her calf and the force of a gale, and protect it from the storm. It may be thought that Edmonton being so far north—nearly 300 miles from the international boundary line—must necessarily be much colder and inclement in winter than farther south. Such, however is not the case. The run of the

rivers being northwards, the land trends lower as we go north. The contour of the mountains permits of

The Warm Chinook Winds

from off the Pacific having more effect, and Edmonton being much nearer the Pacific than the provinces of Assiniboine and Manitoba the snow does not lie so deep, nor are the winters so severe as they are in these provinces, or even to the south of the International boundary. It is a well known fact that when buffaloes existed in numbers on the plains they instinctively went north to their winter quarters, and a strange incident occurred some years ago which quite confirmed the wisdom of this wonderful trait. In stocking the Cochrane Ranche, the cattle were purchased in the eastern provinces and brought West. A very severe winter set in very early, and the cattle, being quite unacquainted with the district, broke up into small bands and wandered hither and thither. A large number went east and a large number went south. Both these bands could be traced for great distances along the plains by their dead bodies being discovered all along their trail, and very few of them were got back alive. A large number remained all winter unaccounted for and no trace could be got of their whereabouts, but in the spring a rumour came south that a number of strange cattle were grazing near Edmonton. Cowboys were sent north to examine this band, and were recognised by the brand that they belonged to the Cochrane Ranche. What surprised everybody was that all the cattle that went north not only survived, but were actually rolling fat.

TOURING ROUND EDMONTON.

INDIANS AND THEIR HORSES.

A STRANGE SIGHT AT THE MARKET.

FRUITS AND FLOWERS IN LUXURIANCE.

A PICNIC ON THE PRAIRIE.

AN INDIAN HYMN BOOK.

(From the Dundee Courier of January 23.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—We stayed four days at Edmonton, and every day we had a drive out of perhaps thirty miles to the country, taking a long detour and returning by a different trail, and every day journeying in a new direction. The first morning, after finishing breakfast, we were joined by our quondam friend, Mr Donald McLeod, and a Crown land agent, when a council of war was held, and our programme arranged for the day. Orders were given to "hitch up a rig," and after being furnished with maps and charts of the district we started north in the direction of Sturgeon River. A short distance from the town we met many Indians and half-breeds. The Indians in this district are Chrees, Stonies, and Iroquois, and the white blood of the half-breeds is mostly French. The French half-breeds are not at all liked by the whites. They are a cunning, treacherous race, and are credited with putting the Indians up to a lot of mischief and discontent, and it was mainly through their instigation that the Indian rebellion of 1870 was incited.

The Indians and Half-Breeds

that we met were mostly all driving a pair of ponies or cayuse in four-wheeled waggons, and had quantities of fruits picked on the prairie and vegetables, which they would barter in the town for provisions.

The half-breeds mostly all farm small patches of land farther back the country, and are said to raise good crops. The most of them are, however, rather negligent of their farms, and leave them for long intervals to go hunting for furs in the Far North. All kinds of road vehicles, whether belonging to whites or reds, are four-wheeled and drawn by two horses, the most of the roads, which at the best are mere Indian trails, not being practicable for one



A CHREES INDIAN'S FAMILY.

horse moving on them. These trails seldom get any making, and are only formed by the wheels of the vehicles and hoofs of the horses. Consequently there is a ridge between the tracks, on the top of which, if only one horse was used, he would have to walk, though the footing would be very awkward. But when two horses are used, each horse runs in the broad rut made by the wheels, which by much traffic is beaten hard and smooth, and makes a fairly good road. The rules of the road are different from those which obtain in this country, and, in meeting, drivers draw to the right-hand side. When driving mares have foals, the foals are allowed to accompany the machines, and it was no uncommon thing to see a couple of

Foals Scampering Alongside

a machine in which the owners were driving to church or market, and taking a suck from their dam when a stop was made. And, whether the parties were going to church or market, the machines were seldom unyoked, a metal weight of perhaps 8 or 10 lbs. being laid at the horse's fore foot and the rein tied to it. The horses are trained to stand in this position without making any disturbance for any length of time. But to us it was rather a strange sight to see scores of machines standing along the sides of the streets or around the walls of the churches with the horses fastened in this manner, with dozens of foals playing around and scampering through between the machines. On this journey we also met many waggons drawn with oxen, hauling firewood or hay to the town. These oxen were harnessed with collars much the same as horses, but few of them had bridles or even halters of any kind, a small string merely being tied to the horn of the near ox. These oxen seemed to step along quite as nimbly as horses, and were hauling loads which I fear the horses of the country could not have moved. The horses are all of the light-legged broncho description, and, although they are of various sizes, I saw none that could be called even medium heavy-weights; nor do I think the heavy-weight draught horses of the old country would find much favour in the district. The work horses are required to move along at a much faster pace than at home, and because of that speed is considered a greater desideratum than power.

Cheap Horses.

As showing how inexpensive horses are to raise, and how easily a man may increase his stock, and

how safe a man's property is though not looked after, I may recite an instance. Mr Anderson, Crown timber agent at Edmonton, had a favourite driving mare which went lame, and was quite useless for work. Unwilling to destroy her, he let her out to the prairie, and heard no word of her for four years, fully believing she was dead. Shortly before I was there a distant rancher told Mr Anderson that the mare was with him, and that she had three colts with her. Mr Anderson would give no credit to the tale, and would not even put himself to the trouble of going to see, but his daughter having more faith in the story, asked her father if he would make her a present of the old mare and her progeny, and undertook to inquire into the matter. To this proposal Mr Anderson at once consented, and the young lady got her brother to go to ascertain. Sure enough it was the old mare, and the three colts were her own foals, which she had borne since last seen by the owner. The young man brought the quartette home with him and presented them to the young lady, and I had this story from the mouth of old Mr Anderson himself. For a good distance around Edmonton the land is thickly overgrown with low scrubby timber, mostly Balm of Gilead poplars, scarcely suitable for building purposes, but excellently adapted for fencing, and not at all difficult to clear off the ground. Great

Expanses of Low Willows

occur every here and there, and even where these are pretty thick, and as high as almost to cover the horses, the breaking plough can be put in and works pretty well. The lands where these willows grow are generally considered the most valuable. In erecting fences no tools are needed but a good axe and an iron beaker for boring the holes in the ground for the uprights, no nails or hammer being necessary. The poplars are cut to about the length of four yards, and these form the bars for the fence. The two uprights at the ends of these bars are merely shoved into the holes made by the beaker, and the bars are wadded in between these with bands of willow. When five bars are used, which is often the case, this makes a capital fence, quite sufficient to keep back even the larger animals. Large open spaces occur every here and there between the wooded groves, where grass grows very rich and abundant, and which, unlike the grass on the plains farther south, is green and succulent. In these open spaces wild roses grow in great profusion, and the ground is literally carpeted with wild flowers of every hue.

No Prettier Scene

can be imagined than these prairies covered with a glow of richest blossom cultivated by the hand of Nature. The most common flowers are golden rod, ox-eye daisy, sunflower, wild vetch, wild anemone, fireweed, wild sage, &c., and what delighted our Scottish eyes most of all, was the pretty Scottish bluebells which grew there in great profusion. Intermixed with buffalo, peavine, and other prairie grasses, these form a sward which cannot be surpassed for thickness, and so tall and luxuriant that a person has not a little difficulty in walking through it. This great luxuriance of vegetation growing year after year from the beginning of time, and fading and decaying where it grows, has formed a surface soil of vegetable mould of great thickness and richness, which nothing "on the top of arth" as the Yankees say, can surpass for crop growing purposes. Wild fruits are very abundant, strawberries being extra plentiful, in some places to such an extent that in walking along a person's boots are painted crimson, and his footsteps have the appearance of a trail of blood.

Wild gooseberries are also plentiful, but very small, not above the size of our black currants. A most delicious berry called Saskatoon grows very abundantly on a bush about the size of our red-currant bush, and there are other kinds of small fruit too numerous to mention. We had brought lunch with us and held

A Picnic on the Prairie,

having a most sumptuous and delicious dessert of wild fruits, picked where we squatted. Close beside us was a camp of Indians, and, although we were so close as to hear them talk in their own language, none of them came near us. After lunch, old Donald amused us by holding a conversation with them in the Chree dialect. They have a soft, melodious tone of voice and accent, very sweet and pleasing to the ear. Books have been got up and printed in their language, and, as I was presented with one of their hymn books, my readers may be gratified by my quoting the first verse and refrain of the well-known hymn, "Hold the Fort!"—

Ma, ne we-chā-wa-kun-e-tik!

Cheest, kisk-e-wā-hoon;

Ke to-tān-e-now-uk-āk-wa,

Pāt-oo-tā-wuk.

"Mit-chim-eek, ne pā it-oo-tan,"

Jesus Christ it wāo;

Nus-pim-ook; "Ke-ya Mun-e-to

We-ye-che-he-yak."

A TYPICAL FARM IN THE NORTH-WEST.

THE SYSTEM OF MANAGEMENT.

EXTRAORDINARY YIELDS OF GRAIN.

SEVEN FEET TALL WHEAT.

NOVEL MODE OF POTATO CULTURE.

WHAT LAND AND LABOUR COSTS.

A SHORT-SIGHTED AMERICAN POLICY.

(From the Dundee Courier of January 30, 1894.)

Mr Osler, the Courier's Agricultural Commissioner to America, writes:—Continuing our drive northwards, we came to the village of St Albert, about nine miles from Edmonton. The village is built close beside the Sturgeon River, and has two general stores, blacksmith's and carpenter's shops, two hotels, a steam flour mill, a Post Office, quite a number of dwelling-houses, and telephone communication with Edmonton. On the north side of the Sturgeon River, the deep, sluggish stream which is crossed by a long wooden bridge, and up a short steep brae, is situated the handsome and imposing Cathedral Church of St Albert Catholic Diocese with the residence of the Bishop, and close beside it is a convent of Sisters of Charity, who conduct an orphanage and an hospital. At the blacksmith's shop we met Mr Maloney, a successful farmer of that district, who was superintending the repairing of his sheaf-binding reaping machines preparatory to harvesting. Our companion, Mr Donald M'Leod, introduced us to him, telling him we were Scottish delegates come to view the land, and that he had brought us to see his

Seven Feet Tall Wheat,

which had so astonished the United States delegates who had called there the week before. Mr Maloney is an Irishman, and expressed his pleasure to have farmers from the old country calling upon him. He was sorry he had no wheat 7 feet tall to show us, but if 6½ feet would do he could show us plenty of that length. "Oh," said Donald, "that is quite long enough for us. Jump into the buck-board and we will go and see it." On the way to Mr Maloney's farm we drove through a beautiful piece of country, situated on a lovely slope hanging down to the Sturgeon River. It is nicely wooded, with nice intervals of open glades that make splendid farms, not in the least difficult to break, and having such a home-like, old country appearance that I quite made up my mind that if ever it should be my lot to take up my home in a foreign land it was here that I would endeavour to pitch my camp. We passed close in front of the Convent, and stopped to have a look of the garden belonging to the Sisters of Charity. It was in splendid order, and the crops of vegetables were really grand. Fruits of all kinds were hanging on the bushes in clusters, but there were

No Fruit Trees.

At least there were none in bearing order, though some had been planted on trial, if they would stand the severity of the winter. Another great want to my eyes in the gardens of these North-West territories is the almost entire absence of flowers, and I conclude that flowers of all kinds grow so luxuriantly and naturally on the prairie that the people do not think it worth while to take up space in their gardens with them. Arriving at Mr Maloney's farm, we were kindly entertained by him in his domicile. And here, I may remark upon the great kindness and attention shown towards us by every person we visited, the reception we got from everybody making it more like as if we had been on a tour amongst old and well-known friends rather than amongst strangers. After dinner we had a walk with Mr Maloney over his farm, and found the reports we had heard about the excellency of the crops were not overstated. In fact, I never, even in this country, where we pride ourselves so highly on our advanced system of farming, saw such

Luxuriant and Rich Crops

of wheat, barley, and oats as I saw there. It was the same all over the farm—not a single patch that could be called inferior, and so clean, too, there not being a single weed to be seen on the whole farm. It was not so much the length of straw that

I admired—although it was so tall that when we sent Mr Taylor into several of the fields he was entirely lost to view—but it was in the great thickness of the straw and the richness of the ears that it excelled. I inquired into Mr Maloney's system of management, and the use he made of his straw and dung. He told me that his system for the most part was one of continuous grain crops—wheat, barley, and oats alternating—and that if a field appeared to be getting dirty he made it bare fallow and cleaned it during summer. His teams were working a field of fallow when we were there, and on this field he was spreading his farmyard manure. It was receiving the last furrow, after which it would be ready for seeding with wheat in spring. Mr Maloney says he converts as much of his straw as possible into manure, and applies it where he thinks it will be safe, but he has to be very careful in his manurial applications. The soil is so naturally fertile that there is a danger of making it too rich and rendering the crops useless.

One Field of Wheat

which we inspected, and which was all that could be wished, had been in wheat successively for five years, but last year he planted two acres along the bottom with potatoes, to which he gave a fair application of farmyard manure. The potatoes gave a good yield, and this year it was sown with wheat the same as the other portion of the field, the result of last year's manuring being that the wheat rushed up with too great luxuriance, and was so lodged with the July rains that it absolutely rotted. Mr Maloney's estimate of his yield of grain this year, and which I can well believe, is that his wheat will thresh 50 bushels per acre, barley 60 bushels, and oats 100 bushels. The prices obtained last year were—For wheat, 65 cents per bushel; oats, 25 cents; and barley, 30 cents. The nature of the soil is the same as I have already described as obtaining around Edmonton—a deep black vegetable mould of extraordinary richness and fertility lying upon a subsoil of marley clay, equally fertile—so that his land is practically inexhaustible. The farm lies pretty high, with a natural slope facing the south, well sheltered with clumps of wood, and watered with small streamlets meandering through it. Mr Maloney entered it in 1882, and paid \$2 per acre for the proprietorship of the land.

The Wages Paid

to his regular farm hands are \$20 a month, with board, and extra hands in harvest are paid \$2 a day. The land around here is mostly all bought up by settlers or speculators, so that homesteaders cannot locate near the town, but there is any amount of free land of the same quality to be got only a few miles distant. One-twentieth part of the land in the vicinity of the town is not under cultivation, and any quantity can be bought from speculators at from 12s to 20s an acre. Government lands are charged \$3 (equal to 12s 6d) per acre. Grazing lands to almost any extent can be rented from the Government at one penny per acre, and permits are given to settlers by Government to cut hay at 5 cents per ton. If a permit is obtained for five tons, a man can cut ten and never be challenged. Mr Maloney had a great crop of potatoes, but his mode of cultivation is somewhat strange. The potatoes are planted about three and a half feet distant from each other both ways, and as they grow they are earthed up with a spade into separate hills. This is also the way that Indian corn or maize is cultivated. In Mr Maloney's case this system was in a manner forced upon him, seeing the field was all planted with young currant bushes, and he could



AN AMERICAN FARMHOUSE.

not well have wrought the potatoes with the plough without running the risk of injuring the bushes. But bushes or no bushes, the

System of Potato Culture

is the same all over the country, and by it I have no doubt that they will raise a large number of big sized tubers in each hill, and it may be a great yield per acre. Nevertheless, I am apprehensive that the system may tell against the quality; at least, I know that over-grown potatoes in this country are not appreciated, and there could be no more certain mode of making them put forth an abnormal growth than giving them so much space between the plants to grow in. To my taste the American potatoes were too sweet and watery, and too stringy and waxy in texture, and altogether lacking that delicious, dry, mealy flavour which makes our home-grown esculents so highly relished. Whether this is due to the climate, the soil, the mode of cultivation, or the kind of potato I am not prepared definitely to say, but I am very much inclined to believe it is due to the climate being too forcing, and that they are grown too fast. But be this as it may, the Americans are certainly

Standing in Their Own Light,

and debarring themselves from participating in a great treat, when they prevent the importation to their country of our superior and delicious Scottish grown potatoes by their prohibition tariffs. Just now Scottish farmers are selling their potatoes at home at the rate of 6 lbs. for a penny, and if it were not for the tariff they could be delivered in American markets at the rate of 4 lbs. for a penny. Surely if American consumers knew how they are punishing themselves by preventing us from giving such a delicious, wholesome, and cheap food stuff, they would never tolerate the embargo for a moment.

MORE ABOUT THE NORTH-WEST TERRITORIES.

A VISIT TO THE MOUNTED POLICE.

HINTS TO INTENDING SETTLERS.

HOW LAND IS ACQUIRED AND WORKED.

THE CARRIAGE OF PRODUCE.

(From the Dundee Courier of February 6, 1894.)

Mr Osler, the *Courier's* Agricultural Commissioner, writes:—The next day after visiting St Albert district we drove down the district lying to the north of the Saskatchewan River, a distance of fifteen miles. Crossing the river at Fort Saskatchewan, we visited the quarters of the mounted police, where we were kindly received and entertained by the Commandant of the Fort, Major Griesbach, and his second in command, Major Snieder. Here a large contingent of mounted policemen are stationed in barracks—a most orderly and well-trained body of men—their uniform and general appearance very much resembling the appearance of our cavalry soldiers at home. Major Griesbach showed me through the whole fort, which is splendidly garrisoned and equipped. They have large stores filled to overflowing with provisions and clothing of every description; their armoury is most efficiently fitted and supplied with all the necessary weapons of warfare; the stables are filled with well-

trained and well-seasoned horses. I minutely inspected a number of young horses, then under training, and observed that they bore the Quorn Rancho brand—the rancho which I have already minutely described. They were good-sized, well-bred animals, as all the horses bred on Quorn Rancho really are; and I learned that they had been recently purchased at 125 dollars each. The single men live in large, well-appointed quarters. All the houses are of wood, and very comfortable and commodious buildings they are. The

Influence of the Mounted Police

force in maintaining law and order throughout all the North-West of Canada both among white men and red men is most wholesome and efficient, and life and property is just as safe there as it is in our own favoured island of Great Britain. Major Griesbach is very proud of his garden, and asked me to go and take a look at it. All kinds of vegetables and fruits that we grow, except fruit trees, were in cultivation, and yielded a large amount of produce. Peas were an extra good crop, and all through the North-West territory peas, both in garden and field, appeared to yield remarkably heavy crops. The Major is a great florist, and his garden was well stocked with many varieties of flowers, and in this respect differed altogether from the other American gardens I saw. Starting from the Fort, the Major, although suffering from indisposition—having risen out of bed to welcome us—resolved, for the sake of spending the evening with us, to accompany us to Edmonton. So we drove up the south side of the river until opposite Edmonton, where we ferried across. All the way, both going out and coming home, we passed through a splendid district of country. One-twentieth part of the land is not yet under cultivation, but every here and there we come upon large block squares where the sod has just been turned by the plough, and where new farms are in process of being formed. Here again I must say this is a grand district for new settlers. I do not think it quite so good as the St Albert district that I described in my last letter, but still it is not far behind. Suppose a young man, without encumbrances, and with a little money, say £50, comes to the country, the

First Thing to be Done

is to select his homestead of 160 acres, which he gets free from the Government on payment of £2 of office dues, on receipt of which he will obtain his homestead papers. He should then put whatever money he has in bank, and let nobody know he has a penny. He then hires himself to a farmer, stipulating that the value of labour will be given in improvements. He goes and works for some months to the farmer until the spring seeding is finished, and then, when the farmer is at leisure, the time



BACK-SETTING THE PRAIRIE SOIL WITH OXEN.

for payment has arrived. The young man gets the farmer's team of horses or oxen and brush plough and goes and breaks up his own land, ploughing it 12 inches broad and 4 or 5 inches deep. The farmer finds it more easy to pay in work than in money,

and far more value will be got in this way by the young settler than if he had been paid in dollars. The reason is plain. If the farmer is not long begun (and most of the farmers in that district are only newly begun) money with him will be scarce, and he would scruple to engage to pay what he knew he did not have to give, but when it can be paid by the use of his own teams at a time when there is little else to do, it is easy to accomplish, and an engagement of that kind will not be difficult to get. As soon as a sufficient breadth of his land is broken, haying, followed by harvest, takes place, all which time he works to the farmer. Then follows threshing, after which he must go to his own farm. The farmer is now due him wages for haying, harvesting, and threshing, and the open weather in the fall allows time for its performance.

The Farmer Helps Him

to cut down and haul wood for building purposes, a sufficient quantity of which he gets free from Government. He also helps him to build his house, stable, and barn work, which can be done at very little outlay, certainly not exceeding the value of his labour. He now resides on the farm all winter, living on the money he brought with him, and occupying himself in splitting rails for fencing, &c. In spring he again engages himself to the farmer, on the same terms as formerly, the ten or fifteen acres which he got broken the previous summer are ready for seeding without more work, and as soon as the right time comes he gets the farmer's teams and implements, and goes and sows and harrows it in. He continues to work with the farmer all spring, and in summer he has more breaking done by the farmer's horses in repayment of work. Haying now comes, and he and the farmer working together puts up a little for winter use. His ten or fifteen acres of grain crop must also be harvested and threshed by the farmer and himself working mutually together. The work which he has given to the farmer will exceed the value received in work at haying, harvesting, and threshing to himself, and will afford him a nice tidy sum wherewith to purchase pork, flour, &c. Winter again comes, and he now resides in his own house, fixing up and preparing for spring work. In spring he again engages the farmer, and goes through the same routine, and this year he will have thirty acres in crop, and will break more if desired, always getting from the farmer the value of his work in improvements. The produce of this crop should and

Will Make Him Independent

of the farmer by affording him money wherewith to purchase a team of horses, two or more cows, implements, &c. It is preferable that new settlers go in for work oxen instead of horses. The reason is that for the first two or three years the work of the farm is principally hauling in chains, and for this oxen are equally as good as horses, and at breaking the sod, as turning up the virgin soil of the prairie is called, they are considered much better. In new soils it is a wonder if some obstacles are not occasionally struck by the ploughshare, and with a team of horses in the plough this would probably cause a smash up, and perhaps a runaway, whereas oxen come to a dead halt on feeling the least obstruction to the even running of the plough. And although slow of movement, still for rough and heavy work generally, they are steadier and far stronger, and therefore more serviceable than horses. Besides oxen are much cheaper to buy, and practically cost nothing for food beyond the labour of providing them with hay for winter and spring. In summer one end of a long rope is attached to a stake or picket driven

into the ground, and the other end fastened around the animal's horns. In this manner they are secured against straying while having sufficient liberty to graze, and so provide themselves with food. In America

No Two-Wheeled Carts

with shafts are ever used, carriage being accomplished with four-wheeled waggon drawn by two horses or oxen with pole between. Whether these waggons are better than carts or not I am not prepared to say, but it is the fashion of the country and likely to continue so. For one thing, one-horse carts would not be very handy on the trails, as the roads are called. These seldom get any forming, being merely tracked by the traffic over them, and the teams being always in pairs, one animal walks in each track, which, by the action of the wheels and hoofs, forms a hard-beaten and pretty smooth roadway. Between the tracks, however, is generally a grassy ridge, on which a single horse between the shafts could hardly walk, and perhaps this also is the reason why road vehicles of all kinds are four-wheeled and drawn by two horses. While speaking of road traffic I may mention that the rules of the road when meeting are entirely the reverse of ours, drivers holding to the right hand instead of to the left. For the benefit of intending settlers I will conclude this letter by giving the prices of a few of the articles likely to have to be purchased by a newcomer.

Yoke of oxen,	\$180	=	£27 8
Two cows with calves,	70	=	14 12
Waggon,	75	=	15 12
Plough,	30	=	6 5
Harrow,	16	=	3 7
Set of harness for oxen,	10	=	2 2
Cooking stove,	26	=	5 8
Small tools,	25	=	5 5
Gun,	12	=	2 10
Two pigs,	5	=	1 1

In addition to the foregoing list the settler will require seeds, a certain quantity of furniture, provisions, &c.

NORTH-WEST FARMERS AT CHURCH.

A VISIT TO BLACK MUD RANCHE.

DESCRIPTION OF THE BUILDINGS.

CHARACTER OF THE STOCK.

(From the Dundee Courier of February 13, 1894.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—We are still at Edmonton, and on Sunday Mr Taylor and I worshipped in the Presbyterian Church there, the incumbent of which is a young minister named Mr M'Queen, from Glasgow. The service was exactly the same as in our Presbyterian churches at home. There was a very good harmonium, which was very well played by a lady member of the congregation, and the singing was very correct, earnest, and sweet. I was seated in the middle of the church, and had no book, but when we stood up to sing the first hymn the minister observed our want and descended from the pulpit and handed us books. I thought it was very kind of him, and wondered how many of our own ministers at home would have been so considerate. The church is entirely of wood, but is very artistically and comfortably furnished and finished. The pulpit is a kind of platform, very little raised above the general floor level of the church. There are no galleries. The congregation

seemed very devout and attentive, and I saw no sleepers, which I rather wondered at, the temperature in the shade being above 100. Some of the worshippers had come great distances, and had driven to church in four wheeled buggies with two horses, which they did not unyoke, but merely tied to posts around the church. A number of foals, whose mothers were in the buggies, accompanied them, and scampered and frolicked around, making their mothers pay tribute by way of a suck whenever they wearied. In the afternoon we again got our driver to hitch up a rig, and had a drive out to the rancho of our friend, Donald M'Leod, which lies beside Black Mud River, about ten miles south from the town. On this drive we encountered

The Worst Roads

we had seen in the country, having to pass through a great many swamps, in which the buggy sank up to the axles. In many places these were laid with corduroy—large trees laid side by side across the road, very open in some places—but the horses seemed to know their business well, and by discreetly avoiding the holes and planting their feet upon the firm logs, they piloted their way nicely. The bridges were also very dilapidated, and our driver had several times to dismount and arrange the planks before venturing upon them. One bridge was completely broken down at the end, and lay with a fearful slope to one side, but our driver, after testing it with his own weight, said he thought it safe, so we ventured and got safely across. On reaching Black Mud Rancho we found Donald in waiting for us, and adjourned to his house to have tea, after which we sauntered out to have a look of his buildings and stock. Donald's buildings are very extensive, and all of wood, whole trees being squared and laid on each other and notched into each other at the corners. A roof tree is laid lengthwise along the middle of the building, only a foot or two above the level of the wall, and from it to the walls roof poles are laid, the whole being covered by a thick coating of prairie hay or straw, and clayed over. There are large carrols around each building, and altogether Mr M'Leod had good winter accommodation for his stock. The

Houses for the Farm Hands

are erected in the same way, clayed between the interstices of the logs, and plastered with clay in the inside. In this way plenty of warmth is secured, but they are small miserable hovels. On many farms the stables and byres are roofed by building a rick of straw or hay over the walls, and as these are seldom thatched and no means are taken to prevent the water from getting in, the stuff is always rotting and diminishing in bulk. Each succeeding crop of straw is piled on top, and in time these scadings have the appearance of huge dung piles. I told one man that if his stable had been within two miles of my farm in the old country that I would have given him £20 for it for manure. Mr M'Leod's rancho is stocked with breeding herds of horses, cattle, and sheep. The brood mares are mostly of the native broncho breeds, graded up with sires of a stronger calibre for draught purposes. I could not exactly say what breed his stallions are, but would suppose them to be a grade between Ontario Clydes and Percherons. They have good thick, well-shaped bodies, short legs, and altogether of the class that seems to be most appreciated in the country, but they are far behind our Scotch Clydes, both in size and quality of bone. In fact, all the stallions I saw in the country, with the exception of a few imported Clydes, were too round of bone, with somewhat

fleshy legs, and short, upright pasterns, and in my opinion

A Thorough Grading Up

with Clyde blood would be very beneficial. Mr M'Leod's cattle were not a particularly handsome lot so far as our Scottish eyes could judge them, but I learned that Donald's object in breeding is quite the reverse of ours. He is a large carting contractor, and uses a great many work oxen in his waggons and bob-sleighs, and for that purpose he wants them big and strong. Consequently, although his breed of cattle be what we would call rough and scrubby, they suit his purpose better than our finer bred and smaller-boned animals with quicker fattening propensities would. His sheep are called Leicesters, but certainly they have nothing pertaining to the appearance or stamp of our home Leicesters. I know they have no Highland blood in them, but in appearance they rather resemble the offspring of crossbred ewes with Leicester tups. But whatever breed they may be, I believe they suit the exigencies of the climate much better than pure-bred Leicesters would. These, I think, would be too soft and tender for the climate of the North-West, the thermometer sometimes going thirty degrees below zero. Nor do I think that any part of the North-West is so well adapted for the rearing of sheep as it is for horses and cattle. For a great part of the summer the grass is too dry, being cured on the stalk to the consistency of well-made hay, very nutritive indeed for cattle and horses, but not the right thing for sheep. My idea of

Sheep Pasture

is that it should contain as much moisture as is necessary for their maintenance without their having to drink water, and that when they have to drink they never do so well, especially when they have to walk a considerable distance to obtain it. Cattle and horses, especially the latter, are different; they will do very well on dry food provided they have free access to water. The great heat is also against sheep. The summers are very warm for weeks, the thermometer standing at over a hundred degrees in the shade, and the poor creatures may be observed with their tongues lolling out like hunted dogs, so that they cannot possibly feed well. Donald's lambs were considered good for the country, and were being drafted away as fat; they would, however, only be looked upon as medium stores at home. Flockmasters are much bothered with a weed called spear grass which grows thickly on the prairie. It has a small stalk about eighteen inches high, on the top of which is a single seed like wild oats. This seed is very hard and very sharp at the point, and an inch or so of the flower stalk is as hard as a piece of brass wire, and twisted like a screw. When this seed and small piece of stalk gets amongst the wool the motion of the animal causes it to work its way into the flesh, and as it often pierces some vital part, many animals are lost before the evil is discovered. Sheep are not, however, so liable to be struck by maggots as they are here—the dry nature of the climate renders every part of the fleece too dry to allow the eggs of the fly to be hatched—nor are they subject to footrot. Taking Mr Donald M'Leod's rancho as a whole, we were very favourably impressed with his mode of managing his stock. There were several systems on which we would have been inclined to have suggested some alteration, but these pioneer farmers know by experience their business better than we can tell them. Besides, it was not our business to endeavour to teach our Canadian cousins, our mission being to get rather than to give information.

DRIVE OVER THE PRAIRIE.

GOLD PROSPECTORS INTERVIEWED.

A DESERTED INDIAN RESERVATION.

ANIMAL AND INSECT LIFE ON THE PRAIRIE.

A FASCINATING FIELD FOR SPORTSMEN.

(From the Dundee Courier of February 20.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Still another day spent in the neighbourhood of Edmonton, for, as I said before, there are only two train services to and from it weekly. As we came to it on a Thursday, and were not ready to start with the return train on Friday, we had to stay until Tuesday, and had thus the best possible opportunity of inspecting the district. On Monday morning, while seated at breakfast in the hotel, we were called upon by Mr Thomas Anderson, Crown agent for the Edmonton district, and Mr Walter, an extensive joiner, wheelwright, farmer, and rancher, and these gentlemen offered to accompany us on a drive to the Beaver Hill, Sandy Lake, and Clover Bar district. Having obtained a buggy and a pair of horses, Mr Walter took on himself the position of driver, seeing he was most intimately connected with the lie of the country. Mr Anderson is an Englishman, a scion of the aristocratic classes, who emigrated early to Canada and made his mark, finding a busy life as a Government representative much more congenial to his taste than an idle life at home. He may be said to be the ruling spirit of the place, and is much liked and highly respected. Mr Walter is a Scotsman who went out there many years ago with nothing in his pocket, and by working steadily at his trade as a joiner has made an independence, and has latterly added farming and ranching to his business. He also is much liked and highly respected, and I would strongly advise people going out to Edmonton with the intention of settling to go to Mr Walter and be advised by him. Our journey was again to the south side of the of the Saskatchewan River, which we crossed at the ferry below the town. When crossing we observed several prospectors

Washing for Gold

on the south shore of the river, and Mr Anderson proposed that we should go and observe them at their work. On reaching them it was found that they were infringing the rules of the place by digging in below and undermining the perpendicular banks. They explained to Mr Anderson that the river was yet too full to allow of working in its bed, and that if they were not to be allowed to work into the banks they would have to stop until the river diminished in volume. But Mr Anderson would not allow of the banks being broken, so after a sharp discussion and a smart rebuke they had to desist. Their *modus operandi* is to have a long box or trough lined with crimson woollen cloth charged with mercury, into which they shovel the sand and gravel from the bed of the river, and, washing this with water the gold dust is fixed by the cloth and mercury and freed from the soil. They were getting a good show of gold when we were there, but not so much as to prove remunerative, and they would likely delay operations until the river fell, when they would get farther down into the sand bars, where they would be more successful. The gold dust obtained from the bed of the river is pur-

chased by the bankers of Edmonton at £3 per ounce. When the river is low and operations are in full swing, the gold-washers earn about \$7 a day, and many farmers and farm servants make a good pile at this sort of work in their spare time. Continuing our drive southwards in the direction of Sandy Lake, we struck out from the trail, and crossed miles after

Miles of Uncultivated Prairie,

where there was no semblance of a road. To describe the rich luxuriance of this prairie scene would be simply impossible. The surface is by no means a complete level, but is gently undulating, with numerous ponds and small rivulets, and clumps and belts of trees here and there. Between these clumps and belts are broad expanses of open prairie literally knee deep with grass and flowers of every shade of colour. These open spaces would make splendid farms, very easy to break and improve, there being no stones to unearth, no roots to dig out, where, in fact, there is nothing more to do than put in the plough and drive away. A great part of the district through which we drove is an Indian reservation, which was set aside by the Government for the sole use of the Indians when the country was surveyed some years ago, but which has now been deserted by the red men. The Dominion Government is now selling the land to white settlers at from 12s to 17s per acre, the proceeds to be devoted to the maintenance of the Indians. Owing to the great luxuriance of vegetation, after it becomes dry and withered, prairie fires are a much more serious and dangerous affair here than farther south, where the sward is much shorter and less abundant. The numerous clumps of wood through which these fires had passed, with their dead trunks and naked branches, stood weird and ghost-like as we passed along, showing us how frequent and destructive these prairie fires are. Every here and there along the courses of the small streams are

Great Beaver Dams.

The dykes extend a long distance to each side of the stream, and are convex towards the current, so as to give more strength in resisting the force of the water above. They are broad at the bottom and narrow towards the top, and we could not fail to admire the extraordinary instinct and industrious habits by which these creatures are enabled by such an expenditure of labour and skill to erect such extensive and substantial habitations. None of these structures were, however, of recent date. We saw none of the animals themselves, and I apprehend that their almost human instinct teaches them to retreat before the advance of man. Musk rats are abundant. This animal bears a strong resemblance to our brown rat, but is somewhat bigger, its body being about 15 inches in length. Its fur is in demand and forms an article of commerce. Its flesh, at those seasons when it is fat, is much relished by the Indians, and is said not to be unpalatable. It is aquatic in its habits; its burrows are always under water, so that it must dive to reach them. On passing the margin of some shallow ponds or swamps I saw what I took to be small coles of hay, from three to four feet high, built amongst the water, and could not understand why they should be placed there. It turned out that these were the huts of the musk rat, constructed of coarse grass and mud, which the animal collects and works together. It is called by the Indians "Sondeli."

Ant Hills were Numerous

all along the way we passed, and the wheels of our buck-board would frequently bump upon a small one concealed among the tall grass. Very

generally they are from two to three feet high, of a circular, conical shape, rounded on the top, and resembling a mound of dried clay. On a stick being pushed into some of them, the insects swarmed out in myriads, but they did not seek to attack us, although I have no doubt they would give an ugly bite if they got the chance. On breaking up the mounds, the whole inside was seen to be intersected with open galleries or roadways, and the first care of the ants seemed to be to seize the larvæ which we had exposed, and carry it down the nest to a place of safety. I was often told that rattlesnakes and other dangerous reptiles existed in places we were going to, but always when we reached that place and inquired, none of the inhabitants had ever seen or heard of any, so that I am doubtful if any poisonous snakes exist in the North-West territories of Canada. Garter snakes are plentiful, but these are perfectly innocuous. On the journey I am describing I saw one of these garter snakes. It was about 26 inches long, and about the thickness of a heavy whip, of a most beautiful speckled colour. Insect life on the prairie is numerous beyond all description. On walking over the plains every footstep raises them in myriads. Butterflies of large size and of every colour under the sun flit about in every direction. Grasshoppers are found in swarms. One species, possessed of wings of a dark crimson colour, has a great resemblance when on the wing to our dark red butterflies, but is much larger. It does not appear to be capable of any lengthy sustained flight, but leaps up from amongst a person's feet when walking through the grass, and flies to a distance of twenty or thirty yards. The

Prairie Chicken,

a fowl about the size of our hen pheasant, and somewhat resembling her in colour, is very numerous on these plains, and affords excellent sport during the open season. No license is required to shoot them, but no person is allowed to sell them or send them out of the country. Every few yards a covey of ten or twelve would start up before us within nice shooting distance, and I regretted very much that it was then close time so that I could not get a shot at them. Sportsmen go out to the prairie in their buggies accompanied by pointer dogs, and when the dog makes a point, they drive up to him and often-times shoot without dismounting. Every lake and pond we passed was literally dotted with ducks of many kinds, geese, and swans. These also give grand sport in the open season, and settlers need never be at a loss to have their larders well supplied for winter with the best and most savoury of fowls' flesh.

A MODEL HOMESTEAD.

TWO ENTERPRISING LONDONERS.

HOW THEY BECAME AGRICULTURISTS.

THRESHING OPERATIONS IN CANADA.

(From the Dundee Courier of February 27.)

Mr Osler, the *Courier's* Special Commissioner, writes:—Still bowling south in the direction of Sandy Lake, over endless expanses of prairie, where no semblance of trail or road is to be seen, through which tall grass that reaches up to the axle of the

buckboard, bumping upon ant hills concealed amongst the grass, and through deserted beaver dams, we at last reach the farm of Cloverbar, where we unyoke in order to feed the horses and procure shelter for ourselves for an hour or two from the blazing sun which threatened to roast us alive. Cloverbar Farm is owned by two young men called Elliot, who emigrated from London some five or six years ago. Their father was a coachman, and they knew nothing about agriculture, in fact they had never seen a plough at work until they came to Edmonton, and knew nothing whatever about the rearing and management of stock. They had very little money, but they were possessed of health and strength and willing arms, stout hearts, and independent, persevering spirits that enabled them to overcome all difficulties and carve their way to success. When they arrived in the country the eldest brother was just over eighteen years of age, and was, therefore, entitled to a homestead of 160 acres of free land, which he took up and located on, breaking up and bringing his farm under cultivation, and erecting his buildings. The younger brother was only sixteen years of age, and therefore could not get his homestead, but he

Hired Himself to a Farmer

and earned money to support himself and brother while the latter was breaking up his land. Two years later, when the younger brother was eighteen, they saw that the eldest brother's farm would support them both, and the youngest being now entitled to his homestead took up his 160 acres of free land alongside his brother. And now they work the whole 320 acres as one concern, living in the same house, herding all their stock together, and housing them in the same buildings. They are very handy with tools, and have in their leisure time erected a nice four-roomed house of dressed timber, which is very comfortable, and even elegant. Their barns, stables, sheds, and carrols for cattle, accommodation for pigs, and houses for poultry, and even pigeons, are very commodious, and are composed of squared logs, covered with straw and clayed over, and although not so elegant as old country steadings these buildings are equally as comfortable and as well fitted for the welfare of stock as anything we have at home. To show how young men possessed of energy, perseverance, and steadiness may get on out there I will now give a vidimus of

The Possessions

of these two young men. They have 12 acres of wheat, 30 acres oats, 10 acres barley, 2 acres potatoes, 1 acre turnips and mangolds, 14 cows, 14 calves, 14 one-year-old steers and heifers, 14 two-year-old steers and heifers, 10 horses, 12 pigs, a large number of poultry, mostly of the Plymouth Rock breed, and a large number of pigeons, which affords them excellent pies on festive occasions. They have no housekeeper or any womankind about them, but they are themselves nice and handy at housekeeping, and manage the dairy to perfection. We had tea here, prepared by one of the young men, and better done ham and egg, or nicer baked bread, done by themselves, I never partook of. Their yield of grain last year was 35 bushels wheat, 50 bushels oats, and 40 bushels barley per acre. This year their crops are much better, and all over they expect to exceed last year's yield by 5 bushels per acre, the prices they got being 70 cents per bushel for wheat, 25 cents per bushel for oats, and 30 cents per bushel for barley—the prices for the two latter being scarcely up to an average rate, the grain being badly damaged in harvesting. The brothers must have been well advised in selecting

their cows, and have since displayed much skill in grading them, their stock being the nicest lot of grade cattle I saw in the whole country. The cows are good Durham grades, and their bulls are of the pure Aberdeen-Angus breed, purchased from the fine breeding herd of

Angus Doddies

belonging to Mr Gordon Cumming, tracing back to some of the best blood in Forfarshire. The result is that the young stock are nearly all black and polled, inheriting to a great extent the thick, blocky, short-legged, fine-boned, quick-feeding propensities of their sires. The whole herd are grazed during the summer on the prairie on grass that belongs to nobody, so that the grazing does not cost them a penny. They are not herded, but are allowed to roam at will, one of the brothers taking an occasional ride out on horseback to turn them back if they stray too far. In winter they are comfortably housed at nights and are allowed out on the prairie during the day. The young stock get a daily allowance of prairie hay, but no grain. The feeding stock are liberally fed on hay and light grain, and sold off fat at three years of age, the average weight being 640 lbs. of dressed carcass, for which they obtain 7 cents per lb., or from £9 to £10 per head. The hay for winter feed is cut off the prairie with mowing machines, a permit being given by Government to cut any quantity at 5 cents per ton, but it is never weighed, and little supervision is taken of the quantity, and if a man gets a permit to cut ten tons he can cut twenty and never be challenged, the Government agents rather encouraging settlers to secure plenty of winter feed, so as to maintain as many head of cattle as possible, the license being merely imposed to prevent parties from establishing a right to the land without purchasing or homesteading.

Working a Homestead.

Any occupant of a homestead, quarter section, having no timber of his own may upon application obtain a permit to cut such quantity of building timber or fuel as he may require for use on his homestead not exceeding the following:—1800 lineal feet of building logs, 400 roof poles, 2000 poplar fence rails, 30 cords or loads of dry wood for fuel, and any quantity of burnt or fallen timber of a diameter up to 7 inches for fuel or fencing purposes, and if that is not sufficient he may upon payment of a quarter dollar (one shilling) get a permit to cut all he needs from off the nearest Government lands. The brothers Elliot had taken full advantage of this privilege, and besides taking as much free timber as erect their stables and other outhouses also had their farm all well fenced, the only outlay on all their improvements being the expenditure of their own labour, cutting down the wood, hauling, and erecting. The building of the house had of course cost more—the sawing and dressing of the timber, the cutting of the shingles, nails, and other necessities—but the whole cost in addition to their own labour, according to their own calculation, did not exceed \$100 (£20). During

Spring and Haying

they hire in one extra hand, and during harvest and threshing they sometimes have two additional hands, but in all ordinary seasons they manage the whole work on the farm themselves. No farmer that I visited in all Canada had fixed in threshing mills of their own, the whole threshing in the country being done with portable threshing machines hauled from place to place with traction

engines, the fuel used being straw, fed into the furnace in a steady stream by a machine invented for the purpose. The owners of the threshing machines carry a full staff of men with them to work the machines, who are boarded and lodged in portable bothies also carried along with them. The threshing commences as soon as the wheat is cut, large quantities of it never being stooked, the climate being generally so dry that the grain is ready for threshing and storing the moment it is cut off the stalk. Harvest generally takes place in the month of July when the days are long, and the threshing men being paid by the number of bushels threshed. Operations go on continuously from sun up to sun down at the rate of 1500 bushels a day of wheat and 2000 bushels a day of oats and barley, the rate charged by the mill-owner being 4 cents per bushel of wheat, 5 cents for barley, and 2½ cents for oats. An automatic arrangement on the machine records the number of bushels passed through daily. The grain is run from the threshing-machine into the box of a waggon, and hauled by the farmers to the nearest grain elevator, where the whole waggon-load is dumped at once into a great hopper, where it is weighed, and run by the elevating machinery into the dressing-machines, and then run to the different bins, into which the particular quality of grain may be graded. After the threshing is finished and the machine hauled away, a match is struck and shoved in below the straw pile, and this, I must say, is a most thorough and expeditious mode of redding up a cornyard, and it is also looked upon as a kind of *feu de joie* announcing to the neighbourhood that the work of threshing is accomplished.

FAREWELL TO EDMONTON.

A CHEAP ESTATE ON THE PRAIRIE.

A FIELD FOR INTENDING EMIGRANTS.

THE DAIRYING INDUSTRY.

GOLDEN OPPORTUNITIES FOR SCOTTISH GIRLS.

(From the Dundee Courier of March 6.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—On our return journey from Cloverbar to Edmonton, Mr Walter made a detour on purpose to see a large extent of prairie which he had rented at a few coppers per acre from the Government for haying. The sward was largely composed of peavine, and would yield about three tons per acre. He thought it about ready for cutting, and intended to start quite a number of mowing machines in a day or two, the only obstruction to the working of the machines being the ant-hills, which, I am sure, would prove a serious bother. Near Edmonton we came upon a large parcel of land which Mr Walter had purchased some years ago, a great part of it being broken and under crop. Mr Walter has few buildings to speak of on his farm. His crops were really grand. He computes he has 60 bushels of barley upon first breaking (that is the first crop after the prairie has been broken up), 70 bushels oats upon second

breaking, and 40 bushels wheat per acre, and I am sure that no one who saw his crops grow would estimate them at less. Mr Walter keeps on an average 100 head of cattle. He generally feeds off at three years of age, but sometimes has a few four-year-olds.

Winter Feeding.

Every morning during winter a man distributes a load of prairie hay amongst them, each animal consuming about 1½ ton of hay during the winter season, and the feeding steers get 1 gallon gristed barley a day. The young animals not feeding off get nothing but the hay, but are constantly out on the prairie, where they pick up a good deal of food for their own support. Last year Mr Walter sold 21 three-year-old steers in one lot to a British Columbian dealer. The gross live weight of the 21 animals was 26,068 lbs., and the total price obtained was \$938.45, this making the average live weight 1241 lbs., the average price £9 5s per head, and the average rate per cwt. 16s 10d. He also sold two three-year-old cattle to the Hudson Bay Company at £10 each. Another gentleman named M'Kernan, a neighbour of Mr Walter's, sold 28 cattle—all three-year-olds—the gross weight of which was 34,079 lbs., or 1220 lbs. per head. The price obtained was \$3.60 per 100 lbs., or £9 13s per head. Neither Mr Walter's nor Mr M'Kernan's cattle were ever in a house. Mr Walter pays his farm labourers \$15—£3 a month, with rations; and his carpenters \$1½—6s 3d a day, with rations. In the south town of Edmonton—that is on the south side of the river—there is a new flouring mill, erected by and owned by the Edmonton Flour Milling Company, and managed by Mr Robert Ritchie, who kindly showed us through the works. It is fitted up on the patent roller flour milling principle, with a capacity of turning out 100 barrels of flour a day. They are having steady employment all the year over, and during last season have been purchasing wheat from the farmers around at from 60 to 70 cents a bushel, or from £1 to £1 3s 4d per quarter. They sell the best flour at \$3—12s 6d per 100 lbs., and baking flour at \$2.75—11s 5d per 100 lbs. It will be observed that these prices are very much higher than at Winnipeg or in any other district of the North-West territories, the reason being that the other industries of the district give employment to

A Much Larger Population

than the cultivated areas are yet able to support. Previous to the erection of the mills, the flour had all to be shipped from Winnipeg, a distance of 1000 miles; but, before the construction of the railway, only two years ago, it had to be hauled from Winnipeg with bullock wagons, the journey occupying three months. Although, as I said before, the town of Edmonton is not well supplied with water, the country around is well watered with running streams and creeks, and where wells have to be dug, water is always found within 20 or 30 feet of the surface. Digging and building a well costs \$1 per foot, and all throughout America it is customary to place a pump in the well, driven by a windmill overhead. These windmills are a prevailing characteristic of American landscapes, in some districts every farm being provided with one. On our return to Edmonton in the evening we found a regular *fete* provided for us, for, as we were to leave in the morning, quite a number of friends that we had made had collected to spend the evening with us in conversation. Naturally the talk turned upon the embargo imposed upon Canadian store cattle in Britain, and much indignation was

expressed as to the attitude of the Home Government in regard to them. None of those present had ever heard of the existence of pleuro-pneumonia in the Dominion, except through the British newspapers, and none of them believed that the disease existed or ever did exist in the country. Before leaving Edmonton I would like to draw the attention of struggling farmers at home and middle-aged ploughmen with large families to the splendid chance which awaits them in this district. They themselves and every son they have over eighteen years of age will get 160 acres of as good land as there is under the sun for practically nothing, the small sum of £2 only being to pay for registration and office fees. If they have five sons that will be an estate of close on a thousand acres they will get amongst them for £10. Nor will the girls be in the way.

Dairying Pays First-Rate

in all the North-West Provinces, there being a steady demand and ready market for butter at from 10d to 16d per lb., and cheese bringing 5½d per lb. The rearing of poultry also pays well. Common hens bring from 2s to 2s 6d per pair, and chickens from 10 to 12 cents per lb. Turkeys bring from 12 to 15 cents per lb., and eggs sell at from 15 to 25 cents per lb. These prices are not much below what we obtain here, and with no rent to pay for the land the industry must be much more lucrative out there than here, and female labour relatively more valuable. Consequently dairymen are greatly in demand and receive good wages. No farmer out there can get on well without a wife to look after his housekeeping and dairy business, but there are hundreds upon hundreds of prosperous young farmers out there who cannot get wives, for the simple reason that there are very few young women out there to make wives of. On some farms men do the milking, drive the churns, and make up the butter, but men at this job are just like fish out of water, and women are at all times to be preferred. Let any number of our bonnie rosy-cheeked Scottish lassies accustomed to housekeeping and dairying go out there, and prove themselves adepts at these occupations, and I will guarantee that before a twelve months are over they will have the refusing of a score of respectable well-to-do young farmers, any one of whom would make a desirable husband. But to both men and women I would say—"Don't go out there and expect to achieve an independence by leading an idle life." The person who would succeed must be prepared to work, ay, and work hard too. Labour is dear, dearer even than here, and a farmer is obliged to take the leading part in all his own operations. If he has a large family to act as helps, he will be all the better off, for out there

"Children are blessings, and he who hath most
Hath aid for his fortune and riches to boast."

And nowhere in the world is Nature more prodigal of her gifts than she is out there to the man who steadily and energetically "earns his bread in the sweat of his brow." But to a man accustomed to farm work here the work he will have to perform will not be one bit harder out there. And to say, as I have often heard it said, that a person going out has to forfeit all the pleasures of life is mere nonsense. There the people are just as social, as friendly, and as neighbourly as they are here. They live as well as we do, if not better, and they have their seasons of leisure, when they join at social meetings, festive gatherings, and sports of every description, and enjoy the pleasures of life just as heartily and well as we do in the old country.

DEPARTURE FROM EDMONTON.

A VISIT TO IMMIGRANT LODGING- HOUSES.

THE JOURNEY TO MONTREAL.

SCENES BY THE WAY.

SHEEP FARMING IN CANADA.

IN THE TRACK OF PRAIRIE FIRES.

(From the Dundee Courier of April 3.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Leaving Edmonton we crossed over the Saskatchewan River and proceeded to the railway station to take train back to Calgary. Near the station are situated the immigrant lodging-houses, erected and maintained by the Government. These lodging-houses are partitioned into nice comfortable bedrooms with clothes presses and other conveniences. There is one common kitchen in each house, provided with a cooking stove and all other necessary culinary and laundry utensils. Immigrants on arrival are admitted to these houses and allowed to stay until they obtain houses of their own. Of course they have to provide their own bedclothes and food, but that is no hardship, seeing there are plenty of provision stores close by. Plenty of fuel is provided free. As these houses are looked after by the Government agents, a man may have no hesitation about leaving his wife and family there while he himself is away.

Fixing Up a New Home

at a distance. All the way between Edmonton and Calgary we saw numerous newly-arrived settlers busily engaged in breaking up their homesteads. Many of them were living with their families in canvas tents, which seemed rather an agreeable mode of bivouacking during the summer months. A great many of these new settlers were from the United States, and all declared that the agricultural capabilities of the soil in that district were immensely superior to anything they had been accustomed to, that the taxation was lower, and that the laws relating to the occupation of the land were much more favourable than in the States. Gradually as we proceed southwards the vegetation becomes less luxurious. We leave the nicely-wooded park-like country behind us, and approach the open plains, where the sward is brown and withered. The grass is cured on the stalk into well-made hay, forming good, nutritive food for horses and cattle, but is, in my opinion, somewhat too coarse and dry for sheep. Having stayed over night at Calgary, we next morning took our seats in a splendid Pullman car on the Canadian Pacific Railway, and started on our long journey of 2200 miles to Montreal, having received word by wire that our vessel the *Iona* was to sail from the latter port in ten days. As we proceed eastwards from Calgary we only see pioneer farms in groups here and there at long intervals. We came in sight of the farms owned and run by

The Canadian Colonisation Company, and large bands of cattle, sheep, and horses are to be seen grazing. Near Swift Current is one of these farms, on which 19,000 sheep and 8000 lambs

are kept. The sheep are divided in 10's of 2000 each. One shepherd is allowed to each lot during summer, and gets a man to assist him in winter. Good shepherds are paid £6 per month with board. Fifty tons of hay for every thousand sheep is all that is put up every season, and it is seldom all used, but it has to be ready in case of a severe winter. The hay is put up by contract, costing 12s per ton, so that in any case the sheep do not cost more than 7d per head for extra, keep during winter. The wool is pressed into bales by horse-power, and brings from 6d to 7d per pound. Mutton put on rail at Swift Current is worth 4d per pound. Up till a short time ago there was a law prohibiting the keeping of sheep, but under certain reservations as to herding and fencing they may now be kept in any number. Hitherto the rent of the land rented from Government has been one halfpenny per acre, but in future it will cost a penny per acre. The whole of these open plains are reticulated with buffalo trails and pitted with their wallows. The trails lead in the direction of water, and resemble the sheep walks in the meadows and pastures of our own country. The wallows are deep, round, saucer-like indentations, where the bulls had scooped out the soil with their horns and fore feet. So long as the Indians had only bows and arrows and the tomahawk with which to attack,

The Buffaloes

were comparatively safe, and the number killed did not exceed the natural increase, but when the rifle was put into their hands the fate of these bovines was sealed, the Indians and half-breeds killing them wholesale for the sake of their skins, the carcasses being left to rot where they fell. The result is that no buffaloes now exist on the plains, but in many places the prairie is literally white with their bones, and at every railway station piles of thirty or forty tons each are collected, proving how numerous these animals had been not more than a dozen years ago. The country around here becomes more broken and numerous lakes and ponds occur in the depressions, while now and again we cross deep summer-dried gullies and creeks. We see no trees, not even a bush, for a hundred miles or more, and without them the short buffalo grass all withered and brown gives the country a desolate, barren look. In many places the soil is thickly impregnated with alkali, which may sometimes be seen coating the surface like a shower of snow. This alkali is very deleterious to plant life, which accounts for the stunted, barren

Appearance of the Vegetation.

And, as the waters of the lakes and streams are generally highly alkaline, these districts cannot be at all well adapted for the keeping of stock. Besides, the surface is in many places overgrown with a nasty milk-coloured weed called wormwood or sage, which gives these great plains a desolate, barren look. This weed is possessed of medicinal qualities, and has such a bitter acrid taste that no stock will eat the grass where it grows. In my opinion these districts where alkali exists in large quantities, or where sage or wormwood monopolises the surface, ought to be avoided by settlers in locating their homesteads. As we proceed eastwards we every here and there come upon an expanse of some hundreds of acres black with the ashes of a recent prairie fire, and every now and again we are plunged into a dense cloud of smoke enveloping the railway for miles, and we pass through prairie fire after prairie fire as we sweep along. These prairie fires are very tame affairs in comparison with what we have been accustomed reading about, a low front of

smothered flame creeping slowly along, and not half so dangerous like as a heath fire at home. The most of these fires are said to be caused by sparks from passing engines, and fire breaks are made all along on both sides of the railway track. These fire breaks are made by ploughing strips of the prairie a few yards broad on either side of the line, and about thirty yards distant, and as these ploughed ridges extend nearly all the way from Winnipeg to the Rockies I am quite within the mark when I say that I have seen furrows 800 miles long. Such furrows would give our crack Scottish ploughmen a grand chance of trying their skill at drawing a straight feering.

CALGARY TO REGINA.

AN IMPEDIMENT TO DEVELOPMENT.

THE CAPITAL OF THE NORTH-WEST.

AT THE HORSE RACES.

INDIANS ON THE COURSE.

AN UNPLEASANT EXPERIENCE.

(From the Dundee Courier of April 10.)

Mr Oler, the *Courier's* Agricultural Commissioner to America, writes:—From Calgary all the way to Regina the general aspect of the country is rather uninviting to the eye of the agriculturist. We see no trees, not even a shrub, for a hundred miles or more. Isolated farms at intervals of five or six miles are to be seen, and the wooden farmhouses looming up in the broad expanse of prairie fifteen or twenty miles away appear like ships scattered on the ocean. It is said that the railway passes through the worst district of the Canadian North-West, and indeed our experience was that such was the case, for every place we stopped at we had a drive out a distance of perhaps thirty or forty miles from the line, and we invariably found that the soil improved the farther inland we went. In planning the railway the engineers selected the nearest and most direct route to the Kicking Horse Pass through the Rockies, but, in my opinion, that was a mistake, seeing that by taking a slight detour at the cost of adding a few miles to the length of the track a much richer agricultural district would have been passed through, and the resources of the North-West would have been better and much more quickly developed. As it is, travellers passing through without stopping to examine cannot possibly be favourably impressed with the appearance of the country. At Regina we stopped over two nights, and took time to have a walk through the town and a drive out to the country around. Regina is the capital of the North-West Territories, occupying a central position on the banks of the Wascana River, and its progress since the advent of the railway has been very remarkable and striking. Here are situated the headquarters of the mounted police, where more than 300 men are usually kept in commodious and well-appointed barracks, there being a magnificent riding-school for practice in the winter. Here is also situated the Government House, where the Lieutenant-Governor and his staff carry on the legislative business of the Territories. By their side is the Indian Department building, wherein the Indian Commissioner and a large staff conduct

the Indian business of the Territories. Numerous churches, large schools, commodious hotels, banks, stores of every description, the never-ending grain elevators and dwelling-houses, mostly all of solid brick, give the town a very substantial and imposing appearance. There are upwards of 2000 inhabitants. Nine hundred electric lights are constantly in use, and sixty telephones are distributed through the town. There is a commodious curling rink, covered in and lighted with electricity, and I learned that

The Roaring Game

is very popular and much resorted to in the winter season. East from the town is a well-made race-course, with a substantial permanent grand stand, and, as the annual horse races took place when we were there, we spent a day in witnessing them. A great concourse of people were collected, all rigged out in holiday attire, and as they all spoke the English language and conducted themselves exactly similar to what people do here, it was difficult for us to realise we were amongst a crowd of foreigners. They displayed a keen interest in the result of the races, and a good deal of bookmaking was going on. The races were keenly and numerously contested, the best running horses being of English descent. The trotting horses were all run in harness, the buggies to which they were attached only weighing 47 lbs. They only consisted of shafts and wheels built after the style of our bicycles. The driver sat close to the horse's tail, and with his arms stretched forward on each side of the animal urged him on at a great speed. The heads of the horses were all tightly reined up with what is called an overdraw check. A strap is attached to each side of the bit, passed up the horse's face, and brought back between his ears, and tightly fastened to the turret of the saddle. This made the horses run with their noses high up in the air—somewhat ungainly, I thought—and it also seemed to me that the tight manner in which they were reined up impeded their action to a considerable extent. They had also galloping contests and games at polo. I thought the running pretty good, but, as I am not well acquainted with racing records, I will give the speed, and connoisseurs can judge for themselves:—Trotting in harness, 2 minutes 35 seconds to the mile; polo ponies galloping, half-mile in 35½ seconds. Many hundreds of Indians had collected to witness the races. These people had their camps pitched on the prairie close by. The Indians take all their worldly possessions with them when they go on a visit, and the bands of loose horses that surrounded their teepees grazing on the prairie were innumerable. I fancy they were holding

A Horse Market

amongst themselves, but could not be sure of this, as no white men were mixing amongst them. The red people, both male and female, seemed to take a great interest in the races, but none of them came within the ring, all standing upon the railway track, which passed upon an embankment close beside the racecourse. It appears that formerly the Indians went keenly into the horse-racing contests, and created a good deal of amusement by their uncouth manner of riding, but since the introduction of English-blooded horses they, finding their native cayuse have no chance in the contests, have given up competing. In the evening I observed the Indians wandering in great numbers through the town making purchases at the stores, but none of them entered the hotels or public-houses, and I did not see a single Indian the least the worse of drink, although there were many whites whose appearance showed they had been worshipping at

the shrine of Bacchus. Indeed, it is a penal offence for a white man to give an Indian drink under any pretext whatever. Shortly before we visited Regina, a white instructor upon an Indian reservation had inadvertently left a press unlocked in which was a bottle of whisky. An Indian stole the bottle and got himself intoxicated. The white man was tried for the offence, convicted, and sentenced to six months' imprisonment without the option of a fine. Sauntering along the street Mr Taylor and I came upon an Indian lad leading a young bear. He had a smattering of English, and we got into conversation with him, and tried to buy the bear. He asked \$4 for it, but as the possession of such stock was scarcely in our line we declined the purchase. The town being so crowded we had a difficulty in procuring a bed, but through the intercession of some parties to whom we had letters of introduction, we were accommodated in an attic room in one of the hotels. A great noise and uproar prevailed nearly the whole night through, and just as Mr Taylor and I were composing ourselves to sleep the bottom of the bed gave way, and we were precipitated to the floor, but we had been accustomed to roughing it by this time, and, without even rising to examine matters, we drew the sheets around us and lay still.

A TOUR AROUND REGINA.

FRATERNISING WITH THE BLACKFEET INDIANS.

VISIT TO A GOVERNMENT EXPERIMENTAL FARM.

AMERICAN SYSTEMS OF CULTIVATION.

(From the Dundee Courier of April 17.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—On the forenoon of the day we left Regina we had a drive out to the country around. In the Government pamphlets and other prints this is reported as a good agricultural country, but, to tell the truth, we were only fairly-well impressed with its appearance, though this may have been due to the time of year we visited it, the dry, withered, somewhat-stunted, and thin appearance of the grass not recommending itself to our fancy. The crops of wheat were fair, but nothing in comparison to those we saw around Edmonton. We saw some herds of very good cattle, shorthorns, or Durhams, as they are called, of a very good grade, and the efforts and care which we observed were being exerted on every hand to improve the quality of the cattle were such as to make us believe that in a few years the herds of the Dominion will not be behind those of the old country. A great number of cows belonging to the townspeople were being grazed around the town in one common drove, several mounted cowboys being engaged in herding them. The price paid for each cow for herding is \$1, and to winter a cow costs from \$12 to \$15 for hay. Milk sells at 5 cents per quart in summer and 8 cents in winter. A cord of wood for fuel costs from \$3 to \$6 according to the time of year. We saw waggons drawn by two oxen abreast bringing in great loads of firewood to the town. They were harnessed in collars, and it was only on rare occasions that we saw the old-

fashioned wooden yoke over the necks in use. They had

No Bridles or Halters,

only a small cord tied to the horn of the near ox, which the driver held in his hand. From what I saw I am inclined to think that the oxen of the country are more serviceable in draught than the native horses. On driving around, we were struck with the great piles of buffalo bones which everywhere met our view. These bones are worth about \$7 per ton for the sugar refineries, but, judging from the large quantities on hand, there does not seem to be much demand for them. The word Wascana, the name of the river upon which the town is built, is an Indian name meaning the place of bones, and refers to a great precipice near the town where great numbers of Indians would annually collect for hunting expeditions, and, forming a cordon around the herds of buffaloes, drive them in great numbers over the precipice where they were dashed to pieces. This they did in a strange belief that the more they killed annually the more numerous would they become. At the station were collected great bands of Indians, and they were more stately and warlike than the majority of Indians we have yet seen. These Indians belong to the tribe called Blackfeet, and time was when they struck terror to the hearts of the white men. They are tame enough now though, and those travellers for whom Cooper's novels have had an early charm find room in their hearts for regret that these blanketed nondescripts standing with outstretched palms—these frowzy beggars—are the real material from which the novelist built his red-skinned heroes. A number of young squaws, probably the best-looking young ladies from the Tee-pee Camp near by, ran alongside the train reiterating the word money, the meaning of which they seem to have a clear perception of. Just as the train was starting some kind-hearted passenger threw them a number of small coins for which they scrambled and fought, tumbling and rolling over each other in a most unseemly fashion, making us contrast in our own minds the rude outlandish behaviour of these

Damsels of the Plains

with the staid deportment and lady-like bearing of our young women at home. Leaving Regina, we pass Que Appelle, and continue our route to Indian Head, which we reach early in the afternoon. On this journey the prairie is broken and bumpy, and numerous ponds and slews occur in the depressions. Large expanses of the land are covered with a low scrub of a kind called buffalo willow. We pass numerous deep summer-dried coulies and creeks, the banks of which are thickly overgrown with scrub, amongst which the grass appears greener and more luxuriant. A coulie is a deep hollow or ravine opening into the valley; a creek is a stream or ravine opening into a coulie. On arriving at Indian Head, we were met at the station by Mr Mackay, manager of the Government Experimental Farm at Indian Head, who had been made aware of our coming. Getting seated in a four-wheeled buggy, drawn by a pair of high-stepping bronchos, we were first driven to the hotel in the village, where we bespoke bedrooms, then out to the experimental farm, where we were most hospitably entertained by Mr Mackay in his own house. And here I cannot help remarking about the frequency of fruit in the *menus* of American meals. Every diet is prefaced by a service of delicious grapes, pears, bananas, cherries, peaches, or whatever sort may be in season—a custom which we relished very much.

The Government Farm.

After dinner Mr Mackay drove us over the farm, and we were much struck with the general excellence of the crops. The chief object of the farm is, as its name denotes, one of experiment, and to show forth to the farmers the best methods of cultivating the soil, the propagation of improved kinds of grain and other seeds, and the production of trees suitable for the soil and climate. Monthly bulletins are sent out to all the farmers of the territories describing every new process tried and the result—describing all new grains and plants, the time they take to grow and ripen, and the quality and value of the produce. Forty-nine varieties of wheat were being experimented on, and as many of barley, oats, peas, and maize. The common sunflower that grows as a flower in our gardens at home was being cultivated as a field crop out there, and is expected to be successful. It yields a large quantity of seeds very rich in feeding properties, and is very easily cultivated. It is said that a good crop of sunflower will thresh 50 bushels per acre, and that each bushel will yield a gallon of very valuable oil, the residue being pressed into cakes of a high feeding value. The stalks yield a fine fibre well adapted for textile or paper-making purposes. The sunflower grows and ripens to perfection in our gardens at home, and I see no reason why it should not be tried as a field crop here. A field of these tall plants in full bloom, with their large golden yellow heads following the course of the sun, has a most imposing and beautiful appearance. Besides the cultivation of crops and propagation of new seeds,

Experiments are Carried on

with live stock to discover the kinds best adapted for the country both as beef and milk producers, and at present shorthorns, polled Angus, and Holsteins appear to be the favourites. All new implements are also tried, and their utility demonstrated to the public. One circumstance which seemed strange to me was that the applications of superphosphates does not seem to have any appreciable effect, proving that, if properly cultivated, the virgin soil of these prairies has inherent all the requisite ingredients for the production of crops without any auxiliary assistance. In the evening Mr Mackay's son, who assists his father on the farm and in the laboratory, drove us out for a long distance through the country around, and we passed through what might be said to be a perfect manufactory of wheat, miles after miles of the land being covered with the cereal alone. It is a grand sight to pass through between great fields of golden wheat, waiting for the hand of the reaper to convert it into dollars. In the middle almost of every field was a round portable granary capable of holding a day's threshing. Into this the grain is run from the threshing machine and stored until it becomes convenient to haul it to market. The usual and most approved system of cultivation is to take two wheat crops in succession, and to have one-third part of the land in bare fallow. After the spring seeding is accomplished the fallow is wrought and cleaned, and any farmyard manure that has been made is applied. This gives plenty of work for the farm staff and teams between spring and harvest, by which time the bare fallow brake is ploughed and ready for seeding in spring. The spring work is thereby facilitated very considerably, and in preparing for the second crop of wheat the stubble is merely burned and the seed put in with a press drill without any ploughing at all. Under this system there is really

No Spring Ploughing,

which is a great advantage, as the seeding is got

through much more quickly and earlier—a great desideratum in these territories where work is oftentimes so long retarded by the continuance of frost. Besides, the land not turned over in spring retains the moisture much better than that which has been recently ploughed. The average yield of the wheat here would, in my opinion, be about 25 bushels per acre, and the price obtained runs from 12s to 14s per quarter.

INDIAN HEAD TO BRANDON.

MEETING WITH A KIRRIEMARIAN.

HIS SUCCESS IN AMERICA.

THE LUMBER TRADE.

(From the Dundee Courier of April 24.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Before leaving the district of Indian Head we had a drive through the great Bell Farm, which huge concern has been so often described. Formerly this farm was run by a company, Major Bell being the principal partner and manager. The company is now dissolved, and Major Bell runs the farm on his own account. A large portion of the land was sold, the Government purchasing 680 acres for the experimental farm. The Brassey Farms lying to the south of the railway track were also bought from the Bell Farm. On the East Brassey Farm there are 53,000 acres altogether, 1300 acres being in wheat and 150 in oats. We drove through one field of wheat on this farm, in which there were 900 acres. On the Bell Farm there are yet 1500 acres of wheat, and, except that some of the fields appeared rather overgrown with certain weeds, the place appeared well managed. We saw twelve self-binding reapers on this farm. On returning to our hotel in the evening I got rather a surprise, being told that a Kirriemuir man was in waiting for me. This turned out to be Andrew Dundas, a native of Kirriemuir, Forfarshire. Andrew followed the occupation of a ploughman when at home, but getting tired of that he got on as fireman upon an ocean-going steamer, and, landing in America, found his way out West. Andrew had very little money, but homesteaded a quarter section of land near Indian Head, and by industry and steadiness he has wrought his way to independence. He has now 480 acres of land all his own, 150 acres of which were in wheat. He has about 20 horses and 70 cattle. He says he is pleased with the way he has succeeded, and although he intends to come to Scotland to see his friends he could never think of staying here again. He thinks there is a far better chance for able-bodied men willing to work out there than there is at home. At least, he says that at home he never could have aspired to be anything better than a common labourer, but out there he is

His Own Master,

with a comfortable home of his own, and good prospects for his family. He sold \$555 worth of cattle last year. Few farmers have threshing mills of their own, the grain all being threshed with portable threshing mills, wrought by traction engines. The fuel used is straw, which is fed into the furnace by a machine invented for the purpose. It is said that straw gives a sharp, quick heat, and keeps up a good head of steam. The owner of the

the mills carry a full staff of hands along with them, and charge for the threshing at 4 cents per bushel for wheat, but if only four men are provided the price charged is 1½ cents per bushel. In this way 2000 bushels are often threshed. During the threshing the farmer's own men and teams are employed hauling away the grain to the elevator, where it is dumped from the waggon loose into a hopper, weighed, and passed through the dressing machinery, and raised by the elevating machinery into the various bins into which it is graded. The farmer gets a receipt from the elevator company for the number of bushels consigned. This receipt is a negotiable document, and when the farmer sells the grain to the flour miller or grain merchant he hands him the receipt and gets his money, and the elevator company have to deliver a like number of bushels of the same grade, though not necessarily the same wheat. It is said that this part of the country is somewhat subject to warm winds, which cook the wheat sometimes, destroys its grade, and renders it less valuable. Occasionally it is nipped by frosts, but snaps of frost are becoming less frequent now that the bulk of land is being brought into cultivation. The great bulk of the land hereabout is being devoted to wheat-growing, and few herds of cattle are to be seen, but this I think a mistake, as a system of mixed farming seems to pay better, the feeding of cattle and pigs with the weak grains being a more profitable way of using them than selling them at a very low rate to the miller.

A Hint to the Farmers.

We left Indian Head about mid-day on Friday, and proceeded eastwards to Brandon, a distance of 180 miles. During this journey we passed through some very poor portions of country, and saw many hundreds of acres of wheat that would never be worth reaping, doubtless owing to its continuous cultivation, much of it being completely smothered with weeds. Sheaf-binding reaping machines were at work in every direction; in fact, on my whole journey I never saw anything else than self-binders at work—sometimes drawn by three horses, sometimes by three oxen. I was much surprised by the carelessness displayed by the farmers in keeping these costly machines. They are scarcely ever put under cover the whole year through, and we saw hundreds of them lying rotting about the homesteads. Implement sheds would effect a vast saving to the settlers, and apart from that I suggested that they might draw their implements together when they were finished with them, and build piles of straw on the top of them to keep them dry. As the idea seemed to take, I have no doubt but that many of the farmers to whom I spoke about it will avail themselves of this suggestion. The town of Brandon has a population of about 6000. It is nicely situated on rather steep ground immediately south from the railway station. The Assiniboine River flows past the north side, and rising from the river on the north side is a somewhat steep, well-cultivated country. Some miles to the south may be seen the Brandon Hills all covered with wood, and between the town and the hills is a broad expanse of well-cultivated farms, with farmhouses and steadings. Brandon itself is

A Splendid Town,

with broad, regular streets, a great many of the stores and public buildings being very large and very elegant. I counted about half a dozen great grain elevators, and visited one very large saw-mill, owned and run by Mr Christie. He cuts his

lumber in the Riding Mountains, 400 miles above the mills, and floats it down the Assiniboine River and its tributaries to the mills, where it is diverted and kept back by a great slanting boom. The river is about 100 yards broad, and when I was there the whole of it for about four miles above the mills was completely covered from side to side with great trees waiting to be operated on. The mills are driven by a 200 horse-power engine, and cut about five million feet of timber annually into scantlings, boarding, flooring, shingles, &c., which are run away from the mills by machinery and built into great stacks of deals, covering acres of ground. Between these stacks railway sidings are run for convenience in loading. The sawdust and planers are automatically run to the engine furnaces, and used as fuel. The slabbings and trimmings are sent down hoppers, cut up into convenient lengths, and sold to the townspeople for fuel. Mr Christie employs 75 hands at the mills, besides great armies of lumberers in the forests. There are two great planing machines, sawmills complete, with four saw edgers and trimmers. The great logs are dragged from the river with powerful self-acting machinery; caught with great arms, which adjust them upon the saw table; automatically run through the planing, edging, and trimming machines, and out into the great yard to be built into the stacks, without scarcely ever being touched by human hands. There is a good steady demand for the dressed timber in the immediate neighbourhood for house-building, furniture, machinery, implements, and other purposes.

DRIVING AROUND BRANDON.

MORE ABOUT EXPERIMENTAL FARMING.

WIND AND WINDMILLS.

AMERICAN COOKERY.

AGRICULTURAL WORK AND WAGES.

(From the Dundee Courier of May 1.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—On Saturday morning, while we were sitting at breakfast in the hotel at Brandon, Mr Thain, Government agent for the district, called and offered to spend the day driving us around the country. This kind offer we thankfully accepted, and shortly his buggy and pair of horses drove up to the door, and we got seated. Our first visit was to the Brandon Government experimental farm, managed by Mr Bedford. This farm, like the experimental farm I have described at Indian Head, was a wonder of neatness and methodical management. The farm buildings were of the best description, and the arrangement for the cattle and horses very much resembled some of our best steadings at home. The huge barn was a wonder in itself, being sufficiently large to store all the hay and straw required for the stock over winter. In one end was the grain store and the gristing and straw-cutting machinery, the power for which is obtained from a windmill placed over the barn. Mr Bedford manipulated a lever and put the mill in operation, and I was delighted with the smooth steady way it did its work and with the easy

manner of controlling it. By self-acting governors it adapts itself to the air currents, and no matter how strong the wind blows it never races or goes faster than the desired speed, and if the gale rises too strong the vane is so constructed that it throws the fans right into the teeth of the wind and stops it altogether. These windmills are very numerous out West, and very useful, and it is surprising to me that more advantage is not taken of wind power at home. The root cellars, containing sufficient room to store all the roots grown on the farm, are beneath the barn under the ground level, where it is impossible for them to be touched with frost, and they are said to keep very well here. We saw some very good specimens of pure-bred cattle about the steading. Two bulls of the short-horn and Holstein breed had been bred in Ontario, and were well grown and developed. There were some really excellent females about the place. Mr Bedford had a one-year-old shorthorn quey led out for our inspection, and I must say that I never saw a sweeter or better specimen of the breed at home. We drove all over the farm, and got a great deal of insight into the systems of

Canadian Husbandry.

Here, as at Indian Head, the approved mode is to take two wheat crops in succession and the third year bare fallow. The same difficulties apply to sown grasses here as at other places out West, no kind being as yet got hardy enough to stand the winter, but great hopes are entertained as to the success of a grass called Hungarian brome lately introduced. Mr Bedford told us that in his nursery he had 84 variety of trees all doing well. We then drove to the great Sandison farm, and had a look through the buildings. On this farm was the only stone and lime farmhouse I saw in all the country. It was really a grand house, and was erected the year before last at a great cost. The stables, made to hold 25 teams of horses, were built of logs, and roofs covered with straw. Turf walls three feet thick were built outside the log walls, which rendered the stables exceedingly comfortable, making them less cold in winter and less warm in summer. We then drove to a farm owned by an Aberdeenshire gentleman named Mr Nicoll, who kindly entertained us to luncheon, and while waiting its preparation by his wife in the large capacious kitchen I had an insight into American cookery. Every kitchen has an excellent cooking stove fitted up with all the necessary accessories for cooking and baking, and all American housewives bake their own bread. Mrs Nicoll was busy baking when we went in, and her bread as it came from the oven was as good and palatable as could be produced by any baker here. Mr Nicoll owns and farms 480 acres. He keeps four men, whom he pays from \$22 to \$25 per month during summer, and from \$35 to \$40 per month during harvest. He reckons his average yield of wheat over a series of years would be 18 bushels per acre. He says summer fallowing is a necessity, and that the land would be all the better of being manured. He is contemplating growing a forage crop to plough down green on purpose to manure the land. He is satisfied sowing upon stubble with press drill without ploughing is to be a success. After this we had a very long drive to the farm of a Scottish gentleman called Matthewson, the name of the farm being Longview. We passed through

A Great Wheat-Growing Country.

The crops varied greatly in appearance, and it appeared to me that continuous wheat-growing was being too much persisted in. On the way we met

a number of Indians, and I asked Mr Thain if they were at all troublesome. "Oh, no," he said, "none whatever. The Yankees say there are no good Indians but dead ones, but, instead of fighting them as they do, we build homes and schools for them, educate them, and learn them to cultivate the soil. We find them peaceable, industrious, and well behaved." At Longview we had tea, and I found old Mr and Mrs Matthewson very intelligent and communicative. They kept a great many pure breeds of poultry, the eggs of which are much in demand for hatching. They keep a good many cows for dairy purposes, and rear a great many pigs. Pigs are worth 18s 9d per live cwt.; turkeys, from 6d to 7½d per lb.; hens' eggs, from 7½d to 1s per dozen; butter, 7½d to 1s per lb.; hens, from 2s to 2s 6d per pair. Cattle at two years of age are worth about £5 10s each, and when three years old are worth about £3 per head more. Three-year-old horses, unbroke, are worth about £16 each. Lambs are worth about 3½d per lb. live weight. Mr Matthewson's average yield of wheat is 18 bushels per acre, and he has 420 acres under wheat and 65 in oats, 90 head of cattle, and 26 horses. He pays his men \$25 for summer months, and from \$12 to \$14 during winter. We saw a very large four-year-old shorn bull at this farm, and their way of managing him appeared strange to us. A rope twenty yards long was attached to his neck and fastened to an iron pin driven into the ground, and that was the full extent of his grazing area. He was very poor, and no wonder, seeing the grass was bare cropped with a flock of sheep that grazed around the homestead. Mr Matthewson said he bought them for pure-bred Leicesters, but they seemed to me to be a very nondescript breed, and not at all like Leicesters, and when I told Mr Matthewson this he confessed he had suspicions that he had been "taken in." Here as at other places, I thought the pasture too dry for the successful feeding of sheep, and, indeed, they were plucked and stunted like, and altogether devoid of the healthy flush of thriving that we like to see them assume here. A big drove of pigs of all ages were grazing about, hurdles covered with prairie hay being erected to protect them from the scorching sun, and to which they could retire at will. They are being fed with steeped grains, no gristing or cooking being resorted to. I am of opinion, however, that it would pay much better to have the grain gristed or broken. The pigs are all of the black Berkshire breed, and very good sorts they are, and they appeared in

Excellent Thriving Condition.

A day or two before I was there he sold twelve pigs for £33. He keeps 250 hens. On our way back to Brandon, a distance of 20 miles at least, we took a long detour, and our way was continually bordered by great fields of wheat, the most of it within a week or ten days of harvest, and averaging, I would say, from 15 to 20 bushels per acre. Ninety feet of space is allowed to the roadways, all lying in the original prairie grass except the beaten trail, which winds hither and thither along the statutory road space. Occasionally we left the Government road and followed an old Indian trail slanting through the fields, and on these trails the track is generally very narrow, the land being cultivated close to the wheel ruts. At one place we were bowling along at a great pace between great fields of wheat, so close to us that we could have plucked the ears of grain on each side of the machine without rising from our seat, when we saw a machine, driven by a lady, coming to meet us. Two foals were following the vehicle, their mothers being in the buggy. She was driving very fast, and

I was wondering how we were to get past each other, when, without slackening her pace, she drove right in amongst the wheat, and, the foals following her, the trail was left clear for us. When at Mr Nicol's farm, before referred to, he yoked his own machine and drove me around to see his crops. We came to a 90-acre field which he wanted me to inspect minutely. He drove the buggy and pair right into it, and, taking a wide circle all amongst the crop, we had an excellent view of it. The most of it was on second breaking, and would yield fully 20 bushels per acre. When at the experimental farm we saw them starting with a self-binding reaper to harvest a field of barley. There was no bout opened with scythes around the outside, but, driving in the reaper, they kept as near the outside as possible, and afterwards cut the outside margin by going the reverse way. Most farmers at home would think this a somewhat wasteful process, but it is the system on which the whole thing is done out West. Most farmers here would also think it sacrilege to drive through amongst a field of standing crop, but they do not stand upon such nice punctilios on the other side of the Atlantic.

A FIFE BAILIE NICOL JARVIE.

WESTERN HOLIDAY-MAKING.

LOST ON THE HILLS.

(From the Dundee Courier of May 15.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—On our arrival at Brandon from the somewhat lengthy drive which I described in my last letter, we were informed by mine host of the hotel that amateur theatricals were to be enacted in the City Hall that evening by a party of the citizens, who had been in training under a professional artiste for some weeks. The abilities of the performers being well spoken of, and the play being "Rob Roy," we were naturally interested to see how this thoroughly Scottish dramatic piece would be enacted and appreciated in a foreign land. Accordingly we procured tickets, which cost half-a-dollar each. The tickets were all numbered, and corresponded with the seats, which were all consecutively numbered, and when we went to the hall and produced our tickets we were shown by a porter to the seat bearing the same number as our ticket. I observed that although a person was late in arriving his seat remained vacant until he came, and as no more tickets are ever sold than there are seats, there is never any crowding or inconvenience. The audience were remarkably appreciative, orderly, and well-behaved. The actors were in excellent training, and did their parts remarkably well, and, barring a little murdering of the Scottish vernacular, the play was as well performed as I have ever seen it in a Glasgow Theatre. *Die Vernon* was personified by a young lady, who performed her part admirably. *Helen Campbell* was enacted by a young married lady, the wife of a prominent citizen of the place. Her acting was very good, but her accent partook more of the cockney than the Doric, and she also seemed to me to be rather too young and too good-looking for a typical Mrs Macgregor, and the colour of her cheeks were suspicious of rouge, the more especially as she was the only rosy-cheeked lady I had seen in the country. But the actor who brought down the house, and who

tickled the risible faculties of all present, was Bailie Nicol Jarvie. There was no blundering of the vernacular with him, and he appeared quite in his natural element. His first sentence convinced me he was a

Veritable Scotsman,

and so it proved, for on Monday morning, when I was walking along the street looking for a shop where I might purchase some views of the town, I saw the chief of police, and, stepping up to him, I asked if he could tell me where I would find such a shop. "Ay, cud I, brawly," he answered with a smile. I started, and said "I would bet he was Bailie Nicol Jarvie. He said—"Ay, A'm a' that's for 'im," and I said—"You're a Scotsman, too." "I am that," he replied, "and frae the kingdom o' Fife." He took me to a shop, where I made my purchases, and then I asked him to accompany me to the hotel, and get introduced to my companions. He came, and we spent an hour or two in interesting and instructive conversation. He told me his father was a griever on a large farm in Fife, not far from Dundee, his name being Kirkcaldy. He has got on very well in Canada, having steadily climbed to the head of his profession, and is much liked and highly respected. On Sunday we had a drive of at least 40 miles out and 40 miles in by another road to the south of the town of Brandon. For a long distance we passed through a good agricultural district, the land being mostly all broken and under wheat. The yield appeared fair, and would average, I would say, about 18 or 20 bushels. As we went further inland we saw greater expanses of the original prairie, and passed numerous great black squares where the sod had just been broken with the plough. We did not see many cattle about, the land being mostly all devoted to grain-growing purposes. We came to one field where a flock of eight score of pure bred Shropshire ewes and lambs were grazing. The field on which they were had been seeded with oats in spring, and after it had grown a certain length the ewes were put on to graze. It provided good succulent food for a time, but unfortunately there was too little of it, and when we examined it there was little sign of oats to be seen, but the whole field was covered with the rank growth of a weed unknown to me, and which the sheep would not put a mouth on. The ewes were excellent sorts,

True to Their Breed,

but they did not seem to me to be in a good thriving state, and the lambs were stunted and small—at least they appeared so to me, though several citizens of Brandon who were with us in the buggy, thought them remarkably good. I observed a water-cart and troughs in the field, showing that water was having to be driven to them. Continuing our journey, we left the agricultural region behind us, and got into what is known as the Brandon hills, and passed a wild unbroken, scrubby, well-wooded district, with numerous ponds and small lakes occurring in the depression. Many boats with picnic parties were rowing about on these lakes, and the margins swarmed with holiday-seekers. Several large tents were pitched at convenient places along the shores, and, as I observed they had their bedding material and cooking utensils with plentiful stores of provisions along with them, it was obvious that these pleasure parties meant to make a lengthy stay, and indeed I learned that this is a common way of doing a holiday out west, hotel-keepers and furniture dealers providing tents on hire for the purpose. Amongst these hills the soil appeared very thin, stony and barren, and not at all suited for cultiva-

tion. Nevertheless, in glades and openings in the woods we came upon occasional clearings where some hardy settler was making for himself a homestead. This is a splendid district for sportsmen. The coveys of prairie chickens were literally rising before us in swarms, and the ponds and musk-gees were black with great swarms of wild ducks. Deer is also plentiful, and there is no lack of wolves and even bears. We saw the huts of the musk rat built like coles of hay amongst the water in the shallows of the lake, and the curious inhabitants, something like our grey rats, but bigger, sitting eyeing us from the top. Gophers are also numerous, and I saw either a badger or a beaver—I don't know which—start across the road in our front. Driving along the trail we were following (only marks of wheels amongst the grass at the best) gradually became more indistinct, and at last disappeared altogether. After a time our driver had to confess that he had fairly lost his whereabouts, and did not know which way to turn or go. A

Council of War

was held, and as our party knew that the trails to Brandon all led in a westerly direction it was resolved to strike across country in an easterly direction, in order the sooner to get upon one of these north and south trails. But which was east? That was the rub. The sun was obscured, and there was nothing to direct us. How we longed for the instinct of the Indian, who could tell his way by the forest signs, but, being inferior to the Indian in that respect, we had to rely upon our own resources. Luckily for our party I remembered I had upon me a small pocket compass, and, referring to it, we steered our course accordingly. After an hour's driving through thick scrub and dense undergrowth—sometimes higher than the horses' heads—and so thick and strong as almost to lift the buggy off the wheels, we got upon a north-going trail, and following it for another couple of hours we emerged from the forest. When we reached the clearing a fierce gale was blowing, which lifted the coal-black dust off the cultivated land in clouds, and wafted it into our faces. The weather was uncomfortably warm, and we were perspiring freely, and the dust sticking to us we were soon all more like niggers than white men. However, it was dark when we arrived in town, and we got to our hotel unobserved. After a thorough scrubbing in the lavatory we had supper and went to bed, but we had more on hand before we went to sleep. A swarm of mosquitoes had got into the room, and no sooner were we down than they clustered on our face and hands, and their attentions becoming unbearable we resolved to have a war of extermination. Mr Taylor occupied another bed in the same room, and we arose and turned on the electric light and commenced operations. The mosquitoes betrayed their presence by their sharp, shrill buzz, somewhat like the buzz of a honey bee below a cloth. We soon got them all killed, and then lay down and slept the sleep of the just.

A HERD OF PURE "DODDIES."

GRAIN MILLS IN BRANDON.

MORE ABOUT WINDMILLS.

(From the Dundee Courier of May 22.)

Mr Osler, the Courier's Agricultural Commissioner to America, writes:—

On Monday morning we drove out to a farm

owned by a gentleman named Macgregor, and saw a number of Shire stallions. Mr Macgregor used to import a large number of Shires and Clydes, but has to a great extent given that up, though he yet keeps a number of good serviceable stallions. He keeps a herd of pure Angus Doddies, which he finds suits the country and climate remarkably well. I admired his cows very much indeed. One three-year-old heifer bred by Sir George Macpherson Grant of Ballindalloch, Scotland, was really a splendid specimen of the breed. She was in grand showyard condition, and would have been ill to beat, even in the showyards of this country. He also keeps a large breeding herd of pigs. West from Brandon the Assiniboine River divides itself and forms an island, partly plain and partly scrub, and it is this island that he has selected for his piggery. The pigs feed on the grass on the plains, and when the scorching rays of the sun become too strong for them, they retire to the cooling shades of the scrub, and they have access to nice cool wallows along the shallow margins of the river. Altogether, a better site for a piggery could not well be imagined. As it suits the nature of the pigs to perfection, Mr Macgregor has lately imported some pure Tanworth boars and sows, which he is crossing with the native black Berkshires. The produce are beautiful creatures. The ground colour of this cross is black, mottled all over the body with pretty red spots. Mr Macgregor says this cross is to be a perfect success, and has far exceeded his most sanguine expectations, and the flesh of the cross is also said to be superior to any of the pure breeds, having more red flesh in proportion to the white than that of any other kind. The pigs are fed on a daily allowance of steeped wheat, to which they come at the call of the herdsman. Mr Macgregor has demonstrated by experiment that one bushel (60 lbs.) of wheat will produce fifteen lbs. of pork, and in this way no more profitable method could be adopted of utilising the cheap grains of the country, and as he can purchase plenty of frosted and light wheat at twenty cents per sixty lbs., pig feeding must be a lucrative industry. Our next visit was to the

Flouring and Oatmeal Mills,

owned and run by Mr Kelly, in the town of Brandon. These mills have a daily output of 250 barrels flour and 100 barrels oatmeal; but the latter is not meal in the proper sense of the word, but rather, as the article is called, rolled oats. The oats are dried and hulled in the usual way, and then ground to the consistency of rough grains about the size of rice. The stuff is then softened with steam, and passed through between smooth rollers, and the finished article is in the shape of broad flakes something like broad bran. It is no use for cake-baking, but makes excellent porridge, which are highly appreciated. I had porridge of these rolled oats every morning all the time I was in the country, and I thought, and every Scotsman that I met agreed with me, that they were an improvement upon the old system. The only fault I had to this dish was that they gave too little of it, but latterly I got up to the dodge of ordering porridge for two. Brandon seems to be the dividing point from which grain is sent east to the Atlantic seaboard; and westwards through the Rockies to the Pacific coast. The west-bound route is certainly the shortest, but as, in sending to Montreal, much of the way is by water down the lakes and rivers the east-bound route is the cheapest, but, on the other hand, better prices are obtained at Vancouver than at Montreal. But situated just as it is near about the dividing point, the freight is consequently higher to seaboard than it is from any of the other great

centres on the Canadian Pacific Railway, and thus farmers there are more handicapped in disposing of their produce than they are at any other point on that great line of railway. The freight from Brandon to Vancouver, a distance of 1300 miles, for wheat, barley, and oats is 60 cents per hundred pounds, and from Brandon to Montreal, 1560 miles, it is 47 cents per hundred pounds. When farmers send grain to the elevators the charge is 2 cents per bushel for cleaning and loading, and one-half cent a month for storage. On the afternoon of Monday we left Brandon on our way to the Souris district, near the international boundary line.

A Destructive Gale.

Taking train at Brandon Station we went back upon our journey for some distance. Going westwards on the Canadian Pacific Railway for about ten miles to Kemnay, then joining a branch line, we struck southwards towards the international boundary line, but before describing this journey I would like to say something about the weather. Up to Sunday evening the temperature had been excessively warm, with the thermometer at mid-day registering 100 degrees in the shade. On Sunday night a fierce gale sprang up, and a great thunder storm ensued. The flashes of lightning were literally incessant and very bright, and towards morning there was a great downpour of rain. When the rain abated the gale again sprang up, and on Monday afternoon it was blowing a perfect hurricane. The wind soon dried up the moisture of the previous night, and as we passed along our route we could see the dust rising in great clouds from amongst the roots of the wheat in every field, and the fine mould was being collected in wreaths in every sheltered hollow along the side of the track. The wheat was just approaching ripeness, harvest being begun in many places, and we were sure from the manner it was being tossed about by the wind that the loss by shelling would be very considerable. At the small town of Souris we changed trains, and had a couple of hours to wait, and to put off the time we had a walk through the town. We found it to be a busy distributing centre for the country around. Store-keeping is the principle business, and we saw lots of country people in their buggies driving from door to door making their purchases. There are quite a lot of blacksmiths' and mechanics' shops in the place, and they all seemed to be doing a "roaring" trade, repairing old and fitting up new self-binding, reaping, and threshing machines and traction engines. The town is all surrounded by prairie, upon which lots of horses and cattle were grazing with no fences to keep them from straying. Two bands of young horses came wandering into the street when we were there, and a number of young scamps got several wolf hounds, of which there were plenty lying about, and hunted them away. We did not enjoy our walk over much. The gale was lifting the fine dust and grit off the street and blowing it into our eyes in clouds, and we were literally almost blinded, so holding our hats on with both hands we wended our way back to the station to obtain the shelter of the waiting-room. At the station was

A Windmill,

pumping water into an elevated circular cistern for the supply of the railway engines, and although we had often seen these machines at work in fair winds, we were interested to observe how this one behaved in the boisterous, unsteady gale which was then prevailing, and so we stood watching it until the arrival of our train, when the engine drew up to the tank to take in water. Unlike the huge unsightly four-armed windmills which may sometimes

be seen in our country, the American windmills are light, aerial, ornamental machines, most efficient in their operations, and thoroughly under control. The sails are composed of long thin narrow slats (something after the fashion of our venetian blinds), extending from the outer rim to near the centre of the wheel. By a simple contrivance these slats can, by the manipulation of a lever, be furled up in clusters, and bring the machine to a dead stop, or, by pulling a lever, the face of the wheel is thrown round parallel with the vane, and entirely out of the current, and so is obliged to stand still. By the use of governing weights the sails or slats are automatically turned to any degree of obliquity to suit the wind prevailing at the time. If it blows strong the weights turn the slats less obliquely, so as to present a less resisting surface, thus giving the wind less power over the machine. If it falls to a calm the governors set the sails to the greatest degree of obliquity, so as to give the wind the full maximum of power, and if it blew a blizzard or hurricane the strength of the gale automatically sets the sails thin edge on into the teeth of the wind, so that it has no power upon it at all. It was very interesting to me to observe, as the wind rose and fell, how the sails opened and shut, adapting themselves to the strength of the current, and the machine moving around as slowly, steadily, and smoothly as though it had been blowing a steady equal breeze. It is wonderful also to observe how little wind is necessary to propel these mills. Oftentimes when it appeared perfectly calm the only sign of stir in the air was the motion of the windmills, which are so numerous everywhere in the country, and I do not think it is too much to say that one-half the water supply of America is raised from deep wells by wind power. They require no attention except occasional oiling. By a simple arrangement they stop themselves when the water tanks are full, and start again when water is drawn. They are most efficiently and strongly built, and seldom go out of order, and the high trested towers upon which they are erected are so strongly constructed that they are calculated to withstand the strongest blizzards to which the country is subject. It is surprising to me that these mills are not in more frequent use here. There are many purposes for which they could be profitably utilised, and I predict that as they become better known, as they will be before long, so will they come into more general use.

IN A PROHIBITION TOWN.

PREPARING FOR SQUALLS.

EASTWARD HO!

A QUAKER SETTLEMENT.

(From the Dundee Courier of May 29.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—Warned by the conductor shouting "All aboard," we again took our seats in the train and proceeded to Napinka, a small town near the International boundary line. We passed through a district which was altogether a great plain, with much of it still lying in the original prairie state. The crops were not up to much, and I was not favourably impressed with its resources either as a grain-growing or grazing country. After getting tea at Napinka, we went out to have a view of the country around. The gale had considerably abated, but there were evidences of its

ravages on every hand. Hay stacks were tossed about, the light sandy loam of the fields had been lifted up and collected in miniature wreaths in the depressions; and, worst of all, the crops of wheat were badly shaken. On an average I do not think the yield of wheat would have been above twelve bushels per acre, even though it had been all got; and I am quite certain the half of the grain was shelled out and lying on the ground. The outlook for the farmers was very poor indeed. We had a walk over some newly-ploughed fields. The ploughing was very neatly done. The furrows, about 14 inches broad and 3 inches deep, were turned completely over, and lying flat on the grassy side. In some places they were begun to back set—that is, they were with a different kind of plough turning the furrow right back again, and by going about two inches deeper a loose soft mould was thrown on the top. After this it was ready for seeding, the seed being put in by a press drill. The soil here was loose and sandy, and very thin and light. The grass on the prairie was withered and scanty, and very unlike the luxuriant herbage we had seen further north. Few cattle were to be seen, any we did see being milk cows in rather thin condition. We returned to our hotel, and found a motley crew collected in the smoking-room. We knew we were

In a Prohibition Town,

but for all that we saw they had been imbibing somewhat freely. They appeared to belong to the working classes, and were vociferating loudly and disputing among themselves. They seemed a quarrelsome, lawless set of men, and I was glad to retire from amongst them, but did not feel altogether safe in my bedroom. There was no lock or snib to the door, so I drew the head of my bed up to its back that nobody could get in without awakening me. I had no defensive weapon, and it was the only time I regretted not having a revolver. I looked for a poker, but there was none in the room. There was, however, an ink-bottle on the mantelpiece, and I emptied it of its contents, tied it on the corner of my handkerchief, and prepared to defend myself should I be molested. I didn't undress, but went to bed in my clothes, but not to sleep. The uproar continued the whole night through. Once the latch of my door was turned, but when I shouted out, "What's wanted," the hand was withdrawn, and I heard footsteps retiring. When we came downstairs in the morning no signs of the rioters were to be seen. They had either left or were in bed sleeping off their debauch. The night at Napinka, with all its inconveniences and troubles, was doomed to be the last night we spent in bed on American soil, and glad would we afterwards have been to have got our heads upon a pillow, even although our environments had not been all that was pleasant. A few days before we had been wired to by Mr Reford, the Messrs Thomson's agent in Montreal, that the Iona was to sail on the Saturday, but, as bad luck would have it, we incidentally saw in a paper an advertisement stating that she was to sail on the Friday, so to be in time it now became necessary that we make

A Race for Home.

Napinka is 250 miles south-west from Winnipeg, and 1700 miles from Montreal, so, calculating our rate of travelling at twenty-five miles an hour—the fastest we experienced even by express in all our travels on the American continent—and giving allowance for a few hours' stoppages for luncheon, &c., at intersectional divisions, we found that the earliest possible hour of our arrival at Montreal would be 9 a.m. on Friday. On Tuesday morning

then, after getting breakfast at Napinka, we proceeded to the station; and, in compliance with the conductor's cheery "All aboard," we took our seats in a comfortable first-class car. We proceeded eastwards on the branch line of the Canadian Pacific Railway leading from the Souris Coalfields to Rosenfield, where we joined the Great Northern Railway 20 miles north from Gretna, on the International boundary line, then down the great fertile valley of the Red River to Winnipeg. On our way we passed the stations of Delorane, Boissevain, Killarney, Pilot Mound, Morden, Morris, and many more. The most of the way is through a perfectly flat, grand agricultural country. The soil appears to be of a rich, deep, heavy nature, apparently for the most part consisting of alluvial deposit, being so low-lying and flat. It is only in accordance with the law of Nature that swamps and marshes should be of frequent occurrence, and, indeed, I would say that one-half of the land is too wet for cultivation. These swamps are not, however, the unmixed evil which many would suppose, seeing they grow great crops of natural grass, which makes splendid hay. Indeed, stock are said to prefer it to hay made from cultivated grasses and to thrive better upon it. The dry portions of the land seemed to be all under cultivation, and the crops appeared fairly good. The bulk of the crops were wheat, but we saw good fields of oats, barley, and flax upon almost every farm, and the cultivation of potatoes and turnips appeared quite general here. Indeed, the system of cultivation appeared to be more mixed and to be more in accordance with the customs of agriculture

In the Old Country

than in any other district of America we had seen. We passed through what is known as the Menonite settlement, composed of a great number of Quaker German emigrants from Russia, who left that country to escape the conscription so irreconcilable with their principles. And as they arrived at an early period, when the Indians were very unsettled and dangerous, they for their own defence and safety had built their habitations and steadings together, and so formed the nucleus of villages, many of which have now become important towns. The farms which surround the villages are mostly small fields laid out in regular oblongs, each with its own particular and separate kind of crop, and have a neat, tidy, old countrylike appearance. These settlers are said to be industrious and thrifty, and to be all mostly in prosperous circumstances. Pilot Mound, which we passed on this journey, was the place from which came the cattle beast which was suspected to be infected with pleuro-pneumonia when it landed in Britain, and which had the effect of stopping the importation of Canadian stockers. It was on this journey I interviewed the parties who gave me so convincing proofs of the non-existence of that disease in the Dominion, all of which I detailed at length in a former letter. Going down the Red River Valley the farms and fields are much larger, and we saw crops of grain than which no better could be desired. The land is deep and rich, but the preponderance of wet land to dry land is perhaps rather great, and as we approach Winnipeg the great bulk of the land is too marshy and wet for cultivation, but affords great crops of natural hay; and so level and even is the surface that a mowing machine might be wrought for scores of miles in one direction without the slightest obstruction. Altogether, I am of opinion that the country we have passed through to-day between Napinka and Winnipeg is the best land we have seen, with the exception of Edmonton; and as the country becomes more settled up and

land more valuable, means will be found to dry a great many of the slews, which will then make grand farms. The beds of the rivers are all very deep within perpendicular banks, and great ditches made from them through the low-lying parts of the country would make excellent lealets into which the drains could be run.

DRIVING ROUND WINNIPEG.

A GREAT CITY.

TRAFFIC OF THE NORTH-WEST.

ARRIVAL AT MONTREAL.

(From the Dundee Courier of June 26.)

Mr Osler, the *Courier's* Agricultural Commissioner to America, writes:—We arrived at Winnipeg about 5 p.m., and as our train for Montreal did not start till eleven, our guide, Mr Burpe, secretary for the Dominion Land Board, took us to the Dominion Land Office, where we met Commissioner Smith, with whom we had a long talk. I handed in an elaborate report of my impressions of the country, with which he was well pleased, and regarding which the Dominion Government have since written through their officials to the Messrs Thomson, proprietors of the *Courier*, congratulating them on the faithfulness of their Commissioner. After this Mr Burpe obtained a rig, and drove us through and around the city of Winnipeg, and we were much struck with the great size, elegance, and architectural design of the majority of the buildings, the great width and orderly appearance of the streets, and the basking, opulent, and prosperous look of the inhabitants. Situated just where the forest ends and the prairie begins, with thousands of miles of river navigation to the north, south, and west, and with the railways and Indian trails radiating in every direction like the spokes of a wheel, Winnipeg has become, what it always must be, the commercial focus of the North-West. It was formerly known as Fort Garry, a lonely trading station of the Hudson Bay Company, the gate of the old fort being still standing. The old name is now abolished, and

The Winnipeg of To-Day

is a flourishing town of more than 20,000 inhabitants. Returning to the Leland Hotel, we ordered supper, and reluctantly bade goodbye to Mr Burpe, our kind and obliging cicerone, who had accompanied and guided us in all our wanderings through the great North-West and over the Rocky Mountains, even to the gates of the Orient, and who had been so assiduous and painstaking in catering for our comfort, enjoyment, and information. I already said that our train was timed to leave Winnipeg at 11 p.m. So, proceeding to the station a little before that hour, we went to the booking-office on purpose to obtain sleeping berths, but found to our disappointment that they were all engaged. This was rather a staggerer seeing we had three nights and three days' continuous railway travelling before us. However, we had to face the inevitable, and commenced our long journey of 1424 miles with little prospects of comfort. The cars were quite crowded, and each passenger had no more than his own sitting space, and even though there had been more room the seats in American cars are so short—only sufficient to seat two persons—that there was no earthly chance of getting a stretch out for a sleep until we reached

our journey's end. Leaving Winnipeg, we strike northwards down the Red River Valley on the east side of the river, through a flat, rich thickly-populated and well-cultivated country. On reaching East Selkirk the railway makes a sharp bend, and, turning to the east and south, we soon leave the broad level expanses of prairie behind us. We now pass through a wild,

Rocky, Broken Country.

The deep rock-bound lakes with waters as clear as crystal are very numerous, and are said to be thickly stocked with many kinds of fish which are easily caught. We pass for long distances down the side of great rivers all eastwards and southwards bound, and we cross many others on girdered bridges of great length; the rivers seem all in a hurry, and we are seldom out of sight of dancing rapids and foaming cataracts. The whole district through which we pass is thickly wooded with great trees of natural growth of enormous girth and height. Forest fires have swept through the woods in places, and the gaunt, tall dead trunks with their naked branches stretched against the sky are weird and ghost-like as we glide through them in the moonlight. Up through this terrible district by much the same route the railway now takes General Wolseley led an army from Fort William to Fort Garry (now Winnipeg) in 1870 to quell the Indian Rebellion, and I saw two of his boats lying stranded just beyond the station at Savanne. Four hundred and thirty miles from Winnipeg we reached Port Arthur, a shipping port on the north shore of Lake Superior, and here travellers set their watches forward one hour in conformity with eastern standard time. I may mention that all west from Port Arthur the Railway Company do not use a.m. and p.m. as we do here, but after 12 o'clock noon they go on 13 and 14 o'clock up to 24 o'clock at midnight. A short distance from Port Arthur is Fort William, the terminus of the eastern division of the Canadian Pacific Railway and the Lake Port of the Canadian Pacific Railway western section. Here along the shore of the greatest sheet of fresh water in the world is scenery more diversified and beautiful than anything the mind can conceive. The wide green waters of Thunder Bay are enclosed by abrupt black and purple basaltic cliffs on the one side, and by hills rising roll upon roll on the other. Here on every side we see evidence of

The Enormous Traffic

of the North-West—long trains laden with grain, flour, and other freights, great piles of lumber, coal, and merchandise, long wharves crowded with shipping, with the railway grain elevators looming above all. Three of these elevators at Fort-William are monsters, each having room to store from twelve to fifteen hundred thousand bushels of grain. The enormity of these figures is difficult to conceive, but when I say that any one of these elevators or grain stores would hold a year's crop of all the grain grown in Forfar and Kincardine shires my readers will be able to form some conception of their enormous size. Nearly all the grain brought from the North-West Provinces by the C.P.R. is transferred from the railway here, run up into the elevators, and stored there until it is convenient to ship it down the lakes and rivers to the Atlantic ports. If time had been at our disposal we certainly would have preferred leaving the railway here and coming to Montreal by boat, but we had no choice. Our time was limited, and we had to stick to the iron horse as the quickest means of reaching our journey's end. Leaving Fort-William we run along the precipitous shore of Lake

Superior for hour after hour, with deep rock cuttings and viaducts constantly occurring. At times we are back from the lake and high above it, again we are running along the cliffs, as low down as the engineers dared venture through tunnels and over immense embankments and bridges, everywhere impressed by the extraordinary difficulties that had to be overcome by the men who built the line. We move on through never-ending hills, forests, and lakes, and on Thursday we reach Sudbury, a new looking town planted in the forest. All the way from Winnipeg to Sudbury, a distance of one thousand miles, may be said to be

One Continuous Forest,

for only at long intervals do we come upon some hardy backwoodsman clearing for himself a farm, the monster piles of tree roots lying here and there upon the fields, and the blackened stumps sticking up from amongst the fields of standing grain, giving evidence of the vast amount of labour which has to be expended before a farm can be reclaimed here. I said to an Ontarian farmer, who was sitting beside me in the train, that I could form some conception of the breadth of this great forest, but could he tell me how far it extended north? He looked at me in a confused kind of way, and said that nobody knew. No wonder then though the Canadians say that "Scotland might easily be lost in one of their woods beyond the power of white man to discover it, were it not for the smell of whisky." But wild and rough as it is, the country is full of natural wealth. Valuable minerals and precious metals abound, and from here mainly is procured the timber to supply the wants of the great and fertile countries lying to the east and west. We come upon great sawmills, around which are huge stacks of deals covering acres of ground. Near Sudbury are the most extensive copper and nickle deposits in the world. Large quantities of ore are shipped from the mines, and a number of great smelting furnaces have been erected to reduce the ore on the spot. At Sudbury a branch line of railway leads off to Algoma Mills, on Lake Huron, and thence to Sault Ste Marie, at the southern outlet of Lake Superior. Leaving Sudbury we pass through a rough, rugged, and tree-clad country. The large, clear rockbound lakes are very numerous. We pass Lake Nipissing, an extensive and beautiful sheet of water, 40 miles long and 10 miles broad, on the shores of which is situated North Bay, a new town with 1800 inhabitants. At Mattawa, an old fur-trading port of the Hudson Bay Company, and now a town with 2000 inhabitants, the line joins the

Valley of the Ottawa

River, which it follows until within a short distance of Montreal. We pass the town of Ottawa, the capital of the Dominion, and in the dawn of the early morning I could see the Government Buildings and the Parliament House of the Dominion with their Gothic towers and many pinnacles, making a magnificent group, on a high cliff overlooking the river. I am not able to speak definitely upon the agricultural prospects and appearances of Ontario, the rate at which we were going precluding the possibility of judging correctly, but we see that the country is thickly populated and well cultivated. The fields are squarely laid out and well fenced, alternate husbandry prevails, and crops of all kinds similar to those grown at home are fairly good. Cattle, grazing in the fields just as they do here, give this district a very home-like appearance. Many wooden houses are to be seen, but the most of the newly-erected farmhouses and steadings are of brick or stone roofed with shingles, and have an opulent and comfortable appearance. Large orchards are attached to every farm, the

trees literally loaded with beautiful red-cheeked apples, which make our mouths water. Groves of sugar maple are frequent, together with timber plantations, and clumps and rows of trees along the sides of the highways and fields give the country a park-like, rich, and pleasant appearance. We reached Montreal at nine a.m. on Friday, thoroughly jaded and tired. We had never been in a bed, and our clothes had never been off since we left Napiuka on Tuesday morning. Beyond a snooze on our seats in the car, with nothing to support or steady our heads, we had

Never Got Any Sleep.

The weather had been excessively warm, and as we were always in a state of perspiration the dust raised by the train had adhered freely to our bodies. I assure you I was in such a condition that I would not have cared for meeting any of my old country acquaintances on the streets of Montreal. So we hired a cab, and drove straight for the wharf, and were gladdened by seeing the red funnel of the Iona standing up amongst the shipping. The officers observed our coming, and gave a welcoming cheer. We stepped on board, and got thoroughly chaffed and laughed at for our dirty, uncouth, and uncivilised appearance. I dived below, and begged the steward to have the bath immediately charged, and I was soon enjoying the delicious coolness of the water pumped from the mighty St Lawrence River. Donning presentable apparel, which I had left behind me in a trunk in the Messrs Thomson's office at the docks, I emerged to the civilised world with a somewhat civilised appearance once more, but two stones lighter in physical corporation than when I stepped down the Iona's gangway two months previously.

The City of Montreal

has been so often described in our home papers and literary works that I consider it would be superfluous of me to take up the time of my readers in dwelling upon it. There is, however, one institution existing in its midst which ought to be better known about here than it is, and which I cannot pass over without making some mention of. It is that of the St Andrew's Home, a building as large as a modern hotel, and as well furnished and appointed. It is kept by Mr and Mrs Donald Campbell, a most exemplary old Scotch couple. It belongs to the Montreal St Andrew's Society, and is entirely kept up and supported by Scotchmen and Scotch women in Montreal. It is for the reception of Scottish emigrants, to provide a home for them where they will be comfortable and safe, and to entice and draw them away from the slums and also from the land sharks, who are always on the outlook to plunder strangers on their arrival. Provided an emigrant is Scotch and not a cabin passenger, he or she is cordially invited to go to this home, taking their wives and families with them, if they have any, and they will be well provided for and comfortably kept without money and without price, until they get into a way of doing for themselves. This is no sham, but a downright reality, and it is the earnest desire of the Society that the fact that such a home exists in Montreal should be as widely known as possible, and the more that take advantage of it the better pleased the Society is. I would specially recommend this home to young women going out to Canada. In Mr Donald Campbell they would find a friend who would be both able and willing to give them a fatherly advice as to their future actions and prospects, and in Mrs Campbell they would find a mother in whom they could repose the greatest confidence—a mother who would be ready and willing to do all that a

mother possibly could in looking after their welfare, and who, by her great influence in that great city, would get them into comfortable situations, where they would be well paid and kindly treated. Mrs Campbell told me that she could find employment in Scotch families for any number of girls, and she wished me to let this fact be known in Scotland, and to recommend the girls to go straight on to her, when, if they behaved themselves, there was no fear as to their future welfare. To married men, too, this home would be invaluable, seeing they could leave their wives and families there in perfect safety, and without any costly bills running up, while they themselves were away on the outlook for work or land. On arriving at Montreal I was taken possession of by a gentleman born and bred in Thrums, now located in Montreal, and a very successful merchant and highly-respected burgess of that city. He was very kind in his attentions and hospitality, and devoted Friday evening and the whole of Saturday in showing me around the town.

CHATS WITH ONTARIO FARMERS.

SCENES ON THE IONA.

SHIPPING CANADIAN CATTLE.

TREATMENT ON BOARD.

(From the Dundee Courier of July 3.)

Mr Osler, the *Courier's* agricultural commissioner to America, writes:—I have already said that as we passed through Ontario and Quebec, in so far as the railway passed through these provinces without stopping, I could scarcely of myself hazard an opinion as to the state and prospects of agriculture. I must now, however, go back upon my journey, and give the gist of conversations which I had in the cars with several Ontario farmers who had been away seeing friends in the Far West, and who came with us all the way from Winnipeg to Sudbury. Henry Carter, farmer, Guelph, has farmed land and reared cattle for sixty years. He rears twenty calves annually, and keeps them until sold off fat at three years of age. He grazes them during summer upon the arable and waste lands. From middle of September to middle of October they are put on rape, after which they are put up for stall feeding, getting chopped hay, together with peas and oats gristed and mixed with a few roots. They average when sold from 1500 to 1600 lbs. on the hoof, and this year the price got was \$5.12½ per 100 lbs., live weight, averaging about £16 per head. His stock consists of good grade shorthorns, pure bred shorthorn bulls being purchased. Mr Carter goes in for

Mixed Farming.

Timothy grass and clover seeds are sown amongst the last grain crop of the rotation. The first year's grass crop is cut for hay, which generally averages two tons per acre, though last year it yielded three tons per acre. The following three years the fields are grazed with stock, and, on breaking the grass, peas are sown, followed by wheat, then barley and oats, a half break of each, after which comes green crop, composed of turnips, rape, and potatoes, followed by wheat, sown down with timothy and clover seeds. Wheat averages 25 bushels per acre, barley 30 bushels, oats 60 to 70 bushels, peas 32 bushels, turnips 30 tons, and potatoes 4½ tons. All the produce is consumed on the farm, with the exception of wheat, which is sold. The straw is all

converted into farmyard manure, and applied to the land. Servants are paid \$175 per annum, with board. Mr Carter says that farms all under cultivation, with suitable buildings and fencing can be purchased at from \$45 to \$60 per acre, and fair good farms farther from a station can be bought at \$20 per acre, farms run from 100 to 200 acres, and when let on lease, bring from \$2½ to \$3 per acre. The soil is generally sandy loam. Fat pigs are worth 8½ cents per lb. of dressed carcase. The kind of sheep kept are Leicester, Cotswolds, and Downs. John M'Kerlie Ferguson has been a rearer of cattle and farmer for 40 years, he keeps a breeding stock of twelve cows, the calves from which are reared and fed off as steers; in addition to these he purchases a score of calves annually, and keeps the whole until they are three years of age when they are sold fat, averaging from fourteen to sixteen hundred pounds on the hoof. He sells his cattle in Toronto stockyards, and last year they brought \$5½ per hundred pounds on the hoof. His cattle are grazed on the sown grasses in the fields, and in the woods all summer, and stall-fed during winter, the calves and one-year-olds get hay *ad lib.*, and a limited quantity of gristed peas, oats, and roots. The steers rising three years of age getting their full of all these ingredients. His system of cropping is similar to that of Mr Carter, but his yields are not quite so good. Wheat averages 15 bushels per acre; barley, 35; oats, 30; peas, 20. The average prices are—Wheat, 64 cents per bushel; barley, 45 cents; oats, 25 cents; peas, 55 cents; and potatoes, 50 cents. His servants are paid 20 dollars a month with rations. Neither of these gentlemen ever heard of pleuropneumonia existing in the country, except only what they have read about in the British papers. They believe the scare to be a political stratagem on the part of the British Government, and consider the Dominion of Canada very badly treated by the embargo put on Canadian store cattle.

On Board the Iona.

It had been announced to us that the Iona would leave her berth at five o'clock on Sunday morning, so Saturday evening, the 20th August, found us on board, with our baggage safely stowed in our former quarters, namely, that known as the doctor's room. All the freight of flour, grain, and hay had been loaded by dusk, and it only remained to get the cattle, numbering 552, on board, when the vessel would be ready for starting on the homeward journey. I was told that the cattle were all lying at the stockyards, and that they would be shipped between two and four o'clock in the morning, and, being desirous to see them put on board, I resolved to stay out of bed until they came. A very busy scene was being enacted on board, a great number of carpenters being engaged erecting the cattle fittings, the clinking of the hammers, driving home the nails, and the rasping of the saws, reducing the boards to the desired length, making an unceasing and unharmonious noise. I was sitting in the saloon reading a vast pile of letters from friends at home, which I had only received on my arrival at Montreal, the only budget of letters that I had been able to get delivered for six weeks. When about one o'clock I heard a most extraordinary bellowing of cattle, intermingled with the shouting and yelling of men, I rushed to the side, and observed a drove of upwards of two hundred steers driven along the shore and into the large shed on the Thomson Wharf. Stepping down the gangway and into the shed, I had a good view of the beasts. A large space of the shed opposite the ship had been cleared for their reception, bales of hay being built around like walls to confine them within proper bounds, and so arranged that

the compartment narrowed towards the end of the gangway connecting it with the ship. The gangway is a narrow passage, with the bottom and sides made of strong planking, with the bottom or floor thickly bestrewed with hay, so as to make it less frightsome to the cattle. The cattle were in a great state of fright and excitement, and terribly heated; in fact, they were just as wet with perspiration as if they had been swum through water, and the sweat was not only dropping, but actually running from their bodies. I never saw cattle so hot in my life, and I make no wonder though they catch chills on board after being warmed up to such a pitch, and I am of opinion that some supervision is necessary to prevent the beasts being treated in this fashion before being shipped. They were allowed to stand a short time in the shed, and when all was ready the barricade at the end of the gangway next the cattle was renewed, and in an instant the shouting and vociferating of the drovers and long-shoremenn recommenced, some hitting freely with sticks, others proding with spikes attached to the end of short poles, and all

Yelling Like Demons.

The cattle were so frightened that they were fain to run along the slip and into the hold to get away from their brutal and noisy tormenters. Once in, a less noisy gang were in readiness to receive them, who, provided with coils of head ropes, slipped a noose over the horns of each steer, and passing the other end through a hole in the head beam, quickly secured him in his place. The work was done so expeditiously that in less than an hour all the 200 were tied, and another 200 or more were waiting in the shed, and before four o'clock all the 552 cattle were on board and safely bound. 210 of these were placed on the upper or hurricane deck, and 342 on the main or shelter deck. All along the sides of both decks from fore to wheelhouse the cattle stood with their hind quarters close up to the outside of the ship, and their heads, facing amidships, are attached by the horns to a beam 3 feet 3 inches above the deck, the rope by which they are bound giving them about two feet of head room. An alleyway passes along in front of their heads. Amidships are other two rows of cattle, with their heads facing outwards to this alleyway, and their hindquarters meeting in the middle of the ship. Troughs to hold feeds and water are placed below the head beams, and the alleyway forms a convenient passage by which the cattlemen can feed and water the beasts. The head beams are firmly bolted to the ship's stanchions, and strong wooden divisions are erected between every four of the animals. 2 ft. 8 in. by 8 ft. is the space allowed for each steer, and it is amply sufficient to allow them to lie down at pleasure. Timothy hay is fed to them *ad lib.*, and I calculated they eat about a stone of 22 lbs. daily. A mixture of ground oats, maize, and peas is given to them twice a day, from 6 to 8 lbs. being the daily allowance. Fresh water from tanks in the bottom of the ship is given them twice a-day. The first day or two the cattle appeared tired and leg-weary, and terribly jaded and drawn up in their bellies, caused by the long journey of 344 miles from Toronto to Montreal in the cars, but excepting a few that appeared somewhat frightened they rested very well, and appeared quite peaceful animals. It was evident these cattle had all been tied up before or they would not have taken so readily to the

Treatment on Board.

It is said the prairie cattle are more difficult to deal with. It is difficult to get them to submit to the constraint of confinement, and they do not rest

well or eat sufficient for their maintenance on the voyage, but by the third day the cattle on the Iona were perfectly reconciled to their quarters and rested as well and fed as freely as they would have done in a comfortable byre at home, and by the time they were put on shore at Deptford I could perceive they were far better filled up and decidedly improved in appearance. At no time during the voyage is the manure cleared away. From the way the cattle are placed in the ship this would be quite impracticable. Certainly the devising of some means by which this could be accomplished daily would be a great desideratum, but I cannot see how this could be managed without too much space being taken up to allow of its being done. But they are by no means in the bad mess that might be supposed, for, as a consequence of all their food being of a very dry nature, the droppings are comparatively dry also, and these being littered over every day the cattle have quite a presentable appearance. I think the Thomson Line of steamers, in so far as they are fitted up for the cattle trade, to be as near the acme of perfection as could possibly be conceived; in fact, although I studied the matter minutely, I did not observe a single feature in the fittings or arrangements of the ship in which I could suggest an alteration. I think, however, that the regime of attendance might be altered for the better. On board the Iona there were 25 cattlemen, four or five of which were bosses, or one man for every 22 cattle, and I could not see any use for nearly so many men on the job. They did not have half work, and they were so thick in the alleyways that the one hindered the other. In a farm steading at home one man is expected to sort eighty cattle, having the byres to muck daily, and hurl heavy barrow-loads of turnips. Neither dung nor turnips have to be dealt with on board, the meal and hay is drawn up from the holds with tackle, and conveniently placed for dividing it out with buckets and forks, and the water is run by hose into large tubs conveniently placed at short distances along the alleyways. The whole work is light and easily accomplished, and I see no reason why a cattleman should not be able to feed as many cattle at sea as on land. It may be argued that might do in good weather, but if it is rough, what would be the result with so few, but the officers told me that neither are the general class of

Sea Cattlemen

any use in rough weather. In fact they do not appear on deck at all, and at such times the work has to be done by the sailors. Without going the length of suggesting that each man should have to feed eighty cattle, I should decidedly say that a man should have no trouble in attending to fifty; this would allow eleven men for a cargo such as the Iona carried, over whom there would require to be one general boss, the whole men to be selected by the ship's company, and directly amenable to the orders and superintendence of the ship's officers. By such a system the cost of transit would be greatly lessened, and the proper attendance and welfare of the cattle better assured. I considered that the weight of the cattle on board would average about 1250 lbs. on the hoof. I learned that they cost \$160 or £11 per head at Toronto; the cost of bringing them from Toronto to Montreal is \$36 per ear load of twenty head, or 7s 6d each; and the cost of attendance, hay, &c., in the stockyards at both ends and on the railway would run up to about £1 per head; feed and attendance on the voyage, stockyard expenses at London, commission on sales, &c., about another £1; freight on vessel £2 per head, which with insurance, &c., added will bring

the expenses of the journey up to fully £4 per head—the total cost of the animal up to the time of his being cashed in London being £15 10s, or 28s per cwt. live weight. We had a pleasant voyage all the way home. Coming through the Straits of Belleisle, we saw five or six icebergs, some of them of great size, a strong head wind was against us, which retarded our progress, and we had to lie at anchor both in the St Lawrence and English Channel, in consequence of thick fogs. We drew up to the pier at Deptford, and disembarked the whole 552 cattle in the short space of half-an-hour, without a single casualty or case of sickness amongst them the whole voyage (cattle are not subject to sea sickness as human beings are). We reached our destination in London on Saturday evening too late for the train, and on Sunday evening, at 8 p.m., Mr Taylor and I took our seats in the "Flying Scotchman," and reached Dundee at 6 a.m., and, after having breakfast, we went to the *Courier* Office, where we met the Messrs Thomson, and gave them an account of our stewardship, and thus concluded our eventful journey of over 12,000 miles.

CONCLUSION OF THE TOUR.

IMPRESSIONS OF AMERICA.

THE COUNTRY'S RESOURCES.

ITS AGRICULTURAL PROSPECTS.

WHAT BRITISH FARMERS HAVE TO FEAR.

(From the Dundee Courier of July 7.)

Mr Osler, the *Courier's* agricultural commissioner to America writes:—I have now taken my readers with me in imagination in a descriptive tour over the billows of the great Atlantic, through the United States and Canada, over the wilds of the Rocky Mountains, out into the Pacific Ocean as far as the island of Vancouver, and home again to Dundee, where I must now bid them an affectionate goodbye. But before doing so, I would like to make a few general remarks upon the impressions I have formed in regard to the western hemisphere and its relations to this country. Well, as a grain importing country I do not think America can harm us more in our markets than it has already done. True, it has cheap land and abundance of rich virgin soils, which require no manures for many years, but it has dear labour to contend against, just as we have, and the long land carriage which has to be paid for before their grain is got to a seaboard will always handicap them in respect to the British markets. Still their surplus produce has to be got rid of, and as our markets provide the only outlet, they will continue to send it, even although it may be at a loss, and I am therefore of opinion that the tendency from America would be to raise the price of grain stuffs, but when we turn to India and Africa, with their countless millions of acres of splendid wheat-producing soils, which can be purchased at next to nothing, and teeming populations, who supply labour at the cheapest possible rate, together with low ocean freight, which land their produce at our doors for a mere trifle, so that, taking everything into consideration, I have no hope whatever that any improvement will take place in our market in regard to prices. Still, I surely think that we have touched bottom, and that no considerable reduction is to be anticipated. But with regard to meat stuffs—that is, beef and mutton—I am very much afraid

that we have not by a long chalk seen the worst. True, I do not think that America is well adapted for the production of sheep, and if we had only it to compete against us, I would have no fear for a reduction in the price of the fleecy tribes; there is, however, no doubt whatever but that the trade in frozen mutton from Australia, already assuming gigantic proportions, is only in its infancy, and that it will year by year increase as establishments for slaughtering and refrigerating are opened up. And considering the cheap rate at which mutton can be produced there and sent over here, there is not the shadow of a doubt but that in a very short time the price of the home article will be run down and greatly lowered. It is, however, in regard to

The Cattle Trade

that we (the British farmers) have to fear America most. I have already shown that well-fed prairie cattle can be raised at the foot of the Rocky Mountains, and sold in our home markets at 22s per cwt. live weight or thereabout. At present home-reared cattle of similar quality are selling at about 30s per cwt. live weight, and farmers are unanimous in declaring that even at that price they are losing money by their transactions. What then is to be the result when the American cattle trade assumes such proportions, as it assuredly will do, as to cause a levelling down. I know very well that cattle in the eastern provinces of America, or, indeed, in any part of that continent where they have to be reared, or agricultural products cannot possibly be produced and delivered here at the rates I have quoted, hence the outcry amongst American cattle rearers as to the low prices, but it is the western provinces where good pasture lands are rented from Government at 3d or at most 1d per acre, that are to run down the prices both in Eastern Canada and the States and at home. But the farmers in Eastern Canada have an alternative which a short-sighted policy on the part of our Government has deprived us of, and which they have not been slow to avail themselves of, and is proving a source of relief to them in the meantime. By purchasing cheap stores from their western neighbours and putting them up to finish off upon their cheap meals and other products, they are enabled to put fattened beeves upon our markets, which neither they themselves, if left to their own resources, nor us could contend against. Why, then, should we be deprived of the same privilege if the finished article (that is, the fat steer) is to be allowed into our markets to run down our prices? Why should we be debarred from procuring the raw material (that is, the car or store ox) at the same cheap rate? It seems to me that the prairies of America are pre-eminently adapted for producing the raw material; that in fact the bones and frame must be built up and formed of cheaper materials than we have at our command in this country, and that our home products, which are ever so much more costly, must be devoted to the production of beef and bones, which is really the commodity which constitutes the value of the animal—that, in short, if we are to be in a position to compete successfully against the foreigner, we must get the Canadian store cattle at a cheaper rate to put beef on and finish off here. And the getting of these cheap stores, which we surely will do before long, is

The Only Bright Speck

that I can see in the whole agricultural horizon, and every farmer in this country should employ his utmost influence with our home legislators in getting the present embargo removed. And now that an exhaustive inquiry is being made into the

health of Canadian cattle, it is to be hoped that the greatest care will be taken to have it conducted upon proper lines. I have already described my voyage home upon the Iona, which carried a cargo of 550 Canadian cattle, which were all put ashore at Deptford, London. While they were being dis-loaded I had a walk through the cattle lairs there, and was surprised to find great quantities of United States and South American cattle confined in the same sheds waiting for slaughter with in some cases only a narrow passage between, and I thought how easy it would be for a little carelessness or connivance to cause a mixture of the herds. Surely when such a momentous issue depends upon the result separate sheds ought to be provided by the Government, where a mixture of the cattle would be impossible. I have now only one duty to perform, and it is to return my warmest thanks to those parties who lent their powerful influence and assistance to make my tour a pleasure and a success. And, first of all, my best thanks are due to the Messrs Thomson, proprietors of the *Courier*, who spared neither trouble nor expense in completing all the arrangements and carrying them to a successful issue. To Mr Murray, the Conductor of the *Weekly News Expedition*, I also feel greatly indebted for his unvaried kindness and attention during all the time I was in his company. To all the officers of the good ship Iona, and especially to Captain Cummings, the commander of that vessel, would I convey my best thanks, for so kindly and unweariedly attending to our comfort and welfare during the voyage out and home. Nor would I forget the members of the *Weekly News Expedition*, one and all of them being able and intelligent men, well qualified, from their great powers of observation and descriptive abilities, to discharge the duties which they had undertaken. We, indeed, formed a very mixed company, no two of us being of the same occupation or district. We had altogether different views and aspirations with

regard to things in general, and the debates and conversations that took place amongst us were of a most varied description, but most interesting and instructive. We were withal

A Happy, Jovial Company,

and all of us contracted and cemented friendships which can only die with ourselves. I have also to acknowledge the deep debt of gratitude I lie under to many kind friends and new acquaintances I met out West. It would take up too much space to name all the gentlemen who ingratiated themselves in our favour by their kindness, hospitality, and help, but I cannot stop without mentioning Mr Burpe, Winnipeg; Mr Anderson, Edmonton; Mr Coleman, Edmonton; Mr Higginson, New Westminster; Mr Thomson, Calgary; Mr Thain, Brandon, &c., and the commandants of the mounted police at the various forts, for so kindly supplying us with machines and drivers to go out to investigate the country. Major Griesbach, at Fort Saskatchewan, and Major Sneider were particularly attentive in this respect, going out with us themselves and giving us all the information in their power. And, lastly, would I return most grateful thanks to my readers who have followed me in the columns of the *Courier* throughout all my wanderings, many of whom have so often expressed the pleasure they have experienced in perusing my articles, and thanked me repeatedly for the amount of information I have been able to give them in regard to the New World. In closing my correspondence on the New World, I have only to say that, although I must now bid adieu to that subject, I have no intention of being a stranger to them, but intend still, through the columns of the same paper, to keep up my connection with them in another capacity, and trust they will give me the same kind attention and consideration in perusing my articles on matters connected with home as they have done in regard to matters on the other side of the Atlantic.