

DUNDEE COURIER AND DUNDEE WEEKLY NEWS ARTISAN EXPEDITION.

AGRICULTURAL COMMISSIONER'S REPORT.

(From the Dundee Weekly News of July 29, 1893.)

CROFTERS IN CANADA.

Mr James Taylor, Raesmill, Arbroath (Agricultural Representative on the *Weekly News Expedition*), reports:—After a very good passage across the Atlantic we first sighted land on the morning of the 2d July. All that day's journey was along the desolate-looking coasts of Newfoundland and Labrador, where scarcely any vegetation is to be seen except some stunted trees and shrubs, with a house or two at long intervals along the coast. After reaching Father Point, it is more inhabited, and cultivation seems to improve. The farms are mostly small, ranging from thirty to forty acres, and the occupiers are all their own landlords. It is no uncommon occurrence to see a horse and a cow going together in the plough, where only one horse is kept. Their cattle seem to be rather rough, and have a "want of rib," as we in Scotland would term it. We can see some flocks of sheep, but cannot very well say of what breed. Their horses are all of the light "mustang" kind—a very good class for doing light work, and working in the light "buggies" they use on their farms. The crofters are for the greater part of the year engaged in fishing, and the good lady of the farm is generally mistress of that department. After passing Quebec things in general begin to improve. The land is better and earlier, and more stock kept. We can now see some very good herds of cattle, and swine are grazing in lots together. Fences are of the most primitive kind, not fixed together in any way, just hung together, the one leaning against the other. The crops appear to be mostly of oats, with an occasional patch of barley and very little wheat. There appears to be a tendency to move further west, and many of the small crofts are deserted and the land rapidly going back to its natural state. After we come nearer Montreal crops begin to improve very much and are much earlier, some very fine crops of hay being cut down.

State of Farms.

We landed in Montreal on Thursday, 6th July, and had a look through the city, but did not see much to which an agricultural correspondent can refer. We took train at 9 p.m. for Toronto. As seen from the train farming is in rather a backward condition until we come into the vicinity of Toronto, when it improves considerably, also farm buildings are in better order and fences seem to receive more attention, and it is also much earlier. They are in the middle of their hay season, and it seems a very fair crop. The principal crops seem to be wheat, barley, oats, mashley, but very little turnips or potatoes. Their horses are all of the mustang breed, what we in Scotland would call "shalts." We see some very good cattle in this district, and pasture is plentiful. Fences are all of wood, no stone, wire, or hedge fences being to be seen. Their farm buildings are also much of the same kind as seen in the province of Quebec, consisting of farmhouse built with wood but very comfortable-looking and a barn.

A Famous Agricultural Machine Establishment.

Arriving at Toronto we had a rest, and set out to visit the works of Messrs Massey, Harris, & Co., Limited, engineers and manufacturers of farm machines and implements. Upon asking at the works we were very cordially received by Mr Shenstone, manager, who at once showed us through the place. The most interesting part of their work to me was the part engaged in the construction of the "Massey Harris" wide open binder. This machine is built almost entirely of steel. The entire frame work, including elevator frames, truss rods, and frames are of solid steel, and that, too, largely of angle steel, the strongest form known for agricultural machine construction. The driving wheel, grain wheel, parts of knotter, cutting apparatus, and shafting, are all of steel. The "Massey Harris" machine is about as simple in construction as a binder can be. Being so light and having the gearing at the centre under the decks, it is easily and correctly supported, and can be shifted a greater distance without danger of throwing a heavy weight on the necks of the horses. Most binders shift only a few inches, and the grain must therefore be moved endways to the knotter. It is obvious that the less the grain has to be shifted, the less "shelling" there will be and the better sheaves. The construction of hay-mowers is also a large branch of their business. They are made of various sizes, cutting bars being from four and a half to seven feet wide, as they have to suit the requirements of all crops and all countries.

American Implements of Husbandry.

They also do a large business in drill-sowing machines. They are not the same as used in Scotland. Their "Shoe" drill-sowing machine is the kind commonly used in America. It is narrower than the machines used in Scotland. They cost £12 upon rail. They also do a large business in the construction of threshing machines, mostly of the movable kind, as they best meet the requirements of the American, who likes to set his mill in the middle of his field, and when that is finished shift to another field. I shall be better able to pass my opinion upon their merits when I see them at their work, as I expect to do in a few weeks. Messrs Massey, Harris, & Co. have also large works at Brantford and at Woodstock. In all they employ 500 hands, not including clerks, agents, &c. Find men mostly steady and reliable, and generally Scotchmen turn out best, and get the most important positions. The whole work is done on the system of piecework, which Mr Shenstone finds works best. The men are making from 12s to 16s a day in some departments, and the average wage over all the work is 8s a day. Four years is the common term of apprenticeships, with the exception of ironmoulders, who have only three. By their rules any labourer may rise from the ranks and do the work of a skilled tradesman without the interference of any union, and there is no union connected with the work. They are all members of a mutual benefit sick society, of which the superintendent of the works is manager,

and payment is made every fortnight. They work 55 hours per week, having a half-holiday on Saturday, and a fortnight is the general rule for holidays during summer. Messrs Massey, Harris, & Co. have a strong objection to working overtime, and never do so unless in cases of absolute necessity.

A Good Farming District.

Upon leaving Toronto for Chicago we find crops after leaving Toronto much the same as in Eastern Ontario. As we proceed they gradually begin to improve, and by the time we reach the London district they are very much better, and we are now in a very good agricultural district. Wheat is very good, and in that district wheat harvesting will be general in a fortnight. Wheat and hay are the principal crops grown. Barley and oats seem to be a failure, and are still very green. Turnips are not much grown, and what are sown are very far back, in most instances just beginning to braird. Potatoes are also looking very well, but are not extensively grown. Thousands of acres of unreclaimed land, mostly in marshes and bush, are still to be seen here. A very difficult and expensive speculation it must be to make it fit for cultivation. In many instances we can see good crops growing and the tree roots still in the ground just as the trees had been cut down, as they cultivate the ground for a number of years before attempting to "draw" the roots. They have a kind of ploughs called "Stump-jumpers" for ploughing land where the tree roots are not yet removed. They slip over the roots guided by a wheel in front without injury to horses or plough. As we came into the south-western district of Ontario, "the garden of Canada," I was struck with the great improvement of crops of every kind. Fruit is grown extensively here; apples, oranges, peaches, bananas, cherries, cucumbers, fields of hops and tobacco, &c., are growing luxuriantly. Indian corn is also grown very extensively here, and has every appearance of being a good crop. Farm buildings are also much improved here, being more after the style of those in Scotland, and more substantial-looking than the solitary "barn" of Northern Canada.

A Wasteful System.

We have seen very little live stock of any kind since leaving Toronto, as they prefer hay crops to stock-rearing. Their horses are mostly the same breeds as in the north, but are better sorts. After we passed Detroit into the States we come into a track of rather poor country. The worst feature I see in Canadian farming is that they burn all their straw, although in some instances we can see they have begun to put their farm manure upon the land, a system that would pay Canadian farmers, and ought to be adopted.

(From the Dundee Weekly News of August 5.)

M'Cormick Harvesting Machine Works.

Mr James Taylor, Raesmill, the agricultural representative on the *Weekly News Expedition*, thus describes the works of the M'Cormick Harvesting Machine Company in Chicago:—

I visited M'Cormick's harvesting machine works on the 13th of July, and was shown through the works by Mr Armour, the manager. The works, I believe, are the largest of their kind in the world. They cover 45 acres, and are, on an average, five storeys in height. There are 2200 hands employed, but no apprentices of any kind. Of the total, 987 are employed at so much per day, the others being all employed on the piecework system. They turn out on an average 800 machines per day, mostly self-binding reapers and mowers. The quantities of

metals used in the works are 100 tons of grey iron daily, 80 tons of malleable iron daily, and 25,000 tons of steel yearly. The rates of wages are about the following:—Moulders, being upon piecework, can make as high as 4½ dollars per day; blacksmiths, 4 to 5 dollars per day; while mechanics and those paid by day wages have about 2 to 2½ dollars. They work ten hours per day, with no Saturday afternoon, and get about a week's holidays every year. They are all non-Union men, and all seem to be well satisfied with their position. In my opinion they work a deal harder than Scottish tradesmen do, as they were all working as for dear life, even although the thermometer stood at 90 in the shade. When working overtime they get the same pay for eight hours as in their ordinary day they would do for ten. One very smart-looking machine came under my notice as being particularly well adapted for smaller farms. The "Queen of Reapers" it is called. It is a very handy and available machine, being very light in draught. These machines are sent to every part of the world, and seem to be very durable.

(From the Dundee Weekly News of September 2.)

THE STATE OF ILLINOIS.

Far Advanced in Agriculture.

Mr JAMES TAYLOR, the agricultural delegate on the *Weekly News Expedition*, writes as follows from Rockford, Illinois:—As far as I have yet seen of America I have found the State of Illinois, and more especially the north-west part of that State, to be farthest advanced in agriculture. There the principal crops grown are Indian corn, oats, and a little barley, and hogs are also extensively fed for the Chicago market. The soil here is generally of a fine deep-black loam, three to four feet deep. The land is more in rotation of cropping, having been longer under cultivation than most parts of America. Land here can be bought at from £8 to £20 an acre, according to its quality, buildings, location, &c. I will give a farm of 160 acres as a fair specimen of their rotation of cropping:—40 acres of maize, 40 acres of oats, 40 acres of permanent grass, with a little barley and as much potatoes as they require for family use. The average amount of stock kept upon a farm of that size would be 6 cows and 10 or 11 calves, which they rear up to feeding age. They feed with corn, and sell off at about 4½ cents per lb. They would also sell about 150 fat hogs under one year old. Oats here average 40 cents (1s 8d) per bushel, and maize 50 cents (2s) per bushel. We have also visited

The Town of Granite Falls,

which is situated in Yellow Medicine County, Minnesota. This town was first settled 23 years ago, and is entirely supported by farmers located in the district. Farming is not so far advanced as in Illinois. Land can be bought at from \$20 to \$25 (£4 to £5) an acre, according to quality. Corn and wheat are the principal crops grown. Wheat yields on an average 13 bushels an acre, oats 35 bushels, and maize about 45 bushels.

Ploughmen's Wages

here are from \$20 to \$22 (£4 to £4 10s) a month, with bed, board, and washing. That is for eight months of the year. The other four months many of them are compelled to go idle, as only a comparatively small number of hands are kept on during winter to feed stock, &c., for which they get from \$10 to \$15 (£2 to £3) a month. The farmers, like those in Scotland, have to engage extra hands during haying time and harvest, for which they give about \$75 (£15)

for two months. Many of them go lumbering in winter, and a goodly number go altogether during the winter months, as it is not easy to find employment.

Cost of Clothing, Food, &c.

I give the cost of clothing for a working man to show how it compares with the wages earned—Sunday suit, \$12 (£2 10s); suit for underwear, \$2 (8s). Overalls for working men, which are always worn, cost \$1½ (6s), and they require three suits of overalls per year. Cotton shirts, 50 cents (2s); hat (working), \$1 (4s); socks (cotton), three pair for 25 cents (1s); working shoes, \$1½ (6s). Plough boots cost \$2 (8s) per pair, but shoes are mostly worn. Skin overcoat for winter, \$10 (£2); felt boots for winter wear, \$3 (12s); fur caps for winter, \$1 (4s). Very few married men are employed as farm servants, and their ambition seems to be to get farms of their own. The general rule is that they all live in the same house with the farmer, and all take their meals at one table. They have no regular hours, and must work from daylight till dark if asked to do so. What is called a "poll" tax is imposed for the maintenance of the public roads. Each man, be he farmer or servant, between the ages of 21 and 50, has to work for two days every year gratis upon the roads, or pay \$1½ (6s) in money each day for a substitute. Farm hands are rather scarce, and there is the same tendency as in Scotland to seek employment in large towns or get farms of their own, one cause of that being the want of house accommodation for married ploughmen, as in this district there is not such a thing as a ploughman's house to be seen. In my opinion, as far as I have seen, the Scottish ploughman is much better off than his cousins on this side of the Atlantic. A ploughman in Scotland can depend upon getting work all the year round according to engagement, while the American has only work he is sure of for eight months a year.

(From the Dundee Weekly News of September 9.)

OVER THE ROCKIES.

TWENTY-FOUR O'CLOCK.

GLIMPSSES OF THE REDSKINS.

PLOUGHING BY BRIGADES.

THE ROCKY MOUNTAIN PARK.

Mr James Taylor writes :—It rained heavily when we left Winnipeg, but as we proceeded westward we left the rain behind and came into fine clear weather. The country after leaving Winnipeg is apparently as level as a billiard table, a belt of almost unoccupied land stretching as far as Poplar Point, seven miles out, due to the fact that it is mostly held by speculators, and the scattered farms visible are chiefly devoted to dairy products and cattle-breeding. After passing Poplar Point Station farms appear almost continuously. The crops grown appear to be mostly wheat, oats, and timothy hay, no maize, and very little potatoes or turnips being grown. We next came to the station and town of Portage La Prairie, on the Assiniboine River, the market town of the district, and one of the principal grain markets in the province. It has also large grain elevators and flour mills, besides other industries. Between Portage La Prairie and Brandon stations succeed one another at intervals of six or eight miles, and at nearly all are tall and

massive elevators for the convenience of farmers in the neighbourhood, with now and then a flour mill. After passing through a bushy district, with frequent ponds and small streams, containing many stock farms, for which, having a plentiful supply of water, it is well adapted, the railway rises from Austin Station along a sandy slope to a plateau, near the centre of which is situated the town of Carberry, an important grain market. The next stop is Brandon. It is what is called on the railway a divisional point, as

The Standard Time

changes here to "mountain time," one hour slower. The time changes four times between Montreal and Vancouver. There is Eastern time, Central time, Mountain time, and Western time, falling back an hour each time as we proceed west. They have also abandoned the a.m. and p.m. system on this railway, and just run on from twelve noon to twenty-four o'clock. Brandon has the largest market for grain in Manitoba. It has five grain elevators and a flour mill. Beyond Brandon the railway now draws away from the Assiniboine River and rises to a "rolling" prairie with small patches of cultivated land here and there. As we come to Virden Station the farms are gradually disappearing, as the land here is again held by speculators. The frequent ponds and copses here offer excellent opportunities for sport. Water fowl and prairie chicken seem to be abundant. At Broadview Station a reservation of Cree Indians is not far away. As we stop there for several minutes we get a fine view of some of the "redskins" with their war paint and feathers.

Westward

we now follow a gradually rising prairie, bounded by low wooded hills at the south. This section is almost exclusively devoted to wheat and cattle. A little beyond Sinaluta Station is the celebrated Bell Farm, containing 100 square miles, and from the next station, Indian Head, near the centre of the farm, the headquarters buildings can be seen on the right. The neat square cottages of the farm labourers dot the plain as far as we can see. The furrows on this farm are usually ploughed four miles long, and to plough one furrow outward and another returning is a half-day's work for a man and a team. The ploughing is done with an almost military organisation—"Ploughing by brigades and reaping by divisions." We enter, after passing Broadview Station, into

Many Miles of Golden Prairie,

as far as the eye can reach along a broad treeless



expanse, which stretches, varied here and there by small towns and frequent herds of cattle and horses, to the entrance to the Rocky Mountains. Calgary is our next stop. It has a population of 4500. It is charmingly situated upon the level prairie in sight of the white peaks of the mountains. It is the centre of the trade of the ranching country, and the chief source of supply for the mining districts in the mountains beyond. Lumber is largely made here from logs floated down the Bow River. From Calgary a branch line of the Canadian Pacific Railway runs north to Edmonton, thus throwing open a new and vast country, which is already attracting settlers in large numbers. As

We Approach Kananaskis,

the mountains suddenly appear close at hand, and seem an impenetrable barrier, their bases deeply tinted in purple, while high above, dimly outlined in the mist, are distant snowy peaks. We reach Canmore, and here an observation car is attached for the convenience of passengers. From the station a striking profile of the Three Sister Mountains is obtained, with the Wood and Pigeon Mountains looming up behind. On either side of the beautiful valley the mountains rise in solid masses westward until the great bulk of the Cascade Mount closes our view. Five miles beyond Canmore the Rocky Mountain Park is entered, and we alight there and receive a very cordial welcome from Mr G. A. Stewart, land surveyor and park-keeper. This park is a national reservation, 26 miles long by 10 miles wide, embracing parts of the valleys of the Bow, Spray, and Cascade rivers, one very fine lake, and several noble mountain ranges. We were driven all over the island, and also to the famous hot-water springs, the more important of which have been improved by the Government, and picturesque bathing-houses have been erected, and placed under the care of attendants.

(From the Dundee Weekly News of September 16.)

FROM WINNIPEG TO VANCOUVER.

EN ROUTE FOR THE CANADIAN RANCHING DISTRICTS.

THE WILDEST OF THE ROCKIES.

Mr James Taylor, further describing the journey from Winnipeg to Vancouver, writes:— We resumed our journey next day, leaving Bamff at 12.30, and it may be said to be here that the wildest of the Rockies begin. After passing Castle Mountain Station, at the base of the great peak whose name it bears, the mountains on each side become exceedingly grand and prominent. As we reach Laggan Station any one who is inclined can get a seat in front of the engine, and Mr Osler and myself availed ourselves of the opportunity of having a seat upon a "cow-catcher." We can now get a splendid view from our seat in front. At first enchanting glimpses only are caught through the trees as we look ahead, but before Eldon is reached the whole long array is in plain view. Turning to the left and looking back, the central peak of Pilot Mount is shaped like a pyramid high above the square-fronted ledges visible below, and squarely opposite the sombre precipices of the Castle Mount, resembling a castle in every way, with towers and battlements complete. West of the entrance into Vermillion Pass stretches the long, rugged, wall-like front of Mount Temple, and beyond it, standing supreme over this part of the range, the helmet-shaped Mount Lefroy, the highest and grandest in this

whole panorama. At Laggan we return to the observation car. The railway here leaves the Bow River and ascends a tributary from the west, which courses through a gap in the Bow range. Looking westwards through this gap towards Bow Lake and

The Huge Peak of Mount Hector,

a view is obtained of the first of the great glaciers. It is a broad, crescent-shaped river of ice, 1300 feet above, and a dozen miles away. The station at the highest point of the mountains is Stephen, 5296 feet above the level of the sea, and, like the enormous mount some miles ahead of it, is named in honour of the first President of the C.P.R. The line here now begins to descend very rapidly. We cross the Wapta Lake at Hector, and, crossing the deep gorge of the Wapta or Kickinghorse, the scenery is now sublime, and almost terrible. The line clings to the mountain side at the left, and the valley on the right rapidly deepens until we can see the river like a silver thread a thousand feet below. Looking to the north, one of the grandest sights to be seen during the whole journey is now visible away to the north, with great white glacier-bound peaks upon either side. Looking ahead, the dark, angular peak of Mount Field is seen. On the left the stately head of Mount Stephen, 8000 feet above the valley, and the spire-like top of Cathedral Mount, still further on the left, occasionally appear over the tree tops. On the shoulder of Mount Stephen is shining a great green glacier, 800 feet in thickness, which is slowly pressing forward, and over a vertical cliff of great height. We still follow the course of the Wapta River, and as we are descending a steep gradient the train, with reversed engine, commences its descent on the western side of the pass, and near Palliser the track enters a deep canon, where the vertical sides of the mountain rise up thousands of feet, and yet so near each other that a stone may be thrown from one side to the other. Down this vast chasm go the railway and river together, the former crossing from side to side to ledges cut out of the solid rock, and twisting and turning in every direction, and every minute or two

Plunging Through Small Tunnels,

made in the projecting angles of rock that seem to bar the way, with the towering cliffs almost shutting out the sunlight, and the roar of the river and the train, increased an hundred fold by the echoing hills. The passage of this terrible gorge will never be forgotten. The train suddenly emerges as if into daylight as Golden is reached. The broad river ahead is the Columbia moving northwards, and we can now see the Selkirks beyond rising from their pine-clad bases, and lifting their ice-crowned heads to the sky. At Donald Station our time again falls back one hour as we change here from Mountain to Pacific time. Here we pick up an extra engine as we are now going up a gradient of 116 feet per mile, and we soon leave the river 1000 feet below. Opposite is a line of huge pine-clad hills, showing occasionally snow-covered peaks above the timber line. Nature has worked here on so gigantic a scale that many travellers would not notice the extraordinary height of the spruce, Douglas fir, and cedar trees. Looking ahead we can now see the heads of

Eight Magnificent Mountain Peaks

in grand array. A little further on we reach Cedar Creek, and a little on is a very high trestle bridge over a foaming cascade, whence one of the most beautiful prospects of the whole journey can be had. So impressed were the builders with the charm of this magnificent part of the mountains that they named it "The Surprise." At Glacier House we are within fifteen minutes walk of the

Great Glacier, a vast plateau of gleaming ice extending as far as the eye can reach, as large, it is said, as all those of Switzerland combined.

Leaving the Glacier the train enters upon

The Most Exciting Part of the Journey,

the descent of the "Loops." The line makes



THE LOOPS.

several startling turns and twists—first crossing a valley that leads down from Ross Peak Glacier, then doubling back until we can see half-a-dozen parallel lines of railway, and along these the train, by doubling itself again and again, and moving at not more than six miles an hour, has to crawl downwards to a depth of 500 feet. We now follow the Illecillewast River, with its waters pea-green, from the Melting Glaciers. The gorge is sometimes of considerable width, filled with a forest of gigantic trees, for which British Columbia is famous. Just east of Albert Canon Station the train runs suddenly along the very brink of several remarkably deep fissures in the solid rock, whose walls rise straight up hundreds of feet on both sides. The most striking of these canons is the Albert, where the river is seen 300 feet below the railway, compressed into a boiling flume scarcely 20 feet wide. The train stops here for a few minutes to give passengers an opportunity of viewing from the solidly-built balconies the boiling river below. As we approach Craigellachie the Columbia River is crossed by a bridge half a mile long. Here the last spike was driven in the Canadian Pacific Railway—the lines from east and west meeting here. Still onward we go to the pretty town of Kamloops. A divisional point on the railway, and also an old Hudson's Bay post, and through the Thomson River valley to Cherry Creek and Spatsum. Three



ALBERT CANON.

miles beyond Ashcroft the hills press close upon the Thomson River, which cuts its way through a winding gorge of almost terrifying gloom and desolation, fitly named

The Black Canon.

Emerging, the train follows the river as it meanders swiftly among the round-topped, treeless, and water-cut hills. The scenery now becomes very striking and peculiar. The train runs upon a ledge cut out of the bare hills on the irregular south side of the river, the headlands are penetrated by tunnels, and the ravines spanned by lofty bridges, and altogether it is a sight that leaves a strong impression upon the memory. The mountains now seem to draw together again, and the railway winds along their face hundreds of feet above the struggling river. This is the Thomson Canon. The gorge rapidly narrows and deepens, and the scenery becomes wild beyond description. The frowning cliffs opposite are streaked in many striking colours, and now and again snowy peaks can be seen glistening through the clouds. At Lytton, a small trading town where ranchmen and Indians appear in numbers, the canon suddenly widens to admit the Frazer River, the chief river of the province, which comes down from the north between two great lines of mountain peaks. The railway now enters the canon of the united rivers, and the scene becomes even wilder than before. The old Government road attracts attention all along this valley—it is sometimes forced to the height of a thousand feet above the river, and is pinned by seemingly slender sticks to the face of a gigantic precipice. The canon alternately widens and narrows. Indians are here and there sitting on projecting rocks down at the water's edge spearing salmon or scooping them out with dippets, and in sunny spots the salmon are drying upon poles. Chinamen are seen on the occasional sand or gravel bars washing for gold; and irregular Indian farms and villages, with their quaint and barbarously decorated graveyards, alternate with the groups of huts of the Chinese. At Boston, four miles below, the principal canon of the Frazer commences, and the scenery is not only intensely interesting but startling. The great river is forced between vertical walls of black rocks, where repeatedly thrown back upon itself by opposing cliffs, or broken by ponderous masses of fallen rock, it madly foams and roars.



FRAZER CANON.

Emerging at North Bend, the train enters the grand canon of the Frazer, the awe-inspiring character of which is beyond description, and when we again reach daylight at the pretty riverside station of Yale, it seems as though we had come through what has been described as "a journey through the regions of eternal night." We are now within 100 miles of the Pacific coast, and the country widens out into

Flat Grassy Plains

backed by the dense forests for which British Columbia is famed. Stopping off at Harrison Station, as we had resolved to visit the Island of Chilliwack, we were rowed across the Frazer River by a native Indian. After a very pleasant stay for a day on the island, we resumed our journey next morning by steamer down the river to New Westminster, where, after a look round the city and a view of its fine marine harbour, we again got upon the cars, and in less than an hour we reached Vancouver City, the Pacific terminus of the railway. The city was founded in 1886. From May to July that year its growth was very rapid, but in July a fire spreading from one of the surrounding forests, which are so numerous in that district, swept every house but one in the place, and with this exception every building now in it has been made since that time. Its situation is most perfect as regards picturesqueness, natural drainage, harbour facilities, and commercial advantages. It has many splendid buildings of brick and granite, and some of its private residences would do credit to a city of a century's growth. Its streets are well made, and it is lighted with gas and electric light. An ample supply of pure water is provided by means of pipes laid to a mountain stream opposite. From

Vancouver City

we went by steamer 80 miles across the Pacific to Victoria, the capital of British Columbia, and drove to many places of interest in the city and around the island. This ended our journey West, and after staying in Victoria we again proceeded East to visit the North-West Territories and ranching districts of Canada. I have long wished to see the West Coast of America, and see the sun set behind the waters of the great Pacific, and my wish has to-night been granted to the full.

(From the Dundee Weekly News of September 23.)

THE CHICAGO STOCKYARDS.

ARMOUR'S PACKING-HOUSES.

CANNED MEAT OPERATIONS.

Mr Taylor, Raesmill, Arbroath, reports:—During our stay in Chicago I on two occasions visited the stockyards, which are situated on the south-west side of the city. Centrally located and drawing



MR PHILIP D. ARMOUR.

supplies from a fertile country of almost unlimited extent, Chicago has for many years controlled the packing business, and indications point to the maintenance of her supremacy. The output of hog and beef products manufactured in Chicago has of late years increased enormously, and gives employment to many thousands of men. Finding it impossible to visit the works of all the different firms, we selected Armour & Co.'s houses as being capable of giving us a good idea of how the different processes of killing and packing are done. In 1886 the number of hogs killed by Armour & Co. was 20,000; in 1892 it was 1,750,000. The number of cattle killed by the same Company in 1892 was 850,000; sheep, 600,000. Usually the cattle are left in the



UNION STOCKYARD.

pens adjoining the beef-house twenty-four hours after having been driven from the stockyards. This ensures an even, cool temperature. They are then driven into narrow passage-ways beside the pens, each compartment being only large enough to hold one animal. Overhead is a raised platform, upon which stands the grim executioner. The cattle are killed by the stroke of a heavy hammer. Sometimes by means of a heavy spear the spinal column is severed at its junction with the skull. Directly opposite the animal as it falls is a sliding door, which is lowered, and the animal is drawn on to the dressing floor by a chain attached to the

horns. It is then raised automatically by the hind-quarters, and suspended from a rail, and busy hands attack it. The head is cut off, and the tongue removed by one man, the feet stripped by the next, the entrails are removed by another; the hide stripped off by one, and a general finishing touch given by another. The

Killing and Dressing

process over, the animal still hangs suspended from the rails, on which it is now moved past the weighmaster, who records its weight and nature, and then it is slid along on the rail to the chill-room. Here the air, by means of cold air machinery, is kept constantly near the freezing point. The chill-rooms of Armour & Co. have a capacity for 15,000 carcasses. Here the carcasses are allowed to hang from 40 to 80 hours, and then, still suspended from the rails, they are run out to the loading platform, divided in fore and hind quarters, carefully inspected and transferred to the refrigerator cars standing ready to receive them, and are then distributed to all parts of the country. Every carcass is inspected by an officer of the City of Chicago Health Department, who issues a certificate as to the health and soundness of every animal, which certificate is transmitted to the dealer who buys the meat. About 1200 men are employed



KILLING CATTLE.

in Armour's Beef House, and the killing capacity is about 5000 cattle per day. The cleaning, cooling, and shipping of the carcasses is, however, not all that has to be done, as almost every item of the by-products is utilised. The entrails are properly cleaned and cured, and, when packed in salt, form a very important industry, being chiefly used as sausage skins. The tongues go to the canning department. The shanks and heads, after being trimmed, are transferred to the glue works. The hides are taken to the cellars underneath, where they are inspected and classified, and then packed with layers of salt to cure. The cured hides are sold to tanners, but Armour & Co. contemplate starting tanneries of their own. No part of the animal is wasted. The livers and hearts are shipped in the refrigerator cars along with the dressed carcasses to supply the Eastern demand. The horns are sold to comb-makers, the shin bones to knife-handle and knitting-needle manufacturers, while the switches, or tail-ends, find a ready market with the hair-mattress manufacturers. And in fact every part of the animal is utilised in some way, thus rendering possible the development of the business on so large a scale, and giving the consumers the benefit of prime, sound, wholesome beef at the lowest

possible price. A great deal of inventive talent has been devoted to the perfection of the refrigerator cars, for the transmission of the dead meat over the country and to the Eastern shipping ports, the average cost of one of these cars being £200—\$1000—and Armour & Co. own 3200 of them, paying the railroads, of course, for "hauling" (as they call it), but themselves supplying the vehicles of



DRESSING BEEF.

transportation. The cars are thoroughly washed and cleaned before and after loading, while large and expensive icing stations are planted midway between Chicago and the large Eastern centres, that the cars may be re-iced during transit. The work is all done on the piecework system, and is minutely sub-divided, and the unaccustomed spectator is astonished at the rapidity with which the experienced hands perform their work, each in his own different department. The

Canned Meat Department

is one of the most interesting of the whole business, and I was afforded an excellent opportunity of seeing all the different processes. From the top floors where the meat is cooked and trimmed down to the label-room where the finished cans are painted and packed everything is life and bustle. Good, prime, well-selected beef is used for making this great staple, but besides there is a multitude of articles turned out. Ox tongues, lunch tongues, canned soups in great variety, potted ham, potted tongue, roast beef, compressed ham, canned tripe, canned pigs' feet, Oxford sausage, and, in fact, almost every delicacy in the meat line is thus preserved in convenient form and guaranteed to keep sound and sweet in any climate. Corned beef, when cooked, is stuffed into the cans by automatic machines. The cans are filled with the proper quantity, and then tested by hand, then they are capped, soldered, and sealed up. The "processing," as this sealing is named, consists of the insertion of the can, when closed, in boiling water or steam. After a time the air, which has been forced to the top, is permitted to escape by means of a small perforation in the top of the can. As the heated

air is blown out the hole is immediately re-soldered and the cans are again subjected to the hot bath. After this they are treated to a cold shower, washed, freed from grease, dried, painted, and labelled. The labelling is done with much dexterity, in fact, the visitor is apt to suppose that it cannot be done thoroughly. A close examination, however, shows us that the girls who perform this work have attained a deftness that is really wonderful.

Extract of Beef.

Armour's extract of beef has taken a firm hold on the popular palate. Its manufacture and preparation for market possess much interest to the observer. With the assistance of experts thoroughly practised in the latest developments and discoveries of science as applied to the extraction and concentration of all that is stimulating and palatable in fresh beef of fine quality, Armour & Company are able to produce an extract superior to anything of the kind in the world. It is admitted by all that extract of beef made from the coarse and practically wild cattle of South America cannot possibly equal in substance and flavour that produced from the well fattened and graded heaves of the United States. Forty-five pounds of lean beef are required to make one pound of Armour's extract. The consumer is saved all the time, trouble, and expense for fuel, and obtains this concentrated soup stock cheaper than it can be made from the beef and bone.

"Billy the Bunco Steer."

There is still one more valuable adjunct of the business which must not be missed. This time it is neither a man nor a piece of machinery, but an old and venerable member of the bovine tribe known as "Billy the Bunco Steer." He has long had the freedom of Packingtown, is monarch of all his brethren, and bears his honours easily. His particular line of work is to lead the unsuspecting train load of cattle from the cattle pens to the slaughterhouse. Every day, with a regularity born of high intelligence and much habit, he takes up his station at the cattle pens. When the time to



"BILLY."

move arrives "Billy" takes his victims in hand, and having probably communicated to them in bovine language that there is something good to eat over the way he marches deliberately at the head of his regiment, and delivers them safely within the slaughterhouse pens. Having thus betrayed his friends, he turns coolly and marches off to perform the same service for another load. Old "Billy" is a *drawing card*.

(From the Dundee Weekly News of November 18.)

AMONG ALBERTA RANCHES.

A SUCCESSFUL ABERDONIAN.

BREEDING ENGLISH HUNTERS.

A SUGGESTION FOR LEGISLATION.

Mr Taylor, the Agricultural Representative on the *Weekly News* Expedition, writes:—Returning from British Columbia we spent three days at Calgary, a very substantially-built town with nearly 5000 of a population, situated at the confluence of the Bow and the Elbow rivers. From the town a fine view of the Rocky Mountains is got. The buildings are chiefly of good sandstone, which is very plentiful in the vicinity. The North-West Trading Company do an extensive dead-meat trade here. They also do an extensive export business with Vancouver and Victoria. To enable them to carry on their business successfully they have built a slaughtering and cold storage establishment about a mile from Calgary. The trouble in shipping live cattle was the falling off in weight and quality during transit. The cold storage building is capable of holding the carcasses of 2500 cattle and 2000 sheep. Here they can be preserved for several months. By this method ranchmen can bring in their cattle, see them killed and weighed, and get their money at once. The Ean Claire and Bow River Lumber Company has timber mills with a capacity of 30,000 feet of lumber and 10,000 laths per day. For some miles round Calgary the Company is well settled, but crop-growing does not appear to be very successful, owing to the drought, although there are some very good fields of oats to be seen.

Elbow Park Ranch.

We drove out in company with Mr Thomson, Homestead Inspector, for about twenty miles to the west, and visited the Elbow Park Ranch, owned by Mr Robertson. This gentleman has been in the ranching business for five years, breeding short-horns and Herefords. He sends all his cattle to Montreal at a cost of £2 8s a head. Mr Robertson is most emphatic in his assertions that no pleuropneumonia exists among cattle in Canada. We



CATTLE RANCHING IN ALBERTA.

then visited Mr M'Pherson, a native of Banochry, Aberdeenshire, who came out to Ontario in 1856, and moved west to his present farm in Alberta in 1883. Mr M'Pherson is quite well pleased with the way he has succeeded in America, as he came out a poor man, and has now a well-stocked farm free of debt. His cattle are all of his own raising, and of the shorthorn breed. He finds there is

A Scarcity of Farm Hands

in his district, and wages here are from £5 4s to £6 a month, with the perquisites common in America. During the summer months men's hours are from 7 a.m. to 6 p.m., with an hour and a half off at mid-day. There is a good deal of land still to be taken in in this district, and it can be bought at from 16s to 20s an acre. Next day we drove from Calgary to the Quorn Ranch, 25 miles south of Calgary. The Quorn Ranch is one of the principal ranches in Alberta. It is 17 square miles in extent, and is well stocked with cattle and horses. We were met by Mr Richard Broderick, a native of Ireland, who did everything in his power in the way of showing us the stock and driving us over part of the ranch. On it there are 1500 horses and several thousand head of cattle. The twelve stallions are nearly all imported from some of the best blood in Britain, several of them having been prize-winners.

300 Mares from Ireland.

Three hundred of the mares were imported from Ireland four years ago, and a number of their stock will be sent to England this year to be trained for hunters and cavalry remounts. Horses bred in Alberta are noted for their endurance, and such a thing as a broken-winded horse has never been known there. Water and natural shelter abound in this place, and the grass is of the best quality and plentiful, making the district highly suitable for stock-raising. But, with all these advantages, there is no denying that Alberta has a severe winter. In fact, I think it ought to be made compulsory that no ranchman or farmer should keep more stock than he can house and feed during the most severe part of the winter. Their present system of allowing them to go outside in all weathers without any attempt at shelter or feeding whatever must often cause great cruelty and privation to the animals, besides being a loss to the owners. In my opinion, some such method as I have suggested, if adopted, not only would add greatly to the comfort of the animals, but increase

The Profits of the Ranchers.

The Iron Ranch is held on a lease from the Government at one per cent. an acre yearly. There are fourteen men employed upon it during the summer season, their wages ranging from £6 to £7 per month during summer. Eight is the usual number kept during the winter, when the wages comes down to £1 12s per month, with rations.

(From the Dundee Weekly News of December 2.)

THE CANADIAN NORTH-WEST Edmonton District.

Mr Taylor, Raesmill, Arbroath, the agricultural representative on the Expedition, continuing his report of his journey from Vancouver, says:—After spending two days in the Calgary district we took train on the morning of August 3 for Edmonton, 200 miles north of Calgary. The greater portion of the land lying along the line of the Calgary and Edmonton branch is a country unsurpassed in all the natural elements necessary to ensure its

prosperity. The settlers who have already tried their fortunes in this district have proved beyond doubt that the land is fruitful and capable of maintaining a large population. Edmonton is a town of over 2000 inhabitants situated on the north bank of the Saskatchewan River amid beautiful groves of poplar trees. It is lighted by electricity, and has a complete telegraphic system, and many institutions which bespeak the progressive character of the Canadian citizen. We visited Mr D. Maloney's farm, and saw a field of wheat of extraordinary growth, which Mr Maloney expects will yield from fifty to sixty bushels an acre. Last year his oats yielded 100 bushels, and his barley sixty bushels an acre. His crops were undoubtedly the best we saw in the Edmonton district, and gave evidence of what splendid crops can be grown under proper cultivation without the aid of any manure. Government land can be bought in this district at 12s an acre, and it will take £4 an acre to clear and break it. Farm hands are rather scarce, and are paid from £4 to £4 10s a month, harvest hands receiving 8s a day, with food and lodgings. Next day we visited Fort Saskatchewan, where is stationed a detachment of the North-West Mounted Police, eighty strong. The soil is of a more sandy nature. We

Visited Many Farms

too numerous to mention individually. At several of them we saw timothy hay growing, which has been sown for several years. The crops were well advanced considering the lateness of the spring. The soil on the south side of the Saskatchewan River, between the Fort and Edmonton, is of a rich sandy black loam, very similar to that of British Columbia, with a clay sub-soil. In Eastern Canada it is imagined by some that the Edmonton country must be too far north to successfully grow wheat, but when one is here and sees the crops that are grown, and hears the settlers talking of the very fine crops produced in the districts of the Peace and Mackenzie Rivers, several hundreds of miles farther north, he is convinced that it is one of the best districts in Canada. Edmonton, as a matter of fact is in the same latitude, 54° (longitude, 114°), as Dublin and York, and consequently is further south than Scotland. Coal is found all over this district, and can be seen standing out from the banks of the Saskatchewan and Sturgeon Rivers. The seams vary from two to twenty feet deep. What is burned in the town of Edmonton is taken from a tunnel run in under the town from the bed of the river. We also saw men washing for gold from bars along the banks of the river opposite Edmonton. The gold is washed out in the form of fine dust, and every year the floods bring down fresh deposits of mud, in which the gold is found. To extract the gold from the sand a blanket is used covered with mercury, to which the gold adheres, the sand being washed off with the water. Miners can make from two to six dollars a day, and the amount taken out in some seasons amounts to 20,000 dollars worth. At Fort Saskatchewan we saw some samples of the gold taken from the river there.

Breaking the Prairie.

When in the Edmonton district we had a splendid opportunity of seeing first ploughing on the prairie, or "breaking" as they call it here, and I had the pleasure of holding a furrow myself. It is generally broken earlier in the season, about the middle of July, to give some time for the decay of the vegetation for cropping next year. In some places two furrowed "sulky" gang ploughs are used, drawn by three or sometimes four horses or oxen, as

the case may be. We were told, however, that the work is always best done by single-furrowed ploughs, which can be drawn by two horses. The breaking is very shallow, not over two inches deep, and the furrows, which, of course, fall flat, are twelve or fourteen inches broad. After the lapse of five or six weeks the land is ploughed again, the process being called back-setting. Practically speaking, the first furrow is just turned back, only they go a few inches deeper. As soon as a thaw sets in and the frost is out sufficiently to allow of the ground being harrowed in the spring, a commencement is made to the seeding. The



PLOUGHING THE PRAIRIE.

seeds are mostly put in by drills, and after it has received a run over with the disc-harrows the land gets no more work, as rolling is considered impracticable in most cases on account of high winds, which blow away the soil in exposed places and leave the seed bare where it has been rolled. It is the general rule to take two or three crops of wheat and then allow the ground to lie fallow. By this means the fallow land is got properly ploughed and cleaned during summer, and appears to work very well, as we saw some splendid crops of wheat after one year's fallow. On inquiries we found that it is

A Prevailing Idea

that the application of manure to wheat lands is as yet unnecessary, and the general desire is to get manure out of the way. But there can be no doubt that, rich as the newly broken-up North-West territories are at present, their fertility cannot be maintained indefinitely under continued cropping. In my opinion, the farmers ought to prepare a method for returning to the soil the elements which they take from it by continued cropping, and the sooner a regular method of mixed farming is adopted the greater will be the success of this great agricultural country in the future. When farmers do not possess steam-threshers of their own, hired threshers are used, the owner of the thresher having a gang of men moving with him from place to place. The farmer has only to cart away the grain, and, if he has sufficient teams available and a railway station within reasonable distance, the grain is at once sent on to the nearest elevator. The average charge for threshing is from 4 to 5 cents a bushel, and they can put through from 2000 to 3500 bushels of wheat per day. Straw, of course, is no object, and consequently they leave a very high stubble when cutting, generally from 6 to 8 inches of straw being left on the ground, by which means the bulk to be carted and threshed is greatly reduced and the threshing made much easier.

Homesteading Regulations.

Any male person not under 18 years can obtain a free grant of land to the extent of 160 acres by paying an entry fee of \$10. At the time of making entry the homesteader must declare under which of

the three following systems he wishes to hold his land, and upon application for his patent must prove that he has fulfilled the conditions named therein—

(1) Three years' cultivation and residence, during which period the settler may not be absent for more than six months in any one year without forfeiting his entry.

(2) Residence for two years and nine months anywhere within two miles of the homestead quarter section (160 acres), and afterwards actual residence in a habitable house upon the homestead for three months at any time prior to application for patent. Under this system 10 acres must be broken the first year after entry, 15 additional in the second, and 15 in the third year; ten acres to be in crop the second year, and 25 acres the third year.

(3) The five years' system, under which a settler may reside anywhere for the first two years (but must perfect his entry by commencing cultivation within six months after the date thereof), breaking five acres the first year, cropping these five acres, and breaking ten acres additional the second year, and also building a habitable house before the end of the second year. The settler must commence actual residence on the homestead at the expiration of two years from date of entry, and thence reside upon and cultivate his homestead for at least six months in each of the three succeeding years.

Application for patent can be made before the Local Government Agent or Homestead Inspector, but before doing so the settler must give six months' notice in writing to the Commissioners of Dominion lands of his intention of doing so. Government lands can be bought outright (unless where they are specially reserved) at 12s an acre, but I think any man going to America, or rather Canada, with the intention of buying land if he has the means, should buy land within reasonable distance of a railway station, and an improved farm if possible, of which there are always some to be disposed of at from £1 12s to £2 an acre, according to its location. Settlers and others are warned against

Cutting Timber

upon Government lands without first obtaining from an authorised agent of the Crown a permit to do so. Any owner of a homestead quarter section having no timber of his own may upon application obtain a permit to cut such quantity of building timber, fencing timber, or fuel as he may require for use on his homestead, not exceeding the following—1800 lineal feet of building logs (no log to be over 12 inches at the butt end), 400 roofing poles, 2000 poplar fence rails (not exceeding 5 inches at the butt end), 30 cords of dry wood, burnt, or fallen timber up to a diameter of 7 inches, inclusive, for fuel or fencing.

(From the Dundee Weekly News of Jan. 13, 1894.)

CANADIAN NORTH-WEST.

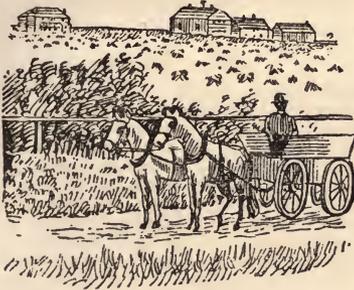
The Regina District.

Mr J. Taylor, the agricultural representative, reports:—We left Edmonton on the morning of August 8th and reached Regina next day before noon. It is a very substantially built town, with 2200 inhabitants, and is the capital of the province of Assiniboia. The land here is of a clayey nature, but we saw some magnificent crops where it is broken, and the luxuriant crops of fruit and vegetables to be seen growing in the gardens give good evidence of the capabilities of the soil. But the country in general around Regina, as in many other parts of the North-West, has a very bleak and bare appearance, which I think ought to be improved by planting belts of timber, and until the Government see their way to plant sections of land here and there with trees, to afford shelter to cattle and break the force of the high winds, this district will never be well adapted for stock-raising or mixed

farming. There is a scarcity of farm servants and labouring men in this district and wages are consequently high, farm servants getting from £4 to £7 per month, with board and lodgings. Masons earn 16s a day; bricklayers, £1; carpenters, 10s to 12s a day; common labourers, 6s to 7s. A man who can turn his hand to anything would have no difficulty in finding remunerative employment here at £4 a month to commence with. Where Scottish ploughmen are satisfied, I would say, "Stay where you are," but any who have a wish to try and better themselves in a foreign country I can safely recommend them to try the North-West, where, if they are prepared to rough it and take whatever employment can be found, there is no fear but they will get on and do very well, as food and clothing are comparatively cheap. There need be no fear of want of employment, as even during the winter season remunerative work can always be obtained in the shape of cutting and hauling timber, bricks, &c. A suit of clothes costs £5 8s; boots, 10s; flour, 6s to 10s per 100 lbs.; oatmeal, 10s per 100 lbs.; cornmeal, 12s per 100 lbs. Beef and pork sell from 3½d to 5d a lb.

Indian Head District.

Our next visit was to Indian Head, where we visited the Government Experimental Farm. At the Experimental Farm wind storms have been very destructive to their crops, and very much of a drawback to the working of the experimental plots. The soil is of such a fine sandy nature that it blows very badly, and often leaves the seed bare. To cope with this Mr Angus M'Kay, the manager, has planted belts of young trees all over the place, and



INDIAN HEAD EXPERIMENTAL FARM.

as they are coming away very rapidly, in two or three years they will afford complete shelter. The growth of these belts of trees throughout the prairie cannot be too much encouraged. Besides taking away the bleak appearance of some parts, they will help materially to equalise the climate. Mr M'Kay drove us round for about sixteen miles, and we saw some splendid fields of wheat and oats. In this district scarcely any crop but wheat is grown, a system which I think is a great mistake as the crops run some risks from frost, and should they get spoiled, as unfortunately they sometimes do, they have nothing else to rely upon, whereas in a system of mixed farming the risk would be materially lessened. Next day we drove through the Bell Farm and Brassey Farm adjoining. There are 13,000 acres upon the Bell Farm, of which 1800 acres are in crop, mostly under wheat, with a small percentage of oats. Some of the wheat fields have an area of 320 acres, and have a grand appearance, as we saw them just within one week of harvest. At Major Bell's steading we saw twelve reapers and binders drawn up in array ready to start work some of the following days. There

are between thirty and forty horses kept on the farm, and about twelve men employed all the year round. As hired help is required during harvest and is difficult to procure in this locality, the Major generally gets from thirty to forty Indians for harvest. They pitch their tents on the prairie close at hand, and I am told they make very fair harvest hands. We also visited the Brassey Farm. Lord Brassey is the owner of a large track of land round Indian Head, and has it divided into four separate farms of 2500 acres each, and farmed by four different companies with separate corporations. Lord Brassey's object is that these companies, who have considerable capital, should provide employment for labourers coming into the country. On these farms they are "breaking" and extending year by year, and some splendid buildings are being erected.

(From the Dundee Weekly News of February 17.)

CANADIAN NORTH-WEST.

Brandon District.

Mr James Taylor writes:—We arrived at Brandon on the 11th of August, and spent three days in its neighbourhood. Brandon is the largest and most important town between Winnipeg and Vancouver, with a population of 5000. Next day we drove out to the Brandon Experimental Farm, about two miles from the town. It contains a section of 640 acres of mixed land, part of it being on the hillside and part in the valley of the Assiniboine River. In so extensive a province as Manitoba soils of different qualities are to be met with, and here, happily, the farm answers the requirements of almost all of them. The principal farm building is a huge barn 100 feet long by 30 feet wide, and in which there is a silo, a root cellar, and all the modern improvements required upon such a farm. They have also straw-cutters and pulpers, oilcake crushers, &c., which are driven by means of a huge windmill, which is fixed upon the top of the barn, and it proves very handy and inexpensive. These windmills are used on nearly every stock farm in America, generally for pumping water for the animals. A number of pure-bred shorthorns, Galloways, Ayrshires, Holsteins, and grade cattle are kept. Experiments are made of the different methods of feeding both with cattle and pigs. A great many varieties of wheat, oats, barley-rye, and Indian corn are tested every year. Every endeavour is being made to obtain a wheat equal in quality to the Red Fyfe, but which will ripen earlier, and although many earlier varieties have been obtained none of them have as yet come up to the standard of the Red Fyfe which appears to be best adapted to the climate. Mr Angus M'Kay, manager of the Experimental Farm at Indian Head, very kindly gave me samples of a few of his favourite varieties of wheat, barley, and oats which I intend to sow, and it will be interesting to note how they are suited to our climate. The tests being made in grasses, both native and foreign, suitable for sowing down throughout the country, are perhaps the most important subject dealt with upon the farm. The forestry department also receives a deal of attention. The benefit to be derived by Canadian farmers from these experimental farms is incalculable, not only at the present time but in years to come can the results obtained from them be observed and appreciated. We next visited the famous Sandison Farm. This enormous farm is situated about eight miles from the town of Brandon. It extends to 6000 acres, of which about 3000 are in crop, 2500 being under wheat, and 500 in oats. The fields are all of a section each, one mile square and furrows one mile long, which means

that every field is as large as the biggest of our arable farms in Scotland. The stables, which can accommodate 64 horses, have a coating of three feet of turf outside and a turf roof—rather primitive-looking buildings in our estimation, but we are told they are very warm and comfortable.

(From the Dundee Weekly News of March 10.)

Brandon to Montreal.

Mr Taylor, Raesmill, Arbroath, reports:—

After leaving Brandon we took train for Napinka, and from there through the fine wheat-growing districts of Southern Manitoba, landing in Winnipeg on the 15th of August. We had now come to the last stage of our journey, as our route now lay between Winnipeg and Montreal, a distance of 1424 miles. Between Winnipeg and Rat Portage, a distance of 130 miles, the country still assumes the unmistakable prairie features, which are nowhere more prominent than around Winnipeg itself. As we proceed we gradually enter upon a "hard" country, the railway passing through scenery of the wildest description. As we reach Fort William we get our first sight of the great Lake Superior. Fort William was formerly a Hudson Bay Company's post, the fur house of the old fort now being used as an engine-house for the great coal docks, and some of the largest grain elevators in the world overshadow all. Along the northern shores of Lake Superior the line runs through a wild, picturesque

region of forests, lakes, streams, and rocky ridges. Nepigon is one of the grandest parts of this great trans-continental route, lying as it does amongst the abrupt headlands of the great lake, traversing deep cuttings in the rocks, creeping at one moment along the open pebbly beach, to disappear the next instant with a terrible roar into a tunnel hewn out of the solid rock, and emerging again only to pass over a trestle bridge the mere height of which makes one feel almost giddy. At Sudbury, where we stop for half-an-hour, are the most extensive copper and nickel deposits in the world. Large quantities of the ores have been shipped from the mines, and a number of smelting furnaces are being erected near Sudbury to reduce the ores on the spot. Little villages around sawmills continue to occur, and newly-made farms are not infrequent. We are told there is plenty of good land near by, but the railway here, as in many other places in regions such as we are now traversing, follows the streams and the "breaks" in the country. And the best of it is not to be seen from the car windows. The lands belong to the province of Ontario, and are open to settlers in lots of 80 acres without price, but timber cutting as yet seems to be the principal industry. As we near Montreal the country loses its "hard" character, and the valley is divided into narrow well-tilled French farms, mostly devoted to dairy produce and the growing of apples, as we saw some fine orchards with crops of apples that were really extraordinary.