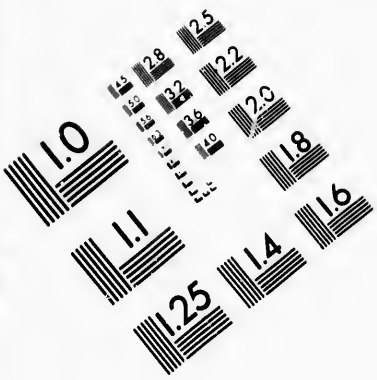

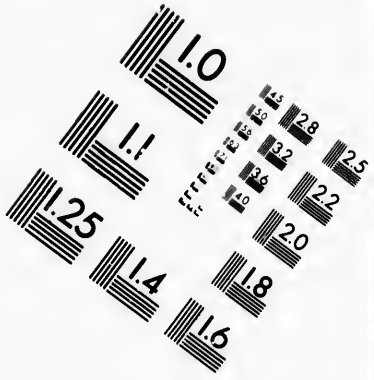

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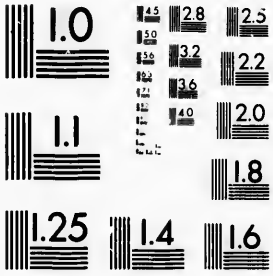

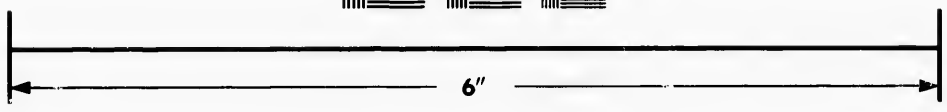

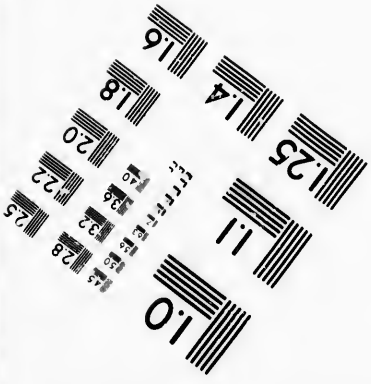

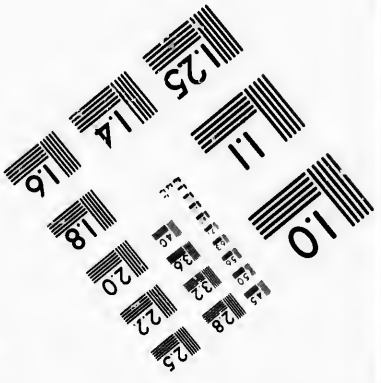

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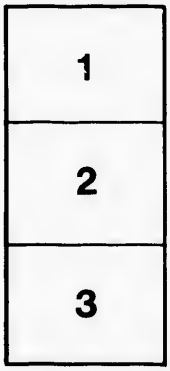

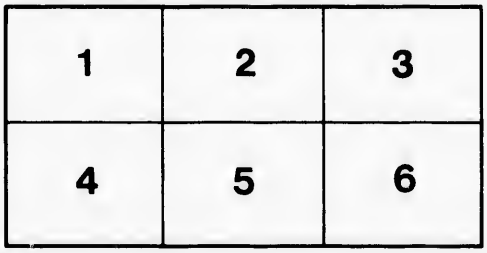

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32X

ACROSS CANADA:

A REPORT ON ITS

AGRICULTURAL RESOURCES.

PARLIAMENT HOUSE, OTTAWA.

— BY —

WILLIAM FREAM, B. Sc. Lond., F. L. S., F. G. S.

Associate of the Royal College of Science, Dublin; Professor of Natural History in the College of Agricultural, Dowston, Salisbury, and Consulting Botanist to the British Dairy Farmers' Association: formerly Professor of Natural History in the Royal Agricultural College, Circucester.

(REVISED EDITION)

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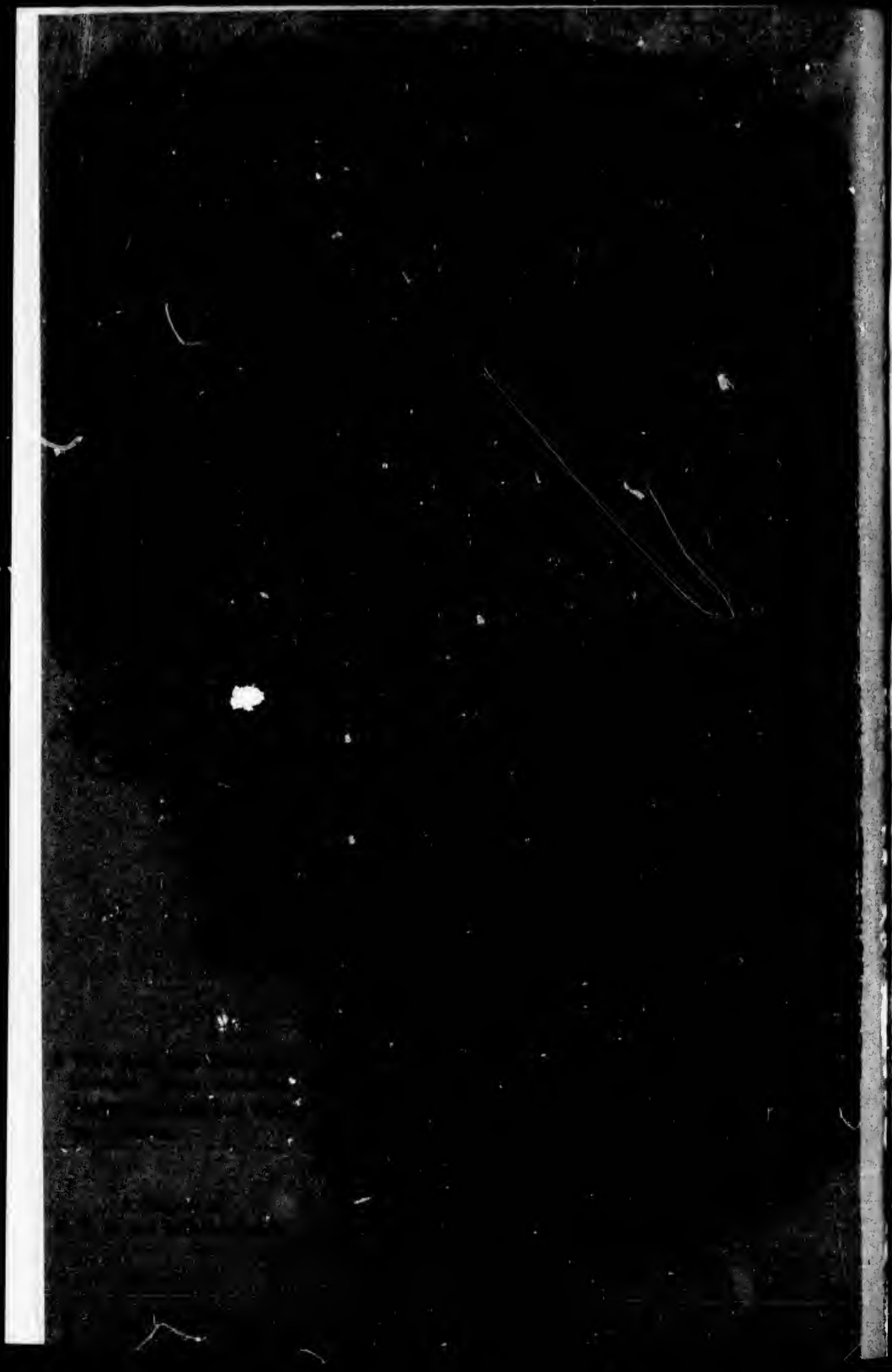
DEPARTMENT OF AGRICULTURE

1886



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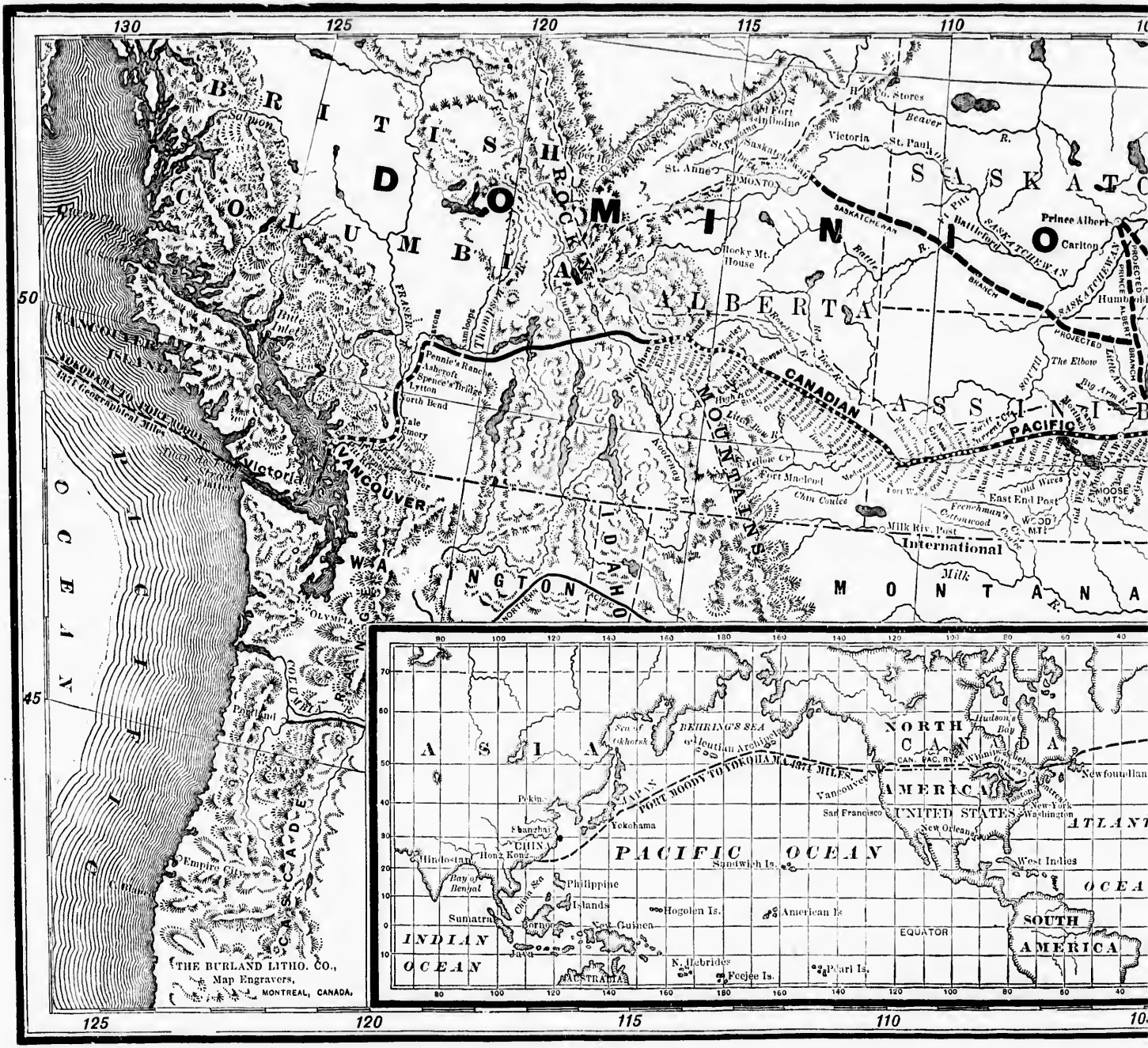
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BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MONTANA
IDAHO
WASHINGTON
OREGON
PACIFIC OCEAN
VANCOUVER ISLAND
ROCKY MOUNTAINS
CANADIAN PACIFIC
NORTHERN PACIFIC
Victoria
Vancouver
Calgary
Edmonton
St. Anne
Victoria
St. Paul
Prince Albert
Carlton
Battleford
Rocky Mt. House
Fort Macleod
Milk River Post
International
Milk R.
Yellow Cr.
Kootenay R.
Columbia R.
Fraser R.
Thompson R.
Kamloops
Yale
Lytton
Ashcroft
Spence's Bridge
Pennie's Ranche
North Bend
Port Townsend
Olympia
Portland
Empress
Victoria to Tokio Route
Port Townsend to Yokohama
Great Circle Sailing Route
Via Honolulu
Via Victoria
Via Vancouver
Via Portland
Via Port Townsend
Via Empress
Via Calgary
Via Edmonton
Via Prince Albert
Via Battleford
Via Rocky Mt. House
Via Fort Macleod
Via Milk River Post
Via Moose Mt.
Via Wood Mt.
Via Old Wives
Via East End Post
Via Frenchman's
Via Cypress Hills
Via Chin Coulee
Via Elbow
Via Big Arm
Via Humboldt
Via Qu'Appelle
Via Beaver R.
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Via Fort Langley
Via Fort Hope
Via Fort Yale
ASIA
NORTH AMERICA
PACIFIC OCEAN
ATLANTIC OCEAN
INDIAN OCEAN
SOUTH AMERICA
EQUATOR
BEHRING'S SEA
Sea of Okhotsk
Aleutian Archipelago
JAPAN
CHINA
Pekin
Shanghai
Yokohama
Hong Kong
Hindostan
Bay of Bengal
China Sea
Philippine Islands
Sumatra
Borneo
Java
New Guinea
AUSTRALIA
Hogolen Is.
American Is.
Sandwich Is.
N. Hebrides
Feejee Is.
Pearl Is.
San Francisco
New Orleans
Washington
New York
West Indies
Newfoundland
Hudson's Bay
PORT MOODY TO YOKOHAMA 4874 MILES.
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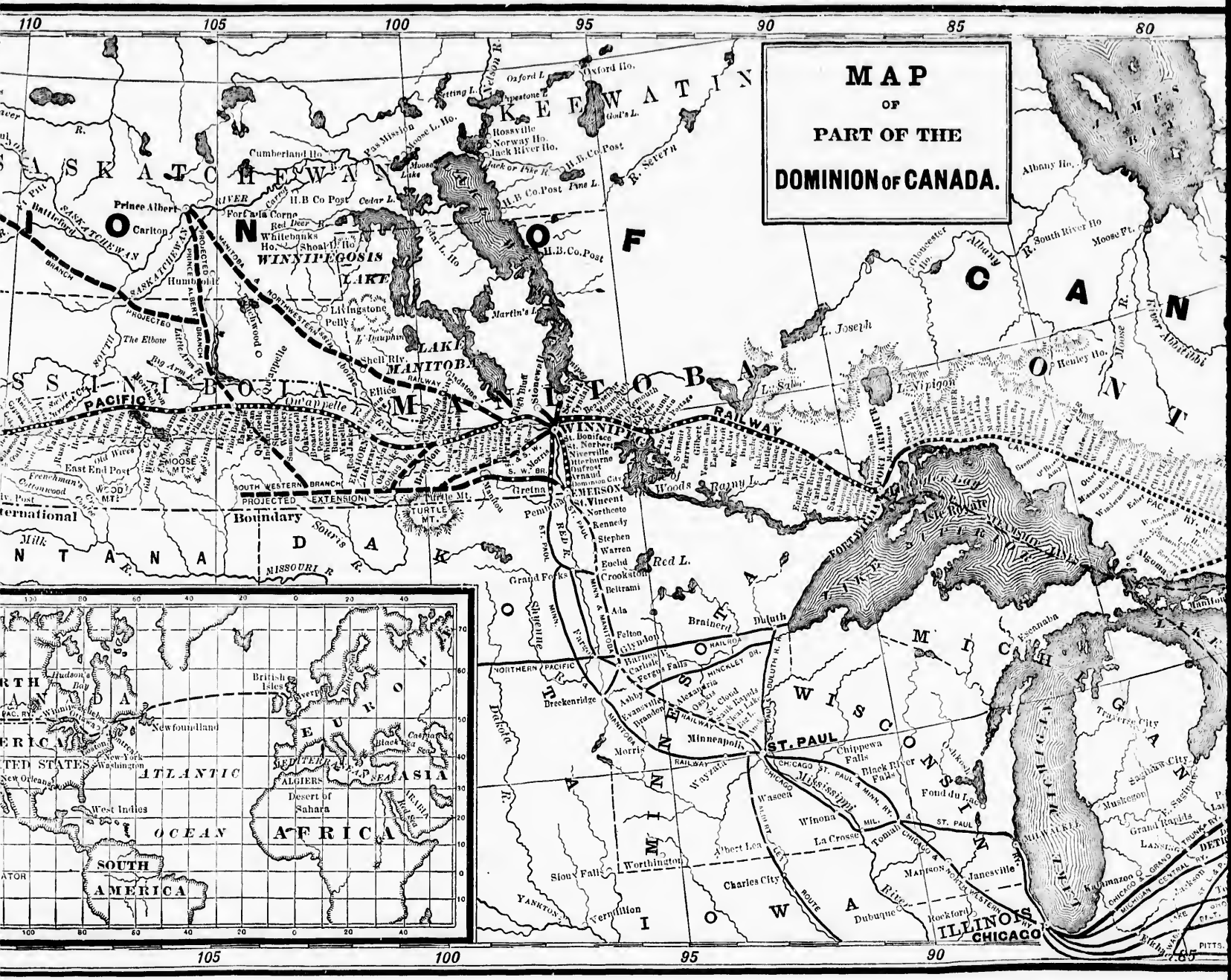
MAP
OF
PART OF THE
DOMINION OF CANADA.
110
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SASKATCHEWAN
KEEWATIN
ASSINIBOIA
MANITOBA
ONTARIO
QUEBEC
Prince Albert
Carlton
Battleford
Humboldt
Cumberland Ho.
Red Deer R.
Whitebanks Ho.
Shoal Lk. Ho.
WINNIPEGOSIS LAKE
Livingstone
Pelly
Touchwood Hills
The Elbow
Big Arm R.
Moosomin
Qu'Appelle
Shell Rly
LAKE MANITOBA
Ellice
Gladstone
Stonewall
WINNIPEG
Portage la Prairie
High Bluff
Oxford Ho.
Oxford L.
Setting L.
Nelson R.
Rossville
Norway Ho.
Jack River Ho.
H.B.Co. Post
Moose L. Ho.
Moose Lake
Cedar L.
Fine L.
R. Severn
God's L.
Albany Ho.
R. South River Ho
Moose Pt.
Gloucester Ho.
Albany R.
L. Joseph
L. Sal
L. Vipigon
Renfrew Ho.
Moose R.
Abittibbi R.
PACIFIC RAILWAY
NORTHERN PACIFIC RAILWAY
SOUTH WESTERN BRANCH PROJECTED EXTENSION
PROJECTED PRINCE ALBERT BRANCH
SASKATCHEWAN BRANCH
NORTHWESTERN RAILWAY
MANITOBA
Turtle Mt.
Boundary
Souris R.
Milk R.
MISSOURI R.
Gretna
Pembina
Emerson
St. Vincent
Northcote
Kennedy
Stephen
Warren
Euclid
Crookston
Beltrami
Ada
Felton
Grand Forks
Red L.
Brainerd
Duluth
Fergus Falls
Dreckenridge
Ashby
Alexandria
Osakis
St. Cloud
Sauk Rapids
Elk River
Minneapolis
ST. PAUL
Morris
Chippewa Falls
Black River Falls
Fond du Lac
Wasecca
Winona
La Crosse
Albert Lea
Worthington
Sioux Falls
Yankton
Vermillion
Charles City
Dubuque
Rockford
Janesville
Madison
Milwaukee
Chicago
ILLINOIS
MINNESOTA
WISCONSIN
IOWA
MICHIGAN
Traverse City
Saginaw City
Mushegon
Grand Rapids
Kalamazoo
Lansing
Detroit
Fort Garry
Portage
Rat Portage
Lake of the Woods
Rainy L.
Rainy R.
Thunder Bay
Algoma
Manitou
Escanaba
Michigan
Huron
Superior
Erie
Ontario
Hudson Bay
British Isles
Liverpool
EUROPE
Newfoundland
New York
Washington
New Orleans
ATLANTIC OCEAN
West Indies
SOUTH AMERICA
MEDITERRANEAN SEA
ALGIERS
Desert of Sahara
AFRICA
ASIA
Black Sea
Caspian Sea
Arabia
Red Sea
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JAMES BAY
E. Main Ho.
East Main R.
Mistassinnie L.
Rupert Ho.
Rupert R.
Albany Ho.
DA.
R. South River Ho
Moose Ft.
R. Saguenay
L. St. John
CANADA
QUEBEC
ONTARIO
Henley Ho.
Moose R.
River Abbitibbi
L. Abbitibbi
Grand L.
Three Rivers
QUEBEC
MONTREAL
OTTAWA
Sherbrooke
Richmond
Sorel
Ottawa R.
L. Nipissing
Algoma
Manitoulin
GEORGIAN BAY
Gravenhurst
Collingwood
Port Hope
Cobourg
Brockville
Kingston
Ogdensburgh
Plattsburgh
Morristown
LAKE ONTARIO
Kincardine
TORONTO
Goderich
Stratford
London
Hamilton
Niagara Falls
Rochester
Syracuse
BUFFALO
Dunkirk
LAKE ERIE
NEW YORK
VERMONT
NEW HAMPSHIRE
Portsmouth
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85
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Table of Comparative Distances.

	Geographical Miles.
Main Line — Montreal to Port Moody, All Rail Route (under construction.)	2,529
From New York to Port Moody, *via* Brockville and Can. Pacific R'y.,	2,746
From New York to San Francisco, *via* Central and Union Pacific Railways, and shortest connecting lines through the United States,	2,896
From Liverpool to New York,	2,986
From Liverpool to Port Moody, *via* Montreal and Can. Pac. R'y.,	5,166
From Liverpool to San Francisco, *via* shortest connecting lines in the U. S.,	5,880
From Liverpool to Yokohama (Japan), *via* Montreal and Can. Pac R'y.,	9,546
From Liverpool to Yokohama (Japan), *via* New York and San Francisco,	10,426

The distances, *via* the Canadian Pacific Railway, are by the Rail and Lake Route.

ACROSS CANADA

A Report on its Agricultural Resources

INTRODUCTION

Canada is so vast country that mere figures fail to convey an adequate idea of its enormous extent. Taken in its entirety it is one-third larger than the whole of Europe. Southward it extends as far as the latitude of Constantinople, while is northern boundary is lost amid the ice-fields of the Arctic seas. From east to west, from the Atlantic to the Pacific coast-line, it stretches a far greater distance than that which lies between Britain and Canada across the ocean. It is a land of huge lakes and broad rivers, of vast grass-covered plains and dence forests, of rich mineral wealth and great agricultural capabilities. The area of agricultural and timbered lands in Canada is estimated at two millions of square miles, which represents rather more than half of the entire surface. But from the returns of the last census, that of 1881, it appears that the area of land actually occupied at that time only slightly exceeded seventy thousand square miles, of which not more than one-half was improved, that is, covered by crops, pastures, gardens or orchards. Hence, of the two millions or square miles estimated to be capable of yielding their produce to the industry of the farmer or the forester, it is safe to say that upwards of one million nine hundred thousand square miles still represent virgin soil, and of this, again, no less than one million square miles are regarded as suitable for the cultivation of wheat. To give some idea of what is meant by one million square miles, it may be stated that this represents an area more than eight times the size of England and Wales Scotland and Ireland put together. But, in the British Isles there are nearly forty millions of people, whereas in Canada there are less than five millions; in other words the population of Canada is about the same as that of London (within the Metropolitan Police District). Canada, then, has room for some of the population which Britain can spare ; it is in need of a frugal, industrious people who will till its vast unoccupied lands, and gather in the fruits which it yields, from the grain crops of Manitoba and the North West prairies, to the grapes and peaches of Ontario and the apples of Nova Scotia ; who will rase cattle, and sheep, and horses among the foot hills of the Rocky Mountains and along the fertile valley slopes of the great Saskatchewan River.

The following pages contain some account of Canada as it appeared to the writer during the early autumn of 1884, in a journey which included points as far distant from each other as the cost of Nova Scotia in the east, and the Kicking Horse Pass of the Rocky Mountains in the west.

An inspection of a modern map of the Canadian Dominion shows that Winnipeg may fairly be regarded as the most central city of British North America, for it occupies a position about equally distant from the Atlantic coast on the east, and the Pacific coast on the west. It is of the country lying west and north-west of Winnipeg, namely, the Province of Manitoba and the North-West Territories that it is proposed to speak first. All this vast area lies to the west of the chain of great lakes which are between the United States and Canada, and, indeed, Winnipeg itself is upwards of 400 miles from the nearest point of the shore of Lake Superior, the most westerly of these lakes. But any attempt to describe the country which stretches westward from Lake Superior to the

Rocky Mountains would be incomplete were it not prefaced by some description of the great artery of communication which places the River St. Lawrence in direct connection with British Columbia, and ere long will form a continuous and permanant overland route between the Atlantic and Pacific Oceans.

Departmental Buildings, Ottawa—East block.

CANADIAN PACIFIC RAILWAY

Whether we regard the Canadian Pacific Railway as a monument of engineering skill, or as a pioneer in the march of civilization, we are equally impressed with the gigantic nature of the undertaking. It spans a continent, and is, we hope, destined to become a great commercial highway, not only between Britain and the vast territories which the railway has penetrated and opened up, but between Western Europe and the countries, like Japan and China, which lie upon the Asiatic boundary of the North Pacific Ocean in the far East. At present the eastern terminus of the Canadian Pacific Railway is at the Dalhousie Square Station, Montreal, in the province of Quebec, and the lengths of the various stages of the journey westward may be seen in the following table:—

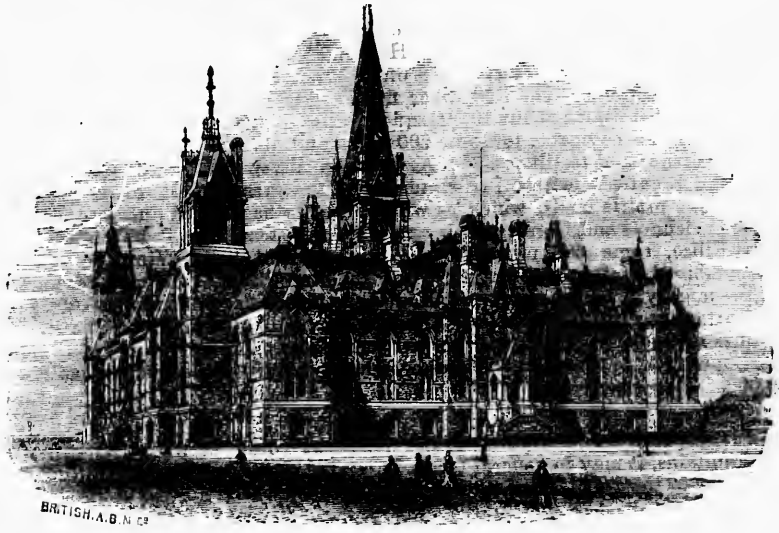
	Miles.		Aggregate Mileage.
Montreal to Toronto	333	.....	—
Toronto to Owen Sound	121	.....	454
Owen Sound to Port Arthur (by steamer)	530	.....	985
Port Arthur to Winnipeg	429	.....	1,413
Winnipeg to Calgary	839	.....	2,252
Calgary to Stephen	121	.....	2,373

At Stephen, in British Columbia, the railway reaches its greatest height above the sea. About 5,300 feet, and at once commences to descend the Pacific slope of the Rocky Mountains. From Stephen to Port Moody, the terminus on the Pacific coast, the tract will be completed by the end of October, 1885. Owen Sound is on the cost of Georgian Bay, which lies in the north-east of Lake Huron, and from this point to Port Arthur, on the north west coast of Lake Superior, three powerful and excellently fitted steamers, the *Alberta*, *Algoma* and *Athabasca* meet the requirements of the line. But the Canadian Pacific Railway already possesses a complete overland route, for the railway connec-

tion lying to the north of the Lake Superior is complete, and open for traffic. With this intermediate portion, known as the Lake Superior section, and the remainder of the track on the Pacific slope of the Rocky Mountains, completed, the main route from Montreal to Port Moody will pass north of Toronto and the voyage across the lakes will be unnecessary, so that traffic will be booked right through from Quebec or Montreal to the Pacific coast of British Columbia without change of any sort. The distances will be the following :

	Miles		Aggregate Mileage.
Montreal to Callender	347	....	—
Callender to Port Arthur	657	....	1,004
Port Arthur to Red River	428	....	1,432
Red River to Summit of Rokies	962	....	2,394
Summit of Rockies to West Crossing, Columbia R.	138	....	2,532
West Crossing, Columbia R. to Savona's Ferry	150	....	2,682
Savona's Ferry to Port Moody	213	....	2,895

The Red River station in the foregoing table is Winnipeg, and that at the summit of the Rockies is Stephen. As several of the lines of the Atlantic steamers land their passengers at Quebec it may be convenient to mention here that the railway journey from Quebec to Montreal is 172 miles, but it is not unlikely that ere long all the ocean steamers will land their passengers at Montreal.



Departmental Buildings, Ottawa—West block.

PHYSICAL FEATURES OF THE PRAIRIE

As large grants of land on either side of the line have been made by the Dominion Government to the Canadian Pacific Railway, and as the railway authorities are offering allotments to settlers on very advantageous terms, some description of the geological and other physical features of the wide belt of country between Lake Superior and the Rocky Mountains may be of interest. After leaving Port Arthur, which is on the coast of Thunder Bay, Lake Superior, the railway passes through a low, swampy country, with considerable timber. As Rat Portage, 297 miles west of Port Arthur, is approached, the country becomes more rocky in character, and this continues till the neighbourhood of Telford, 338 miles west of Port Arthur, and 91 miles east of Winnipeg, is reached. West of Telford station the rocks disappear and the line passes into the muskeg or swamp

country, which in this district forms the eastern border of the great Red River plain. This swampy region, 20 miles in width, extends north and south for a considerable distance, and is covered by a bed of peat some nine feet in depth. About 70 miles east of Winnipeg the great alluvial tract of the Red River Valley is entered upon, constituting the eastern boundary of what is termed the first prairie steppe. This, like the other steppes to which reference will be made, is a vast open plain stretching almost without break or interruption of any kind from horizon to horizon. It is in the middle of the rich agricultural lands afforded by the alluvium of the Red River Valley that the City of Winnipeg, the metropolis of Manitoba, is situated, at the confluence of the Red and the Assiniboine Rivers. The line of latitude of Winnipeg runs very slightly to the south of the Land's End in England, so that this city lies south of any town in the British Isles. The site of Winnipeg is that of the old Fort Garry which was formerly the administrative centre in the North West of the Hudson's Bay Company, so that, as a centre of distribution for the great North West, Winnipeg holds the same position as Fort Garry did in the old fur-trading days. Its situation on the junction of two great rivers is a fact of immense importance in connection with the future commercial development of the vast prairie region. The Assiniboine flowing westward empties its waters into the Red River flowing northward, and 45 miles north of Winnipeg the Red River discharges the mingled waters into Lake Winnipeg, which is 280 miles long and 57 miles broad at its widest part, its coast line beings upwards of 1,000 miles long, while its area of 9,000 square miles is greater than that of Wales. At its northern extremity the lake discharges its waters into the Nelson River which flows into Hudson's Bay at Port Nelson, from which point to Liverpool there is an ocean passage of 2,941 miles, being 100 miles less than the distance from New-York to Liverpool, notwithstanding that Port Nelson is on the central north and south line of North America. From the northern extremity of Lake Winnipeg to Fort Churchill, another point on the coast of Hudson's Bay, and the probable terminus of the Hudson's Bay Railway, the distance is only 350 miles, which is less than that between London and Edinburgh. The Red River flows at first through the States of Minnesota and Dakota, and it drains about 10,000 square miles of the Province of Manitoba on its way northward. It is navigable for some 200 miles, and its valley is covered with a soil of great excellence and fertility. The Assiniboine River drains an area of about 66,000 square miles, entirely within British territory, the greater port of the area being occupied by rolling prairie lands, which, as will here after be pointed out, are endowed with undoubted richness and fertility. It is navigable for steamers of 100 tons burden as far as Fort Ellice, some 600 miles from Winnipeg. But Lake Winnipeg not only receives the combined Waters of the Assiniboine and Red Rivers ; it also receives the outflow of the mighty Saskatchewan, and altogether the drainage of some 400,000 square miles finds its way into this lake. Besides the main line of the Canadian Pacific Railway, four other lines run into Winnipeg and so enhance its importance as a great trading centre. The population of the city of Winnipeg which, in 1870 was only 300, had risen in 1884 to 30,000.

To return now to the description of the land extending between Winnipeg and the Rocky Mountains, it may in general terms be stated that the North West, from the Red River Valley to the foot hills of the Rockies is one vast fertile plain, the prairie, which for ages has afforded grazing lands te innumerable herds of buffalo which have to a great extent disappeared in the presence of the white man, but whose bones bleaching on the prairie may still be seen in great numbers. As we have already explained, the prairie is entered from Lake Superior through a belt of rough country with swamps, and streams, and rocks, and after crossing the muskeg or swamp which forms the eastern boundary of the Red River Valley, the traveller passes over three plains, or steppes, at different levels, on his progress westward in the direction of the Rocky Mountains. The Red River Valley form a portion of the first steppe, and it is occupied by a great lacustrine deposit 40 miles wide which extends right through the Province of Manitoba, from north to south. It presents a flat surface of the most typical prairie land, and is made up of the finest possible silt with a covering of black vegetable soil, which works up with great facility into choice agricultural land. At Stony Mountain, near Winnipeg, and at Selkirk, 21 miles north of the city, cream coloured limestones affording a beautiful building stone are extensively quarried. The first prairie steppe attains a height of about 800 feet above the sea, (the surface of Lake Superior is 627 feet above the sea), and

extends westward as far as Macgregor, 79 miles west of Winnipeg, where, near the western boundary of Manitoba, there is an escarpment known variously as Pembina, Riding, Duck and Porcupine Mountains. When this sloping escapment is surmounted, it is seen to be but the edge of more elevated plain, the second steppe, which rises to a height of 1,600 feet above the sea, and extends westward as far as Moose Jaw, 398 miles from Winnipeg, comprising in its sweep the great plain of Regina and the celebrated Bell farm at Indian Head. The Railway, in ascending the gradient of the escarpment, follows the Assiniboine valley, and on the second steppe the underlying rocks can only be seen in the scarped banks of the deeper river valleys, the surface being covered by a great depth of drift. In the vicinity of Moose Jaw another slope, known as the Missouri Coteau, leads up to the third prairie steppe, of which the Missouri Coteau is, of course, the eastern edge. On approaching the base of the Coteau from the eas, across the second prairie steppe, a gradual ascent is made, amounting in a distance of 25 miles to upward of 150 feet. The surface now becomes more undulating in outline, and low hills formed of boulders and gravel are seen. The belt of the Coteau is marked by the absence of drainage valleys, and the pools and lakes on its surface becoming in consequence charged with saline matters, are sometimes spoken of as alkali lakes. The sulphates of soda and of magnesia, known popularly as Glauber's and Epsom salts, are the most abundant ingredient of the saline waters, and as the pools and lakes sometimes dry up towards the end of summer, deposits of white crystals are left behind, which contrast in colour with the crimson tints of the marsh samphire, Salicornia, which grows around the lakes. Old Wives Lakes are of this saline character. The average elevation of Coteau above the level of the sea is about 2,000 feet, and few of its hills rise more than 100 feet above the general level. The average breadth of the Missouri Coteau is from 30 to 40 miles, and it stritches diagonally across the central region of North America for a distance of about 800 miles, fringing on the south the valley of the mighty Missouri whence the Coteau take its name (French, *Côteau*, a hill-slope.)

The third prairie steppe attains an elevation of 3,200 feet, and sweeps in an almost unbroken plain from the Missouri Coteau to the foot-hills of the Rocky Mountains, which commence beyond Calgary, a rising town 839 miles west of Winnipeg. Through this great plain the rivers have cut deep valleys, so that the view from the deck of a steamer is very limited ; this may be well observed at Medecine Hat, 660 miles west of Winnipeg, where the railway across the south Saskatchewan River. There is evidence that within recent geological time the whole of the prairie area was extensively glaciated the numerous boulders scattered over the prairies pointing to the transporting power of moving ice. On the third steppe, some of the boulders appear to have been used in modern times by buffalo as rubbing stones, and they are surrounded by basin shaped depressions worn out by the feet of these animals. The two prairie escarpments to which reference has been made were cut by the action of running water, the higher one before the period of glaciation, and the lower one at a later date by the waters of the now extinct lake which once occupied the Red River Valley. West of Medecine Hat and as far as Calgary the line passes along the west side of Bow River, over a plain heavily covered with drift. At Calgary the Rocky Mountains come into full view, and a railway journey of 121 miles brings the traveller to the summit of the grade, and to the water parting which separates the watershed of the Pacific from that of eastern slopes.

FORAGE PLANTS OF THE PRAIRIE.

The greater or less value of land is to a great extent deducible from the character of the plants which grow wild upon it. Save for more Scrub here and there, and low shruds bordering swampy localities, the level monotony of the prairie is not often broken by any vegetable groth which cannot be regarded as herbage. Of true tries there are none, absolutely none, and much of the peculiar appearence of the prairie in undoubtedly due to its treeless character. But this absence of trees is not without its advantage to settlers, for the enormous labour involved in clearing land of timber, which the pioneers

In the more eastern parts of Canada have to face, is unknown on the prairie. Indeed, as will be pointed out subsequently, one of the chief inducements the prairie offers to the settler is the speedy return he gets for even his earlies labours. The herbage growing on the prairie differs much from that which grows on unbroken land at home, and it may be as well to mention here some of the leading plants. Of the true grasses there are but few species similar to those found in Britain, and of those few it is somewhat remarkable that one of the best is practically indentical with a species which has earned a very unenviable reputation at home, namely, couch grass, *Triticum repens*. Wherever there is marshy ground, or saline soils, this plant grows in abundance and makes a good fodder. It must be remarked, however, that the special character which makes couch grass so objectionable to British farmers in their arable lands, that is, the possession of long underground stems or stolons, is absent in the couch grass of the prairie which is non-stoloniferous, and, therefore, does not tend to form in the soil a dence bed or couch of prostrate, interlacing stems. Another British grass found on the prairie is our common meadow grass, *Poa pratensis*, which is there called red-top, or June grass; this species is known in the United States as the Kentucky blue grass. Our fine bent grass or florin, *Agrostis vulgaris*, also grows on the prairie, and is likewise termed red-top, or low-land pasture grass. These two kinds of red-top, are found chiefly in the eastern prairies. The Best grasses of the salt marshes are *Triticum repens*, *Spartina gracilis* and *Glyceria airoides*. On the high, dry grounds the best fodder grass in *Stipa spartea*, the buffalo grass of the northern prairies whilst among other valuable species are *Bouteloua oligostachya*, the buffalo grass of the southern prairies, and *Triticum caninum*, *Hierochloa borealis*, *Andropogon scoparius*, and *Vilfa cuspidata*. The bearded wheat grass, or dog wheat, *Triticum caninum*, closely approaches couch grass in character, and *Hierochlæ borealis* is the holy grass of Northern Europe; the latter possesses a most delightful lavender-like odour, and is used by the indians in making mats which retain their fragrance for a long peri d. The common cultivated grasses of Britain, such as cocksfoot, foxtail, timothy, and the fescues are unknown on the prairie, though it is highly probable they will speedily be introduced. It is a noteworthey fact that the sedges, all of which are regarded as worthless at home, and are generally indicative of poor and undrained land, contribute no inconsiderable part to the nutritive herbage of the prairie. The sedges belong to the genus Carex, and are easily recognized by their solid triangular stems; the most valuable sedges on the western prairies is *Carex marcida*, and on the eastern prairies the best are *Carex aristata* and *Carex lanuginosa*, none of which are found in Britain. In some districts the prairie hay consists, almost exclusively of sedges. The summer food of horses which are grazing is chiefly *Carex aristata*, that grows in the marsh lands; this sedge dies down with the appearance of the frost of winter, and then the horses go to the higher lands and feed on the grass, *Stipa spartea*. Two other valuable grasses which deserve mention are the blue joint grass, *Calamagrostis Canadensis*, allied to the small-reed grass of Britain, and *Spartina cynosuroides*, a tall handsome species, found abundantly in the salt marsh among the prairie plants worthy of note are *Artemisia frigida*, a low shrub with a powerful odour, and allied to our wormwood and mugwort; *Eurotia lanata* allied to our spinach; *Lathyrus venosus*, the purple-flowered pea vine; *Vecia americana*, the purple prairie vetch; *Petalostemon violaceum*, the "prairie clover," which is not a true clover, but only so called; and *Oxytropis splendens*. All these are fed upon by animals when grazing, and the two first named are winter forage plants. In the fall of the year horses eat the hips of the prairie rose, *Rosa blanda*, a beautiful dwarf plant with flowers possessing the sweet odour of our dog rose, but with a ruddier colour. The prairie chicken (strictly speaking, the sharp-tailed grouse), is also very partial to these rose-hips, as well as to the fruit of *Elæagnus argenteus*, a plant allied to the sea buckthorn of Britain. In June and July the prairie presents a brilliant spectacle, for then most of the plants are in bloom, and near the farmsteads large areas are cut and made into prairie hay for winter feeding. The best proof of the nutritive value of the mixed herbage of the prairie is afforded by the fact that for unknown ages the buffalo has roamed over and dwelt upon these plains; but this subject will be reverted to later on. I am greatly indebted to Professor John Macoun, M. A., F. L. S., the botanist to the Geological and Natural History Survey of Canada, for much useful information which he gave me during our journey across the prairie.

Nor is the prairie barren of luscious fruits, for wild strawberries and raspberries grow in many localities, and besides attaining a good size, possess a fine flavour. Hops

thrive wherever there is sufficient undergrowth ; they are to be found in quantity in the Qu'Appelle valley, and some very fair specimens were shown at the Manitoba exhibition, held at Winnipeg in September, 1884.

GRANTS OF LAND TO SETTLERS.

It would be foreign to the purpose of this Report to enter at any great length into a description of the manner in which the great region of Manitoba and the North-West has been measured and laid out in townships. Each township is a square, the length of whose sides is six miles, and it contains thirty-six sections of 640 acres each, which are again sub-divided into quarter sections of 160 acres. A road allowance, having a width of one chain, is provided for one each section-line running north and south, and on every alternate section line running east and west. The following diagram shows a township with the sections numbered :—

N

31	32	33	34	35	36
30	29	28	27	26	25
19	20	21	22	23	24
18	17	16	15	14	13
7	8	9	10	11	12
6	5	4	3	2	1

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The sections are apportioned as follow :

OPEN FOR HOMESTEAD AND PRE-EMPTIONS.—Nos. 2, 4, 6, 10, 12, 14, 16, 18, 20, 22 24, 28, 30, 32, 34, 36.

CANADIAN PACIFIC RAILWAY SECTIONS.—Nos. 1, 3, 5, 7, 9, 13, 15, 17, 19, 21, 23, 25, 27, 31, 33, 35.

Nos. 1, 9, 13, 21, 25, 33 along the main line, Winnipeg to Moose Jaw, are sold to the Canadian North-West Land Company, the balance of their lands being in Southern Manitoba.

SCHOOL SECTIONS.—Nos. 11, 29 (reserved by Government solely for scholl purposes.)

HUDSON'S BAY SECTIONS.—Nos. 8 and 26.

To assist in the development of the line the Dominion Government made to the Canadian Pacific Railway a grant of lands comprised within a belt extending, for a width

of 24 miles, on each side of the line. All the old numbered sections, one square mile in area, within this belt are offered by the company on very favourable terms to settlers. The belt, 48 miles wide, extends from Winnipeg to the foothills of the Rocky Mountains, a distance of about 900 miles. The fullest particulars of the inducements the company offers to settlers, accompanied by charts and maps, may be obtained by writing to the company's general emigration agent, Mr. Alexander Begg, Canadian Pacific Railway, 88, Cannon Street, London, E. C.

THE YOUNG CITIES OF THE PRAIRIE.

The proximity of a railway is an important factor in the marketing of agricultural produce, and it is not surprising to find that towns have sprung up all along the line of the Canadian Pacific Railway, but it is surprising to reflect on the rapidity with which some of these towns have grown in size and in importance, and how neat, business-like, and well laid out many of them appear to be. As some as the centres of leading agricultural districts, it appears desirable to give a brief account of a few of the leading ones, taking them in the order in which they are reached by the traveller in his journey westward from Winnipeg. The municipal organization of some of these towns is very complete, and remarkably so when it is borne in mind that most of them are not more than two or three years old ; they afford strong testimony of the energy and capacity for business which characterize the dwellers in the North-West.

Fifty-six miles west of Winnipeg the town of Portage La Praire is reached. It lies near the western boundary of the first steppe, and occupies the central position of the richest wheat growing land in the Province of Manitoba. It commands a very advantageous position, for, besides being on the main line of the Canadian Pacific Railway, it is the south-eastern terminus and head quarters of the Manitoba and Northwestern Railway. This line is projected to run in a north-westerly direction to Prince Albert, on the Saskatchewan River, a distance of 430 miles from Portage La Prairie ; about 80 miles of the track are now in operation, the stations proceeding from Portage La Prairie being Macdonald, Westbourne, Woodside, Gladstone, Neepawa, Bridge Creek, and Minnedosa. The last named place is about 30 miles due North of Brandon, a rising town on the Canadian Pacific Railway, and is situated on a tributary of the Assiniboine River. The Manitoba and Northwestern Company has a grant land from the Dominion Government of 2,750,000 acres of forming and timber lands along its line of route, and cheap warrants for 160 acres or more, to be selected by the settler, may be purchassed at any of the offices of the Allard Royal Mail Steamship Company. In addition to its position with reference to these two railways, Portage La Prairie possesses a further advantage in that it lies on the north bank of the main Assiniboine River ; it is therefore likely to become an important industrial centre, and it already possesses paper and flour mills, and a biscuit factory. The population is between three and four thousand.

Between Portage La Prairie and Carberry fifty miles to the west, the line sceands the gentle slope of the first escarpment, and Carberry, 106 miles from Winnipeg, is near the eastern border of the second prairie steppe. It is the county town of Norfolk, and is the centre of a fertile wheat-growing area called the " Beautiful Plains." Although the building of the town was only commenced less than two years ago, it now has a population of over 400, and is already an important centre for the shipment of wheat.

Twenty-seven miles beyond Carberry the traveller arrives at Brandon, a beautiful town situated at the crossing of the Assiniboine River. Its fine buildings, and broad regular streets cannot fail to impress the visitor, and it strikes one at once as a town of which it would be pleasant to dwell. It is the market centre for a considerable area in country, extending nortward as far as Minnedosa, and southward to Turtle Mountain, and there is much excellent land in the neighbourhood. Near the railway are several large elevators for the reception of the wheat grown in the district.

Brandon is 133 miles west of Winnipeg, and 47 milles farther on, the rising town of Virden is reached, whence a further run of 39 milles places the traveller at Moosomin, 219 miles from Winnipeg the line leaving the general trend of the Assiniboine River valley in vicinity of Virden. West of Moosomin, near Wapella, the track crossess the Indian tail from Moose Mountain in the south-west, to Fort Ellice, on the Assiniboine River, on the north-east. Moose Mountain forms part of a group of drift hills known as the Weedy, Wolfe, and Squirrell Hills, and is a favourite place for settlement ; Fort Ellice, as has already been stated, is the point up to which steamers from Winnipeg can navigate the Assiniboine River. Favourably situated between these two points, and in the midst of a promising country, Moosomin appears to have a bright future before it. The Scoth crofters sent out last year by lady Gordon Cathcart are established in the district about ten miles south of Wapella. Each crofter has a homestead of 160 acres, and the settlemen is already on the high road to success.

Broadview, 164 miles west of Winnipeg, and 45 miles beyond Moosomin, is another well laid out town, and the commercial centre of an excellent farming country. It occupies a pretty situation near the head of Wood lake, and workshops of the railway are established here.

Proceeding westward the line skirts the southern boundary of the Qu'appelle Valley, and 48 miles from Broadview the traveller comes to Indian Head, the station of the famous Bell Farm, which is 312 miles from Winnipeg. The town of Indian Head, which takes its name from the fact of the Indian Agency for the Qu'Appelle district being situated here, rejoices in a charming situation, possesses excellent natural drainage, and is the site of the finest brick hotel in the North-West. Eight miles north of the town are the fishing lakes of the Qu'appelle River, and a beautiful lake may be visited in a journey six miles south of the town. The bell Farm affords a notable example of the capabilities of the prairie soils, and a full description of this remarkable feature in the agricultural interprise of the North-West is given later on.

The town of Qu'Appelle is only 8 miles byond Indian Head, and is situated south of th fort of the same name. The Qu'Appelle River is exclusively north of the railway track, and it flows from west to east, pouring its waters finally into the Assiniboine River near Fort Ellice. The town of Qu'Appelle was, until recently, called Troy, and the local authorities, in adorning its street with poplar street, have set an example which deserves imitation in all the prairie towns. The Government Immigration Buildings are at Qu'Appelle, and in the neighborhood of the town are numbers of excellent farms, both large and small.

After leaving Qu'Appelle, the next place of importance is Regina, 32 miles to the west, and 356 miles from Winnipeg. Regina is not only the capital of the Provisional District of Assiniboia, but it is the metropolis of the North-West Territories. It is the head quaters of that fine body of men, the North-Western Mounted Police, who are entrusted with the maintenance of law and order over an enormous area, and, as the seat of government of the North-West, there may also be seen at Regina the Indian and Departmental Offices, and the residence of the Lieutenant-Governor. The Wascana River, or Piles of Bones, as it is also called, flows across in a north-westerly direction, and supplies the town with good water, Regina possessing the largest and best constructed reservoir in the North-West. A scheme is under concideration for constructing a railway from Regina in an almost directly northern direction, past Long Lake to Prince Albert, the town on the North Saskatchewan River which, it will be remembered, has also been chosen as the northern terminus of the Manitoba and North-Western Railway, which joins the Canadian Pacific Railway at Portage la Prairie. Regina is in the midst of the Great Plain of Regina, one of the largest continuous tracts of wheat-growing land on the prairie, the soil being a rich, dark, clayed loam. With its public buildings, substantial houses, and wide open streets, the town cannot fail to impress favourably any one who may visit it, and it is likely to undergo rapid development. And yet, less than three years ago, there was nothing to mark the site of this rapidly rising city save a few canvas tents, and the silen-

ce and solitude of the Great Plains of Regina had never been disturbed by the shriek of the locomotive.

Journeying along westward some choice farming land is entered upon after leaving Regina, and here the traveller commences the ascent of the second prairie escarpment, the Missouri Coteau, marked by gently undulating land. At Moose Jaw, 42 miles beyond Regina, and 398 miles from Winnipeg, a very populous town is reached at the confluence of the Moose Jaw and Tunder Creeks, tributairies of the Qu'Appelle River. The town is neat and trim, its streets and avenues are well planned, many of its buildings are handsome and substantial, and the growth of its population has been remarkably rapid even for a prairie town. Fifteen miles to the north is Buffalo Lake, formed by the expansion of the Big Arm River on its way to join the Qu'Appelle ; the banks of the lake are about 300 feet high. From the town of Moose Jaw an Indian trail leads northwards to the Temperance Colony, about 160 miles distant, where the settlers occupy a rolling prairie well watered and fertile. Saskatoon, the capital of the colony, is on a wooded bluff, overlooking the broad Saskatchewan River.

Beyond Moose Jaw the railway track follows Thunder Creek, and continues to ascend the slope of the Grand Coteau of the Missouri. There are good pastures in this district, and the land looks well adapted for sheep grazing. Twenty miles west of Moose Jaw the line passes the southern shore of the long, narrow Pelican Lake, which abounds in duck, geese and pelican. The summit of the Missouri Coteau is reached at a point 45 miles west of Moose Jaw, and 443 miles from Winnipeg. At this point, called Secretan, the third prairie steppe is reached, and Secretan is further of interest in that the most easterly of the ten experimental farms of the Canadian Pacific Railway is situated here. The most westerly of the ten farms is at Gleichen, 351 miles beyond Secretan, and the history of this and the other farms will be found detailed later on. The railway track through the Coteau passes over some thirty miles of rolling or broken country, consisting of successive ridges and mounds, diversified with swales and alkaline ponds. To the south are the Old Wives Lakes, with Chaplin Station, nine miles west of Secretan, at their northern end. The lakes, fifty miles long, and six to ten miles broad, swarm with wild duck. Going on wesward the train passes Rush Lake, and arrives at Swift Current, 511 miles from Winnipeg. This small town is not far from the South Saskatchewan River, as it bends southward on its way to join the main stream. Forty-four miles further on is Cypress Station, lying to the north of the Cypress Hills. Around this spot is a considerable tract of bare, and apparently barren land, but as there appears to be plenty of useful clay resting on sandy subsoils, it is very likely that good agricultural soils may here be worked up, and the success of the experimental farms at Swift Current and Gull Lake gives support to this idea.

Forty-two miles west of Cypress is Maple Creek, 697 miles beyond Winnipeg, and more than 1,000 miles from the shores of Lake Superior. The creek takes its name from the quantity af ash-leaf maples which clothe its banks, and it is not unlikely that a considerable town may arise at this spot, inasmuch as the ranchers of Montana, the nearest of the states of the Union, find that they can save both time and money by taking their cattle through Canadian territory, driving them first to Maple Creek, whence they are taken by rail to Winnipeg, and then sent southward to Chicago. About thirty miles south-west of Maple Creek an Indian trail leads to Forth Walsh, one of the chief barracks of the North-Western Mounted Police.

Medecine Hat, 63 miles west of Maple Creek and 660 miles from Winnipeg, is beautifully situated on the east bank of the South Saskatchewan River, a short distance north of the point where this river receives the waters of its triburary, the Seven Persons River. With a present population of less than half a thousand, it is nevertheless a town which seems bound to make rapid progress, for it is the centre not only of an agricultural area but also of what in the near future bids fair to become an important coal mining district. It occupies a great amphitheatre surrounded by low Cretaceous hills, the effect of which rising abruptly from the dead level of the prairie is very marked, Medecine Hat is at a

height of 2,100 feet above the level of the sea, and the magnificent river which adds so much to the natural beauty of the locality has here carved out for itself a channel, the banks of which rise nearly 300 feet above the water. Immediately on leaving Medecine Hat for the west the train passes over a very fine iron railway bridge, which here at a great height above the water spans the gorge of the South Saskatchewan. Away to the north-east of Medecine Hat this River is joined by the Red Deer River, while much farther in the same direction, on the banks of the Northern Saskatchewan, is the town of Battleford, between which and Medecine Hat communication is kept up along the Indian trail. Battleford is the centre of a picturesque region occupied by many thriving settlements.

And now, west of Medecine Hat and as far as Calgary, a distance of 179 miles the route lies through the last stretch of genuine prairie land,—prairie land, too, of the most typical character, one sky-bound grassy plain, unbroken either by tree or shrub. Blackfeet, Crees, and parties of other tribes of Indians are here met with. Beyond Medecine Hat a broad table-land extends between the Bow River on the south and the Red Deer River on the North, and at Langevin, 35 miles west of the banks of the Saskatchewan, a recent boring for coal resulted in the tapping of a heighly, combustible gas which was ignited as it issued from the earth and the heat evolved was, in September last, being utilized for driving the steam machinery employed in the boring. Crowfoot Crossing, 106 miles from Medecine Hat, takes its name from a weel-known Indian chief; a few farms are established here, and there is also a large Indian reserve. Nineteen miles further on is Gleichen, in the midst of a promising agricultural district, and almost on the direct north and south line between the important centres of Fort MacLeod and Edmonton; the former lying amongst the foot-hills southward on the banks of the Old Man River before it flows into the Belly River, a tributary of the South Saskatchewan, and Edmonton being far a way to the north on the banks of the North Saskatchewan. Here, on a clear day, the lofty, snow-clad peaks of the Rocky Mountains, more than a hundred miles distant, may be seen glistening against the western sky. Beyond Gleichen is a fine expanse of unoccupied grazing land which, till recently, was the home of buffalo and antelope. Passing Cheadle, which is named in honour of the intrepid traveller who made the "north-west passage by land," the western boundary of the third prairie steppe is attained near the banks of the beautiful Bow River, penetrating the outer valley which, the traveller pushes on to Calgary, the most westerly of the genuine prairie towns met with along the track of the Canadian Pacific Railway.

Calgary, 179 miles from Medecine Hat, 839 miles west of Winnipeg, 1,268 miles from Port Arthur, Lake Superior, and 2,280 miles west of Montreal, is more than 3,000 feet above the level of the sea. A small town as yet, it nevertheless possesses capacities for a great and rapid development: the centre of a broad and fertile agricultural district, the head quarters of the large cattle ranches to the south, the future commercial centre for the mining enterprise which will ere long develop the country to the westwasd, and, above all the natural beauty of its situation,—these are some of the factories which will help to insure a great future for the town of Calgary. Eastward is the prairie, and the town itself is on the prairie; but to the north, to the south, and to the west, the foot hills of the Rocky Mountains break the monotony of the scene, and are themselves thrown into relief by the loftier summits in the back-ground, and these in turn present a wonderful contrast with the white peaks which tower above and behind them in awful grandeur.

Through the plain of Calgary flow the clear waters of the Bow River, which a short distance from the town is joined by its tributary, the Elbow. The excellence of the land in this district is testified by the number of flourishing farms on Pine Creek, on Fish Creek, and on the banks of the Elbow River, and the plentiful supply of good water, the abundance of fuel, and the kindly climate must continue to make this an attractive region to settlers. A journey northward by stage, occupying five days, is necessary to reach Edmonton the headquarters of the Saskatchewan trade of the Hudson's Bay Company.

West of Calgary the prairie continually narrows as it follows the course of the Bow River over which the railway is carried no less than four times. Keith is the first station

reached, and next is Cochrane, 20 miles from Calgary, where are the buildings of tog Cochrane cattle ranch. The journey now begins to get more laborious as the ascending grades become steeper in character. A few miles farther on is Morley, named after Dr. Morley Punshon, and still farther west the turbulent Kananaskis River is crossed. From this point the route is through the Gap, and through Canmore, Duthil, and Banff to Castle Mountain, at the foot of which, and on the banks of the Bow River, is Silver City, where there are numerous indications of rich deposit of gold, silver and copper. Passing on through Eldon the traveller arrives at Laggan, or Holt City, one of the most motley little towns conceivable. From this point a very steep gradient, about 7 miles in length, leads to Stephen, 5,300 feet—more than a mile—above the level of the sea, and here, in the Kicking Horse Pass in the highest point reached by the Canadian Pacific Railway. Before reaching Stephen, which is 121 miles beyond Calgary, the line passes out of the North-West territories into British Columbia, the Pacific province of the Dominion of Canada. Stephen is about on the line of water parting between the Pacific and Atlantic slopes of the Rocky Mountains and a short distance beyond Stephen the picturesque Kicking Horse Lake supplies the Kicking Horse River, which flows westward to join the Columbia river, whose waters find their way into the Pacific Ocean. West of Stephen the construction works of the railway are still in progress, the timber required being hewn from the well-wooded mountain slopes on either side, and floated along the Kicking Horse Lake to a steam saw mill at its eastern end. On this lake, Canadian lumbermen may be seen at work guiding the logs in the desired course ; the skill of the lumberman is wonderful, he combines the surefotedness of the mule with the agility of the cat.

SCENERY OF THE NORTH-WEST.

It would be a hopeless task to attempt to convey any adequate idea of the scenery of the Rocky Mountains. In approaching this superb range from the east the traveller experiences a succession of surprises, each one more novel than its predecessor. All the splendid and magnificent effects which Nature can produce when she works with such materials as massive rocks and yawning chasms, lakes and streams and waterfalls, dense belts of dark green forest trees, dazzlings snow fields, and lofty ice-clad mountain peaks glistening in the blue vault of heaven, are here combined to form a glorious panorama which must limger in the memory of him who sees it for ever. Dwellers on the prairie need never be more than a day or two's journey from regions were Nature may be seen in her grandess and widest moods. To the south, and more particularly to the north of the railway belt, scenery widely different from that of the prairie may be enjoyed ; mind and body may alike be refreshed in the wild recesses of the Rockies, the Alp of the North-West ; and the country east of Winnipeg, between Lake Superior and the Red River Valley, presents another complete change of scenery from that of the prairie. At Rat Portage, for example, 132 miles east of Winnipeg, the lovely Lake of the Woods is bound ere long to become a great place of ressort in the summer season ; not only are its surroundings in the highest degree picturesque, but the surface of the lake itself is dotted with innumerable islands of every variety of shape ond size. These islands, tree-clads or grass—covered to the water's edge, are like

"Summer isles of Elen lying in dark purple spheres of sea,"

and upon them, and in the waters around them, the tired worker will find rest and enjoyment. More to the east, about the shores of Lake Superior, are many of the scenes of Hiawata.

It must not be throught that the Canadian Pacific Railway presents in its outward features much similarity to one of our English railway. The iron road that spens the

prairie passes through no cuttings and over no embankments, except at the stations it is a single track, it runs very slightly above the level of the rest of the prairie, and has no boundary face on either side. The locomotive, as is customary in America, carries in front a cow-catcher to clear wandering animals of the track, though these generally take to their heels at the sound of the deep, hoarse whistle, or of the full-toned bell, both of which the driver can call into requisition if necessary. Side be side with the railway, another emblem of letter-day civilization stretches across the continent,—the telegraph wire. As the traveller speeds onward over the level plain he notices but few signs of life though now and again a flock of prairie blackbirds or a flight of wild duck may enliven the air, while here and there a gopher, or "prairie dog," may be seen scampering along the ground. A great silence prevails, and away from the settlements there many be nothing to break the dead level between the eye of the spectator and the horizon. Here, on a clear day, the horizon is so well defined, and the contrast in appearance between land and sky is so marked, that one gets a conception of the vastness of the blue vault overhead such as can never be acquired on the ocean.

THE PRAIRIE DISTRICT.

In 1882 the southern portion of the North-West Territories was, for the convenience of settlers, partitioned into four provisional districts, namely, Assiniboia, Saskatchewan, Athabasca and Alberta. The western boundary of Manitoba lies on a line drawn north and south through Fort Ellice, and between Virden and Moosomin. Manitoba covers about 123,000 square miles ; Assiniboia extends westward from the boundary of Manitoba to the meredian of Langevin, on the Canadian Pacific Railway, about 500 miles of the line passing through it, and both this district and Alberta are defined on the south by the boundary between Canada and the United States. The district of Saskatchewan occupies the region to the north of Manitoba and Assiniboia, while Alberta lies between Saskatchewan and Assiniboia on the east, and the central ridge of the Rocky Mountains on the west. Athabesca in the destrict north of Alberta, its eastern limit being formed by the Athabasca and the Slaves rivers. The leading towns are Regina and Medecine Hat, in Assiniboia ; Calgary and Edmonton in Alberta ; and Battleford and Prince Albert in Saskatchewan. In Manitoba the chief towns are Winnipeg, Portage la Prairie, Brandon, Emerson and Gladstone. The areas of the four provisional district are ; of Assiniboia, 95,000 square miles ; of Saskatchewan, 114,000 square miles, of Alberta, 100,000 square miles ; and of Athabasca, 122,000 square miles. For the sake of comparison it may be mentioned that the total area of the British Isles (England, Wales, Scotland and Ireland) is about 121,000 square miles, so that, roughly speaking, it may be said that each of these district is nearly as large as the whole of the United Kingdom of Great Britain and Ireland.

It seems desirable at this stage to enter some what more fully into a description of the agricultural features of the North-West. The rich wheat lands of Manitoba, the rolling prairie west of Brandon with here and there its alkali laker, the vast grazing lands in the ranch country south and west of Calgary, the fertile belt that stretches north-west from Brandon and through the Saskatchewan valley towards Edmonton, all suggest themselves as worthy of discussion. As, however, considerable information is already available as to the agricultural capacities of the Red River valley and generally of the fertile district of which Winnipeg is the centre, it may be advisable to give detailed reports only of points farther west. Amongst these, the Bell Farm, both from the magnitude of the undertaking and the significance of its results, deserves the first place.

THE BELL FARM

The headquarters of the Bell Farm are at Indian Head station, 312 milles west of Winnipeg, and the farm is comprised in the operations of the Qu'Appelle Valley Farming

Co. It covers in all an area of 56,000 acres, and was organised in the year 1882, when breaking of the sod was commenced. In 1883, the area of wheat grown was 4,000 ; it was sown without backsetting, and gave an average yield of bushels an acre. In the present year, 1884, there are 7,000 acres under wheat, and next year it is proposed to have no less than 14,000 acres of wheat. The harvest is usually over by the middle of August, but these year the season was somewhat backward, and harvest operations were in full swing in the middle of September. Thirty-eight reaping machines were at work simultaneously at the ingathering of the crop, and the sheaves as they come from the self-binders are left in the field for a day or two, and then carried to the threshing machines, so that the wheat never goes into stack. The grain is delivered from the threshing machines into large wooden granaries erected in the fields, whence in winter it is sleighed across the snow to the elevators adjacent to the railway.

The soil is a dark-coloured clay loam of great depth, and a 3 horse team with a sulky plough, working on a 16 inch furrow, can turn up two acres a day, the cost on the Bell Farm being 1 dollar 90 cents per acre, equivalent to 7s. 11d. The seed is sown broadcast on the rough fallow in March, at the rate of 1¼ bushel per acre, and this is followed by two or three harrowings.

It was found practicable, with the machines already mentionned to cut as much as 800 acres of wheat per day, so that at this rate the entire 7,000 acres could be cut in nine working days. The yield this year was expected to be 25 bushels an acre, and, on this estimate, it would not cost more than 33 cents per bushel to grow, which is exactly equivalent to 11s. per quater. The manager of the farm, Major Bell, believes he can grow wheat and place it on the wharves at Liverpool, at 23 per quater, this price including 8 per cent, interest on the working capital involved, and anything realised above 23s. representing profit.

About 300 horses were found necessary this year, through and the summer they are occupied in breaking new land or in ploughing fallow land for the next spring's sowings. As soon as harvest is finished they would all be engaged in ploughing till the winter's frosts closed the plouging season. A good heavy cart-horse weighing, say, 1,400 lbs., costs from 180 to 190 dollars, or about £38. In summer, 135 men are employed, and about half this number in winter. The summer labourers are paid at the rate of 30 dollars (£6 5s.) a month and all found. The resident labourers get a cottage and one acre of land free, with 35 dollars a month in summer and 30 dollars a month in winter. The first foreman gets 50 dollars a month, and the four head foreman 40 dollars a month each, and all found. The farm is worked in five divisions and Major Bell telephones instructions to each division from his residence every evening. The hours of work are from 7 a. m., to 6 p. m., with one hour out.

This season the farm also grew 500 acres of oats, which yeild from 50 to 60 bushels per acre, and are largely used in feeding the horses ; also 400 acres of flax, the seed from which would sell at 75 cents a bushel, and the land would go into wheat. This summer 1,400 tons of prairie hay were got in, and for this it would be simple necessary to mow the prairie.

An examination of the standing wheat at harvest time showed it to be a good, clean regular crop. Only one variety was grown, that known as Fyfe, or No. 1 Hard, and it yielded a dry, bright, marketable sample. No "docking" or weeding of any sort has yet been found necessary, and there is no trace of the red hoppy which is such a pest in English corn-fields. The straw is of fair length, beautifully clean, and quite free from rust. Only sixty head of cattle are kept and the straw is mostly burnt. A good example has been set at Bell Farm, in the planting of trees ; last spring 25 miles of poplar trees were set out, they cost 10 cents each and were planted 20 feet apart, so that the cost per single row per mile was 26 dollars, equivalent to £5 8s. 4d.

EXPERIMENTAL FARMS OF THE THIRD STEPPE.

The Experimental farms of the Canadian Pacific Railway originated in a desire to refuse certain rumours to the effect that the territory between Moose Jaw and Calgary, a distance of 441 miles, was unfit for cultivation. To settle this point the authorities adopted the very bold expedient of establishing a number of experimental farms along the railway track through the district in question. On October 12th, 1883, a train composed of 14 cars and locomotive left Winnipeg for the west, and it contained teams, men and outfit necessary for establishing the left farms. The site for each farm was only selected the day before the thirty teams were set to work on it. The original intention was to break the sod in each locality during October, 1883 to backset during 1884, and so prepare a good seed bed for the spring of 1885. But, so impressed were those who had charge of the work with the character of the soil, that they determined to risk the attempt of raising, crop, directly of the sod. Accordingly, at the end of March, this year another train left Winnipeg with seed and all facilities for sowing, and during August and September the crops were harvested and the yield ascertained. The results of these plucky experiments, and other details respecting the ten farms are collected in the following table, which is self-explanatory :—

Name of Farm, and Station	Miles West of Winnipeg.	Acres.	Nature of Soil, and Depth in Inches.	Subsoil.	Bushels per Acre. Wheat.	Oats.	Barley.	Pease.
1. Secretan	443	11½	Clay loam, 5 to 10 in	Sandy clay	22	44	17	10
2. Rush Lake	489	13	Sandy loam, 5 to 8 in	Sandy clay	22	54	18	11
3. Swift Current	511	20	Clay loam to Sandy loam, 10 to 15 in.	Clay and sandy clay	13	30	*	11
4. Gull Lake	546	30	Sandy loam, 8 to 18 in	Sand and sandy clay	24	56	30	17
5. Maple Creek	597	18	Sandy loam, 6 to 12 in	Sandy clay	23	50	31	15
6. Forres	615	28	Light Sandy loam, 5 to 12 in	Sand and Sandy clay	31	50	28	16
7. Dunmore	651	35	Sandy loam, 4 to 8 in	Sand	20	39	33	10
8. Stair	668	18	Clay loam, 6 to 10 in	Clay	20	25	15	12
9. Tilley	713		Medium light sandy loam, 5 to 8 in.	Clay	12	39	14	10
10. Gleichen	785	42	Rich dark loam, 8 to 14 in	Clay and Sandy clay	29	57	*	13
Average yield from all the Farms					21	44	23	12

*Not sown.

In considering these satisfactory results it is but fair to bear in mind the very primitive style in which the land was cultivated, and further to remember that there was no constant supervision of the farms. It is reasonable to conclude that these farms, and others like them, for out on the western prairie, and at elevations varying from 2,000 feet to 3,000 feet above the level of the sea, will under proper cultivation yield results not inferior to those obtained in the plains around Winnipeg ; And it is further worthy of note that many of the regions on the third pririe steppe and all the experimental farms are on this steppe—offer considerable facilities for grazing, so that it is likely that mixed farming will soon be established here. Takes, for example Maple Creek. In this district stock winter out, and thrive well on the herbage growing on the slopes of the Cypress Hills to the south. Much of the Cypress Hill regions appears to be admirable suited to grazing and dairy farming, and no doubt to sheep raising. Gleichen, again, is in the middle of a district which looks well adapted to stock raising and dairy farming.

THE RANCHES.

From Maple Creek to Dunmore the railway runs almost due west, but near the latter place it turns to the north-west, and practically retains this direction up to the

summit level. Had it continued straight on it would have passed to the south of, or right through, the ranch country ; as it is, the cattle ranches are on the south and west of the track. At present, then, the ranch country lies between Calgaay on the north, Fort MacLeod on the Belly River on the south, and the Rocky Mountains on the west. Cattle, and horses have hitherto been the chief consideration of the ranchers. Sheep are, however now beginning to receive attention in certain districts. The life of a "cow boy" is a hard and sometimes a severe one but it is an active, healty existence, which many a hardy young fellow would no doubt prefer to a sedentary occupation at home, especially if he saw some prospect of starting farming on his own account. A cow boy's outfit comprises a California saddle, with tapaderos (fittings) complete, a rifle on the saddle, a pair of schapps (leather leggins), a pair of Mexican spurs, an overcoat, and a cow boy hat or soft sombrero. No doubt to the cow boy in these western wilds.

'Tis pleasant to track the roving herd
On a long, bright summer day
To camp at night by the lonely creek,
Where dies the golden ray.

The Canadian ranchers have been fortunate in having no outbreak amongst their herds of the contagious diseases which have had such disastrous effects on stock keepers at home. This immunity from disease is a precious boon which they will do well to guard most jealously.

It is unnecessary to enumerate the ranches. The leading ones are about 100 miles south of Calgary, towards Montana. At and around Calgary the chief constituent of the herbage is the grass *Stipa spartea*, and the fact of one of the bistorts, *Polygonum vivipa-rum*, which is an Alpine plant, growing freely here renders it doubtful whether wheat growing would prove generally successful though some good results have this season been attained in the cultivation of wheat and oats on a small scale. The plains about Calgary, like the foot-hills beyond, are however obviously destined to be a great stock-raising and possibly a dairing country.

There is a part of the North-West not yet opened up by railway entreprise, but to which wistful eyes are already eagerly turned. This is the fertile and lovely district com-prised in the valley of the Saskatchewan. The towns of Edmonton, Battleford and Prince Albert lie along this little known region, and the projected railway from Secretan, on the Canadian Pacific line, to Edmonton, would render the entire valley much more accessible.

CLIMATE OF THE PRAIRIE.

Nothing in connection with the North-West is, perhaps, more misapprehended at home than the nature of its climate. Old notions, and particularly erroneous ones, die hard, and the idea, that up to fifteen or twenty years age was still current in England, that North-West Canada was a cold, desolate, inhospitable region, with its soil frost bound nearly the year round, and fitted only to be the home of fur-bearing animals, still lingers in the minds of many people. That in the North-West the thermometer as a rule gives higher readings in the summer and lower in the winter than we are accustomed to in the old country is perfectly true, but in estimating the character of a climate it is wrong and misleading to be guided by the thermometer alone. The atmosphere possesses other properties besides temperature ; it can tell a tale to other meteorological instruments besides the thermometer. The hygrometer, an instrument for indicating the amount of moisture in the air, should be observed in conjunction with the thermometer, or the same information may be gained by comparing the reading of a wet bulb and a dry bulb ther-mometer. It is thereby ascertained that the air of Manitoba and the North-West is usually drier than that of the British Isles, and to comprehend the significance of this fact

it is necessary to bear in mind the well-known physical law that water is a better conductor of heat than dry air. The presence in the atmosphere of moisture—and atmospheric moisture is merely water vapour, often containing minute particles of water—renders the air a better conductor of heat the higher the percentage of moisture. Hence in cold weather, moist or damp air will conduct away heat from the animal body more rapidly than drier air, and thus arises the pronounced feeling of discomfort which in the British Isles is often associated with cold, damp weather, and probably much more frequently experienced in Britain than in North-West Canada. Dry air is a bad conductor of heat, so that, even with a very low temperature, such air really plays the part of an insulator in preventing the escape of warmth from the body. Let it, however, become saturated with moisture, and it would at once, by conducting the heat away from the skin, produce a sensation of cold and discomfort. On physical grounds, then, it is easy to understand how the dwellers North-West cand endure a winter temperature which in our own climate would be intolerable—the dryness of the atmosphere is their protection. To explain why the atmosphere in so much drier there, would involve too great a divergence into physiographical details.

Moreover, the frost which locks up the land for months in the winter is really a serviceable friend to the prairie farms. The moisture which permeates the soil expands in the act of freezing, and this cause a minute separation or disruption amongst the particles of ploughed earth, so that when the thaw comes they fall a part in a desirable state of tilth which it is well nigh impossible to bring about by the work of any agricultural implement. Frost is a good servant to farmers, and one that works without pay. At home, a winter without frost is regarded by farmers of arable land, particularly of heavy clay soils, as a misfortune ; they now well that it means much extra work on their fallow lands for both men and horses, and that with all their pains they cannot produce so effective a result as frost is capable of bringing about.

THE NORTH-WEST MOUNTED POLICE

A few words on the prairie police will not be out of place. They are pratically a crops of horse-soldiers known as the North-Western Mounted Police, and it is their duty to cary out the law and preserve the peace over a district stretching from the Manitoba boundary 750 miles westward, and from the United States boundary 250 miles northward. They wear a bright military uniform including scarlet jacket, are well mounted on excellent horses, and carry carabine, sword revolver and cartridge belt. Officers and men together number less than six hundred, and yet under their care the North-West is absolutely safe, the Indians being particularly impressed with the power wielded by these guardians of the peace of the prairie. All enlistments are made at Fort Osborne, Winnipeg, and applicants must be between 22 and 40 years of age, active, able-bodied men of sound constitution, and must produce certificates of exemplary character. The term of engagement is for five years, and there is no buying out. Members of the force are supplied with free rations, free kit, and are boarded and lodged in the police barracks. The rate of pay varies from 50 cents a day 14s. a week) in the first year, to 70 cents a day (20s. 5d. a week) in the fifth year. The duties of the police are often associated with danger and fatigue which tax severely the physical powers, but for a strong healty man there is a certain charm about the life, and some who think of settling down in these regions might like a five years introduction before pitching their tents. An excellent knowledge of the country is obtained during a term of service in the force, but none of its members are permitted to combine the callings of policeman and farmer. During the last six months of their service they are allowed, upon the Commissioner's recommendation, to make application for a homestead, and everything possible is done to further their interests in that direction, provided their duties have been satisfactorily performed. The headquarters are at Regina barracks ; other centres are at Fort Walsh, Fort MacLeod, Battleford, Calgary and elsewhere. As the introduction of alcoholic liquors into the North-West is contrary to law, the policemen are charged with the enforcement of

this regulation ; and they often experience a long and severe ride across the prairie on the track of indians who seem to have an almost uncontrollable propensity for horse stealing. These aboriginal thieves are generally captured and punished. Last september the prisoners I saw in confinement at Regina barracks included " Sitting Back." " Single Man," " The Rat." "The Rock," ' Day Thunder," and "Frog's Thigh," all of them for stealing.

THE PRAIRIE AS A HOME FOR SETTLERS.

What advantage or inducements does the North-West offer to settlers ? Part of the answer to this question must be sought in the foregoing pages, but I will enumerate here some of what I consider to be the chief attractions. Grants of land within convenient distance of the railway may be obtained either free from the Government, or at very cheap rates from the Canadian Pacific Railway. These may be selected from the richest prairie land at the choice of the settler. No clearance of timber is required, there is no severe labour with the axe, nor any patient waiting for years in order that tree stumps may rot to facilitate their removal. The prairie sod can be laid under a plough for the first time and a crop harvested all within the space of the first twelve months. The country is well watered for, from what has already been said,it is evident that rivers and lakes and creeks abound, and where running water is not conveniently near, good water can be got within moderate distance of the surface. The prairie is healty to dwell upon, the climate is more genial than is generally supposed, and settlers who go out in robust health will fine the country is not only tolerable but enjoyable to live in. Weak or delicate people should not go there, for they might find the air too bracing. Idlers and loafers should not go there, becase the prairie is in need of thrifty workers. Men who want to acquire wealth without working for it should not go there, because they will be desapointed. Thomas Carlyle once wrote, "Two men I honour, and no third —first,the toil-worn craftsman that with earth-made implements laboriously conquers the earth and makes her man's" Men of this tipe will find on the prairio a wide field for conquest and I believe they may fell more certain of a reward and of a speedy reward, than in nine cases out of ten they could hope for in the old country.

For a long time to come the welfare of the North-West must depend chiefly upon its agricultural development. And at present its agriculture is of a some, what primitive character, and does not demand much technical knowledge on the part of the settler though I am far from implying that seme farming experience acquired at home would not be very valable, especially in connection with the mixed kind of farming which I shall presently suggest. Strong men, who delight in work will get a good start, for at the outset the great question for the settler is, how much can I plough ? And he might continue, for what I can plough I can sow, and what I can sow I can reap. But a settler would be illadvised to undertake the cultivation of more land than he could conveniently manage, as he would probably fall into slovenly farming, and so bring about a deterioration in the value of his holding.

While I regard the Bell Farm as a valuable example of what can be effected in wheat-growing on the prairie, I think it would be a mistake and a misfortune were the vast plains of the North-West converted into more wheat-producing lands. They are capable of something better than this, or, at all events , of a more varied agricultural development, and I would suggest to settlers that even at the end of the first or second year they should vary the monotony of wheat-growing by the cultivation of potatoes and vegetables, and by the maintenance of cattle, pigs and poultry. At the exprimental farm at Gleichen I noticed some excellent kitchen garden produce, and in the exhibition at Winnipeg I saw cabbages and other vegetables which would be no discredit to any market garden in England. The maintenance of live stock migth have a small beginning in the keeping of one or two cows for the sake of milk and butter, and extensions in this direction might be made year by year. Excepting in such articles as tea, coffee and sugar, the settler would not find much difficulty after the first year or two in keeping his household table supplied all the year round from the produce of his farm.

The nutritive value of the prairie herbage is sufficiently proved by the fact of its having sustained the vast herds of buffalo which for ages have made the prairie their home, but which are now disappearing before the advance of civilisation. Nevertheless the introduction of cultivated grasses would in all probability be a step in the right direction, and the attempt would most likely be justified by the success which would follow it. Although much of the land appears capable of growing wheat for an indefinite period, yet those settlers whose means would allow of it would I think do well to sow a portion of their land with good English grass seeds after the third or fourth year. Such grasses as cocksfoot, foxtail meadow fescue and timothy, together with white and purple clover and a little black medick suggest themselves as desirable, but every effort should be made to secure clean seed. It is an interesting fact that there are no true clovers native to the prairie, although many species of the milk-vetch, Astragalus, are met with.

The more mixed farming extends on the prairies the more interesting will the settlers find it, and the less dependent will they be upon the prices they will from year to year secure for their wheat. The establishment of flour mills in the North-West will lessen the cost of flour and of oatmeal, will the facilities afforded by the railway must continue to enable them to compete on favourable terms with the other wheat-exporting countries of the world. Artificial feeding stuffs like artificial fertilsers belong to a future period.

There is no carcity of timber or of fuel, for vast forest are at different spots touched by the railway. Moreover, it is absolutely certain that extensive coalbearing regions exist in many easily accessible points of the North-West, some of the coal, as in the Saskatchewan valley near Medecine Hat, being obtainable by open workings, the coal cropping out at the surface. Not only will the North-West continue capable of meeting its own demands for mineral fuel, but in a short time it will probably be in a position to export coal.

Through the prairie is destitute of trees it is not destined to remain so. Every settler should plant belts of poplar and other trees about his homestead. They will break the force of the wind, afford grateful shelter to live stock, and do much towards relieving the monotony of the plain. The work might be progressive, a few trees being planted each year, but it is detail that should not be neglected. In the rolling country beyond Calgary, and in the foothills of the Rockies, where pastoral farming will probably constitute the main industry, much ground shelter is available for live stock.

As to the prospects of the Great North-West, it is only the poet who can say :

> "For a dipt into the future, far as human eye could see,
> Saw the Vision of the world, and all the wonder that would be ; "

but if its development in the near futur may be at all gauged by its progress in the immediate past, then will its growth be rapid indeed. Men who go out there determined to work will, as the years roll on, find themselves in a much better position than they can hope to secure in the old country, and when the time comes for them to enjoy a well-earned rest in their declining years they will find that they have got the means to enable them to do so. And the children who are born and bred in the happy prairie homes, who will see around them on every side the triumphs of man's industry, who are reared in the bracing atmosphere of a northern sky, they cannot fail to be healthy and vigorous.

> " Iron jointed, supple-sinew'd they shall dive, and they shall run,"

and, true " prairie flowers," tney will grow into men and women possessed of a physiqu which could never have been acquired under the sunnier, more southern, and more ener

vating climes whiter so many efforts are made to attract British settlers-scions of the nation which has conquered and colonised a larger portion of the earth's surface than all other nations taken together.

ONTARIO.

The province of Ontario is so well known that little need be said about it here. Occupying an area greater than that of France, extending farther southward than any other part of the Canadian Dominion, and bounded on two of its three sides by the great freshwater lakes of Huron, Erie and Ontario, it enjoys advantages of position, soil and climate, which have combined to render it agriculturally, commercially, and financially, the premier province of Canada. The beautiful capital, Toronto, "the Queen City of the West," is thoroughly English in appearance and character, and it is a genuine treat to walk through its broad open streets, to inspect the busy shops, and to rub shoulders with the genial, healthy-looking people who are evidently proud of their metropolis. The bustling, thriving towns in this happy province are too many to particularise, but it is not necessary for an agriculturist to spend much time in Ontario before becoming favourably impressed with the condition of its farming industries. That the sturdy pioneers of agriculture in this province had to face many natural difficulties is abundantly shown in the tracts of yet uncleared forest land which are here and there to be seen, in the tree stumps amongst which the ploughs have on many a farm yet to find their way and in the snake fences which at once appeal by contrast to the eye of any one who is familiar with the hedge-rows of Old England.

The agriculture of Ontario is more varied than that of any other part of the Dominion. The crops include wheat, barley oats and rye, Indian corn, buckwheat, peas and beans. Roots are cultivated to a considerable extend, but hardly so succesfully as in England, through the extension of stock farming will doubtless be reflected in improved yields of roots. The average yields this year, taken over the whole province, in bushels per acre are: of fall wheat, 21; spring wheat, 20; barley, 25; oats, 36; rye, 16 (this crop was abominably poor); peas, 24; beans, 22; and of hay and clover, 1½ tons per acre. On the leased farms the average rent per acre is two dollars and seventy-five cents (equivalent to 11 s. 6. d.), the highest rents being in the country of Durham where they average three dollars and fifty- five cents (equivalent to 14 s. 9. d.), and the lowest in the county of Muskoka, 88 cents per acre (4 s. 1. d.). The wages for farm lands, with board, range between $196 a year in Algoma county, and $149 in Welland county, the average being $175 (equivalent to £37 a year or about 14s. a week, with board.) Without board the wages range between $308 and $231 a year, the average being $257 (equivalent to £53. 13s. a year, or slightly over £1 o week] The average wages of domestic servants are $1.50 per week, with board [equivalent to £16. 5s. a year, with board.] Farmers in Ontario find a difficulty in getting really competed farm hands, and such men can always secure high wages.

Fruit is very largely grown in the province, its climate rendering it particularly suitable to fruit culture. Nearly a hundred varieties of apples are cultivated and the produce is largely exported. Peaches constitute another prominent feature, some of the peach orchards containing as many as 10,000 trees. Grape culture is on the increase, there being more than 3,000 acres of vineyards, chiefly in the southwestern district. Plums, cherries, pears, strawberries and raspberries are likewise extensively grown.

The Ontario farmers are fully alive to the necessity of raising well-bred live stock, and in this department they approach very closely to the approved practice of stock, farmers at home. In dairy farming, again, they seem determined not to be left behind in the race, and there are upwards of five hundred cheese factories in the province. I may here take the opportunity of expressing my surprise that cheese should be so seldom

seen on the table in Canada. I am speaking quite generally. At most of the places I stayed at cheese did not seem to enter into the dietary at all, and in my long journey across the prairie I do not remember seeing any (save what I took with me). It is, perhaps, no exaggeration to say that a pound of good cheese possesses a much nutritive value as two pounds of lean beef, and in places far away from towns cheese should certainly be more generally consumed than, as far as I could ascertain, is the case.

Even a brief notice of Ontario would be incomplete without a few words devoted to the Ontario Agricultural College, situated near the picturesque town of Guelph. It is supported by the Provincial Government, and is highly creditable to the province, nor can there be any doubt that it is quietly and unobtrusively, but none the less effectively, exerting a powerful influence for good on the agriculture of Ontario, and of other parts of the Dominion as well. The state subsidy enables it to offer to future farmers a good technical training, both in the theory and practice of their business. The college is a commodious edifice, and the farm buildings and the appurtenances are very complete. Of the 550 acres comprised in the farm 400 are under cultivation, the cropping including wheat, oats, barley, peas, hay, roots, pasture and corn fodder. The stock yards have the educational value of an agricultural show, including, as they do, pedigree animals of all the leading breeds. Here, under the sunny sky of Southern Ontario, where the gay little humming birds flit from flower to flower by day and the whip poor-will trolls out his unmistakeable notes at night, may be seen splendid specimens of Shorthorns Hereords and Devons, of Aberdeen Polls, Galloways, Ayrshires and West Highlanders, of Jerseys, Guernseys and the ponderous Dutch cattle, while of sheep the Southdown Shropshire, Hampshire and Oxford Downs, the Lincolns, the Leicesters and the Cotswolds, the Highlands and the Cheviots are all represented. The selection and fine condition of these representative animals reflects, no little credit on Professor Brown, who so ably fills the Chair of Agriculture in the college, and to whose car the farmers of Ontario may with confidence entrust the technical training of their sons. Although I spent a whole day inspecting the college and the farm under the joint guidance of the courteous President of the institution, Mr. James Mills, M. A., and Professor Brown, I yet felt that, there were many other things I would, fain have seen had time permitted. I would too, that my space allowed me to give a fuller notice of this admirable institution, Ontario may well be proud of her agricultural college.

It is to the emigrant who has a fair amount of capital at command that Ontario will prove most attractive. Many of the younger agriculturists of this province are turning their faces westward, desirous of throwing their lot in with the chances of that great prairie region which has been described. In a measure the change from an Ontario farm to a prairie farm is less pronounced than from an English homestead to one on the prairie, and as desirable farms come into the market in Ontario it seems a natural proceeding for them to be taken up by men of sufficient capital who are newly arrived from the east.

THE PROVINCE OF QUEBEC

In journeying from Ontario to Nova Scotia the traveller may lay down his route through such important cities as Toronto, Ottawa, Montreal and Quebec. Though Quebec is the capital city of the Province of the same name, the city of Montreal, two hundred miles higher up the St-Lawrence, is much larger and is a more important trading centre. The commanding site of Quebec city is surpassingly beautiful and has been the theme of many a brillant essaye. Montreal, likewise, as viewed from the summit of Mount Royal, between the foot of which and the banks of the St. Lawrence the city nestles, is seen to occupy an enviable position ; it is almost exactly due north of New-York, from which city it is 400 miles distant. Both Montreal and Quebec, are in the Province of Quebec, and there are at present two lines of railway between these cities, the Grand-Trunk on the south side of the St. Lawrence, and The North Shore Railway which runs along the northern bank of the same river. The population of the province of Quebec is stated at 1,359,027, of whom no less than 1,073,820 are of French origin,

descendants of the old French settlers who crossed the Atlantic when Canada was an appanage of the French crown. The French Canadians have preserved their language, their farth and their agriculture to this day, and hence this last ramed feature calls for but little comment. On either side of the mighty St. Lawrence, from Montreal down as far as Rimouski, where the Allan steamers land the mails for Canada and take up those for Britain, the white houses of the farmsteads of the French Canadian farmers are to be seen in one long straggling line,—at entervals a town is seen, by the general effect is that of a sparsely populated village hundreds of miles long. The great majority of the towns and villages have French names, many of them of historical interest and association. The agricultural practices are of a primitive type, and though there is an air solid comfort about most of the homesteads, yet the farmers of the St. Lawrence valley seem imbued with little or none of the progressive spirit characteristic of the age. I saw men on their knees cutting corn with the sickle ; I saw dogs harnessed to little carts in which was farm or garden produce. Here and there a bit of really good grazing land attracts the eye, and it is noticeable that at most of the farms a few head of cattle are maintained. The people appear to be happy and comfortable, fairly well to do, and content to jog along in the same grooves as their fathers smoothed out before them. Hense it is not surprising that those who leave their native land for Canadian shores seldom linger in the Province of Quebec : there is more to a tract them in the direction of the settling sun, and thither they wend their footsteps.

There is, however, one partion of Province of Quebec to which the foregoing remarks cannot in fairness be applied, that, namely, which extends south and west from the city of Quebec to the United States frontier, to the boundaries of Vermont and New-York states. This region, known as the Eastern Townships, is from an agricultural point of view of a much more go-ahead character than the rest of the province. Wild lands for settlement may be obtained on very easy terms, and improved farms may be secured at moderate outlay, so that the new comer who wishes to settle in these parts has considerable choice before him. The proximity of the New England States ensures a near market for much of the agricultural, and particularly the dairy, produce of this part of Quebec. Unfortunately, the time at my disphsal did not allow of my visiting the Eastern Townships, so that I am not in a position to speak very definitely as to their agricultural capabilities nor yet of the inducements they can offer to settlers.

NOVA SCOTIA.

The Province of Nova Scotia occupies a peninsular position on the east of the Province of New Brunswick, which it adjoins, and to the south of the Gulf of St. Lawrence ; Nova Scotia, New Brunswick, and Prince Edward Island constituting the Maritime Provinces of Canada. Cape Breton, an island to the north, is also included in the Province of Nova Scotia, the intire area of which is about 20,000 square smiles, or two-thirds that of Scotland. The long narrow form of the peninsula, and the numerous indentations of the coast-line are such that no part of the province is more than thirty miles distant from the sea. The climate is in the main an insular one, and more closely resembles that of England, particularly in its humidity, than does that of any other part of Canada. The coldest season of the year is in March, when the east winds blow off the ice-flocs in the Atlantic ; after this the spring rapidly advances.

From Britain, the most covenient way to approach Nova Scotia is to sail from Liverpool to Halifax, its capital city. The distances 2,855 miles, and the mail steamers make the voyage regularly, all the year round, both winter and summer. Journeying from the west, however, or landing from the steamer at Quebec, the best route from this city, is by the Intercolonial Railway, which from its western terminus at Quebec to its terminus at Halifax, extends a distance of 675 miles. The railway passes from Quebec in a north-easterly direction along the south shore of the St. Lawence till Rimouski is reached, when, turning eastward and southward it leaves the Province of Quebec for that of New Brunswick. At Moncton, in the latter province, the line divides, one branch

going southward as far as St. John, the capital of New Brunswick and the other tending eastwards through the isthmus into Nova Scotia, across the breadth of which it runs to Halifax. The population of the entire province is 441,000 which is less than that of Glasgow.

Halifax is a quaint, English-looking city of some forty thousand inhabitants. It is now the solitary place on the American Continent where are English garrison is kept, and the old British flag still floats above its citadel. The most prominent feature at Halifax is its magnificent harbour, capable of affording shelter to all the fleets of the world. It is a great coaling and victualling port of ships of war and for vessels engaged in the Atlantic trade, and the natural resources of the province are such as enable it to meet all the requirements of ships which call at its capital.

Four great industries make demands upon the energy and the enterprise of the Nova Scotians, namely, agriculture, mining, ship building and fishing; and of the first named of these it will be my duty to speak in not altogether laudatory terms. The mineral wealth of Nova Scotia is considerable. Gold occurs in quantity in the old rocks which form the Atlantic border, is worked at about twenty places, there being some interesting gold mines within an easy distance of Halifax, which, through the kindness of Mr. Edwin Gilpin, M. A., Director of Mines for the province, I had an opportunity of seeing in considerable detail. In 1883 upwards of £56,000 worth of gold was exported from the mines of Nova Scotia. Valuable of iron occur, and are worked at Londonderry and New Glasgow. Gypsum, or plaster of Paris, is largely mined, particularly near Windsor. The province is very rich in coal, and its known productive coal-fields cover an area of 685 square miles. The coal is nearly all bituminous, and some of the sections are of great geological interest, notably those at the Joggins, near Springhill, on account of the large and beautifully preserved remains of ancient forms of plant life which they enclose.

It is hardly necessary to give any details of the ship building and fishing interest; but it will presently be shown that these two industries have, countary to what might be expected, exercised and adverse influence upon the development of agriculture in Nova Scotia.

The agricultural districts lie rather in the western than in the eastern half of the peninsula, and may be seen in their most typical features around the Basin of Minas and along the Bay of Fundy, particularly in the fertile Annapolis valley, in the southern portion of which sheep are pastured out all the winter. Most of the farms occupy sites which were once covered by timber, and much of the "forest primeval" of which Longfellow sings in his pathetic poem may still be seen, interspersed with numerous streams and lakes abounding in fish. The most peculiar features of Nova Scotian agriculture are undoubtedly associated with the lands bordering the Bay of Fundy. This bay is so situated with respect to the ocean, and the conformation of the land which encloses it is such, that the tide in its rise an fall has a very considerable vertical range which is particularly noticeable in the rivers which flow into the bay. The best analogy to be found in the British Isles is afforded by the river Severn where, in the spring of the year, a high tidal wave rushing up the trumpet shaped estuary gradually gets its waters so crowded together that they form an almost vertical wall as they advance up the narrower parts of the river and produce what is known as the "bore." In the Bay of Fundy, however, this happens with every rise of the tide. When the tide is out a great expanse of reddish or brownish fertilising slime may be seen, which is rapidly covered with a sheet of water as the tide rises, only again to be left bare and slimy at the next period of low water. I saw these effects at various places including Truro, Windsor, Grand Pré, and others, and was much impressed with the quantity of slime which can easily be procured and utulized for its excellent fertilising properties. It is on the coast lands and on the banks of the rivers that dykes have been erected, chiefly of earth or mud, whereby the salt water can be excluded from large areas of land which then become covered with a valuable erbage, and from this is made the sa t-hay or marsh-hay so much valued by the stock farmers of Nova

Scotia. The road from Windsor to Port Williams, on the Cornwallis River passes through to land and Evangiline, and the words of Longfellow convey a most graphic description of the surroundings.

> "In the Acadian land, on the shores of the Basin of Minas,
> Distante, secluded, still, the little village of Grand Pré
> Lay in the fruitfull valley. Vast meadows stretched to the eastward,
> Giving the village its name, and pasture to flocks without number.
> Dykes, that the hands of the farmers had raised with labour incessant,
> Shut out the turbulent tides, but at certain seasons the flood-gates
> Opened, and welcomed the sea to wander at will o'er the meadows.
> West and south there were fields of flax, and orchards, and cornfields
> Spreading afar of unfenced o'er the plain, and away to the northward
> Blomidon rose."

As the spectator surveys the scene with Cape Blomidon in the background, he realises to the full the truth of these words.

Heavy crops of hay are made from the salt grass which grows naturally on the dyke land and marshes. As this hay is much valued by farmers as food for stock I was left to examine the growing crop in the marshes near Londonderry and I fonnd it to consist almost entirely of two species of grass and a small species of vetch. The grasses are *Spartina cynosuroides*. not known in England, though I had occasion to mention it as growing on the prairie, and the couch grass, *Triticum repens*, which has also been previously spoken of. Some specimens of the latter grass were ergoted, but I do not know whether ergot is sufficiently abundant to be dangerous to breeding cows. After mowing, the salt hay is cured by dragging it up to the higher slops and spreading it out ; it cost about £1 an acre to make and is worth from £5 to £6 a ton in the market, the yield of hay being frequently as much as 2½ or 3 tons an acre. Some of the best dyke lands may be seen in the Cornwallis valley were they have sold for as much as two, three and even four hundred dollars an acre (from £40 to £80). Around Grand Pré the meadow land is, much of it, worth £50 to £75 an acre.

The average yield of cereals in the western counties is, in bushels per acre, the following : Of wheat, 18 barley, 35 ; oats, 24 ; rye, 21 ; Indian corn, 42 ; buakwheat, 33. Of hay the average yield comes up to tow, tons, but as much as four tons per acre of timothy grass and clover have been taken off in some localities, besides a fair aftermath.

The estimation of bulky produce like turnips, mangels and potatoes, by measure rather than by weight, is a relic of an old practice which Nova Scotia farmers should abandon, for it is impossible to get either absolute or comparative results of much value by this method. The average produce in bushels per acre of turnips in 420 ; of mangels, 500 ; of potatoes, 250. In the case of turnips and of mangels, the yield in bushels is converted into tons on the assumption that one bushel weighs 60 lbs., but this system of measurement is obviously vage and unsatisfactory ; it belongs to a by-gone period and should be discontinued.

The only grass raised from seeds is timothy grass, and when the hay is marketed, the seller is as eager to give as the buyer is to demand, a guarantee that it is clean, pure timothy all through. Here, I tink, is another mistaken notion put into practice, and I feel certain that such grasses as cocksfoot, meadow fescue, and foxtail might be included in the mixtures for grass lands in Nova Scotia.

The export of farm produce is steadily increasing, and last year upwards of one and a half million dollars (say £300,000) worth of such produce was shipped. These exports include cattle sent to Europe, potatoes to the United States, and enormous quantities of apples sent across the Atlantic.

Stock farming should be a thriving industry in Nova Scotia, its climate and its soil being well adapted to the raising of large herds of cattle and flocks of sheep. It is true that sheep are kept in considerable numbers, and much of the country which, in appearance, is not altogether dissimilar to that which extends between Ballinasloe and Galway in Ireland, should produce mutton equal to that of the Roscommon sheep. But modern sheep farming and the economical production of mutton and wool appear to be points in which the farmers of Nova Scotia still linger behind the times.

In grazing stock for the English market Nova Scotia possesses a great advantage over the other provinces of the Dominion. It is the nearest stock-raising province to Britain, and the cattle and sheep can be taken on to the steamers without having to undergo that lowering of the system and waste of the tissues which are almost inseparable from a long journey, overland, much of it by rail. Consequently they would reach the British ports in much better condition than those whose travels commence more to the west.

The dairy farming of the province is improving, and several cheese and butter factories are in operation. I must, however, express the surprise I felt when I found American cheese and salt butter placed on the table at more than one place at which I called in the course of my rambles through this beautiful country. Surely this ought not to be, particularly in the summer season.

There seems to be no lack of useful land at very low prices. Here is a case in point: Dr. Macdonald, of the Londonderry Mines, bought 300 acres at a dollar an acre. Two acres of this land were sown with turnip seed, and yielded between 1,400 and 1,800 bushels, equivalent to from 18 to 20 tons and an acre. The land was old run out grass land, which was broken up for oats, and then followed by turnips, the seed being sown between the 15th and 25th of June. The two acres under turnips were dressed with stable manure and 4 cwt., of superphosphate per acre. Sheep are not folded here, and the roots would be used for their winter feed.

Any notice of Nova Scotian agriculture would be incomplete without a reference to its fruit farming. All along the Annapolis Valley is to be seen one of the finest apple growing regions in the world. Thirty years ago the province was importing apples; at present upwards of a million bushels are grown each year, and enormous quantities are exported to England and elsewhere. A variety known as the Gravenstein is the kind chiefly cultivated; it is a fair-sized, beautifully tinted apple, with crisp, juicy flesh.

Some inquiries made in the course of a drive through the orchard districts around Port Williams enabled me to collect the following facts and figures, before detailing which I may mention that a barrel of apples contains three bushels:—An orchard of 6 acres was pointed out to me which would yield 1,000 barrels of apples, and these would sell for £500. The gathering and packing would cost 10 cents a barrel, and 10 barrels might be filled by one person in a fair day's work. The barrels cost from 20 to 25 cents each. Young apple trees fit for transplanting cost from 30 cents to 40 cents each, and to plant on acre with trees at the rate of 40 to the acre involves an outlay of from 25 to 30 dollars, which includes the cost of both labour and trees. Labourers' wages in the neighborhood range between 1 dollar and 1¼ dollar a day in the busy season (from 25s. to 32s. a week), and between 60 cents and 70 cents a day in the winter (15s. to 17s. a week). The cost of living here is less than in England, and clothing is not much dearer.

Much of the scenery of Nova Scotia is very picturesque, and the alternations of wood and water, of rock and fertile grass land, are pleasing to the eye, particularly in the autumn, when the brillant crimson foliage of the maple and the sumach are thrown into bold relief by the dark green leaves of the pine trees and sombre hues of the cypress, while here and there in the forest or by the water side may be seen the tents of the Micmac Indians, who still linger in the presence of a civilisation which can find no place

for them. A drive around the outskirts of the bustling town of Truro, at the head of Cobequid Bay, a part of the Basin of Minas, gave me an opportunity of seeing some attractive farms, whose occupants evidently appeared desirous of keeping abreast with the times. And at Windsor, which lies a considerable distance to the south-west of Truro, on the River Avon, I was enabled through the courtesy of the Sheriff, to drive over a wide expanse of country of most fertile description ; much of it, indeed, was highly suggestive of rich grazing lands at home. The farms, too, were neat and tidy in appearance, and there was a general air of comfort and content, not only here, but in other parts of Nova Scotia, which could hardly fail to impress the visitor.

I come now to the discussion, of two important points—first as to why the farmers of Nova Scotia are somewhat behind the times in their agricultural practices ; and secondly, as to whether Nova Scotia is a province to which settlers should be advised to emigrate. With regard to the first point, reference has already been made to the mining, shipbuilding and fishing interest of the province, and many of the farmers are so absorbed in one or another of these industries that, as was forcibly expressed to me by a Nova Scotian gentleman well qualified to give an opinion, they do little more than dabble in farming. When shoals of mackerel or other fish come into the local waters the farm is forsaken for the sea ; when a ship is to be built the labour which should be given to the farm is consumed in hauling timber. Nova Scotia may be proud, and justly so, of the half million tons of shipping which were first launched upon her waters, but it is none the less deplorable that her agriculture should have to suffer on account of its being able to enlist only a divided interest. It would be wrong, however, to convey the impression that all the farmers are indifferent to the progress of agriculture, and the establishment within recent years of a number of local agricultural societies certainly indicates a desire for improvement. Major-General Laurie, of Oakfield, Halifax, N. S., to whom I am indebted for considerable information, has long taken a warm interest in the promotion of such institutions.

As to whether Nova Scotia offers a good opening for the settler, I am inclined to answer most unhesitatingly in the affirmative. Even the labourer will find here higher wages and cheaper food than he can get at home, while the man who can combine a knowledge of modern farming with the possession of a moderate amount of a capital can hardly fail to derive satisfactory results from the materials he will find at his disposal. In fact, Nova Scotia is in need of farmers who will give farming the first place in their consideration, who can bring with them some of the improved practices of modern agriculture, who can intelligently combine pastoral with arable farming, who know something of dairying, who understand how to manage and at the same time to improve a flock of sheep, who in laying land down to grass will not rest their faith solely in timothy, and who in estimating the yields of their root crops will discard the bushel measure in favour of the weighing machine. If there be any such men who are tired of the old country, or who may not be satisfied with the prospect before them in case they stay all their lives at home, and who feel they possess sufficient "grit" to enable them to smile at the difficulties and inconveniences which must always at first surround the settler in a new country, I would earnestly commend to their notice the advantages offered by Nova Scotia.

The varying prices of different kinds of allotments in the province are such as to suit the purses of all comers. Uncleared Crown lands may be bought for less than 2s. an acre. Improved farms of 100 to 150 acres with house and farm buildings may be bought for sums extending from £100 to £500 according to the degree of cultivation. Numbers of tidy farmsteads were pointed out to me which could be purchased for 800 or 1,000 dollars (£160 to £200), and I feel not a little confidence in ascerting that young men who possess the requisite knowledge and are in a position to command £500 and upwards would in a very short time begin to get a good return on their outlay in this fruitful province.

As in Ontario, so in Nova Scotia, improved farms may be obtained because those who own them desire to move westward. It is well to remember that men who were

born in the Canadian provinces, the sons or grandsons of men who were themselves pioneers, are likely to be imbued more strongly with the pioneer spirit than those who arrive fresh from the eastern side of the Atlantic, and it seems appropriate a rearrangement that new settlers who possess the necessary capital should take up and improve the farmsteads which years ago were hewn out of the wilderness by earlier settlers from the old word.

THE OUTWARD JOURNEY

The conveniences of modern travel are such that the emigrant's journey to North-America is deprived of nearly all the hardships that were at one time associated there with. The once dreaded sea voyage now occupies little more than a week from Liverpool to the Canadian port, arrived whereat, the officials of the Canadian Immigration Department are at hand to give all advice and assistance necessary for the despatch of each emigrant or party to the desired destination. I crossed the Atlantic and the mail steamship *Parisian*, belonging to the Allan Line, and desire to place on record my appreciation of the general excellence of the accommodation provided, and of the skill with which these steamers are navigated. A large number of emigrants occupied the steerage and intermediate sections, and from personal inquiry I found that they were well satisfied with the arrangements made for their comfort, and with the good and liberal diet placed at their disposal. Among my fellow passengers in the salon was a lady, who, in the course of the voyage inspected minutely all the details of management in the intermediate and steerage sections, and paid particular attention every day to the character and quality of the food supplied. The results of her investigations led her to speak in warm terms of approval of the care bestowed even upon the poorest passengers, and, as the mother of a grown up family herself, she would be qualified to examine everything with a critical eye, so that I consider such an opinion much more valuable than my own, and am glad to be able to quote it. I may add that the Allan steamers sail from Liverpool to Quebec weekly through the summer, and to Halifax all the year round, and that emigrants landing at Quebec will receive from Mr. Stafford, the Dominion Agent at that city, every attention and assistance that his long experience can suggest.

Emigrants intending to settle in Nova Scotia would, of course, sail for Halifax, where they would find themselves within, at most, a day's journey of their destination. Those however, who are bound for the prairie will, on their arrival at Quebec, have a long railway journey before them, travelling day and night, save for stoppage at certain stations for meals All night travelling is not pleasant unless comfortable sleep can be ensured, and I wish, therefore, to speak in high terms of the "Emigrant Sleeping Cars" which the Canadian Pacific Railway authorities have, with humane forethought, attached to all their long distance trains. The cars are comfortable and comodious, and the sleeping accomodation is based on the same principle as in the Pullman sleeping cars, but with no upholstery. With a warm rug or blanket in which to wrap himeself the traveller can stretch out at full length and get a long refreshing sleep. The palace sleeping cars of the same railway are superbly fitted ; in one of them, named the "Wabigoon," I travelled for nearly a fortnight and slept soundly and comfortably in bed every night. In the emigrant cars there is no extra charge for the sleeping accommodation.

SOME LAST WORDS

Those of our fellow country men who leave the old country to settle in Canada will in time find themselves passing into one of two classes, namely, those who succeed, and those who fail. The latter, though numerically small, make a great deal of noise and it is perhaps only a trait of human nature that the man who fails should ascribe the cause to anything and everything rather than to himself. It is exceedingly likely that most of the men who fail in Canada would fail every where else, and I am strongly of opinion that a very high percentage of the men who emigrate to Canada, whether they possess large or small capital, or no capital at all, are bound to succeed if they go to work with a determination to do so, and evince that determination in steady, earnest labour, accompanied by frugal habits. In no part of the world is agricultural entreprise likely to open up an El Dorado, but there are fair and reasonable grounds for asserting that in Canada a man is likely, after years of honest toil, to be in a considerably better

position than he could ever have hoped to attain from the same expenditure of work, and it may be of capital, at home. He may easily become a land owner out there, but no difficult it is to become one at home! And the knowledge that the work he does by the sweat of his brow is done for himself, that any improvements he may effect will be improvements of his own estate, that there need be no lease whose restrictions might hamper is operations,—reflections such as these cannot fail to sweeten his labour and to urge him to father exertions. Even the man who can only get a few pounds with which to start may, if he be young, increase his capital by slight savings from his wages, and in time find himself in a position to take up a quarter section (160 acres) on the prairie and the man who can by his own efforts work himself in to this position is not likely to remain in long, but to steadily enlarge the magnitude of his undertakings. I hope I have, in an earlier part of this Report, made it plain that what would be regarded as a small capital in Ontario or Nova Scotia, would relatively be a large initial capital on the prairies, and this a distinction which intending settlers would do well to bear in mind. I made numerous inquiries of all sorts and conditions of men connected with the agricultural interest, and in the great majority of cases I found that new settlers were satisfied with the change they had made, and buoyand as to their prospects,—the star of hope shone brightly above them, and in its cheerful light they would work and reap the reward of honest toil. In its political and social institutions, in many matters relating to education and religion, Canada is ahead of Britain; knotty ploblems which still sorely vex the mind of the mother country have been satisfactorily solved by this, one of her fairest daughters, and one whose youth is so pregnant with promise. The best guarantee for the future of Canada is to be sought in the history of her brief past, and those who would fain be identified with the development of the great future which the sons and daughters of the Domiion mean to carve out for her should hie them westward. "What man has done, man can do" wrote Elihu Burritt, and when for one man who has in the past worked for Canada there are in the future a thousand, the result will be commensurate:—

"Men my brothers, men the workers, ever reaping something new:
That which they have done but earnest of the things that they shall do."

One more word and I have done. I am old-fashioned enough to feel proud at having been born under the British flag; it is a privilege I should have been sorry to have missed. There are, no doubt, many who share my feelings in this matter, and it is a pleasant reflection that, in leaving the scenes of shildhood to found new homes in the Far West, the settler in Canada is still sheltered by the ample folds of the national flag. In the Dominion he may hold property and acquire all the rights of citizenship without forfeiting his position as a British subject, and without being severed as an alien from the kith and kin he has left behind him.

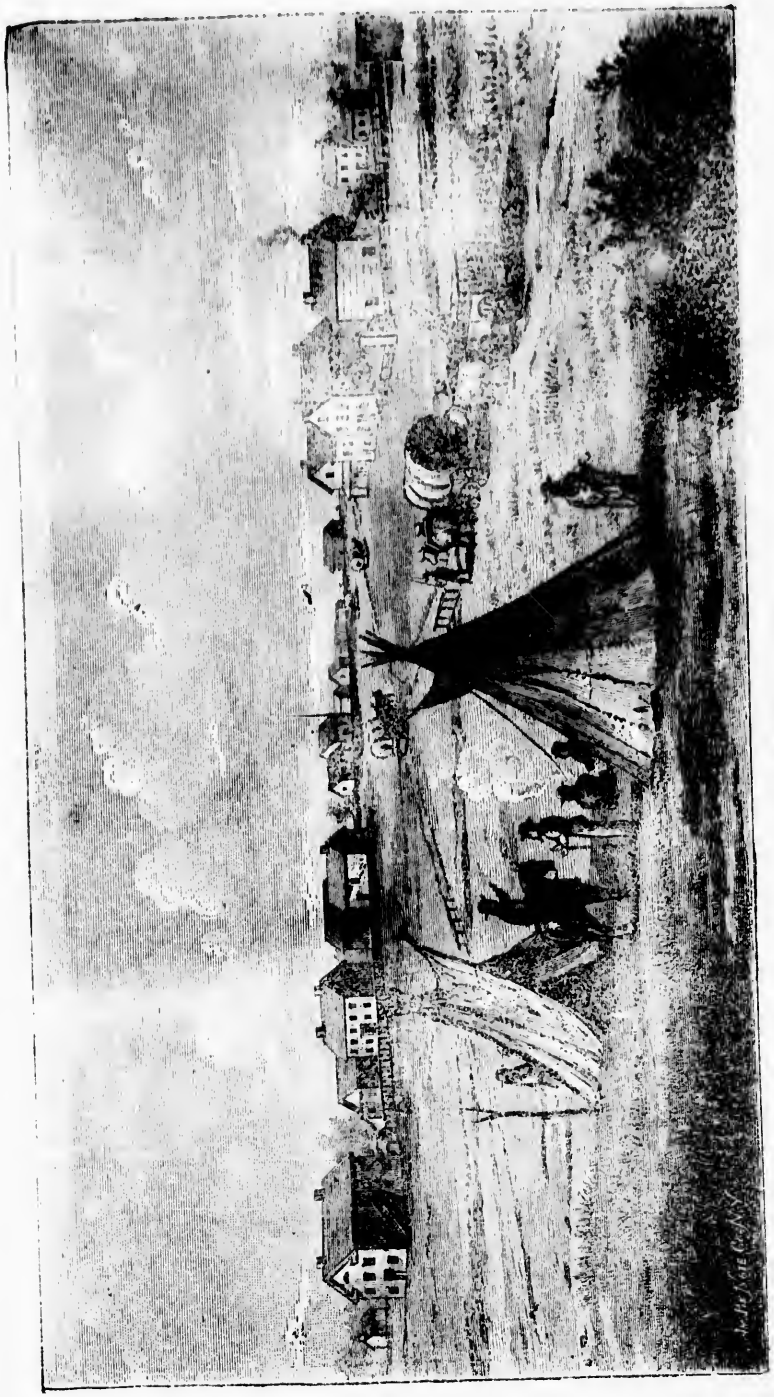
Before concluding my Report I desire to express my thanks to many Canadian friends, on whose kindness I have encroached while gathering the facts herein set forth, and, though I forbear to mention their names, I trust that, should these lines ever come under their notice, they will remember that I am not unmindful nor ungreatful. There are two points in the character of the Canadian people which cannot fail to impress any one who may visit this vast area of Greater Britain—these are, their faith in themselves and their confidence in the future of their country. The moral influence of two such potent factors is bound to accelerato the rapin development which Canada appears destined to undergo, nor can it have other than a salutary effect upon those who more westward and cast in their lot with these dwellers.

"In the pleasant land and peaceful."

College of Agriculture
Dowton, Salisbury.

November 1884

W. FREAM.



WINNIPEG 1871

WINNIPEG 1883

WINNIPEG 1883

MINNEDOSA, MAN.

CANADIAN GOVERNMENT AGENCIES.

ALL PERSONS desirous of obtaining information relating to Canada, can make application to the following Agents:

IN THE UNITED KINGDOM.

LONDON....Sir Charles Tupper, K.C.M.G., &c., High Commissioner for the Dominion, 16 Victoria Chambers, London, S.W.
Mr. J. Colmer, Secretary, High Commissioner's Office (address as above).
LIVERPOOL..Mr. John Dyke, 15 Water Street.
GLASGOW...Mr. Thomas Graham, 40 St Enoch Square.
BELFAST....Mr. Charles Foy, 29 Victoria Place.
DUBLIN.....Mr. Thomas Connolly, Northumberland House.
BRISTOL....Mr. J. W. Down, Bath Bridge.

CANADA.

IN THE OLD PROVINCES.

QUEBEC.....Mr. L. Stafford, Pointe Levis Quebec.
TORONTO....Mr. J. A. Donaldson, Strachan Avenue, Toronto, Ontario.
OTTAWA....Mr. W. J. Wills, Wellington Street, Ottawa, Ontario.
MONTREAL..Mr. J. J. Daley, Bonaventure Street, Montreal, Province of Quebec.
KINGSTON..Mr. R. Macpherson, William Street, Kingston, Ontario.
HAMILTON..Mr. John Smith, Great Western Railway Station, Hamilton, Ontario.
LONDON....Mr. A. G. Smyth, London, Ontario.
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WINNIPEG..Mr. W. C. B. Grahame, Winnipeg, Manitoba.
EMERSON...Mr. J. E. Tetu, Railway Station, Emerson, Manitoba.
BRANDON...Mr. Thos. Bennett, Office at the Railway Station.
PORT ARTHUR..Mr. J. M. McGovern.

IN BRITISH COLUMBIA.

VICTORIA.....Mr. John Jessop.