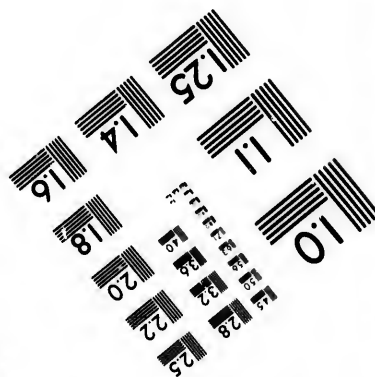
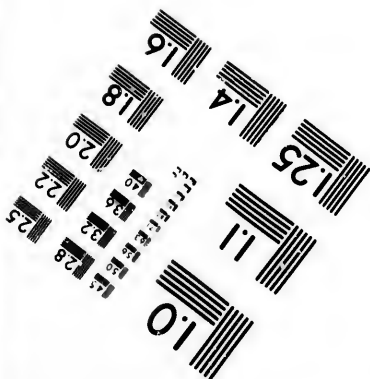
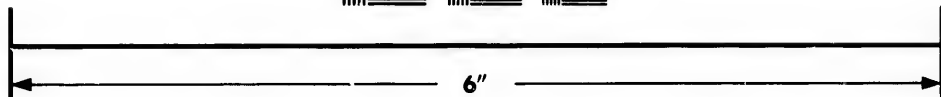
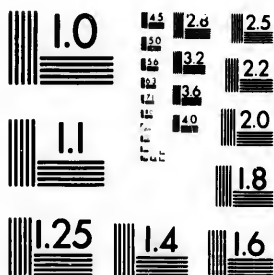


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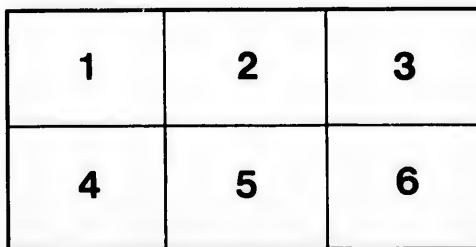
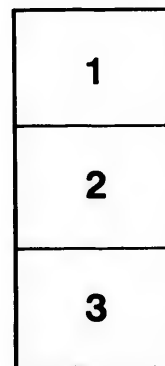
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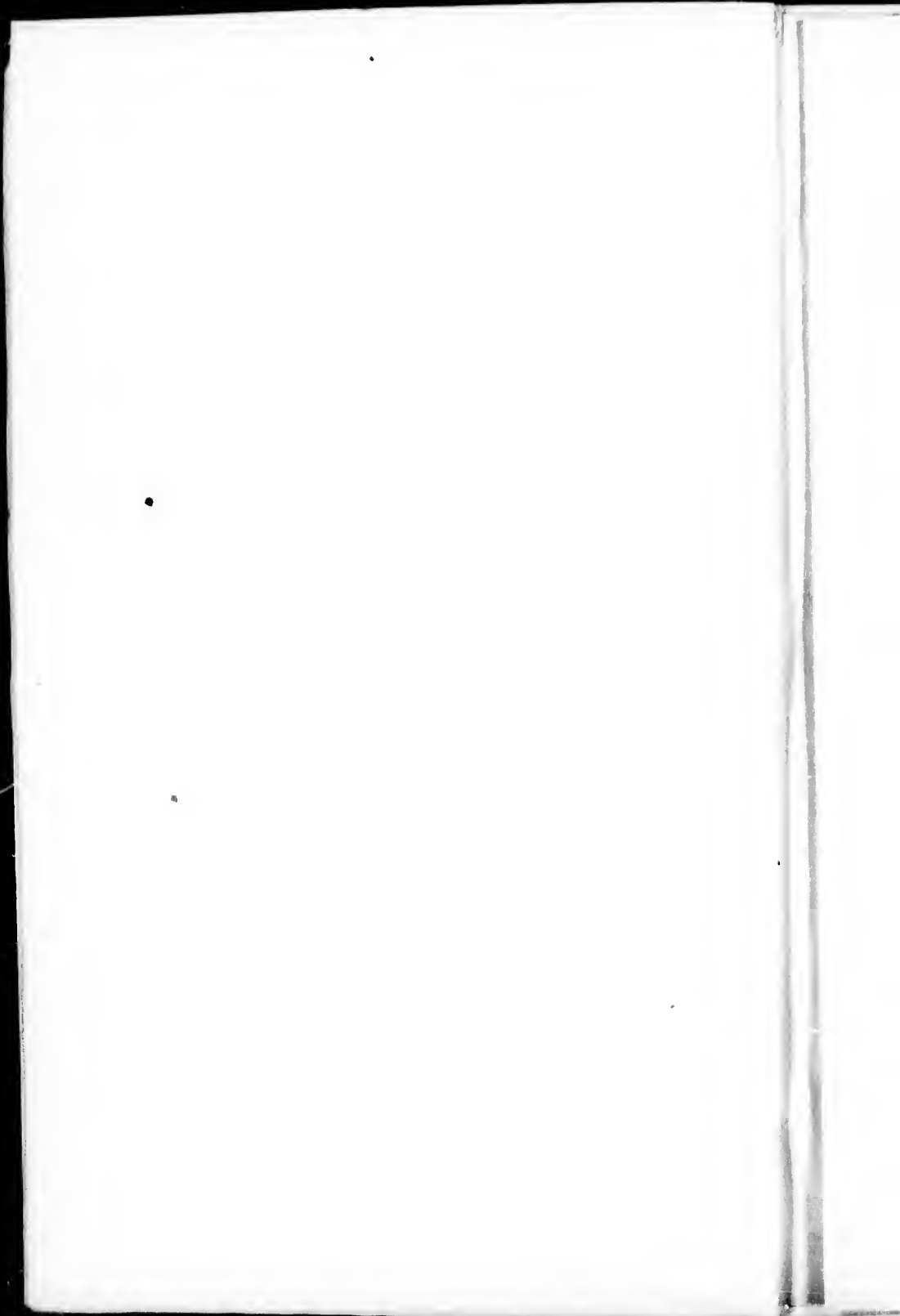
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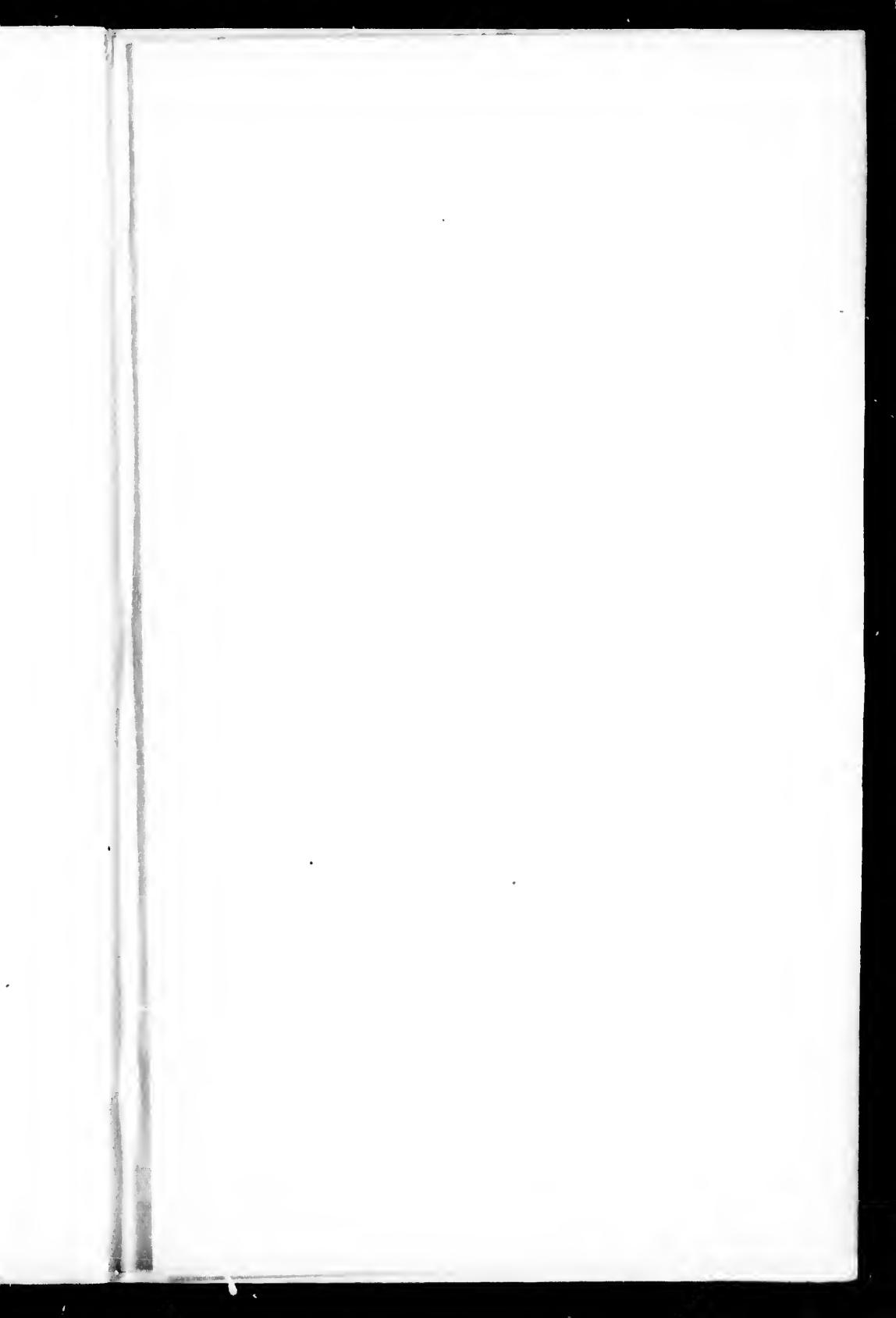
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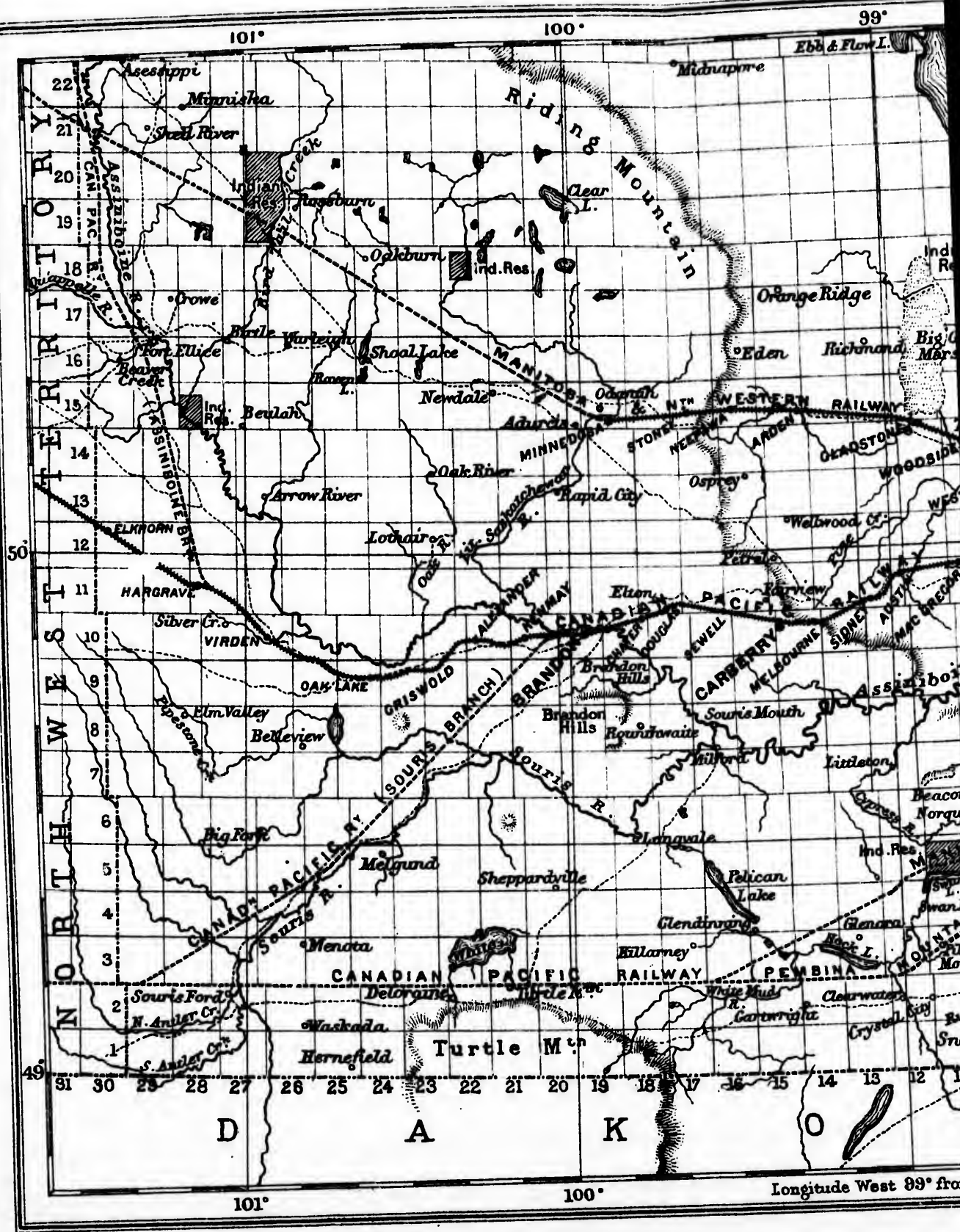


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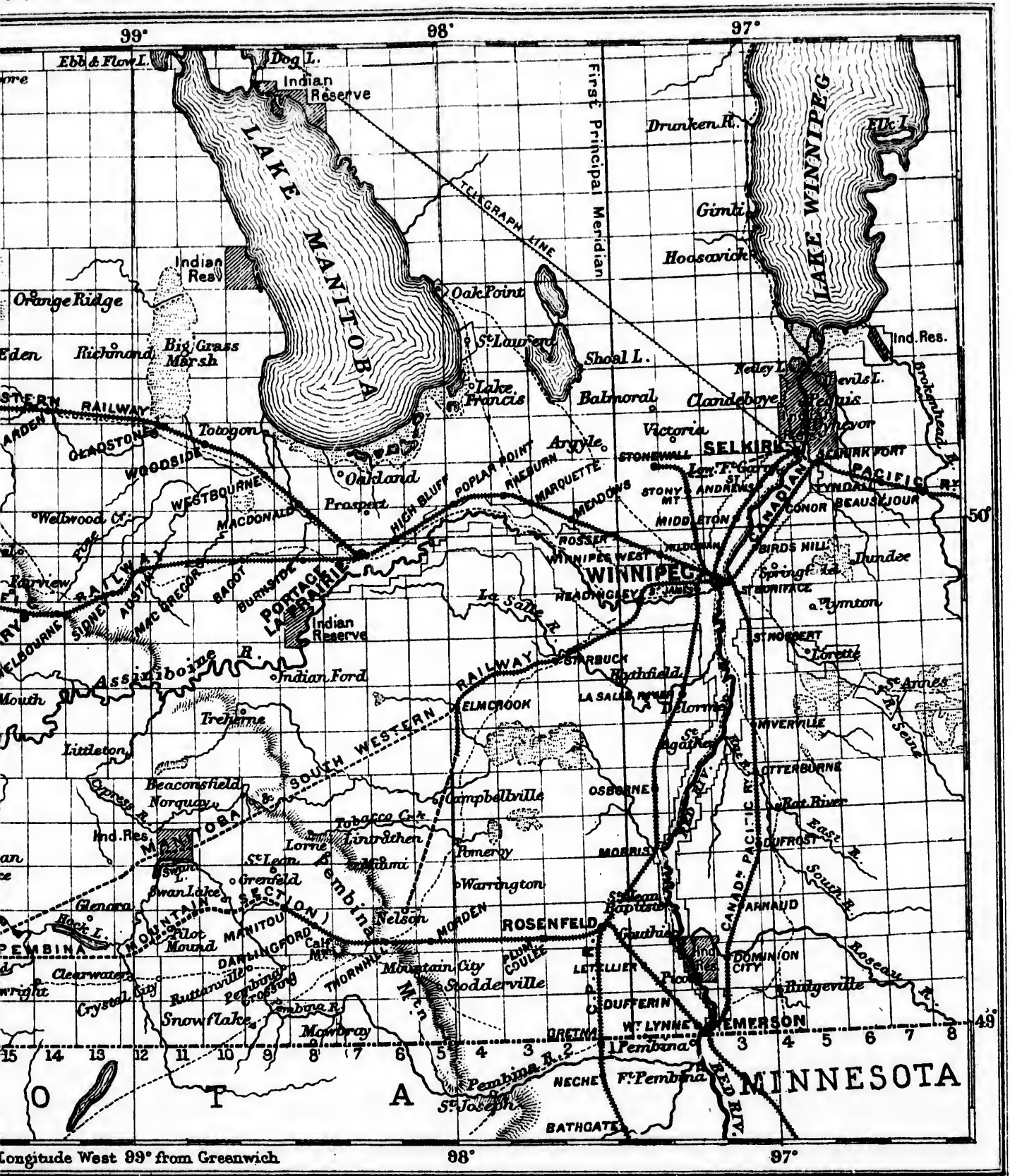




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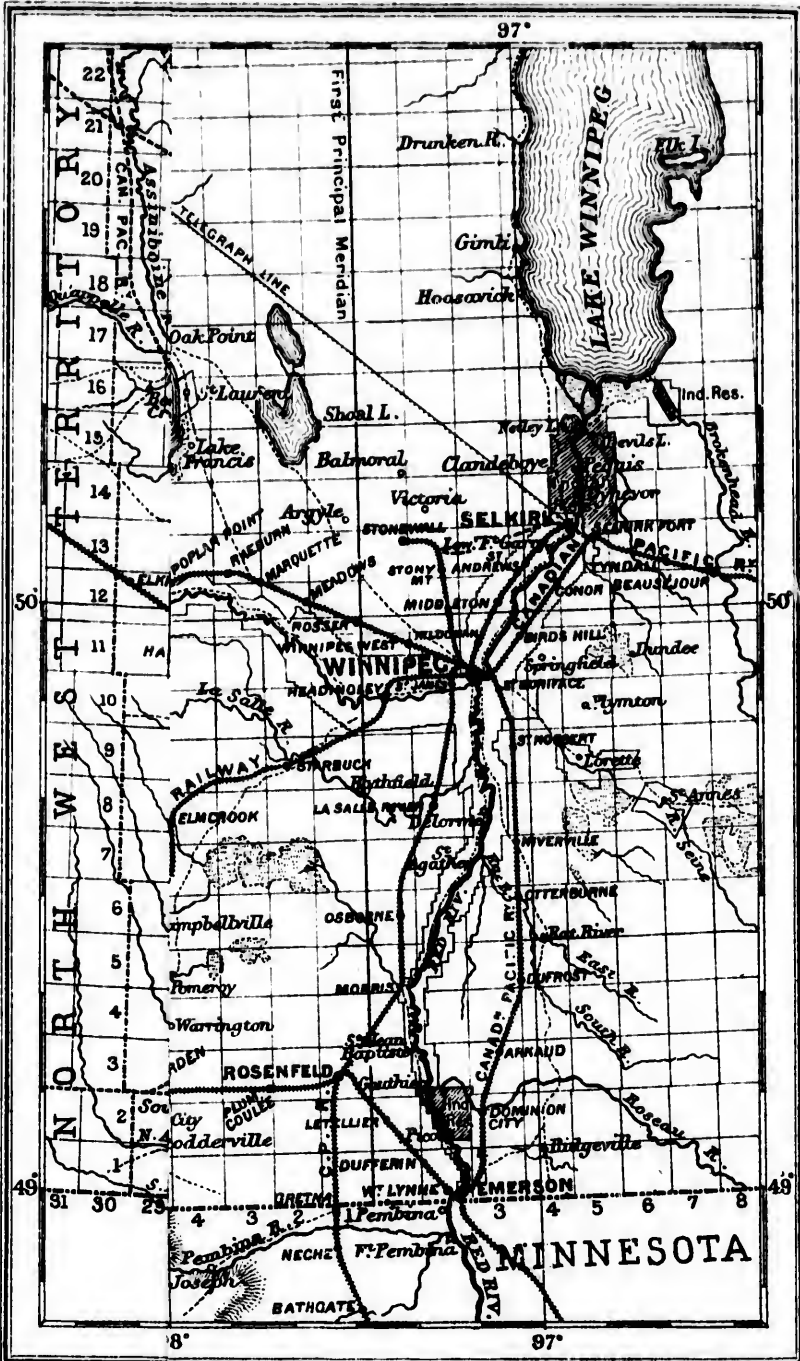


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MANITOBA



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MANITOBA DESCRIBED:

BEING

A SERIES OF GENERAL OBSERVATIONS

UPON THE

*Farming, Climate, Sport, Natural History,
and Future Prospects of the Country.*

BY

ROBERT MILLER CHRISTY.

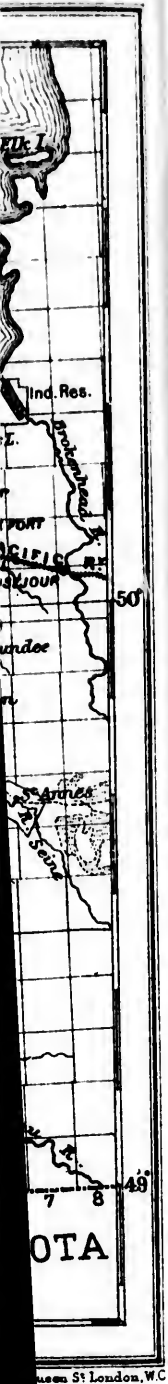
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1885.



“There is, indeed, scarcely a British Colony, or a State of the Union, which has not an agency in this country engaged in distributing the most glowing accounts of the unrivalled riches, above ground and beneath, which are waiting to be picked up in their respective territories. And I am far from saying that many of the documents so circulated are not carefully prepared, and their contents, to a great extent, justified by the facts. But they are not what is needed. Not one of them, that ever I saw, tells a youngster how he will be housed and fed, what wages he may hope to earn, what sort of company he will be thrown amongst.”—THOMAS HUGHES.

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PREFACE.

IN launching this, my little bark, upon the troubled sea of Literature, I have only to express one hope : that it may escape those perils of shipwreck and collision which, upon waters so crowded with crafts bearing larger and more valuable cargoes of intellectual goods of every kind, are always imminent ; and that, in the course of its voyages, it may ultimately reach many havens where the commodities with which it is laden will be welcomed and valued. The good name of the firm under whose auspices it now first sets sail is at least one guarantee that this hope will meet with fulfilment.

For an explanation of the scope and object of the work the reader is referred to the Introduction.

My warmest thanks are due to Sir Charles Tupper, the Canadian High Commissioner in London, who has most kindly supplied the very excellent map of the Dominion which accompanies this work.

R. M. C.

CHELMSFORD, *January* 15, 1885.

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MANITOBA DESCRIBED.



INTRODUCTION.

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I N laying this little book before my indulgent readers, I cannot claim, as many authors are able to do, that there is any dearth of literature upon the subject of which it treats. On the contrary, this country has, for some time past, been inundated by a surprising number of books, pamphlets, newspapers, and maps, all professing to give a true and correct account of Manitoba, and of the prospects of those who emigrate thither.

B.A.

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page 177

But every one will be agreed that there is literature *and* literature ; and, seeing that by far the larger portion of the printed matter, which has been circulated so lavishly by the Dominion Government and the Canadian Pacific Railway Company, has emanated from parties having a more or less direct and personal interest in persuading as large a number of persons as possible to proceed to Manitoba, for one purpose or another, it is plain that it must not be relied on implicitly, unless supported by a considerable amount of independent testimony. Now, I do not for one moment wish to say that there are any statements in these pamphlets which are deliberate falsehoods ; but every one who has been persuaded by them to emigrate will know that those who put forward these glowing descriptions are apt to speak enthusiastically of the advantages of the new country, whilst its disadvantages are kept so completely in the background, and are passed over with such scanty notice, that the simple-hearted emigrant is in danger of falling into the belief that he has only to proceed to the country in question in order to reach a Utopian land where his

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troubles will be for ever ended. For instance, in all the pamphlets that have been issued concerning Manitoba, I have been unable to find, after a brief search, that the mean winter temperature is anywhere straightforwardly stated, though figures are given from which this may be ascertained. There is, however, plenty of information as to the delights of the summer season. That these pamphlets should endeavour to put the best side outermost is only natural; but I know well, from personal experience, how old Manitoban settlers despise such literature as that I speak of; and many a time have I heard them apply epithets to it which I should not care to repeat here. They know well enough that the very best of new countries present some hardships that must be contended against.

So far as I am aware, almost the only independent and detailed evidence as to the good or bad prospects of the Manitoban settler, coming direct from an entirely disinterested person who has seen the country as an emigrant sees it, is that contained in a small work by "A Retired Officer," and entitled "A Year in Manitoba." With the author of this little volume I see no reason to quarrel, but maintain, nevertheless, that his book is now to a large extent out of date, having been written during 1881 (now more than three years since), at a time when Winnipeg was only able to boast some 8,000 inhabitants, and our author, by his own confession, had not been further west than his own residence at Headingley, thirteen miles from the capital. Moreover, at that time the railway extended but a few miles to the west of the city. Now, Winnipeg is a place with 30,000 inhabitants; a complete line of railway has been pushed over a thousand miles to the westward, having its present terminus among the Rocky Mountains; six other lines of railway also run into the city; towns and villages have sprung up in every direction throughout the province; and it is not too much to say that the country has itself been made within these last three years—that in that time it has changed more, and made greater progress, than any agricultural part of England usually does in three times thirty.

For these reasons I venture to think that a completely independent account of how the country and its prospects

appeared to me during a recent visit will not be altogether unacceptable. In the first place, let me most clearly and distinctly state that my evidence is absolutely without bias, either one way or the other. I have not one single cent invested in Manitoba, nor any other reasons whatsoever likely to induce me to represent things there otherwise than as they really are. I paid my own passage out; went how, when, and where I pleased; and, indeed, held no intercourse with interested officials until three days before leaving. I was especially careful to gain my information direct from genuine settlers; and, in the course of journeys from place to place, undertaken with other objects in view, I stopped at their houses, ate at their tables, saw them at work, and generally mixed with them a great deal. I did not depend upon the railway for my ideas of the country, as do numberless persons who, coming as they say to inspect it, rush westward to the Rocky Mountains, afterwards writing newspaper articles which provoke the scorn of the hard-working settlers. The last thing I did before leaving the country was to make an extensive expedition northward towards Fort Ellice, in order to see something of the more thinly-settled portions of the country. Therefore, whatever my readers may think of the use I have made of my opportunities, I must ask them to admit that no better means could have been taken to ascertain the truth. If I have spoken enthusiastically, I have only done so after personal investigation and inquiry; and I have not in the slightest degree endeavoured to conceal certain serious drawbacks which I found.

Once for all, I wish here to acknowledge the great hospitality which I received at the hands of many English gentlemen and others who, whilst on my journeys and at other times, treated me as they would have done an old acquaintance. Undoubtedly, in young countries like Manitoba, hospitality is dispensed with a more liberal hand than in older ones. I met with innumerable acts of kindness, which I should never have expected at home; or, expecting, should certainly not have received. To my friends, Messrs. Arthur S. Thompson and E. E. T. Seton, of Carberry, my thanks are especially due.

I must ask those of my readers who find the minute

details, into which I have entered in some parts of my subject, to be irksome, to remember that they are inserted for the benefit of those who would most desire such pointed information.

Finally, let me repeat that this book is not written with the object of "cracking-up" the country of which it treats, nor for the purpose of persuading any persons to emigrate thither; but, having gone to that country before the wheat was in ear, and remained till the harvest was got in, and winter had laid its grasp upon the soil, and having, during that time, been much interested in all that was to be seen, I made it an object to inquire into everything concerning the present state and future prospects of the country, with results which are embodied in the following chapters. Although I do not pretend that this book is the only one which an intending emigrant to Manitoba need consult, I have in it endeavoured to give just such an unbiassed account of what I saw and thought as I should like to have before me for my guidance were I a young person in doubt as to the advisability of emigrating to that country; and I can honestly ask my readers to accept the following statements exactly as they would the testimony of one of their own personal friends whom they had sent out to report impartially on the present state of Manitoba.

I left Liverpool for New York by the Inman Line steamer *City of Chester* on July 5, 1883, and duly arrived at the latter place on the morning of the 14th, after a voyage which was prosperous and uneventful, except for the occurrence of a few hours of very bad weather when four days out. The violence of the sea completely carried away the wheel-house on the stern of the vessel and did other damage, but the remainder of our time at sea was as pleasant as it could well be. However, an Atlantic voyage has been so often described that I shall make no attempt to describe it again. After spending a few days sight-seeing in New York, I proceeded on towards Winnipeg by way of Niagara, Chicago, and St. Paul, making a short stay at each of those places. In Winnipeg only a few hours were spent before the journey was again resumed. At Carberry, 105 miles west of the capital, I found a warm welcome from kind friends, and saw the first of a settler's life on the Manitoban prairies, the

details of which I shall attempt to sketch in the following chapters.

Since this book was completed (in April, 1884), I have again had occasion to undertake a journey to America, and have paid two distinct visits to Manitoba. These visits, though somewhat brief, afforded a most excellent opportunity for corroborating and adding to the observations made during my first and more extended stay in that country. I have thought it desirable, in most cases, to insert as foot-notes such alterations or additions as I desired to make, rather than to insert them in the original text; and, if the fewness of the alterations which I have thus made affords any clue as to the reliability of what I originally wrote, my readers may certainly place great faith in my observations.

In a general way, I have but few additional remarks to offer. The amount of visible progress which the country had made since my first visit was not great; the depression in business was still considerable, but certainly not so severe as during the previous autumn. The weather, during the first half of the year, had been in every way propitious, and prospects of an abundant harvest—to which every one was anxiously looking forward—were everywhere to be seen. These expectations were not, at that time, without good foundations; but, unfortunately, since my return home, accounts have come to hand that wet and stormy weather has seriously interfered with the getting-in of the crops. In other respects, the situation did not appear to me much altered.

It should be observed that the dates in the text refer to the year 1883, those in the foot-notes to 1884.

CHAPTER I.

GENERAL OBSERVATIONS ON THE PHYSICAL AND OTHER
FEATURES OF MANITOBA.

TEN or twelve years ago, had any man in England been asked the whereabouts of Manitoba, it would not have shown any unpardonable ignorance on his part had he replied that he did not know; for at that time the province had scarcely entered upon its existence. Now, however, the case is very different. Not even the dullest can have failed to gain some knowledge of this much-advertised country. If we pick up almost any local newspaper, or enter the small general shop which serves as Post-Office in some remote country village, there we are almost certain to be confronted by an announcement as to how much land may be obtained in Manitoba as a "free grant" from Government. There seems, nevertheless, to be still some misconception left, many persons using the name Manitoba to signify a much larger tract of country than that to which it really belongs. Manitoba is situated in what is now commonly known as the North-west, or the Canadian North-west; but still it is not one of the "North-west Territories," being a province of the Dominion of Canada, and having a separate Provincial Government of its own. The enormous region known as the North-west Territories, including the adjacent islands in the Polar Sea, covers an area of 2,665,252 square miles. It was acquired by purchase from the Hudson's Bay Company, and added to the Dominion of Canada in 1870. In 1882 a portion of this region was divided up into four huge districts or territories, which lie to the north and west of Manitoba, and have received the names of Assiniboia (95,000 square miles), Alberta (100,000 square miles), Athabasca (122,000 square

miles), and Saskatchewan (111,000 square miles). It may here be explained that in this book I am only concerned with Manitoba proper.*

Manitoba, with a greater or less extent of the country surrounding it, has, in the past, been known by the following names, among others:—Red River Country, Red River Settlement, Fort Garry, Selkirk Settlement, Hudson's Bay Territory, Rupert's Land, and Assiniboia. Since its formation into a province in the year 1870, its boundaries have undergone extension; and, at the present time, it is proposed to extend them again as far to the north as Hudson's Bay. Then, as now, the 49th parallel of north latitude, forming the boundary-line between Canada and the United States, constituted its southern limit. On the west, the 99th deg. of west longitude; on the north, a line drawn 30 min. north of the 51st parallel; and on the east, the 96th deg. of west longitude, formed its other boundaries. The province at that time measured about 135 by 105 miles, and contained an area of 14,340 square miles, or 9,177,600 acres, with a total population of about 18,000 persons, including nearly 7,000 Indians. Fort Garry, the well-known chief trading station of the Hudson's Bay Company, or rather the settlement around it (numbering, at that time, some 250 souls), which had now come to be known as Winnipeg, was the capital; whilst there was also a small settlement at Portage la Prairie, as well as a considerable number of Half-breeds, Indians, and old servants of the company located along the banks of the Red River and the Assiniboine. But in 1880 the area of Manitoba was increased by the addition of territory on all sides except the south. On the south, the province is still divided from Minnesota and Dakota by the 49th parallel of north latitude; it extends northward as far as 52 deg. 50 min. north latitude, taking in the major portions of the great lakes of Winnipeg, Manitoba, and Winnipegosis; on the west, it adjoins the territory of Assiniboia in 101 deg. 20 min. west longitude; while on the east it extends to the Lake

* Those desiring to know more of the great country to the north and west of Manitoba should consult "Manitoba and the great Northwest" (Jack, Ludgate Hill, London, 1883), by Professor John Macoun, Botanist to the Dominion Government Geological Survey.

of the Woods, joining on to the province of Ontario in west longitude 95 deg. It measures, therefore, about 260 miles from north to south, 300 from east to west, and contains, roughly, an area of about 80,000 square miles, or 51,000,000 acres. But it should be observed that for some time past the respective Governments of Ontario and Manitoba have carried on a very vigorous discussion as to which shall possess the stretch of country lying between the Lake of the Woods and Lake Superior. If this is ultimately awarded to Manitoba, the province will then extend eastward as far as the 89th deg. of west longitude, and will contain about 123,200 square miles, or 78,848,000 acres, which is an area considerably larger than that of the United Kingdom. As this area is the one given in the Government pamphlets, it has been usually employed in making calculations.

The country thus marked out occupies an almost exactly central position in North America, hence the name of "the Centre Province," which is occasionally applied to it. By the route at present proposed for the Canadian Pacific Railroad, Winnipeg will, I believe, be within twenty miles of being equi-distant from Montreal and Port Moody, the two termini of the line; while its position in the continent is almost equally central, reckoning from north to south. This fact may astonish some people, but it is true nevertheless. There are numbers of persons in England who, having never troubled themselves to consult a map in order to ascertain the truth, and who—forgetting that Manitoba is far removed from that great equaliser of temperature, the sea, and consequently can have its atmosphere warmed by no such kind friend as the Gulf Stream, which renders our climate so mild and damp,—have contracted the not unnatural idea that, on account of its exceedingly cold winter, Manitoba must be a country not very far removed from the Arctic Circle. I have sometimes amused myself since my return by asking friends how many hundreds of miles north of London they imagined Manitoba to be situated; and the replies have actually ranged from "a few miles" up to "about 900"! No wonder, then, that some have been astonished when they have been informed that Winnipeg, being situated close to the 50th parallel, is

nearer the latitude of Paris than that of London, or more than 1,000 miles from the Arctic Circle.

The origin of the name Manitoba* which I heard given differs considerably from that which Professor Tanner mentions in his recent "Report." It means literally "The voice of the Great Spirit," and is taken from the Lake Manitoba, so called by the Indians, it is said, from the fact that at a certain part of what is known as the "narrows" of the lake, the rushing of the water produces a sound which is superstitiously said by them to be "The voice of the Great Spirit" (*Manitou*). Unless I have been wrongly informed, the name was never applied by the Indians to the country; but, when the province was formed the euphonious Indian name of the lake was given to it.

From the foregoing, it may be seen what an exceedingly small portion of British North America (or, as it is now called, the Dominion of Canada†) Manitoba forms. An illustration may serve to make this still plainer: if we take a piece of paper exactly one yard square to represent the size of Canada, and mark off, in any part of it, a space about six inches square, that portion will represent the size of Manitoba. The Dominion of Canada has an estimated area of 3,470,392 square miles, and is actually larger than the United States, not including Alaska. It is England's largest, nearest, and by far her most important colony. The natural wealth of Canada is immense. Provided with magnificent sea-ports, both on the Atlantic and Pacific coasts, she has also an unusually excellent internal water communication; her stores of coal are enormous; her forests are inexpressibly vast; her minerals, in some regions, are in immense abundance; her fisheries are among the most valuable in the world; one vast area has unrivalled corn-growing capabilities; while a region still vaster has, for over two centuries, supplied wild animals provided with

* In England the name is frequently pronounced Manitobá, with the accent on the last syllable; but in the country itself I never heard it otherwise than Manitóba, with the accent on the penultimate syllable, as in Dakóta.

† Newfoundland, which has an area of 40,200 square miles, and is England's oldest colony, forms no part of the Dominion of Canada. It is still a separate colony, with a Government of its own.

valuable furs, which have enabled one of the largest trading companies in the universe to pay a steady dividend. But by no means the smallest part of Canada's wealth lies in her hardy, independent, intelligent, industrious, and pushing population, which, since the year 1784 (that is, in exactly a century), is said to have increased no less than 3,000 per cent., or more than twice as fast as that of the United States during the same period. Canada alone, had England no other dependencies, has regions of such great fertility, and of such vast extent, that she would be able to relieve the mother-country of her surplus population for very many years to come. In spite of all the noise that has been made over the few thousand colonists who have gone to Manitoba, it is certain that not one ten-thousandth part of all the good and fertile land in the North-west is now under any sort of cultivation. Were the whole of this vast region thickly settled, Canada would be able to supply us with her surplus grain in such immense quantities that we should scarcely need to trouble our heads about that arriving from any other quarters. On the whole, it would be far more unreasonable to doubt that, in the future, Canada is destined to become a great and powerful nation, than it would have been, a few hundred years ago, to doubt that England would ever rise to the proud position she now occupies.

But I have been diving into the future where prophets and seers alone are accustomed to tread, and, not being one of these, I will retrace my steps to speak of the present state of Manitoba.

Manitoba is often spoken of as the "Prairie Province," and it is well so-called—prairies being its most striking feature—though, eastward from Winnipeg, it is true there is a region of almost unbroken forest, widely different from the kind of country extending for hundreds of miles west of the city. Certainly the province cannot be generally described as a beautiful or very picturesque one, in the usual sense of those words. No country, of which prairies are the main feature, could well be so, even though watered by great rivers and in places covered by a dense growth of small timber. Some parts of Manitoba, therefore, are of an undeniably dismal aspect; but, speaking personally, I

do not consider that by any means the whole of the country answers to this description: on the contrary, I saw several very picturesque scenes—notably Shoal Lake. Not only Manitoba, but the whole North-west has a romantic interest and a fascination about it which must inevitably be felt by all travellers who have the slightest appreciation of Nature in her wild and untamed aspects. The unknown, solitary expanse of dark pine forests, the great herds of wild buffalos which formerly existed, the roving Indians, the enormous lakes and solitary rivers, the desolate, waste sandhills, and the fertile, endless prairies, have all their charms, even for one, like myself, who has but seen their outskirts.

It does not take much research to find that the country of which I speak—and not only Manitoba, but much of that beyond—has deeply impressed nearly all intelligent travellers who have visited it for the last twenty or thirty years. Many of them have expressed in powerful language their belief that in the near future it is destined to become a thriving agricultural region, supporting a large population. How near their prophecies are to being fulfilled will, I think, be seen from the few paragraphs I will next quote.

Captain (now Colonel) Butler, who, as I learned from the newspapers, visited the North-west during the time I was there, writes, in his charming book, "The Great Lone Land," of the district around the forks of the Saskatchewan: "It is impossible that the wave of life which rolls unceasingly into America can leave unoccupied this great fertile tract. . . . As I stood in twilight, looking down on the silent rivers, merging into the great single stream which here enters the forest region, the mind had little difficulty in seeing another picture, when the river forks would be a busy scene of commerce, and man's labour would awaken echoes now answering only to the wild things of plain and forest." Elsewhere the same author says: "The plain through which the Red River flows is fertile beyond description."

Professor Henry Y. Hind, writing in 1860,* says: "Many

* "Narrative of the Canadian Red River, Assiniboine, and Saskatchewan Exploring Expeditions," vol. i., p. 191.

million acres of land which cannot be surpassed for fertility, being composed of rich prairie mould from 18 in. to 2 ft. deep, lie free and unsettled on the banks of Red River, the Assiniboine, and their tributaries, inviting settlement." Further on (p. 226) he writes: "No fact, however, is more satisfactorily determined than the adaptation of the climate of Assiniboia [now Manitoba] to the cultivation of wheat. Forty bushels to the acre is a common return on new land."

The report of Mr. J. A. Dickenson to Professor Hind, the head of the expedition, after the former had returned from a branch expedition which he had undertaken in order to explore the valley of the Qu'Appelle, reads now like true prophecy. Having ascended an elevation near the Crooked Lake, he writes (p. 373): "As I stood upon the summit of the bluff, looking down upon the glittering lake 300 ft. below and across the boundless plains, no living thing in view, no sound of life anywhere, I thought of the time to come when will be seen swiftly passing along the distant horizon the white cloud of the locomotive on the way from the Atlantic to the Pacific, and when the valley will resound with the merry voices of those who have come from the busy city on the banks of Red River to see the beautiful lakes of the Qu'Appelle." It is needless to say how nearly all this has been fulfilled. The railway, which at that time was scarcely even projected, now passes hundreds of miles to the westward, though not yet quite to the Pacific; the Qu'Appelle valley now contains the largest arable farm in the whole world; and "the busy city on the banks of Red River," then a village of 150 inhabitants, is now an accomplished fact.

In 1865, Viscount Milton and Dr. Cheadle, in their fascinating book, "The North-west Passage by Land," which describes the hardships of their journey from the Atlantic to the Pacific, and which most people will have read, speak (in the preface) of "the magnificent regions of the Red River and Saskatchewan, where 65,000 square miles of a country of unsurpassed fertility and abounding in mineral wealth lies isolated from the world, neglected and almost unknown, although destined, at no very distant period, perhaps, to become one of the most valuable

possessions of the British Crown." Again (p. 41), they say: "From Red River to the Rocky Mountains, along the banks of the Assiniboine, and the fertile belt of the Saskatchewan, at least sixty millions of acres of the richest soil lie ready for the farmer when he shall be allowed to enter in and possess it. This glorious country, capable of sustaining an enormous population, lies utterly useless, except for the support of a few Indians and the enrichment of the shareholders of the Last Great Monopoly."

The Rev. James McGregor, D.D., who accompanied the Marquis of Lorne on his journey through the North-west Territories in 1881, afterwards wrote as follows in the *Contemporary Review*:—"As day after day, and week after week, we drove across those fertile regions, it was a daily wonder to us all how they had so long been kept hidden from the hungry millions of Europe. From Winnipeg to the Rocky Mountains, we did not come across a thousand acres which were not fit for grazing or for agriculture.* Of the marvellous fertility of the first prairie steppe, the Red River Region, there is no doubt whatever. The soil is a rich, black, friable mould, from 2 ft. to 4 ft. in depth, and has in some places yielded crops of wheat for fifty years without manure."

Nothing would be easier than to multiply these quotations to any extent, for such enthusiastic descriptions are the rule among travellers, and it would need some search to meet with exceptions. To the testimony already brought forward, I will merely add a few words to the effect that, although I have seen but a comparatively small portion of the lands in the valleys of the Assiniboine and Red River, and nothing at all of those in the valleys of the Saskatchewan and Qu'Appelle,† the innate fertility of the soil, and the fair excellence of the crops raised on it, by means which, if adopted in England, would result in complete failure, far surpassed my wildest expectations. It is, I think, almost impossible for any one to travel through the North-west without being impressed with the fact that, in the course of

* In this case, then, I think His Excellency must have been conducted through the pick of the country, for I saw hundreds of acres that were practically worthless for either purpose.

† See p. 142.

time, when railways shall have rendered its many capabilities available, the country will have before it a bright future.

There could, however, hardly be a greater mistake than to imagine *all* the land of Manitoba to be of this excellent character ; for, although I do not believe that the better parts could, for fertility, be surpassed in the world, still there are parts so execrably bad that I hardly know of any use on earth to which they could be put. They *might* keep one or two sheep to the square mile, but for any other agricultural purpose I believe them to be as valueless as the middle of the Atlantic ! I allude to the ranges of sand-hills which occupy a very large stretch of country—probably not less than 1,000 square miles—on the north bank of the Assiniboine, sending out spurs far to the northward, which, crossing the main line of the Canadian Pacific Railway, have the tendency of very much disappointing travellers who view the country merely from the line. The sand-hills proper are merely wind-blown dunes of absolutely pure sand. They are never of great height, and are separated by hollows, in the bottoms of which water often stands. A few spruce-trees or stunted oaks and poplars are generally scattered over their surface, but never grow densely. Willows and various other shrub-like trees often surround the ponds. The surface of the sand is covered by a dry, scant growth of benty grass, which, with a plant known to settlers by the name of “ground juniper,” and which sends out long, rope-like branches, thickly covered with leaves that cross and recross with one another till the sand is covered with a thick carpet of evergreen verdure, doubtless has a very marked effect in preventing the shifting of the sand during high winds. These desolate sand-hills are the home of many a bright flower and many wild birds and other animals, which might often live long months together without seeing a human being.

Beside the sand-hills proper, there are in their neighbourhood large tracts of sandy soil, which are of next to no value, except as grazing-lands, and very little for that. In some parts, too, immense numbers of erratic boulders obstruct cultivation ; in others, innumerable ponds, lakes, and “sleughs” render the ground very wet ; while in other

places the soil is hardly as yet capable of cultivation, on account of the fact that in the spring time it is covered with water, resulting from the melting of the snow. It is evident, however, that these last are difficulties that can, and doubtless will, be remedied when, all the first-class land being taken up, the second-class land comes to be more valuable. Drainage is an operation which is hardly likely to recommend itself to the Manitoban farmer for a long while to come yet; but there is no question that very much of the land at present wet could, by its aid, be rendered fit for cultivation. It not unfrequently happens that such land lies on the highest ground, as, for instance, the wet districts round Rapid City. This is due to the retentive nature of the clay sub-soil. The fact, too, that most of the rivers flow along the bottoms of more or less deep gorges will be found of great advantage when drainage comes to be undertaken.

A friend of mine, who has seen a good deal of the country, has made a very rough calculation. He estimates that, of all Manitoba, one-third is prime land, ready for the plough; one-third is second-rate, but most of it capable of being made almost as good as the first; and one-third is almost worthless. In this I think my friend is not very far wrong.

Throughout the entire province there is little variation in the nature of the soil which forms the surface of the ground. Except upon the sand-hills, it is everywhere a fine, black, powdery, and almost soot-like mould, too sandy in some places to be of much value, but elsewhere of surprising fertility and great productive power. Soil it can hardly be called: manure would be a better name. In the next chapter (where also will be found some analyses) I have given reasons for believing that its fineness, blackness, and fertility are due to the action of prairie fires. Nothing speaks more strongly in favour of the soil of the prairies of the North-west than the fact that, go where you may, nearly every settler assures you that nowhere can better soil be found than that of the district in which his farm happens to lie. Over and over again have people told me this, till there is scarcely any well-settled portion of the Province of Manitoba which I have not been assured is absolutely the

best. I do not think Mr. Hepple Hall is very far wrong when, in his "Lands of Plenty," he says: "The soil, it may be safely stated, is as fertile as any the sun shines on in this world." The thickness of this stratum of black loam varies considerably: in some places it is barely one foot, in others four; but the average is perhaps about eighteen inches. In some parts a high wind will cause the surface of ploughed land to drift when very dry. Below the loam is, in most parts, a stratum of very fine, impervious, sandy clay, varying in thickness from two to four feet, and suitable for making into bricks, as is done near most of the towns. Beneath the clay, again, is often an unknown thickness of fine, pure sand, which forms the sand-hills when it comes to the surface. In some parts large numbers of erratic blocks of granite and other sorts of rock strew the surface or are found in large quantities beneath it; but for some miles round Carberry I did not (with one exception) see half a dozen stones weighing as much as a couple of ounces.

There seems to be a very general, and apparently well-grounded, opinion that for the last few years the whole body of water throughout Manitoba and the North-west Territories has been gradually rising; in fact, that it undergoes periodical fluctuations. Thinking this an interesting circumstance, I endeavoured to inquire into the matter, but with only a very partial amount of success, the great majority of the settlers having been in the country much too short a time for them to have made any extended observations. The belief in the fluctuations, however, appears to be wide-spread, and not a few settlers could give me what seem to be actual instances. Some appeared to be of the opinion that the water had now been falling for a year, or perhaps more.

About two miles to the south of Carberry is a large "muskeg," or swamp, over a square mile in area, and presenting a good deal of open water. Mr. William Harkness, who lives on the edge of it, told me that a few years since grass could be cut with a mowing-machine in many parts where now is open water, upon which terns, ducks, and grebes disport themselves. There is a long, narrow sleugh running up towards Carberry on the eastern side, concerning which a farmer stated that he could now procure water for his cattle

at a spot something like a mile nearer to the town, and closer to the beginning of the sleugh, than he could five years ago. I was told of other sleughs in that neighbourhood which formerly could be crossed with a wagon, but are now almost impassable. But the most valuable piece of testimony I received was from the Rev. H. McKellar, of High Bluff. This gentleman has an extensive knowledge of some of the more remote parts of the country, having, for many years past, acted as missionary. The regular periodical rise and fall of the water seemed to be a phenomenon which he fully recognised, and he was inclined to believe that it passed from a maximum to a minimum in about seven years. At present the water was slowly falling, having passed its maximum height about two years since. Several years ago, when returning from Prince Albert, on the Saskatchewan, whither he had gone a year or two before, he was able to drive through places which had been impassable on the journey up, and there were other unmistakable signs of a falling of the water. On the whole, although the exact period occupied by each rise or fall may at present be unascertained, it hardly seems reasonable to doubt that some such fluctuation does actually take place; and, seeing that periodical fluctuations in the height of the water in the Great Lakes have, for years, been well known to occur, it seems only reasonable to suppose that these two interesting phenomena may have some connexion.

Professor Hind makes a good many remarks upon this subject ("Exploring Expeditions," vol. i., p. 18), some of which I take the liberty of quoting: "The occasional fluctuations in the level of the waters of Lake Superior certainly exceed 3 ft. . . . In the region about Lake Superior the years 1845-6 were unusually dry, and in 1847 the lake had reached a very low stage of water. The years 1849-50 were wet, and the level of the lake in 1851 was from 3 to 3½ ft. above the level of 1847."* The Professor adds: "The variations in the levels of the great Canadian lakes are phenomena of the utmost importance

* "Report on the Geology of Lake Superior District," by J. W. Foster and J. D. Whitney, U.S. Geologists.

to commercial interests. The supply of water to the Erie and Welland Canals is dependant upon the relative height of the water of Lake Erie. Periods of great anxiety have occurred among mercantile men at Buffalo respecting the supply of water to the great artery which unites Lake Erie with the Hudson River." Professor Hind next gives a table showing the fluctuations of the height of the water in Lake Erie, as observed for many years past by various authorities :—

HEIGHTS OF WATER IN LAKE ERIE (1790 TO 1859).

<i>Maxima.</i>	<i>Minima.</i>
1st. 1790, 5 ft. 6 in. above lowest level.	1st. 1795.
2nd. 1801.	2nd. 1810, 6 ft. below 1838.
3rd. 1815, 2 ft. below 1838.	3rd. 1820, zero of comparison.
4th. 1827-30.	4th. 1832.
5th. 1838, 5 ft. 3 in. above zero.	5th. 1846, 2 ft. above zero.
6th. 1853.	1859 (April), 5 ft. 6 in. above zero.

After commenting on these figures, he says : "As a result of observations extending over twelve years (1846 to 1857) in the variations of the level of Lake Ontario, the following facts have been established :—(1) The mean minimum level is attained in January or February. (2) The mean maximum level in June. (3) The mean annual variation is 25 in. (4) The maximum variation in twelve years was 4 ft. 6 in. (5) There is no periodicity observable in the fluctuations of the lakes, and recent observations tend to show that there is no flux and reflux dependent upon lunar influence."* With the first three paragraphs I am not particularly concerned. They treat merely of an annual variation which is very easy of explanation. The water is lowest at the time when all the small feeders of the lakes are frozen solid, and anything that falls will remain upon the ground; while the maximum is attained during the summer month of June, when all the snows of winter have been melted and poured into the

* Whittlesea and Dewey, *American Journal of Science and Art*, May, 1859.

swollen streams to be carried down to the lakes. A similar fluctuation may be observed daily in many—perhaps all—rivers which have their origin among snow-capped mountains. They are highest during the day, when the sun is melting the snow, and lowest during the night, when the snow is not being interfered with. This annual variation amounts to only twenty-five inches, whilst I am speaking of a variation of several feet in several years. Twelve years seems to me altogether too short a period of observation for the statement to be made that “no periodicity is observable in the fluctuation”; for reference to Professor Hind’s table shows that there is a certain amount of periodicity observable, and, although there are exceptions, that the passage from a maximum to a minimum, or *vice versa*, occupies about six years, or not much different from that which is stated to be the case with the water throughout the North-west. This latter, if it really takes place, will, from time to time, exercise a considerable influence on the “sleughs” and “muskegs” on the prairies, and it seems probable that those settlers who have dug their wells during the recent wet years will shortly find it necessary to deepen them. It may further be observed that frightful floods, consequent upon the overflow of the Red River, are reported to have taken place in 1776, 1790, 1809, 1826, and 1852, all of which dates, except 1809, correspond with those mentioned by Professor Hind as having been marked by a maximum of water in Lake Erie. Whether or not these few remarks may ever assist in throwing light upon the subject I cannot say. They are merely given here for what they are worth.*

* The fact that fluctuations in the water-level do take place in the North-west has not escaped the notice of the members of the Geological Survey of Canada, as reference to the reports will show; but only a *sinking* seems to have been observed by them. Professor Selwyn, the director, speaks of this in an account of a journey across the country in 1874.

CHAPTER II.

ON THE ACTION OF PRAIRIE FIRES IN THE CANADIAN
NORTH-WEST.

THERE is a romance about the vast prairies of America which is not likely soon to disappear. All of us from our childhood have read tales of Indians, of hunters and fur-trappers, of wolves and of buffaloes, of the boundless extent of the prairies, and of the vast conflagrations which often sweep over their surface. These and other things have all helped to create in our minds a feeling of interest in these great unending meadows; but, to persons who have travelled over their surface day after day, seeing, perhaps, neither man, nor house, nor tree,—nothing but the grassy flat, bounded by an ever-shifting, unreachable horizon,—no comparison will seem more apt than that comparing them with a great ocean. The simile is in many points strikingly correct. Everywhere stretches an ocean—not of water, but of grass; here the surface is smooth and level, but we travel on, and presently arrive at a spot where it is uneven and rolling; travellers need a compass or the stars as their guide; the smoke of a locomotive drifts away and spreads itself on the horizon like that of a steamer at sea; living creatures are comparatively seldom seen; a vulture may sail over with easy, magnificent flight, conjuring up the idea that he is the albatross of the Prairie Ocean, but usually all is still; provisions and other necessaries for a long journey have to be taken in at the outset; storms, tempests, and high winds sweep over the ocean of grass, as over that of water; if a cluster of trees does appear on the far-distant horizon, perhaps raised up and brought into view by the deceptive mirage, it calls up the idea of a cluster of palms on some low coral reef: the fact, too, that there is one great main ocean, joined by many smaller tributary seas—all these, and many other things, help to strengthen the comparison.

In many minds the question will arise: "Why should

the prairies be so bare and treeless?" The soil, in many parts at least, is abundantly fertile; the high winds that sweep over their surface are not so high but what trees could flourish. That the prairies lie too near to the icy north for trees to grow on them is ridiculous; for by far the larger portion of their area lies south of Scotland, while nowhere are the forests denser or more extensive than on their northern margin.

To the solution of this point, then, let us now turn our attention. I may at once state my unhesitating belief that the treelessness of the prairies is due to artificial causes—that the agency by which the prairies have been brought to their present state is FIRE— one of the best servants, but, at the same time, one of the worst masters, man ever had. When it is understood that, to the prevalence of Prairie Fires in the past, I am inclined to attribute, to a large extent at least, the very existence of the prairies themselves, their dreary treelessness, the fertility of their soil and its fine, black, soot-like texture, the alteration of the flora, and the extermination of certain organic creatures (which are usually abundant in similar situations, and would, I believe, exist now on the prairies had it not been for the fires), I do not know whether I shall find many persons willing to go with me so far as I go myself; but my opinions, if erroneous, are, at any rate, formed from personal observation, and after conversation with many residents on the prairies themselves.

The idea that the prairies are due largely to the action of fire is not by any means a new one. It crops up frequently as an almost accepted fact in the accounts of travel in the Prairie Region, which the more observant travellers have given us. But I do not know of any work published in this country which presents all the aspects of the question and all the facts so methodically and so clearly to its readers as I shall attempt to do.

Every one is familiar with the glowing tales of the huge fires which are well known to occur on the prairies, and of the way in which hunters and travellers are accustomed to "fight fire with fire," when placed in situations of danger. But not a few persons in this country have, I believe, a vague sort of an idea that these fires are in some way due

to natural agencies ; and, indeed, I will not deny that, before visiting the prairies, I, more or less, held this belief, if I held any belief at all—which, never having thought seriously about the matter, was hardly the case. But though there may very possibly have been instances in which fires have been caused by some such natural agencies as lightning or friction of the boughs of a tree ; though the change they have worked upon the face of the country is incalculable, and the mischief they annually cause, in one way or another, is enormous ; still, all the evidence goes to show that they are, in nearly every case, due to human agency, and I know of little or none to the contrary.

Prairie fires, in the first case, originated among the Indians who, when on their "Great Fall Hunts," used to "put out fire" as a signal to their friends that they had found buffalo, or with the object of more effectually gathering the animals together by limiting their feeding-ground. Lieut. R. I. Dodge, in his "Hunting-Grounds of the Wild West" (p. 29), says : "The Indians burn portions of the prairie [*i.e.*, the "plains" of America] every fall, setting the fire so as to burn as vast an extent of country as possible, and yet preserve unburnt a good section in the vicinity where they purpose to make their Fall Hunt. The buffaloes, finding nothing to eat on the burned ground, collect on that unburned, greatly reducing the labour of the hunt." But the buffalo has now been exterminated, and the Indians have no longer any cause for setting the prairie alight, and yet fires continue. The fires now, however, have probably a different origin from those of years past. They are, I believe, caused in nearly every case by travellers who carelessly neglect to extinguish their camp-fires ; by persons who maliciously put out fire ; or by settlers who do so with the mistaken idea that by burning the grass they lessen the number of mosquitoes, or for the purpose of improving the pasturage the following year. As the larva of the mosquito is an aquatic creature, burning the grass cannot lessen the abundance of this insect. The delusion has arisen from the fact that the mosquitoes hide in the grass, and have thus led many settlers to the belief that they are born there.

Fires may take place either in the spring or autumn. All travellers, who journeyed through the land years ago when the buffalo still existed, and the Indians set fire to the grass for convenience during their Fall Hunts, speak of the prairie fires as taking place at the latter season, before the winter snows had fallen; but I am very strongly inclined to believe that, although great fires do still come in the autumn, the majority (or, at least, many more than formerly) now come in the *spring*. The reason for this is, that the settlers do not like to put out fire in the fall, because they prefer to keep the pasturage for their cattle until as late a period in the year as possible, and also because there are at that season corn and hay stacks standing about in every direction; but in the spring-time none of these reasons have any force, and the settlers then burn the prairie, with the objects already mentioned, as soon as the disappearance of the snow has left the dead grass dry enough to "carry fire."

Towards the end of September, the prairie, which up to that time has been so gay with a never-failing succession of brilliant flowers, becomes of a uniform, sombre brown colour. A very abundant, bright-blue species of gentian is the last flower to appear, and, when that is over, nothing remains but a few stray blossoms belonging to an odd assortment of species; while the grass, hitherto green, becomes dead, dry, and highly inflammable. From this time until the first fall of snow, which often does not come till December is well advanced, is the time when the autumn fires appear; or, if they do not come then, the dead grass remains and can be burned as easily the following spring.

Before visiting the prairies of the North-west, I must confess that, like many other persons, I had no clear idea as to the great prevalence of the fires, regarding them as occasional occurrences only; but, from what I have seen and heard, I imagine that the larger portion, at least, of the whole area of the prairies gets burned over annually. This is not surprising when it is considered that the only conditions required for fire to run over hundreds of miles—or round the world, for the matter of that,—are a more or less strong wind behind and a stretch of dry grass in front. I

myself saw a fire which I had reason to believe was forty miles in length, while Professor H. Y. Hind, to whose "Narrative of the Canadian Red River, Assiniboine, and Saskatchewan Exploring Expeditions of 1857 and 1858," I have already referred, says: "From beyond the south branch of the Saskatchewan to the Red River, all the prairies were burned last autumn [1857]—a vast conflagration extending for 1,000 miles in length and several hundred in breadth." It is, however, very probable that the prairie fires occurring now in the North-west are not so extensive as formerly, although probably they are more numerous, on account of the very much greater number of persons there are to start them. That their courses should be shorter now than formerly is not due to any increase of the only natural obstacle to their progress,—namely, water, in lakes or streams,—but to the amount of *ploughed land* which now, both in spring and autumn, largely checks their movements. Even on stubble, I was told, fire could only run before a very high wind.

But, if I have been compelled to enlarge my ideas as to the ordinary frequency and extent of the fires, I have, on the other hand, found it necessary to contract my notions as to their average magnitude. It appears that on the prairies there are fires *and* fires: everything depends on the length of the grass and the strength of the wind. Every settler, with the slightest grain of forethought, provides his house and premises with what is known as a "fire-guard." This is done by the very simple process of turning a few furrows with a plough all round the premises. Many a settler, through the neglect of this precaution, or when he has allowed his fire-guard to become old and overgrown with grass, has had to bemoan the loss of a stack of wheat, oats, or hay, his farm-buildings, or a comfortable house or shanty, built with the labour of his own hands. Not a few persons, whose ideas of prairie fires have been gathered from what they have read, or from pictures in which men, horses, cattle, buffaloes, hare, deer, birds, and what not, are depicted as flying before the devouring element, may feel disinclined to believe that such a simple precaution could be sufficient to stay the onward progress of a fire; but in most cases it will suffice. On many of the drier

portions of the prairies, the grass is very short and scanty, and a fire will not "run" unless there be considerable wind to drive it. • Even then it is but a very small affair—merely a narrow, flickering line of advancing flame, which might almost be slipped out with a wet pocket-handkerchief; and, indeed, as a matter of fact, is often brushed out for short distances with a wet sack or a broom by settlers anxious to preserve their homes; for, if the fire be stopped along the windward side of a settler's premises, the wind carries the two wings of the fire on past the sides of the buildings; and, although they may eventually join again to the leeward, they cannot then return to burn the premises, unless the wind shifts completely round. Such small fires as those of which I now speak are often stopped for considerable distances by obstacles of much smaller importance than a settler's fire-guard—for instance, by the numerous "trails," as the prairie roads are called. These, though merely, as a rule, two narrow wheel-marks with grass growing between (the "team" running in the wheel-tracks), often stop fires for short distances; but, being able to cross the trail at other spots, the broken line of flame gradually joins again, leaving many triangular patches of unburnt grass on the leeward side of the trail, the apex of the triangle, of course, pointing in the direction in which the fire has gone. I saw instances of this one bright moonlight night when I was passing over the dry, sandy prairie between Fort Ellice and Elkhorn. The short, scanty grass had been burned by a fire, the lurid glare of which I had plainly seen, miles away, after dark on the previous evening. The trail I travelled on, though but faintly worn, served, nevertheless, to check the fire for 100 yards in some places, so that on one hand I had burned, and on the other unburned, prairie; but in places the flames had contrived to creep across, and had gone on their way rejoicing. On one occasion, too, I remember seeing a spot where a small fire had been checked, for several yards at least, by the wheels of a wagon having previously crossed its track, pressing down the short grass, though they had left almost no impression on the soil. Such trumpery fires as these are the rule in dry districts; but there are times when the wind is strong, and the waving grass grows long and rank

in a moist soil, when fires occur of much more serious proportions. Then a great wall of flame, yards in height, rushes along, causing danger to travellers over the prairie, and destruction to all kinds of settlers' effects. I have been credibly informed that such fires find no difficulty in leaping such a river as the Assiniboine. The following account of an adventure with the fire I clipped from a newspaper. It recounts the experience of a gentleman from Toronto, and will show the danger there is at times:—

A PRAIRIE FIRE.—Severe prairie fires are raging between the North and South Saskatchewan, and extending east and west for hundreds of miles, burning up everything throughout this part of the country. I left Battleford last Friday on a buckboard, accompanied by Dr. Dyke Parker. For several days Battleford had been enshrouded in smoke; and, as we advanced southward, the smoke became denser, until some eighteen miles south of Battleford a heavy column of dense smoke and flame was seen advancing towards us, with a strong wind blowing directly in our teeth. For some little time we drove towards it, and then halted, with the intention of burning a patch in which to stand as the fire swept past. We were advised by some Indians, however, who were going before the fire, to make for a butte, or hill, where the grass was short, and to run through the fire there, as the smoke was becoming unbearable. This we accordingly did, reaching it just before the flames lapped up the long grass in the bottom below, and roared through the poplar bluffs on either side. Then, as it rushed up the hill-side, we put the horse at it, and shutting our eyes and wrapping ourselves in blankets, we dashed through where the fire was lowest, and emerged into a blackened waste beyond, half suffocated, but none the worse. We travelled onward through burnt and smoking country all the day, and the following day again met the fire on its southern course. Taking our foregoing experience, we waited until it reached the short herbage on some rising ground, and again cleared it safely, but had a sharp run before it, as it swept rapidly after us, and reached the high grass in the low land beyond. All day the smoke was almost unbearable, but we pushed on, and towards evening had again to dash through the fire several times, which we safely accomplished with a slight singeing. We were now nearing a long stretch of flat prairie where the grass had attained a considerable height, through which the fire was dashing with lightning speed, and the flames rising ten feet high and more. As we advanced, in its rear, a team attached to a wagon was seen madly dashing through the flame and smoke towards us. They slackened speed as they breasted the hill on which we stood, and on driving up we found the rig badly smashed, the horses with manes and tails burnt completely off, and their hides burnt and torn off in large patches, leaving the raw and bleeding flesh. They were terribly burnt, and cannot live. Mr. Prince, of Battleford, and a boy were with them, and they were also much burnt, especially Mr. Prince, whose face and hands were masses

of blisters, and with beard and hair burnt off. He told us he had been caught in the high grass, that the wind suddenly changed, and that before they could burn a patch the flames rushed down upon them. He, however, might have outstripped them with his fast team had it not been that he had gone to the help of some incoming settlers, consisting of two men and some women and children, who had an ox-wagon heavily laden. We gave him what assistance lay in our power, and travelled on. He will leave his horses with the boy and walk into Battleford, or wait for the chance of a lift by some incoming traveller. Shortly afterwards we met the ox-wagon. The men showed terrible evidence of the severe ordeal through which they had passed, and were severely burned about the face and hands. The oxen were also very badly burned, and their hides were cracked and peeling off. The women and children were placed on top of the wagon, which was piled high with furniture, and blankets were wrapped round them. They got off with burnt hands. They will camp until some teams that are coming up arrive. These teams we hurried on to meet, and sent them forward at their best speed to help the others on. Till we reached the South Saskatchewan, the country was a dreary, blackened waste. But, on the other side of the river, southward to Swift Current station on the Canadian Pacific Railway, the prairie-grass waved in full vigour.

The grass on the prairies, so far as my observation goes, becomes in the autumn much drier and more combustible than it usually does in England; and when it is remembered that the Manitoban climate is drier than ours, that high winds are more prevalent, and that the area over which a fire can run, when once started, is very extensive, no one need wonder that very great conflagrations often take place; nor is it difficult to see why such fires do not gain ground in civilised countries such as England. The grass here is greener and much more succulent; it is generally fed-off so close that there is no dry, inflammable portion left; the climate is moister; high winds are not so frequent; while the number of hedges, and the large extent of cultivated ground, would soon check any fire that once got started.

It being now understood how very prevalent these prairie fires are, the reader will, in a measure, be prepared for my statements as to the very powerful effect they have been able to exercise upon the face of the country in various ways; but, before discussing this effect in detail, I wish to say something more of my own experience of the fires themselves. My experience certainly has not been extensive; but I crossed not a few portions of the prairie

where fires had been, and saw small ones actually burning in the distance. The spectacle of a large fire at night is said to be one of the most terrific sights imaginable. The volumes of flame and smoke, and the lurid, red glare over the whole sky, give everything a most unearthly appearance. The little fires I saw were only large enough to look "uncanny," without being grand. On October 12, whilst on the prairie, at a locality known as Viola Dale, near the head of Oak River, I came upon the place where a large fire had been thirteen days before. A settler's family, living a few miles off, told me that it had come from near Fort Ellice; that it had burned up many settlers' effects, and that they had seen it at night, with flames leaping high into the air, "rushing along at the rate of a locomotive," colouring the sky with an unearthly glare, and so filling the atmosphere with dense smoke that it was unpleasant to breathe. Another man told me that he had burned his hands whilst endeavouring to save his father's premises from the flames. In one place I saw an absent settler's house which had been saved entirely by its fire-guard. How wide the fire may have been I do not know, as it was a good deal split up near its end by meeting with ponds and sloughs, which, perhaps aided by the wind falling and the fire reaching the river, had caused its stoppage; but, after following up its track for a mile or two, I arrived at a place where it must have been several miles in width, as on every side nothing was visible but burned grass. The appearance of the country was most dismal, and the smell like that of a burned straw-stack. Yet this fire cannot have been a very large one, for the grass it had consumed had been comparatively short, except in some of the moister spots, and in many places the trail had, for short distances, checked its advance. This being the first fire of any magnitude that I had seen, I was a good deal interested in observing the support which it gave to the beliefs already advanced as to the various effects of fire on the prairies. First, let me take the matter of the blackness and fertility of the soil. That the soil is very black and very fertile has already been put forward; and, with the knowledge already gained as to the prevalence of fires, it seems only like putting two and two together to make four, to conclude

that these features are due to the fires. In any case, the ash of the burnt grass was left as a black deposit upon the surface of the ground ; and this was especially the case in the bottoms of sleughs and hollows, and where the willows had made the grass long and rank by shading the soil and keeping it moist. Such spots, at a little distance, appeared much blacker than the rest of the prairie, and examination showed the deposit of ash to be sometimes as much as one-eighth of an inch in thickness. Now, it is a matter of common observation that the black prairie-loam is usually blackest in such situations, and I do not think it is at all difficult for any well-trained mind, capable of weighing the effect of a very small cause very often repeated, readily to comprehend that the blackness, fineness, and fertility of the soil of the prairies is the effect, in a very large measure at least, of the annual deposition, for many generations past, of a very small quantity of this ash, which must undoubtedly have great manurial value. The thickness of the black loam varies from about one to three feet ; but, taking the average at about eighteen inches and the average annual deposition of ash at only one-thirty-second of an inch, we find that it would have taken just 576 years to deposit eighteen inches of soil by this means alone. But the ash would certainly rot further and become consolidated after deposition ; therefore, let us double our figures, and we get 1,152 years as the time required for the formation of eighteen inches of black loam. Of course, in moist districts, where the grass grows long, the rate would be higher, and in dry districts lower. I am perfectly aware that the foregoing is a very vague, and largely a speculative, calculation ; but it will serve to illustrate my point.

The belief as to the black loam having originated thus is far from being an original one, as I met and conversed with many settlers who fully supported it ; whilst others accepted the view, when the facts of the case were represented to them, and only a few dissented.

If the blackness and fertility of the soil are not due to the fires, to what are these features due ? Some persons told me that the gradual decay of the grass for generations past was the cause ; but dead grass and leaves have

decayed in many other places for generations without leaving, so far as I have seen, a soil nearly so black as that of Manitoba. The opinion of Professor Sheldon, of the Agricultural College, Downton, Wiltshire, is only another piece of evidence in favour of the fires, though he does not allude to them. He writes: "The soil of Manitoba is a purely vegetable loam, black as ink and full of organic matter, in some places many feet [?] thick, resting on the alluvial drift of the Red and Assiniboine Rivers." The very few analyses of the soil of Manitoba that have been made have been published in Emigration Pamphlets almost *ad nauseam*; but, as they bear on this subject, I will introduce two of them here:—

ANALYSIS NUMBER ONE.

ANALYTICAL LABORATORY, SURGEONS' HALL.

EDINBURGH, December 14, 1876.

Moisture	...	...	...	...	...	21.364
Organic matter containing nitrogen equal to ammonia, 23	...	...	...	...	...	11.223
Saline matter:						
Phosphates	...	...	...	...	0.472	
Carbonate of lime	...	...	...	...	1.763	
Carbonate of magnesia	...	...	...	...	0.937	
Alkaline salts	...	...	...	...	1.273	
Oxide of iron	...	...	...	...	3.115	
					—	7.560
Silicious matter:						
Sand and silica	...	...	...	...	51.721	
Alumina	...	...	...	...	8.132	
					—	59.853
						100.000

The above soil is very rich in organic matter, and contains the full amount of the saline fertilising matters found in all soils of a good bearing quality.

(Signed) STEPHENSON MACADAM, M.D.
Lecturer on Chemistry, &c.

ANALYSIS NUMBER TWO.

No. 1.—Surface Soil.

1. Moisture	...	...	...	...	4'6
2. Organic matter, humus containing nitrogen,	...	...	...	...	11'8
3. Phosphate and carbonate of lime	...	...	...	...	31'4
4. Soluble alkaline salts, potash and soda	...	...	...	...	8'6
5. Insoluble silica and gravel	...	...	...	...	43'6
					<hr/>
					100'0

No. 2.—Soil at 15 in. below Surface.

1. Moisture	...	...	...	...	3'2
2. Organic matter	...	...	...	...	9'0
3. Phosphate and carbonate of lime	...	...	...	...	51'4
4. Soluble alkaline salts	...	...	...	...	4'6
5. Insoluble silica	...	...	...	...	31'8
					<hr/>
					100'0

No. 3.—Soil at 24 in. below Surface.

1. Moisture	...	...	...	...	2'0
2. Organic matter	...	...	...	...	7'2
3. Carbonate and phosphate of lime	...	...	...	...	28'6
4. Soluble alkaline salts	...	...	...	...	10'4
5. Insoluble silicates and gravel	...	...	...	...	51'8
					<hr/>
					100'0

I consider the above a very favourable result for a wheat soil. It contains a fair average of the constituents of an immediate crop on the surface No. 1, both in ammonia and phosphate of lime, and the constituents of No. 2 and No. 3 show that the soil in this respect is enduring and practically inexhaustible under ordinary prairie tillage.

(Signed) J. BAKER EDWARDS, Ph.D., D.Ch.
Professor of Chemistry, Montreal.

Jan. 20, 1883.

No less an authority than Dr. Gilbert has also analysed samples of Manitoban soil, and bears testimony to its extraordinary richness in nitrogen.*

* I cannot pass from this discussion as to the peculiarities and probable origin of the black soil of the North American prairies, without alluding to the *tchornozem*, or black earth, of Southern Russia, so well described by Sir Roderick Murchison in his "Geology of Russia in Europe and the Ural Mountains" (vol. i., p. 557), and in the "Journal of the Royal Agricultural Society" (vol. iii., p. 125). The region occupied by the black earth is an enormous one. Having its commencement in Hungary on the west, it extends completely across the whole of European Russia, and, although its limits upon the plains of Siberia are unknown, it is reported to extend "over considerable spaces in the eastern, central, and southern parts of that region," and is probably of a somewhat similar nature to the *ri'gur*, or dark soil, of Central India. A line drawn from Kief on the Dnieper, through Kasan on the Volga, to Ekaterinburg on the eastern side of the Urals, marks its northern boundary; while another line, drawn from Odessa to Orenburg on the Ural River, roughly indicates its southern limit. In the district thus marked out, the black earth is not universal, but occurs in patches only, though some of these are of great extent. It always overlies all other kinds of soil; occurs at all elevations; and varies from 15 ft. to 20 ft. in thickness. It is "jet black when moist"; is similar in nature throughout the entire area; is excessively fertile; and, though slightly intermixed with sand, is so light and fine that travellers crossing patches of it in a dry season are often thickly covered with a black dust, which rises up in clouds through the dense covering of rich grass when disturbed by a horse's feet. Of its great fertility there is no doubt. Sir Roderick says: "The *tchornozem* is unquestionably the finest soil in Russia, whether for the production of wheat or grass. It is so fertile as arable land that the farmers never apply manure; and, after taking many crops in succession, leave it fallow for a year or two, and then resume their scourging treatment." As is the case with the soil of the prairies, the natural fertility of the *tchornozem* is so great that slovenly methods of farming are encouraged, and manure is allowed to accumulate in "hillocks of considerable magnitude." The results of two analyses which are given show it to be very rich in organic matter and nitrogen. The following, which is one of them, would serve almost equally well for the black soil either of Russia or Manitoba:—

Silica	...	...	...	...	...	...	69.8
Alumina	...	...	...	...	...	...	13.5
Lime	...	...	...	...	...	...	1.6
Oxide of iron	...	...	...	...	...	...	7.0
Organic matter	...	...	...	...	...	...	6.4
Traces of humic acid, chlorine, &c.	...	...	...	...	...	...	1.7

100.0

Although the nature and properties of the *tchornozem* and the prairie

This point, then, being disposed of, let us turn to others. Obviously the perpetual occurrence of prairie fires must have exercised a very powerful influence upon the flora and fauna of the country. We will take the latter first.

It is a remarkable fact that, although very many species of fresh-water mollusca (*i.e.* snails) inhabit almost every pond, lake, and stream, not a single species, so far as my observation goes, inhabits the bare, open prairie. That this is not due to the cold of winter, is, I think, obvious. I am convinced that the prairie fires must again be put forward as the cause of this remarkable fact; for I was careful to observe that the fire burns the grass so completely down to the ground that, had any snails been sheltering among its roots (as they habitually do in England), they would certainly have been burned. Not unfrequently in dry parts of the prairie the settlers cut hay round the ponds which collect in the depressions, afterwards setting light to the rushes to make the grass more succulent next year. In many such cases I noticed, where the pond had been dried up by the drought this summer, leaving the molluscs lying on the mud, that the flames, in burning the rushes, had burned the shells so severely that their occupants would certainly have been killed had they not been already dead through the effect

soil are thus shown to be very closely allied, it does not necessarily follow that the two have a similar origin. Sir Roderick Murchison is altogether opposed to the belief that the Russian black earth is "the humus arising from decayed forests or vegetables during the present period," though he admits this to be "the prevalent opinion in Russia," and some of the reasons which he advances against this view do not appear to me to be at all conclusive. The possibility of fire having had something, at least, to do with the deposition of the black soil is not referred to by Sir Roderick, who, in opposition to a certain author whom he quotes, expresses his total disbelief "in the former existence of forests which have been destroyed (for Herodotus tells us that large tracts of the Scythians were entirely bare of wood), and we are firmly persuaded that by no efforts could any Government produce forests in those districts, except in certain rocky and moist spots." This may be quite true of the Russian Steppes; but I am confident that the case is different with the prairies of America. Sir Roderick's opinion is that the *tchornozem* is a *sub-aqueous deposit*, probably derived, to some extent at least, from the denudation of the black Jurassic shale; but he does not deny that some speculation is needed in order to account for the whole area covered, on this hypothesis.

of drought. There are, however, a few small species of land-snails inhabiting the extensive spruce swamps and the wet moss beside the sloughs which, of course, the fire does not attack. Further, there are, I believe, at the present time no mammals habitually frequenting the open prairie except burrowing ones. A possible exception to this may have to be made on account of one or more species of hare, but these in most parts (if not all parts) of the prairie are very rare, though not uncommon in the woods. In times past, of course, the Buffalo formed another exception. These facts may, I believe, be easiest explained by supposing that the fires, by constantly sweeping over the prairies, have rendered them uninhabitable, except by burrowing animals. To the same cause may, I believe, be attributed (at least in a large degree) a still more remarkable circumstance, namely, the entire absence of earth-worms from the prairies of the North-west. I have been assured of this absence by many settlers and have verified it by my own observation. Having elsewhere treated more fully of the subject,* I will but briefly refer to it here. Most persons will be acquainted with Mr. Darwin's interesting work, published shortly before his death, in which he shows that over the larger portion of the earth's surface we are in no slight measure benefited by the actions of these humble creatures. They are, in fact, nature's agriculturists, which, for generations past, have regularly ploughed and rendered the soil fertile in their own way. But, as there are no earth-worms in the North-west, it is certain that the fineness and fertility of the soil of that country, which has of late attracted so much attention, cannot be due to their actions: consequently this enormous area of over two million square miles must be regarded as forming an exception to the general rule shown to exist by Mr. Darwin. This absence of earth-worms is rendered all the more noticeable by Mr. Darwin's remark that "earth-worms are found in all parts of the world, and some of the genera have an enormous range. They inhabit the most isolated islands," &c., and further that "worms throw up plenty of castings in the United States."

* *Nature*, January 3, 1884, page 213.

I do not know of any cause which can satisfactorily account for the absence of worms from the prairies except the fire, which, by burning the grass over large areas, would annually deprive the worms of that variety of decaying vegetable matter which constitutes their food. Frost, the only other possible cause, seems inadmissible, since worms are known to occur in Iceland hundreds of miles to the north.

It appears, therefore, as if the cause which has deprived the soil of the North-west of that natural cultivation which the soils of most other countries enjoy has, at the same time, liberally supplied it with a manure resulting from the ashes of the grass which is annually burned.

We come now to the consideration of another statement that I have already put forward, which is this: That the fires, by gradually killing and consuming the forests, have caused the treelessness of the prairies; or, in other words, that the prairies themselves are, largely at least, due to fire. The evidence on this point is, I think, very clear. Several explorers of the North-west, from whose works I shall take the liberty of quoting, since great experience lends weight to their opinions, speak of this matter without the slightest hesitation. It can be shown, on the clearest evidence, that, if the fires have not caused the prairies, they are at least now extending them in numberless places; that trees still grow on the prairies in spots that are protected from the fire; and that over large portions of the prairies young trees spring up annually, only to be at once burned; but, if protected from the fire, they would grow, and in due time reproduce the banished forest-growth. We will consider the last point first. It is a matter of every-day observation on the prairies, that on any piece of ground over which the fire is prevented from passing (as, for instance, that inside a settler's fire-guard), a flourishing growth of willows, roses, silver-leaf bushes, and poplars at once shows itself. If a portion of the prairie escapes the fire for one year, the growth of bushes has time to attain a height of, say, one or two feet; but, by keeping the ground moister, they encourage the growth of long grass, and thus bring about more surely their own destruction; for, when the relentless fire comes, it catches the grass, and burns the young shoots

of the bushes along with it; but there is no reason whatever why the poplars, at least, should not grow into trees, if they were protected from the fire. There is a very general impression abroad among settlers that, because trees *do not* grow on the prairies, the soil is not suited to support them, consequently that they *will not* grow; but no delusion could well be greater than this, or more completely opposed to every-day observation; and it is only fair to the settlers to say that, as most of them have, as yet, been but a short time in the country, their errors of opinion may be excused. Not a few of them have planted rows of trees near their houses, but, generally, with the very worst success. In a country where the winds are so strong as in Manitoba, trees, if planted at all, need some protection at first, such as being planted in clumps, or, still better, raised from seed in plantations. That they will grow from seed in the soil of the prairies has already been shown conclusively, and at High Bluff I saw several thick clumps of flourishing young maples that had been thus raised from seed and protected from fire. One man, who had round his house several clusters of well-grown young poplars, told me that he had observed them springing up ten years before, and had preserved them solely by means of a fire-guard. In confirmation of what is here advanced, I may mention the case of Mr. J. F. Roberts, a very intelligent Ontarian gentleman, now farming on the bare, treeless prairie, about five miles north of Brandon. On first taking up his land, he was assured by his neighbours that it was unreasonable to suppose he would ever get trees to grow on his farm, for, had the soil been suitable to them, they would certainly have been there. But Mr. Roberts was too acute a man to believe this, and observing last spring a number of seedling poplars springing up in a slight depression, where the soil was more moist than on the level ground, he protected them by a fire-guard. The result of this was, that, when I saw them last September, they were a flourishing lot of young trees, some two feet high, which he hoped soon to be able to transplant. These trees must have originated from wind-blown seeds, as there were, I believe, no other trees whatever within three or four miles, at least; and Mr. Roberts has at present to go eight or nine miles for

his supply of firewood, which, it may well be imagined, keeps him pretty busy all winter.

Those who have occasion nowadays to cross those portions of Iowa and Minnesota, where, fifteen years ago, there existed nothing but a treeless and uninhabited prairie, will see numerous clusters of flourishing aspens, while every settler's house has a few trees planted round it for the sake of shelter. What has been done in these and other States of the Union, where a Tree-culture Act is in force, proves most conclusively that trees will grow well on the prairies, if only they are planted and protected. Again, along each side of the Northern Pacific Railroad, at least as far west as the Missouri, young aspens have been planted as snow-breaks wherever there is a danger of the line being blocked by snow in winter. In years to come, these will provide an inexpensive substitute for the wooden snow-breaks at present in use.

Evidence as to the past and present destruction of forests and consequent extension of the prairie through fire is not less conclusive. An old half-breed told Mr. Seton that when, as a boy, he used to hunt the buffalo on what is now known as the "Big Plain," it was covered with bluffs of good timber, which have now almost completely disappeared. Many settlers can point to some dead tree or small clump of bushes which forms the last remnant of a respectable-sized bluff that has been destroyed by the fire within the last year or two. A settler always likes, where possible, to be able to shelter his house from the icy blasts of winter behind some small bluff; but if he wishes to preserve his shelter, it is imperatively necessary to surround it with a fire-guard. There is hardly a bluff that does not show signs of the fierce conflict it annually has to wage with the merciless fire. The destruction wrought is often heart-rending to see. The prostrate trunks of trees, charred and blackened by the fire, everywhere lie around the outside, while, further in, the trees have a melancholy, drooping, woe-begone appearance. A typical case is something of this kind:—A fire comes over the prairie, and, arriving at the edge of a bluff (as isolated clumps of trees are always called) or at the edge of the more extensive "bush," it attacks the outer trees, burning one side of their trunks just above the ground,

also leaping up and consuming their smaller branches. Thus, perhaps, over an area of several acres the fire has eaten into the bush, consuming the underwood, injuring (if not killing) the trees, but still leaving them standing. Next year the fire comes again from the same direction. If any young underwood has sprung up it is again destroyed, and the fire enlarges the hollow in the trunks of the standing trees that it had commenced the year before. This, if it does not prostrate them, effectually destroys their vitality; while the fire proceeds on still further into the bush, destroying as it goes. The year after the hungry fire comes again,—always from the same direction. Again the undergrowth is destroyed; again the hollows in the tree-trunks just above the ground are enlarged; again some of the trees fall and lie charred and half-burned as the fire passes on, again adding a larger area to that over which it has already spread hideous disfigurement. Those trees which were first attacked, and which have not already fallen, have now great black hollows scooped out of their trunks as if some animal had gnawed into their bases till nothing but a shell remained to support them. But the fire seldom forgets to return year by year. When it does come it gnaws again at the same spot where it has already several times found food for its unappeasable appetite; the trees fall, and the fire, passing on in its haste to attack those it has as yet only partially overcome, leaves them as charred and blackened logs upon the ground. Year by year the fire comes; seizes on these logs; chars them more and more completely, and rushes on further and further into the bluff; until, in a few years, it is all destroyed. Let us suppose that some twenty or thirty acres of wood have been thus destroyed in, say, seven or eight years: will any one imagine the trees will grow again in the same period? The bluff may have been growing there for centuries, or possibly it may have been destroyed, in like manner, many years before and have grown up again; but, as growth is slow and destruction by fire is swift, it is evident that, even supposing some of the destroyed bluffs do grow again—which is not improbable—on the whole the prairies would extend their boundaries. And with such havoc as I have described going on year by year who can wonder at it? I have sketched no

fancy picture, but one which I have seen in all stages of completion in the bluffs round Carberry and elsewhere. It does not seem to me reasonable for any man who has seen the destructive effect of these fires to deny that sufficient time only is wanted for exactly the same means to have originated even the wide prairies themselves. Over and over again Professor Hind speaks of having observed the same thing—forests of large pines, spruces, or tamaracs, prostrated by the fire, to be partially succeeded by a less valuable growth of elm, poplar, or willow, which, in its turn, is at last destroyed. Here is what he says upon the subject:—"That forests once covered a vast area in Rupert's Land there is no reason to doubt. Not only do the traditions of the natives refer to former forests, but the remains of many still exist as detached groves in secluded valleys, or on the crests of hills, or in the form of blackened, prostrated trunks, covered with rich grass and sometimes with vegetable mould or drifted sand. The agent which has caused the destruction of the forests which once covered many parts of the prairies is undoubtedly fire; and the same swift and effectual destroyer prevents the young growth from acquiring dimensions which would enable it to check their annual progress. Nearly everywhere, with the exception of the treeless, arid prairie west of the Souris, and west of Long Lake on the north side of the Qu'Appelle, young willows and aspens were showing themselves in 1858, where fire had not been in the previous year. South of the Assiniboine and Qu'Appelle, few plains had escaped the conflagration in 1857, and the blackened shoots of willow were visible as bushes, clumps, or wide-spreading thickets, where the fire had passed." Again, he says:—"The annual extension of the prairies from this cause [fire] is very remarkable. The limits of the wooded country are becoming less year by year; and, from the almost universal prevalence of small aspen woods, it appears that in former times the wooded country extended beyond the Qu'Appelle, or three or four degrees of latitude south of its present limit. . . . This lamentable destruction of forests is a great drawback to the country, and a serious obstacle to its future progress." There is no mistaking the tenor of these remarks; but the same facts must strike every observant traveller on the

prairies. Macoun, for instance, writes :—"The real cause of the absence of wood on every part of the region under consideration is undoubtedly prairie fires, which sweep over every part of it year after year, destroying the seedling trees as long as there are any seeds left to germinate, and year by year killing the bushes till the capacity of the root to send up shoots dies out, and then even willows cease to grow. . . . Finally, there is not a series of sand-hills throughout the country, no matter how poor the soil, but what has either wood or brush ; while immense tracts of first-class soil are without a bush. The rich soil, with its abundance of grass, affords, when dry [presumably the grass is meant], fuel for the flame which destroys any seedlings which may spring up ; at the same time the sand-hills, being unable to carry fire through their extreme poverty, keep it [the growth of seedlings] alive."

Professor Macoun has, over and over again, expressed his firm belief in the opinions I have here advanced as to the destruction of the forest-growth by means of fire, and many statements in support of these views may be found in his interesting work, "Manitoba and the Great North-West" (especially on pages 27 and 28), where he states that between the Rocky Mountains and an imaginary straight line connecting Moose Mountain and the Touchwood Hills, the whole country is utterly devoid of wood as far north as latitude 52, with the exception of Wood Mountain, the Cypress Hills, and certain narrow river valleys. Elsewhere, in reference to Professor Hind's journey of exploration in 1859, Professor Macoun adds that "where he saw large forests, I passed over in 1880 and never saw a twig."

Although further evidence may not be wanting to corroborate that which has gone before, I will make one more extract. Professor A. R. C. Selwyn, Director of the Geological Survey of Canada, writes as follows : "Whatever the effect may be of these destructive conflagrations, in reference to the water-supply of the region, there is no doubt that at different times almost every square mile of the country between Red River and the Rocky Mountains has been subjected to them ; and that hundreds of miles of forest have thus been converted into wide and almost

treeless expanses of prairie." He then goes on to speak of the large area now devoid of trees. Dr. R. Bell, the Assistant Director, in forwarding a report to Professor Selwyn shortly after, comments upon the foregoing sentence in the following words: "Your remarks upon the destruction of forests by fire, between Red River and the Rocky Mountains, are corroborated by all that I could hear upon the subject. The rapidity with which some tracts between Prairie Portage and Fort Ellice were stated to have been converted from forest to prairie, is almost incredible."

Could anything show more conclusively than the foregoing statements the destruction which these fires have wrought?

It may, however, be asked: What has become of the trunks and stumps of these destroyed trees? The former, lying upon the surface of the ground, would be annually attacked by the fire, and at last would be entirely converted into ash, or they would be speedily disintegrated, when once well rotted, by a species of ant which drives tunnels through such soft logs in all directions. Dr. Bell, in speaking of the district south of Fort Ellice, writes: "The aspens of that region burn much more readily than does the wood of the same tree in Ontario and Quebec, and the portions which escape total destruction by fire rot and disappear in the course of one or two years." I have heard of charred logs being dug up from a considerable depth below the surface of the open prairie. They had probably been covered by the burrowings of gophers and badgers. The working of these animals will also, to some extent, account for the disappearance of the roots and stumps of the trees; but it certainly is surprising that these should have disappeared so completely as they have done.

It is a well-known fact that the growth of forests is intimately connected with the climate of any country, and it is natural to conclude that the disafforestation of the prairie region must have caused some change in the climate. The whole subject has of late been brought prominently before the Canadian public through an energetic pamphlet by Mr. R. W. Phipps, of Toronto, in which he shows that the removal, during the last fifty years or

so, of the extensive forests which formerly covered the Province of Ontario has seriously affected its climate by lowering the mean temperature and lessening the rainfall. This, again, has decreased the volume of the streams, but made them subject to serious floods on the appearance of heavy rain. This being the case, one may fairly conclude that the same results have followed the removal of the forests in the North-west, and that, were they restored, the high winds (including blizzards) would be greatly lessened, the rainfall equalised, and the mean temperature raised. The same cause must, as already stated, have had a considerable effect on the flora and fauna,—both directly and indirectly,—by changing the climate and by the extermination of those species fitted for a forest life, in favour of those more suited to exist on the open plain, or able in some special way to resist the fire.

Before proceeding further it will be necessary for me to make two explanations. The first is, that in speaking of "prairies" I refer to the true prairies only, and do not include the arid, sterile region now commonly spoken of as the "Great Plains," but formerly called the "Great American Desert." It is a very common thing for people to confound the *prairies* of North America with the *plains*; but this should on no account be done, for the prairie-region has features and characteristics quite different from those of the plain-region. The whole of the central portion of North America, lying between the Great Lakes and the Rocky Mountains, may be described as a vast plain sloping downwards from the foot of the mountains. North of the International Boundary-line the slope is more north-eastward, as shown by the courses of the Saskatchewan, Churchill, Nelson, and other rivers; while south of the line the boundary is more south-eastward, as shown by the courses of the Missouri and the Mississippi, so that, to some extent, the division between Canada and the States is a natural one. Along this boundary-line, the surface of the ground rises from about 700 feet at the point where the Red River crosses it to about 4,000 feet at the base of the Rocky Mountains, a distance of about 1,000 miles; but this rise includes two sudden lifts of over 600 feet each, marking the boundaries of the "three prairie

steppes" into which the great central plain is naturally divided. The first, or easternmost, steppe embraces the valleys of the Red River and Upper Mississippi. North of the International Boundary, it is bounded on the west by the chain of elevations known as the Pembina, Riding, Duck, and Pas Mountains; but these are altogether mis named mountains, inasmuch as, when their summit is reached, another extensive plain (the Second Prairie Steppe) is found to extend from it, away to the westward. This, again, is bounded on the west by another similar rise, of which the Grand Côtéau de Missouri forms part, extending north westwards across the Saskatchewan to near Lac la Biche. On ascending this, the Third Prairie Steppe, which extends to the mountains, is reached. The true prairies occupy the First and Second Steppes. They are abundantly fertile, well watered, and would, for the most part, be covered with forests of aspen and willow, did not the annual fires prevent their growth. The greater part of Manitoba lies within the limits of the First Steppe, but a portion also lies in the Second. Broadly speaking, the prairie region of North America comprises the eastern portions of Ohio and Indiana; the southern portions of Michigan and Wisconsin; portions of Missouri, Kansas, and Nebraska; almost the whole of Illinois, Iowa, Minnesota, and Manitoba; all of Dakota as far west as the Missouri, and all of the North-west Territories of Canada south of the Saskatchewan as far west as the 104th degree of longitude. The true plains occupy the Third Prairie Steppe, or all the country between the prairies and the Rocky Mountains, "where" (as Prof. Hind says) "both soil and climate unite in establishing a sterile region." Fire may have had something to do with denuding this region of its trees, as Prof. Macoun seems to consider; but, on the other hand, Lieut. R. I. Dodge, in his interesting work, "Hunting-grounds of the Wild West," says he does not believe the treelessness of the true plains to be due solely to fire, but also probably, in part, to high winds and lack of water.*

The second point on which I wish to offer an explanation is, that in discussing the destruction by fire of the

* For further observations on the plains, see p. 141.

forests which once covered large portions of the prairies, we must take into consideration the fact that the fires will, in nearly all cases, travel eastwards with the prevailing winds. This will be the more clearly seen when it is pointed out that the mean resultant direction of the wind for eleven years (1871 to 1881 inclusive) was N. 44 deg. W. This will help us to understand several facts; such, for instance, as why, if there are any trees, they will, in the majority of cases, be upon the *eastern* side of a lake or river. Thus, as Captain Butler remarks of the Red River:—"Its tributaries from the east flow through dense forests; those from the west wind through the vast sandy wastes of the Dakota prairie, where trees are almost unknown."

Roughly speaking, the whole of the region for hundreds of miles to the east of Red River and Lakes Manitoba, Winnipegosis, and Winnipeg, is one of dense forests, protected from the ravages of the prairie fires by those friendly pieces of water; while the whole region to the west is prairie, exposed to the fire. On the north, the north branch of the Saskatchewan forms the boundary of the true prairies. Presumably, the fires must have had some open region in the east for them to start upon, before they could gain strength to attack and destroy the forest lying to the east; and doubtless the arm or extension of the great plain which extends northwards to the South Saskatchewan, provided such a tract. Another conclusive proof that the reason for trees not growing on the prairie is that the fire prevents them so doing, is afforded by the fact that, wherever there is an island in a lake or in the middle of a "sleugh," that island, being protected from the fire, is covered with trees and bushes. Proofs of this may be seen everywhere on the prairies. Further, when a deep ravine, formed by some rivulet, crosses the bare prairie, its sides are thickly covered with bushes, because, as a rule, the wind cannot get down into the ravine to drive the fire onwards. The same thing is often observable where there is a sudden drop in the surface of the ground.

Captain Butler, in his "Great Lone Land," compares the edge of the great sub-arctic forest, "whose northern extreme must be sought where the waters of the Mackenzie mingle with the waters of the Arctic Sea," to the shore of

an ocean with "its capes and promontories, which stretch far into the sea-like prairie, the indentations caused by the fires sometimes forming large bays and open spaces won from the domain of the forest by the fierce flames which beat against it in the dry days of autumn." Of Fort Carlton, on the Saskatchewan, he writes:—"Carlton stands on the edge of the great forest region, whose shores, if we may use the expression, are wasted by the waves of the prairie ocean lying south of it; but the waves are of fire, not of water. Year by year, the great torrent of flame moves on deeper and deeper into the dark ranks of the solemn, standing pines; year by year, a wider region is laid open to the influence of sun and shower, and soon the traces of the conflict are hidden beneath the waving grass, and climbing vetches, and the clumps of tufted prairie roses. But another species of vegetation also springs up in the track of the fire: groves of aspens and poplars grow out of the burnt soil, giving to the country that park-like appearance already spoken of. Nestling along the borders of the innumerable lakes that stud the face of the Saskatchewan region, these poplar thickets sometimes attain large growth; but the fire too frequently checks their progress, and many of them stand bare and dry, to delight the eye of the traveller with the assurance of an ample store of bright and warm firewood for his winter camp when the sunset bids him begin to make all cosy against the night."

Enough evidence has now been brought forward to show that fire is the agency which has destroyed the forest-growth that once covered the prairies, and that, were the fires stopped once for all, trees in plenty would soon grow up in all parts of the prairies, which are at present so bare. Had these fires been stopped some fifty years ago, it is not, I believe, too much to say that at the present day the Province of Manitoba would better have merited the title of the Sylvan Province than that of the Prairie Province. In support of this, I will again quote Prof. Hind, who says:—"In the State of Missouri, forests have sprung up with wonderful rapidity on the prairies as the country became settled so as to resist and subdue the encroachment of the annual prairie fires from the west." Again, he says:—"If

willows and aspens were permitted to grow over the prairies, they would soon be converted into humid tracts, on which vegetable matter would accumulate, and a soil adapted to forest trees be formed. If a portion of the prairie escapes the fire for two or three years, the result is seen in the growth of willows and aspens, first in patches, then in large areas, which in a short time become united and cover the country, thus retarding evaporation, and permitting the accumulation of vegetable matter in the soil. A fire comes, destroys the young forest-growth, and establishes a prairie once more. The reclamation of immense areas is not beyond human power; the extension of the prairies is evidently due to fires, and fires are caused by Indians, chiefly for the purpose of telegraphic communication, or to divert the buffaloes from the course they may be taking. These operations will cease as the Indians and the buffaloes diminish,—events which are taking place with great rapidity.”

But the whole of the indictment against the fires is not yet told. In the spring time, they often destroy the nests of the prairie chickens; and, as might be expected, when they come in the autumn, they cause immense destruction among the settlers' crops and buildings. The following paragraphs will speak for themselves. They are a few of those I clipped from various Manitoban journals:*

“Prairie fires are raging at Long Lake, Egg Lake, and the Beaver Hills. At Egg Lake the fire has entered Captain Moore's timber limit, and is destroying all before it. Twelve or fifteen miles up the river the fire has run through to the bank, and is now working east. Unless rain falls soon, the chances are the whole country will be burned over. Many of the farmers at St. Albert have burned around their stacks, and on the south side they have been ploughed around. No serious losses have been reported so far, and, with a little precaution, no loss of any account need be sustained.”

“There has been considerable hay destroyed by fire

* A single copy of the *Regina Leader*, which has just come to hand, dated October 22, 1884, records no less than eight instances of the loss by settlers of valuable property. There is also a leading article upon the subject.

around this district this fall. Walter Wells and Albert Norton, we are told, lost all they had, in the shape of several stacks, which they put up at the place known as Victoria Bog. James Shaw and George Hyde are among the losers in this line. These gentlemen all live in and around Balmoral, and, of course, they were not made aware of the fire until it had gained too much headway to be put a stop to."

"A prairie fire, driven by a high wind, swept over a large extent of this vicinity, and consumed an immense quantity of hay. As a consequence, it is feared that some settlers will be obliged to dispose of the majority of their stock. This should be a warning to farmers to put fire-guards around their hay as soon as it is stacked. 'An ounce of prevention is worth a pound of cure.'"

"SELKIRK, Oct. 2.—Prairie fires have been raging about six miles west, and have done considerable damage to the hay."

"The country on the Calgary trail, between the Black Mud and the Pipestone, has been burned. The fire crossed the river from Stony Creek to the south side, and is now burning furiously."

"Mr. Gunne has received information that disastrous fires have been raging in the country around Moose Mountain during the past week, a number of settlers having had their entire crop, and in many cases their houses, consumed. The reports so far, however, are very meagre."

"The prairie fires swept over the Elm Valley neighbourhood on Tuesday, the 2nd of the month. Mr. Dougall Cameron mourns the loss of his hay-stacks; Mr. Wright lost 1,200 bushels of grain; and Best Bros. 700 bushels of wheat and oats, and 17 tons of hay. Mr. Best came very near losing his house, the fire burning up his wood-pile to within a few feet of the door."

"A prairie fire a few miles from Crystal City was raging the latter part of last month. The horizon on every side was lighted up, and it made a landscape long to be remembered for its picturesque beauty. The fire is said to have started on the American side in Dakota, and swept into Canadian territory with great fury, and we are sorry to state that some of the farmers suffered severe loss in the destruc-

tion of their crops. Mr. D. Potter, we are told, lost all of a very large crop, and nearly all of the crop of Mr. Alex. McTavish was destroyed, as was in part the crops of Gabriel Holmes and Corbett & Crookshank, and William Coulthard. Mr. Forsyth, in 1,15, not only lost all of his crop, but also his granary, and nearly all the material he had on the ground for the construction of a dwelling. This sad experience of those who have had their crops thus ruthlessly destroyed will prove a lesson to many to secure their crops with good and sufficient fire-breaks."

From the evidence now adduced, it will be seen that the enormous damage done by the prairie fires has no compensating features, except that the pasturage after them is, perhaps, improved for a time,—a matter of comparatively small moment surely. Yet I am convinced that by far the largest number of fires, both in the spring and autumn, are started intentionally by settlers to improve their pasturage, or, as they think, to rid themselves of mosquitoes, while the rest are due to carelessness in not putting out camp-fires, &c. This being the case, most persons will very naturally ask why the starting of a fire should not be heavily punishable by law. The only answer returnable is, that it is so; but the difficulty of carrying out the law is very great. Mr. Acton Burrows, Minister of Agriculture, obligingly furnished me with a copy of the Act passed on February 8, 1880, and entitled "An Act to Prevent the Extension of Prairie Fires." It is rather a curiosity in the way of legislation, and may be summarised as follows:—

(1.) Any person making haystacks on the open prairie shall protect them with a ploughed *or burned* fire-guard, not less than 8 ft. wide, and not less than 20 ft. from them; and, to prevent accidents, a fire shall not be lighted for this purpose unless at least three men be present to prevent it running. (2.) Any person disobeying this to be liable to a fine. (3.) Any person allowing fire to run off his own woods or prairies, to the damage of those of other persons, shall be fined, on conviction, not less than 200 dols. or, in default, not more than twelve months' imprisonment. (4.) Any person leaving a fire burning without taking effectual means to prevent its spreading on to lands other than his own, shall be finable to the extent of 100 dols., or im-

prisoned for not more than six months. (5.) The informer is to receive half the fine. (6.) Persons may let out fire to save themselves from danger. (7.) In case of fire in woods or on prairies, the nearest overseer of highways may summon the inhabitants to assist in putting it out. (8.) In case of default, the parties are finable. (9.) Damages are recoverable before any competent Court of Jurisdiction. (10.) Copies of this Act are to be distributed. (11.) Repeals former Acts and Orders in Council.

Here we have the first section *compelling* a man to protect his own goods, and, in so doing, either to use a plough, or, at his own option, the very means which are as likely as not to cause the same danger to all his neighbours as he himself is trying to provide against; for it is fairly certain that, in many cases, no three men could be sure of preventing a fire from running. A friend told me that he once accidentally let fire out in a high wind, and before it had run a mile, he was sure the blaze was two miles wide. I heard, too, of a case in which a reverend gentleman had been fined the full 200 dols.; but, as a rule, settlers can fire the prairie with impunity. Difficult as it might be to enforce, a law is required which shall severely punish the lighting of a prairie fire under any pretext whatever. The severity of the penalties in the present Act shows that the Manitoban legislators went to work in the right spirit, though with a wrong method.

I must ask my readers to pardon the great length at which I have treated of this part of my subject; but enough has been said to show its great importance.

CHAPTER III.

OBSERVATIONS ON THE CLIMATE OF MANITOBA.

THERE are many persons who will be inclined to ridicule my remarks upon the climate of Manitoba, simply because I have not spent a complete winter there. But, as a result of extensive inquiries, I am convinced that this is

not so great an omission as many people will be inclined to believe.

Of all the causes which make Englishmen distrustful of Canada as a field for settlement, the severity of the winter is by far the most powerful. Were our would-be emigrants perfectly satisfied in their own minds that the winter certainly is not so great an obstacle to the future development of the country as some persons have represented it to be, the tide of emigration to Canada as a whole, and to Manitoba in particular, would be greatly increased. To this point, then, I will now direct my attention.

To the mind of the average Englishman, Canada insensibly presents itself as a land of perpetual winter. The ideas of fur-clad men, of jingling sleigh bells, of hard frosts, of "ice carnivals," and all other kinds of winter sports are so inseparably connected with Canada in the thoughts of many, that the notion of there being a summer at all in that country—to say nothing of that summer being a delightful one—is, at first, not altogether unlikely to appear absurd. This idea, that Canada is a country knowing no other season than the winter time, which has almost unconsciously permeated our thoughts, is, I believe, largely responsible for the bad name which Manitoba has now come to possess in the eyes of many people. What amount of truth there is in it let my readers judge after having read my statements.

I have no desire whatever to make the Manitoban winter appear either more or less severe than it really is; but the almost universal testimony received from actual settlers has perfectly convinced me that the disadvantages of the severe winter have been greatly exaggerated in this country; though it is useless to deny that they are very great. Lest some should imagine that, having only seen things at their best, I am disinclined to believe they ever reach their worst, I will here quote some remarks made by Captain Butler in his "Wild North Land" (p. 68). He says: "Those who in summer or autumn visit the great prairie of the Saskatchewan can form but a faint idea of its winter fierceness and utter desolation. They are prone to paint the scene as wanting only the settler's hut, the yoke of oxen, the

wagon, to become at once the paradise of the husband man. They little know of what they speak. Should they really wish to form a true conception of life in these solitudes, let them go out towards the close of November into the treeless waste; *then* midst fierce-storm and blinding cold, and snowdrift so dense that earth and heaven seem wrapped together in indistinguishable chaos, they will witness a sight as different from the summer ideal as a mid-Atlantic mid-winter storm varies from a tranquil moonlight on the *Ægean Sea*." This, it may be pointed out, is written as a result of the author's experience under canvas merely, and, therefore, is not likely to be under-drawn; but, if any one fancies that occasional spells of weather as bad, or even worse than this, renders life in a well-warmed house unbearable, let him go out and ask the many settlers that are already on the prairies what their experience has been, and they will answer almost to a man: "Long and severe the winter doubtless is; but, for all that, it is not unbearable, nor even, at times, unenjoyable."

The *Mark Lane Express* is leader of the anti-Manitoba faction in this country. In a recent issue, the editor of this usually-reliable journal waxes exceedingly wroth against Professor Tanner, whose chief fault appears to have been that, in his "Report on Canada," he had given his opinion upon the Manitoban climate, after having made many inquiries concerning it upon the spot, instead of setting to work in a London office to draw upon his imagination for his ideas upon the subject, as his antagonist has most clearly done. I do not wish to deny that the Professor's report does require rather more shading, by way of contrast with the super-abundant rose-colour which it shows; but, of the two, his opponent, by rushing infinitely further in the opposite extreme, has fallen into by far the gravest error. The North-west is derisively spoken of as "British Siberia," while, as to its climate, we are told that "seven months of winter and five months of mosquitoes is the programme of the year in Manitoba." Next we have the inquiry, very innocently put forward: "Shall we ever get a report on Manitoba written by a visitor who chooses some other time than the pleasant Indian summer—the *only tolerable portion of the year in Manitoba*—for his travels

in the province?" As showing the value of such abuse, it will be well to observe that a few lines higher up we had been led to suppose that no portion of the year was either pleasant or tolerable in Manitoba. It is usually quite useless to argue with an author who makes such statements as the foregoing; but, for the sake of the readers, I wish to point out that many reports, such as those asked for, do exist. For instance, no one has spoken more highly of the North-west than Captain Butler, Viscount Milton, Dr. Cheadle, and the author of "A Year in Manitoba," all of whom have passed at least one winter in the country, and some have even suffered considerable hardship from the cold. For my own part, although I was not in Manitoba during the Indian summer,—a season, it should be remembered, which has an average annual duration of less than seven days,—I can assert that during almost the whole of the time that I was there the weather was not only tolerable, but delightful. The author of "A Year in Manitoba," after having spent a winter there, writes:—"The sense of cold is certainly much less here than in England; its dryness probably accounts for much of this; but cold and heat are relative terms as regards the feelings." With 12 deg. of frost, he says, "the weather felt quite warm, and both gloves and overcoats seemed superfluous." But the editor's confidence in his own opinion has led him into a trap. He makes an extract from the Professor's report, in which the following appears:—"On account of the bracing dry atmosphere, the fluctuations of temperature are not inconveniently felt, as is the case where the atmosphere is more humid. The warm days in summer are generally followed by cool evenings, and such a thing as very sultry and oppressive heat is scarcely known. The warm days followed by cool nights, and copious dews, facilitate the growth of cereals in a wonderful degree. The winters here are also very pleasant and bracing, proceeding from the same cause, namely, the dryness of our atmosphere." "This is a little too much, and it renders one unavoidably cautious in accepting the Professor's judgment of other matters in Canada," says our editor, apparently overlooking the fact that the foregoing is no vain imagination of Professor Tanner's, but the deliberate opinion of Mr.

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GENERAL METEOROLOGICAL MEANS AND QUANTITIES FROM OBSERVATIONS T

PHENOMENA.	1871	1872	1873	1874	1875
Mean Height of the Barometer	29.1369	29.1131	29.1295	29.1451	29.1474
Mean Temperature	32.43	32.84	32.29	31.85	29.63
Maximum Temperature	100.3	99.5	94.3	94.5	94.3
Minimum Temperature	-40.3	-41.0	-36.0	-38.7	-41.6
Mean Percentage of Sky Clouded	0.52	0.50	0.49	0.41	0.46
Amount of Rain in inches	15.600	21.620	13.580	14.988	12.290
Amount of Snow in inches	51.50	73.02	36.85	36.17	47.11
Total Precipitation of Rain and melted Snow	20.175	30.170	17.040	18.314	16.847
Number of Days on which Rain fell	56	54	61	47	68
Number of Days on which Snow fell	48	46	55	42	57
Number of Fogs	17	9	6	8	2
Number of Auroras	48	59	81	54	42
Number of Thunder-Storms	27	27	24	31	13

CERTAIN METEOROLOGICAL MEANS AND QUANTITIES

PHENEMONA.	Jan.	Feb.	March.	April.	May.	June.
Mean Temperature .. 1880	0.50	-2.23	7.36	30.72	54.75	62.79
Maximum Temperature .. "	40.5	36.4	44.7	67.5	83.5	87.0
Minimum Temperature .. "	-31.3	-35.3	-36.3	-3.2	29.2	34.0
Mean Temperature .. 1881	-9.2	3.7	20.8	32.12	57.4	62.8
Maximum Temperature .. "	31.5	29.0	41.3	59.5	84.6	98.0
Minimum Temperature .. "	-40.5	-27.3	-8.2	-10.3	21.3	39.7
Mean Temperature (average).....	2.9	3.0	9.0	30.2	51.2	63.6

FROM OBSERVATIONS TAKEN AT WINNIPEG, FROM 1871 TO 1881 INCLUSIVE.

1874	1875	1876	1877	1878	1879	1880	1881	Mean for 11 Years.
29'1451	29'1474	29'3191	29'1517	29'0993	29'1520	29'1365	29'1520	29'1530
31'85	29'63	31'34	36'88	36'96	33'36	31'82	34'3	33'06
94'5	94'3	95'0	95'0	94'5	93'0	90'3	98'0	95'34
-38'7	-41'6	-43'0	-44'3	-25'3	-50'5	-44'4	-40'5	-40'51
0'41	0'46	0'50	0'48	0'56	0'52	0'55	0'57	0'51
14'988	12'290	22'950	22'034	24'135	19'810	21'683	8'055	16'977
36'17	47'11	74'21	30'30	34'44	57'90	58'19	80'19	52'72
18'314	16'847	29'184	24'608	29'516	25'235	27'166	18'094	23'304
47	68	68	78	81	91	76	79	69
42	57	46	29	34	39	46	49	45
8	2	8	16	5	9	7	11	9
54	42	31	33	12	36	26	36	42
31	13	28	25	17	37	33	29	27

WINDS AND QUANTITIES OBSERVED AT WINNIPEG.

May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Year.
54'75	62'79	65'61	62'24	51'97	38'25	12'46	-2'58	31'82
83'5	87'0	90'3	84'3	78'0	74'3	46'3	34'5	90'3
29'2	34'0	39'0	37'0	27'0	14'0	-25'3	-44'4	-44'4
57'4	6'28	69'9	66'4	51'1	34'3	12'1	10'1	34'3
84'6	98'0	93'5	88'7	81'0	66'0	44'8	38'7	98'0
21'3	39'7	39'0	37'7	27'0	11'0	-26'3	-27'3	-40'5
51'2	63'6	65'9	64'8	51'3	40'0	14'6	0'6	32'6

To face p. 53.

GENERAL METEOROLOGICA

PHENOMENA.	187
Mean Height of the Barometer	29.1
Mean Temperature	32.4
Maximum Temperature	100.3
Minimum Temperature.....	-40.3
Mean Percentage of Sky Clouded ...	0.5
Amount of Rain in inches	15.6
Amount of Snow in inches	51.5
Total Precipitation of Rain and melted Snow	20.1
Number of Days on which Rain fell	5
Number of Days on which Snow fell.....	4
Number of Fogs	1
Number of Auroras	4
Number of Thunder-Storms	2

C

PHENOMENA.	Jan.	Feb.
Mean Temperature .. 1880	0.50	-2.2
Maximum Temperature	40.5	36.2
Minimum Temperature.....	-31.3	-35.3
Mean Temperature .. 1881	-9.2	3.7
Maximum Temperature	31.5	29.0
Minimum Temperature	-40.5	-27.3
Mean Temperature (average).....	2.9	3.0

James Stewart, of St. Andrews, Manitoba, who has resided there and systematically recorded the fluctuations of the weather since the year 1867. Further comment is needless.

So far as the readings of the barometer and thermometer go, no one need any longer be in ignorance of the climate of Winnipeg; for the daily readings of both, from the beginning of 1871 to the end of 1881, together with "certain meteorological means and quantities" for each year, and for the whole period of eleven years, are given in full in the "Report of the Department of Agriculture for 1882." The first of the two tables on the accompanying sheet gives the principal results of these observations. The second indicates the maximum, minimum, and mean temperatures for each month in 1880 and 1881, and also for those two years as a whole, as shown by the report: as well as the average mean temperature of Winnipeg for the year and for each month in the year, as given in the article "Canada," in the last edition of the "Encyclopædia Britannica."

Although the winter is thus shown to be excessively severe if the thermometer alone be consulted, the almost universal testimony one receives from settlers is that, although the *duration* might be considerably shortened with advantage, still it is far from being an unbearable or even disagreeable time; that a temperature of many degrees below zero is not felt to be anything like the inconvenience it would be here. The nights are excessively cold, and so are the mornings and evenings. It is then that the mercury shrinks to 30 deg. or 40 deg. below zero, and people who are not very careful of themselves are certain to get more or less severely frost-bitten. But for several hours at mid-day the state of things is generally very different. The sun shines brightly, and even warmly, through the clear dry air, upon the dazzling white snow; out-door work can be carried on, provided there is no wind; the mercury rises to zero, or even higher, and all nature looks so cheerful that existence itself is said to be a pleasure. Of course there are precautions which must be taken, or the return of the intense cold at night will freeze the unlucky settlers in their very beds. The houses are

built solidly and compactly, with small rooms that can be conveniently warmed with a stove in which a fire is kept up all night. Not a few settlers told me that if they could only get plenty of coal they would laugh at the worst frosts.

The much-abused stove is, of course, as much an institution in Canada as in the States. Whether or not it is more unhealthy than an open fire I do not know; but I *do* know that as a warming contrivance it is vastly superior, while, as a cooking apparatus, it is not inferior. A hot fire is very quickly obtained in a Canadian stove, and cooking is done as easily as with a kitchen range. Unlike an open grate, a stove gives off heat all round, while the chimney or pipe, still giving off heat, is carried up through the ceiling to the room above (when there is one), where a tin contrivance, called a "drum," is often used. In this the hot air circulates, often giving off as much warmth as the stove below. Thus, the whole of the heat generated by the consumption of fuel in the stove, is, as far as possible, utilised, and but little is sent up the chimney to warm the clouds, which is the principal effect of open grates. The Manitoban farmer, with his small, stove-warmed house, has the power of making himself snug, which many an English cottager finds he lacks when an unusually severe winter arrives.

Out-doors, great fingerless mittens of buffalo-hide are worn on the hands; huge overcoats, made of woolly buffalo-ropes, and worn over everything, give human beings an extremely ursine appearance; while mocassins of soft moose-skin cover the feet, and permit that free circulation of the blood which hard leather boots would prevent, thereby causing the feet to become frozen. Though made of soft skin, there is no danger of their becoming worn out or wet through, for the fine powdery snow is always dry, and always soft, and seldom melts until the arrival of the universal and rapid spring thaw.

Manitobans know what to expect during winter, and prepare for it accordingly. There is never any doubt, as there is here, whether the coming winter is going to be a hard one, or, indeed, whether there is going to be a winter at all. The hard frost comes one year much as it came the year before—perhaps a little more or a little less severe,

but still always intense. During the night, the very earth outside, and the logs or beams of the house, can sometimes be heard cracking like pistol-shots. The panes of the window become covered with solid blocks of ice, due to the condensation of moisture, often levelling them up with the sashes; and little buttons of ice form on the heads of each of the tacks that nail the paper to the frame of the house. The winter of 1882-83 was often spoken of as a very severe one, the mercury frequently falling at night to 20 deg. or 30 deg. below zero, while on one occasion it is said to have reached - 50 deg. Fahr.

The cracking of the beams of a house is akin to the cracking of a ship's timbers during an Arctic winter. It is imaginary rather than real, since no cracks open. But it is different with the earth. In hollows and slight depressions on the prairie, where water has stood in the autumn and been frozen with the soil, the surface of the ground during the following summer may be plainly seen to have been cracked and riven by ziz-zag, lightning-like seams running into one another every few feet or inches. The actual cracks do not gape open, but still it is easy enough to see where they have been. Even on the dry, level prairie, when breaking is going on, a number of sods may often be seen to break in two in exactly the same line as the plough lifts them. This is due to an old winter frost-crack, which, though it could not before be seen by the eye, thus shows itself.

The winter usually sets in about the last week in October or first in November, and continues without a break until the beginning or middle of April. It is said that a thaw which does not completely clear the ground is more to be dreaded in the North-west than a temperature of 50 deg. below zero; for the hard crust that forms during the next frost causes many animals to starve through being unable to get at their food beneath it. But it must not be supposed that the lovely winter days that have already been spoken of are invariable. As in other countries where the cold of winter is intense, it only becomes unpleasant when a wind is added. A very low temperature can be easily endured when all is perfectly still; but, when a wind is added, frost-bites at once occur. Now Manitoba, being a

level, open country, is a good deal exposed to the effect of winds; and this fact may be blamed for the greater part of all that is disagreeable in connexion with the winter. The fine powdery snow lies on the ground ready to drift with the slightest wind, and it requires no little skill so to manage the winter drifts that they may be turned where they are the least inconvenience.

Out on the open prairie, the slightest obstruction or eminence causes the driving snow to form a long, narrow drift behind it, which drift, as soon as the wind shifts round to any other quarter, throws another drift, as wide as the first is long, and at right-angles to it. Few things throw a worse drift than a straw-stack, or a building with sloping sides; for, as there is nothing to turn the wind, the snow is deposited all over and around such a building, whereas a sheer upright wall throws the wind back, to some extent, causing a drift to be formed at a little distance from the wall,—this distance being greater according as the wall is high.

Of all things Manitoban, the most to be dreaded is a "blizzard." This phenomenon is usually concurrent with a very low temperature, and woe be to the unlucky settler who is out on the prairie away from shelter when a blizzard comes on! A terrific wind, chilled below zero, sweeps over the surface of the ground, driving the powdery snow in clouds before it till it is utterly impossible to see one's way. A real blizzard of great severity, fortunately, is not of very frequent occurrence. A blizzard often lasts for an entire day, but seldom more than one occurs in a year, and that usually about February. During a blizzard, it is not necessary for snow to fall, but that which previously lay on the ground is lifted up and driven forward with tremendous speed. One man told me that he had heard of a case in which a settler, returning home with his team, had been caught in a blizzard; but, by standing up on his load, he was able to get above the snow into clear atmosphere, and he thus managed to find his way home. Yet, after all, a blizzard is as nothing when compared with the frightful tornadoes, which are sometimes known to sweep over Minnesota, Wisconsin, and Dakota, clearing everything before them,—levelling houses, and killing people. For

whatsoever reason it may be, Manitoba has never been cursed with such as these.

The following graphic description of a blizzard is from the pen of my friend, Mr. E. E. T. Seton, of Carberry. I make no excuse for inserting it here :—

A MANITOBAN BLIZZARD.

Dramatis personæ.—A Manitoban party consisting (after Capt. Mayne Reid's plan) of some greenhorns, a scientific member, and an experienced native, known as John.

All Ontarians have heard of that simoon of the snow—a Manitoban blizzard ; but, unless they have travelled beyond the bounds of their province, they can never have experienced one ; for a blizzard can only take place in a land of intense cold where there is a level unbroken waste of snow.

During our first winter we were very naturally looking out for the terrors of a blizzard. Time wore on into the Christmas season ; the snow lay deeper and deeper on the ground, and the thermometer was steadily below zero ; but there was no great disturbance to note.

However, one day it came on to blow hard—as hard as I have ever seen it in Ontario. The wavy expanse of snow was more and more tossed into heaps—each heap like a curled but stable wave—and over the crest, in gusty bursts, the wind sent hissing clouds of snow, which hid from view objects a mile off and left but smoky outlines of those nearer. It was also very cold, and to the new comers it seemed a hard day indeed. As we watched the snow-sea being tossed about, one of us asked : “ John, is this a *Blizzard* ? ”—“ No.”

Such little spells of blustering weather increased in number and were passed without comment ; they might stop out-door work in Ontario, but the hardy Manitobans heed them not.

But a harder, fiercer one came on us about the middle of January. The thermometer had fallen 30 deg. below zero. All night the winds worked around the house and over the prairie, trampling and tossing the fine powdery snow in wild sport. Fences were quickly disappearing beneath the fast-accumulating heaps ; while in places the hard grinding of the storm was laying bare the ground. The air was full of snow for 50 ft. up. We could not see 100 yards with clearness. The cutting cold was driven into our faces, so that an hour or more outside necessitated a return to the house to thaw a nose or an ear. Travelling was impossible ; and, as we looked at the careering clouds of snow-dust, one said : “ John ! *This* is a *Blizzard* at any rate ? ” The answer was a contemptuous “ No ! ”

Time passed, and we were in February. The snow lay deep over all things. The winds had piled drifts and carved hollows innumerable about every projection, till the plains seemed like a turbulent ocean of snow. One day, towards the end of the month, dawn showed a cloudy sky ; and, though the weather seemed calm, there was at times a gust of wind which blew up a cloud of snow for a minute and

then let it settle again. Towards night it got windy, blowing from the north, and the thermometer had fallen to 40 deg. below zero. Later on, the wind increased to a gale, and snow fell steadily. All night we heard the sound of the strong wind and the snow hissing over the roof. Towards morning it got worse. When it should have been day, we looked out; but nothing was visible at 20 ft. There was nothing but a chaos of whirling powdery snow—a steady blast of howling, stinging snow—snow above, snow around, snow below, snow everywhere—snow driven almost through you, bearing a numbing chill to your very bones. The racing clouds were swept low to earth and whisked along like ice in a torrent. Round the house the wind fairly screamed; not the mere hair-like crack in roof or wall but became a funnel for sifting snow. Twenty feet away from the buildings you seemed to be alone in space; even your feet were hidden in hissing snow; while the terrible gale, chilled to 40 deg. below zero, was tearing up solid drifts in ranks and hurling them high into the gloom. The roaring was deafening, like a steady r-r-r-r-r from a fan-blast. The air was like flame on one's flesh through its very coldness. The universe seemed blotted out by a Niagara of snow. There seemed neither heaven nor earth—nothing but furious winds and driving snow—gloom and terrible frost. The day was darkened and the sun forgotten—to his eyes the land was blotted out in the awful tumult.

I can say no more! "Storm" is a weak word to describe it. For two days it lasted and we lived hidden. The third morning came, but calm; it was over. The face of the plains was changed; there were creatures enough dead under that chaste white covering.

As we dug out the cattle, said one—"John! That *was* a Blizzard." This time there was no reply!

Whatever the reason may be, it is a curious fact, admitted by all Manitobans, that Englishmen feel the cold of the first few winters less than they do themselves; but, after that, they feel it more. "Old country blood is thicker," natives tell you by way of accounting for this peculiar circumstance.

In a recently-received letter, a friend of mine—an Englishman—writes from Manitoba as follows, under date December 18, 1883, quite unprompted by any questioning on my part: "It is very cold, but still bright and fine; and, to a robust man, enjoyable. I daily go shooting, and amusing myself out of doors without any inconvenience, though my nose becomes unpleasantly cool at times."

It is very noticeable in Manitoba that, however hot the days may be, the nights are always cool. This applies equally to both summer and winter, so that the pains to which a certain newspaper editor has gone to show that the

minimum temperature of all the days in the months of October and April is nearly always some way below the freezing-point, though not incorrect, is still hardly a fair way of putting the matter, since the *mean* of those months is nearly always above the freezing-point.

But there are two scenes in the act—summer and winter. The former comes in with a rush, conquering everywhere, driving out chill frost, and taking his place. While the reign of warmth and sun-shine lasts there is little to remind one of the storms and conflicts which hold sway over the prairies during the winter time. In the bluffs and on the rivers; in the air and on the plains, all nature is on the move. A constant succession of bright flowers is kept up; birds are singing and rearing their young; thousands of brilliant-winged grasshoppers rise as one walks through the grass; while gorgeous butterflies by hundreds flutter past, forcing all men to wonder why the two sides should be so different—why such a surprising contrast? Bright sunshine overhead is daily succeeded by sunshine—everything seems in harmony with everything else. The days are nearly always warm, but seldom oppressive; for, on the open prairies, there is nearly always a sufficient breeze to be perceptible. Sometimes the mercury rises very high. I have seen it up to 88 deg. Fahr., and every one spoke of two excessively hot days which occurred towards the end of last June, when the mercury stood at 118 deg. in the sun, and the heat was so excessive that outdoor work was almost stopped.*

Certainly the summer climate is very fine; and, if it is fair to speak from one year's experience, I should say that it is decidedly superior to that of England. As a rule, it is "set fair": when rain *does* come, it usually rains with a will, and then stops. Two or three days of half-hearted drizzle seldom occur; and, when they do, are set down as "English weather." I saw only one spell of such. Many of the summer rains are thunder-showers; but these, though often very heavy, are soon over. All travellers on

* About the middle of last July (1884), I experienced a few days of excessive heat in Winnipeg. On one occasion, I believe, the thermometer indicated nearly 100 deg. in the shade.

the prairies speak of the frequent and excessive thunderstorms. Their severity is probably due to the lack of trees, buildings, and other eminences to draw off the electricity from the air to the ground. Natives said the storms this year were not so severe as sometimes; but, in all conscience, I thought them sufficient. I never saw such lightning or heard such sudden and tremendous crashes of thunder: they literally shook the house. Sometimes at night I have gone out into the pitchy darkness to watch the magnificent display of brilliant flashes from storms which appeared to surround the whole horizon, while the banging and crashing of the thunder was past description.

The clearness and dryness of the air on the prairies is often spoken of, and struck me much. Whilst I was in the country I only remember to have seen one fog. As in the higher mountainous parts of Switzerland, one is often much deceived as to distance.

On account, I suppose, of the clearness of the atmosphere, auroras are seen almost nightly at some times of the year. I saw them night after night during last August, usually taking the form of a low, wide bow, arching over the north, or of a shapeless haze of white light extending low down for some distance along the northern horizon. In winter, when the frost is severe, they are often much more brilliant. The smoke, too, of a locomotive may often be seen for a long distance, as it floats away on to the horizon exactly like that of a steamer at sea. One evening, about sunset, a train passed Carberry for the west. Shortly after I was surprised at seeing a distinct line of smoke, extending rather low down along the northern horizon, from the north-east right round to the west, it having, of course, floated away on a slight southerly breeze.

The mirage is an optical phenomenon very frequently seen on the prairies. On different occasions the illusion takes slightly different forms; but its main feature is, of course, a lifting up, and often a magnification, of distant objects. Often, during a hot day, what appears like a clump of bushes, may be seen on the far-off horizon as if slightly elevated; or, as if seen on the further shore of some wide sheet of water. Another form is usually seen in the early morning, before the thin night-mists have

cleared away, and especially after a frosty night ; as, for instance, on the morning of September 8 last, when I was distinctly able to see houses and shanties dotting the plain to the north of Carberry, all appearing to be of quite double their usual height, as well as being lifted up and distinctly visible, though, of the majority, not a trace can be seen under ordinary conditions. Beyond all, in the distance, the outline of the Riding Mountain, nearly fifty miles away, was distinctly visible, though usually quite unseen. One gentleman, living four miles from Brandon and twelve from Rapid City, told me that he had on several occasions seen the former town, and once the latter, so raised up by the mirage as to be visible from his house, although in both cases, and especially the latter, there is rising ground between which, under ordinary circumstances, absolutely prevents his seeing either place.

But I must not forget that peculiarly calm and dreamy period, the "Indian summer," which has been so often misunderstood, and about which so much has been written but so little really learned, when the summer time, as it were, summons up its last expiring energies as if determined to enjoy itself for a brief period before giving place to its chill, cold enemy—winter. The characteristics of this peculiar phenomenon have been thus described : " Sounds are distinctly audible at great distances ; objects are difficult to discern unless close at hand ; the weather is warm and oppressive ; the atmosphere hazy and calm ; and every object appears to wear a tranquil and drowsy aspect." According to Hind, the average duration of the Indian summer in Ontario for twenty years (1840 to 1859 inclusive) was six days ; the average date of commencement being October 27, and of termination November 2 ; but, in the North-west, the season is more marked, and probably of longer duration. Unfortunately, I left Manitoba just too early to see the Indian summer this year. A few days after my departure it set in (about November 5) ; but lasted only till the 9th, when the winter cold commenced in earnest.

All parts of Canada, as well as the more northerly States of the Union, are at times subject to what are known as "summer frosts," and it may be safely stated that, in the

North-west, they are more to be feared than the severest frosts of winter. At times they have done considerable damage to growing crops ; but, usually, the injury is only slight. I believe June is the month in which they most frequently appear.

If the great alternations of heat and cold, which are thus shown to exist were really painful to bear, surely we should have abundant complaints from those who have already emigrated to the North-west ; but, of all the disparaging remarks which I heard made as to a settler's prospects, few related either to the climate or to the country. All the testimony showed that the winter, which is usually represented to be so unbearable, is, in spite of some drawbacks, quite the reverse. Ontarians are rare who do not prefer a Manitoban winter to that of their own province. The climate of every country has some disadvantages. Unless a man courts disappointment, he will not set out upon a search for a land where ideal meteorological conditions prevail ; and Englishmen, above all others, are, in this matter, the persons with least right to throw mud at others. Had there been of late in England no disastrous seasons, no wet and sunless summers ; no mild, unseasonable winters ; no great storms to uproot trees, ruin houses, and wreck ships ; no destructive floods and no famine in Ireland, England might well find fault with Manitoba. As it is, the Manitobans are fairly well satisfied with their climate ; and they would on no account exchange it for that of England. If we look at the matter entirely without bias, we shall, I think, be compelled to admit that Nature has been far from unkind to this wild North Land. A long and rigorous winter she has certainly imposed upon it ; but, as though in compensation for this, she has given it a fertile soil and a delightful summer climate which, in spite of the shortness of the latter, many another nation might well envy.

CHAPTER IV.

FARMING IN MANITOBA.

IN speaking of the methods of agriculture as practised in Manitoba, or in any other equally young and recently-peopled country, it is hardly necessary to premise that the agricultural art—if art it may be called where art there is none—is in a very rude and primitive condition, and bears about as much relation to that practised in the thickly-peopled countries of the Old World as the performances of the house-plasterer, working with a whitewash-brush, bear to those of the artist, who works with a fine camel's-hair pencil. Each, in its own place, serves its own purpose, and would be useless in the place of the other. Thus, in a country where, on account of the abundance of available land, there is practically no system of tenure, but every man tills his own ground, paying neither rent nor tithe—scarcely even taxes—to any man; where the soil is so unboundedly fertile that the use of manures, the adoption of all systems of fallowing, or the rotation of crops would be quite useless, it is not surprising that these more elaborate methods of cultivation have not yet been employed.

There is one great advantage which Manitoba possesses over all other British Colonies. Elsewhere, as a rule, the emigrant commencing colonial life will find it necessary to expend a considerable sum of money and a great deal of personal labour in order to clear his land of its native forest-growth; but, in Manitoba, nearly the whole of the country is prairie land: consequently the farmer has nothing to do but to fence and plough it, when he will find himself possessed of almost everything constituting a complete farm. Nearly the whole of Ontario (from which province Manitoba has been largely peopled) was, until comparatively recently, covered with a dense growth of splendid

forests, out of which every acre that was brought under cultivation had to be hewn laboriously with the axe. If a settler added five acres per year to his cultivated ground, by cutting down the magnificent trees, piling them in a heap and burning them—even then leaving his ground encumbered by their stumps—he might consider that he had done well in his twelve months. Hence it is often said that So-and-so has gone out into “the backwoods of Canada”; but such an expression is wholly inapplicable when applied to Manitoba, where the soil requires nothing but the application of the plough to enable it to grow good crops of wheat; and, provided a sufficient number of men, horses, and ploughs be employed, there is little or nothing to prevent one farmer from bringing several thousand acres of land under cultivation in a single year. Here, then, Manitoba possesses one marked advantage over the state of things which formerly existed in Ontario, and which now exists in many parts of Australia and New Zealand. But Manitoba, like all other countries, has its own peculiar disadvantages; and these may almost all be collected together under one heading—the length of the winter and consequent shortness of the summer. It is not too much to say that the great and only secret of successful farming in Manitoba, is to farm in a manner which is adapted to the climate. The settler knows well what he has to expect; and, unless he profits by it, deserves, and will meet with, nothing but failure. That this *can* be done is proved conclusively by what *has* been done.

We will suppose that the emigrant arrives upon the land which he has selected some time during the summer. The first matters requiring his attention will be the building of a house and the breaking of some land. Many settlers live in tents until the arrival of winter renders it necessary to remove to some warmer shelter; and, through the warm summer months, this mode of life is not unpleasant; but it will certainly become the reverse if carried on later than the end of September, and a house of some sort should be ready for occupation by that date.

It is a common practice with settlers to raise, or attempt to raise, a crop the first year; but I am inclined to doubt the advantages of the plan, except upon a small scale, or

when the settler has a large family to feed and very little or no capital to purchase provisions. It is, of course, absolutely necessary for this purpose that the farmer be at work early in the year—certainly not later than the month of May. The plan adopted is to sow the oats or potatoes upon the prairie and plough them in. In moist places, or in wet seasons, this may succeed; but, as a rule, I believe the results are not very encouraging, and all the crops which I saw grown under these conditions were poor.

The method usually adopted, however, on virgin prairie soil consists, in the first place, of "breaking" it. Breaking is done by taking a thin peel, from one inch to one inch and a half thick, from the surface with an instrument known as a "breaking-plough." This is provided with a sharp-edged steel wheel that goes in front, cutting the sod, which is afterwards turned by the plough-share to a width of fifteen inches at a time. An acre and a half is an average day's work with horses; but oxen are slower. Breaking may be done at any time of the year except during winter; but is usually the farmer's occupation after the period of seeding. After being broken, the sod is allowed to lie and rot for six weeks or two months, when it is "backset." This operation consists in ploughing it back again, but this time to a depth of three or four inches. Some farmers backset their breaking crossways; but this leaves the ground very rough, and is not a plan usually followed. This double ploughing is very necessary with fresh, prairie soil in order to break up, as much as possible, the sods, which are rendered very tough by the grass-roots they contain, and which, in any case, do not rot completely for several years. More than an acre of backsetting is often done in a single day; and the two operations together are at present usually charged for at the rate of six or seven dollars per acre. Backsetting is sometimes done in the spring, and a crop grown on it the same year; but it is far better done either during the summer, or after harvest, when the terrific frosts of winter assist in the pulverisation of the soil, and leave it ready for seeding directly the thaw takes place in spring.

The ploughing of stubble land is also done both in the spring and after harvest; but, unless I am greatly mistaken,

no good farmer would willingly leave it to be done in the spring ; for, as has been already stated, the great secret of success in Manitoban farming is to farm in a manner suited to the climate ; and, as spring-wheats only are grown, the most important point of all is to be able to sow at the earliest possible date after the departure of winter, in order that the crops may be able to reach maturity and escape the early frosts of autumn. It is manifestly impossible to do this if the ploughing be not done during the autumn, in which case, too, the soil loses the advantage of being exposed to the winter frosts.

Of all periods of the year, spring is the time when the Manitoban farmer is busiest. Then it is that his resources are strained to the utmost : a few short weeks are all that he has in which to sow his crops ; and, unless they are got into the ground with all possible expedition, the result is likely to prove a disappointment. No sooner has the rapid thaw removed the snow and softened the ground to a depth sufficient to allow sowing to take place, than the harrows should be at work preparing a fine seed-bed. Sowing is done with an implement corresponding to our drill, but usually called a "broad-cast seeder," since it does not put the seed into the ground, as do our drills, but first distributes it broadcast upon the surface, afterwards covering it with mould by means of the long teeth with which it is fitted. Then again, the harrows are often used to cover it more effectually. Sowing broadcast by hand is not a usual practice in Manitoba, where, on account of the prevalence of high winds, it would be difficult evenly to distribute the seed. Such, then, are the simple methods usually adopted for the cultivation of the soil.

Next, the crops commonly grown will be treated of.

Maize, or Indian corn, which, in all parts of America, receives the distinctive name of "corn," cannot usually be grown to advantage, as the summer is too short to ripen it, but many settlers grow it as "green-corn," for household purposes. Indeed, there seems to be no reason why it should not be largely grown in England, for the same purpose. Flax is a crop which has been more largely cultivated in the past than it is at present. The only cause

which prevents its being extensively grown is the want of a market. Nevertheless, the Mennonites grow a good deal; and I saw fifty acres of it near Brandon. Peas and beans are seldom grown as field-crops, though they flourish well in gardens. "Roots," such as swedes and turnips, will grow surprisingly well where the soil is moist enough; but many parts are too dry to bring them to perfection. Potatoes, too, flourish wonderfully, but must be got in in good time, or the early frosts of autumn will cut them down. There were 11,892 acres under potatoes in the province last year. The disease is a thing utterly unknown; and I met some settlers who actually did not know what it was. Doubtless this absence is attributable to the unusual fertility of the soil, which promotes a rapid and healthy growth. The much-dreaded Colorado beetle, or "potato-bug," which is such an intolerable nuisance in other parts of Canada, and in the States, is also quite unknown; and Manitobans seem to imagine that they are now safe from its ravages.* The potato forms a very important item in a settler's diet. A curious and original method is adopted of stealing away, for immediate use, the large tubers that are first formed, the plants being afterwards left to mature their smaller tubers. This is effected by groping about with the hands in the soft, powdery soil below the roots. The samples grown are sometimes very large; although, of course, no manure or any other artifice is used. Near Brandon a man showed me an "Early Rose" potato, which I weighed, and found to turn the scale at twenty-six ounces. It was his largest; but he said he had plenty over one pound in weight. Clover is a crop of which I saw nothing, and was assured that it was not grown, on account of its inability to withstand the winter frosts. But in an article in the *Nor-west Farmer* its praises are loudly sung, and its cultivation strongly urged, on the ground that, "in the adjacent state of Minnesota, where the conditions of farming are very similar to what they are in Manitoba, clover is coming more and more into demand." Timothy-grass is often grown for hay.

* Since the foregoing was written, the insect has been met with in small numbers in several districts round Portage la Prairie.

Although there were 47,356 acres under barley this year, it is not a crop very largely grown, on account of the want of a market for it. Oats are very extensively cultivated; and, according to the official returns, there were in 1883 about 168,687 acres under the crop, or an increase of 58 per cent. over the previous year. In spite of the very large yield usually obtained, I fear the proceeds of such an extensive area cannot fail to cause much disappointment, as it must far exceed the requirements of the province; and it is hardly likely that it would be found worth while, or possible, to export oats. Whilst the railway was being constructed, a large supply was required, to feed the many teams that were at work; and the price per bushel for oats was higher than that for wheat. This, combined with the belief that oats were an easier and surer crop than wheat, gave a great impetus to their cultivation; but the market is now glutted, and the price, in many places, is (or was) as low as fifteen cents per bushel, and nowhere higher than thirty cents. Of rye, the Mennonites grew 1,500 acres last year, against only seven acres in all the rest of the province.

But the crop on which the province must depend for its future prosperity is undoubtedly wheat. The country is essentially a wheat-growing one; and its welfare is, and in the future will be still more, intimately connected with the cultivation of this cereal. No less than 250,000 acres were returned as being under wheat in 1883, which was an increase of 54 per cent. over the acreage of the previous year.* Practically, there is only one sort of wheat grown in Manitoba,—the “Red Fyfe,”—a spring wheat, said to have had a Scotch origin. Fall, or winter, wheat has as

* Mr. Burrows's ninth *Crop Bulletin*, which has recently come to hand, and bears date October 31, 1884, does not give a very satisfactory account of the harvest of the year. The getting-in of the crops seems to have been seriously hindered by the weather. The area under wheat this year was 309,281 acres, an increase of 18 per cent. over 1883. Placing the average yield as low as twenty bushels per acre, the total yield would be about 6,205,620 bushels, of which it is estimated that about 4,750,000 will be available for export. The area under oats was 86,944 acres, or 40 per cent. less this year than last; while there were 19,345 acres, or 31 per cent., less under barley. The acreage under potatoes this year is not stated.

yet only been grown experimentally. That Red Fyfe should be the only kind grown is not due to any fault of the country or the settlers, but is a result which has been brought about by the combined action of the millers, the railway company, the Hudson's Bay Company, the public Press, and the Board of Agriculture. These influential bodies issued a proclamation, some time back, urging the farmers to discontinue the growth of all other kinds; while the Board made arrangements for procuring and selling at a low price a quantity of pure seed, which the "C. P. R." (as the railway is called) carried free of charge, and the Government admitted duty-free. It is claimed for this wheat that, for milling purposes, it is the most valuable kind grown, having a thinner skin and containing more gluten than any other kind, as well as being very hard, and consequently well suited to the rollers now so largely used instead of mill-stones, especially in America. It is also claimed that, while the inferior, soft, white wheats can be grown elsewhere, the valuable Red Fyfe can only be produced to perfection in the North-west; and it is therefore desirable that it alone should be grown. Hence, the action of the authorities.* Much has been written as to the magnificent wheat-growing capabilities of the North-west, and nearly every one seems agreed upon the subject. The few samples which I brought home were much admired by farmer friends and relatives, especially that mentioned elsewhere as having taken first prize at the provincial show. The grain is small, but very plump and dark-coloured. Many farmers express doubt as to the possibility of growing winter wheat on a large scale in Manitoba, urging that the time between harvest and winter is too short to allow of the ground being ploughed, the wheat being sown, and of its coming up. In many cases where it has been tried, failure has certainly been the result; but, where the seed has been got in early enough, this has not always been the case.

As a rule, the harvest in Manitoba commences about the

* That it certainly is a valuable kind of wheat is shown by the fact that it was being largely advertised for seed this spring by a Minneapolis firm in the principal newspaper of Minnesota, in which state there seems to have been quite a demand for it.

second week in August : but this year it was not in full swing until the first week in September, and was not entirely finished by the end of the month. In a country where labour is both scarce and dear, and the summer very short, it is a total impossibility for the harvest to be got in after the leisurely fashion that is pursued in England. Self-binding reapers are almost invariably used. I did not see an acre cut by any other means ; though in some parts ordinary reapers are still in use. These machines have advanced much nearer perfection in America than with us, and, although several English makers have now taken to building them extensively for home and colonial use, they do so almost entirely on American lines. Across the water many different makers, both Canadian and American, keep up a very warm competition for public favour. Each has his own agent in all the larger towns. The price for a self-binder in Manitoba is certainly high, being from £60 to £65 ; but, as the harvest literally could not be got in without them, the settlers *must* afford to purchase them—poor though many of them are as yet. The makers have adopted a system under which payment extends over three years, though, of course, in this case, the price is higher than if ready-money were paid down. This price is undoubtedly much higher than it would have been had not the Dominion Government thought proper to place the very heavy duty of 35 per cent. on all imported agricultural implements. Those settlers who have not a sufficiently large acreage to make it worth their while to purchase a binder, join with, or hire of, a neighbour. Many farmers are very careless of their implements, often leaving binders exposed for months to wind and weather, largely, however, on account of the lack of suitable buildings to house them in.

There are some eight or nine Canadian makers, all of whose machines I have seen at work, and am convinced that there are none better than those turned out by Messrs. Harris, Son, & Co., of Brantford, Ontario, who are first-class makers. Of American makers the principal ones are Deering and MacCormick, of Chicago, and Woods, of New York. All the machines are constructed upon the same plan, though each maker has his own special points ; and these are so frequently being changed to make room

for fresh improvements, that a machine made one year is antiquated the next. Doubtless there will yet be made many very material improvements: but I can testify that, in the light crops usually grown in America, they work as it is in a manner that it is scarcely possible to find fault with, binding the sheaves with the utmost regularity, neatness, and speed. The part which seems principally to require perfecting is the canvas which performs the "elevation" of the straw. This is liable to get out of order, and its removal, if possible, would greatly lighten, cheapen, and simplify the machine. I cannot help thinking that eventually these machines will take the shape of what is now termed a "low-down binder"; which is a machine that binds the sheaf between the driving-wheel and the cutting-table, without elevating it. I believe, however, it is a fact that some of the earliest machines were of this kind, and that nearly every American maker has, at some time or other, attempted to perfect such a machine; but all have as yet failed to achieve any great amount of success. That self-binders will shortly come into general use here there can be no question: it is only a matter of a little time; but, at present, the price asked by English makers is outrageously high. Doubtless the greater amount of straw grown here and the difficulty of passing the machines through gates will cause some trouble; but these are by no means insuperable difficulties. True, there is not here the same necessity to use them, since labour is so much cheaper; but, as the binder has no wife and children to keep, he can afford to do the work cheaper than his human competitor; and will, in a short time, find extensive patronage amongst employers of labour in this country. I had it from one of the agents of the principal Canadian makers, that his firm sold about 450 binders last year in Manitoba, and 550 in Ontario; and that, for 1884, they contemplate building 1,500 machines to satisfy the increasing demand of their customers. The same firm last year ordered no less than 250 tons of binding-twine for use with their machines.

Wire-binders have now gone completely out of fashion. Their knotting apparatus was very simple; but the wire remained in the thrashing-machines and caused much

annoyance. I was told, too, of a case in which, after death, pieces of wire were found almost to fill the stomachs of two cows which had fed on straw that had been bound with wire.

But, after all, it is rather surprising that binders should be used at present in Manitoba; for, seeing that the straw is useless, and is invariably set fire to after being thrashed, it seems to me that the binding and subsequent carting and stacking of it is an unnecessary and unremunerative operation. If the corn had to stand in stacks to harden, as in England, the case would be different; but it is not so. The grain is almost as hard when in the field as when thrashed; and, if the ears only were removed by some such instrument as that used in California and Australia, and known as a "header," and if the straw were afterwards burned standing, most of its component parts would be returned direct to the soil from which they were derived, while a considerable saving of expense would also be effected.

It has often been stated, and almost as often doubted, that the yield of wheat in Manitoba averages as much as 25 bushels per acre. I therefore took especial pains to arrive at the truth on this matter, and, from the frequent and very uniform testimony I received, I can honestly say that I believe the statement is correct; though, of course, the above yield is often exceeded, and as often fallen short of. As a matter of fact, very few settlers ever know what their yield of wheat is; but I believe, nevertheless, that the foregoing is a fair average, although the Government Returns place the yield at 29 bushels per acre between the years 1876 and 1882. This figure would not, of course, be very high for England, where the expense gone to in growing an acre of wheat is very much greater than in Manitoba; but, for America, it is very high, and I doubt whether any other part of the continent, or even of the world, can compare with it, when the expense of production is considered. In California and Minnesota, for instance,—two great wheat-growing regions,—the average yield is given at a contemptibly low figure. It must be remembered, however, that the soil which has given this return is, in most cases, absolutely virgin soil, and, after a

few years' cropping, will certainly produce a lower average ; but, on the other hand, it must be very many years before the whole of the fertile region is brought under the plough. If old pasture-land in England were broken up, a very large yield of wheat could be grown on it at first. The following paragraph, which I clipped from a newspaper, would certainly "beat the world," *if* it were true!—"Thirty acres of White Fyfe wheat on the R. C. mission-farm yielded 1,200 bushels. Another field of four acres of the same variety yielded 360 bushels, from eight bushels of seed. This beats the world." Some persons seem to consider that the yield of wheat is largest about the third year, on account of the pulverisation of the soil becoming complete about that time.

After being cut, the wheat is generally stooked and allowed to stand in the field for a while, though the owner usually carts it as fast as he conveniently can with the limited means at his disposal. It is in all cases stacked in the field, and the stacks are never thatched, as they are intended to be thrashed as soon as possible. They are not even covered with a cloth, as few settlers can, or will, afford these ; consequently, a great deal of grain becomes half ruined if heavy rain sets in soon after harvest. One small, round stack is put up every day and finished at night ; so that, if rain does come, there is less danger of damage being done ; and a small stack is more convenient when the settler is short-handed, as is usually the case. These small stacks are placed in two rows, with sufficient width between for the thrashing-machine to stand. The thrashing day is arranged for as soon as possible. It is a busy time in the settler's house or shanty. A company of men usually comes with the machine, and these men have to be lodged—often with hay and sacks on the shanty floor—as can best be done. The full strength is made up by the settler's neighbours, who all give him a day's help, which he, in his turn, pays back when their thrashing-days come round. The whole gang must also be fed by the one for whom the thrashing is being done ; and, with the limited accommodation possessed by most settlers, this is no easy matter. Often, too, for want of a granary, the thrashed corn has to be stored in a room of the house.

There is no lack of thrashing-machines in the country, as they are built cheaper in America than with us, and many a successful settler starts one. The engines are all, I believe, fitted to burn either wood or straw, the latter being stuffed in with a fork through a hole in the side, though in some places they are made to be self-feeding. The thrashing-machine is always called an "agitator," and is somewhat different in construction from an English machine, being fitted with an elevator, instead of requiring a separate one. It seems rather surprising that, where the quantities to be thrashed are small, the moves frequent, and sufficient motive-power often difficult to get together, the engines are not made locomotive like many in England.

Thrashing over, the settler is left to dress his corn at leisure with his "fanning-mill"; after which he takes it to the nearest town for sale. A few years ago, before dressing-machines were introduced, farmers were compelled to sow very unclean seed, the consequence being that their land is now in an exceedingly foul condition, wild buck-wheat being the greatest nuisance. The thistle—that curse of the Ontarian farmer—has not spread as yet in the North-west, except in the old-settled district immediately around Winnipeg.

Manure is nowhere used, except in the very oldest-settled portions of the country. Where cattle are kept, it is considered a nuisance, and is destroyed or thrown away. Many a time has a stable or cow-shed been removed, rather than the great heap of dung that has accumulated round it! A few years hence, the Manitoban farmer will not be so anxious to get rid of his manure as he now is. Straw-stacks are always set fire to. One day, when I was at High Bluff, the sky was of a dull, leaden hue, and the white puffs of smoke from the thrashing-engines and the larger clouds from the burning straw-stacks all around the distant horizon had a most strange appearance. The straw-crops are usually short; but, as the straw is of no value, this is no disadvantage. It is an undeniable fact that, had the settlers more capital, and were many of them to cultivate their land in a less slovenly manner, their yield per acre would, in many cases, be much greater.

One point, concerning which I took especial pains to inform myself, was the price at which wheat can be grown

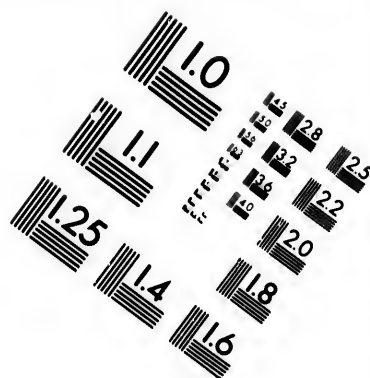
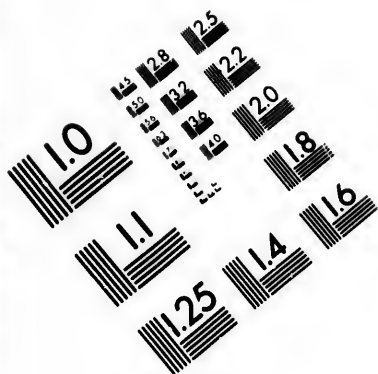
and sold at a profit to the producer. The results, I think, will not fail to interest British farmers, coming, as they do, from a country which promises soon to take no mean share in the competition against which they will have to fight in the future, even harder than at present. The point is one on which it is very difficult to obtain reliable information, as the settlers seldom know exactly how to estimate the cost of the various operations involved, especially as very few of them keep any sort of accounts. The following figures, however, are correct, so far as I have the power of making them so. The cost of growing wheat on freshly-broken prairie and on old stubble-land will, of course, be kept separate.

I believe the ordinary cost of growing an acre of wheat on fresh prairie soil and marketing the produce (provided, of course, that the settler lives within a reasonable distance of the railway), the owner hiring to perform the various acts of cultivation, is about 14 dols. per acre, made up as follows:—

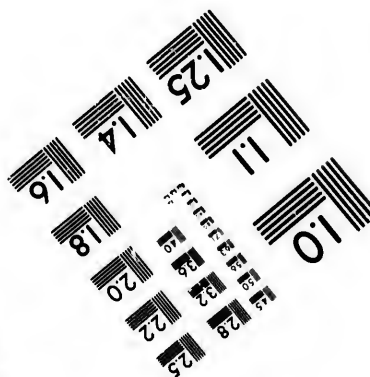
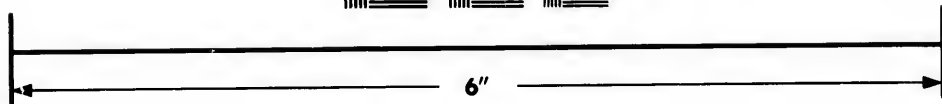
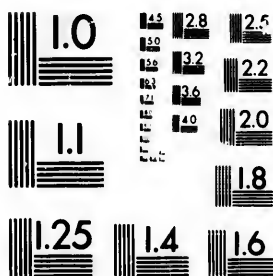
	Dols.	Cts.
Breaking and backsetting	6	0
Seed	2	0
Harrowing, seeding, &c.	1	50
Cutting and stooking	2	25
Stacking, thrashing, &c.	1	25
Marketing	1	0
	<hr/>	
Total	14	0

But, in the following years, this estimate (which, I think, is, if anything, too high) would be reduced considerably by the lessened amount of ploughing and harrowing required. Several practical farmers estimated the cost of growing and marketing the produce of an acre of wheat on old stubble, hiring labour throughout, at 8 dols. to 10 dols. Taking the mean, and supposing a man to obtain an average yield of 25 bushels, which he sells at a price of, say, 70 cents per bushel, it is clear that his gross profits from the acre would be about 8 dols. 50 cents. But it is also plain enough that, if a man puts in his wheat himself (as most do), he will not have to pay in cash for his own labour; consequently, the expenses incurred will





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be less and his profits greater ; indeed, one gentleman even put the actual cost at no more than 4 dols. per acre. These estimates, it will be seen, do not take into account interest on capital, value of land, &c. ; but the constant increase in the value of the latter, as that round it becomes more settled, ought to do more than cover these, even in a country where the rate of interest is very high. The foregoing calculations are, of course, necessarily very rough. Though the returns are great, the cost of implements is high, and the income of a man without sufficient capital to hire is limited by the amount of land which he can cultivate himself : hence the progress of such settlers is at first but slow and uphill work. The price of wheat throughout Manitoba is just the price in Winnipeg, *minus* the cost of carriage thither, by road or rail, from any point to the westward. When I was in the city this price was about 80 cents per bushel. It has been much lower in the past, but seldom much higher. I made many inquiries of railway officials and others as to the cost of transporting wheat eastward. I believe that between Winnipeg and Port Arthur over the Canadian Pacific Railway (435 miles) the charge is 23 cents per bushel ; from Port Arthur to Montreal (chiefly by water) it is about 11 cents per bushel. The ocean-freights between Montreal and Liverpool are constantly varying, but may be set down at about 10 cents per bushel.* As a matter of fact, I believe no Manitoban

* This would show that the cost-price of a quarter of Manitoban wheat landed in Liverpool (without taking into account "handling," insurance, or profit to importer) to be about 41s. 4d.—not a very encouraging out-look, certainly, with English wheat at 30s. 6d. or thereabouts. But, on the other hand, the price here will probably be somewhat higher in the future than at present, a sample of "No. 1, Hard," Manitoban wheat would usually fetch a higher price than average English wheat, and the railway carriage on the other side of the water will probably be lower in the future than now. Since last year, the charge over the Canadian Pacific Railway, between Winnipeg and Port Arthur, has been reduced to 17 cents a bushel. Advices recently to hand show that during last October (1884), 239,468 bushels of wheat were "shipped" from Manitoba over the Canadian Pacific Railway. The price now is, of course, much lower than at this time last year. I believe that at Carberry and Brandon the price is now a little over 50 cents a bushel ; at Winnipeg, something over 60 cents, or perhaps higher.

wheat was exported to Europe last year. A good deal, however, was sent to Montreal.

The past year (1883) in Manitoba is spoken of as having been an altogether abnormal and unfavourable one; but, in all similarly-situated young countries, this is a tale annually told. There does, however, seem no reason to question that the weather this season has not been so propitious as in some former years, on account of a very severe and prolonged drought (or, as it was always called and spelled, "drouth"), which lasted from the beginning of June until the middle of July, and severely checked the growth of crops, especially in the drier districts. During the latter half of July, and afterwards, there was an abundance of rain, which mitigated the results of the drought, but never altogether removed them.

On the night of September 7 came the first frost—a rather severe one—which, besides doing serious injury to some of the wheat, completely cut down the cucumbers, potatoes, and peas. The outcry against the Manitoban climate, which the occurrence of this frost raised, can only be silenced by presenting the real, unvarnished facts of the case, which are these:—It appears, upon inquiry, that the frost did not come this year very unusually early, but that the harvest was most unusually late: hence the damage done. For instance, the author of "A Year in Manitoba" states that in 1880 the first sharp frost came on the very same date, causing the loss of part of a "late-sown" crop of barley. But the unwelcome frost which caused so much discussion last September was by no means confined to Manitoba. Its effects were felt the whole way from the Atlantic to the Pacific shores; and it caused much damage in Ontario, as well as in several states of the Union, which are said never before to have been thus visited. For instance, it was stated last January in the *Mark Lane Miller* that "the Minneapolis millers had grown seriously alarmed, consequent on the discovery that part of the wheat-crop of northern Minnesota and Dakota (estimated as high as one-fifth of the entire crop of 21,000,000 bushels) had been greatly damaged by the severe frosts of September—so much so, indeed, as to be unfit for milling purposes." It will, therefore, be seen that, if the climate of Manitoba

is to be blamed, a very large area besides cannot escape similar censure. Immediately after the frost occurred, grossly-exaggerated reports were set afloat, principally by interested parties, as to the amount of damage done. It is an indisputable fact that injury was caused to the wheat in all parts of the province : not a single farmer I spoke with denied this ; and I myself saw a good deal of grain that had been hurt. But, after all, I am quite unable to believe that so much as 25 per cent. was even touched, or that as much as 10 per cent. was ruined ; and there is no question that wheat cut before the frost escaped altogether. I am confident, too, that in most cases where damage took place the fault lay with the farmer, rather than the climate : the former should have farmed in a manner suited to the climate, by sowing his seed earlier. On the whole, the damage was certainly much less than at first reported, though, in some instances where a settler had his whole crop late, it may have entailed considerable hardship.

The situation may thus be summed up : a late spring threw back seeding ; a very dry June retarded the growth of the crops, causing harvest to come fully a fortnight later than usual ; which, again, caused the latest pieces of wheat to get frost-bitten. This late harvest hindered the getting-in of the roots and potatoes, and the still more important operation of autumn ploughing ; so that I fear a great deal was left over to be done in the spring. For this, however, many of the farmers themselves are not altogether blameless. October was a cold month on the whole, with sharp frosts at nights, though the days were warm. One night a large hotel in Brandon caught fire ; and, being of wood, of course burned furiously. A good steam fire-engine threw an abundance of water over it, and in the morning I saw the blackened ruins hanging with icicles, while the unburned floors were covered with sheets of ice.

In any open, prairie country, like Manitoba, the question of fencing must always remain a difficult and important one. The great scarcity of timber in most parts prevents the construction of the "snake fences" which are so common in all parts of Ontario ; while it is held to be questionable whether the ordinary "quick" could survive

the winter frosts ; or, if it could, whether hedges of it would not cause such extensive drifts as to be worse than useless. No doubt one or two quick-hedges in a neighbourhood would throw serious drifts ; but, if the whole country were covered with hedges, as in England, these drifts could not attain very large size, on account of their great number ; for it must be remembered that it is the extensive, unbroken flatness of the prairies at the present time that causes the snow on them to accumulate in such large quantities against the comparatively few projections it meets with as it drifts over long distances before the strong winds. There is a native species of hawthorn, with spikes nearly two inches in length, which may come to the rescue some time in the future ; but at present the settlers seem to hang almost all their hopes on what is known as the "barb-wire fencing," which, though open to very great objections, is the only kind in use throughout a very large portion of the province. This execrable invention, though perhaps a necessity in Manitoba, has, to some extent, found its way into England, where, seeing that other kinds of fencing are available, its use should be absolutely prohibited by law. The wire is "galvanised," and consists of two strands twisted together, having short pieces of similar wire so inserted between, and twisted round, the main wire, every six inches or so, that four points, each about half an inch long, project on all sides, ready to tear any unfortunate animal that runs against them. A cheaper sort has four-pointed stars cut out of galvanised sheet-iron, and inserted between the strands of the wire, but the points of this kind are easily broken off. This wire is, of course, stretched tightly along on posts set firmly up where the fence is intended to be, the wire being fastened to the posts by small staples. The posts generally in use are of tamarac, cut in the swamps ; but cedar posts, obtained from the extensive forests east of Winnipeg, last three times as long, though they cost much more in the first instance. Posts are usually about 3 in. in diameter, stand 5 ft. out of the ground, and are set 12 ft. apart. A complete fence has three wires stretched along it, each rather more than a foot apart, and a light pole nailed along the top to make the whole more conspicuous. The manner in which these

posts are set up on the prairies is very much quicker than the laborious method employed in England of digging a hole for each, and then ramming the earth down firmly round it. One day a master of the art showed me how it was done. The posts are all neatly pointed beforehand: a man takes one of them in his hands and brings the point down as heavily as possible on to the ground at the required spot. This is done several times, until a hole is formed in the fine black loam several inches deep. Into this about a quarter of a pint of water is poured, and the operation continued as before. The water so assists the post in its descent that, after a few blows with a mallet, or even by merely using the hands, it quickly penetrates 18 in. or so into the ground, and remains standing firmly enough for any purpose. The effect of the water is most surprising: by its aid a skilful hand requires no more than five minutes to put in a post. The fence is run straight by the eye. For larger posts an instrument known as a "post-hole auger" is used. This is constructed something after the fashion of a carpenter's auger, with a wooden handle; but the shank, generally a piece of gaspipe, is about 4 ft. long. The auger cuts a neat round hole; and, on being pulled up, lifts the loose earth with it. There is a hollow down the handle of the auger, which, by allowing the entrance of air to the hole, prevents suction when the earth is being pulled up.

One great advantage of this style of fencing is, that it casts no drifts to delay spring-ploughing, as fences of timber, especially snake-fences, are apt to do; and this is no small advantage, when it is remembered that to be able to sow as soon as possible after the spring thaw, is, in the North-west, a matter of prime necessity. Another advantage is, that barb-wire fencing is as cheap as anything that could be got. The posts usually cost nothing, as the settler cuts them in the swamp, if there be one near, and draws them home in winter,—stealing them, in nine cases out of ten, off some Government reservation: but, if cedar posts be used, these cost from 10 cents to 15 cents each. I understood that the barb-wire costs about 1 dol. 80 cents per 100 yards; and a friend told me that he estimated the cost of fencing to be about 9 cents per yard, wire, posts, and labour

included. In England, the wire is advertised at the price of 10s. per 100 yards.

The great disadvantages of barb-wire as a fencing material are that, being almost invisible in the dark, persons are liable to run against it. I remember seeing several faces very much disfigured by this means. Cattle, too, are almost unable to see it, and sometimes get hideously torn on the spikes, which, however, are misnamed "barbs": they are merely sharp points. As yet, but few farmers have been able to find sufficient time to procure poles and nail them along the top; and, until this is done, the fences will remain dangerous. Horses will sometimes become very careful not to run against the spikes, and probably soon learn not to "kick against the pricks." American cattle seem to have a greater inborn desire to break bounds than English ones; and a beast with this character largely developed is spoken of as being "breachy."

Barb-wire is a somewhat recent invention. When it first came out in Canada, it was as a single strand, round which the spikes were twisted. But it was found that in great frosts the tension of the wire, when stretched from post to post, became so great as to snap it. Then some one brought out the two-strand wire, which was found to stand the frost, even though "galvanised," after being twisted, thus practically making one wire. A fortune, probably, awaits the man who will invent some cheap fencing that is not open to these objections; and inventors seem to have their eyes fully opened, as I sometimes saw several other kinds of fencing. Round Portage la Prairie, where there is an abundance of timber, and much of the land has been settled for years, snake fences are numerous, as in some other parts of the country; but still, in most places, barb-wire is the rule.

The style of horse used for farm work throughout Manitoba is by no means bad; but, according to English ideas, is too light for the purpose. Nearly all the horses I saw would pass with us under the name of "nag," and would be used here for driving purposes. They are seldom shod, except on the fore-feet, as the roads, not being metalled, are soft, and shoeing is not necessary, except when the ground is frozen hard before the snow comes. A farmer

usually has a "team" of horses (that is two), which serve him for all purposes. They draw the plough, the seeder, the harrows, the binder, and the wagon; and, if the owner should require it, one or other acts as a saddle-horse, or runs in the buggy. Except in the last two cases, a single horse is never used. The wagon and all farm implements are made with a pole (or, as it is called, a "tongue"), and a "neck-yoke," and the invariable "team" is used, no matter how light the load may be. Shafts are unknown, except upon buggies. Horses are worked to an extent which, in England, would be called very hard; but in Manitoba it seems to cause no remark. The same two plough from morning till night, with but a very brief midday rest; and the three that are harnessed to the binder in the morning keep on till night, though the work is far from light. The reason for this is plain enough: if a change were required, the work would generally have to stand still, for none but the most well-to-do settlers are, as yet, able to keep more than one team. A great many, if not a majority, of the settlers in Manitoba use oxen instead of horses; and this is especially the case with beginners; for, while the first cost of oxen is less than that of horses, they can also be kept very much cheaper, since they require, as food, nothing but the hay which may be made in any quantity on the prairies; while horses require corn, and this a fresh settler would have to purchase. Probably, however, horses will be more kept now that oats are so cheap. Whilst in Manitoba, I saw quite as much as I cared of oxen as beasts of draught: as a rule, they are slow, sullen, and often vicious brutes, and I cannot understand how any one would use them who was able to afford horses, although many settlers said that, on account of their being steadier than horses, they were preferable for breaking. This may be so; but I cannot help thinking that, in some cases, "the grapes are sour," and that in reality horses are best. At all events, if I were a settler, I should be inclined to make the wish the father of the thought! A team of oxen, however, costs only about 200 dols., while horses, if good, would cost double that. All the horses in Manitoba, as well as nearly all the cattle, have been brought up from Ontario.

The wagons which are invariably used are light and convenient. They weigh about 800 lb., and cost about 75 dols. An excellent drawing of one is given in "A Year in Manitoba." The "box," as it is called, is removable, and, in some pioneers' wagons, it is said to be made watertight, in order that it may be floated across rivers. The harness used, alike for ploughing and for the wagon, is very light and simple. It is fitted with nickel buckles, and is good enough, when new, for any gentleman's carriage. Two-wheeled vehicles are very seldom driven, buggies being invariably used. These extremely light, strong, four-wheeled conveyances are equally common in Canada and the United States; and it is strange that they should not be much more used than they are in England, where the good roads are well suited to them; but customs here are very much like the laws of the Medes and Persians. The "buckboard" is a species of buggy, fitted with a seat for two in front, and a platform behind for luggage. The whole vehicle is of the lightest description possible, and is largely used in travelling. But the ancient, native conveyance of the country, though it has attained to considerable fame under the name of "Red River cart," is, in all truth, a most primæval affair. It is constructed entirely of wood, usually without one particle of metal, though I have sometimes seen a strip of buffalo-hide nailed round the nave of the wheel, or used as a tire. The various parts of the vehicle are put together with pegs; and, though the whole is of small capacity and of most antediluvian appearance, it is well suited to its uses, the broad, high, tireless wheels passing very well over the sleughs and soft places on the prairies; indeed, the strength and utility of these carts is well shown by a passage in Prof. Hind's work. He says:—"There were 2,108 in the settlement [round Fort Garry] in 1856. . . . These carts will last for several years; and one which conveyed some heavy boxes of geological specimens from Red River to Crow Wing last autumn had previously been twice near to the foot of the Rocky Mountains, and was still in good condition." Red River carts are now chiefly used by the Indians, who drive oxen in harness in the shafts.

Sheep and cattle are, as yet, not kept to a very large

extent in Manitoba. The reason for this is, that to commence stock-raising requires far more capital than to start corn-growing ; and, although the majority of settlers admit that the former would pay them well, they are, at present at least, unable to go in for it. Time, and the sure increase of capital, will, of course, remedy this state of things ; and, as it is, more cattle are kept in the older-settled district round Portage la Prairie than anywhere else. A certain Mr. Mackenzie, of Burnside, keeps, I understand, a very large herd. Where a man is possessed of cattle, he is generally able to let them have a very extensive run during the summer months ; for, unless he be near a town, there is sure to be a large extent of unoccupied land that is in the hands of speculators all around his farm, over which there is nothing to prevent him running his cattle, or cutting as much hay as he pleases to feed them during the five months of "stabling," as the Canadian says. The impression is very strong in England that the cold of winter is so great as to render it impossible to keep cattle to advantage in Manitoba. There may be something in this view ; but the fact that many settlers do keep a few cattle through the winter, and would keep more had they only capital enough, is conclusive proof that the difficulties are exaggerated. During winter the animals should certainly be kept under cover—at least during the night. Although some of the more well-to-do settlers have imported excellent pedigree bulls, the animals usually kept in Manitoba are not, as yet, of a very high class, though many settlers would be glad of well-bred beasts if they could get them.

Having read much as to the excellence of the prairie grasses, I was rather surprised to find them very different from my expectations. In the drier parts of the prairie the grass is miserably scanty and short ; and especially in the autumn, it is harsh and dry, having about it nothing of the greenness and succulence of English grass. In the wetter parts it is just the same, but much longer, and it would, in England, certainly pass as useless "sedge ;" but that cattle eat it, and that it is highly nutritious, there is no question whatever.

The system of haymaking is rather peculiar. In the moist parts, where the grass grows long, the hay is cut with

a mower on the prairie, and piled up in great heaps. These are not thatched, but left until wanted during the winter, when drawing them home affords work for the horses. It is estimated that any amount of hay may thus be put up for 1 dol. a ton. In the drier districts, such as the country around Brandon and the Big Plain, the grass on the prairie is generally so short as to be useless for hay, and it has to be cut in the hollows and round the edges of the sloughs. The settler goes with his scythe, and, wading ankle deep in water among the tall grass, cuts just as much as he wants. So little succulence is there in it that the next day it is made up into great cocks and left standing until the winter, when it is carted home. This, of course, affords winter-work for the horses; and, in any case, the hay could not be drawn off until the surface of the swamp or "muskeg" was frozen: under other conditions the wagon and horses would be engulfed. One settler never interferes with another's hay, though it lies unprotected for months.

Sheep are kept by a few farmers in small lots, and the universal testimony is that they thrive astonishingly. One man who had kept a few for several years told me that he would not be afraid to start with 1,000. Sheep will thrive on the very shortest grass, and there is no reason why they should not be largely kept on the prairies. The great drawback is supposed to be the wild oat or spear grass (*Stipa spartea*), which is very abundant on all dry parts of the prairies. The seeds, which ripen during July, have an excessively sharp, barbed point, and are easily able to penetrate the skins of sheep by means of what is known as "hygroscopic action." This takes place in the shaft or awn, some 3 in. in length, with which the seed is provided. When dry this is twisted; but, when wetted, it untwists and elongates, driving the point forward and receiving resistance from behind by means of a portion of the shaft forming a right angle with the main portion, and being provided with many minute teeth which catch in the wool and prevent the whole contrivance from going backwards. That these seeds have the power of penetrating the skins of sheep has been denied on good authority; but I am able to state, as a result of extensive inquiries, that they often do so in great numbers,

especially about the shoulders of the animals. Some seeds I brought home penetrated half an inch into the shoulder of one of our sheep. Most settlers are well aware of this peculiarity, as the seeds also trouble curly-haired dogs and severely prick the legs of any one walking through the grass. I have elsewhere published in detail my observations on this point, and have been able to show that the seeds are only troublesome during about three weeks in the year; that, by running a mowing-machine over the ground infested with the grass, or by keeping the sheep on enclosed ground, they eat the grass down, its seeds never reach maturity, and their harmfulness is destroyed; consequently, the spear-grass need be no serious hindrance to the keeping of sheep in Manitoba. I do not believe the seed has the power of killing animals, as I could never hear of a fatal case, though often told that such had occurred.

The gigantic "Bell Farm," near Indian Head, has gained such world-wide celebrity that I cannot pass on without referring to it, though it lies far to the west of the province of Manitoba. On the 10th of July, 1884, whilst upon a journey from Winnipeg to Medicine Hat, I managed to spare a day for the purpose of visiting the Bell Farm. The following facts are gleaned partly from notes made upon the spot, and partly from information since supplied by Major Bell:—

NOTES ON A VISIT TO THE BELL FARM.*

The Bell Farm lies upon the line of the Canadian Pacific Railway, 312 miles west from Winnipeg, and close to the town and station of Indian Head, in the Territory of Assiniboia. It is the property of the Qu'Appelle Valley Farming Company, Limited, which was formed in the year 1881, but it takes its name from its able manager, Major W. R. Bell, who resides upon the spot. The entire area contained within the boundaries of the farm is 64,000 acres, or 100 square miles; but of this a number of sections are the property of the Hudson's Bay Company, while others are reserved by Government for educational purposes, so that the area actually covered by the farm is not more than about 54,000 acres. It is, however, I believe, a fact that Major

* This article appeared in the *Field* on December 27, 1884. It is reprinted (with slight alterations) by the kind permission of the editor.

Bell is the manager of the largest, single, arable farm in the world; but this statement will not bear close examination, for as yet only a comparatively small portion is under cultivation. Neither is it altogether correct to describe the company as a farming company only, since it has two strings to its bow, and is also to some extent a Colonisation Company, as will be hereafter explained.

When, on April 29, 1882, the company obtained possession of the land by special Act of Parliament, it lay more than two hundred miles distant from the nearest railway station. The difficulty of obtaining so large a tract of land, unbroken by the homesteads of settlers, necessitated the location of the farm so far away in the west; but so rapidly was the construction of the railway carried on, that Indian Head was reached, and the line was running through the centre of the farm, within a few months. Nor is the situation of the farm in any respect other than a good one. Much has lately been written of the almost fabulous fertility of the fine black soil of the prairies; and nowhere is the soil better than in the valley of the Qu'Appelle or Calling River, where the farm lies. It is slightly stony, however, in places, and is everywhere marked by the old paths of the buffalo. Several pleasant *coulées*, with streams in their bottoms, intersect the farm. The conditions under which such a large tract was made over to a single private company were that the company should have the land at the exceedingly low price of 1½ dol. (5s.) per acre, on condition that not less than 4,000 acres were to be broken and brought under cultivation annually for five years, or 20,000 acres in all; but these conditions have probably been found too irksome, for I understand that application is about to be made to Government for their cancellation. It was considered that the advantage to the whole country of bringing so large an amount of land under cultivation would more than compensate for the low price at which it was sold. The general scheme of the company is to bring the land under cultivation, dividing it up into about 250 separate farms of 213 acres, each provided with a good house and buildings. These farms will then be offered for sale to the men who have charge of them, at a valuation price, payable in instalments over a term of years. At present the selling price is from 12 dols. to 20 dols. per acre. The whole of the land is intended ultimately for sale, though the home-farm of about 20,000 acres might be retained by the company if found to be sufficiently profitable. In any case it is expected to be all under cultivation two years hence—*i.e.*, at the end of 1886.

No one visiting the farm will fail to be struck with the idea that in Major Bell the company has a remarkably clear-headed manager. His energy and foresight are made obvious by the perfectly methodic manner in which every operation is carried out—so different from the slipshod ways of the average settler. Roughly speaking, his system of farming, when complete, will be as follows: Each "section," or square mile, will be divided into three portions of 213 acres each, one of which it is intended to fallow yearly. While the company retains possession of the land, a foreman will be set over about every twelve farms or four sections. I will next speak of what has been and is being done.

The ploughs commenced to "break" the rich, black, prairie soil on June 15, 1882, and, before winter set in, 2,400 acres were ready for cropping the following year. In the middle of August the farm buildings were commenced. As early as possible next spring one half of the broken area was sown with oats, and the other half with wheat. The latter gave an average yield of 19½ bushels per acre, and such of it as was sold (local demand taking nearly the whole of it for seed) realised an average price of one cent over the dollar (4s. 2½d.) per bushel. Some of the later-sown wheat was injured by the early frost on the night of September 7. In the same year (1883) 4,600 additional acres were broken, making 7,000 in all, and the following spring (1884) about 5,500 acres were sown with wheat, 1,200 with oats, and the remainder with flax. This crop was, of course, still on the ground at the time of my visit, and it was a really fine sight which the Major was able to show me during the very enjoyable drive round his farm which he was kind enough to take me. The longest furrow to be seen was two miles in length: several single pieces of wheat covered more than 1,000 acres each; while the largest extended to 1,500 acres. In all directions ploughs were at work tearing up the splendid virgin soil, for an additional 5,500 acres were to be broken before winter, and the entire year's ploughing was expected to reach 12,000 acres. As we gained a slight eminence and were able to look around for miles over the level prairie, seeing, on all sides, fields of waving grain, large expanses of recently-broken ground, horses and men busily engaged in breaking more, the substantial stone farmhouse, with the other farm buildings (including the large circular stone stable) grouped around it, and the sun shining brightly on the zinc roofs of the little houses of the foremen, scattered widely on every side, each with its acre of garden, one could but feel a pardonable pride in the thought that the energy and power of man was thus able to convert what, only three years before, had been an uninhabited waste, into the smiling and prosperous scene then around us.

As we went along I made many notes of the more interesting points mentioned by Major Bell. The whole of the ploughing is done with horses, of which 193 are now kept. The Major will not hear of steam being used, urging (with much force) that, as he would require just as many horses as he now keeps to sow and reap his crops, they may just as well do the ploughing also, instead of standing idle for a good portion of the year while the ploughing is being done by steam. The ploughs used are all sulkies and gang-ploughs, on which the men ride. Each turns more than one furrow to a depth of rather over three inches, and each is required to travel sixteen miles a day; indeed, it is said that twenty miles forms an average day's work when no accident occurs. The width of the furrows is from fourteen to sixteen inches. At the time of my visit forty-five ploughs were breaking over one hundred acres per day. Breaking is continued during the whole of the summer. After the sod has lain a while to rot, the disc-harrows are passed over it diagonally, cutting it up into lozenge-shaped pieces and leaving it ready for seeding first thing in the spring. "Back-setting" is dispensed with on the farm. As much as

possible of the stubble-ploughing is done in the autumn, so that the seed may be got in the moment after the frost takes its departure in spring. Sowing is done with broadcast seeders, a kind of combination between drill and harrows. Last year twenty-two self-binders by Deering, of Chicago, were used in getting in the crops; but to these there have this year been added twenty-five more by an excellent Canadian firm, the Messrs. Harris, of Brantford, making forty-seven in all. About sixty head of cattle and some pigs are at present kept upon the farm. Barb-wire is largely used for fencing. So great has been the number of visitors to the farm that the company has been compelled to erect, at considerable expense, a large brick hotel at Indian Head; but it is not yet open. The farm has become so well known that there is never any difficulty in getting sufficient men, especially as good wages are given. This summer 160 to 180 men were employed, at 30 dols. per month and board. During the coming winter a much smaller number will be retained at 15 dols. per month. The bareness of the prairie has been enlivened by the planting of such large numbers of small poplar trees that, if all had been planted in a straight line at their present distances apart, they would have extended no less than twenty-four miles. The trees were dug in the "bluffs," or clumps of wood, and set out beside the roads which give access to the different parts of the farm. Altogether the total amount of capital expended upon the farm is upwards of 375,000 dols. (£77,160).

During an afternoon's drive of some miles I had an excellent opportunity of noticing the pieces of wheat through which we passed. In most cases the colour and condition was excellent, and formed a great contrast with the foul and uneven pieces so often grown by the average settler. There were, however, pieces which did not promise nearly so well as the rest. For instance, there was a volunteer crop, that had appeared on a piece of land which had borne a crop the previous year, and had been intended as a fallow this season, and looked so healthy, that it was allowed to grow by way of experiment—not, however, with very good results; for I have since heard that it did not yield more than an average of six bushels per acre, though it certainly promised more in July. This was, of course, fall or winter wheat, which has as yet only been grown experimentally in the North-west, and even then with but little success. Then there were 640 acres sown with wheat that had been injured by frost the previous autumn through being backward, gophers having eaten down the first spring-growth. About half of the area sown was in good condition, the soil being slightly moist; the other half was thin and poor, a drier piece of ground apparently not suiting it; and, as it lay close to the house, it proved a great eye-sore to Major Bell. The whole, however, has not yielded badly, for the product is now estimated at twenty bushels per acre.

To me the Major's statements as to what it cost him to produce a bushel of wheat were of chief interest, as doubtless they will be to most readers. He assured me that, as near as he could calculate, the cost to him of growing and placing on the rail at Indian Head each bushel of wheat that he produces is from 30c. to 33c. (1s. 3d. to 1s. 4½d.), which he also estimates to be 40 per cent. lower than the

cost to the average settler. Further, he says that not more than 7 c. to 9 c. (3½d. to 4½d.) per bushel is paid for manual labour. At the present time the freight from Indian Head to Montreal (1,746 miles) is 32 c. (1s. 4d.) per bushel, but it will be lower next year, and Major Bell is confident that when, two years hence, the whole of his home farm is under the plough, he will be able to lay prime hard "Red Fyfe" wheat, of the excellent quality usually produced in the North-West, down in Liverpool at a cost price of 75 c. (3s. 1½d.) per bushel, or 6 dols. (25s.) per quarter, or even lower.

Of the financial standing of the concern I am not competent to speak, nor am I able to draw any comparison between the Bell Farm and the large wheat-farms of the United States, though I have visited the Dalrymple Farm in Dakota.

The following calculations, though they may not give any very valuable results, will be interesting, as showing the magnitude of the operations which Major Bell carries on. A plough having a single share only, cutting 12 in. wide, would require to travel eight miles and a quarter in order to plough an acre. If the whole of this year's ploughing were to be done with one such plough, it would require to travel 99,000 miles, or about four and one-eighth times round the globe, which would occupy nearly sixteen years and a half at the rate of two acres per day, or nearly thirty-three years if oxen were used, and one acre a day only were ploughed. If a single team were to have started to cut this year's crops with a 5 ft.-swarth machine, and to have travelled twenty miles per day, they would have taken 577 days to accomplish the work. When the entire home farm is under cultivation, the estimated yield of wheat will be upwards of half a million bushels, which would require a train consisting of over 1,000 of the ordinary grain-cars to carry it all away.

Although farmers in Manitoba suffer from various disadvantages, such as short summers, cold winters, unseasonable frosts, want of labour, and the like, still, many of the principal disadvantages of farming in England are absent. There are no rent-days, no tithes, no sparrows, no rats, no costly manures to be bought, no burdensome taxes, no antiquated landlord's restrictions, and but few insect pests. Sometimes the crops are injured by frost or hailstorms; but this is not often. Sparrows will, doubtless, arrive in due time, as also rats. Farmers consider gophers injurious to their grain-crops, and often boast of having shot 150 or 200 in a year. A gopher is a small burrowing animal, of which two species (*Spermophilus franklini* and *S. tridecem-lineatus*) are common on the prairie. One farmer told me that he had recently taken as much as half a bushel of good wheat out of a gopher's store-house. The cosmopolitan English mouse has not yet found its way to Manitoba; but settlers

make great complaints concerning a species of prairie mouse (*Hesperomys leucopus*), which enters their houses, and, by destroying clothing, makes itself even more troublesome than our mouse does. About two years back cats were so much in request, and so difficult to procure, that there was really an opening for some enterprising young follower of Dick Whittington, of story-book celebrity. In one place I saw a cat which was accustomed to being regularly taken round to three different houses in turn, in order to keep down the mice!

For some years to come yet, however, there will always be the danger of a fresh invasion of locusts, or, as they are generally called, "grasshoppers." These destructive insects have, at irregular periods of years, invaded Manitoba, as well as a very large area adjoining it in the United States, coming from the westward in numbers that are perfectly incredible, completely devastating the country and devouring every blade of green grass. They seem usually to appear for two years running. Some idea of their indescribable numbers may be gained from Professor Hind's account of his exploring expedition in 1857-58, in which years they were extremely abundant. In the past the locusts are known to have appeared in the years 1818-19, 1857-58, and lastly in 1874-5. Should they occur again shortly, it cannot be denied that they would cause untold loss to the settler.

I cannot leave this part of my subject without speaking of the statistical work which is being carried out under the able management of Mr. Acton Burrows, J.P., Deputy-Provincial Minister of Agriculture, to whom my best thanks are due for information most kindly given. A system of "Crop Bulletins" was commenced and carried out this summer in a way that is a model for all colonial countries. The arrangements which have been made follow the lines of those previously pursued in the State of Iowa. A "crop correspondent" is appointed in every township, and to each of these men, numbering altogether several hundred, a circular of inquiry is sent as often as information is desired. In return for their replies, the correspondents are granted certain privileges by the Board of Agriculture. The replies are digested and printed in

the bulletins, of which five were issued at irregular intervals this year. But the "Report of the Department of Agriculture and Statistics of the Province of Manitoba for 1882,"—a bulky, closely-printed volume of 320 pages,—contains a far greater amount of really interesting reading. The information given relates to almost every subject in which the province has a direct concern. There are long articles treating of the crops, the census returns, the postal service, the construction of the railway, the geology, the climate, and innumerable other matters, among which the meteorological statistics are very prominent. The volume is altogether devoid of puff; it contains little besides solid facts; and, in my opinion, deserves almost unqualified praise, except in one particular: it is a great deal too wordy; but this is a fault which nearly all American official publications of the kind exhibit to a greater degree even than English ones.

The kindred subjects of horticulture and arboriculture deserve some notice here. Close to Brandon I held conversation with an Irishman who was following the trade of nursery-gardener on a small patch of ground. His peas, lettuces, beets, sweet-corn, citrons, and water-melons had, he said, all done well, though the latter required to be cut and allowed to ripen under glass. He was of opinion that almost anything that grows in the open air in England would grow in Manitoba and *vice versa*. On June 19, there had been a slight frost, but not enough to kill cucumbers. Potatoes, he considered, should not be put in till May, or they would be likely to suffer from the frost. Some butter-beans,—a Canadian dwarf kind of French bean,—astonished me by their prolific yield. I believe most of the plants bore far more than their own weight of pods.

Although very few settlers have, as yet, kept bees, there is no reason whatever why they should not prove profitable,—in fact, the abundance of wild flowers is a strong argument in their favour; but the bees would, of course, require some protection from the winter frosts. One person has, I know, kept bees in Manitoba with good results for three seasons. Wild bees, though not abundant, are far from rare.

Much controversy has been waged, and many conflicting opinions expressed, as to the fruit-growing capabilities of Manitoba and the North-west. The country certainly will never grow a very great quantity of fruit; and, at present, the amount produced is practically *nil*; but I can see no reason why any sort of fruit should not grow that does not require a very long summer to ripen it. In some places (though not much where I went), plums, currants, gooseberries, cranberries, and raspberries grow wild abundantly. A small strawberry, about the size of the wild English one and having a deliciously-flavoured fruit, grows wild in quantities on the prairie, and is often used for jam. Some cultivated raspberry and currant bushes brought up from Ontario in the autumn of 1882, stood the winter well and bore fruit sparingly last summer; but some apple-trees had been killed above the graft, probably through having been too long a time out of the ground. With regard to apples, it is certain that they now grow well in Minnesota; and, at the last meeting of the American Pomological Society, a collection of no less than 140 varieties from that State was shown, though it is but a few years since the possibility of their growing there was altogether ridiculed. Not a few attempts have already been made to plant fruit-trees in Manitoba, and most of these have certainly met with poor success; but this has, undoubtedly, been due to insufficient care and knowledge of planting, and to the selection of sorts ill-adapted to the circumstances, rather than to the defects of climate or soil. The North-west is a country which has been denuded of its trees by artificial means; and the fact that certain trees do not grow there is no proof that they *will* not. In planting fruit-trees on the prairie, it is highly desirable, if not absolutely necessary, that they should be protected from the high winds that are due largely to the bareness of the country; and this should be done by planting other trees as wind-breaks.

The kinds of fruit grown in Ontario and the United States are principally those which have been introduced from the mild and humid countries of Western Europe; and it is not reasonable to suppose that these sorts would continue to flourish and bear abundantly if suddenly transplanted to a country where the winters are longer and

more rigorous, and the summers, though bright, are short. If these sorts are ever to grow in Manitoba, it is evident that it can only be after a carefully-conducted system of "hardening off," which must be a slow, tedious, and often disappointing matter. But it is only fair that inquiry should be made as to what has been done in the colder and less kindly regions of Eastern Europe. This has been done with most encouraging results. Two gentlemen have lately been in Russia, making inquiries as to the sorts of apples and other fruits which are there grown in districts where the climate is less, or at all events no more, propitious than in Manitoba. After hearing the opinions of these gentlemen and others, at a meeting held in Winnipeg in August last, an influential association was formed, having as its object the encouragement of horticulture and arboriculture in the province; and I understand that the Government, through the Board of Agriculture, is prepared to back this society. It seems that at nine or ten towns and villages near the city of Simbersk on the Volga, there are thousands of acres planted with apple-trees, which, for hundreds of years past, have supplied the cities of Moscow, Nijni-Novgorod, Simbersk, and Kazan with an abundance of fruit, though these places all lie hundreds of miles north of the latitude of Winnipeg, in the dry, arid, steppe region of Russia, where the days are excessively hot, the nights very cool, and the winter climate decidedly colder than that of Manitoba. In addition to apples, plums, cherries, and pears are grown in large quantities, and their quality is described as being that of "really choice fruit." The fruit-trees are dwarf ones,—bushes, in fact, rather than trees,—and belong to special sorts, unknown in Western Europe. It is these sorts which are now about to be introduced, and which it is proposed, with good prospect of success, to cultivate in Manitoba.

The subject of tree-culture is, to my mind, one of such great importance to the future prosperity of Manitoba—not to speak of the whole prairie section of the North-West—that it should on no account be left to private enterprise, but should at once engage the most earnest attention of the Government,—or, rather, should have done so long ago. True, certain "tree-planting regulations" are

already in force ; but they have been found inoperative, and should now be replaced by fresh ones. In speaking of the scarcity of timber, it is very necessary to state whether building-timber or fuel is meant. The former is very scarce in all parts of the province lying west of Winnipeg. Years ago, Professor Hind wrote :—“ Timber fit for lumbering purposes is only found in narrow strips on the Red and Assiniboine Rivers, and in still less quantities on the Roseau and Rat Rivers. It consists of elm, oak, and poplar of very large growth, as is stated elsewhere ; but, if the settlements progress (and why should they not ?), these supplies will soon be consumed.” The scarcity of good timber is further shown by the precise regulations in the “ Dominion Lands Act ” for the careful husbanding of what little there is. That there are no valid natural reasons why the country should be devoid of timber, has already been shown ; and the matter is one which might well be urged upon the attention of the Government, so that in years to come the province would not be altogether dependent upon supplies from outside.

Wood for fuel is, of course, much more easily procurable. Wherever the country is wet, or much interspersed by lakes and rivers, or wherever there are extensive sand-hills, the supply of fuel is usually good, and sometimes abundant ; but it is very different in some other parts, such as the dry, bare prairie around Brandon, the Big Plain, and other places, to say nothing of the absolutely treeless plains in the North-west Territory, where one may travel for days without seeing any growing thing taller than a dwarf rose-bush. Even in Manitoba, some settlers have to go as much as ten miles for their firewood, and few will say this is no disadvantage ; although, of course, the matter will be of less consequence when coal comes into more general use. Yet, in spite of all this, the official compilers of the pamphlet, entitled “ What Farmers say of their Personal Experience in the Canadian North-west,” have the face to write as follows :—“ Wood for building and fencing purposes is a matter of great importance in a prairie country, and in this respect the Canadian North-west is peculiarly favoured. [!] Although there are sections where wood is scarce, as a general rule there is a well-regulated

supply throughout the country." These words can give no other impression than that *timber fit for building purposes* is readily obtainable, which impression is wholly wrong so far as many very extensive districts are concerned. Of course, it may be argued that there is an inexhaustible supply of building timber on the east, north, and north-west of the prairies, but this is not to the point: such wood is *not* easily obtainable. Next, we have given "The Testimony of Settlers respecting Wood and Fuel," from which, as we are told, "it will be seen that, on the whole, there is not much difficulty in obtaining sufficient wood for the purposes of the farm." The evidence brought forward will, no doubt, prove perfectly conclusive to emigrants before they leave our shores; but, after their arrival in the colony, they may learn that the whole of the testimony brought forward has been collected from a limited area in the moist regions around Emerson, Winnipeg, and the Portage, and along the banks of the rivers between those places—possibly as much as one-thousandth part of the whole North-west! True, it may be urged that when these statements were penned no other portion of the North-west had been opened up, but this does not alter the case; and though, doubtless, these statements have only been sent out of late through an oversight, it is now time that they should be discontinued.

CHAPTER V.

HINTS FOR THOSE WHO CONTEMPLATE EMIGRATING.

FROM the way in which Manitoba has been spoken of in the foregoing pages, some might be led to believe that I am about to adopt the persuasive ways of the ordinary emigration pamphlet-writers, and promiscuously advise all kinds and all classes of people to take advantage of the magnificent opportunities of bettering their condition, which this promising colony affords; but this is far from

being my intention. Should any of my readers desire to ask, whether I consider it desirable for him or her to emigrate to Manitoba, the wish shall, once for all, be satisfied by my most emphatically answering: "No: I have not the least intention of accepting the responsibility of recommending any particular person or persons to take such an important step in their lives as emigration."

I have spoken of the country in terms of admiration because I believe facts warrant it. No other British colony has, within an equally short time, made such rapid progress as Manitoba; and this is in itself a recommendation, since this progress carries with it a rapid rise in the value of land which cannot fail to benefit the emigrant. But, supposing it were proved that Manitoba possesses greater advantages than any other colony, this does not affect the great fact, which cannot be too strongly put forward, that there are people who *should* emigrate; and there are people who *should not*. Banking and brewing are very lucrative businesses; but it does not follow that every one can go into them with equal chance of success. To some the colonies offer magnificent advantages; but to others they offer next to none. It must lie with every man to decide for himself whether he is, or whether he is not, fitted for a colonial life; and I am bound to say that I think comparatively few middle-class Englishmen are thus fitted. The matter is one in which hard-and-fast rules cannot be laid down; but let every one remember that in emigrating to Manitoba, or any other of the colonies, an important step in life is being taken which, if wrong, it may, or may not, be possible to rectify.

With many persons emigration is now a panacea for all the ills due to dense population and excessive business competition. I do not regard things in this light; but yet am most strongly of opinion that, things being as they are, a very large proportion of our population would benefit itself, as well as that left behind, by judicious emigration; yet, on the other hand, unless great caution be used the intended benefit may very easily become an unintended and unexpected curse. Whilst in Canada I met many settlers, some of whom had bettered their circumstances by emigrating; whilst some others belonged to the class

which does foolishly in leaving England. It is with the object of assisting the former with reliable information, and of deterring the latter, that this book is penned.

It is impossible for any person to make use of too much caution in deciding the great question whether he or she should, or should not, emigrate. Nearly all the failures among settlers I saw in Manitoba were those of persons who never should have gone there at all; while nearly all the disparaging accounts I ever read of any of the colonies evidently had their origin in the same cause. As a general rule in all the colonies, and especially in Manitoba, young and unmarried persons have a very great advantage over those who are already married and burdened with a family, particularly in those cases where the amount of available capital is very small. A man with a young family, and without ample capital to start in a small way on his own account, should think very seriously before emigrating. A man with sufficient capital and a strong working family, the grown-up members of which can "hire-out" if need be, has usually pretty good prospects before him.

Few persons will need to be told that the life usually led by settlers is a rough one (at least, at first), or that a considerable amount of really hard manual labour has to be gone through—indeed the very first thing that has to be considered is that no one need ever dream of succeeding in the colonies unless he is prepared to run the chance (amounting, in fact, almost to a certainty) of having to go through both of these. Of course it is just possible that a young man may obtain genteel employment in a town, in which case he will probably receive a fair salary, but situations of this kind are generally as hard, or harder, to obtain in any of the colonies than in England. It is to agriculture, in one branch or another, that nine out of every ten emigrants must expect to turn their attention.

I believe it is correct that by far the larger number of persons who have already emigrated have been drawn from the professional and labouring classes—a somewhat unusual connection of the two. Some people hold the opinion that it is to young men of the former class that the colonies offer the greatest advantages; but in this I beg to differ from them—indeed, I have formed the opinion

that, as a rule, such young men make a mistake in emigrating, unless useless for any purpose here. Were they to live as roughly and work as hard here as they would be compelled to do to obtain a mere living, or, at best, a comfortable position there, the probabilities are that in the end they would reap greater results here than there. Let such young men consider that in the colonies they will in all probability waste an excellent education, far from cultivated society, or in the society of men frequently the reverse of cultivated; leading, for a time at least, a life which, so far as material comforts are concerned, is as rough as that of the average agricultural labourer in England, and performing manual labour which does not differ one whit from that which "Hodge" does in our fields, except that, as a rule, it will be for himself, instead of for an employer; but, supposing that he seeks employment on the railway at what would be called "navvy's work" in England, his labour would not have even that advantage; and I heard of cases in which well-educated young men, brought up to professions, had sought this employment—indeed, it was affirmed (I know not how truly) by the newspapers whilst I was in Manitoba, that a son of the Poet Laureate was at work out West upon the railroad.

Of course, however, there is, as usual, another side to the question. Instead of manual labour being looked down upon in the colonies as in England, the reverse is the case; and, as already stated, almost the only employment that a young man who emigrates must expect to obtain, is directly manual. To some the freedom and absolute independence of the life, the feeling that they are their own masters, the owners of so much "landed property," freed from the irksome shackles of civilisation, living in a free country where they are at liberty to wander where they please and shoot what game they can—these, and other similar advantages, more than compensate for the inconveniences. But all persons belonging to the class spoken of are not cast in a mould of this nature; and, to a very large proportion of refined and educated people, who have never been trained to do a stroke of manual labour, the early portion of an emigrant's life is one of drudgery and hardship.

I do not at all desire entirely to discourage the emigration of gentlemen's sons to Manitoba or any of the other colonies, for it is quite certain that many such have left England greatly to their own advantage; but I should do very wrong were I not to enjoin great caution upon them before deciding to emigrate. It is much to be regretted that there are not more thoroughly good schools at which the sons of gentlemen, while receiving a sound general education, might also receive a practical agricultural training, which would accustom them to labour with their hands, and thus in a measure fit them for a colonial life. Of course, if a young man goes out supplied with, say, £1,000 capital, there is no reason why he should not do as well, perhaps better, than in England, without much hardship, for the very good reason that any one starting with a capital (in a colony, perhaps, more than anywhere else) has a very great advantage over any one without it; but then those with the command of even a small amount of capital are not generally those who wish to emigrate. The matter ought to be considered this way: suppose the son of a doctor and the son of an agricultural labourer go out together without capital, and both take up land in the same colony. Both may succeed, or both may fail; but the latter will run the greater chance of success, on account of his having had a previous training which fits him for the life which, if not distasteful, is at least novel to the former. At the same time, there is no *reason* why the doctor's son should not succeed, provided he intends so to do. Taken all round, however, for young men of good education, or with the remotest prospects of success in this country, emigration is very often a game which is not "worth the candle."

But, if I am correct in saying that there is a class which should *not* emigrate, I am certainly still nearer the truth in saying that there is a class which *should* emigrate, and whose fault alone it will be if its condition is not bettered by so doing. This class it is which comprises the agricultural labourer, the crowded working population of our large towns, and those, generally, who perform, for a bare subsistence, what, in this country, is so often called "menial work." Of this very large class, no portion would be more benefited

by emigration than the first—that which contains the agricultural labourer. The present degraded state of the rural labourer must be well known to every one. Much has been written as to the lowness of the farm-labourer's wages, which is, to a large extent, the cause of the unsatisfactory condition of his class, and some statisticians take great pleasure in showing that his wages have increased faster in proportion during a certain period of years than the income of any other part of the community ; but this is not to the point : it merely shows that the former state was *very* bad, and the present state (though it may be, and is, better) may still be, and is, bad. To admit that the farm-labourer is underpaid, but to say that he cannot receive better wages because the farmers, though they do their best, are, in these times, unable to make ends meet, is not disposing of the question, but only enlarging and making it worse. Many thousands of farm-labourers' families are being brought up on 13s. to 15s. a week ; and this miserable sum is gained in employment which, be the workman ever so good or ever so bad, will always remain the same, and will not, in one case out of a thousand, offer to the workman in his old age the slightest prospect of saving enough to spend his last days in comfort. Those acquainted with "Hodge" are usually acquainted also with his views upon the matter. He knows well enough that it is impossible for him to save—that the workhouse is his perfect right—his only hold upon the country, given to him because he has been deprived of every other stake in the land, and must still be kept alive for the credit of humanity ; and why should he not take advantage of his indisputable rights, and end his days ignobly within the four walls of the workhouse, when no other alternative is open to him ? The agricultural labourer has, moreover, in him just the very habits and the very qualities which an emigrant wants. He is accustomed to living a more or less comfortless life in a crazy cottage, to eating coarse food, and to performing hard physical labour ; and these are the very things which offer an emigrant success in a new land. It seems, therefore, as if one of the very classes which most require assistance has, more than any other, the best chances of obtaining it by emigration to the colonies ; and, to a man belonging to this class,

I am convinced that, in Manitoba at least, to say nothing of any other place, success is, in all human certainty, assured, provided only that reasonable means be taken to ensure it. It is my honest conviction that, provided such a man be steady and industrious, emigration offers to him the opportunity of raising himself, in time, from the condition of a prospectless hireling here, to that of a comfortable and independent, but not rich, farmer in Manitoba, or some other of the British dependencies. But every emigrant, of whatever class, must fully recognise that everything rests with himself; that in young countries, like Canada, the influences for bad are very numerous; that in bettered circumstances it is much easier to give way to them; and that, if this be done, success is no more likely to be obtained in any of the colonies than in England.

But there is one other warning needed. Some persons go out with the hope and expectation of making a speedy fortune in the colonies, and then returning home again. Let me assure any such that they had much better remain at home. Manitoba and the other British colonies are not places where a fortune is easily and quickly made. A few, by well-directed speculation, may make a considerable sum of money in a short while (often at the expense of honest workers), and are able to return home and live handsomely; but these are the exceptions which are brought so prominently before us: of the majority we hear little or nothing. The Canadian North-West, like all the other colonies, is a place where a great many may, and can, obtain a comfortable independence, though few will ever grow rich.

I am one of those who think it the duty of the Imperial Government to take steps to promote more rapid emigration to our colonies. It cannot be denied that there are in this country large numbers of persons who are able and willing to work, could they but obtain employment; while there are numberless orphans and deserted children who, if they remain in England, will surely go to swell our vast army of paupers. I have already urged the case of the agricultural labourers, because that is the class of which I have seen most; but many of those who are well acquainted with the state of things in our larger towns have still more strongly urged the necessity of assisting the poorer classes of urban

labourers to emigrate. On the other hand, our colonies have millions of acres of fertile land lying vacant for want of that which is the life-blood of all countries—population. Could anything seem more rational, or more likely to bring about a right feeling between England and her various dependencies, than that the Imperial Government should do what lays within its power to transfer our surplus labour to the place where it is so badly wanted? The fact that, while Great Britain and Ireland have, on an average, no less than about 299 persons to the square mile, Canada has only about 1.25, New Zealand only a little over 5, and Australia considerably under 1, most clearly shows how much such a transference is needed. Yet, although I believe this to be one of the most pressing questions of the day, I am willing also to admit that it is one of the most difficult. To whom assistance should be given, or exactly how it should be given, I am not as yet prepared to say, further than this: that whatever is done must be done with the greatest possible amount of care and forethought. It is quite true that our colonies have vacant lands, and that we have surplus labour, but to bring the two together hap-hazard is not more likely to result in tidy farms and prosperous settlers than the mere bringing together of ink and paper is likely to produce a book. It cannot be too strongly urged that the mere sending out of poor and helpless emigrants to the land that awaits cultivation, is not enough. With young, unmarried persons, able to look after themselves, and having nobody dependent upon them, this may not be altogether unsafe; but for those who have families it is *imperatively necessary* that some provision should be made to enable them to commence life in the new country. To accomplish this a loan should be made, for the repayment of which and the interest thereon the land itself may, under the laws of Canada, be held as security. The section of the "Dominion Lands Act" (1883, chap. 17, § 38), under which this is made possible cannot be made too well known. It is as follows:—

"If any person or persons, thereunto authorised by the Minister of the Interior, place immigrants as settlers on homestead lands in Manitoba, or the North-West Territories, free of expense to the Government, the Governor in Council may order that the expenses,

or any part thereof, incurred for such person or persons for passage money, or subsistence in bringing out an immigrant, or for aid in erecting buildings on his homestead [160 acres], or in providing horses, cattle, farm implements, or seed grain for him, may, if so agreed upon by the parties, be made a charge upon the homestead of such immigrant." The Government will not convey to the settler the fee of his homestead until he has paid off the charge and interests. The principal money charged is not to exceed 500 dols. (£100), and not more than 6 per cent. interest is payable.

I am well aware that many Canadians will quarrel with me for some of the sentiments I have expressed regarding emigration. "Send us," they say, "good farmers, men of substance, with sufficient capital to take up and cultivate our unoccupied, though fertile, lands. These poor people are no good to us." This is, of course, perfectly natural from their point of view; but, as a rule, men of substance can find an opening here, and are, consequently, unwilling to undergo the trials which are more or less inseparable from the commencement of a settler's life in a new country. On the other hand, it should be remembered that it is chiefly the honest poor, unable to find work here, who are most benefited by emigration, and that the great advantage possessed by Canada and the other colonies over England is, that given due time and sufficient industry, a vast and almost unlimited number of such persons may raise themselves to positions of comfort and independence. In speaking as some Canadians often do, they are apt to overlook the fact that many, if not most, of those now holding good positions in the colony, or their fathers, have raised themselves from positions quite as humble as those of many of the poor emigrants now landing on the shores of the New World.

The amount of capital required by a settler is another point concerning which information can only be given on general lines. The statements circulated by the Canadian Pacific Railway authorities in their pamphlets, that "some require more than others," and that "a man with £100 to £150 would be able to do well" are perfectly true; but to the latter should be added the words, "provided that he knew how to use it well." It is quite certain that many men are now doing fairly well who started with much less, or even with nothing; for, be the settler's capital great or

small, everything depends upon the use he makes of it. If a man takes up land and starts farming with but little capital—say £100—he must not mind putting up with considerable privation at first; as, of course, it will be a full year before his land can make him any return. Of course, too, for a man who possesses nothing but his strong arms, and has at first to “hire out” and work and live hard in order to save something to start on his own account, the hardships encountered will be greater still; but it is the fact that not a few, but many men are *able* thus to start with nothing and raise themselves in time to comfortable independence, which is the great advantage possessed by Manitoba and the other colonies over England.

Those who emigrate to Manitoba with the idea of hiring out till they can save enough to start for themselves, should clearly understand that, unless they make all-the-year-round engagements, they will probably find it very difficult to obtain employment during the winter months, *i.e.*, from November to March, although during the remaining months a steady, sober, and industrious man will almost certainly be able to get employment, if not on a farm then on the railway, though this kind of work is often hard and rough. As to the female sex, information is easily given. Any woman who can work with her hands may emigrate to Manitoba with perfect safety. Female domestic servants are in very great demand in the towns, and receive high wages. Any marriageable young ladies may also go thither with safety, as the demand for wives among the settlers is considerable. There are many young men who went out when but little more than youths, and, having now attained to a fair degree of prosperity, are anxiously looking out for wives to keep their houses for them. Of course, the life is more or less rough, but still it need not be a hard one. I would respectfully suggest to the editor of the *Matrimonial News* that he would do well to extend his circulation throughout the North-West!

Some will doubtless say that what I have now written upon the subject of emigration has been marked by an excess of caution; but I do not think so. Emigration is an important step for any man to take, and therefore re-

quires great caution. To those, then, who have convinced themselves that they are of the right class, and have decided to emigrate, I will next proceed to offer a few practical remarks.

No one can do better than choose the Allan Line of steamers by which to cross the ocean. They are all first-class vessels; and the "intermediate" accommodation with which they are provided is such that no man, however well brought-up, need be afraid of, if he intends to go farming in the North-West.

The practical recommendations given in the pamphlets issued by the Government as to what to take and how to get to Manitoba may, I believe, be relied on. Emigrants will do well to take a ticket straight through to Winnipeg, as it comes much cheaper and saves trouble. If it is desired to break the journey at any particular place there is generally not much trouble in arranging to do so. During the season "the Lake Route," *via* Collingwood or Sarnia to Port Arthur, is decidedly to be recommended, as being cheaper, pleasanter, and but little slower than the "all-rail route"; but those who cannot put up with very rough accommodation had better not take what is called "second-class" by these boats. The accommodation would be miserable were it called steerage, no food is provided, and high rates are, I believe, charged. During the coming spring, however, the Canadian Pacific Railway will start running a line of its own steamers to connect its two termini at Algoma and Port Arthur, which route will, doubtless, be found to be the best.*

The best time of year to go to the North-West varies a good deal according to circumstances. If a man is going to friends, one time of year is almost as good as another. Any man intending to hire-out would do well to get there in the early spring—say the beginning of April. A person intending to take up land as soon as possible can hardly get there too early in the spring, as he will then have more time to select his location, build a house, and get some breaking done ready for the following year. In any case it is undesirable to arrive out just before winter; and a

* See p. 140.

settler taking out a wife and family would do well to leave them behind in Ontario, until he has got together a habitation for them, as it is often nothing less than a cruelty to take a family up into the wilds of the North-West until this be done. "Land hunters," as those are called, who start out in search of land on which to settle, should procure the "Land Prospector's Manual," by Captain C. W. Allen,* which gives many detailed hints and explains the very simple (but, at first, rather puzzling) system of survey which has been adopted. The book also contains a useful synopsis of the Dominion Lands Act. As to clothing by all means let emigrants take what they possess, especially if it be warm. Some recommend that an additional supply should not be procured; but in this I do not agree. I believe the bulk of American clothing is far inferior to English goods at the same price. Emigrants could hardly do better than apply to such a firm as Messrs. Gardner & Co., of Whitechapel and Deptford, for their supplies of clothing. It is certainly desirable to take all personal belongings, such as boots; for in Manitoba, one gives six or seven dollars for a pair far inferior to what could be obtained for £1 at home. Great, thick-soled, iron-tipped, hob-nailed boots are, however, not in fashion, and Canadians laugh at them. On the prairies there is scarcely any wear on the soles, and these may, therefore, be thin; whilst the "uppers" should be stout to withstand the friction against the harsh prairie grasses. The boots almost invariably worn are light-soled top-boots, coming up nearly to the knee. Thick corduroy and fustian clothing also is seldom seen; but "overalls" made of "duck," often put together largely with copper rivets, are in common use. Small household ornaments and nick-nacks would be found very useful in making a settler's shanty look home-like, but there is scarcely any article in ordinary use, or which could reasonably be expected to be obtainable, that cannot be had in the stores, of which there is no lack in the towns. No emigrant, however

* London; Simmons & Co., Upper Thames-street: The Toronto News Company and the Montreal News Company, 1881. Price, 25 cents.

poor, should attempt to take any article of furniture. It is almost needless to say that an emigrant will save himself much trouble and will make sure of obtaining a first-class outfit by procuring it of Messrs. S. W. Silver & Co., the well-known colonial outfitters, of Cornhill. It is a very good plan to take out a variety of garden-seeds, and these may be best obtained of Messrs. Jas. Carter & Co., of High Holborn. Everything sent out by this firm may be thoroughly relied upon.

An emigrant should clearly understand that there are various means by which he may acquire land. First, he may take up a "homestead," or a free grant from Government of 160 acres, for which he will pay nothing but a registration fee of ten dollars; but he will have, nevertheless, to reside upon it for at least six months in each of his first three years, and to perform a certain amount of cultivation, before he is entitled to what settlers call a "recommend," which entitles him to the "patent" which gives him full possession of his land and "perfects his homestead entry," as the expression is. It should, however, be kept in mind that much searching would now be needed to find a really good homestead anywhere within a reasonable distance of the railway or a large town, without going a hundred or a hundred and fifty miles, at least, west of Winnipeg. A homesteader may also take up a "pre-emption" of 160 acres adjoining his homestead on payment of two dols. fifty cents per acre. This right will cease after January 1st, 1887. Any man with sufficient capital to buy land could obtain an almost unlimited quantity, even close to the towns, by purchase from the Railway Company, the Hudson's Bay Company, the various Land and Colonisation companies, or from private owners. Full particulars are given in the various pamphlets so lavishly distributed by these several bodies. Canadians are often amused at the pride shown by young Englishmen in the possession of land. This commodity is with us bound up in so few hands, and the title "landed proprietor" carries so much along with it, that many an emigrant cannot conceal his satisfaction at having attained, at last, to the dignity of a landowner, even though it be in a country where all men are, or can be, such.

It is a common practice for young settlers belonging to fairly well-to-do families, when first emigrating to any colony, to pay a premium to some settler who is already established on a farm, in order to be taught farming. This is a plan often followed in Manitoba. In some cases it has advantages : in others it has none. When the parents of a youth who is altogether fresh to farming (perhaps fresh to a country life) can afford to pay a premium, and desire to know that, for a time at least, their son will be more or less looked after, the system may not be a bad one ; but, on the other hand, there is seldom any real necessity why it should be followed, and very often the premium that is paid is simply wasted. Farming in Manitoba is not such a difficult trade to learn, or employment so hard to obtain there, but that a young man of average capabilities can easily obtain the latter, and consequently learn the former, receiving wages for so doing, instead of paying a premium, which may be sorely missed from a very limited capital ; and, as a general rule, it is not advisable to pay this premium. The reason why so many settlers are anxious to take in pupils is, that the premium is very often an object with them ; and, labour being scarce and dear to employ, it is an advantage to be able to obtain any one who will work for his board, without being so independent as to be wanting to leave every now and again.

In all parts of Canada, the "hired man," as he is called, is in most ways the equal of his master, living in the same house on terms of perfect equality, except that, of course, he has to work. It is obviously very difficult to give any hard-and-fast information as to wages, because these are frequently altering at different times and in different places. For all kinds of labour, wages are now considerably lower than they were during the boom. An ordinary farm-hand could then get something like 2½ dols. per day : now the same man's wages would be about 20 dols. to 25 dols. per month, in addition to board and lodging. During harvest wages are higher : a man will then sometimes be able to obtain 1 dol. 50 cents per day, with board, &c. The wages of labouring men, other than farm hands, are, as a rule, higher. The Government sets the value of a day's "statute labour" (eight hours), at road-making, at 1 dol. 50 cents.

Roads are made by all householders being summoned by the "path-master," on a certain date, to give so many days' labour, or their equivalent, according to the number of teams they possess. This is a custom which has been brought up from Ontario. Females, capable of taking service as domestic servants, are certain to obtain situations at good wages. A good man, steady, and able to work, will be able to find employment on a farm for eight months out of the twelve; but, during the winter, the demand for hands is very slack, except for "lumber-men" in the forests east of Winnipeg. At the present time, the demand for labour is very much greater, and wages are higher, in the North-West than in the older provinces of Ontario and Quebec. Employment can be obtained on the Canadian Pacific Railway nearly the whole year round.

A comprehensive list of the ruling market prices of household commodities in daily use is given weekly in the *Manitoba Free Press*, but would probably be misleading were I to quote any of the figures here. Manitoba is unquestionably a much dearer place to buy in than England, or even the eastern provinces of the Dominion. This is, of course, largely on account of the stringent policy of Protection, which the province severely feels, having to buy everything in a dear market, yet having, at present, no manufactories to share in the profits yielded by the abnormal stimulation of prices.

So much noise has been occasioned by the advertising of Manitoban land, that some might begin to imagine that by this time it is all taken up; but there could hardly be any idea more absurd. The population of the province is of the scantiest kind: one may often walk for miles along trails, crossing fertile prairie lands, without seeing a house; while, except in a few very limited localities lying close to the railway, the cultivated land is but a minute fraction of the whole. According to the official returns for 1883, there were then only 597,420 acres cultivated in the province. Adding the large allowance of one-quarter for land unreported, we get 746,775 acres, or about 1 per cent. of the whole! But, as showing the vast extent of almost equally available soil lying in the still more thinly-peopled North-West Territories, and which will in time come to be occupied by an

industrious population, I will here quote a paragraph from Captain Butler's work, "The Wild North Land." He says:—"In the deed of surrender, by which the Hudson's Bay Company transferred to the Government of Canada the Territory of the North-West, the Fertile Belt was defined as being bounded on the north by the North Saskatchewan River. It will yet be found that there are ten acres of fertile land lying *north* of the North Saskatchewan for every one acre lying *south* of it." Astonishing as this statement may seem, who will question, at least, its approximate correctness, when it is deliberately put forward by a man who knows so well what he is speaking of as Captain Butler? This immense area will, in due time, come to be occupied; but, at present, few will find it to their advantage to penetrate into the far West and North. There seems at the present time, as everybody who visits Manitoba will see, a mania for rushing West. The cry there is, "Westward Ho!" once more. For some time, at least, the settler's supplies will all come *from* the East, while all his produce will go *to* the East; and it is certain that the land in Manitoba is as good as any lying further West, while it is unquestionably far better than a great deal.

CHAPTER VI.

SETTLERS IN MANITOBA: THE SOCIAL AND POLITICAL CONDITIONS UNDER WHICH THEY LIVE.

THE present place seems the most suitable for presenting a variety of information as to the classes of people usually met with in Manitoba, their mode of life, and the social conditions under which they live.

To describe the general characteristics of the inhabitants of any country is always a more or less difficult task; and especially is it so when any part of America is the country

under discussion ; for, in that case, the population to be described is usually the most heterogeneous mixture of all nationalities imaginable. Manitoba is no exception to this rule, but rather a typical example of it. Among the different sorts and classes of men there represented, may be found retired military and naval officers of all ranks (who have usually come out to settle their sons), English labouring-men of all kinds, clergymen's sons, Icelanders, Ontarians, broken-down English farmers, the sons of English gentlemen (often with college educations), Irish cotters, Frenchmen, Germans, Scotchmen, Yankees, Mennonites, Indians, Half-breeds (of divers kinds), Swedes, Norwegians, and representatives of nearly all other European countries. The contrast between two neighbours is often most curious. As a rule, however, each class of settler is more or less confined to particular localities. Thus there are certain districts mostly inhabited by Englishmen, by Icelanders, by Mennonites, or by Ontarians ; but in all rural parts the finely-polished element is in the minority.

There are in the province nearly 8,000 Mennonites. These industrious people are of German origin ; but, having a conscientious objection to the conscription, they were compelled to leave their native country, and a large body of them settled in Russia. There, however, they still met with persecution on account of their religious beliefs ; and in 1875 arrangements were made with the Manitoban Government for establishing them in a colony on a large tract of land specially set apart for them on the bank of the Red River, just north of the International Boundary. The daily life of the Mennonites is a simple one ; their industry is very great, and I doubt whether, at the present day, there are in Manitoba any settlers more prosperous than they. Their small, though tidy, cottages and farm buildings, surrounded with little neat gardens, full of bright flowers, are collected together in small clusters or villages, of which a considerable number, scattered over the level prairie, may be seen at the same time from the train. The Mennonites, from having been longer on the ground, possess many more cattle than ordinary settlers. During the summer-time, many herds, each belonging to the inhabitants of one village, and in charge of a boy or girl, may be seen

from the windows of a passing train, feeding beside the line.

There have been settlements of Icelanders at Gimli and Hoosavik, on the western shore of Lake Winnipeg, since the year 1875.

But, after all, the person most often met with is the Ontarian. Probably two out of every three settlers one meets in Manitoba are from Ontario. That this should be so is, on first thoughts, rather strange, for Ontario still professes to be open for immigration. The explanation lies in the fact that every Canadian wants to own a farm; and consequently the population moves where unoccupied land is most abundant. To obtain a farm in Ontario it is necessary to purchase one, or hew one out of the forest; but in Manitoba neither of these courses is necessary. These Ontarians, of all persons, make the most desirable class of settler. Accustomed, in a large degree, to the ways of the country, to the great extremes of the climate, to the use of the axe from childhood, to hard work and rough living, and provided with a very fair allowance of self-reliance and intelligence, it is no wonder that they thrive in the young province, or that they should hold, as I know from experience many of them do, most English settlers in considerable derision.

The last Dominion census was taken in 1881, and, although the figures relating to Manitoba were very inaccurately taken, they may have an interest as showing the difference in the relative numbers of the two sexes which exists between a young colony and the long-peopled countries of the Old World. The population of the province in 1881 was returned as 65,954; but it is safe to say that it was at least 80,000. During 1881 this was increased by about 25,000, in 1882 by 44,500, and in 1883 by about 42,772, bringing the total population, at the end of that year, to something like 192,272.* In 1881, there were 12,803 inhabited houses (including 401 "shanties"), which housed 14,169 families. There were also 1,136 houses building. The males of the population numbered 37,207;

* In 1884, the number of immigrants was 30,265, bringing the total population to about 222,500.

the females 28,747—a wide divergence, considering that in England the males stand to the females in the proportion of 100 to 105.5. The difference in Manitoba is, nevertheless, largely included among unmarried persons and children; for, among the married persons, there was only an excess of 405 males, showing that most married settlers had their wives with them. In Canada, the taking of a census showing the religions of the people does not seem to be dreaded as in England. In Manitoba, in 1881, the people worshipped as follows:—

Church of England	... 14,297	Pagan	... ..	2,175
Presbyterian	... 14,292	Lutheran	... ..	984
Roman Catholic	... 12,246	Quakers	... ..	43
Methodist	... 9,470			
Baptist, including	7,776		&c. &c.	
Mennonites	... 9,449			

The birth-places of the people are given as follows:—

England	... ..	3,457	Manitoba	... ..	18,020
Ireland	... ..	1,836	Russia and Poland, includ-		
Scotland	... ..	2,868	ing Mennonites	... ..	5,651
Quebec	... ..	4,385	United States	... ..	1,752
Ontario	... ..	19,125		&c. &c.	

In 1871 the population of Manitoba was 18,995, including 6,767 Indians.

So far as I was able to learn, the following tribes of Indians are more or less numerously represented in the province. The Crees are the original inhabitants of the country, and are divided into several sub-tribes. There are also Chippewa or Ojibway Indians, who inhabit mostly the forest country west of Winnipeg, and the Sioux, the latter being an offshoot of the great Dakota nation, and have occupied the country from the south. Whether or not there ever was any foundation for the halo of poetry and romance with which the Indians are surrounded (principally on account of the writings of the poet Longfellow) I cannot say; but certainly the glory of the Indians of to-day has departed. The present specimens of the red-skinned race, instead of being the bold, self-reliant, independent fellows their fathers were, are now, so far as Manitoba is concerned, but little better than

hangers-on of civilisation, earning a wretched gipsy-like living by carting firewood, shooting and selling wild ducks, and the like. Certainly on one or two occasions I did see a few specimens of the race dressed in all that imposing array of beaded, brightly-coloured garments for which their passion is well known; but the majority now assume the garb of civilisation, and dress in ragged, ill-made clothes, which detract no little from the interest with which one regards their much-talked-of wearers. Their bead-work is sometimes very handsome, but I fancy they are now a good deal leaving off the making of it. During the summer most of the Indians pitch their tents or "tepees" close to the towns, retiring in winter to more sheltered situations in the bush. A most inordinate number of dogs is attached to each tent. Many of them possess a Red River cart; or, in some cases, a wagon and a pair of ponies. The Indians are, I believe, fairly honest now, as well as peaceably inclined, and there is positively less bodily harm to be feared from them than from the Fenians in England, although they have no particular liking for the white men, and live a good deal to themselves. Whilst I was in Manitoba an English clergyman wrote to a friend there asking whether there was any danger to be apprehended from Indians or wolves. His letter was thought such a good joke that it found its way into the newspapers! It has often been said of the Indians on the United States side of the boundary that they are inhuman and untameable beasts; but the present peaceful condition of nearly all the Canadian Indians, who have been fairly-well treated from the first, is proof to the contrary. One day I saw an Indian on the platform of the station at Brandon whilst the train was waiting there. He stood stock-still, with folded arms, gravely watching the bustling scene. The solemnity of his appearance was not a little increased by the fact of his wearing a pair of goggles! This he probably did for no other reason than that, having seen white men do so, he knew of nothing to prevent him following their fashions! After the train had left I saw him walking back to his tent with a slow and meditative step, as if fully conscious that, of all the many agencies which had helped in taking from him the undisputed possession of the hunting-grounds of his

fathers, the railway-train was the most powerful. Nevertheless on more than one occasion I saw Indians travelling by train—a most incongruous thing surely! One was evidently an old chief. He wore a blanket over his shoulders, had his gun in a canvas cover, and was accompanied by a younger, and rather handsome, man—evidently his son—who wore beautifully bead-worked leggings. Two other Indians had come down to see them off. Indians probably have not very æsthetic tastes in the matter of diet. They religiously follow, to the best of their knowledge, the principle, so often taught to young people—not to waste good food! Dead horse is said to be a great luxury with them. It matters not in the least *how* the horse died, so long as it *is* dead! Skunk, too, is another of their dainties, as elsewhere mentioned. In one settler's house I was told of a skunk that had been killed at the height of summer and allowed to lay for a fortnight, when some passing Indians carried it off as a prize! At the same time and place I was assured that, after a number of dogs had been poisoned in a particular district by strychnine laid out for wolves, the Indians came round, gathered them up and carried them off to eat; but, as no information was forthcoming as to what followed the feast, I took the liberty of doubting the truth of the incident.

As a rule, a new settler erects, and lives in, what is known as a "shanty," and *talks* of the time when he will build a house. A "shanty" is a construction too primitive to have the latter title bestowed upon it. In districts where a sufficiently good supply of building-timber is obtainable, the settlers' houses are usually of rough logs; but in other parts they are of "lumber" (*i.e.* boarding), and these latter are usually the most devoid of artistic appearance. Some of the settlers seem very poor hands at house-building. Many of their residences are positively hideous, while others lean strongly to one side. All houses are built very small, the usual size being less than that of an average cottage here. For this, there are several reasons, the principal of which are cheapness and the greater ease with which small houses are warmed. Ontarians often laugh at the great "Englishmen's houses" built by self-willed Britons.

The log-house style of architecture originated in Ontario, and has, from there, been imported into Manitoba. The strength and neatness of a building in this style are sufficient to astonish any one who sees a "raising" for the first time; especially as the whole of the work is usually done with the axe alone. The Ontarian is at home when he is handling the axe: it is his sole and only tool; and the skill and precision often attained in the use of it are wonderful to see. By the axe Ontario itself has been hewn out of the primæval forests, and the same tool now serves the Ontarian as hammer, mallet, chisel, plane, saw, and often butcher's cleaver; while I have heard it said that pioneers have even used it to iron their linen and to shave with! The Canadian woodman's axe is, however, a different tool from an English carpenter's axe, having a much narrower blade and a curved cutting edge.

One day I had the good fortune to witness a "raising." When a settler requires some new building put up, he invites as many of his neighbours as the magnitude of the work requires. This constitutes a "raising bee." When these neighbours, in their turn, have a raising, the first settler gives each as many days' help as the other gave him. On account of the weight of the logs to be lifted, cut and fitted, eight men can, of course, do far more work in one day than one man could in eight days—if, indeed, one man could do anything at all, which is doubtful. The building I saw put up was a "cow-stable," as the term is, twenty-five feet by twelve, which is a large size. The logs used were of spruce, hewn from trees a foot or more in diameter, cut and drawn home from the bush during the previous winter. The preparation of these logs requires a great deal of time and hewing. A man stands on the log and "hacks" with his axe, as roughly and as deeply as he can, into each side of the log: this loosens the wood. A "broad axe" is next brought into use, and the sides of the log, which are to form the inside and the outside of the building, are cut down flat to a chalk line. The broad axe has a cutting edge nearly a foot wide, and requires great skill to use it well. The log is now ready to go up. For foundation, a log-building seldom has more than four large logs laid on the prairie sod and carefully levelled. On

these the logs which form the walls are laid, being securely dovetailed into one another at the corners. The axeman stands over the corner of the building, turns up the log, cuts the notch in it, and carefully fits it into its place. The corners made by these rough means are surprisingly neat—almost as straight, in fact, as those of any brick building. They are afterwards cased with boards in order to prevent the wet getting in and starting rot in the joints. The dovetailing is done entirely with the axe. I cannot believe but that it could be done equally well with a saw, but no Canadian would hear of such a thing. The saw only comes into use in cutting off the projecting ends of the logs, and in cutting out the door and windows, which are made afterwards. Of course the substantiality of such a building is very great, as also the quantity of timber used. The building I saw took two men two days to raise nine tiers of logs all round, but the logs used were large ones. They had, however, all been hewn into shape beforehand by the owner, a friend of mine, who made the calculation that each required one hour and a half and about 3,500 blows with the axe to get it into shape. After the walls are up there is still much that remains to be done. The gaps between the logs have all to be “chinked” or filled with pieces of wood nailed securely in. After this every crack in the walls has to be filled with mortar to keep out the cold. Then the door and windows have to be finished and the roof put on. Mother Earth usually provides a floor, and often a roof too, as the settlers say sods make a warmer covering than straw. But with houses of the better sort “shingles” are always used for roofing. These are small boards twelve or fourteen inches long by six wide and a quarter-inch thick at one end, tapering thinner at the other. They are put on three deep all over the roof, the thin end being covered by the thick end of the one above it, so that only about one-third of each shingle is exposed. The best shingles are of cedar, but most are of spruce or tamarac, and cost about five dollars per thousand.

This is the way the settler usually builds his shanty, which is never a very grand affair—seldom more than twelve or fifteen feet by twenty feet, with only just

sufficient height to stand upright in—and many a man's pigs in England are housed in a more sightly, if not in a more comfortable, edifice—indeed, after the house is built, the shanty is often used as a pig-sty.

Thick brown paper, either tarred or not, is a material largely used by settlers for lining the insides of their houses. It has several advantages, among which are its cheapness, convenience, and warmth.

The educational arrangements throughout Canada seem particularly good. In Ontario, a really promising youth can obtain a good education almost for nothing, by means of scholarships. In Manitoba, two sections in every township (that is, one acre in every eighteen) are reserved for school purposes. As soon as the surrounding district is sufficiently thickly inhabited, these sections are sold, and the school is started. It is hardly, however, to be expected that, with a population so widely scattered, there should not be many cases in which it is almost impossible to secure proper instruction for children.

Everything being considered, the Church accommodation may also be pronounced excellent. The Presbyterians, the Church of England party, and the Baptists are all very pushing, especially the former; and no district able to support a church is long without one. There is in Canada no "Established Church," as in England. Although the Church of England is numerically very strong, it rests entirely upon its own merits, exactly like any other sect.

On account of the scarcity of named places and towns, direction has nearly always to be expressed by the cardinal points of the compass; and the system of survey which has been, and is being, carried out in the country is so simple that addresses may be, and often are, given numerically. The whole of the North-West has been divided by certain arbitrary lines, called Principal Meridians, running due north and south. The first of these runs through the village of Rosser, about ten miles west of Winnipeg; the second is about 180 miles further west, or about ten miles beyond the boundary of the province. All the others are separated from one another by about an equal distance. The country between these lines is surveyed off into columns, each six miles broad, and running northward

from the United States Boundary-line. These are all numbered in regular order, and are called "ranges." There are some ranges east of the First Principal Meridian. Next, the country is divided by parallel lines running east and west, each six miles apart, and cutting the ranges up into "townships," each six miles square. Each township is again divided up into thirty-six "sections" of one square mile, or 640 acres. These are again divided up into "quarter-sections," of 160 acres each. The townships and sections are all numbered in regular order, so that it is possible to indicate any particular quarter-section in any surveyed portion of the country by means of numbers only. For instance, Rapid City is in quarter-section north-east, sec. 20, Tp. 13, R. 19 west (of the First Principal Meridian understood). All ranges west of the Second Principal Meridian are in the North-West Territory. This simple method of survey is extremely convenient, as distance can be easily reckoned with accuracy on a map by counting the number of sections or townships to be crossed; and, as the corner of every section is marked by a numbered post set up on the prairie, no one need ever get lost so long as he is provided with a map, and is able to find a "section-post," and to read the numbers thereon.

The Canadian system of money-values is similar to that used in the United States. The value of a cent is practically $\frac{1}{2}$ d.; of a dollar (100c.), 4s. 2d.; and of a "quarter" (25c.), about 1s. The bronze coins are of the values of 1c. and 2c.; but these are, as yet, very scarce in Manitoba, and I do not remember having seen a specimen of either, the whole time I was in the province. The authorities did on one occasion have a number brought up from Ontario, much to the alarm of the shopkeepers, who had formerly profited by not being able to give small change, and who now thought that "the hope of their gains was gone." The silver coins are of the values of 5c., 10c., 25c., and 50c. A 20-cent piece has now been called in on account of mistakes occasioned by its resemblance to the quarter-dollar. The 10-cent piece is not called a "dime," as in the States. The 5-cent piece is practically the lowest coin: nothing could be bought for less, nor would change usually be given to a smaller amount. Of

notes, there is the "shin-plaster," value 25c., or 1s., and measuring about 4 in. by 2 in. There are "bills" for 1, 2, 4, 5, 10, 20, 50, and 100 dollars. The convenience of these for sending by post is very great. In Canada, a hundredweight is really 100 lb., and a ton, consequently, 2,000 lb., or about one-eighth less than an English ton. A Canadian bushel is not a measure of quantity, but of weight, and varies according to the article. Thus, a bushel of wheat, peas, beans, or clover-seed is 60 lb.; of rye or maize, 56 lb.; of barley, 48 lb.; and of oats, 34 lb. The "quarter" is not generally used as a measure of grain.

The postal service throughout Manitoba seems to be exceptionally good, all things considered. Offices are opened in the smallest villages, and are well conducted, though the postmaster, who is always a storekeeper as well, receives no salary, as his private business is supposed to profit through the custom brought by the postal business. Although the settlers are so scattered, there seem to be but few letters lost in Manitoba, though at "the end of the track" there are great complaints of the uncertainty of the post. Registration is, however, a good deal more used than in England.

The number of trails crossing the prairies in every direction is very great. A settler's wagon, passing over the same ground several times, leaves a mark which often remains for a long while. Some of the trails are very old ones, made by the trading carts of the Hudson's Bay Company. These are distinguishable from the more numerous wagon-trails by their appearing to have three wheel-marks, the centre one being formed by the feet of the ox. On wagon-trails there are only two tracks, as the horses run in the wheel-marks. As a space has been allowed in the survey for a road to run down the side of every section, the settlers always plough up the old trails, and turn the traffic into the space that has been left to accommodate it. I had heard much of the shocking condition of the roads in Manitoba, and, for some time after my arrival there I wondered how such good roads could have got such a bad name. When it is considered that the trails run across the fine soil of the prairie without ever having been made, and that there is often no material within miles

to make them of, the trails must be pronounced wonderfully good ones. But this is their fine-weather appearance: a season of rain works a vast change. The fine black soil is then kneaded up into a paste by the wheels of the passing vehicles, and the roads become most objectionable, either to walk or drive upon. The state of the Winnipeg streets will hereafter be alluded to. After the spring thaw, the trails are generally in an indescribable condition.

It will be scarcely necessary to say that, as a rule, the settlers live a simple and frugal life. They themselves supply, where possible, the articles they use or consume, and the amount of actual cash which passes through their hands in the course of a year is but small. Breakfast is generally taken as early as six or seven o'clock; dinner about 12; and tea (always called "supper," being the last meal of the day) at six. Tea is drunk at all meals; though coffee and cocoa (the latter bearing the well-known brand of Epps & Co.) appear on some tables. Potatoes, and a very coarse sort of treacle, known as "molasses," are two edibles which frequently appear on the table; but salt pork, fried in slices like bacon, is in most cases the staple article of diet, both for breakfast and dinner. All settlers will find it needful to harden their hearts and eat largely of this article; for fresh meat, other than game, is, of course, difficult to procure away from the towns.

Nearly every settler has his well close to his door, but the usual quality of the water is not first-class. Sometimes it is stinking and alkaline; but the water in wells which are in constant use is generally of fair quality. Unless, however, it is frequently drawn, it acquires a rather disagreeable smell and taste, which is usually attributed to the woodwork put to prevent the sandy sides from caving in, but which, I think, is more likely due to a slight admixture of alkali. The average depth at which water is met with is about 20 ft.

I took considerable pains to inquire concerning the liquor laws in Manitoba, and talked with many temperance advocates; but the law, on this point, seems to be in such a confused state that I was about as wise at the end as at the beginning. In the North-West Territories the sale of all intoxicating liquors is totally prohibited: without an official "permit" none may cross the boundary. A member of

the mounted police occasionally searches the trains, and should any alcoholic liquors be found, he empties them out of the window. Such a regulation speaks volumes for the social condition of that part of the country ; but I fear it is not infrequently evaded. Manitoba, however, is *not* under what is called the "North-West Act : " let no mistake arise on this point. There are many persons now in Manitoba who have gone there under the impression that by so doing they will be able to escape from the temptation to drink which has been their ruin in this country. This is more especially the case in that part of Manitoba which has been somewhat recently added, having formerly been in the North-West Territories. I have known of cases in which friends at home have been under the impression that their relatives in Manitoba were free from that temptation to over-indulge in drink which was their ruin at home, whereas they really were not. Any man living an isolated life far away from a town would, very probably, find it difficult to obtain intoxicating drinks ; but, however the law may stand, I can state positively that in the towns nearly every hotel is provided with a bar ; that there is a good deal of drinking and drunkenness ; and that, by those who wish them, alcoholic liquors are as easily obtainable as in England. They are, however, seldom taken at meals, and their sale to Indians is, I believe, at all times prohibited.

The importance of an ample supply of coal nowadays hardly be exaggerated in any country. This applies with especial force to the North-West, where the cold of winter is so great, and timber for fuel, in some parts, so scarce, that coal is next door to an imperative necessity. It is, therefore, encouraging to learn that there is every prospect of the supply of coal to the region in question becoming, in the immediate future, enormous. Far away to the West, on the banks of the rivers which, rising in the Rocky Mountains, feed the Saskatchewan, large seams of excellent coal lie close to the surface ; and although the railway has but recently reached the district, several mines are already at work. Sir Alexander Galt has a mine on the Belly River, from which, when in Winnipeg, I saw a pillar of first-rate coal weighing 610 pounds. The Woodworth Mine, near Medicine Hat, made its first shipment of coal eastward

on the 26th of September last. Hitherto the transport difficulty has been the great drawback, the coal having had to be brought in barges down the river to the rail at Medicine Hat ; but, during 1884, it is expected that a line of rails will be laid down direct to the mine.* Already the railway company is using this native coal on the western portion of its line, and whilst I was in Winnipeg it was selling there at the rate of 9 dols. per ton. It must, however, be remembered that the Canadian ton is about one-eighth less than an English ton. As the coal, in order to reach Winnipeg, has to be carried some 600 miles by rail, it is clear that the carriage will come to more than the first cost. Coal, of some kind or other, is said to be found in the Turtle Mountain district, close to the boundary, and the Souris Coal-fields are occasionally spoken of ; but some doubt may legitimately be entertained as to the nature, value, and extent of the deposits in these places, as there has been no little excitement concerning coal in Manitoba, and many a man cherishes the belief that it will shortly be worked on his farm ! As already stated, the settlers are very anxiously looking forward to the time when they shall be able to obtain coal at a reasonably low price.

Settlers in Manitoba and the North-West Territories will find themselves decidedly well off so far as newspapers are concerned. I noticed the following journals all advertised in one pamphlet : *The Winnipeg Sun, Minnedosa Tribune, Manitoba Free Press, Selkirk Herald, Rapid City Standard, North West Advocate, Manitoba Liberal, Stonewall News, the Signal, the Daily Sentinel, and the Regina Leader*, beside which I know of several others. Canadian journalists are quite as enterprising as their proverbially-pushing brethren in the United States, and many a ludicrously small place has its own newspaper. The price of all, or almost all, papers is 5 cents ; but a weekly edition is generally issued for circulation among farmers, and the price for this is 10 cents. The *Manitoba Free Press* and the *Winnipeg Times* are the leading journals. The weekly edition of the former ("the monarch of the weeklies," as it calls itself) contains an astonishingly large amount of

* This has been partially done.

really well-written matter. As a rule, however, the quality of the matter printed by these pioneer journals is not up even to a low standard of excellence—no one, indeed, would expect it to be of a very high-class kind. I brought home a copy of the *Portage Daily Tribune*. This influential organ is merely a printed sheet measuring 20 in. by 27 in. The news with which it was laden covered just 165 square inches, or rather more than one-sixth of the available space, the rest being reserved for advertisements. The distribution of news seems, in fact, to be but a secondary object with some Manitoban journals: their primary object appears to be to slander and abuse their contemporaries and opponents of the opposite political party. Brandon, with its two newspapers, is, indeed, a veritable second edition of the far-famed borough of Eatonswill. Directly and intentionally dishonest motives are constantly attributed to opponents; and even the very best journals are not altogether free from blame on this head.

In Canada political feeling often runs very high; and, as, of course, each province has its own House of Legislature (and, consequently, its own elections), there is plenty of scope for loud and energetic controversy, which it cannot be said is always carried on with a strict regard to good taste, any more than that carried on by the various political parties in England. The last Dominion Government called itself "Liberal," but the present Government, which calls itself "Conservative," calls its predecessors "Grits." The existing Government has now been in power over five years, but there was a general election about a year since. The Right Hon. Sir John A. Macdonald is Premier. Of course, all the legislators receive salaries as well as "mileage," according to the distance they have to travel in attending to their duties. The Manitoban Legislature is also Conservative, and the Hon. John Norquay is Premier.

As a rule, the average Canadian is strictly loyal to the British Crown and House of Commons. England is almost invariably spoken of as "the Old Country"—a term which undoubtedly had its origin in the minds of emigrants who entertained affectionate memories of home, although, nowadays, it may be used conventionally and without any

direct meaning. There are, of course, persons who are in favour of throwing off all dependence upon the British Government, but this is not the desire of the majority. The Canadian, however, lives next door to, and is very intimate with, the members of a great and flourishing republic, in which class-privilege, hereditary legislators, and the like find no place; and it is but natural that the Canadian's thoughts and opinions should have been, to some extent, at least, influenced by this fact. The result of this circumstance is that in Canada there is an under-current of feeling that the country ought to have some more direct representation in the Imperial House of Commons, in order that she might be better able to make known her wants, and this feeling cannot fail to increase as time goes on. The ordinary Canadian is able to tolerate Royalty, but an hereditary, legislating House of Peers is to him a wondering-stock. One settler confided to me the opinion that it would be better for England "if all the Lords were thrown into the sea!" My reply to the man who preached this doctrine was that I agreed with him as to the object which he had in view, but not as to the means he thought it desirable to take in order to obtain that object. An "Established" and State-supported Church is also an anomaly in a Canadian's eyes.*

* Since these sheets went to press, news has come to hand that some of the Indian tribes have joined the Half-breed revolt now going on in the Saskatchewan district under Louis Riel. In spite of the apparently peaceable state of the Canadian Indians, it is certain that many of them are now in a very unenviable condition, through the extermination of the buffalo; and it is, therefore, not surprising that some of them should be ready to join any movement of malcontents that may arise. The present revolt is not likely to be very serious, unless it produces a general rising of the Indian tribes throughout the North-West; and, in any case, settlers in Manitoba are not likely to be placed in situations of real danger. Although nearly all the newspapers spoke of the "revolt in Manitoba," the seat of the rising lies more than two hundred miles north-west of any part of the province.

CHAPTER VII.

OF THE CANADIAN PACIFIC RAILWAY IN PARTICULAR AND
OF AMERICAN RAILWAYS IN GENERAL.

THE Continent of North America is, and for long has been, the home of great railway undertakings. The necessity for opening up, and providing transit across, her vast territories has fostered this enterprise and led originally to the proposal (at first regarded as an insane one) of building a line of railway from the Atlantic Ocean, across the barren plains of the West, and over the Rocky Mountains to the Pacific Coast. All the world knows that our enterprising cousins, the Yankees, have long ago found out that, like many other "impossibilities," the thing was by no means so very difficult when once it was taken in hand; and it has now been done, not once only, but several times.

But it is now some twenty-five or thirty years since we ourselves began to talk of doing the same thing for our equally wide possessions on the American continent, and, though the project is at the present time on the high-road toward completion, still we must confess that it is not yet done—that the more pushing inhabitants of the United States have, in this matter as in so many others, given us a lead.

Since the thing first came to be agitated, several well-equipped exploring expeditions have been sent out to discover and survey the best route; whilst private travellers, who have been over the regions to be crossed, have also given the world the benefit of their opinions. The expedition on which Viscount Milton and Dr. Cheadle suffered such hardship had partly this object in view; while Captain (now Colonel) Butler, whose entertaining stories of travel

in the "Great Lone Land" every one knows, urged, in an appendix to his second book, that the route to be taken should lie north of the north branch of the River Saskatchewan, where, he says, it would traverse a country "fitted for immediate settlement; a country where rich soil, good water and abundant wood for fuel or building could be easily obtained." The point at which the proposed line should cross the Rocky Mountains has always been especially difficult to decide. It was originally intended that the route should lie far to the north of the location which has now been selected, and that it should cross the mountains by what has been variously known as the Tête Jaune, Yellow Head, or Jasper House Pass; but Colonel Butler has shown that this is impossible—that the difficulty of crossing the cañons of the Frazer, Columbia, and Thompson Rivers is insurmountable. In its place he recommends the Peace River or Smoking River Pass. All these, however, have now been relinquished in favour of another pass some 150 miles further to the south.

Thus it will be seen that, since the proposal to build the line was first put forward, its progress has been much chequered, and has evoked much discussion. But the plans assumed a much more definite form when, in 1871, the Province of British Columbia entered the Dominion, one of the articles of confederacy being, that the Dominion Government should undertake to promote the construction of a trans-continental railway, which would bring the mineral resources of the new province nearer to the older provinces, and, generally, connect the former with the world at large. With the object of fulfilling this condition the late Liberal Government, before it was overturned by the present Conservative one, had already taken the matter in hand, and actually commenced work on the railroad, intending to carry it out slowly, bit by bit, as their resources permitted or opportunity offered. A commencement had been made east of Lake Superior; another portion had been begun between Thunder Bay and Winnipeg; and yet another piece had been commenced west of the Rocky Mountains on the Pacific Coast. This plan, if carried out, would have had its advantages. It would have been slow,

but sure; and the line, when completed, would have belonged to the country instead of being owned by a company of monopolists with a huge land-grant. But a new Government came with a new policy. An agreement was entered into with a powerful and wealthy "Syndicate," which bound the latter to build and completely equip the line before the 1st of May, 1891. A friend has kindly procured for me a copy of the extra number of the *Canada Gazette*, dated February 16, 1881, which contains this agreement. It is of such great importance to the whole North-West that I make no excuse for inserting an abstract of its conditions here.

The agreement, dated February 16, 1881, is between the Canadian Government and the following persons, who constitute the "Syndicate" or directorate of the company: Geo. Stephen and Duncan McIntyre, of Montreal; John S. Kennedy, of New York; Richard B. Angus and J. J. Hill, of St. Paul; Morton, Rose, & Co., of London; and Kohn, Reinach, & Co., of Paris.

The sections of the contract provide as follows:—

1. That portion of the Canadian Pacific Railway to be constructed along the north shore of Lake Superior from near Lake Nipissing to Port Arthur shall be called the Eastern section; that portion between Lake Superior and Winnipeg is the Lake Superior section; that portion between Winnipeg and Kamloops on the west of the mountains is the Central section; and that portion between Kamloops and Port Moody on the Pacific Coast is the Western section. The whole shall be called the Canadian Pacific Railway.
2. The company shall deposit with the Government 1,000,000 dols. as security for the completion of the line, on which the Government will pay interest at the rate of 4 per cent. per annum until a default occurs: on completion of the line the whole sum with any accrued interest shall be returned to the company.
3. Provides for arbitration in case of dispute; for the construction of the line at a standard equal to that of the Union Pacific Railway; and with a gauge of 56½ in.
4. Work shall commence at the eastern end of the Eastern section before the following July 1; and on the Central section before May 1; both to be pushed forward vigorously so as to be fully equipped and in running order before May 1, 1891, unless unavoidably prevented.
5. The company to pay to the Government the cost of the construction of the portion of railway extending west from Winnipeg for 100 miles.
6. Unless unavoidably prevented the Government shall in every way complete the Lake Superior section and that portion of the Western section between Kamloops and Port Moody by the dates of the then existing contracts.
7. These portions, when in every way complete, to be

handed over to the company (but without equipment) as their property, to be by them efficiently maintained. 8. The company shall at once equip and maintain these several portions. 9. Government grants to the company a subsidy or bonus of 25,000,000 dols. in cash and 25,000,000 acres of land, to be paid in instalments on the completion of portions of the line not less than 20 miles in length and subject to various conditions and regulations. 10. Government also grants all land required by the company for the railway, stations, workshops, wharfs, &c. ; and agrees to admit, duty-free, all steel rails and every other sort of material to be used in the first construction of the railway or line of telegraph in connexion therewith. 11. The grant of land to consist of every alternate section of 640 acres in a belt 24 miles broad on each side of the line ; but if any of such land be "not fairly fit for settlement," the company may reject it and choose any other vacant Government lands elsewhere. 12. Indian title to be extinguished where necessary. 13. The company may build the line where they please, subject to the approval of the Governor in Council, so long as they preserve the terminal points already mentioned. [The Yellow Head Pass has since been relinquished in favour of the Kicking Horse Pass.] 14. The company may build any branch lines, subject to the approval of Government, which shall include all the necessary lands that are in its possession. 15. "For twenty years from the date hereof, no line of railway shall be authorised by the Dominion Parliament to be constructed south of the Canadian Pacific Railway, from any point at, or near, the Canadian Pacific Railway, except such line as shall run south-west or the westward of south-west ; nor to within fifteen miles of latitude 49 [the United States frontier]. And in the establishment of any new province in the North-West Territories, provision shall be made for continuing such prohibition after such establishment until the expiration of the said period." 16. The entire railway shall be for ever free of every kind of taxation ; and its lands shall not be taxed for twenty years unless they are previously sold. 17. Empowers the company to issue bonds secured upon their land grant under various conditions. 18, 19, and 20. Relate principally to the said bonds. 21. Relates to the incorporation of the company. 22. Provides that the Railway Act of 1879 shall apply in all cases where it does not interfere with the foregoing provisions.

The document also contains numerous other regulations and conditions relating principally to the management and incorporation of the company ; but those already set forward are the ones that are of chief public interest.

Were any English line of railway to be constructed under such conditions as these, the British public would indeed have good reasons for expressing astonishment ; but the conditions previously existing in England are widely different from those existing in America. Here, it is not

the custom to make large grants of public money and land in order to enable a private company to build a line of railway; but, in America, this is far from an uncommon occurrence.

Enormous as are the benefits which Canada may expect to derive from the line in question, no one will deny that the concessions are also enormous. Relieved of all fear of competition, of all taxation, and of all the expense of purchasing land; with a cash bonus of 25,000,000 dols.; with portions of their line over 700 miles in length, already completed by Government at an estimated expense of 35,000,000 dols. (exclusive of large sums previously spent on surveys), and handed over to the company gratis; with a land-grant of 25,000,000 acres, which it is especially stated is to be "fairly fit for settlement," and which is now being sold at 2 dols. 50 cents per acre and upwards (although, of course, the process of sale is a slow one)—with all these concessions, surely the Canadian Pacific Railway *ought* to thrive.

Let us look for a minute at the advantages which the construction of the line will confer upon the Dominion of Canada. In the first place, a new and highly advantageous route will be opened up between England and the Eastern Asiatic countries—China, Japan, and even India—and, on the completion of the railway, it is intended to start lines of steamers to these countries, as well as to our colonies of Australia and New Zealand. From Montreal (the present eastern terminus) to Winnipeg by the "C.P.R." (as the line is invariably called in Canada) will be 308 miles shorter than the existing all-rail route *via* Chicago; the distance from Atlantic to Pacific by the Canadian Pacific Railway will be 494 miles shorter than the distance between New York and San Francisco; and the route from Liverpool to Yokohama by the same line of railway, when completed, will have the advantage of being 1,053 miles less than the existing route *via* San Francisco. In the next place, an enormous extent of boundlessly fertile country will be opened up as a home and as a source of food for the struggling millions of Europe; trade of every kind will be stimulated; the mineral resources of British Columbia will be brought nearer to Europe; while the

agricultural products of the prairies can be sent westward to feed the mining population across the mountains; the enormous stores of coal in the upper valley of the Saskatchewan will be made available; the extremes of the wide Dominion will be more closely bound together; and in a thousand indefinable ways Canada, and a large portion of the civilised world besides, will be benefited—indeed, in the complex state of society which we call Civilisation, it is almost impossible to over-estimate the importance, if not the necessity, of such easy means of transit as railways alone provide. It is not too much to say that the line in question has practically *created* an enormous area of country; for, though it is true that the land was there before, still it lay almost uninhabited and unapproachable, and, consequently, was almost worthless. Looked at in this light, the price which Canada has had to pay seems insignificant; but it may still be doubted whether one, at least, of the concessions is not a little too great—that which practically gives the company a monopoly being, of course, the one referred to.

All railways are, to a certain extent, monopolies; and this is truer of American railways than of those in England. But few, even in America, are such unmitigated monopolies as the one now under discussion. Not long since I read in an American newspaper that some New York financier had expressed his opinion that the Dominion Government would have done better had they handed over their power and position to the Syndicate (as the company is always termed), reserving only the railway and its vast concessions to themselves! As a matter of fact, the Syndicate is now omnipotent over the larger part of the Dominion, and is the virtual, if not the actual, Government of this portion.

The large concessions and financial aid which, as now described, the Government of Canada has thought fit to grant to the Canadian Pacific Railway Company, are so enormous that in this country, where arrangements of a similar kind are but seldom made by governments, many people might be readily excused for falling into the belief that the company would henceforth be able to build its railway without further assistance. But this has not turned out to be the case. The difficulties encountered have

proved so great that, although there can be no question as to the soundness of the company as a commercial concern (which the traffic receipts for last year clearly show), the privileges which the company already possesses have now been found insufficient to enable it to build the line at the rate at which it is in every way desirable that it should be built. Last November, therefore, fresh negotiations were opened with the Government, the objects of which were to obtain for the company further financial assistance in order to enable it to continue vigorously its work of construction; and, so great are the advantages which the early completion of the line is expected to confer upon the whole country, that, after careful consideration, the Government decided to enter into engagements by which it guaranteed a semi-annual dividend of 3 per cent. upon the whole of the outstanding stock of the company for ten years, upon certain security being given. This, it was thought, would so promote the sale of the company's stock as to provide it with sufficient funds to carry the work to a completion; but, for various causes, the results were not as had been confidently anticipated; and, although the company was in possession of resources amply large enough to have completed the line within the contract-time, so desirable did it seem that it should be completed at as early a date as possible, that the Government were again applied to for further aid. This time a direct loan was asked for.

American railways of all kinds are fickle-minded concerns in the extreme, while the intentions of their directors are perfectly inscrutable. The various lines there are, to a large extent, in the hands of private speculators, who use them to attain their own ends, and to cut out rival lines, much more than could be done in England. With a new line everything appears to hang on the matter of a *bonus*, which may thus be regarded as "the root of all evil." The conditions under which American lines are constructed are, of course, widely different from those existing with us. Here, railway companies have a ready-made country, with old-established, deeply-rooted towns, from one of which to another the lines are made to run, gaining usually an immediate return on their outlay—in short, the towns make the railways. But in America the railways make the

towns. In building a railroad there, such as the Canadian Pacific Railway, the new line nearly always passes through more or less uninhabited country, where there can be but a very slow return for the outlay until the railway itself, by opening up and rendering the district available, has *populated* it—hence arose the system under which Governments make enormous land-grants to any new company. The land is usually quite valueless to the Government without a railway ; but the company, by providing the line, render the land at once of marketable value ; and being, thereupon, enabled to sell it, gain for themselves some return for their outlay ; and, at the same time, perform a public service by finding a population for the new district, which, again, will provide them with dividends and the Government with an increased revenue. From much the same causes arose the custom of particular localities giving bonuses to railway companies. It is difficult, under the circumstances, to see exactly how the matter could be arranged otherwise ; but it is undeniable that the bonus is very often a source of dispute and uncertainty as to the route to be taken by a new line. For instance, a company of speculators or capitalists meet together, and, after a little agitation, procure a charter from Government. It is then master of the situation, except, perhaps, in the matter of funds—a great consideration, it is true. The country to be traversed, though it may be fertile, is unavailable and thinly inhabited. What few towns or settlements there are already in existence are young and small and, metaphorically speaking, have got no roots. If the company chooses to spite the inhabitants of any such a town, it can start a new one of its own near at hand on its own land, when the old one may as well “bust up and go on West,” as the Yankees say. But the inhabitants of the town naturally have no wish to “bust up :” they want the railway to increase the value of their property, and, if the line goes elsewhere, they may be ruined ; while, on the other hand, the company usually wants funds to help it to build its line. Hence arose the custom of the towns giving bonuses—a system under which mere villages saddle themselves with a debt of 50,000 dols. or 100,000 dols. The directors always skilfully manage to delay matters and make them appear unsettled,

until they finally know which towns will give them the largest bonus : and this is the reason why proposed railways in the North-West are expected any time, years before they actually come ; why the intentions of the directors are always doubtful ; why all manner of contradictory rumours are current ; and why there is no certainty of knowing where the line will run until the rails are actually laid down. The following newspaper-cutting will serve as a specimen :—
“ PORTAGE LA PRAIRIE, September 10.—Various railway rumours are current here. One has it that the Canadian Pacific Railway Company have promised backing to the Souris and Rocky Mountain Company, and are urging the latter to proceed rapidly in order to cut out the Manitoba and North-Western in the North-Western district. Another is that the Grand Trunk is about to purchase the Manitoba and North-Western. Many here hope the latter is true.”
It must be clearly understood, however, that the Canadian Pacific Railway has a semi-official status which places it above such petty haggings as those just described as the usual accompaniments of the birth of the smaller and less important lines.

Having now treated at some length of American railways in general, I will next proceed to give further information regarding the construction and working of the Canadian Pacific Railway in particular.* The rapidity of the progress of construction since the company was incorporated on February 16, 1881, has been far ahead of the rate at which any of the trans-continental lines in the United States were built, and is altogether unparalleled in the history of railway building in any part of the world. Within three months of the company being incorporated (that is, about the beginning of May, 1881), work was commenced on the main line west of Winnipeg ; and, by the close of that year, the track was laid as far as Oak Lake, 165 miles from the commencement, while considerable progress had been made with the grading beyond. In the spring of 1882 construction was much delayed by the floods in the Red River valley, which, for a time, caused a break in the rail-

* I have pleasure in acknowledging the courtesy with which Mr. H. Moody, the London manager of the Canadian Pacific Railway, has supplied me with some of the following items of information.

way communication with the south. On this account only sixty-nine miles were completed between the beginning of April and the end of June. After this, however, the work was pushed forward with surprising rapidity, as the following record in miles will show: July, 64; August, 86; September, $71\frac{1}{2}$; October, $59\frac{1}{2}$; November, 38; and December, 30. By the end of 1882, therefore, "the end of the track" had been advanced to Rush Lake, 585 miles west of Winnipeg, while the year's record was raised to 420 miles. The best month's work was done in August, when eighty-six miles were laid, being an average of 3.2 miles for each working day; though, on two occasions during the month, more than four miles of track were laid in one day. Grading was stopped by the frost on November 13, but recommenced again at the end of the following March (1883), and track-laying on April 18. From that date until the track reached Calgary, on August 15, the monthly record in miles was as follows: April, $17\frac{1}{2}$; May, 52; June, 67; July, 92; and August, 26. On seven occasions during June and July the day's record exceeded four miles; twice during the latter month more than *six miles* of track were laid in the day; while the average for all the days in the same month on which any work was done was as high as 3.7 miles. At Calgary the line enters the Pass, and the ascent of the eastern side of the Rocky Mountains begins. On November 27 last the summit, 122 miles west of Calgary, was reached, raising the year's mileage to 377 miles, and making the total distance from Winnipeg 962 miles. The entire mileage constructed during 1883 upon all the main and branch lines of which the company has the management is returned as 918 miles. Looked at in any light whatever this is a record which cannot be called a poor one. More than 1,000 miles of railway laid within a little more than thirty consecutive months (or in about twenty-five months during which work was actually going on), is a triumph which, as already stated, has yet to be equalled. It must not, however, be for one moment supposed that because the work has been done thus rapidly it has been scamped or done in a slovenly manner. When compared with some of the best English railroads, the laying of the track of the Canadian Pacific Railway will, of

course, appear to have been done in a very temporary manner ; but, on the other hand, it is certain that the work would compare favourably with that which any other western American railway could show. The Union Pacific Railway was from the first selected as a standard of excellence which the Syndicate were compelled to come up to, or the conditions of their agreement with the Government would have been broken. As a matter of fact, the line was entirely completed, piece by piece, as construction went on : the grading was done, the rails laid down and secured, stations were built, engine-sheds erected, telegraphs put up, sidings laid down, and the line was equipped with all necessary rolling-stock as fast as the work proceeded. This was, in fact, a necessity, or the materials for construction could not possibly have been got to the front. There is a siding at each station—that is to say, about every eight miles—and the aggregate length of all the sidings is sixty-six miles, which amount is not included in the figures which have been already given as to the length of the line. It is hardly necessary to say that the track is a single-lined one, and that it was laid down from one end only. The "ties," or sleepers used have all been cut in the forests around the Lake of the Woods. The rails used have all been of best English or German steel, about one-half having come from Barrow, and the other half from Krupp's works at Essen, Prussia. All the stations and other buildings are of a substantial and permanent character. The greater part of the work has been done by the firm of Langdon, Shepard, & Co., contractors. This firm, within fifteen months (including, of course, a winter), completed 677 miles of main-line, 48 miles of sidings, and is estimated to have moved something like ten million cubic yards of earth. In most places it was necessary to keep the grading done a long way in advance of the track-layers, in order that the work of the latter might not be interfered with. In some cases it was even necessary to have men as much as 200 miles in advance, and the difficulty of keeping them supplied with necessaries in a country where there were no roads, can be better imagined than described. During the construction of the line, yards were established at intervals of 100 miles : at these all the

necessary materials and supplies were carefully sorted and forwarded to the front in selected lots, each train taking exactly the proper number of rails, ties, spikes, telegraph-poles, &c., to complete a certain amount of track, so that there was no material scattered along the line in small quantities. The houses composing the village which surrounded each yard were made portable, so that, when it became necessary to shift the seat of operations nearer the front, the houses were put on flat trucks, and carried forward to the point at which the new yard was to be established. As showing the admirable arrangements that were in force, it may be mentioned that the materials for construction were delivered at the end of the track, day after day, with such regularity that, during two seasons, it is said the greatest delay experienced by the track-layers did not once exceed three hours. It has also been stated that, with one exception near the crossing of the Saskatchewan, the maximum gradient between Winnipeg and a point four miles below the summit of the Rocky Mountains (a distance of 958 miles), does not exceed forty feet to the mile. The amount of earthwork between Winnipeg and Calgary (840 miles) has averaged 16,300 cubic yards to the mile, which is a very high average for a prairie country, but is accounted for by the fact that the line has been well raised up above the level of the prairie in order to avoid its being blocked by snowdrifts in the winter.

It should, however, be pointed out, in connexion with the rapidity with which the main line of the Canadian Pacific Railway between Montreal and the Rockies has been carried out, that nearly the whole of this distance (800 miles of it, at least), was upon fairly-level prairie, where the difficulties of construction were reduced to a minimum. There are still some 260 miles of the mountains to be crossed, and over 400 miles still remain to be completed in the wild, rocky region north of Lake Superior. It is now, however, confidently announced that the entire line from the Atlantic to the Pacific will be completed and in running order in less than two years from the present time, or before the end of 1885, which will be no less than five-and-a-half years before the contract-time! It ought, then, to be possible to go from Liverpool to Yokohama by

the Canadian Pacific Railway with but two changes—one at Montreal and the other at Port Moody.*

Last autumn rumours were spread abroad to the effect that the Kicking Horse Pass had been pronounced impracticable by the company's engineers, and that work had been suspended in consequence—one rumour, which I heard in Winnipeg, actually said for two years! I have, however, been positively assured that the Kicking Horse Pass has *not* been abandoned: but, as work on the mountains had necessarily to be suspended for a time on account of the snow, the engineers thought it worth while to occupy the interval of enforced idleness with a fresh survey of the route selected. By this pass the company claims to have found a route through the mountains which will effect a saving of 120 miles over the Tête Jaune Pass in the distance between the two oceans; which will give gradients easier than those that have had to be crossed by any of the lines in the United States; and which will concentrate all its steep gradients into three short sections of twenty miles each.

That section of the line between Port Arthur and Lake Nipissing is being pushed rapidly forward by enormous gangs of men. Some 8,000 or 9,000 have been kept at work the entire winter through; and it is confidently anticipated that, with the aid of large quantities of dynamite, the line will be completed about the same time as that part which crosses the mountains. Already the track is laid over 100 miles east of Port Arthur, and, with the opening of the spring of the present year (1884), a branch line will be completed to Algoma Mill, on the shore of the Georgian Bay, Lake Superior. From this point the company will at once commence running a line of steamers on their own

* At the time of writing (December 1884) the latest advices to hand state that unexpectedly rapid progress has been made with the line north of Lake Superior which is expected to be complete by April next. The "end of the track" is now said to be seventy miles west of the summit of the Rocky Mountains. Some difficult work has been experienced in descending the Kicking Horse Pass and five tunnels have been bored. Two more ranges in British Columbia have yet to be crossed, but 3,000 men will be kept at work all winter, and it is said that the main line will be complete and in running order by November next.

account to Port Arthur (360 miles), when they will, at last, be able to convey passengers by a route entirely their own from Montreal to the summit of the Rocky Mountains—a distance of 2,300 miles. This route will also be more direct than any at present existing between the North-West and the Atlantic sea-board, and will, doubtless, find much favour until the final completion of the line renders it an unnecessary one. Three fast, steel, Clyde-built steamers have been already delivered over to the company, ready for work when navigation opens.*

In addition to the main line between Montreal and Port Moody (which, when completed, will be 2,875 miles in length), the company has in operation branches from Winnipeg running to Stonewall (20 miles), to Selkirk (22 miles), to Manitou (101 miles), and to St. Vincent (68 miles), on the boundary, where connexion is made with the St. Paul, Minneapolis, and Manitoba Railway, and, through it, with the whole American railway system. It has also acquired possession of the Manitoba and South-Western Line, feeding the much-talked-of Turtle Mountain district, which will this summer be pushed forward; † while the Manitoba and North-Western Railway and the Souris and Rocky Mountain Railway are independent lines, which are being pushed north-westward, and will, in time, serve as useful feeders for the main line. That portion of the line between Port Arthur and Winnipeg was completed by Government and handed over to the Syndicate in May, 1883. It is now busily in operation. Shortly after its incorporation the Syndicate purchased the partly-finished Canada Central Railway, in order to connect its eastern terminus, near Lake Nipissing, with Montreal on the Atlantic coast. Several other short branch lines have

* At the last moment, and just as I myself was preparing to travel over this route, it was announced that, on account of difficulties connected with the getting of the steamers to Algoma, and because of the insufficiency of buoys in the channel, the vessels would run from Owen Sound, at the south end of the Georgian Bay, instead of from Algoma. The three vessels on this line are named *Alberta*, *Athabasca*, and *Algoma*. They are splendid ships, lit entirely by the electric light. I made the first trip up the lakes, which any of them made this spring, on board the last-named.

† This has not been done.

also been purchased, or are now under construction, by the Syndicate; and it is stated that arrangements are now in progress by which the company will gain access to the winter ports of Boston, Portland, and St. John, and which, when completed, will place the two termini of the railway considerably more than 3,000 miles apart. The total mileage of the Canadian Pacific Railway, open at the end of 1883, was 2,963 miles, of which 503 miles were constructed by the Government, 1,414 miles by the Syndicate, and the remaining 1,046 miles consisted of lines that have been leased or purchased. Some idea of the enormous number of men to which the construction of the line gives employment may be gained from the fact that, during the first half of last July over 800 were sent West by the Winnipeg employment-bureau. Probably, when work commences in earnest this year (1884), the company will have in its employ over 20,000 men. Mr. Moody writes:—"The company employs on the line as many thousand men as it can get: next season we hope to have 10,000 men at work in the Rocky Mountains." According to the returns the company's "pay roll" (presumably including wages only) amounted to 2,241,638 dols. in 1882. From the foregoing, every one will see what an enormous power this young Railway Giant will wield when he comes to attain his full growth.

The route across the prairie-region which the company's engineers have chosen has caused surprise to not a few people. Certainly it does not show by any means the best aspect of the country to those who merely pass through it by rail; but it is very direct, and probably that fact was the one which weighed most strongly with the authorities. About sixty miles west of Winnipeg the line passes through a wet and thickly-wooded country, while the stations of Sydney and Melbourne are situated among desolate sand-hills, where but few persons have been fools enough to locate. After this, the line passes through good country for several hundred miles, until the Great Plains, which occupy the Third Prairie Steppe, are reached. Much discussion has been waged as to whether or not this bare, arid, and treeless tract is fit for settlement. It certainly is a northern extension of the vast plain which used formerly

to be known as "The Great American Desert"; but the members of the Syndicate are evidently of opinion that their portion of it is capable of cultivation, for they have not rejected it as part of their land-grant, which the terms of their agreement with the Government expressly gives them power to do, should they so wish. Probably in time a very large part will be settled, but not until the better land lying north and east is all occupied.*

* So many contrary and conflicting statements and opinions have been put forward as to the capabilities of this region that I may as well set forth here my own observations, although the subject is not one directly connected with Manitoba. Last July (1884), I had occasion to undertake the journey from Winnipeg westwards almost as far as Medicine Hat, in the valley of the Saskatchewan, and back. Immediately afterwards I went south, and then journeyed out over the Northern Pacific as far west as Helena, Montana, at the foot of the main range of the Rocky Mountains. I will speak of the last journey first. The country in the Red River Valley about Fargo, and in Dakota as far west as the Missouri, seemed to be quite as good as, and not very dissimilar from, the country I have praised so highly in Manitoba. West of the Missouri, however, the great plain of the Third Prairie Steppe is at once reached. The vegetation is scanty, but affords fair pasturage for cattle, except in those parts where a parched and sandy soil produces nothing but cactus, or where alkali is especially abundant. The vegetation in the valley of the Yellowstone is very parched and scanty in appearance; but it is, perhaps, hardly fair to judge of the surrounding country by what may be seen in the river-valley alone.

Of the country lying immediately west of Winnipeg I have already spoken. With the exception of the wet, wooded, and sandy tracts between Portage-la-Prairie and Carberry, it is of fairly uniform excellence, at least as far as Regina, 356 miles from the capital. A few miles west of Regina the Third Prairie Steppe, or True Plains, are reached, and the fine, black, fertile loam of the true prairies to the east is exchanged for a drier, sandier, and less fertile light brownish soil. From this point to Medicine Hat (a distance of 300 miles) very little change of any kind is observable. The surface is never flat, but invariably rolling. This circumstance did not at all agree with my preconceived ideas of the country. The elevations never attain to any great height, but are always of a sufficient altitude to prevent the traveller obtaining a view from the train more than a few miles in extent. The face of the ground is so completely devoid of everything of the nature of a shrub that, for hundreds of miles, no stick large enough to form a pen-holder is to be seen, except here and there when crossing the valley of a small stream. The vegetation has both a scanty and a parched appearance, and there are large patches of sand, alkali, and cactus; but, on the whole, I am bound to confess that I was most agreeably surprised at the nature of the country. Hearsay had

One passenger-train runs over the track each way daily as far west as Moose Jaw, while twice a week trains run to the end of the track and back. The cars are seldom otherwise than well filled. On most days also there is a goods (or, as it is always called, a "freight-train") each way. Those going West are generally "construction trains." They are laden with rails, ties, and other material for the end of the track, and are often of great length. The ordinary passenger fare east of Brandon is 3 c. per mile; west of that place it is 4 c. This rate is lower than that charged by most other western railroads (notably by the Northern Pacific), and compares very favourably with the fares on most English lines, being, in fact, less than the average second-class fare; while the comfort afforded, even by the ordinary American "cars,"* is, to my thinking, greater than

led me to suppose the whole area a useless desert; but it is most emphatically nothing of the kind. A very large portion of the region I passed through would unquestionably support vast herds of cattle; while, further west, among the foot-hills of the Rocky Mountains, is a still better country, where more sheltered valleys, greener grass, and a milder winter hold out great promise to ranch-men. Further, I am not afraid to say (indeed, I feel confident) that in years to come, when the increase of population shall have over-run the more fertile prairies, we shall hear of the plough and the harrow being successfully employed upon these now cheerless, solitary plains. I feel but little doubt that they could be rendered more habitable by the careful planting of trees, which would have a strong tendency to increase the present scanty rain-fall, and break the now violent winds. Whether, however, trees ever grew naturally on the plains, and have been destroyed by fire, is a point I cannot decide. Prof. Macoun states his belief that this has been the case; but the fact that the soil is not black, like that of the prairies, lends no support to this view. The Canadian Pacific Railway authorities have made a commendable effort to solve the question of the fertility of the plains for themselves. Last year a special train left Winnipeg laden with horses, ploughs, men, fencing materials, and other implements of husbandry. Patches of ground were roughly cultivated and sown. I have had the opportunity of inspecting several of these "Experimental Farms," and can testify that, although it would be untrue to say the crops were good, still they were fairly so, though evidently in want of moisture. On the whole, I consider the average of the country along the Canadian Pacific Railway to be decidedly superior to that along the Northern Pacific Railway.

* For a berth in a Pullman-car an additional charge of from 3 dols. to 4 dols. a day (twenty-four hours) is made. I have covered some very long distances in "sleepers," as they are called, and consider they afford the utmost perfection of comfort as yet attainable in railway travelling.

that given by any English first-class carriage, except in the matter of that "solitary confinement" which the insular-minded Briton so dearly loves. A complete American train generally contains the following kinds of cars:—first, the baggage-car, the mail-car, and the express car; next, the emigrant-car, the second-class (or smoking-car), and the first-class car; after that, the dining-car; and, lastly, one or more "Pullman palace sleeping-cars." "On board" such a train as this little is wanted beside bath- and reading-rooms to convert it into a travelling hotel or club-house. The advantages possessed by such a train over an English train are these: the cars are better lighted at night, are more roomy, and better warmed (often, indeed, far too well warmed); the seats are more comfortable, and, being reversible, no one need ever sit with his back to the engine; further, the traveller can obtain all conveniences, such as walking about, partaking of meals, washing, going to bed, purchasing books, newspapers, fruit, &c., without leaving the train. The "checking" of luggage, too, is a system almost too excellent for praise. It is quite impossible to see why it should not be adopted here. For my part, whether the journey be long or short, I much prefer railway travelling in America to the same in England.*

* The author of "A Year in Manitoba" must surely be an Irishman; at least he strongly reminds me of the Irishman who complained bitterly because all his grievances had been taken away and he had nothing left to grumble about! Our author writes that checking "is done by giving the traveller a brass ticket for each package, the baggage-man retaining a duplicate. With a lot of luggage this is a *serious cucumbrance!*" For myself I can say that, although I have travelled over 20,000 miles by rail in the United States and Canada, I cannot remember ever to have had my baggage labelled with my name or destination (my address was placed inside for safety), nor have I ever lost anything. Why, too, cannot our engines be provided with whistles similar to those used in America? Instead of the discordant and detestable screech we now hear, we should then have a base "boom," which would be audible at much greater distances, and would be in no way unpleasant. Certainly one drawback to American railway travelling is the totally unnecessary destruction of baggage that goes on. Trunks are often thrown bodily out of the baggage-cars on to the platform and then rolled along on their corners, bumping heavily. I have two suggestions to offer to travellers: the first is, that they should apply to Mr. Griffiths, "the safe man," for one of his massive, burglar-proof constructions, into which their goods might be

The guard is always a "conductor," and, on freight-trains, his van is always a "caboose." There are already over 200 cabooses in use on the line. The conductors are always men of a superior class. Those connected with freight-trains are paid by the number of miles they run, and are said often to earn as much as 130 dols. per month, whilst those on passenger-trains often earn 100 dols. The following ideal regulation is said to have been issued to the company's servants, and to be now in force, but I fear the force must be a weak one:—"In future, the use of all intoxicating liquors, either on or off duty, is strictly prohibited. Any violation of this order will be severely dealt with." All the post-office and baggage-cars in use on the line are built with sliding, instead of folding, doors, and the windows are securely barred, so that an effectual resistance could be offered in case of an attack. Some interesting figures in the Report of the Department of Agriculture and Statistics show that in 1882 the total mileage of passenger-trains was 281,377, of freight-trains 1,841,146, and of mixed trains 44,451. Altogether, 758,448 tons of freight were carried over the Western Division, of which, however, rather more than one-half was for the use of the company itself. At Winnipeg, no less than 109,164 "pieces of baggage were handled," as the expression is. The number of passengers travelling over the line during the year was 258,058. The gross traffic receipts of the entire line for the year 1882 were 2,536,420 dols., or at the rate of about 3,500 dols. per mile. Considering the fragmentary state of the main line, and the fact that that year was only the *second* of the company's existence, this result may be said to be most surprising; still more so when it is added that in the following year the gross receipts amounted to 5,281,811 dols., or more than double.

Passengers are allowed to travel by freight-trains at the

packed with safety; the second is, that they should employ ordinary trunks and label them "*Dynamite with care.*" The last plan is worth a trial. The American hotel system is, to my thinking, superior to the ordinary European plan. A fixed daily charge is made for a bedroom and three meals. There are a few hotels in London that are carried on under this system,—for instance, the American Hotel, 34, St. Martin's Street, Leicester Square.

regular fare and at their own risk. The cabooses attached to these trains are fitted up with greater comfort than an average English third-class carriage, and generally have occupants. No one should imagine, however, that these trains afford very smooth or enjoyable travelling, or that they keep to anything like their appointed time. Those I journeyed by were from one to eight hours late!



CHAPTER VIII.

THE "BOOM" AND ITS EVIL EFFECTS.

No visitor to Manitoba will have been more than a very short time in the country before he hears of the "boom." A "boom" is, I believe, strictly an American institution—at least so far as land is concerned. It is, in principle, identical with the "gold-rushes" which have taken place in Australia and California in years past. The wildest and most insane speculation is the only foundation on which a "boom" can thrive. During its existence business of every kind is in a state of altogether abnormal and unhealthy activity; wages and prices are exceedingly high; and every one is endeavouring to buy and sell at an unusual rate. In Manitoba the "boom" took the form of a mania for dealing in "town-lots." It seems to have extended to nearly every town in the province; though, perhaps, it was more fully developed at some than at others. It originated in the autumn of 1881; and "the bottom fell out," as the expression is, about the end of the following spring. During this time the condition of business was almost beyond the conception of those who did not see it. Town-lots, measuring usually about 30 feet by 100 feet, were bought, houses were run up, and stores opened by the score. In the towns it is literally a fact that nearly every place of business was also a real-estate office. Every hotel-bar was placarded with advertisements and crowded with people crazy to sell town-lots. It mattered nothing if

these lots were at the bottom of the Assiniboine, or in the middle of a pond, or even if they had no existence at all; so long as they were shown on paper they were eagerly bought by persons willing to give enormous prices for the prospect—usually a good one—of selling them again at a handsome profit. Inspecting them was an altogether superfluous accompaniment either of sale or purchase. Auctions, at which these paper towns found ready sale, were, I believe, held in all the principal cities of Canada. It is a fact that the town of Brandon was surveyed for a radius of several miles in every direction beyond its present limits; and many other places were in the same state. Professor Macoun gives the following sketch of the "boom" in his work on "Manitoba and the Great North-West":—

"Nothing to equal it had ever before occurred on Canadian or British soil. Thousands of dollars were made by operators in a few minutes. Vast fortunes were secured in a day. The excitement spread like wild-fire all over the country. Cool-headed professional and business men (clerical as well as lay) left their callings in other parts of the country for the scene of the modern Canadian El Dorado. Real-estate agents became as numerous as the sand on the seashore. The educated and refined, as well as the illiterate, took part in land transactions. No regard was paid as to whether the vendor had a right to sell or not: everything was taken for granted."

Who will wonder that there should come a time of reaction and depression after such proceedings as these?

During the time the boom lasted, a common labouring man's wages were something like 2½ dols. per day, and he lived on champagne like a lord. In Winnipeg it was difficult to get a bed to sleep in at night, so great was the incoming tide of people, attracted by the prospects of realising a speedy fortune through gambling with town-lots. Farmland, too, shared in the inflation produced by the boom, but not to the same extent as town-lots.

None, however, but the very simplest could expect this state of things to last long; and, as already stated, the depression which inevitably follows a period of abnormal business activity soon began to be felt, and is now only slowly removing its woful effects from the towns all over

the province.* Many a town-lot is now not worth as many thousand cents as dollars were given for it during the boom; many a store is now closed, many a business man a bankrupt, and many a speculator ruined; while, even now, failures are going on which are directly attributable to the evil effects of the boom. A few of the sharper ones may have backed out in time, and made good hauls; but the majority were, as usual, gulled, and many must have lost heavily. I heard of men who, during the boom, were accounted to be worth upwards of a hundred thousand dollars, who are now barely worth the clothes they stand in. One gentleman told me that, during the boom, he made over £1,000 in less than six weeks; but, much sharper than most, he knew how to keep it, as well as how to make it, and left the sinking ship in time. The complaint now is, that land round the towns is out of cultivation, being owned in tiny lots by unknown persons all over the Dominion, who keep themselves carefully in the background, lest they should be called upon to pay further instalments on plots of ground which are now worth less than the first instalment already paid. Looking back now, when men's reason has returned to them, it seems impossible to understand how such a state of things could ever have arisen; but, then, all crazes and manias—the infamous South Sea Bubble, for instance, which was of a kindred nature with the boom—seem equally outrageous when calmly viewed after the excitement has passed away.

That the depression in business is now terribly severe in nearly all the towns in Manitoba, as elsewhere mentioned, is obvious to every person who may have occasion to visit them, and its existence is not denied by the public newspapers: that it is both directly and indirectly attributable to the boom, by its having caused great over-trading and an excessive supply of goods; that the present number of bankruptcies, though painful to see, will, in the end, have a beneficial effect, by placing business on a secure footing:

* I have been credibly informed that, during the height of the boom, land in Winnipeg—then a place of only 10,000 inhabitants, and 500 miles from any centre of civilisation—sold for higher prices than land will fetch at the present day in the middle of Chicago—a place of 600,000 inhabitants.

that, when this takes place, business will again flourish; and that the present depression in business, being the inevitable result of inflation due to the maddest speculation, cannot in the slightest degree be attributed to any fault connected with the country, are all facts which will be equally obvious to every observer. The depression has, in no slight degree, been aggravated by the total want, throughout the Dominion, of any law of bankruptcy, so that the affair has to be managed by the cumbersome and wasteful process of bailiff's seizure and sale. Obviously, where there are so many sales and where money is now so scarce, things must sell for far less than their real value, as, indeed, is generally the case; and I heard of many articles which had been sold at an absurdly low figure.

But, as there is no rule without an exception, so there is one town which, having escaped the boom, has, consequently, seen nothing of the depression. This town is Carberry, a place of 300 or 400 inhabitants, but in which all the business done is healthy and there have been no sales or bankruptcies. At the present time Carberry is growing slowly, honestly, and substantially, according to its requirements, and does not, like its neighbours, seem to expect its requirements to grow along with it. It is the only village worth the name between Brandon and the Portage, and, being surrounded by an excellent and well-settled agricultural district, may expect to grow steadily in the future. Its prosperity may be directly attributed to the failure of the boom, which seems here to have defeated its own ends. The following is an account I had given me of the growth of Carberry—perhaps not altogether correct as to detail:—When, in August, 1881, the railroad reached the Big Plain,—as the district round Carberry is called,—the station and town of "De Winton" were commenced and named after General De Winton, aide-de-camp to the Marquis of Lorne. This was done on a section of land about two miles east of the present town, the property belonging to a certain General Rosser, who was in some way connected with the syndicate, and would, doubtless, have lined his pockets finely had he not, about the following June, found occasion to differ from his colleagues, who, naturally, had no further wish to aid him in his speculations.

Accordingly they closed their station, and erected a temporary one on a desolate spot among the sand-hills, where no one would dream of settling. Here it remained for over a month, while the syndicate was bargaining for another section of land, they themselves not possessing a suitable one and yet requiring a station to supply the Big Plain. At last, for a very high figure, they purchased that on which Carberry now stands. Here they immediately built a new station, surveying the land off into town-lots, which they sold as fast as possible. Of course, De Winton languished and died: at the present time only a house and a half remain, all the others having been moved two miles over the prairie to Carberry, and, to this day, some of them are considerably out of the perpendicular, and bear other signs of injury received during the journey. The post-office was not moved until some time later, when the inconvenience began to be felt. General Rosser is said to have sold his land to another speculator, in consequence of which, though of first-class quality, it still remains uncultivated. Thus the City of De Winton "bust up and went on west," as the Vankees say. Carberry has now something like fifty houses, including three hotels, several excellent stores, a blacksmith's, three grain warehouses, &c. &c.

As the railway reaches further out into the Far West, it carries the boom along with it, and one reads in the papers that "things are booming" at such-and-such a place. When it reached Calgary, the materials of a house were unloaded from the train one Monday afternoon, and on Tuesday evening the said house was built and occupied. This is the way they do things in the West!



CHAPTER IX.

THE CITY OF BRANDON.

ON September 18th I first saw the city of Brandon, in the vicinity of which place I spent a short time. To me, after a long sojourn in the rural district round Carberry, it appeared indeed a city of no mean size, although, I believe, its population falls a trifle short of 4,000.

The history of the rapid growth of Brandon is a surprising one—or, rather, it would be so for any Old World town; but, on the other side of the Atlantic, instances could be given even more wonderful. At the time I was in the city I believe that its age was almost exactly two years and five months; and that before the month of May, 1881, there literally was not a single inhabitant of the spot it now occupies. I made the acquaintance of a gentleman who claimed the honour of having put up the first building. In the spring of 1881, after the Canadian Pacific Railway had passed into the hands of the present powerful syndicate, and there was every probability that the rich prairie lands of the North-West would at last be opened up to the world by the much-talked-of trans-continental railway, speculation began to be rife among a few keen-sighted men as to the point at which the track would cross the Assiniboine River, believing (and that rightly) that a town would eventually spring up at that spot. During May a complete change in the proposed route indicated the present site, and the following month of June saw the city born. The streets were surveyed, and a number of settlers arrived, who, though most of them spent their first nights on the open prairie, are now among Brandon's foremost men. Within twenty-four hours of the time when the first purchasers of town-lots from the

agents of the syndicate had become owners, they had started a brisk real-estate business, and when, on May 28, a heavy consignment of lumber arrived from Winnipeg by the steamer *North-West*, it was eagerly bought up, and the boom was in full swing. Within two weeks of this date it is said that "some half-a-dozen stores were already in operation, and every business man had a real-estate branch, of greater or less magnitude, connected with his regular calling." The first rush over, however, a temporary lull ensued; but the track of the Canadian Pacific Railway, reaching the city about the end of August, brought a revival, and a steady stream of immigrants took place for the remainder of the year, till, in December, the place must have contained a population of several hundreds, while churches, hotels, a post-office, and a station were all in operation. The first number of the *Brandon Sun* was published on January 19, 1882 (that is, when the place was less than eight months old), and recorded that at that date the population was estimated to number 700, the buildings 170, and their cost was put at 200,000 dols. The progress of the city continued so steadily that, with the commencement of spring, the population was 1,500, and the number of business establishments; 120. On May 30, when just one year old, the city was incorporated by Act of the Provincial Parliament, and the first municipal election took place just a month later. Steadily the growth continued, till, towards the end of September, 1882, the population numbered 3,000; but, about that time, an occurrence took place which is commonly described by saying that "the bottom fell out." This, being interpreted, means that the boom, which hitherto had raged furiously, came to a timely end.

The situation of Brandon is excellent in a commercial point of view. For miles around extends a splendid country for agricultural purposes, while a number of smaller villages must at present draw their supplies from it. Its position, too, is not altogether unpicturesque. It lies on the right-hand slope of the wide, steep-sided valley which the Assiniboine has cut out of the prairie, and which is often called the "Grand Valley." Below the town, the river threads its way through a dense growth of willows

which covers the level bottom of the valley. Elsewhere, on all sides of the town, extends a rolling, treeless prairie of excellent soil. Brandon, at first sight, strikes one as quite a decent sort of place, very largely on account of its excellent streets, which are far ahead of anything of the kind possessed by any other Manitoban town; and so they ought to be, considering the large supply of boulders, stones, and gravel of glacial origin found in the neighbourhood, and even under the very town itself. I understand that until last autumn the streets were as bad as those of any other town in the province, but that the municipality spent many thousands of dollars, keeping a large gang of men at work until late in November, with the result that Rosser Avenue is now as well macadamised as many a London road. Another thing in favour of Brandon is its compactness, in which it forms a great contrast to Portage-la-Prairie. On the whole, Brandon has the appearance of a brisk, busy little place, and no doubt will rise to be a thriving city in the future; but at present the ill effects of the boom are very apparent in the number of stores and shanties which are "for rent." The depression in business is, or has been, exceedingly severe, and I was told that there were very few of the business firms which had not undergone some species of "legal whitewashing." The number of hotels is quite astonishing: I believe they have accommodation for over 1,000 guests. How they all live is a marvel, and probably they all could not but that each is provided with a large billiard-room and a bar at which all spirituous liquors are freely sold. Most of the buildings are still of wood, but some few of stone or brick are now going up: one, of especially pretentious dimensions, was, I understood, intended for a Masonic Hall. The Ontarian element seems very strong, but still there is a good admixture of Englishmen. I found that nearly every one had speculative dealings in land—hotel-keepers, shopmen, clerks, even the barber—and wished either to buy or sell, though some worked their farms by hired labour. Although the boom is over, the number of agencies for the sale of town-lots struck me as very great, and the agencies of money-lending companies are also numerous. Things, on the whole, did not appear to be outrageously dear, though I found, from experience,

that the price of getting one's hair cut amounted to 35 cents, or 1s. 5½d. !*

Brandon has now two newspapers, the *Mail* and the *Sun* : the latter is Liberal, the former Conservative. Both come out in the evening, and, from an English point of view, are equally poor. A fashion of advertising one's goods on the "board-walks" seemed to be much in vogue. There are two bridges over the Assiniboine, at which toll is taken to the amount of 20 cents for a conveyance and 2 cents for a foot-passenger. There are generally a few Indian "tepees" on the outskirts of the city, and on one occasion I counted as many as twenty. Their inhabitants frequent the streets, where they try to scrape together a little of the "wherewithal" by selling the wild-ducks they shoot. Being dressed in ragged coats and trousers, they often cut a very sorry figure, but the mocassins they wear are sometimes nicely bead-worked. The enterprising Chinaman seems even to have reached Brandon, and is already at his favourite trade. I left some garments to be washed at the laundry of Mr. or Mrs. Wah Hep (I am obliged to confess complete ignorance as to which it was), who gave me a receipt with curious inscriptions thereon, which he (or she) subsequently informed me represented merely the number twenty-five. This surprised me, for I never imagined that, even in China, such an amount of learned-looking calligraphy (there were thirteen distinct strokes) was required to express so simple a matter. I thought from the first that the situation of the Post Office was most inconvenient, it being the last house but one on the western extremity of the town; and it was only just before leaving the place that I discovered the reason of this. It seems that the postmaster moved his office to its present situation about a year since, because the house was his own private property! The newly-erected public school is quite a large building for the district, and, like several others of the better class of buildings, is of white brick, made from clay dug about two miles to the north.

* I have since paid the sum of 50 cents (2s.) for the privilege of having this operation performed, and the sum of 25 cents (1s.) for getting my boots blacked! This, however, was among the Rocky Mountains.

Around Brandon may be found a small, though substantial, class of farmers, which is but slightly represented in any other part of the province. These men are persons who possess capital and thorough business capabilities, and work large farms by means of hired labour, somewhat on the English plan. Such are the Hon. J. W. Sifton, Charles Whitehead, J. A. Johnson, Alexander Fleming, and others. Their farms would average at least a square mile, or 640 acres, in extent, and are almost entirely under cultivation. Their owners, being men of capital, have a considerable advantage over the ordinary settler, who has seldom one-half of his land under crop, and often can barely afford the necessary implements to work even that much and to get his harvest in with. Whilst I was in Brandon, some of the above gentlemen were already thrashing their corn and delivering it in the city at the rate of hundreds of bushels a day, receiving the high price (over 80 cents per bushel for wheat) to which they were entitled from being the first in the market, whilst many of their neighbours had still their grain in the field. There is room in Manitoba for many more men of this class. I saw the farms of several of the gentlemen I have mentioned, and all exhibited good management. That of the Hon. Mr. Sifton, who regularly employs ten men and eight teams, was well fenced, and, in addition to several hundred acres of wheat, showed some fifty acres of flax. Another gentleman—an English capitalist, who must not be overlooked—is Mr. J. D. MacBurnie, who is universally respected in the neighbourhood. Though not one of the earliest arrivals, this gentleman seems to have been so struck with the prospects of the place as to acquire an estate of some 4,000 acres of farm property, which he has fenced off into farms of about 320 acres, on each of which he has built a house, erected the necessary farm-buildings, and dug a well. These farms are leased to tenants on the following terms: the landlord provides the farm and seed-corn, in return for which he receives one-half the crop, the tenant providing farm-stock and implements, and being thus in time enabled to purchase the farm. Mr. MacBurnie also holds a farm of nearly 1,000 acres on his own account.

CHAPTER X.

PORTAGE-LA-PRAIRIE AND THE PROVINCIAL AGRICULTURAL
EXHIBITION FOR 1883.

ON the 1st day of October I left Brandon and proceeded to Portage-la-Prairie in order to attend the Provincial Agricultural Exhibition, and to spend a short time in that neighbourhood. These exhibitions seem to be great institutions both in Canada and the United States, and are often attended by very large numbers of people. Being usually held after harvest, the results of the year's farming operations may be seen at them to great advantage. They often also go by the names of fall fairs, shows, or industrial exhibitions, the last title best indicating their nature and purpose. The Dominion has a show of its own, which is moved about from city to city, one year after another, the last having been at St. John's, Newfoundland. Then each province has its own fair, as well, I believe, as most counties; and generally each of the larger towns has one of its own. The young Province of Manitoba is by no means behind-hand with its shows, for, besides the principal one, nearly every town of any size has a show of its own, which is generally held in or about the month of September.

In 1882 the Manitoban Legislature passed "An Act concerning Agriculture and Statistics," which, among other things, provided for the formation of a Provincial Board of Agriculture, consisting of one representative from each electoral district. This Board makes the arrangements for holding the Provincial Exhibition, and under its auspices the affiliated societies, of which there are now over two dozen, each receiving an annual grant to augment its funds, hold smaller shows.

With the Provincial Exhibition, at which I spent two days, I must confess to a slight feeling of disappointment,—

not so much with what I saw (which I considered most creditable to the infant province) as with what I did not see,—the very extensive prize list having led me to expect a much larger show; whereas, in many of the sections, there was not a single entry. The railways had agreed to convey passengers for the return journey at the rate of a fare and one-third; the gates were to remain open a whole week; and the general regulations and arrangements set forth beforehand were on such an elaborate and extensive scale, that I was expecting something which would at least surpass an ordinary English county show. In this, however, I was somewhat disappointed,—perhaps unreasonably. With the arrangements which the officers had made, but little fault could be found: everything was done much after the fashion of an English agricultural show. The ground was rather inconveniently situated, being over a mile from the station; and, covering some 18 acres, was open to the rather unusual objection of being too large for its requirements, so that at the best it only looked half full, especially as the attendance, throughout the whole time it was open, was miserably small. Although the exhibition was advertised as the ninth annual one, it was in reality the first, the former ones having been held by a society which was not in reality provincial, having always held its shows at its head-quarters in Winnipeg. There was, therefore, every reason for marking the commencement of the present exhibition; and the streets of the town were gaily decorated when the Lieut.-Governor, accompanied by Mr. C. J. Brydges, President of the Board, and various members of the Government, opened the show with all due pomp and ceremony on the morning of the first day, the judges being afterwards set to work. The prizes offered (1st, 2nd, and 3rd, in nearly every case) numbered altogether about 1,570, and amounted to no less a sum than 8,000 dollars, while the list of entries numbered 2,053,—a very handsome total, all things considered. There were 41 distinct classes, each being again divided into “sections,” in which prizes were offered for horses, cattle, sheep, pigs, poultry, dogs, manufactures, cereals, roots (and all other field, garden, and dairy produce), fine arts, natural history collections, ladies’ work,

school work, and bands of music. In one respect the show, regarded only as an agricultural exhibition, was decidedly ahead of many English shows, which, inasmuch as they do not usually offer prizes for grain or roots, are *cattle shows* rather than *agricultural shows*. At the Portage, no class was better represented than the grain class.

Taken all round, the show was an excellent index to the industries of the province. The horses, sheep, cattle, and pigs, were highly creditable to such a juvenile country as Manitoba. In Class 30 (field roots) the exhibits formed a very striking series, and included potatoes, various sorts of turnips, mangold-wurtzel, beets, carrots, kohlrabi, pumpkins, &c., not one of which gave me reason to alter the opinion previously formed as to the great fertility of the soil. The potatoes struck me as being very superior to those usually found at shows in England, and of the disease there was not the least trace. The few sorts represented were those which seem to find very special favour throughout the province, namely, Early Rose, Early Ohio, Beauty of Hebron, and the Climax. Turnips and mangolds, although there were few of the latter shown, were at least as good as those usually exhibited in England, which is saying no little, seeing that these are among the most expensive crops a farmer here grows, whilst there they are grown of equal size by the very roughest and least expensive cultivation, their excellence being solely due to the inherent capabilities of the soil. Such garden products as carrots, sweet corn, onions, squashes, and cabbage, were well represented and uniformly of good quality; but fruits of all sorts were conspicuous only through their absence, except in the shape of bottled wild fruit for winter use. Pickles were in great force, also for use in the long winter when no green things are obtainable. An interesting feature was a collection of garden vegetables, &c., grown by the Sioux Indians on White Eagle's reserve.

But Class 27, containing the cereals, was, after all, the one which proved to me the most interesting. The samples of oats were fairly numerous and uniformly good, while the same might be said of barley and peas, though there were not many lots of either of these, both being, as yet, but little grown in the province. The samples of

wheat shown were both very numerous and very good—so much so, indeed, that the *Free Press* considered itself justified in remarking that, “The quality of wheat shown on this occasion was, no doubt, the best ever seen at an exhibition in this or any other country, and will, probably, never be excelled.” With the exception of winter wheat (fall wheat), of which, however, none was separately shown, all the prizes were for “Red Fyfe,” in accordance with the desire of the millers and the Board that no other sort should be grown in the province, as elsewhere explained. The first prize in this section of 100 dols. (or gold medal at option), was given by the Hudson’s Bay Company, and supplemented by a Diploma from the Board. In obtaining a sample of the best lot from the grower, Mr. J. R. Hartney, of Plum Creek, Souris District, I received the information that he arrived in Manitoba from Ontario about June, 1882, getting about 200 acres broken and backset during the fall. Between April 30 and May 8, he put in 140 acres of wheat with seed obtained from the Board. Cutting commenced on August 30, finishing on September 12, or just four months after sowing. The average yield of the 140 acres was 30 bushels 16 lb. per acre. It would be difficult to find any more convincing proof of the wheat-producing capabilities of Manitoba. There was also an exhibit of Red Fyfe wheat grown on the Bell Farm, which, on account of its purity, was being sold at the rate of 1 dol. 25 cents per bushel for seed.

Nearly every agricultural implement manufacturer doing business in the province was represented on the grounds, although nothing of great novelty was shown. Some of the machinery was in motion, especially the binders, many of which were binding sheaves by hand-power. Among these was one which attracted a good deal of attention on account of its being a “low down” manufactured in the province. It is intended to be used with two horses instead of three, as usual, and when manufactured for sale will weigh about 1,000 lb., or fully one-third lighter than any other as yet obtainable, excepting one now advertised by Messrs. Harris & Co.

My presence at the show also enabled me to learn a good deal of the neighbourhood around Portage-la-Prairie.

There are considerable complaints as to the length of the name of the town, and the adoption of some shorter designation is under consideration. If called Portage merely, it might be confused with Rat Portage and various other Portages, although in conversation it is usually spoken of as "the Portage," and in writing the abbreviation "P. la P." is frequent. The name is due to the fact that the old *voyageurs* made a "portage" there across the prairie from Lake Manitoba to the River Assiniboine.

The most curious feature about the town, and the one which will first strike a visitor, is the great amount of ground covered in proportion to the number of inhabitants. The population is, I believe, somewhat larger than that of Brandon, or about 5,000, against 500 in 1880. The length of the town, however, from end to end, is somewhere about three miles, and its breadth a mile and a half, although, I believe, the actual corporation boundaries are even larger; so that, were the whole built up and lived upon, the town could accommodate upwards of 100,000 persons. This great scattering of the inhabitants, and consequent inconvenience, is, of course, due to the Boom, in which town-lots were sold over the whole area, but only some of them were built upon, while the rest now lie unoccupied, and their owners, for the most part, are unknown. The town is divided into two parts,—the East End, where most of the business is transacted, and the West End, which is "backed" by the Hudson's Bay Company, on account of their store being there. The Portage has the appearance of being, and in fact is, a very much older place than Brandon. There has been a settlement of some sort on the spot for sixty or a hundred years past, and a few general stores have been doing business there for the last dozen years or so. Of course, the size of the place was increased many fold by the boom, which came in the autumn of 1881, and ran as high as anywhere; indeed, I am inclined to think it ran higher than in most other places; for I read in a newspaper that Portage had been nearly "boomed to death," and that "altogether it was a great misfortune to the Portage that it was not allowed to expand and grow in a natural manner." If one may judge by the number of closed stores and hotels, of which there are more than in Brandon, some of

them being the largest in the town, and from what I heard and saw as to the number of sheriff's sales, I should imagine that, at the present time, business must be labouring under a terrible depression, and that it must be difficult for even sound firms to keep on their legs at all. Probably this may be partly attributed to the fact that the Portage is only some sixty miles from the larger city of Winnipeg, so that many persons make their purchases there, while this would be less likely to be the case with Brandon. But in the future, Portage, being the centre of a grand agricultural district, and also the junction of two lines of railway, may look forward to times of prosperity. As in Winnipeg, the principal business street is called Main Street. The buildings, both private and commercial, struck me as being superior to those in Brandon, probably on account of the greater age of the town; and it is certainly a pleasanter and less dreary place to live in, on account of there being a few trees; indeed, between the river and the town there is an extremely dense bush. There are already several manufacturing establishments in the place, the largest being, perhaps, the mill and elevator of the Portage Milling Company, which are situated near the station, and are the largest of their kind in the province, except the Ogilvie Mill at Winnipeg.

One day a friend drove me out a few miles west of the city along the Sleugh Road to a place where there is an old dismantled fort of the Hudson's Bay Company,—a substantial square log building, surrounded with the remains of a high palisade,—now used as a stable. The view from this spot up the river, with its steep, densely-wooded banks, is rather a fine one. On the side of the road just opposite the fort is an old, disused Sioux burying-ground. There were a good many Indian "tepees" scattered about, as well as a number of their inhabitants, one of whom—an old lady—I remember particularly well, on account of her wearing a most gorgeous blanket, striped with all the colours of the rainbow. I was told that the farmer, on whose ground the burial-place is situated, had prohibited the Indians from making use of it on account of their performing the operation of burial so superficially, that the place had come to possess certain gastronomic attractions

for all the dogs of the neighbourhood. However, the Indians had chosen a fresh spot, half a mile or so further on, and the graves there—some twenty or so in number—presented an extremely tidy and well-kept appearance. In the centre was an erection of poles about 10 ft. high, set up like the poles of a “tepee,” evidently over the grave of a dead chief. Around it were the other graves, all of which were designed on the same plan, but of different materials. Each was covered with a construction resembling the roof of a house, about 7 ft. long and 2 ft. wide and high. Some of these were made of canvas sheeting stretched over a frame, and ornamented with pieces of ribbon, which fluttered in the wind, whilst others were very neatly made of split poles cleverly nailed together. At each end of this covering a small triangular hole had been left, probably for the use of the spirit of the “dear departed,” and at the foot of each grave was a stick supporting a linen bag, in which, at certain times of the year, tobacco is placed to satisfy the wants of the spirit of the dead man as it roams through the “happy hunting-grounds.”

About a hundred yards from the burial-ground, on an elevated spot close to the river-bank, was a small area enclosed with bushes, and having stuck up in the middle a taller bush, in the top of which were, for some undividable reason, a number of small twigs arranged together after the manner of a crow's-nest. The place thus marked was, as my friend told me, one of the old gambling-dens, in which the Indians were accustomed to give way to their insatiable desire for gambling. Many an Indian has, doubtless, entered possessed of several ponies, a rifle, and various household effects, and left, as my friend put it, “with a mortgage on his shirt.”

Another day I started in a drizzle for a walk round the High Bluff district lying a few miles to the east of the city. The district round the Portage is very different from that further to the west. Lying just between the lake and the river, the soil itself is much moister, while the rainfall is also heavier; so that the drought, which was this year felt so severely through all Western Manitoba, was not experienced round the Portage. Owing to this greater moisture, the grass and all the prairie plants grow much

more luxuriantly than on the comparatively dry and arid prairies round Brandon and Carberry, the country being consequently much better fitted for cattle-rearing, while, at the same time, it can grow magnificent crops of all kinds. Taken altogether, I consider the district round High Bluff and the Portage was the best part of Manitoba I saw. Nearly everything met with on my walk gave evidence of a comparatively old settlement of the district, as is but natural, considering that many of the farms I saw had been occupied for ten or twelve years. For several miles nearly all the land I passed through seemed to be under the plough, one field joining on to another, and separated only by a wire or snake-fence, the latter being largely used on account of the much greater abundance of timber. There were also fenced cattle-yards, which I do not remember to have seen further West. Quite a number of farmers kept sheep in small lots of ten or twelve, and these were invariably stated to do well. The wool does not seem to be much valued, as there are no mills at which the farmers' wives can get their carding done, as in Ontario; but one, on whom I called, more thrifty than the rest, said she did her own carding. On account, too, of the greater length of time the country has been settled, the roads are well defined and fenced, and generally a good deal beaten. The farmers' houses and farm-buildings also are more commodious and better built. I was surprised to observe quite a number of ruinous log shanties standing here and there beside the road, and, upon inquiry, learned that most of them had been built by half-breeds on their grants of land, which, on the advent of the white man, of whom they are by no means fond, they had sold to speculators and decamped westward. Firewood is easily obtainable from the dense bush, and the general aspect of the country is much pleasanter than that of the districts I saw further West.

CHAPTER XI.

THE CITY OF WINNIPEG.

WITH the exception of a few minutes spent in Winnipeg on the outward journey, I first saw the city when I entered it on the evening of the 18th of October last; and a more miserable introduction I have seldom had to any place. It was dark, with a bitterly cold wind, accompanied by snow and sleet. The only thing upon which it was possible to make observations that night was the mud in the streets: this I could not have overlooked had I wanted. Much has been written of the bad roads in Manitoba, and I had seen something of muddy streets in the Portage and elsewhere. But the term "muddy" conveys no idea of the streets of Winnipeg: mire or slough alone correctly describes their condition, a true conception of which can only enter the mind of man through the eye, not through the ear. Main-street, the principal thoroughfare, 130 feet wide, and over a mile in length, instead of being the best, as might be expected, is the very worst, in consequence of the heavy traffic. The whole road, as I saw it, lined with shops, thronged by foot-passengers and brilliantly lighted by the electric-light, was literally *inches* deep in soft black mud, through which carts and wagons slowly toiled, many of them having the spaces between the spokes of the wheels almost filled by masses of mud. The tram-cars ran down the centre of the street in a little river of slush. The worst of country lanes in Essex in a mild, wet winter are hardly so bad. Top-boots were in high fashion, being worn, indeed, almost as a necessity, though the board-walks were fairly clean and men were at work with shovels—brooms were nowhere—making crossings here and there. Winnipeggers seem so accustomed to this state of things that they scarcely notice

it ; but new-comers do, and often express no little astonishment.*

Nevertheless, all the circumstances being considered, Winnipeg is truly a fine city, and certainly the only place in Manitoba deserving that designation,—Brandon and the Portage being mere country villages when compared with it. They, and to a greater or less extent the whole country, are supplied from Winnipeg which is the metropolis, not of the province only, but of the whole North-West. As a settlement, Winnipeg is much older than the other places referred to, but its progress has, nevertheless, been much more wonderful than theirs. The city is not unpicturesquely situated on the level ground close to the junction of the Assiniboine, with the great Red River of the North.† Its nucleus, Fort Garry, which gave the name Garry to the little settlement before it was finally dubbed Winnipeg, has for nearly 100 years been the head-quarters, alike of civilisation and of the Hudson's Bay Company, in the North-west. For a good deal of the following information I am indebted to the Winnipeg City Directory, a comprehensive and well-printed volume of over 500 pages. It seems that about the year 1819, or about the time when Lord Selkirk was attempting to carry out his scheme of colonisation, a certain Mr. A. McDermot

* Rumours without number, to the effect that the paving of Main-street was just about to commence, have been circulated since the foregoing was written ; but, in spite of the falsity of most of these, it is now a fact that this much-needed work has been actually begun.

† Fine as the situation may be in most respects, there is one unpleasant fact connected with it which should not be altogether overlooked. It is, I believe, correct that no less than seven times within the last 110 years the present site of the city has been more or less seriously flooded in consequence of overflows of the Red River. In 1776, 1790, 1809, 1826, and 1852 the whole of the surrounding country, including the highest part of the city, was covered by several feet of water ; in 1861 by about 2½ ft. ; in 1882, the lower, though not the higher parts were submerged. It should be noted that the size of the floods seems to be on the decrease. In 1861 it was less than in previous years, and in 1882 still less. This may perhaps be attributed to an enlargement of the channel of the Red River. Tradition very confidently states that the width of the river at Winnipeg has very greatly increased since the advent of the Selkirk settlers, seventy years ago. It seems, therefore, as if we might look for a still greater diminution in the extent of the floods in future.

opened a small general store ; but, excepting that of the Hudson's Bay Company, this was the only business establishment until 1848, when Mr. A. G. Bannatyne opened another, which still exists as the large wholesale house of Bannatyne & Co. In 1862 about a dozen houses of business were at work ; and at the end of 1870, after the suppression of the rebellion, the inhabitants of the village numbered just 215 souls ; but, when once the unsettled times were over, the population began rapidly to increase, for in 1874 we find the place being incorporated with a population of 3,700, which had risen to 5,000 in the following year. "At the present time (April, 1883) the manufacturing institutions of the city number over 170, and give employment to over 3,000 persons, male and female ; there are three saw-mills with an annual capacity of over thirty million feet cut ; three flour-mills are in operation, whose daily capacity averages over 1,200 barrels of flour ; three foundries, with machine-shops in connexion, give employment to over 250 hands ; two steam furniture-factories are in full blast ; and over 60 institutions in the city employ steam-power in connexion with their business. . . . With the opening of this spring the wholesale houses of every description number over 80. . . . The financial institutions of Winnipeg comprise branches from eight of the leading chartered banks of Canada, which are supplemented by seven private banks, and the agencies of eleven loan and investment companies. . . . Over 300 mercantile concerns are now in operation. . . . No city in the universe of the same size possesses so many commodious homes for the travelling public. . . . Fifteen houses in the city are capable of accommodating over 100 guests, and five can house comfortably over 150." This is a picture of business activity which could be equalled by few, if any, towns of equal size and age in the world. It is said that between January 1st and July 30th, 1883, no less a sum than 1,710,850 dollars was expended over building in the city of Winnipeg.

The number of inhabitants at the present time seems a little uncertain ; but I was told that at the last census, whenever that was, it was as high as 25,000, and that now it probably amounts to nearer 30,000. It seems almost

like an insult to pat Winnipeg on the back, and commend it, as many people do, for having made such good use of its time: the city has now arrived at a state of maturity when it no longer needs such patronage. As with many other young towns, however, the larger portion of its business is confined to a single street, which is known as Main-street. This thoroughfare, from its great width and length, would do credit to a much larger place, but the odd and incongruous assortment of the buildings which line its sides is most ludicrous. Here a small frame-house, scarcely deserving the name of shanty; next a substantial block of well-filled stores; then a small wooden hotel, or eating-house; next a huge, many-storied warehouse, such as that of the Hudson's Bay Company; all tending to show that, whether by choice or necessity, Winnipeggers are believers in the trite saying that "variety is pleasing." The outskirts of the town swarm with numbers of minute tents and shanties inhabited by the lower classes of the population. The modern name is, of course, borrowed from the lake or river of the same denomination, and is said to be derived from two Indian words, *ouie nepique*, signifying "dirty water." In Winnipeg, one is surrounded by signs of comfort and civilisation to a much greater extent than can be found elsewhere in the province; and to me, after an exile of three months in the West, it seemed, indeed, as if I must have got a long way towards home when I reached the capital and saw the wide streets, brightly lighted by electricity, with tram-cars running down the middle, the many churches, the fine bridges which span the rivers, and the numerous stores crammed with all kinds of goods, among which I remember noticing Christy's hats, Keen's mustard, and Huntley & Palmer's biscuits. Of all the buildings which adorn Main-street (or otherwise), that constructed of red brick, which serves as stores for the Hudson's Bay Company, is certainly the finest; and the variety of goods with which its windows are filled are of a class one would expect to find in Regent-street or Piccadilly, rather than in what many people would call the "wilds of Manitoba." Had my observations been a little less close, I should have given the first place to a large pile of buildings opposite that just mentioned, and known as the "Cauchon Block,"

after a local M.P. At first I took it for stone, but was not long in discovering that it was in reality a *wooden* building, covered with sheets of *tin*, cunningly sanded and painted over! This trumpery style of construction is rather in vogue with our neighbours across the Atlantic, because by its aid a very pretentious house can be run up very cheaply. The city contains many good buildings of white brick, made in the neighbourhood. The various religious sects are possessed of surprisingly large churches, and from having spent a Sunday in Winnipeg I can testify that it is a very sabbatarian place: business of every kind is totally suspended, and the street-cars stop running. Two fine iron bridges span the Red River, and one the Assiniboine. Of course, the telephone is the means by which the Winnipeggers are accustomed to communicate with one another. To deprive the town (or, for the matter of that, any other American town of equal size), of its telephones, would seem to its inhabitants almost as great a catastrophe as the annihilation of the penny post would seem in London. Every kind of business is transacted through the telephone. I had once the honour of being introduced by one business firm to another through it. At first, the ignorance of the people as to their own city surprised me; but, on considering its newness, and their own recent arrival in it, I no longer found cause for wonder in the fact that, whether I asked the whereabouts of any particular street, a particular store, or the name of the parson belonging to such and such a church, no one had the least idea. I actually had to inquire of seven or eight persons before I could learn the whereabouts of the Government offices; while I positively found one shop where the folks inside did not even know the number of their own house, though it was up over the door.*

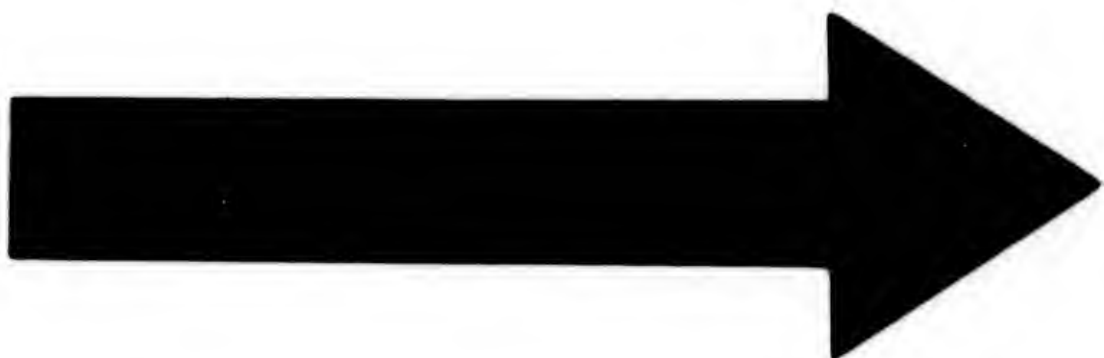
From all that I could learn, business is not so dull in Winnipeg as it is in Brandon and the Portage. It has been

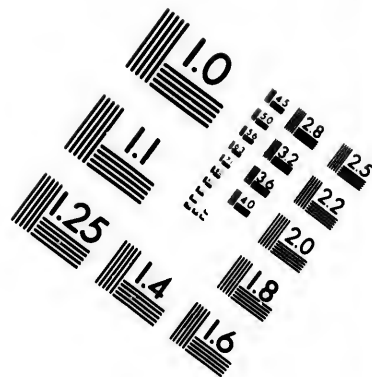
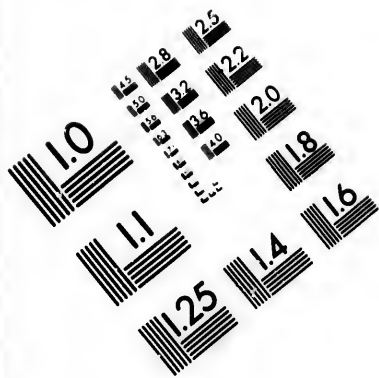
* This extraordinary ignorance of everything "more than a yard away" (as one writer expresses it), is far more noticeable as one gets into the more primitive parts of the States, especially the West and South. People tell one such things as the time of starting of a train or the distance to such and such a place, apparently without in the least caring whether their information is right or wrong.

bad, thanks to the boom, but is now said to be improving; though, from the number of sheriffs' sales, sales of bankrupts' stocks, and closing businesses, I should imagine times are, as yet, not very good. In the due course of things, however, recovery will be assured; and trade will, in time, be placed on a firmer commercial footing. One evening I attended several sales which I chanced to see going on; and, from the way articles of food and clothing were being disposed of at far below what I knew must be their cost prices,—the auctioneer and sellers not seeming to care, the buyers being evidently accustomed to purchase in that way,—I could easily understand that even sound business men must find it very difficult to keep on their legs.

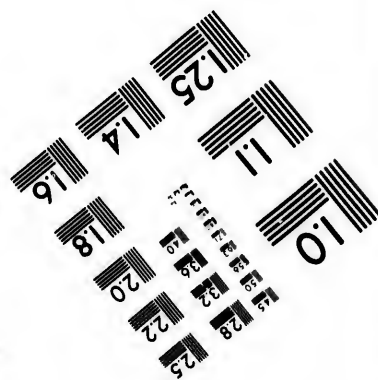
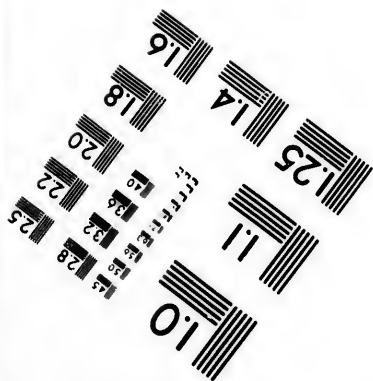
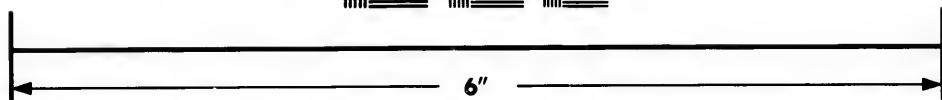
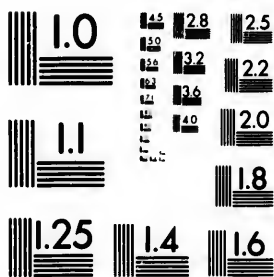
In Main-street (or, as it seems the custom all over Canada to say, "On Main"), I was both pleased and surprised to discover the rooms of the Manitoba Scientific and Historical Society, a flourishing institution, with some 200 members who pay a subscription of 4 dols. per annum. It is the nucleus of what may, in the future, prove a most useful scientific body, and has already (being now about three years old) done some good work in the way of publishing, opening grave-mounds, and establishing a Library and Museum.

Whilst in Winnipeg, I had the privilege of going over Ogilvie's mill, which I understood to be the largest in the Dominion, and to have cost, together with the elevator adjoining, upwards of 300,000 dols. The mill is a huge white-brick structure of five stories, and altogether is over 100 feet in height. The motive power is given by an engine having a fly-wheel weighing 22 tons and carrying a belt 24 inches in width. The internal arrangements of the mill are as near an approach to perfection as is possible at the present day, all the machinery being of the latest and most improved kind. The flour-making appliances consist of two pairs of the old-fashioned stones (probably for some special purpose), and 36 double pairs of porcelain and chilled-iron rollers, through several of which the flour has to pass before it is perfected. On other floors is the machinery by which the flour is dressed. It is difficult to describe the perfection of the plan on which the whole mill is contrived; but it will be better understood when I say





**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

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that, though it is capable of turning out hundreds of sacks of flour per day, only ten mill-hands proper, excluding engineers, are employed. The mill started running on full time on October 3 last, and now works both night and day. The elevator was not fully completed at the time of my visit, but was expected to be in working order before winter, when it was intended to fill it, as a reservoir from which supplies might be drawn during the spring and summer months. It is fitted with machinery capable of unloading, weighing, and storing the contents of a railway-car (500 bushels) in twenty minutes. It has six huge bins, each about 15 feet square, of great depth, and capable together of containing 140,000 bushels of wheat.

One day I walked down Main-street to the spot where it crosses the Assiniboine, close to its junction with the Red River. The object of my visit was to see Fort Garry, which formerly stood there. But, what was my surprise, when I found that the building had been almost completely demolished! It seems a thousand pities that this well-known—even historical—old building should not have been spared; but I understand that part of it projected so inconveniently into the street that it was difficult to avoid the act of Vandalism. Built about the year 1829, an interest had collected round the old fort, on account of the visits paid to it by almost every traveller who has written of his journeyings in the North-west. This interest culminated in its connexion with the Red River Rebellion; and, although it was, of course, no longer of any actual use to the Hudson's Bay Company, still it seems a pity that the old place was not allowed to stand. At the time of my visit the substantial old stone palisade had quite disappeared, although many of the antique beam-and-plaster buildings, which served as stores or residences, still stood, and much resembled many of the old farm-houses, built of the same materials, that are so common in the Eastern Counties. A few small guns and rotting gun-carriages were scattered about; and foundations were visible in several directions. A tram-car was standing on the very spot where, I was informed, Scott was murdered by order of the infamous Riel on March 4, 1870; and, just on the opposite side of the street, I was shown the prison—a small

timber building, with barred windows, and now used as a painter's warehouse—in which Dr. Schultz was confined. It seems extraordinary, looking at the place now, with a busy city of 30,000 inhabitants close at hand, to think that such scenes as those of the pigmy Red River Rebellion could have taken place there only such a short time as thirteen years ago. It is quite unnecessary again to set forth in detail all the particulars connected with this rebellion. Enough has already been written upon the subject to commemorate some much more important historical event. The causes which led to the rebellion were, briefly, these:—After having held undisputed sway over their vast and silent territories for upwards of two centuries, “the Governor and Company of Adventurers of England trading into Hudson's Bay” began to find themselves the object of a good deal of complaint from various quarters. It was urged against the Company that it had, in view of its own private interests, persistently opposed everything likely to lead to the opening up of the country over which it ruled; that it had endeavoured to conceal from the outside world the true value of its vast territories; and that it had failed adequately to punish certain offences that had been committed under its rule. An inquiry was accordingly held in London, as a result of which the arrangement was made that the Company should surrender its territorial rights to the Government of Canada, receiving in return a large money-compensation and extensive grants of land. This was in the year 1869. At that time it was estimated there were some 15,000 half-breeds and others, many being old servants of the Company, settled in the districts around the Red River. These knew no other law or authority than that of the Company, and were not unnaturally alarmed when they heard that a new power was about to enter in and rule over them. Their fears were most unnecessarily increased by the very hasty and objectionable means taken by the parties sent up from Ottawa to form the new government. The native population accordingly rose in revolt; the road to the fort from the United States boundary was barricaded; the new Governor was informed that he was not to advance; and, finally, the insurgents, under Louis Riel, established themselves in the fort, where

they remained for nine months, until, in the year following (1870), they were dislodged by Colonel (now General Lord) Wolseley. These are but the bare outlines of the whole affair. The half-breeds were undoubtedly in the right to a large extent; and, although the matter never came to be one of fighting, and the only blood spilled was that of the unfortunate Scott, the half-breeds obtained an acknowledgment of what they considered their rights. Titles to their land were promised to all those found in peaceable possession, while a grant of something like a million and a half acres of land was made to the half-breeds and their children for their support, a certain number of acres being given to each. These half-breed grants have now, however, mostly passed out of the hands of the original holders, who have moved away further to the North-west, not liking the increasing numbers of the white men.

Having seen something of the larger towns of the province, I started from Brandon one morning late in October, upon an expedition *via* Rapid City, the Oak River district, Shoal Lake, and Birtle, to Fort Ellice, and thence southward to Elkhorn station, close to the western boundary of Manitoba. Whilst upon this tour I covered some hundred and fifty miles of very interesting country, but lack of space compels me to do no more than briefly notice two of the most picturesque scenes I saw. The first was Shoal Lake, which is certainly a very pretty spot, and would be accounted so in many a country more generally picturesque than Manitoba. The conditions, too, under which I saw it, on a clear, frosty morning in October, with a keen air and a bright blue sky overhead, increased its attractiveness not a little. Unlike all other Manitoban lakes which I have seen,—even those close adjoining it,—the waters of Shoal Lake are perfectly clear and entirely free from weeds; the well-defined beach is of a fine sand and shingle, such as any fashionable English watering-place might envy; the shores are strewn with many a great rounded granite boulder, and fringed with numerous clumps of poplar. As I sat on one of these great stones, admiring a scene as calm and tranquil as any I had ever viewed, a tiny sand-piper every little while would dart out from the beach with a shrill whistle; a fish

would occasionally ripple the surface, or a musk-rat swim leisurely across in front of me, or the ducks, far out on the shining water, would rattle their wings with a splash and a quack; while, close at hand, within easy gunshot, three dapper little grebes kept constantly bobbing up and down, the snow-white gulls sailed smoothly overhead, and the frozen froth on the water's edge crackled loudly as it thawed. The other scene to be spoken of was of a different kind. Early one afternoon I came rather suddenly on the left bank of the Assiniboine, just opposite the place on the right bank where Fort Ellice is perched. The view one obtains from the side of the great gorge which, in the course of ages,—and those ages geologically short ones too,—the river has cut for itself out of the level country, is certainly a striking one. The valley itself is just one mile and a third in width, and 250 feet in depth, having steep sides, densely covered with trees and brushwood. It must not, however, be supposed that the river occupies the whole of the bottom of this valley. The bottom is itself something under a mile wide, formed of alluvium, perfectly flat and covered with a dense growth of willow bushes, among which the river meanders from one side to the other with such an astonishingly tortuous course, often turning almost back upon itself, that, whilst standing on the top of the bank, I was really unable properly to fit together the numerous twists and bends seen among the willows below me and on either hand. Lesser tributary creeks, also deep, and with steep wooded slopes, run in on both sides of the main valley. Arrived at the ferry I found the scow under repairs, having been sunk a few days before, but managed, at last, to get across in a small boat, the river being quite narrow. After scrambling to the top of the steep river-bank I found myself at the well-known trading station of the Hudson's Bay Company, which has so often served as a resting-place for weary travellers through the "Great Lone Land." The fort, of which Professor Hind gives an illustration, is a collection of unpretentious, low, wooden buildings, consisting of a store (which also serves as a post-office) an hotel, and sundry dwellings, the whole being surrounded by a construction which is doubtless meant to be called a "palisade," but which would hardly repel an attack of

babies, much less that of an Indian war-party. Fortunately, however, there is now no longer any need to act upon the defensive. There were, as usual, a few "tepees" of friendly and peaceable Indians on an open piece of ground close to the fort, and within a few miles there is a considerable scattering of settlers.



CHAPTER XII.

DISCONTENT AMONG SETTLERS.

It would not be accounted honesty on my part were I to pass over, without notice, the fact that in Manitoba there exists, among settlers and others, a good deal of discontent and ill-feeling against certain of the powers that be; but I shall endeavour merely to enumerate the chief causes of that discontent, and shall abstain, as much as possible, from criticism thereon, in the belief that an outsider is very likely to take erroneous views upon such matters.

Not a little hardship undoubtedly exists among men who have attempted to become settlers in the North-west when provided with insufficient capital. Indeed, it is certain that among the settlers a considerable number have heavy mortgages on their farms. It is but natural that persons so situated should prefer to blame others rather than themselves. It is, also, quite certain that a *very large portion* of the outcry is due to political bias.

Not a few complaints are made in some quarters against the actions of the Railway Syndicate, whose charges are sometimes called exorbitant; but I have already brought forward facts that are utterly opposed to this; and I may here state my belief that, on the whole, the Company is a straightforward concern, honestly endeavouring to open up the great country which has been intrusted to its care. But the chief charge usually made against the Syndicate is that it has failed to supply sufficient branch lines. It is, however, only natural that the Syndicate should wish to concentrate all its energies upon its main line—indeed, the

provisions of its charter, and the conditions which led to the granting of that charter, leave but little alternative. Looked at in the light of the requirements of the whole of the Dominion, it is in every way desirable that the main line should be completed first; but, looked at in the narrower light of the requirements of Manitoba alone, it is clearly desirable to have the branches constructed at once.

With the Provincial Government I did not hear much fault found. It seems not to possess much power, the management of the lands, timber, and minerals, and the granting of railway charters over a large portion of the province being still in the hands of the Dominion Government, against which most of the outcry has been raised. A "North-west Farmers' Union," for the redress of grievances (real or supposed), was formed in Brandon in November last, but it does not seem to be an organisation of any real importance. The secession of the province from the Dominion was urged by some of its members.

I will next endeavour to enumerate (without necessarily endorsing) some of the things most complained of. It is held that the policy of Protection, instituted by the present Government, tells very severely on a province like Manitoba, which has no manufactures of her own to be benefited. It is further urged that, while all the other provinces have control over their own lands, timber, and minerals, those of Manitoba are managed by officials 1,500 miles away at Ottawa, whose land-policy the agitators state to have been a bungle from beginning to end. Complaints were heard from some quarters on account of two orders which, for some reason, the Government thought proper to make: one withdrawing from settlement all the Government lands south of the railway, and the other withdrawing from settlement a belt one mile wide along each side of the line. These have now, however, been withdrawn. The order which provides that, when a homestead has once been thrown up, it shall not be open for homesteading again, has also caused some complaints; but Mr. A. H. Whitcher, Dominion land agent at Winnipeg, kindly explained to me that the reason for this is to prevent one man fraudulently attempting to get possession of another man's homestead. The recent appointment of homestead inspectors is a most

satisfactory arrangement. These men visit the various homesteaders on their homesteads at uncertain intervals, in order to see that they fulfil the conditions by not remaining off their land more than six months at a time. Another matter which has caused complaint is, that the rights of "squatters" are said to have been ignored, in the face of assurances that they should be respected. A squatter is a settler who goes ahead of the surveyors, and locates on land which is not really open for homesteading; but, obviously, he has as much right to be regarded as a homesteader. The right of homesteading a second time, after the entry for the first has been perfected, is one which has only lately been conceded.

Land speculation, of one sort or another, has undoubtedly been, and is, the curse of Manitoba. If it has not been fostered, it has, at least, been in no way discouraged by the action of the Government and the Railway Syndicate. Speculators may, or may not, benefit themselves, as the case turns out; but it is certain that, in a country like Manitoba, they do not benefit the community; and the thing has been so overdone that but few can have benefited even themselves. So many speculators now hold land in Manitoba that a large area is, by this means, kept out of cultivation, and settlers are driven away from the railway and far apart from one another. This should have been checked by making residence and cultivation, in most cases at least, the necessary companion of ownership; but the damage has now been largely done. As a result, there is much talk of settlers who have left the province, crossed the boundary, and entered the Territory of Dakota. This has certainly taken place to some extent; but I believe the amount has been enormously exaggerated by political partisanship.

But, after all, the fact does not need much pointing out, that all the disadvantages that have been just alluded to cannot be attributed to any shortcomings of the country. They are matters which can easily be remedied by Government.

CHAPTER XIII.

SPORT AND NATURAL HISTORY IN MANITOBA.

To those persons to whom the shooting of winged game presents itself as the consummation of existence, Manitoba holds out considerable inducements. The country will disappoint any one going there with the idea of finding a large variety of game. To find this it is now necessary to go far beyond the bounds of civilisation, into the wild, thinly-peopled and thickly-wooded regions further to the north. Even there much disappointment is likely to be met with, for the greed of gain has long ago sadly lessened the numbers of the larger game-animals, such as the moose, elk, deer, bear, and buffalo,—even the last being now practically exterminated from the face of the prairies.*

The country, however, still affords an abundance of winged game, and, consequently, of sport. But the idea of sport existing throughout America is radically different from that existing here; and Englishmen going out must be prepared to give up many cherished notions as to private property in game, and as to the proper ways of killing it. Here, where land is in comparatively few hands, and game a matter of expense to rear, it is but natural it should be fondly cherished. But in America none of these conditions exist. Land is in plenty, and game likewise, without ever having been preserved; and the average Canadian, for instance, has not the least idea of going out to shoot it (or, as he says, "for a hunt") for any purpose or object whatsoever, except the pot. Hence one universally-recognised

* Quite a trade in old buffalo-bones is now beginning to grow up both along the Canadian and Northern Pacific Railways. They are gathered up and sent east to be used in making artificial manure. Forty-eight tons of bones, valued at 312 dols., recently passed through Winnipeg, from Regina to St. Paul.

English law of sport is abolished; and the Manitoban sportsman is unable to see any reason why he should shoot prairie chickens by any other means than getting as near as possible and literally "potting" them as they sit. To make his game-birds rise, as a matter of course, would appear to him a proceeding as insane as it would be for him to attempt to shoot them when once they were upon the wing. The shot regularly used to kill wild-ducks and prairie chickens (birds about the size of grouse) is preposterously large for such a purpose. Outrageous as it may seem, shot smaller than No. 1 or No. 2 is very seldom used, and is, indeed, actually difficult to purchase. It is perfectly useless to expostulate on the absurdity of using such shot: it is the custom of the country, and therefore no other would kill! The guns in use among settlers are by no means of the most recent pattern: some of them are really most curious pieces of ordnance. Nearly every settler, however, owns a gun of some sort, and it is the custom to carry them a good deal. Emigrants desiring to take out with them a good gun cannot do better than communicate with Messrs. Bland & Sons, of the Strand, W.C., and Whitall Street, Birmingham, who are first-class makers. During the season, ducks and "chickens," as they are called, form a very considerable article of diet, on account of the cheapness and ease with which they are procured.

The sportsman in the North-West is not hampered by any such vexatious restrictions as his brother in England. He has not even to take out a licence of any kind; and, as a matter of fact, game is public property, although, I believe, it is not legally so: any way, one man shooting over another's land is seldom interfered with. A man may take his gun and proceed almost whithersoever he chooses, shooting game as he goes. He may cross the great wastes of sand where the prairie chicken abounds; he may penetrate the dense swamps where the spruce partridge lives; or he may wander on and on for miles, bagging the ducks which blacken a thousand lakes, and nobody questions his perfect right to do so. Such liberty as this, so widely different from anything usually obtainable in England, except by persons in comfortable circumstances, is a great temptation, which has caused many an English

settler to neglect his farm, and to follow the abundant game, till the Canadians, who care little or nothing for sport, have said in ridicule, "These people are no good to farm: they only come for the sport."

I do not wish it to be thought, however, that there are no game-laws in force in the province of Manitoba, for there are; and it is only reasonable that there should be. Game of every sort, no matter how abundant, quickly disappears when persecuted in the breeding-season, and a "close-time" is, therefore, desirable in every country. I have before me a copy of the Game Act passed by the Provincial Legislature in the beginning of the year 1883. It provides that none of the following animals may be shot at, trapped, hunted, taken, or killed, during the following close seasons:—

(a) Deer, elk, moose, reindeer (cariboo), their fawns, or hares, from January 1 to October 1.

(b) Grouse, prairie chicken or partridge, from January 1 to September 1.

(c) Woodcock, plover, or snipe, from March 15 to August 1.

(d) Any kind of wild-duck, widgeon, teal, or wild goose (except the species known as "wavey"), from May 1 to September 1.

(e) Otter, fisher, beaver, musk rat, or sable, from May 1 to October 1.

(f) Mink or marten, from April 15 to November 1.

Several other provisions make it illegal to have any of the above in possession during the close-time; to use any punt-guns or batteries; or to take any of the animals mentioned above, except those in sections e and f, by traps, nets, snares, gins, "or other contrivances." It is further provided that no person shall shoot, kill, injure, take, buy, sell, or have in possession, at any time, any bird except eagles, falcons, hawks, jays, crows, or ravens, or their eggs, nests or young, though the Minister of Agriculture may grant permission for them to be killed for scientific purposes. The fine for breaking the Act is fixed at not less than 10 dols. or more than 50 dols., the whole of which is paid to the prosecutor. It is intended to appoint game guardians in every district to see that the Act is carried out.

A settler will find but few opportunities of pursuing the larger game mentioned above. Elk and moose are now very scarce in Manitoba, and those that still survive are exceedingly wary.* Deer are considerably more numerous,

* My friend, Mr. Seton, has lately (October, 1884), however, succeeded in killing a fine moose in the woods on the sand-hills south of Carberry, after a hunt extending over many days.

but also very wary, and I never saw one, though I not unfrequently saw their tracks when crossing swamps, sand-hills, and other wild places. To hunt these animals with any degree of success requires much skill and an intimate knowledge of their habits. Bears' tracks, too, were occasionally seen; and, on the whole, these animals are far more likely than any of the others just mentioned to give the sportsman, ardent for an encounter with big game, a chance of distinguishing himself. They are, I believe, far from rare in some parts of the province; but, being of a shy and retiring nature, there is positively no danger to be apprehended from them, unless first attacked and wounded, when, like all their kind, they turn to bay and become really dangerous. As a rule, the black bear keeps to some snug and undisturbed retreat in the woods, and is seldom met with unless gone in search of, though I heard of one curious exception to this. During the time I was in Brandon a great black bear was actually killed by some young English settlers out on the open prairie, miles away from any trees, and only about three miles from the town.

The picturesque "hunting scenes" inserted in the pamphlets sent out by various agencies in London, though not altogether imaginative, nevertheless, do not represent scenes of by any means every-day occurrence. Large game may abound in some places, but those places are far removed from the abodes of man; and the statement that "large game abounds in great profusion in many places west and north-west of Winnipeg," though perfectly correct, is *equally true of London.*

But there is in the country, as already mentioned, a very considerable abundance of winged game. Of this the prairie chicken (*Pedivcetes phasianellus*) is the most important bird. It is not the prairie hen or pinnated grouse (*Tetrao cupido*), so common in the United States, and which, of late years, has been so largely imported as dead game into this country, but it is the very acme of perfection as a game-bird. It is common, a good breeder (often laying 15 or 16 eggs at a time), is widely distributed, its flavour is more than excellent, its weight is greater than that of a red grouse, and, although a strong flyer, it is generally

possible to get within shot before a covey rises, even at the end of the season, when they begin to get wild.

Mr. Seton has been carefully gathering information as to the natural history of these birds, and I am indebted to him for much of what follows. Their dancing and strutting in large parties on any slight elevation, when pairing in the spring, is a most laughable performance. When young, the birds are largely insectivorous, and I have often turned out of the crop of a single bird several scores of the little grasshoppers so common on the prairies. Succulent, green garden vegetables are also eaten with great relish, and the hips of the prairie rose often serve them as a meal. In places where no grit is obtainable for the birds to swallow, as on the Big Plain, the hard seeds of this shrub, roasted and dried by the prairie fires, serve instead to grind the food in their gizzards. The prairie chicken is, in many ways, especially well fitted to survive the inclement winter of the region it inhabits. Hardy it is, of course, in the extreme. During the autumn a row of short stiff bristles grows along both sides of each toe: these act as snowshoes, and enable the bird the easier to walk on the fine powdery surface of the snow. During the winter the chickens retire to the bluffs, where they roost freely in the trees, and, curiously enough, when the cold is at its greatest, dive down into the soft snow, and remain, warmly hidden for the night, beneath its surface, though, when in this situation, many fall a prey to the foxes and wolves. Whilst I was in Winnipeg, chickens were selling at 80 cents per pair. They are not, however, so numerous but that there will be considerable likelihood of their extermination after the country becomes more thickly settled, if considerably greater attention be not paid to the close season than it at present receives. For several miles around the town of Brandon, where a good deal of shooting goes on, I saw no chickens.

Among the islands and estuaries, as well as on the level, treeless, grassy region which abuts upon the Polar Sea in both the Old and the New Worlds (called "tundra" in the former case and often "barrens" in the latter) countless thousands of wild fowl have their summer home and rear their young in peace. In spring time, soon after

the snows have melted, a vast army of Arctic migrants crowds northwards, stopping a while to feed here and there in the countries over which it passes. Just before winter sets in, this great army returns, having its numbers augmented by the yearling birds, and not unfrequently proceeding along some route quite different from that it took in the spring, but often following the course of some great river. This huge army of migrating wild fowl passes over Manitoba twice annually: and, as the majority of those flocks which I observed last autumn seemed to be taking a south-westerly course, it seems probable that, commencing at the Great Bear Lake in the far north-west, they follow the remarkable chain of lakes, extending in a straight line south-east to Lake Winnipeg, after which they strike across the narrow watershed between the valley of the Red River and that of the Mississippi, and continue their way to the southward along the latter. On the 11th and 12th of October, when near Rapid City, I saw thousands of ducks on the lakes close to which the trail passed. But the number I saw on this occasion was as nothing compared with the number to be seen a little earlier in some other places. I often heard the expression that "the ducks made the water black" during the autumn migration.

A good many mallard and blue-bills breed in the lakes, and these, of course, afford shooting long before their brethren arrive from the north. One day I saw Mr. Seton kill three by a single shot through some rushes, when he only knew that he was aiming at one. Not less than a dozen species of duck may be obtained on migration; and the Indians derive a considerable revenue from shooting them for sale in the towns.*

According to accounts, many of the lakes and rivers swarm with fish; but, being no fisherman, I can say nothing from personal experience, except that an hour's fishing in the Assiniboine yielded absolutely nothing. Frozen white fish, taken by the Indians in Lake Manitoba, are sold during winter in some of the towns at an excessively cheap rate.

* My observations upon the birds of Manitoba will be found in an article in the *Zoologist* for April, 1885 (vol. ix., p. 121).

More than one species of hare exists in Manitoba; but these animals, as a rule, do not frequent the open prairie. The prairie hare (*Lepus campestris*) is a large animal, but I only saw one specimen—at Beaver Creek, near Fort Ellice. Another species which I have shot is the *Lepus americanus*, which is very abundant some years in the bluffs, but in other years scarcely one can be seen.

Throughout the province, wherever the prairie is interspersed with numerous ponds, the musk rat is an exceedingly abundant animal, and I have sometimes seen as many as seven or eight of their "houses" in a single lakelet. The musk rat is allied to the beaver and to our own water-vole or "rat," but is much larger than the latter. His house is a construction of no mean size, as it often attains a height of 4 ft. or 5 ft., and, being built of reeds and flags, looks for all the world like a great haycock floating on the surface of the water. The owner and architect does not seem to be at all shy, and may often be seen swimming leisurely round his dwelling. His soft, thick fur is largely exported, and used for lining mantles, &c., hundreds of thousands of the animals being sometimes killed in a single year. His flesh also, at certain times of the year, furnishes the Indians with food. To secure the beast, they take a long, spiked iron rod, and run it down through the roof of his house, thus impaling the tenant,—a most burglarious proceeding surely!

In winter-time, the hungry wolves and foxes frequently come round the houses, but are always very careful to keep out of shot. The prairie wolf is a shy, miserable brute, from which not the slightest personal danger need be feared, unless, perhaps, when hunger has brought him to the last stage of desperation. Possibly it may, at times, be different with the larger timber wolf, but this animal is scarce.

I met an Indian one day, whilst upon a trail near Fort Ellice, mounted on a white native pony, and wearing a bright scarlet blanket. We gravely saluted one another, and passed on. The proper way to salute an Indian whom you meet casually anywhere in Manitoba is to say, "*Bon jour, neche.*" This is the salutation they themselves give, and they are often called "neches" in consequence. The

words mean literally, "Good day, friend." The Indians are fond of being thus noticed. But he had no sooner got to the windward of me than the stench became indescribable: the fellow had been eating skunk, pure and unadulterated! Not a few travellers have recorded that they also have eaten of this dainty dish, but in nearly every case we are informed that some days—or at least sufficient time—had been allowed to elapse after death for the body to get rid of the superfluous effluvium with which the animal is so abundantly provided. Archbishop Taché, in his book of travels in the North-west, records, not only that he has actually partaken of a meal of skunk, but that he intends, and is even eager, to do so again! Now, of all things which an archbishop might eat, I should have thought that the flesh of skunks would have been the last selected. Truly it has been said by wise men that "there is no accounting for tastes"! Probably, however, the archbishop would differ from some in preferring not to take his skunk-meat of its full flavour, as this Indian had evidently done. Skunks are very common on the prairie, and one is constantly coming across their scent, though the animal himself may be a mile away up wind. In the distance, the smell is not disagreeable, but close at hand it becomes disgusting. Skunks are not unfrequently killed in the act of robbing hen-houses. I shot one once from a boat, as he was returning from his morning bath on the edge of a lake. A handsomer beast is not often seen: about the size of a cat, he is covered with very long and glossy black hair, with a narrow stripe of pure white, extending from the tip of the nose to the tip of the tail. If only the fur could be easier disinfected, it would come much more into use.

To those who have experienced the annoyance caused by mosquitoes, it may appear almost like a piece of grim irony to treat of them under the heading "sport"; for it is certain that, if any sport at all ever results from their contact with man, it is on their side, and not on ours. It cannot be denied that, during the months of June, July, and August, mosquitoes are so numerous and so exasperatingly troublesome (especially on still evenings), as to amount almost to a curse to both man and beast. During these months, most settlers keep a fine gauze netting

stretched over their windows, and at night a "smudge," or fire of damp sticks and straw, is lit, so that the cattle may find some refuge from their persecutors in its smoke. In time, doubtless, when the stagnant swamps and ponds become fewer, the mosquitoes also will decrease in number; and, as it is, old stagers seem to mind them little; but, for my part, the injunction, "Love your enemies," finds no favour, if the list of my enemies be held to include mosquitoes. No wonder the Indians regard them as agents of the Evil Spirit!*

CHAPTER XIV.

IS THE HUDSON'S BAY ROUTE FEASIBLE?

THE prosperity of any country depends in no slight degree upon the excellence, or otherwise, of its internal water communication, and upon the facilities which the nature of its coasts afford for the interchange of its commodities with those of other countries. In both these respects Canada is peculiarly favoured. It is doubtful whether any other country on the face of the earth excels it in the possession of so large a number of splendid inland sheets of fresh water, from the size of the "Great Lakes" down to that of the numerous ponds and lakelets which so abound in all parts of the Dominion, while the way in which many of these are connected together by their own long,

* Another insect which, in many parts of the country, abounds during the same season as the mosquito, but forms a great contrast to it by reason of its harmlessness and beauty, is the little firefly. Well do I remember a long, late drive which I had over the prairie in Southern Manitoba one very dark night in July last. On every side were hundreds upon hundreds of these insects, filling the air with innumerable tiny luminous streaks, each of which lasted for an instant and then faded away. So numerous were they that I am quite sure the darkness was perceptibly lessened by the thousands of their tiny sparks.

straggling arms, as well as by streams and other water courses, is a most striking feature. With great and navigable rivers, also, Canada is particularly well provided. Canadians would have but small cause of complaint, were the St. Lawrence the only great river of their country; but, beside this, there is the Peace River, the waters of which flow full 2,000 miles before they reach the ocean; and, if we regard the Nelson River as a continuation of the Saskatchewan (a distinction to which it has some claim), we have another river over 1,300 miles in length. But, in addition to such natural facilities for internal water communication as these, Canada is possessed of several excellent seaports, by no means the least important of which lies in the very centre of the vast Dominion, upon one of the largest inland seas that the world contains. No one is at present able to say how great an influence this fact will not exercise upon the future development of the North-west; for it may yet be found that the turning to account of this great natural advantage will have as desirable an effect upon the "Great Lone Land" as the construction of the Canadian Pacific Railway has already had.

Hudson's Bay (or, as it would more appropriately be called, Hudson's Sea) is, of course, what is referred to in the foregoing paragraph. The question of the navigability of Hudson's Bay and Strait has, for many years past, excited an amount of interest in the minds of the people of Canada, which it is difficult for any one to comprehend who has not been in that country; and, although Manitoba does not extend to Hudson's Bay as yet, the future prosperity of the former depends so much upon the feasibility of navigating the latter, that no apology is needed for discussing the matter here.

Fortune has not so favoured me that I am able to bring the light of personal experience to bear upon the subject; indeed, the number of those who know anything of it from personal experience, is exceedingly small. There exists, nevertheless, a surprisingly large amount of information which has been bequeathed to us by those early and enterprising pioneers, who entered the Bay in the 17th and 18th centuries for purposes of trade or ex-

ploration. For much of our early information on the subject we are indebted to that curious craze for the discovery of a passage through the Polar Sea to the countries of the east, which, for more than a century, attracted so much attention in the various countries of Western Europe—it is, indeed, a fact that Henry Hudson was in search of the much-talked-of “North-west Passage,” when, in 1610, he discovered the great Bay which now bears his name. The evidence of these early explorers has, of late years, been supplemented by that of the captains of the vessels of the Hudson’s Bay Company, of various American whalers, and other persons. It is a few of the more prominent facts to be gleaned from such sources as these, that I now desire to place before my readers, in order that they may be able to form their own opinions as to the ultimate probability of the establishment of what may appropriately be called “The New North-west Passage.” In doing this I wish to acknowledge the great assistance I have derived from a pamphlet entitled “Our Northern Waters,” by my friend Mr. Charles N. Bell, of Winnipeg, as well as from several official publications, and from evidence given before committees of the Dominion Parliament by Dr. Robert Bell, of the Geological Survey of Canada,* and by Professor H. Y. Hind. The present chapter, therefore, may be briefly summarised as an examination of existing evidence as to the feasibility of establishing a commercial route between Canada and Europe *via* Hudson’s Bay.

Hudson’s Bay, together with its southern extension known as James’s Bay, is a great inland sea, lying between the 51st and 63rd parallels of north latitude and the 78th and 96th degrees of west longitude. Its greatest length from north to south is 1,000 miles, and its greatest breadth about 600. It has an area of about half-a-million square miles, and drains a region measuring over 2,000 miles from east to west, 1,500 miles from north to south, and covering upwards of three million square miles. On the

* Dr. Bell, who must not be confounded with Mr. C. N. Bell, has been engaged for six years past in exploring Hudson’s Bay and the country surrounding it, consequently his statements carry much weight.

north-east it is connected with Davis's Strait and the open Atlantic by several channels, the chief of these, in every way, being Hudson's Strait, which has a length of about 500 miles, an average breadth of about 100; is bounded on the north by Meta Incognita; on the south by Labrador, and has its main entrance in N. latitude 61° , or about the latitude of the Shetland Islands. The southern portion of the Bay lies in the latitude of Devonshire and Cornwall; no part, either of it or of the Strait, lies within 150 miles of the Arctic Circle. The Bay is singularly free from shoals, and its waters are said to have a very even, average depth of about seventy fathoms. One of its harbours is described by all travellers as an extremely good one, while there are several others of lesser importance. It is now very many years since forts or trading posts were first built on the shores of the Bay by the French, and afterwards by the Hudson's Bay Company. The earliest of these—Fort York, or York Factory—is the most important station at the present day. It lies on the west side of the Bay, near the mouth of the Hayes River, and was built in 1676. Fort Severn, on the Severn River, some way further east, was built in 1686; while old Fort Churchill, near the mouth of the Churchill River, further to the west, was first built in 1688; but in 1733 a large stone fort, with sides 300 feet in length, mounting forty guns of large size for those times, and occupying a very commanding position on the west side of the harbour formed by the mouth of the river, was commenced. It occupied several years in building, but in 1782 was surrendered, without a shot being fired, to the French Admiral La Perouse, who had entered the Bay with three men-of-war. The fort was by him destroyed, and is said now to be "probably the largest ruin in North America." Fort Albany on the west side, Fort Rupert on the east side, and Fort Moose at the south end of James's Bay, all lie near the mouths of rivers of the same names, and were built in 1664, 1668, and 1730 respectively. The mouths of all these rivers are navigable to a certain distance inland, but the harbours at the mouths of the Nelson and the Churchill will probably carry on the great bulk of the commerce of the future; and it is to a discussion of the facilities which these rivers afford for

communication between Winnipeg and the Bay, that I will next direct attention, taking the former first.

Lake Winnipeg constitutes the centre of a great sub-drainage basin, which is supplementary to that of Hudson's Bay. The waters of a huge district, extending to the Rocky Mountains on the west, to the sources of the Mississippi on the south, and for some distance to the east, are all poured into the lake. The great main channel, by which nearly the whole of these waters are discharged into the Bay, is the Nelson River. From the point at which it leaves the lake it is 360 miles in length, and descends 710 ft. in that distance. Unfortunately it affords no facilities for navigation. Dr. Bell is very explicit on this point: he says that, except for a chute of 15 ft., there is a navigable stretch of 180 miles in the central portion of the river. For a distance of forty-five miles down from its source, and a like distance up from its mouth, the river is also navigable, but the remainder is not. Of the harbour at its mouth, Dr. Bell says: "Most of its estuary becomes dry at low tide, but a channel runs through it at the centre, as far as the head of tide-water." This channel has "an average depth of about two fathoms at low water." The tides at the mouth of the Nelson River amount to 15 ft. York Factory is not on the Nelson, but on the Hayes River, which flows into the Bay close to the Nelson, and is navigable by shallow-draught vessels for 140 miles inland. The fort was established on the Hayes River because, being smaller than the Nelson, the Indians found it easier to navigate in their canoes. York Factory has been termed "the Archangel of the West"; but it would appear as if this name would be more appropriate if applied to Fort Churchill; for although, according to Dr. Bell, "the Churchill River would afford no facilities" for navigation, being "rapid down to the head of tide within eight miles of the sea," the harbour at its mouth is a very excellent one. Of the Churchill, the same authority has said that, "unlike all the other rivers, it has a deep, rocky, and comparatively narrow mouth, which can be entered with ease and safety by the largest ships at all stages of the tide"; while Sir J. H. Lefroy has stated that "it will undoubtedly be the future shipping port for the agricultural

products of the vast North-west Territory, and the route by which immigrants will enter the country." Another authority, possibly too enthusiastic, has spoken of it as "one of the finest harbours of the world," and as taking "a front rank among ocean ports." Archbishop Taché says it is "capacious, safe, and convenient." But it is not sufficient to show that the harbours themselves are good, unless it be also shown that they may be safely entered during a sufficiently long period of the year. On this point, Mr. Bell says, in his interesting pamphlet: "The records of the Hudson's Bay Company, as presented to the Government in 1880, show that the Hayes River at York Factory, for an average of fifty-three years, was open on the 15th of May. Only once in the fifty-three years did it remain closed till the end of May or beginning of June. Once in 1878 the river closed as early as the 3rd of November, but the average closing for fifty-three years was about the 20th of November." Of the much larger Nelson River it is stated that it "closes much later than does the Hayes, if, indeed, it can be said to close at all." Dr. Bell says: "I think the average of the rivers is about six months." In considering this part of the subject, it should be remembered that the average time during which the harbour of Montreal remains open has been officially stated to be from May 1st to November 25th, while the period of navigation on the Great Lakes has about an equal average duration.

From the foregoing statements it will be clearly seen that the only possible means of communication between Winnipeg and the Bay will be by means of a railway. I understand that two companies were formed some time back for the purpose of constructing such a railway. Both received from Government the offer of a liberal land-grant; but, in neither case, was this sufficiently large to induce either to commence work, and during last year the two companies amalgamated. Preliminary surveys have already been made, and the route is reported as "not presenting any very great engineering difficulties"; but, until more is known as to the navigability of the Bay and Straits, it is not to be expected that a commencement will be made with the actual work of construction. To this

point, then, I will next direct attention, after having first said something of the great advantages which would follow from the establishment of such a route, setting aside, for the moment, the question of its feasibility.

The importance of the proposed new route to the whole of the Canadian North-west, both for purposes of export and import, and for immigration, as well as its advantage over the existing route to England by way of Montreal, will at once begin to become apparent when it is pointed out that, although Winnipeg occupies an almost exactly central position in the North American Continent, it is, nevertheless, situated within 600 miles of the salt sea-water of Hudson's Bay; so that, if found feasible, the proposed route would effect a very great saving in the necessary amount of land-carriage (which, as everybody knows, is much more expensive than water-carriage), while the length of the ocean voyage will be increased very little. This would be an especial advantage in the case of bulky goods, which are particularly unsuited for land-carriage; and the more northerly route would have an equal advantage in the case of meat and dairy produce, since these could be the easier kept cool. The distance between Winnipeg and Liverpool by the Canadian Pacific Railway, when complete, will be 4,654 miles, of which 1,434 will be covered by rail, and 3,220 by ocean-steamer. By the combined Canadian Pacific Railway and Lake routes, the distance between Winnipeg and Montreal is ninety miles less, or 4,544 miles to Liverpool. By the Hudson's Bay route, if feasible, the distance between Winnipeg and Liverpool will be reduced to about 4,000 miles, which will be a saving of 800 miles in the land carriage, though only of about 650 miles altogether. On account of its more northerly latitude, the distance between Fort York and Liverpool, which is given as 3,415 statute miles, is only 200 miles further than from Montreal to Liverpool, while the distance is actually about 150 miles less than from New York to Liverpool. This fact alone confers an immense advantage on the proposed route; but we must remember, in addition to this, that a great stretch of country to the north-west of Winnipeg will be brought, practically, as near to England as Winnipeg now is. For instance, if we follow Dr. Bell

in regarding Lac La Biche as the centre of the great agricultural region, we shall find that the journey from there to Liverpool, if performed *via* Hudson's Bay, instead of by the St. Lawrence, would effect a saving in land carriage of a distance equal to the distance between Winnipeg and Montreal. In short, if the Hudson's Bay route prove practicable, Manitoba and a large portion of the North-west Territories will be brought almost as near to England as Ontario and Quebec are at the present day. Moreover, if the Hudson's Bay route were ever established, it is probable that a good deal of the grain from Minnesota and Dakota would go by it to Europe. After the foregoing statements, few, I think, will be inclined to deny that the opening of a great commercial route through Hudson's Bay, if found feasible, would be fraught with advantages to the whole of the north-western portion of the American Continent, which it would be almost impossible to estimate too highly.

I will next discuss the evidence as to the possibility of navigating the Bay and Strait. As far as the former is concerned, evidence is so clear that discussion is almost useless. Although James's Bay (the water of which is sufficiently fresh in places for drinking-purposes) may, at times, become frozen over, all the evidence goes to show that Hudson's Bay does not freeze over. A fringe of ice forms round the coast, and extends for a mile or two out to sea, but not more. An experienced whaling captain writes, "Hudson's Bay is open all winter, and what little ice makes on the shore breaks up with every gale of wind." Dr. Bell has stated that "the Bay is open all the year round, like the ocean in corresponding latitudes. . . . On parts of the eastern coast, I am told that the sea washes against the rocks all the winter, just the same as on the coast of Nova Scotia or Newfoundland." The Doctor has bathed in the waters of the Bay during summer with perfect comfort, which could not have been done in the waters of the Gulf of St. Lawrence.

The whole matter, therefore, seems to resolve itself into a question of the navigation of Hudson's Strait. On this point, although the amount of available evidence is far from being sufficient to set the matter at rest, we are

singularly fortunate in having so valuable a stock of information as that contained in the works of the early explorers and traders, such as Fox (1635), Dobbs (1744), Ellis (1748), Robson (1752), Umfreville (1790), Hearne (1795), La Perouse (1798), Chappell (1816), and others; while the captains of the vessels of the Hudson's Bay Company and of various American whalers have been able more recently to give much corroborative evidence. Inquiry has shown that, since the discovery of the Bay in 1610, vessels have entered it on at least 750 different voyages, and it is known that this does not cover all. The list includes British troop-ships, emigrant-ships, vessels of the French and English navies (the latter generally when convoying the Company's ships), some of them carrying 74 guns, as well as whalers and vessels bound on voyages of trade and discovery. For more than a century past the Company has regularly supplied its posts on the Bay by ships from London, which have always taken back the valuable fur produce of the previous year; whilst a small vessel has been employed in the Bay itself. Formerly several of the Company's ships visited the Bay each year, but at present only two do so, as there are now railway facilities for getting home the furs which used formerly to go by water. As regards the earliest date at which ships may reasonably expect to find a clear passage through the Strait, evidence is very conflicting. It is said that the Company's vessels are not accustomed to leave the Orkneys before the end of June, and Captains Bishop and McPherson, both of whom have made many voyages for the Company, have both informed Mr. Bell that they consider the 1st of August as the earliest date at which a sailing ship should attempt to pass; but in this they differ from several other individuals whose opinions carry considerable weight, notably from five whaling captains whose statements Mr. Bell quotes, and all of whom put the date nearer July 1. One of these writes:—"The entrance to the Bay can be made from the 1st to the 15th of July." Captain Wm. Kennedy, one of the searchers after Franklin, now residing near Winnipeg, writes:—"A residence of eight years on the shores of Ungava Bay and its vicinity, enables me to state that for four months, viz., July,

August, September, and October, there is no difficulty in the navigation." It cannot be denied that the passage through the Strait from east to west is difficult for sailing-ships. Fifteen days (which may be taken as its average duration) is a long while to occupy in sailing 500 miles, being an average of only about 33 miles per day. Much evidence is available, all going to prove that the prevailing wind in the Strait during summer is nearly always north or north-west, and vessels entering the Strait are often compelled to put up with much tedious delay for want of a southerly or south-easterly breeze. On the other hand, the passage in the autumn through the Straits from west to east is generally spoken of as easy, the prevailing wind, which formerly had been foul, being then fair, and the ice, which formerly obstructed the passage, having then very largely disappeared. The ships of the company usually pass out during October; but apparently reliable evidence is not wanting leading one strongly to the belief that, even in an ordinary year, the voyage might be successfully undertaken as late as November the 15th,—an opinion strongly held by Dr. Bell. Four voyages out of the Bay by whaling-ships, mentioned in "Our Northern Waters," occupied an average of only six days, and H.M.S. *Rosamond*, in 1814, passed out through the Strait in three days when she had been twenty-five days going in. Indeed the navigation of the Strait from west to east seems usually to be so easy, that the question of the feasibility of establishing the Hudson's Bay route resolves itself very much into a question of the *inward* navigation of the Strait. As a rule a good deal of ice is met with when entering during July, especially upon the south side, where it is driven by the wind. In some years it might be found to be impossible for sailing-ships to enter at all (though the experience of the Hudson's Bay Company seems to preclude this); but, on the other hand, Captain Bishop states that "out of twenty-three voyages that he has made, only on six did he find perfectly open water and clear sailing on his way into the Bay." In all the evidence as yet available, there is, I believe, nothing to show that in most seasons the Strait is not open (even for sailing vessels) all the winter through, although this will very

probably prove eventually not to be the case. That it is not always so is clearly shown by the experience of the Hudson's Bay Company's ships which, for some cause or other, have occasionally had to winter in the Bay. Dobbs, writing in 1774, mentions the case of a vessel which, when passing out of the Strait late in the autumn, entered an inlet, for some purpose, and was there detained by the ice which, however, moved off in December and allowed her to pass through the Strait at Christmas-time. Nor is evidence wanting to show that the time of year usually chosen for entering the Strait, is far from being the best that might be selected. It is the opinion of Dr. Bell, Professor Hind, and others who have studied the subject, that late in June or early in July is the very worst possible period for passing through the Strait, inasmuch as the large mass of ice which the wind brings down Fox's Channel, is then passing out through the Strait and being dispersed. It is contended, with some show of reason, that if the attempt to enter the Bay were made in May or early in June, before the ice had become loosened and had begun to move, the passage through the Straits would be much more easily accomplished; but on this point more evidence is wanted.

Dr. John Rae, the celebrated Arctic explorer, in a lecture which he recently delivered before the Manitoba Historical Society, said that, although he had a very high idea as to the value of the route if practicable, much of what had been said about it did not agree with his own personal experience. He had passed through the Strait on three occasions, and on two of them had been very much hindered by ice. He feared there would be an average detention of four or five days on each voyage, though this might not apply to steamers. As it is only fair that both sides of the question should be stated, I will here quote some remarks which Dr. Rae has since written upon the subject. He says: "On my first voyage to Hudson's Bay we were stopped by ice for weeks on the outward trip, the floes being so closely packed that some ladies in one of the ships frequently walked a mile or two to the other vessel, took dinner, and returned without difficulty. The mouth of the Strait was completely blocked

on our attempting to get home, and we had to run into the Bay again. On one of my other two voyages home we met so much ice that a consultation was held by Captain Head and some of the Hudson's Bay Company's factors on board. Two of these latter pleaded strongly the necessity of running back into the Bay, but there was a majority against them and we squeezed through."

For at least half a century past, according to Mr. Bell, the Bay has been regularly visited by American whalers as well as by whaling vessels from Dundee and other Scotch ports. One of the reports of the Commissioner of Fisheries for the United States shows that an average of rather more than four whaling vessels a year visited the Bay between 1861 and 1871, and that the average annual catch amounted in value to 124,000 dollars. Although Dr. Rae has expressed the opinion that the whaling-season in the Bay does not exceed two months, Mr. Bell is able to give some figures tending to prove that it is nearer four months.

Dr. Bell has obtained from the officials of the Hudson's Bay Company in London a statement of the dates of arrival at and departure from the various posts on the Bay of the Company's ships for many years past. The figures may be found in the "Report of the Geological Survey of Canada" for 1879-80. The list shows that, between the years 1879 and 1880, York Factory was visited no less than 133 times. The names of the same vessels often appear many times in successive years. On one occasion (1850) four ships visited the fort; on four occasions three, and on many occasions two. The earliest arrival took place on August 2nd, 1850. The average date of arrival appears to be about the end of August; but six arrivals are recorded between September 20th and 30th, and one (the latest) on October 7th, 1836. The earliest date of sailing again for home is August 25th, 1829; but ten other sailings in August are recorded. The latest date for sailing was October 7th, 1811; but eight other sailings in that month are recorded. On four occasions we are informed that vessels wintered in the Bay. The lists also show that, with one exception (1779), Moose Factory has been visited by a ship in every year since 1735, or for 147 years. One vessel came each year, and two vessels had to

winter there. The earliest date of arrival recorded is July 21st, 1745, there being only two other arrivals in July (1742 and 1749), while the latest arrival took place on September 25th, 1811. The earliest date of sailing recorded is August 4th, 1742, while the latest is October 10th, 1811; though there have been five other sailings in that month. Of the earliest seventeen sailings (up to 1752), all but two seem to have been in August; but since that year there have been only four sailings in August.

The foregoing figures show a regularity of navigation which is really surprising; and the immunity from the loss of its ships which the Company has enjoyed is none the less so. It is, I believe, a fact that the Company has never lost more than two of its own vessels. These were the *Prince of Wales* and the *Prince Arthur*, which went ashore together, on Mansfield Island, in 1864. No lives were lost and the greater portion of the cargo was even-

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Judging from the evidence which has now been brought forward, it is not, I think, too much to expect that, although in some years accidents may occur such as that which took place in the St. Lawrence in 1870, when a loss of one million dollars is said to have been sustained by the freezing-in of the outward-bound shipping, still, in the course of a few years, we shall see large ocean-steamers pushing their way into the Bay, discharging their cargoes on the wharves of the towns which have grown up around

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Judging from the evidence which has now been brought forward, it is not, I think, too much to expect that, although in some years accidents may occur such as that which took place in the St. Lawrence in 1870, when a loss of one million dollars is said to have been sustained by the freezing-in of the outward-bound shipping, still, in the course of a few years, we shall see large ocean-steamers pushing their way into the Bay, discharging their cargoes on the wharves of the towns which have grown up around

the sites of York Factory and Fort Churchill, loading again for the English markets with the various commodities which the North-west will undoubtedly produce before long, and send by rail to the very shores of the Bay. All this one may, with confidence, expect to take place with nearly as much regularity as the same thing now takes place in the St. Lawrence during a great portion of each year; although, comparatively, it is but a few years since it was declared impossible to navigate that river with steamships, and several were actually lost in proving that a large fleet of splendid ocean-steamers might sail, every summer, between Liverpool and Montreal, with a punctuality almost equal to that of the express trains between London and Brighton.

But, although the existing evidence may be sufficiently strong to warrant us in this belief, yet it cannot be denied that, without still more conclusive evidence, the actual commencement of the construction of the railroad by which all this is to be made possible, would be rash in the extreme. The Dominion Government, clearly recognising this fact, conscious that the future greatness of Canada will be worked out in the North-west, and that it will be greatly influenced by clear proof or disproof of the feasibility of the new route, came, last February (1884), to the very wise decision of granting 100,000 dols., in order to purchase, equip, and despatch a steamer for the purpose of making further investigations.* The project is one which, although it has been under discussion some six or

* On February 21 last, Mr. Staveley Hill, having put a question to Mr. Campbell-Bannerman in the House of Commons, as to whether one or more vessels of the Royal Navy could not be placed in Hudson's Strait for the purpose of making observations, was told that, although the members of the Government "fully appreciated the importance of the subject, they were not prepared to offer any assistance," being in possession of information showing that the Strait is not free "for secure navigation for more than an average of seven or eight weeks in the year." Those who remember that about the same time the old Arctic exploring vessel *Alert* was presented to the Government of the United States, will be inclined to think this decision rather shabby. It is quite true that the *Alert* was put to a very good use—the search for Lieut. Greely; but when she might have been of so great a service to one of our own colonies the gift appears a rather untimely one.

seven years, was not realised until the departure of the steam-whaler *Neptune*, from Halifax, Nova Scotia, under Lieutenant Gordon, on the 22nd of July last. The plan of the expedition was to leave seven observing parties at various spots on the shores of the Bay and Strait,—three on each side of the latter, and one at Fort Churchill, on the former,—and then to return. The *Neptune* arrived home again in October, and the preliminary report of her commander shows that the programme was satisfactorily carried out, except that two attempts to land a party on Resolution Island, at the mouth of the Strait, failed, the steamer striking on some sunken rocks, and only getting off after serious injury to her keel; so that this part of the project was given up. In one place the water is spoken of as being "alive with cod." Heavy ice was met with when half-way through the Strait, in August; and the passage is said to have been unusually obstructed this year. Lieutenant Gordon states that, from his own opinion and from other evidence, he has come to the conclusion that navigation of the Strait is possible for one hundred days per annum, and probably longer; but that the vessels used would need some extra strengthening. The ship will again leave, for the purpose of bringing home the parties, early next spring; and on her return we shall have acquired a most valuable series of observations which, though it may not settle the question, will at least go far towards doing so.

The facts already brought forward will lose none of their force when it is remembered that, although what has been already done has been accomplished in spite of a total absence of reliable charts, lights, and buoys, the catastrophes have been exceedingly few. Nor must it be forgotten that the vessels in which the earlier voyages were so successfully made, were of a description which no one would dream of employing now. They were small, and must have been rudely constructed. For instance, the *Discovery*, which was making her fifth voyage into those waters when she entered the Bay, under Capt. Bylot, in 1615, was a vessel of only fifty-five tons; while the *Charles*, in which Captain Fox discovered the channel which is named after him, in 1631, was of only thirty tons. Even now, however, the "good wine has been kept until the last";

for there is one fact which, though more encouraging than most of the foregoing, has not yet been mentioned. It is this: *Up to last year, all the voyages ever made into the Bay had been accomplished in sailing-ships.* It is quite possible that, on one or two occasions, steamers may have entered the Bay, especially as the Hudson's Bay Company has run steamers to Ungava Bay, on the south side of the Strait; but, as yet, I have not been able to learn that any have done so, with the exception of the *Neptune*, just alluded to. The significance of this fact can hardly be rated too high. The advantages possessed by a steamer over a sailing-ship, when navigating ice, are so immense and so clearly obvious as scarcely to need pointing out. Many sentences illustrative of this are to be found in the works already referred to. Some of the Company's captains have admitted that a steamer could probably enter the Bay something like a month earlier, and leave a full month later, than is at present done. Captain Kennedy writes: "I believe that steamers might get through as early as June, and as late as November." Dr. Bell, who, through lack of wind, was nineteen days in passing out through the Strait on board the Company's ship, *Ocean Nymph*, in the early part of October, 1880, states that a steamer could have made the passage in thirty-six, or, at most, forty-eight hours. Many travellers, both early and recent, express the belief that, on the north side of the Strait, there will nearly always be found, between the shore and the ice which has been driven away from it by the wind, a channel which sailing-ships could utilise with a favourable wind. Steamers could, of course, pass at all times, if this is the case. Dr. Bell, speaking of the Straits, says: "We do not know anything to the contrary of their being navigable for steamers the whole year round." This, however, is another point on which more conclusive evidence is wanting.

The whole question of the feasibility of the Hudson's Bay route gains much interest from a comparison with what has been, and is being, done on the other side of the world towards opening-up a trade with the northern parts of Europe and Asia through the bays and rivers opening, like Hudson's Bay, on to the Polar Sea. Since the famous

voyage of the *Vega*, in 1879, attempts have been made to open water communication with the districts drained by the rivers Obi and Yenesei, through the Kara Sea; and, although much success has not as yet attended those efforts, it should be remembered that the most southerly entrance to the Kara Sea is some 350 miles further north than any part of Hudson's Strait. The case of Archangel, which, like Forts York and Churchill, lies upon a large inland sea, might, at first sight, seem very similar, but examination shows considerable difference in favour of the latter. Not only does Archangel lie over 500 miles to the north of York Factory, but vessels, in leaving it for any other European port, have to sail nearly 500 miles north of any part of Hudson's Bay or Strait. Yet here, although the harbour is only open from June to October, we have a city of over 20,000 inhabitants, which number would grow rapidly larger were it not for the total want of railway communication with every other place. Ten years ago (in 1874), its exports were valued at £1,234,390, and it was visited by 472 vessels, of which 62 were steamers and 220 coasting ships.

Hitherto I have only discussed this question from one point of view—that of navigation; and I think the results warrant the belief that, if the Hudson's Bay route is never established, it will not be on account of any mere difficulties of navigation. The doubt as to whether a railroad to the shores of the Bay could ever be made a sound commercial concern is often enlarged upon by pessimists, and I will next examine this point. That the mechanical difficulties of construction are not great has been already stated; but the question of its paying when constructed is another matter. Although it seems probable that the navigation will be open for more than four months in the year, it is not yet safe to count confidently on a longer period. The question, therefore, may be asked: Would the traffic, during those four months, be sufficient to make the line pay, when it might have to lie idle the rest of the year? Facts are not wanting to show that the country to be traversed is, to some extent at least, capable of development. At present it is practically uninhabited, and there would, consequently, be no local traffic at first; but the

existence of the line would, in time, probably create some. Dr. Bell says that valuable timber is found in some parts, and logs of spruce and pine would, almost certainly, be available for export. To say nothing of the fur-trade, which has become so inseparably connected with the name of the Bay, the salmon and other fisheries are said to be excellent, while game of various kinds is in fair abundance. The region in question is also stated to be rich in minerals, but the extent of those riches is not yet known. A good authority has written: "Minerals may, however, become in the future the greatest of the resources of Hudson's Bay." Gold, silver, and copper are a few among the many. Furthermore, Dr. Bell has given it as his opinion that a considerable area south of James's Bay will eventually become available for agriculture; and, although this belief may be rather too sanguine, it is significant as showing the country to be better than some might imagine it.

In connexion with this branch of the subject, there is still to be mentioned one other great obstacle to the utility of the route. As has been already said, the rivers probably close in November; and, if the rivers are closed so that vessels are unable to approach wharves later than this date, the possibilities of the Strait being navigable all winter is of but little value. The autumn is a busy time in the North-west, and I think it is pretty certain that only a small portion of the year's grain crop could be got out before the closing of the harbours; consequently it would require storing till the following spring. Dr. Bell's opinion is, that "it would be better to store it and take it out the next year by the short route, than to bring it by one involving a long land-carriage." The same objection, however, applies with even greater force to Archangel as a port, and yet it is certain that that place has succeeded in securing an extensive trade.

There will, doubtless, be some inclined to say that, upon the evidence produced, I have founded hopes more sanguine than facts warrant; but I maintain that the proper course is to hope for the best until the worst is clearly shown to predominate. Those who, at the present day, are inclined to believe in the hopelessness of establishing a commercial route to Europe *via* Hudson's Bay, would do

well to remember that no small portion of the history of America is but a history of the accomplishment of things which, but a few years before, had been generally regarded as "impossible"; and those who are able to look but a few short years into the future will, I think, be able to perceive that the establishment of the so-called "Hudson's Bay Route" is one of these possible "impossibilities."



CHAPTER XV.

THE JOURNEY HOME.

AFTER a few days in Winnipeg, during which time I received the greatest kindness from the various Government officials and others upon whom I called, I left the city early one morning by the train bound eastward for Port Arthur. Of the twenty-four hours spent "on board" this train I have none but pleasant recollections to record. Although it is true I had been told that the country passed through was rocky and well wooded, I had not at all grasped the real facts of the case, and was, therefore, not a little surprised at seeing scenery which, by comparison with that of Western Manitoba, may certainly be described as grand.

For the first twenty-five miles or so there were numerous poplar-bluffs, with signs of cultivation between. Then commenced a dense, unbroken forest of spruce, tamarack, and poplar, extending mile after mile along each side of the track. As a rule, the trees are small and of little value, but doubtless finer trees grow further away from the line. In many places, that blackening and devouring demon of destruction, the Fire—started, doubtless, by a spark from the engine, or perhaps sometimes intentionally,—had rushed through the dense forest-growth, killing and prostrating thousands of slender young trees, and laying bare the ground beneath.

At a station bearing the immortal name of Darwin, the

first rocks were seen—merely some low, rounded, glacier-scraped hummocks, of a reddish colour, rising but little above the surface of the ground. As the train moved east from this place, the amount of rock visible became greater every mile, but in general appearance it was always the same. There was no loose *débris* of stones and boulders; no rugged, weather-worn crags or peaks; nothing but low mounds everywhere swelling up above the surface of the ground among the pines, sometimes even to the height of 20 ft., but everywhere smoothed, scarped, and rounded by the action of the mighty glaciers which swept over them in long-past ages.

Still further, and the aspect of the country changed again, becoming even rockier than before. The isolated hummocks disappeared, and the whole surface of the ground came to be formed of unchanging Laurentian rocks, rising in places, sinking in others, but always smoothed and rounded in outline, as though a heavy ocean-swell had suddenly been turned to stone. In no case did the rocks attain any great height—not even in the region around the Lake of the Woods, which was the most broken and diversified district we passed through. Even the pines, though they covered the country, seemed to have a difficulty in growing, and many, as though in desperation, had grasped the rocks so firmly with their knotted roots as to suggest to the beholder the idea of a huge octopus seizing its prey. Innumerable little lakes, of all imaginable shapes and sizes, were dotted about in all directions: their extraordinary number was really most astonishing. Prof. Hind estimates the proportion of water to land in the district as one to two; yet there are very few large lakes or rivers, the water being distributed in “countless thousands” of tiny lakelets and rushing streams.

About mid-day we arrived at, and crossed, the northern arm of the Lake of the Woods. Surely no spot on earth was ever more appropriately named than this! Surrounded on every side by a dense and almost unbroken forest of pine, which extends in every direction for full one hundred miles; with the islands which lie scattered over its surface also densely wooded, and with pines innumerable mirrored on the smooth surfaces of the many long, straggling arms

which the lake throws out far into the primæval forest, as if more effectually to strengthen its connexion with its highly-descriptive name, "The Lake of the Woods" could hardly have received any more appropriate title. Some of the scenery of the region surrounding it is fine and wild. Everywhere extends the solid, red, primæval rock : except where the fire has devastated the forest the surface is always more or less densely covered with wood ; myriads of lakes and lakelets are strewn around in all directions, some long, some narrow, some winding in shape, all teeming with fish, and filled with a cold, clear, black-looking water, which forces upon the mind the idea of its profound depth. The track passes along the edge of many such lakes, while it crosses the narrow arms of others by means of causeways, roughly formed by throwing in pieces of blasted rock. It is said that when some of these causeways were being constructed, the amount of material swallowed up showed many, even of the narrowest arms, to have a surprising depth. It can hardly be said, however, that the scenery is very beautiful. It lacks that variety and ruggedness, those peaks and precipices which form the beauty of mountainous districts ; but, at the same time, the rounded rocks, the dark forests, the still lakes, and rushing streams all combine to give to the scenery of this region a certain grandeur of its own, in spite of its presenting a somewhat stern, silent, and forbidding aspect. In years to come the attractions of the region around the Lake of the Woods will draw towards it many tourists and holiday-keepers, and I think it would be a most excellent thing if the Dominion Government were to reserve a sufficiently large area of it from sale or settlement as a public park for the benefit of the people of Canada. The United States, more than ten years ago, set aside an area of 3,575 square miles, containing the unequalled wonders lying around the Yellowstone Lake, as a National Park, and quite recently the Government of New South Wales has followed suit in establishing a public pleasure-ground, 56 square miles in extent, at Illawarra.

Rat Portage and Keewatin are two rising towns, lying close together on the shore of the lake, in the debatable

ground between Ontario and Manitoba. Lumbering appears to be the sole occupation of the inhabitants of these two places: there seems to be absolutely nothing else going on. Logs fill every stream and pond around the towns; saw-mills abound; sawn lumber is piled everywhere; and numbers of houses are daily being built for the accommodation of more lumber-men. It is claimed (I know not with how much truth) that Rat Portage possesses the finest water-power in the world, and that the place will some day come to be one of the great milling centres of North America.

I was a good deal amused at the stations we passed. Almost without exception they were small buildings, set close beside the line among the stumps of the felled trees, and usually without the slightest sign of cultivation or civilisation around, not even to the extent of a visible road leading up through the forest. Sometimes a few shanties were to be seen; but what anybody's object could be in getting out at such places, I was quite unable to imagine; yet at most of the stations there were mysterious parties who seemed to have business of some kind on hand. Between Winnipeg and Port Arthur, a distance of 435 miles, with the exception of Selkirk, Keewatin, and Rat Portage, I did not see any place which, by the greatest stretch of courtesy, could have been called a village; yet on this journey the train stopped, I suppose, at something like fifty stations.

A stranger might well ask, "Why, within a few miles of the city of Winnipeg, should the country change so suddenly from open prairie to dense forest?" The answer, however, is not difficult to give: the fires which rage upon the prairies usually travel eastwards before a westerly or north-westerly wind; but they are completely stopped in their onward progress when they reach that impassable barrier formed by Lakes Winnipeg, Winnipegosis, and Manitoba, as well as by the Red River; and it is to these friendly, protecting pieces of water, together with the many lakes in the forest itself, that we are indebted for the vast forests to the east. Excepting only the transition from sea to land, I have never, in any part of the world, seen a change of physical characteristics so sudden or so striking

as that from fertile prairies to rocks and forests, in the neighbourhood of the city of Winnipeg. In numberless places, however, fires, started by the railway, by Indians, or by the carelessness of white men, have caused much destruction ; and, although the amount of forest now devastated is as nothing compared with that still unburnt, every precaution should be taken to prevent the firing of the forests in the future. Our cousins across the Atlantic are the possessors of domains so vast and so naturally rich that they are slow to learn the lessons they are now being taught as to the needless destruction of those riches. They have exterminated the buffalo ; they have impoverished much of their soil by perpetual wheat-cropping ; and they are the losers to a still greater extent through not having taken greater pains to preserve those magnificent forests which were once so extensive in Michigan, Wisconsin, Minnesota, Ontario, and elsewhere. When once a fire gets hold upon the forest, with a high wind behind its back, there is absolutely no stopping it. It rushes onwards, ever widening, ever destroying. Such fires have been known to continue burning for weeks, and even months, trees of all sorts, old and young, being, of course, totally destroyed by thousands ; till now the cry begins to be heard that the supply of good timber is becoming exhausted. And well it may ! I imagine that the forests of America suffer more every year from the ravages of fire than they do from the attacks of the lumbermen in ten. It matters little in what direction one travels, the same thing may be seen almost everywhere—splendid forests of pine, blackened, and half or quite destroyed by fire, often to be succeeded, in after-years, by a growth of less valuable trees. I know of no scene much more depressing, or more hideously repulsive, than that of a forest which has been devastated by the fire-demon. One sees, in fact, a battle-field, on which a fierce though unequal conflict has been waged between the works of animate Nature and a relentless fiend who gives no quarter, feels no mercy, and against whose resistless and insatiable fury it is useless to contend. Some of the victims, stark and black, still remain standing, with their knotted arms twisted as though in agony ; while others have fallen headlong to the ground, where their seared and rotting carcasses long

remain to disfigure the green covering with which, after a year or two, Nature attempts to hide the traces of her defeat.

To the past prevalence of these forest fires must be attributed the small size of the trees in the forest between Winnipeg and Lake Superior, as well as the dense growth of the latter, which has recently been mentioned. After a forest has been destroyed, a dense growth of young trees springs up. As these trees grow, the stronger kill the weaker, till, in an old forest, the trees are all of good size, are not clustered thickly together, and there is very little undergrowth.

Night fell when but half our journey was completed; but a fellow-traveller, who knew the route well, told me that for the whole stretch of 400 miles there was no break in the forest. When morning broke, we were passing along the banks of the Kaministiquia,—an impetuous river, rushing along between banks thickly covered with pines,—and were rapidly nearing Fort William, an old post of the Hudson's Bay Company, that has formed the nucleus of Port Arthur, which place we reached after a journey of just twenty-four hours. The train, running up the middle of the principal street of the town, with desperate clanging of the engine-bell, as usual, came at last to a standstill near the large wharfs which form the principal mainstay of the place. Here,—that is, in the street,—we and our luggage were bundled out to await the starting of a steamer down the lake.

After an ocean voyage during which absolutely nothing was experienced to break the dreary monotony except three days and nights of rather heavy rolling, we reached Liverpool, and I, shortly afterwards, my home,—where it is now necessary for me to bid adieu to my indulgent readers, expressing only the hope that what has been herein written will afford guidance to some, at least, of those in search of reliable information concerning Manitoba—a country which, I am confident, has before it no inconsiderable future.

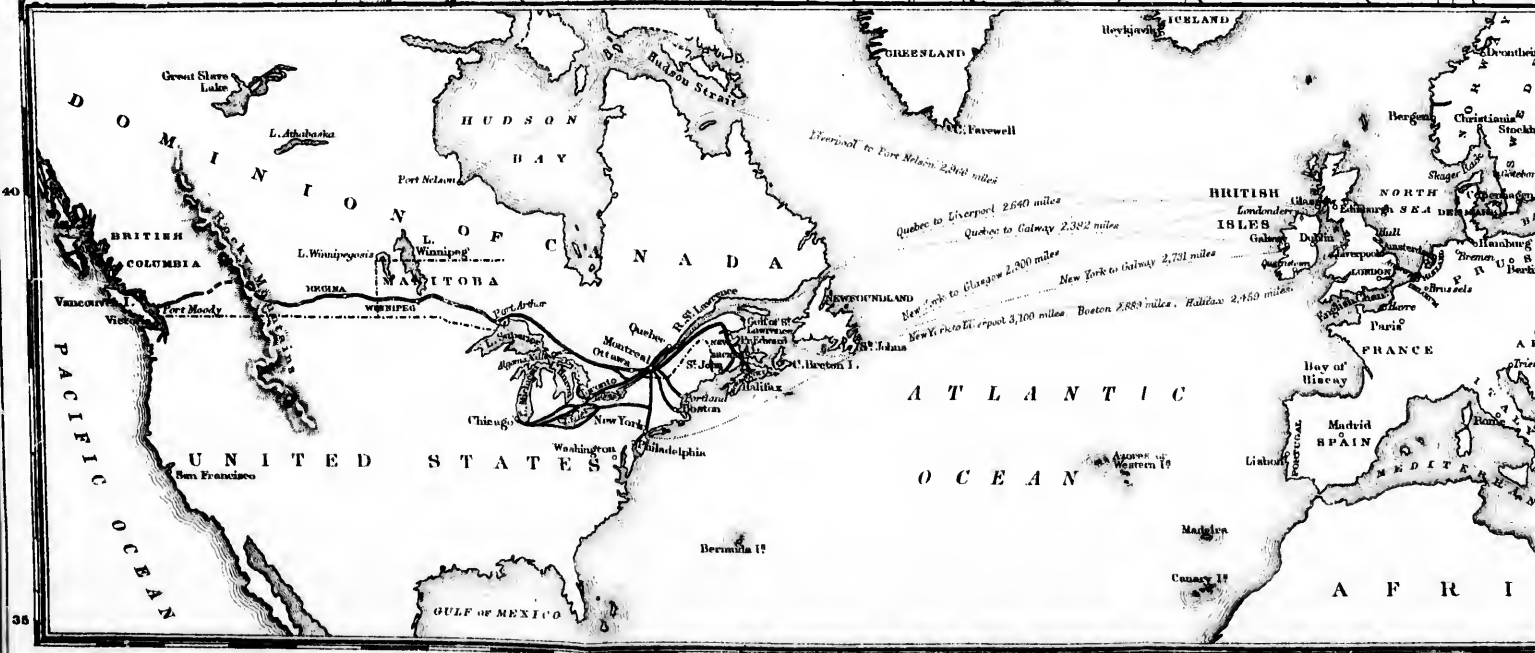
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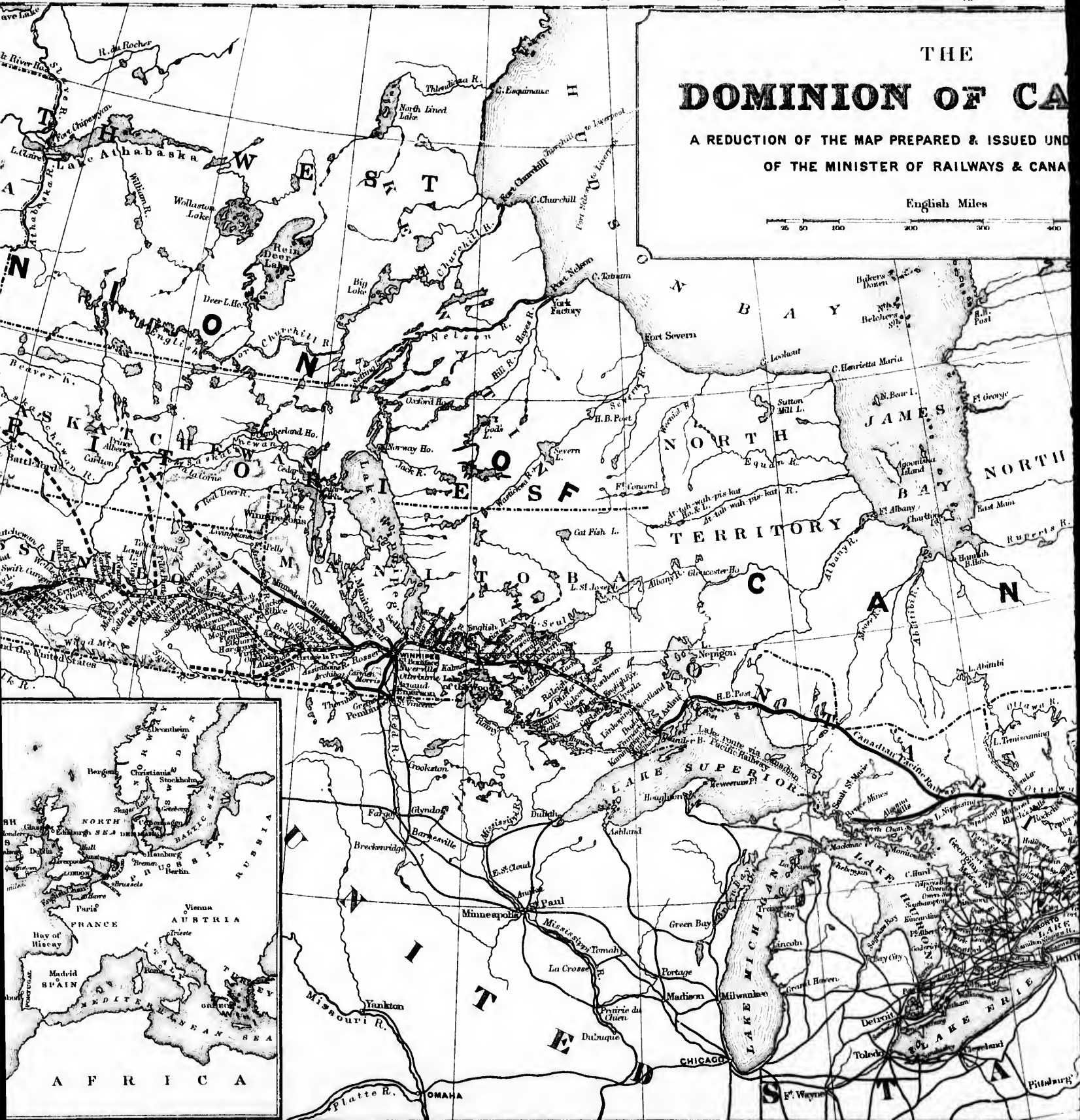
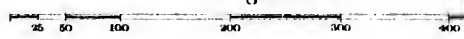




THE DOMINION OF CANADA

A REDUCTION OF THE MAP PREPARED & ISSUED UNDER THE AUTHORITY OF THE MINISTER OF RAILWAYS & CANALS

English Miles



THE DOMINION OF CANADA

A REDUCTION OF THE MAP PREPARED & ISSUED UNDER THE DIRECTION OF THE MINISTER OF RAILWAYS & CANALS (1882)

English Miles

