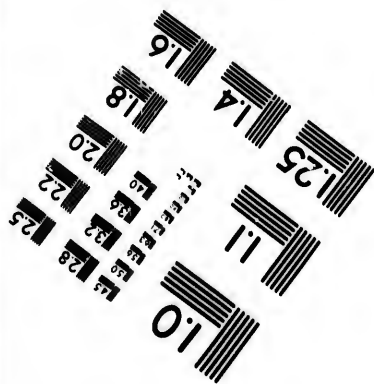
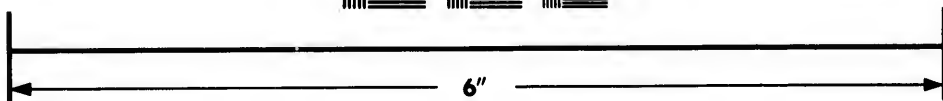
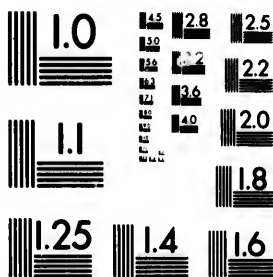


**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

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

**CIHM/ICMH
Microfiche
Series.**

**CIHM/ICMH
Collection de
microfiches.**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

© 1982

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/
Couverture de couleur
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- Tight binding may cause shadows or distortion
along interior margin/
La reliure serrée peut causer de l'ombre ou de la
distortion le long de la marge intérieure
- Blank leaves added during restoration may
appear within the text. Whenever possible, these
have been omitted from filming/
Il se peut que certaines pages blanches ajoutées
lors d'une restauration apparaissent dans le texte,
mais, lorsque cela était possible, ces pages n'ont
pas été filmées.
- Additional comments:/
Commentaires supplémentaires:

- Coloured pages/
Pages de couleur
- Pages damaged/
Pages endommagées
- Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached/
Pages détachées
- Showthrough/
Transparence
- Quality of print varies/
Qualité inégale de l'impression
- Includes supplementary material/
Comprend du matériel supplémentaire
- Only edition available/
Seule édition disponible
- Pages wholly or partially obscured by errata
slips, tissues, etc., have been refilmed to
ensure the best possible image/
Les pages totalement ou partiellement
obscurcies par un feuillet d'errata, une pelure,
etc., ont été filmées à nouveau de façon à
obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

The copy filmed here has been reproduced thanks to the generosity of:

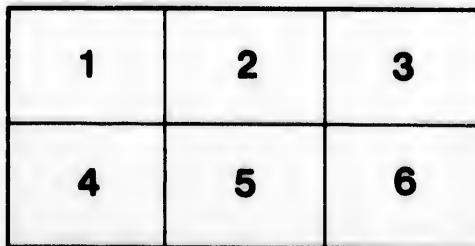
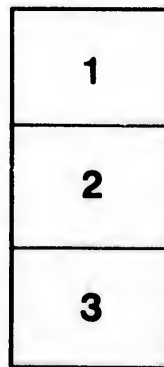
University of British Columbia Library

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol \rightarrow (meaning "CONTINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

University of British Columbia Library

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole \rightarrow signifie "A SUIVRE", le symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

ails
du
odifier
une
mage

rrata
o

pelure,
n à

32X

HE 2810

C27C1

(119)

- ART. V.—1. *The Expansion of England.* By J. R. Seeley, M.A. London, 1884.
2. *By the West to the East. Memorandum on some Imperial Aspects of the Completion of the Canadian Pacific Railway.* London, March 1886.
3. *Parliamentary Debates. Canadian Hansard.* 1880-1-2-3-4-5.
4. *Canadian Pacific Railway: Annual Report for 1885.*

ROBERT CAVELIER, better known as the Sieur de la Salle, accepted in 1666 from the Sulpician Fathers of Montreal the grant, on easy terms, of a tract of land situate about nine miles from that settlement, and just above the last and fiercest of the rapids of the St. Lawrence. Cavelier certainly did not accept this grant with the intention of merely cultivating his new property, nor even of aiding his feudal lords in defending the village from Indian incursions. The post of danger occupied by La Salle was regarded by him as a base from which to push onward to the discovery of a new route to China and Cathay, an enterprise to which, from the first day of his landing in Canada, he seems to have devoted himself. Like many others who, themselves firmly possessed of an idea, have failed to make their friends share in their enthusiasm, La Salle was regarded as a dreamer. When his first expedition to the West reached, after much suffering, the end of Lake Ontario, its leader found no one willing to pursue with him the supposed route to China by the valley of the Ohio River; and those who turned back eastwards gave to his seigniory near the St. Lawrence rapids, in derision, we are told, of their leader's dreamy projects, the nickname of 'La Chine.'

In a strange way, and after long intervals, the onward march of the world is resumed along tracks once trodden, but which for ages have been deserted. The old route by the Ottawa Valley, which the pioneers and missionaries of the seventeenth century used for reaching the upper Lakes of North America, was for nearly two centuries neglected and almost forgotten, in favour of the easier line by the St. Lawrence and the lower Lakes. But now once more that line resumes its importance; and, while it was never given to La Salle himself to approach the Pacific Ocean or even to penetrate further west than the Mississippi, trains will in a very short time be thundering across his old homestead at Lachine, carrying passengers, mails, and merchandise, by that which, after all, has proved to be the most expeditious route between Europe and China.

Of necessity in a country so extensive as Canada the develop-
ment

ment of lines of communication between its several parts has been one of the primary duties of the Government. Hence the enormous outlay upon canals and railways made both before and since the Confederation of the several Provinces. Hence, too, it results that the construction of Canada's latest and most important work, the Canadian Pacific Railway, is really the history for the time of Canada itself. A work, then, which is so particularly representative of England's greatest colony, which is so vast in length, and has been so dramatic in the rapidity of its execution, should have in these pages some record of its history and of its construction. And, further, as as it promises to be intimately associated with the great future of the British Empire, it may also claim consideration in respect of its Imperial and commercial value.

It is unnecessary to decide to whom is due the credit of first giving practical shape to the idea of constructing a transcontinental railway in British North America; but as long ago as 1847 Major Carmichael Smyth, in a letter addressed to 'Sam Slick,' strongly advocated its execution as an Imperial work. 'This national highway,' he wrote, 'from the Atlantic to the Pacific, is the great link required to unite in one chain the whole English race. It will be the means of enabling vessels steaming from our magnificent colonies—from New Zealand, Van Diemen's Land, New South Wales, New Holland, from Borneo and the West Coast of China, from the Sandwich Isles, and a thousand other places—all carrying the rich products of the East, to land them at the commencement of the West, to be forwarded and distributed throughout our North American Provinces and delivered within thirty days at the ports of Great Britain.'

Railways have rendered most efficient aid in making Canada the country that she is to-day. The Grand Trunk line first practically united Upper and Lower Canada. The unfortunate Ashburton Treaty, by extending the northern frontier of Maine to the highlands overlooking the St. Lawrence, having made the separation between the maritime and inland provinces of Canada almost complete, no close political or commercial union between them was possible, until railway communication from the Atlantic seaboard to Quebec through British territory had been provided. Hence the repeated efforts made to construct such a road, the necessity for which was more than ever demonstrated at the 'Trent Affair' in 1861; and hence, when the proposal for a Confederation of all the Provinces was mooted in 1864, one of the essential conditions stipulated for by the Maritime Provinces was the immediate construction

tion of the Intercolonial Railway. For military and political reasons that railway was kept as far as possible from the American frontier, the mileage between Halifax and Quebec being thereby increased to a very considerable extent; and for this, among other reasons, the line can hardly be considered to have been commercially a success. It has been in some quarters assumed that, because the Canadian Pacific Railway is the result of political necessity, therefore its commercial fate cannot be other than that of the Intercolonial Railway. But, as we proceed with our narrative, it will be seen that the conditions of the two lines are not similar, and that their prospects therefore will most probably be different.

On July 1st, 1867, the Act of Union, assented to by the Imperial Parliament in March, came into force, and the Provinces of Quebec, Ontario, New Brunswick and Nova Scotia, became the Dominion of Canada. In 1870, Rupert's Land and all the territories theretofore controlled by the Hudson's Bay Company; in 1871, British Columbia; and in 1872, Prince Edward Island, were severally admitted into the Confederation, which since the latter date has comprised all British North America with the exception of Newfoundland.

In a country of such peculiar geographical features, a political union, however cleverly designed and ably directed, would avail but little, were not a physical union by means of a trans-continental railway speedily provided. Riel's rebellion in 1870 demonstrated alike the necessity and the difficulty of reaching the Red River Settlement. No one doubted the vigour and 'push' of Colonel Wolseley, but it took the expeditionary force which he commanded ninety-five days to reach Fort Garry from Toronto. It would have been impossible for the Government at Ottawa to control a sparse population in the North-West, so far removed from the Executive and the more settled provinces; while the attempt to do so could not but result in enormous expenditure, with no corresponding advantage. To increase the population was difficult, so long as the sole access to the country lay through the United States. It was not, however, the North-West Territories only that had to be considered. As the Atlantic Provinces had stipulated for the construction of the Intercolonial Railway, so the Pacific Province, on entering the Confederation, insisted upon the construction of a railway that should give her access through British territory to her sister provinces in the East. Compliance with this demand was felt to be a commercial as well as a political necessity, and Sir John Macdonald, with a boldness that exasperated his opponents and almost staggered his friends,

friends, promised that the line should be completed within ten years.

In 1871 the Dominion Parliament passed a Resolution to the effect, that the Pacific Railway should be undertaken 'by private enterprise, and not by the Government, and that the public aid to be given to secure the undertaking should consist of such liberal grants of land, and such subsidy in money or other aid, not unduly pressing upon the industry and resources of the Dominion, as the Parliament of Canada shall hereafter determine.' That aid was in 1872 fixed at \$30,000,000 in cash, and a land grant amounting to 54,700,000 acres. But Sir Hugh Allan, and the Company which he formed, could not induce capitalists to embark in the undertaking on these terms. In 1874, the Liberal-Conservative Cabinet of Sir John Macdonald gave way to a Liberal, or 'Grit,' Government under Mr. Alexander Mackenzie's leadership; and, however they might criticize the recklessness, as they termed it, of a policy that had undertaken to accomplish impossibilities, the new Administration frankly admitted that all Canada was in favour of, and was committed to, the construction of a transcontinental line with all speed; with the reservation, however, equally insisted upon by both parties, that its construction should not materially increase the fiscal burdens of the people. In 1875, as the original compact was then obviously impossible of fulfilment, a new agreement with British Columbia was, by Lord Carnarvon's help, arrived at, by which a large sum was to be annually expended on railways in that province, and the line was to be completed as far eastward as Lake Superior by 1890. Thus, within fifteen years some 1900 miles of railway were to be constructed; a task of the probable fulfilment of which Mr. Mackenzie could only bring himself to speak in the following cautious terms: 'We shall always endeavour to proceed with this work as fast as the circumstances of the country—circumstances yet to be developed—will enable us to do, so as to obtain as soon as possible complete railway communication with the Pacific Province. How soon that time may come I cannot predict.' Mr. Mackenzie's aspirations, it will be observed, were limited to the construction of a line from Lake Superior westward; the link eastwards to form a connection with the railways of older Canada being an undertaking far too onerous, it was then thought, to be embarked in.

The new Cabinet altered the form of subsidy, and offered \$10,000 and 20,000 acres per mile, and in addition a Government guarantee of 4 per cent. for twenty-five years on such further amount of capital as might be named by those who tendered

tendered for the work. But these terms, also, were unsuccessful in attracting capitalists, and in 1875 the decision of the previous Parliament in favour of private enterprise was reversed, and it was settled that the work should be undertaken by the Government itself.

Sufficient work was done in the next few years to show, not only how fatal to the success of the great Transcontinental Railway its construction by Government would be, but also how imperfectly each of the political parties understood what was required to make such a line a commercial success. Mr. Mackenzie, for instance, must be credited with the ingenious proposal to give an amphibious character to the line, by 'utilizing the magnificent water stretches' which lakes and river afforded; a proposal which, if carried out, would have absolutely marred the usefulness of the railway as a through route.

When the Mackenzie Cabinet fell in 1879, and Sir John Macdonald returned to power, the Railway Department was placed in the hands of Sir Charles Tupper, an indication at once of the important part that railway extension would play in the policy of the new Cabinet, and of the vigour with which that policy would be maintained. The work both of surveys and of construction was accordingly pushed on; the 'magnificent water stretches' were abandoned; rails were laid from Emerson to Winnipeg, so that, at least through the United States, railway access to Manitoba was secured; and at the same time every effort was made to complete the line between Lake Superior and the Red River, so as to obtain, at all events in summer, a purely Canadian route to the North-West.

About this time the attitude of the Liberal party towards the Pacific Railway project appears to have undergone a change. Mr. Mackenzie, we have seen, had, when in power, admitted and heartily striven to carry out the obligations in regard to the construction of this line, which his predecessor had contracted. The Conservative Opposition, though in the nature of things critical as to details, seem in the main to have loyally supported the Government in pressing on the work. But soon after the parties changed sides in the House of Commons, and especially when Mr. Mackenzie's influence with his party, owing to his failing health, began to wane, a new departure in Opposition policy was made. The Liberals said that to carry out the country's obligations to British Columbia was impossible; that to attempt to do so would impose upon the Dominion financial burdens of an absolutely ruinous oppressiveness; that the idea of a railway from ocean

to

to ocean, entirely avoiding foreign soil, must be relegated to a dim and very distant future; and, with a strangely unpatriotic perverseness, they laid stress upon the merits and advantages of the Western States of the Union as a reason why their own grand possessions in the Canadian North-West would long remain neglected. The result, however, to the country of this strange perversity was good; for the Cabinet, thwarted by the obstacles put in their way, were driven to revert to the original plan of having the work executed by an independent company.

A few Canadians, whose reputation stood equally high for shrewdness, courage, and probity, had recently converted a bankrupt railway in the Western States, thereafter known as the St. Paul, Minneapolis, and Manitoba Railway, into a prosperous concern; profitable to themselves and extremely useful to the public. To these gentlemen, most of them their political opponents, the Government turned, and induced them, after due consideration, to take upon themselves the execution of a work that had already upset one Government, had materially contributed to defeat another, and which, it was commonly said, would yet be the death of many another Administration before it was completed.

In January 1881 Sir Charles Tupper, as Minister of Railways and Canals, introduced into the House of Commons Resolutions to give effect to the Provisional Agreement already arrived at between the Government and the Syndicate, as it was called. Following, as he was able to do, that the terms (which will be given in detail later on) were far more favourable to the country than any which had been previously proposed, and even than those on which the late Government had attempted to get the work executed, he appealed to the Opposition to unite with his own supporters in bringing this great national work to a triumphant and satisfactory conclusion. But the appeal was in vain. The Canadian Opposition missed, on this occasion, an opportunity of adopting a course, that would have been at once creditable to themselves and advantageous to their country. It must be confessed—as the wearisome pages of the Canadian *Hansard* fully testify—that the captious criticism on the subject of the Canadian Pacific Railway has not redounded to the reputation of the Opposition as patriots or statesmen; while it cannot be questioned, that the tactics so persistently adopted by them have at times done much abroad to shake the credit and position of the Colony. Canadians have during the past few years been often heard bitterly to say, that the worst enemies of their country and the greatest obstacles to its progress were to be found among their own countrymen. But, without pursuing

pursuing this topic any further, it is enough to say, that the Resolutions above referred to were adopted by large majorities in both Commons and Senate, and that on February 17, 1881, the Canadian Pacific Railway Act received the Royal Assent, and the Company its charter.

Let us now go back six years, and look at the problem then before the organizers of the new Company. Canada's object was to connect the Atlantic and the Pacific Oceans by a railway to be made entirely on Canadian soil. This meant the construction of at least 2500 miles of new line. Of this length, the 650 miles between the upper Ottawa River and Port Arthur lay through a district of which all that was known was its extreme unsuitability for railway construction. The fertility of the great prairie plains, stretching for 900 miles westward from the Red River, was theoretically believed in by the few, but was not yet practically demonstrated to the many; while in the West there were three mountain ranges to be crossed, and the dangerous cañons of the British Columbian rivers to be threaded. Through these the three-quarters of a million sterling already spent on surveys had hardly resulted in discovering one feasible line for the passage of the railway to the Pacific. Any estimate of the cost of construction was necessarily little more than conjectural, while the market value to be set upon the Land Grant, upon which it was expected that so much of the capital needed for the work would be raised, was also problematical. Then, as to time—the Government wanted the line completed in ten years; but Mr. Mackenzie had, as we have seen, expressed grave doubts whether the western section, from Lake Superior to the Pacific, could be completed even in fifteen years. Then the Government stipulated, that the line should be worked, as well as made, by any syndicate that undertook its construction. But how was the cost of working it to be met? Had not a high authority lately estimated that cost annually at eight million dollars beyond the earnings? Had it not been officially argued that, since for many years the line would not pay its expenses, the Government must grant a heavy subsidy? The men who, in the face of these awkward facts, and of still more awkward uncertainties, entered upon the task put before them, and who, before appealing to the public for aid, subscribed a million sterling as an evidence of their own faith in the ultimate success of their undertaking, were not wanting in courage.

The conditions of the contract now made were, briefly, as follows. The Government were to complete and hand over to the Company the lines then under construction, amounting in
all

all to 713 miles, and representing approximately an outlay of \$30,000,000. The remainder of the line between Callendar—a geographical expression for the terminus of the yet unfinished Canada Central Railway—and the Pacific coast, an estimated total of at least 1900 miles, was to be completed by the Company before May 1891. The construction was to be equal to the standard of the Union Pacific road. The subsidy was fixed at \$25,000,000 (5,000,000*l.* sterling) and 25,000,000 acres of land; each amount to be given to the Company in stated proportions to the work done on each section. Materials used in the first construction of the road were to be admitted free of duty. The Company's lands, if unsold, were to be free of taxes for twenty years, and its property was to be exempt from taxation. The right of way over lands owned by the Government was to be free. The rates charged by the Company were to be exempt from Government interference until the shareholders were in receipt of 10 per cent. on their stock; and for twenty years no competitive lines were to be allowed to cross the American boundary in Manitoba or the North-West Territories.

With these concessions the Company at once set to work. The first thing done was to secure the Canadian Central Railway, by which Ottawa was reached, and a connection at Brockville with American lines; and the next thing was to acquire from the Quebec Government the line from Ottawa to Montreal. This brought the Canadian Pacific to tidewater; to the chief port and city of the Dominion. But Montreal, important centre as it is, is only a summer port; and arrangements were made for the control of railways giving access to the Atlantic coast. To this we shall return later on. Again, an acquaintance with Canada, or a glance at the map, will show that the main line of the Canadian Pacific does not touch South-Western Ontario, the great district between Lakes Ontario, Erie, and Huron, whose capital is Toronto, and which is, on the whole, the most prosperous section of the Dominion. The manufacturers and merchants of Ontario were naturally looking forward to a large business with the new settlers in the North-West; but it was obvious that, unless the Syndicate gained access to that district, and could exercise some control over its traffic, almost the whole of the latter would pass to Manitoba *via* Chicago, and thus be lost to the national railway. An arrangement was accordingly made with those who were then constructing the Ontario and Quebec Railway between Toronto and Montreal; and that line, together with other lines affiliated to it, were leased to the Canadian Pacific.

The Canadian Central Railway not having in 1881 reached Callendar,

Callendar, it was obviously impossible for the new Company to undertake much work beyond that point. Its chief energies were therefore first directed to the construction of the line from Winnipeg westwards. At the outset two decisions of importance were made: first, to adopt a more southern route across the plains and through the mountains than had formerly been advocated; and secondly, to construct the line in a more substantial manner than the contract required. The former decision would, it was calculated, save between 70 and 100 miles in the through distance, but the latter necessitated the abandonment of all the work done by the Government beyond Winnipeg, at a time when it was supposed that a 'Colonization road' of a cheap character would suffice.

We enter now upon a record of construction that is absolutely without parallel in railway annals. People talk of the 'Prairie section' as if the country were as level as a billiard-table, and that little more was required than to lay the rails on the surface of the soil. But those who have been in the North-West know well that, except between Winnipeg and Portage, there is very little level country. The earthwork on this whole section averaged at least 17,000 cubic yards per mile, and the railway was constructed unusually high above the ground, so as to avoid as far as possible the risk of snow blocks. Work was commenced in May 1881, and by the close of the season 165 miles had been completed. This rate of progress, however, was not fast enough. So in the spring of 1882 a contract was made with Messrs. Langdon and Shepherd, of St. Paul, to complete the line to Calgary, 839 miles from Winnipeg. The work was sublet by them in short sections, according to the ability of the sub-contractors. But in a country where even the stone and timber for construction, as well as the food for men and horses, had to be brought up from an ever-receding base, it was absolutely necessary that the control of the whole should be centred in one management. To provide for the sixty different parties employed, to see that each had its requisite materials, and that work in each year was being done up to time, as well as up to the standard, could only be effected by perfect organization. From an account given by an eye-witness, himself very capable of appreciating what he saw, we extract the following graphic description of the work:—

'The rapidity of construction of this section of the road is without parallel . . .

'As soon as a gang had finished one section they had to move from a hundred to a hundred and fifty miles ahead, where in another six weeks they were tolerably sure to hear the locomotives behind them,

them, and the clanging of the hundred hammers of the track-layers close at their heels.

‘In advance of the track-laying party were two bridge gangs, one working at night and the other in the day, and as every stick of timber had to be brought from Rat Portage, 140 miles east of Winnipeg, they were seldom more than eight to ten miles ahead of the track-layers. The timber had to be hauled from the point where it could be unloaded, as near to the end of the track as possible, to the place where it was wanted; and this was generally done in the night, to interfere as little as possible with the other work. Where not a stick of timber nor any preparation for work could be seen one day, the next would show two or three spans of a nicely finished bridge; and twenty-four hours afterwards the rails would be laid, and trains working regularly over it. Following these came the track-laying gang, the most attractive and lively party of the lot, and on which most of the interest of those who visited the work seemed to centre. There were three hundred men and thirty-five teams in this gang. Moving along slowly but with admirable precision, it was beautiful to watch them gradually coming near; everything moving like clockwork, each man in his place knowing exactly his work and doing it at the right time and in the right way. Onward they come, pass on, and leave the wondering spectator slowly behind whilst he is still engrossed with the wonderful sight. The returning locomotive, with her long string of empty cars rushing past him, awakens him from his reverie; and another pushing before her more slowly her heavy load, and taking them up to the front, shows him that where an hour before there was nothing but an upturned sod, two ditches and a low embankment, there is now a finished working railway. The emblem of civilization has passed, the subjugation of the land is accomplished, and that which was the hunting-ground of the Indian and the home of the buffalo yesterday, has gone for ever from his occupation; is Britain to-day, not in name only, but for use, and will probably be occupied within a week by some hopeful and happy British family, who in another season or two will make it a smiling home and the abode of lasting comfort and prosperity. No wonder that it was a sight that hundreds came to see; it was a miracle of progress, the visible growth of an empire; the practical realization of the dream of centuries, as the highway was gradually being laid down destined to conduct the commerce of Europe to that wonderful Orient where a prodigal Nature pours out her riches to supply the wants and luxuries of the world. All that Columbus and Champlain and others had hoped to discover, all that Magellan and Hudson and Franklin had died to find out, all that England and Spain had bestowed their money to explore, and all that France had lavished her energies and sacrificed her heroes to control, was quietly being accomplished by that motley gang and those few locomotives, as the north-west passage to Asia was advancing over these hitherto unserviceable prairies. Each day from twenty to twenty-five heavy twenty-ton cars of rails and fastenings, and from forty to fifty cars of ties and other materials were laid by this busy track-laying

track-laying gang, and nearly all of this had some an average of a thousand miles by rail before it was safely delivered at the "end of the track."*—'Engineering,' April 25, 1884.

The result of this energy was very conspicuous. But in the spring of 1882 disastrous floods occurred in the upper Red River, the only route by which supplies could then reach the North-West; and consequently in the three months ending 30th June less than 70 miles were completed. This comparative inactivity was, however, counterbalanced by the work of the next six months, which, at the rate of over 58 miles a month, produced 349 miles of finished railway. In 1883, 376 miles were completed, and this included the gradual ascent of the Rocky Mountains to within four miles of the summit of the pass. The total advance for the three years was 962 miles, exclusive of 66 miles of sidings. The greatest length of mileage laid in one month was 92 miles, in July 1883; the highest daily average during several weeks was 3.46 miles *per diem* for the eight weeks ending August 5th; and the greatest length laid in one day was 6.38 miles on July 28th in that year.

For the details of that remarkable day's work we again refer to the paper above quoted:—

'There were twenty-four men to handle the iron, that is twelve unloading it from the cars, and twelve to load the trollies. It took the same number to lay it down in the track. The total number of rails laid that day was 2120, or 604 tons. Five men on each side of the front car handed down 1060 rails, 302 tons each gang, whilst the two distributors of angle plates, and bolts, and adjusters of the rails for running out over the rollers, handled 2120 rails, 4240 plates, and 8480 bolts. These were followed by fifteen bolters, who put in on an average 565 bolts each; then thirty-two spikers, with a nipper to each pair, drove 63,000 spikes, which were distributed by four peddlers. The lead and gauge spikers each drove 2120 spikes, which, averaging four blows to each spike, would require 600 blows an hour for 14 hours. There was 16,000 ties or sleepers unloaded from the trains, and reloaded on to waggons by thirty-two men, and thirty-three teams hauled them forward on to the track, averaging seventeen loads of 30 sleepers to each team. On the track eight men unloaded and distributed them, and four others spaced them, two others spaced and distanced the joint ties, and two others arranged and adjusted displaced ties immediately in front of the leading spikers. Four

* An opinion having been expressed, that the then projected line from Snakim to Berber could be completed in four months, provided that the working parties were protected from Osman Digma's attack, the assertion was promptly made by the leading London journal, that it was impossible to construct a railway "telescopically" from one base. And yet in three years these Canadians had just constructed 960 miles "telescopically!"

iron carboys and two horses were used to haul the iron to the front. The first two miles of material were hauled ten miles along the prairie, and the rest from three miles up, as the usual side track gang put in a siding two thousand feet long during the day.'

But dramatic as was the completion of such a length of mileage within three working seasons, the work which had meantime been going on near Lake Superior was no less remarkable. Operations in this case were not confined to the ends of the line, but were carried on at all points to which access could be gained on or from the Lake. From Callendar westwards a more favourable route than had been expected was found; and on several long stretches progress was very rapid. But some of the most difficult and expensive work on the line was required along the northern edge of the Lake itself. The amount of rock-cutting was very heavy, and here, as in the Rocky Mountains, it was found desirable to establish dynamite factories on the spot. It is said that 1,500,000*l.* sterling was expended in dynamite, and that \$10,000,000 were laid out on one 90-mile section of road. Even all through the winter of 1884-5 this work went on, some 9000 men being employed. And well it was for Canada that such energy had been shown and such progress made in that district; for when Riel, in the spring of 1885, raised a rebellion a second time in the far North-West, the citizen soldiers, who flew to arms from all parts of Canada, were hurried forward over that uncompleted but still most valuable piece of railway, and by this means speedily and unexpectedly arrived at the scene of the revolt. The experience of the men could not have been a very pleasant one as, in the early spring and in intense cold, they were carried in contractors' cars over the unballasted road, and had to march over the frozen margin of the lake on arriving at each gap in the unfinished line. But patriotism triumphed over natural obstacles as well as over the rebels. The Pacific Railway, though incomplete, enabled the Government to crush the rebellion promptly: completed, it makes future rebellions impossible. By the time the troops returned in the early summer, the gaps had been finished, and there was a continuous line of rails stretching from Montreal to the summit of the Rocky Mountains.

The summit, we have seen, was reached by the track-layers at the end of December 1884. It was not unreasonable that those, who had crossed the prairie with such speed, should pause awhile at one of the greatest declivities down which a railway has been carried. It was not, however, from exhaustion either of resources or of energy that a short halt was then called, but in order that

one more examination might be made of the two passes, by either of which the west slope of the Rockies might be descended. The Howse Pass presented easier gradients, but it would have added thirty miles to the line, while to reach it an altitude of another 1000 feet would have to be surmounted—a very serious matter in the region of snow. So the Kicking Horse Pass, with all its difficulties, was selected. The decision once made, the work went on.

At the watershed is a lake, from either end of which issues a stream—the outlet of one stream is in the Atlantic, *viâ* Hudson's Bay, the outlet of the other is in the Pacific. The latter stream, the Kicking Horse River, begins its turbulent course through a cleft of crystallized limestone of excessive hardness, and falls 1100 feet in three and a half miles. To complete at once the circuitous route by which this descent could be accomplished without exceeding the gradient of 2·2 per 100 feet, which had been decided upon as the maximum to be allowed in the Mountain section, would have delayed the work beyond that point so many months, that it was determined to construct, at the most difficult part, a temporary line on which a very steep gradient would for the time be admitted. This was accordingly done, and not only the construction trains but those for the regular traffic, after the completion of the line, have ever since been so easily and safely worked up and down this heavy gradient, that it seems doubtful if it will ever be necessary to undertake the longer and easier route. In the 44 miles between the summit of the Rockies and the mouth of the Pass in the valley of the Columbia River, a fall of 2757 feet was accomplished, and in that distance, in addition to other minor streams, the Kicking Horse River was crossed nine times, and, exclusive of tunnels, 1,500,000 cubic yards were excavated, 370,000 of which were of rock. The drilling for this, owing to the impossibility of conveying machinery to the spot, was done by hand. In one part treacherous landslips gave far more trouble than even the hardest rock. It was, therefore, not to be wondered at that, by the 18th of June, the permanent way had only been laid 8 miles west of the summit. By the end of the season, however, there was a satisfactory record of 75 miles of finished line, including a very considerable bridge over the Columbia River.

By the time the work was, in the spring of 1885, resumed at the mouth of the Beaver River, the line in course of construction by the Government from Port Moody to Savona's Ferry, near Kamloops, was approaching completion. The gap between the two ends was only 220 miles, but two mountain ranges, the Selkirks and the Gold Range, had to be surmounted. Through

the latter, the more westerly of the two, Mr. Moberley had some years before, by following the true indication of an eagle's flight, discovered the Eagle Pass; but for many years the magnificent Selkirks had defied the attacks of all surveying parties. To Mr. Moberley attaches the credit of having pointed out that, up a certain branch of the Ille-cille-wait River, the long-looked-for route would, if at all, be discovered; and Major Rogers, the Canadian Pacific Company's engineer, has the honour of being the first man known to have crossed this range, by a pass to which his name has been very properly given, and through which the railway came close upon the heels of its first discoverer.

Even to those who had triumphed over the obstacles of the Kicking Horse Pass, the ascent and descent of the Selkirks presented problems that taxed to the utmost the skill and courage of the engineers. The traveller, who in his luxurious carriage is enjoying some of the most splendid mountain scenery in the world, will also certainly admire the ingenuity and daring of the men who devised and executed the railway along which he is so smoothly carried. While the track-layers from the East were steadily making their way through the Rogers Pass, those from the West were making good progress across the Gold Range; and as the autumn advanced, it became an interesting question when and where the two parties would meet. As expressive, in an American manner, of a huge distance, there was an old saying, that on one of the Dalrymple farms in the Western States the furrow was so long that, when the gang of ploughs returned, they found the harvest ripening from the seed dropped on their first passing. Some idea of the length of the Canadian Pacific Railway and the speed of construction may be formed from the fact, that several miles of permanent way yet remained to be laid in the West, when the first train, that was destined to pass from the St. Lawrence to the Pacific coast, left Montreal. Steadily westward moved the train, steadily onward from both sides proceeded the work; until when the locomotive reached a point in the Eagle Pass, not far from the second crossing of the Columbia River, the two parties were found on November 5th, 1885, face to face, and the Canadian Pacific Railway, with the exception of one rail, was an accomplished fact. It is significant of the business-like, unostentatious manner, in which this whole work was accomplished, that, whereas the Northern Pacific celebrated the driving of their 'golden spike' by an extravagant excursion, that admittedly cost the Company \$175,000, and probably cost them half as much more, the last spike on the Canadian Pacific was driven by Sir Donald Smith, in the presence of not more than a dozen persons
besides

besides those who had been actively employed in laying the permanent way. 'The last spike,' Mr. Van Horne had long before announced, 'will be just as good an iron spike as any on the road; and those who want to see it driven will have to pay full fare.' There was no banquet, no speech-making in the depths of that British Columbian forest; and, having seen the last rail duly laid, the whole party, it is said, quietly went fishing at the next 'likely' stream. But the telegraph—for the wire had throughout kept pace with the railway—flashed the news of the completion of the undertaking far and wide; and a graceful and fitting testimony to the importance of the great work was conveyed to the President of the Company in the following message:—

'I am desired by the Governor-General to acquaint you, that he has received Her Majesty's commands to convey to the people of Canada her congratulations on the completion of the Canadian Pacific Railway. Her Majesty has watched its progress with much interest; and hopes for the future success of a work of such value and importance to the Empire.

'MELGUND, Governor-General's Secretary.'

The contract stipulated for the completion of the line by May 31st, 1891. As we have seen, the last rail was laid on November 5th, 1885, and a regular through train service commenced on June 28th, 1886, or five years in advance of the specified time. When it is remembered that in the West three mountain ranges were traversed, and that in the East, near Lake Superior, the work for more than 100 miles was one of the utmost difficulty, the construction of more than 2200 miles of railroad in four years and a half must be regarded as a most wonderful achievement. That this was not effected by scamping the work is proved, by the independent testimony of English, French, and American engineers who have examined the line, as well as by the formal certificates from time to time given by the Government Engineer. Indeed, it was obviously to the interest of the future proprietors of the railway, that it should be most substantial in construction, and that the gradients should be easy; more especially as in the conveyance of transcontinental mails, passengers, and freight, upon which the future of the line so greatly depends, high speed will necessarily be required. A few statistics will show that this can be easily obtained. The three heavy gradients in the mountains are all contained within three sections of, say, 20 miles each; a concentration that tends to security and economy in the working. Between Montreal and Winnipeg there is no gradient exceeding 53 feet to the mile; between Winnipeg and a point close to the summit

summit of the Rockies there is but one that exceeds 40 feet. Since July, the schedule time between Montreal and Burrard's Inlet has been 136 hours; soon to be reduced to 120 hours; and this again, when the China and Australian mail service commences, will, we are promised, be reduced to 90 hours, or a through speed of 32 miles an hour.

For making fast time, a comparison between the American and Canadian transcontinental railroads is most markedly in favour of the latter. On the Canadian Pacific, as we have seen, the heavy gradients are all within a short length of line; whereas on the lines in the States they are stretched over hundreds of miles. Then, too, in the summit levels to be reached the Canadian line has an immense advantage. The Northern Pacific passes are respectively 3940, 5500, and 5563 feet above the sea; those on the Union and Central Pacific are 6160, 7017, 7835, and 8240 feet; while those on the Canadian Pacific are 1996, 4306 and 5296 feet only.

In actual distance, also, across the Continent, Canada has a considerable advantage: the distance from Montreal to Vancouver being only 2905 miles, while from New York to San Francisco it is 3271 miles. And whereas the various American railways making up the transcontinental line are owned and managed by several distinct companies, the whole traject from the St. Lawrence to the Pacific is under one undivided control. In carrying the Pacific and Atlantic mails to and from Japan, China, and Australia, the advantage of having the line from end to end under one management, so that it can be kept clear, of shorter mileage, and of easier gradients, will continually be felt.

In July 1886, as we have seen, Montreal found itself in easy daily communication with the Pacific coast. But neither Canada nor the Railway Company were satisfied to rest there. The St. Lawrence is only available for summer traffic. True, the Grand Trunk connects Montreal with the harbour of Portland, Maine. But it was deemed essential that the national transcontinental line should have its own independent access to all the Atlantic ports; and especially that the Maritime Provinces of Canada should be brought into closer commercial relations with the rest of the Dominion. To effect this, the Canadian Pacific prepared to bridge the St. Lawrence; and the Government agreed to subsidize a company which undertook, by acquiring such lines as were already available, and by constructing the missing links where needed, to make an almost 'Bee line' between Montreal and the head of the Bay of Fundy, round which it was necessary to go to reach Halifax. This 'Short Line,' or International Railway, is to be completed by the

the winter of 1886-7, and the effect will be to bring the New Brunswick port of St. John, and the Nova Scotian port of Halifax, 279 and 125 miles respectively nearer to Montreal than they are by the present Intercolonial Railway route. The Short Line will, of course, as it passes for some 150 miles through the State of Maine, not be available for troops and war-materials; but commerce fortunately can, by sealed cars and bonding arrangements, afford to disregard political boundaries.

We move quickly now-a-days; and that which was deemed almost one of the world's wonders a few years ago is now thought little of, being superseded by something else which in most instances is better and has also cost far less than its predecessor. In 1860 the Prince of Wales formally opened the Victoria Tubular Bridge at Montreal. Crossing the St. Lawrence at one of its widest points, it is over 9000 feet long; it took more than five years in construction, and cost the Grand Trunk Company, it is said, over six millions of dollars. It was, in its day, a wonderful work. In January 1886 the Canadian Pacific made a contract for the construction of a steel truss-bridge across the St. Lawrence at Lachine. There were to be fifteen stone piers, two of which stand in 27 feet of water running at the rate of about seven knots. There were to be two cantilever spans over the steamboat channel of 408 feet each, two level spans of 270, eight of 240 feet; the whole length being 3454 feet. It was late in April before the contractor for the masonry could get to work at the piers, which he was bound to finish by November 30th. A fortnight in advance of that time he reported the work accomplished. The bridge-builders are close behind the masons, and by the time these words are in print it is expected that the Lachine bridge will be ready for the trains. The cost has not been made public, but it is said not to exceed 250,000*l*.

It is supposed that, at one time, when the work of construction was in progress all along the Canadian Pacific line, as many as 25,000 men were employed upon it. And before leaving this part of the subject, a word ought to be said in praise of the Dominion regulations for keeping the peace in the vicinity of great public works, and also of the Temperance rules which are so honestly and strictly enforced in the North-West. It was only by the help of these efficient rules and regulations, that such a record of unprecedented work was possible, and that peace and order could be, and were, as well maintained at 'the end of the track' as in a quiet English village. The contrast between this state of things in Canada and the rampant rowdyism that marked the construction of the Western railroads in the United States

States aroused, as well it might, the warm approval of an old Yankee contractor at work on the Canadian Pacific. 'When a man breaks the law here,' he said, 'justice is dealt to him a heap quicker and in larger chunks than he has been accustomed to in the States. I tell you there is a way to do it, and they *are* doing it here, right from the scratch.'

Although we are not writing for financial readers, still the question will naturally be asked, What has been the outlay on all this gigantic work, what is the capital charge of it to the Company, and is a sufficient rate of interest likely to be provided by the traffic receipts? It is needless to say, that the Company has received substantial aid from the Dominion Treasury, as well as constant moral support from the Government. It is equally needless now to recapitulate the various forms which at times that aid assumed. Suffice it to say that, on one side, the Company's contract is admitted to have been honestly and satisfactorily fulfilled, while on the other it has already repaid to the Government all the money advanced to it in excess of the original subsidy. Each party to the contract is now, therefore, clear of the other.

On the Canadian Pacific proper the capital charge appears to stand at 7,000,000*l.* sterling, in 5 per cent. bonds, placed on the London market by Messrs. Barings, and 13,000,000*l.* in shares. For the latter an annuity of 3 per cent. per annum for ten years, expiring in August 1893, was purchased, out of capital, from the Dominion Government. This is an inalienable payment secured to the shareholders, totally irrespective of any surplus earnings that in the meantime may be available in the form of dividends. The main line, however, and its branches and leased lines are treated by the Company as one system, and as such must be regarded. The total liabilities of the whole system, capitalized, represent about \$135,000,000, say 27,000,000*l.* sterling. (This includes an estimate for the cost of the St. Lawrence bridge, &c.) Taking the total mileage when completed at 4500 miles, this represents exactly \$30,000, or 6000*l.* per mile—certainly an extraordinarily low capital charge. After making as careful an allowance as we can, to cover all the additions made since the last Report was issued, we shall not be far wrong in placing the Fixed Charges for 1887 at \$3,340,000, to cover which the line only requires to earn \$750, say 150*l.*, per mile.* It has hitherto been both
ridiculous

* We have said that there is no other railway whose position is so parallel to the Canadian Pacific as to allow of useful comparisons being made between them. But, for whatever they may be worth, we give the following figures. Over a period

ridiculous and impossible to attempt to say, either what have been, or what ought to have been, the earnings *per mile* of an incomplete road of such an exceptional character as the Canadian Pacific. The railway has been incomplete; most of the country through which it passes is undeveloped; much of it is still absolutely without population; and traffic, commerce, everything, has to be created. Above all, the through traffic may be said not to have yet commenced. That a line with all these things against it should already be earning a substantial amount in excess of its Fixed Charges is astonishing, and cannot but be gratifying to its shareholders. These charges for 1886 amount to \$3,110,000, over which the net earnings for the year—the last two months still being estimated—will apparently show a surplus of some \$500,000. As the Fixed Charges will, presumably, not increase for some time to any very large amount, beyond the figure given on the previous page, whereas in the nature of things, with only an ordinary increase in the population and business of the country, the traffic receipts must yearly show a large development, the financial success of the undertaking seems as assured as the construction of the railway.

It is only right to point out, before leaving the financial branch of the subject, that the Company, in the 14,500,000 acres of farming land still left to it in the North-West, possesses a reserve of capital that cannot be estimated to-day at less than 4,500,000*l.* sterling; an estate that costs its owner nothing in taxes, and of which, by a process of 'unearned increment,' the value is year by year rapidly growing. On these matters the Directors of the Company, whose promises and predictions have certainly been hitherto more than fulfilled, may fairly be listened to; and this is what they said to their shareholders in their last Report:—

'In conclusion, the Directors beg to renew their expressions of entire confidence in the success of the enterprise, as a commercial undertaking. With its main line stretching from the Atlantic seaboard to the shores of the Pacific; with its extensive system of branch and connecting lines, enabling it to reach the chief centres of trade in Canada and the Northern United States, with its own steamships on the great Lakes, and all this under one management; with the further great advantage of having only to provide for a total capital charge, including bonds, leases, and ordinary shares, of less than

period of nine years the Grand Trunk net earnings averaged \$1850 per mile. Those of the Great Western of Canada, during six years, \$1165. The Northern of Canada, during the past four years, \$1360, and the Northern Pacific, during the twelve months ending Sept. 1886, at the rate of \$2190 per mile. The Canadian Pacific can pay its fixed charges by earning only \$750 per mile.

\$30,000

\$30,000 per mile, or about one-fifth of that of its principal Canadian competitor, and far below that of any of its American competitors;— with all these advantages, and its superior facilities for attracting business and conducting it economically and efficiently, and with no telegraph, sleeping-car or elevator companies, or any other private interests whatever to sap its revenues, the Canadian Pacific Railway can hardly fail to meet the expectations of its projectors, and to be a source of large and certain profit to its shareholders; and, finally, with the establishment of steamship connections of the best class, both on the Atlantic and the Pacific, it must soon become a powerful factor in the world's commerce.'

The great project, except as regards the extension to the eastern seaboard, being now practically complete, Canada has already begun to reap some return for the sacrifices she has made; and we in England may all the more cordially hope that her expectations may be entirely fulfilled, inasmuch as while working for herself, she has also been working in the interests of the mother country. For herself, she has welded that iron band, without which her political system would disintegrate, but the possession of which promises to render permanent a Confederacy occupying a line four thousand miles in length, of which each section is now within touch, by wire and rail, of the rest. The 'illimitable possibilities' of the Great North-West, with its millions of acres of land producing abundantly the hardest wheat in the world, are now ready for development. There is no longer any reason, why Canada's sons should 'go to the States' to make a new start in life, while there is every reason, why emigration from our own shores should, in preference to being allowed to drift to New York, be judiciously directed to a land over which the British flag waves, and where, in fourteen days from the date of leaving his old home, the emigrant may be turning the furrow on an estate of 160 acres of good wheat land which, at no cost to himself, is, as children say, 'his very own.' The Railway, too, has solved the most difficult problem of the Indian question. If the advent of the locomotive should make the buffalo extinct, like the dodo, there is ample compensation in the fact, that 'Big Bears' and 'Sitting Bulls' are also passing away. The remnants of the races, that have left nothing but piles of bones to mark their long occupation of one of the finest portions of the earth's surface, will now have to exchange the scalping-knife, paint, feathers, and heathen Sun-dances, for ploughs, and clothes, and Christianity.

The ranching industry in Alberta, for which district American cattle-men are deserting their former holdings further South, is rapidly

rapidly growing, and, either 'on hoof' or in refrigerator cars and steamers, its products will, along with 'No. 1 Hard' wheat, soon make their mark in English markets. The eastern foothills of the Rockies are underlaid by vast coal fields, which are already supplying to the settlers on the treeless prairie that cheap fuel, without which the cultivation of those rich acres would be impossible. For lumber, too, about the future supply of which Americans are, not without reason, becoming anxious, the Canadian Pacific opens new districts near Lake Superior, in Keewatin, and, above all, in British Columbia, whose forests are perhaps the finest in the world. The impetus given to mining industry, too, is already most marked: witness the extraordinary copper deposits near Sudbury, the silver ore that is rapidly making Port Arthur a large industrial centre, and the gold wealth of the Kootenay district, now for the first time made accessible. Add to this list the opening of a large reciprocal trade between the Dominion and Australia, and we have the principal results to Canada herself of the completion of the Canadian Pacific Railway.

But there are other and yet more far-reaching results that affect Englishmen all the world over. Whether we regard it in relation to the emigration problem, which must so soon be grappled with; or in connection with a possible Imperial Federation; or, lastly, as a contribution to the safety and defence of the Empire at large, we shall find much to interest us in the Canadian Pacific Railway. In order that this may be understood, it will be necessary to show, by a few details, what a revolution in our old-fashioned ideas of geography and routes this young giant is already effecting.

Canada has hitherto been content with an ocean service that has landed passengers in Quebec very comfortably in ten or eleven days from Liverpool. But, in view of the understood intention of the Imperial Government to subsidize a line of mail steamers on the Pacific between Vancouver and Japan and China, the Dominion Government are now calling for an accelerated Atlantic service, and it seems certain that they will be offered one of a character and speed at least equal to any now running to New York. The result will be that, as Halifax, projecting far into the Atlantic, lies nearer than New York to Queenstown or Plymouth by 600 miles, passengers and mails will be carried from shore to shore in (say) five days and a half. From Halifax those travelling west to the East will be carried to the Pacific coast in another equally short period—say, eleven days from London to Vancouver. A year ago the British Government called for tenders for a mail service
between

between Vancouver, Yokohama, and Hongkong. The Canadian Pacific people had, no doubt, already seen the possibilities of that route, and promptly laid before the Imperial authorities a scheme far in advance of what had been asked for. The Postmaster-General having proposed a $10\frac{1}{2}$ -knot service, the Company pointed out, that there would be no inducement for the Dominion authorities to secure a fast service on the Atlantic, or for their own trains to cross the Continent at express speed, if time was thus to be thrown away on the Pacific, and they promptly offered an efficient 15-knot service across that ocean. In addition, they proposed to construct their mail steamers under Admiralty supervision in such a manner as to render them convertible at short notice into armed cruisers of a formidable and useful character. This means, that not only will the passage, between England, Yokohama, and Hongkong, which now, *via* Brindisi, occupies 40 to 42 and 32 to 35 days in either case, be reduced to 25 and 31 days respectively; but that the British Government could, in times of danger, command the services of several first-class cruisers in those seas, to which it will always remain difficult to send reinforcements of ships, but on which it is, in view of our more intimate relations with China, and our possibly less harmonious relations with Russia, increasingly important, that England should not, at a critical moment, be weak.

With its Eastern terminus at Halifax, where is a dockyard and the only Imperial station on the Atlantic coast, and its Western at Vancouver, and coal mines at both, the Canadian Pacific becomes a strategic line of no little importance to the Empire. Vancouver is exceptionally well adapted for the purposes which Great Britain requires. The Pacific squadron, having its rendezvous in British Columbia waters, will no longer be cut off from its base, and dependent on a foreign country for even telegraphic communication with its own. The Admiral, lying in Burrard's Inlet, which could itself easily be fortified, is, by a wire that no foreigner handles, in touch with Halifax, Bermuda, and Whitehall, and can draw men and supplies in a week from Halifax, in a fortnight from England itself. Across the Straits lie the coal mines of Nanaimo, whence comes the only good coal on the Pacific coast; and at Esquimalt the Dominion has just completed a large dry dock, and has agreed, it is said, to erect defensive works.

But it is not only our relations with Japan and China that are affected by this railway. In speaking of the possible alternative route to India which it affords, we shall be careful not to overstate its importance, although we know that by some authorities

rities that is estimated very highly. When the Suez Canal was opened, a great part of the commerce of the world, from having been *oceanic*, became again more or less *thalassic*, in Carl Ritter language. The present generation has come to look upon that route as permanent, and such a very large proportion of ships are now built on Canal measurements, that any blocking of 'the ditch' will cause a very serious disturbance to trade. Yet all are agreed that, in the case of a European war, the Canal, even if not blocked, will be nearly useless, because the passage of the Mediterranean, in the face of so many ports from which cruisers could sally, will be so dangerous as to be practically unusable except by strong squadrons.

'In that case we shall revert to the Cape route.' To a certain extent, yes; but, if we are wise, not exclusively. We want to send military and naval supplies of men and materials to India. The transport has first to run the gauntlet of the ports of Western Europe and of vessels lurking about the Western islands. Then the centre of depression of war-clouds moves now-a-days as fast as a south-west gale coming up from the Atlantic, and troops and stores despatched *via* the Cape may be sadly needed in Europe before they reach their destination: but, once started, they are gone beyond recall. Granted, however, that the vessel safely reaches Bombay in, say, thirty-three to thirty-five days.

Now let us look at the Canadian route. The North Atlantic should be, and in case of war *must* be, safe for British shipping, if for no other reason than this, that otherwise we shall starve. Neither Russia nor India will then send us a bushel of wheat. Cargoes from New Zealand, California, South America, will be risky ventures. It will be on such wheat-fields and ranches in the North-West as we have been describing, that many-mouthed England will depend for her food supplies; and the food problem promises to be for us one of the most serious in the great wars of the future. Our transports, then, we must assume, will be able safely to run to North America, from whence they will bring back food supplies. Presumably, too, if the war-cloud lowers in the East, a force will have quietly been concentrated at Vancouver. From that point, if need arose, it could either be conveyed to England in a fortnight, or landed in Calcutta in twenty-five days. The Halifax garrison and more troops from England could reach India in five, and eleven days longer, respectively. This is, at least, a second string to our bow; and such second strings are not to be lightly thrown aside. In chronicling the suggestive fact, that the first through-train on the Canadian Pacific carried, in six days from Quebec

to

to the Pacific, naval stores for Esquimalt, we do not wish to give undue prominence to the part which this railway can play in actual warfare, for in the peaceful development of commercial intercourse will lie its greatest triumphs. In this respect, fuller use of the Pacific route to Australasia demands attention. Already we are told that a cable is to connect Vancouver with Australia and New Zealand *via* Honolulu; and with such an Atlantic service as we have anticipated, and a correspondingly fine service on the Pacific as will undoubtedly follow, one cannot but foresee that Australia will shortly be fortunate in possessing a mail service between London and Adelaide *via* Suez, and another between London and Brisbane *via* Canada, each covering the distance in about thirty-two days.

The political significance of the construction of the Canadian Pacific and its bearing upon the Egyptian question was grasped by the deputy Whewell Professor of International Law, who more than a year ago wrote:—

‘When the representatives of England come to the discussion of details [about the Suez Canal and Egypt] in the Council Chamber of the Powers, they will now be in a better position than they were a few months ago, owing to an event which is about to happen in a distant portion of the globe. I refer to the opening of the Canadian Pacific Railway. The importance of this railway can hardly be over-estimated from an Imperial point of view.’

And after describing the advantages, which we have touched on above, of the alternative route to India which the railway affords, Mr. Lawrence proceeds:—

‘England’s position with regard to the Egyptian Question has been greatly altered by the opening of the Canadian Pacific Railway. The Suez Canal is still of the utmost importance to us, and as far as our commerce with the East is concerned there will in all probability be little difference between the old state of things and the new. But a free passage through the Canal for our transports, at all times and under all circumstances, is by no means so essential to the defence of the Empire as it was a short time ago. We have, therefore, far greater liberty of action in dealing with the other Powers, than we had before. On the one hand, we can with safety accept proposals as to the guardianship of the Canal, which involve some slight and remote risk that measures of police may be enforced against us at a critical time, more from a desire to injure us than because our proceedings cause any real danger to the traffic. Now that we have an alternative route to India, we may be able to purchase other advantages in the settlement of Egyptian affairs by giving our consent to an arrangement concerning the Canal, which prudence would formerly have compelled us to decline. On the other hand, the necessity of coming to an arrangement of some kind is not so great as it was. If the

the Powers should endeavour to take advantage of our position as rulers of India to impose upon us conditions which we deem altogether inadmissible, we can decline to enter into any agreement at all, and leave them to do their worst when a crisis arrives. The continuation of the present state of uncertainty as to the legal position of the Canal is no longer as dangerous as before. A settlement of the difficulty is most desirable, but it is not so essential that we need concede more than we deem just and right in order to get it.*

Much reference has lately been made to the 'immensa majestas Romanæ pacis.' England can hardly have a higher ambition than to secure to the world the benefit of such a peace. And anything that strengthens our position, that by reducing time and distance enables us to concentrate and most efficiently employ our necessarily scattered and somewhat limited forces, and that for commercial advantage as well as for political security brings the component parts of Greater Britain into closer relationship with each other, is an advance towards that most desirable object. Such a contribution to the welfare and unity of the British Empire, and so to peaceful interests throughout the world, has Canada now most obviously made by the construction of her inter-oceanic lines, and by the completion of the Canadian Pacific Railway.

* 'Essays on some disputed questions on Modern International Law.' By T. J. Lawrence, M.A., LL.M., Dep. Whewell Professor, &c. &c., pp. 68-69.

