SANDFORD FLEMING

EMPIRE BUILDER

LAWRENCE J. BURPEE

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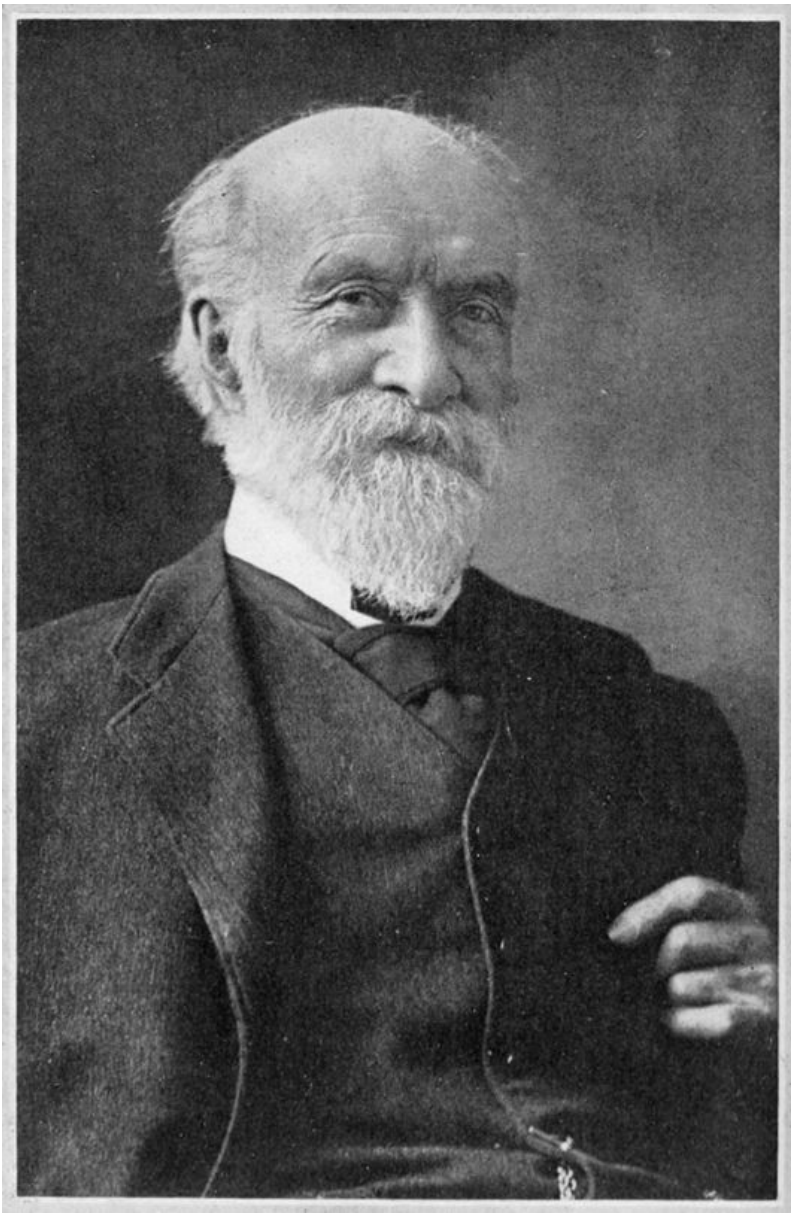

Sandford Fleming

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BY

LAWRENCE J. BURPEE

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PREFACE

Some years ago, at the conclusion of a game of chess, Sir Sandford Fleming told me that he had been repeatedly urged to prepare for publication his reminiscences of sixty odd years in Canada. He did not feel equal to the task himself, but said that if I thought a biography would be of sufficient interest to justify the trouble, and would undertake it, he would be glad to give all the necessary particulars. Thereafter as occasion offered we talked over various incidents in his long and eventful life, and he placed in my hands a series of diaries running back to the year 1845, when he set out from Glasgow in the sailing ship *Brilliant* to seek his fortune in the New World. We were both rather busy with other matters, and as a result the biography progressed very slowly, but it was finally completed a few weeks before his death. Sir Sandford had taken the keenest interest in the completion of each chapter, and I had hoped that he would live to see the printed book. All references to him were therefore put in the present tense. Now that it has become necessary to add the irrevocable words that close the volume, it seems preferable to let the rest of the narrative stand as it was. Apart from all other considerations, I had rather think of the kind old friend with whom I spent so many delightful hours, and to whose wealth of human experience I feel so deeply indebted, as a living than a dead personality.

OTTAWA,
September, 1915.

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CHAPTER I
A VOYAGE IN A SAILING SHIP

Sandford Fleming was by birth a Fifer; that is to say he first saw the light, January 7, 1827, in the 'Lang Toun' of Kirkcaldy, in the ancient Kingdom of Fife, the home of his forefathers for many generations. You will remember what Andrew Fairservice says in *Rob Roy*, 'Kirkcaldy, the sell o't, is langer than ony town in England'. His father was Andrew Greig Fleming, and his mother Elizabeth Arnot. He was named after his maternal grandfather Sandford Arnot, and after an uncle of the same name, a Sanskrit scholar of some renown then living in India. His mother's grandfather, one of the clan Cameron, fought at Culloden, and afterwards with seven others rowed Prince Charlie over to France. One of her uncles served under Wolfe at Quebec.

Fleming's earliest schooling was obtained at Kennoway, the home of his grandmother, under a Mr. Bethune, who some years later emigrated to Canada and became master of the High School in Montreal. Eventually he settled as a resident missionary on the north shore of Lake Erie between Caledonia and Port Dover. At this same Kennoway school Dr. Allan Pollok, one of the leaders of the Presbyterian Church in Canada, also commenced his education. Fleming's education was continued at the Kirkcaldy Burgh School, the same of which Carlyle had been master some twenty years or so before. About the age of fourteen he became a pupil of the well-known Scottish engineer and surveyor John Sang, with whom he remained until he left for Canada in 1845.

Of his boyhood days in the ancient seaport of Kirkcaldy we get random glimpses through the pages of a tattered diary, the first of a long series continued to the present day. 'My present plan', he puts down in his diary, in a boyish hand, 'is to write a sort of diary so that I can put there anything particular that happens or is of utility to recollect.'

Kirkcaldy was then pretty much what Carlyle found it in 1816, a long straggling town, picturesque in its way, a characteristic bit of the Kingdom of Fife; filled with a shrewd, hard-headed, and hard-working population; the home of many industries. Carlyle has made both place and people immortal in his rough-hewn, compelling phrases: 'The Kirkcaldy population were a pleasant honest kind of fellow mortals; something of quietly fruitful, of good *Old-Scotch* in their works and ways; more *vernacular*, peaceable, fixed, and

almost genial, in their mode of life, than I had been used to in the Border home-land. Fife generally we liked. Those ancient little burghs and sea-villages, with their poor little havens, 'salt-pans', and weatherbeaten bits of Cyclopean breakwaters and rude innocent machineries, are still kindly to me to think of;—Kirkcaldy itself had many looms, had Baltic trade, Whale-fishery &c., and was a solidly diligent, yet by no means a panting, puffing, or in any way gambling "Lang Toun".' An ideal place, as some one else has said, for the nurture of economists, and here at least one world-famous economist was born and nurtured—Adam Smith, of the *Wealth of Nations*.

But there was a quality in the shrewd yet kindly atmosphere of this Scottish town that led to other things than the dry bones of political economy. It nurtured in the boy Sandford Fleming that rare combination of gifts, the genius for dreaming great dreams and the capacity for bringing them to fruition. Here were planted the germs of mighty projects, destined to be developed in the course of time under other and distant skies.

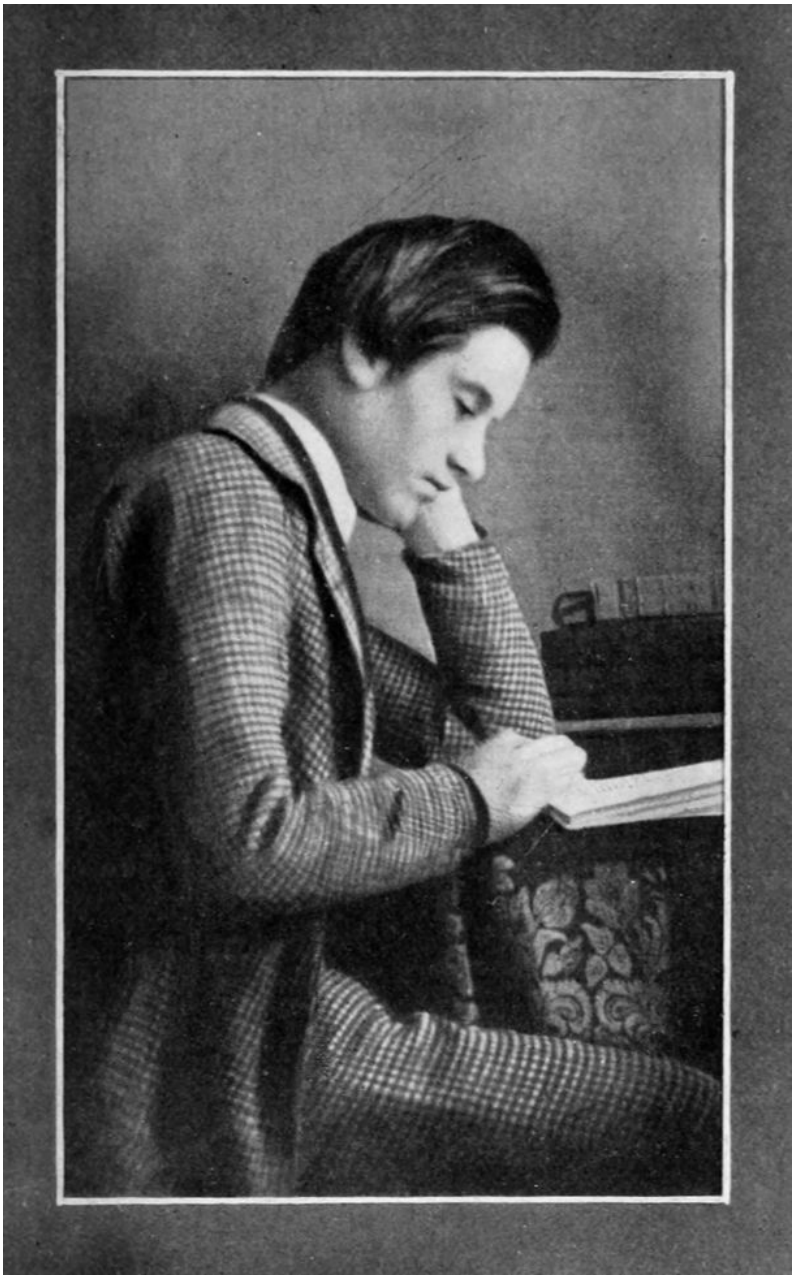
Turning the pages of the old diary, one comes upon this extract copied from *Poor Richard's Almanack*, than which nothing could more surely reveal the character of the boy: 'But dost thou love life? Then do not squander time, for that is the stuff life is made of. How much more than is necessary do we spend in sleep, forgetting that the sleeping fox catches no poultry, and that there will be sleeping enough in the grave. Sloth maketh all things difficult, but industry all easy; and he that riseth late must trot all day and shall scarcely overtake his business at night; while laziness travels so slow that poverty soon overtakes him.' Not to squander time has been one of the guiding principles of Sandford Fleming's life. It has made that life a full one in the broadest and best sense of the term.

And the boy in those far-off Kirkcaldy days was already taking the lesson to heart. Under the guidance of one of the best of teachers he was rapidly mastering the principles of his chosen profession. He had shown in school a strong taste for mathematics, and threw himself into the study of engineering with an energy that scorned obstacles. His days were passed in technical instruction in Mr. Sang's office, and in gaining practical experience in harbour and water-works, as well as railway surveys, especially across Fifeshire from Edinburgh to Perth and through the Carse of Gowrie, from Perth to Dundee. Also he made prolonged examinations of the southern uplands in connexion with the new Edinburgh water-works. For recreation, he joined a local chess club called the 'Divan', and his diary for January 1845 records the progress of a tournament for the coveted rank of 'caliph', in which he won his way to the final stage and lost by a single game.

Up to his eighteenth year he had not seen much of the world beyond the heart of Scotland, embracing the group of counties extending from Perth and Dundee in the north to Lanark, Peebles, and Haddington in the south. He knew thoroughly, however, his own county, with its characteristic scenery, from the Ochil Hills to Loch Leven, the Lomonds to Largo Law and the East Neuk of Fife. He was familiar with the ruined palaces of Dunfermline and Falkland, and the manifold relics of other days between Queensferry and St. Andrews. Many a summer holiday had he fished the Leven waters, river and loch; had become familiar with the historical associations of Loch Leven castle perched on its rock in the middle of the lake, the ancient residence of Scottish kings and the prison-house of the ill-fated Queen Mary. Loch Leven, once the scene of stirring and romantic events, is now better known as the arena of peaceful contests by the disciples of Izaak Walton.

As a schoolboy, Fleming had played on the same Kirkcaldy beach that Carlyle loved so well: 'The beach of Kirkcaldy, in summer twilights, a mile of the smoothest sand, with one long wave coming on, gently, steadily, and breaking in gradual *explosion*, into harmless melodious *white*, at your hand all the way (the *break* of it, rushing along like a mane of foam, beautifully sounding and advancing'); the beach where Carlyle and his friend Edward Irving had so often walked and communed together. Many a summer's day too he spent in the beautiful dell of Kennoway, near his grandmother's home. At other times he made excursions to Ravenscraig Castle and to Seafield, sketching the ruins of the old towers; to the quaint little town of Kinghorn on the road to Burntisland; to the ancient castle of Fordel, with its stately beeches and gardens, its turrets and tapestries; to Dysart, and to the caves of Wemyss.

Occasionally too business or pleasure would take him to the old town of Dunfermline, where he probably may have seen a much smaller boy named Andrew Carnegie, who was destined to make a name for himself in the world. A familiar sight was the island of Inchkeith, in the middle of the Forth, pretty much the same then as when Carlyle and Irving visited it in Robie Greg's 'poor green-painted, rickety yawl'; the same wonderful views across the water, 'Edinburgh with its towers, the great silver mirror of the Frith, girt by such a framework of mountains, cities, rocks and fields and wavy landscape, on all hands'—a precious memory to hold for other days.



SANDFORD FLEMING IN 1845

But of all the scenes about Kirkcaldy, once familiar to Sandford Fleming, nothing exceeds in loveliness the parks and gardens. The gardens of Dysart stretching from Ravenscraig along the banks of the Forth and

overlooking the beautiful southern shore from the Bass Rock to Salisbury Craigs and Arthur's Seat are the pride of the people of the 'Lang Toun'. Even more richly endowed with sweetness and quiet beauty is the Raith, immediately adjoining Kirkcaldy. There is only one Raith, and to those who have known it the wide world may be searched in vain for its equal. Every son and daughter of Kirkcaldy carries through life the memory of its charm, with its beautiful lake and waterfalls, its heather lodges, its gently swelling uplands, its magnificent trees of every variety, all combining to give to the Raith an air of perfect sylvan beauty.

An entry in the diary under date of January 13, 1845, must be given in full, for the sake of the spirited description it contains of a little-known Scottish festival: 'Auld Hansel Monday. Went down with others to Duravale to see Miss Simson's picture of the Slave Market at Constantinople, and then returned to Haugh Mill. Next morning I entered the kitchen at six o'clock. Here is the master at the fire heating the meal, and the mistress at the boiler stirring and boiling the head of a fat ox. On a long row of tables are placed wooden cogs now filled with oatmeal, into which is poured the water in which the head was boiled. The plowmen with their wives and children come in, upwards of forty of them, with a noise of endless "Fine days", and "Merrie Hansel Mondays to ye", with the shaking of hands, &c. Now they are all seated on forms, benches and planks of wood. Silence reigns after the blessing is asked, except for the noise of the horn spoons and the sloustering and snoring of the company. What a scene of happiness, scarcely to be imitated by the pencil of Wilkie! But this is not all. The beef is now commenced upon, and crowned by the introduction of Bacchus. The master begins, "Here's a' yer healths an' mony a Hansel Monday may we see". The bottle passes round the table, and the feast is never closed until the whole may well say they are fou' and as thankfu'. The plowmen now set out to visit their friends, and the farmer's sons and relations get the guns ready for the field sports. They commence at a favourite field; those that have guns take their station at regular intervals, the boys and others without guns filling in between. So they scour the fields one after another till two or three o'clock, when they return laden with the products of the chase, chiefly hares, to a hearty dinner, intermixed with whisky toddy, and a general talk of the adventures of the day. Tea and more toddy follow later, with songs, Scottish proverbs, cards, dice, recitations and divers games. The amusements are carried on to a pretty late hour, when once more Hansel Monday ends.'

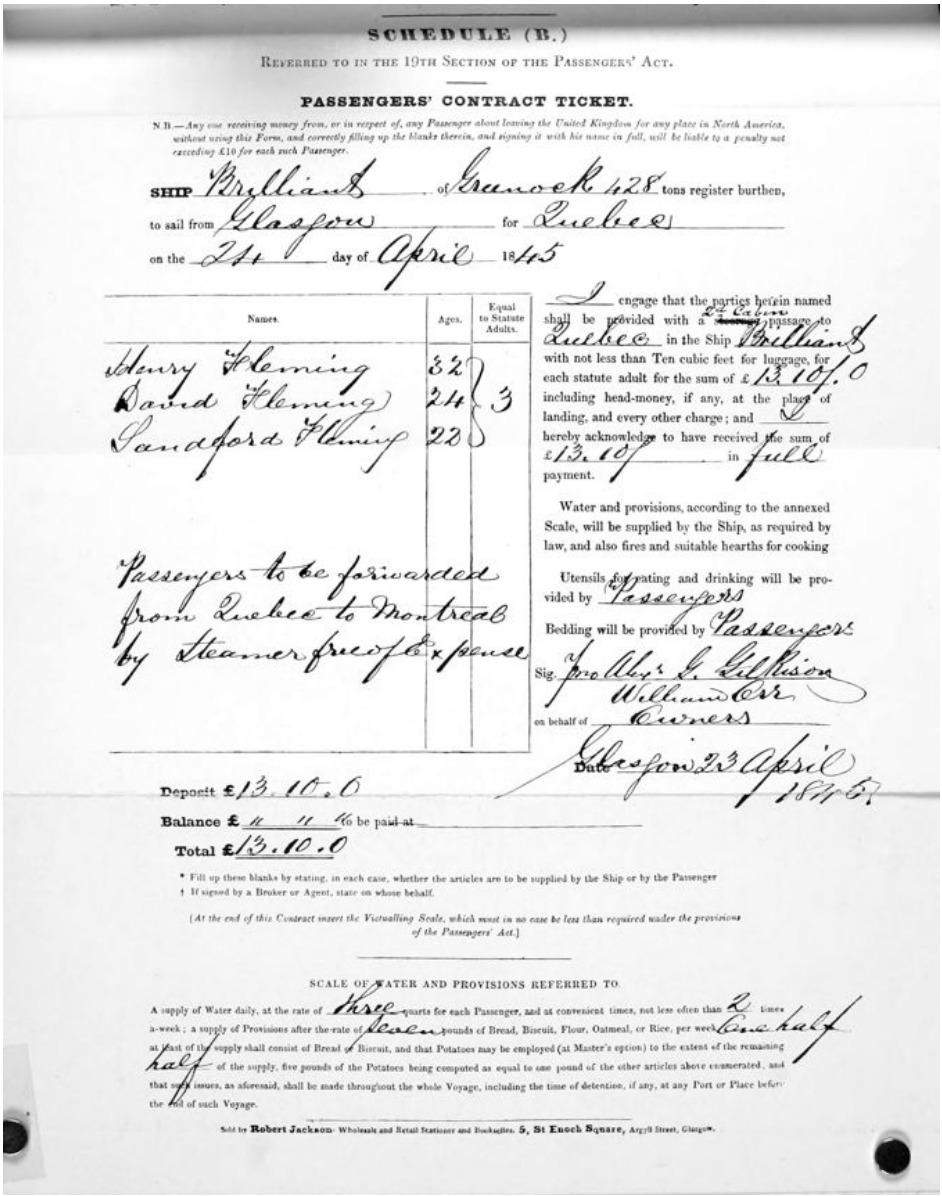
In this month of January 1845 the thoughts of the young man are constantly turned towards Canada. January 7 he notes in his diary: 'This is my birthday, and I am now eighteen years of age. Went up with my father to

Balbirnie to see Mr. Ellice (Edward Ellice, M.P.) about going to Canada.' A few days later he writes: 'Got a pocket sextant, a present from Mr. Sang, on the thoughts of going to America.' By dint of hard work he had now qualified himself to practise his profession as a civil engineer and surveyor, and had acquired not a little facility as a draughtsman. The prospects of employment in the old land were bright enough, especially as the railway system was at that time being inaugurated throughout the United Kingdom, but, like many another youngster, the spirit of adventure had got hold of him, and after careful thought it was decided that he should try his fortune in the new world. His brother David had also determined to emigrate to Canada. On the 20th of April the diary reads: 'Went to church twice, expecting it to be the last time in Scotland'; and the following day the young man writes: 'David and I up about Kennoway taking farewell of our friends. My grandmother was a little affected, and with tears in her eyes she said, "In danger I'll no' can help ye ony way, but I'll pray for ye." Robert and Sandford Imrie, our cousins, came along to a cross-road near the Milton, and when parting dropped a letter into our hand, saying "Just to put in our pocket: it might be of use to us afterward". It was addressed to S. & D. Fleming, enclosing two pound and two crown pieces. It certainly showed an uncommonly kind and feeling heart, and is ranked among the incidents of my life which I will never forget. On coming home, our Kirkcaldy friends were at supper, and the workmen were drinking David's health with some money which he gave. Rodger Black gave us each a present, to David *Gems from American Poets*, and to me *Gems from British Poets*, and I got from my Uncle Alec a pocket compass which also answers as a sun-dial.'

On the morning of April 22, they were up at six making their final preparations. 'After taking farewell of our friends, our mother, brothers and sisters, David and I, accompanied by our father to Glasgow, left Kirkcaldy perhaps for ever. We crossed the Firth to Edinburgh, and left by the five o'clock train for Glasgow.' The following day was spent in Glasgow, making final preparations for the long voyage by sailing ship to Quebec. In the year 1845 a voyage across the Atlantic was not such a simple matter as it is to-day. Sandford Fleming, who was to do so much to increase the means of communication, had to be satisfied with the leisurely speed of an old-fashioned sailing ship. We of this generation, who have become so accustomed to the marvels of luxury plying almost daily between the opposite shores of the ocean, can hardly realize that the whole story of ocean navigation by steam lies within the bounds of one man's lifetime. When Fleming crossed the Atlantic in 1845 the dawn of the era of ocean steamships had barely opened. The Cunard Line had only recently been

formed. It was then known as the British and North American Royal Mail Steam Packet Company, and consisted of four side-wheel steamers, mere pygmies beside the great Cunarders of to-day. It is worth remembering that as this first line of ocean steamers was organized by Sir Samuel Cunard, a Canadian, so the very first vessel to cross the Atlantic by steam power was built in Canada, her hull in Quebec, her engines in Montreal, fed with Canadian coal, and navigated by a Canadian crew. The *Royal William*, for so she was named, sailed from Quebec as long ago as 1833, and made a successful though not very rapid voyage by steam to London. After leaving Quebec, she coaled at Pictou, and steamed triumphantly into the Thames twenty-five days later.

Seventy years ago, however, adventurous young men, determined to carve a fortune in the new world, were content to find their way by such old-fashioned sailing ships as those engaged in the timber trade. In such a ship passage had been engaged by the young travellers. The original passenger's ticket used on the occasion is still extant, and is not without interest as a relic of days when the sailing ship was still the usual means of conveyance across the Atlantic. It reads: 'I engage that the parties herein named shall be provided with a passage to Quebec, in the ship *Brilliant*, with not less than ten cubic feet for luggage, for each statute adult, for the sum of £13 10*s*. including head-money, if any, at the place of landing, and every other charge . . . Water and provisions, according to the annexed scale, will be supplied by the Ship, as required by law, and also fires and suitable hearths for cooking. Utensils for eating and drinking will be provided by passengers. Bedding will be provided by passengers.' It is noted that the fare includes free passage from Quebec to Montreal by river steamer. Then follows the scale of water and provisions: 'A supply of water daily, at the rate of three quarts for each passenger, and at convenient times, not less than two times a week; a supply of provisions after the rate of seven pounds of Bread, Biscuit, Flour, Oatmeal, or Rice per week. One-half at least of the supply shall consist of Bread or Biscuit, and that Potatoes may be employed (at Master's option) to the extent of the remaining half of the supply, five pounds of the potatoes being computed as equal to one pound of the other articles above enumerated.'



SCHEDULE (B.)

REFERRED TO IN THE 19TH SECTION OF THE PASSENGERS' ACT.

PASSENGERS' CONTRACT TICKET.

N.B.—*Any one receiving money from, or in respect of, any Passenger about leaving the United Kingdom for any place in North America, without using this Form, and correctly filling up the blanks therein, and signing it with his name in full, will be liable to a penalty not exceeding £10 for each such Passenger.*

SHIP Brilliant of Greenock 428 tons register burthen,

to sail from Glasgow for Quebec

on the 24th day of April 1845

Names.	Ages.	Equal to Statute Adults.
Henry Fleming	32	3
David Fleming	24	
Sandford Fleming	22	

Passengers to be forwarded from Quebec to Montreal by Steamer free of Expense

I engage that the parties herein named shall be provided with a ~~Steerage~~ passage to Quebec in the Ship Brilliant with not less than Ten cubic feet for luggage, for each statute adult for the sum of £ 13.10.0 including head-money, if any, at the place of landing, and every other charge; and I hereby acknowledge to have received the sum of £ 13.10 in full payment.

Water and provisions, according to the annexed Scale, will be supplied by the Ship, as required by law, and also fires and suitable hearths for cooking

Utensils for eating and drinking will be provided by Passengers

Bedding will be provided by Passengers

Sig. pro Abr. G. Gillison Williams & Co

on behalf of Owners

Date Glasgow 23 April 1845

Deposit £13.10.0

Balance £ 11 11 to be paid at

Total £13.10.0

* Fill up these blanks by stating, in each case, whether the articles are to be supplied by the Ship or by the Passenger

† If signed by a Broker or Agent, state on whose behalf.

[*At the end of this Contract insert the Victualling Scale, which must in no case be less than required under the provisions of the Passengers' Act.*]

SCALE OF WATER AND PROVISIONS REFERRED TO.

A supply of Water daily, at the rate of three quarts for each Passenger, and at convenient times, not less often than 2 times a-week; a supply of Provisions after the rate of seven pounds of Bread, Biscuit, Flour, Oatmeal, or Rice, per week; one half at least of the supply shall consist of Bread or Biscuit, and that Potatoes may be employed (at Master's option) to the extent of the remaining half of the supply, five pounds of the Potatoes being computed as equal to one pound of the other articles above enumerated; and that such issues, as aforesaid, shall be made throughout the whole Voyage, including the time of detention, if any, at any Port or Place before the end of such Voyage.

Sold by **Robert Jackson**, Wholesale and Retail Stationer and Bookseller, **5, St Enoch Square**, Argyll Street, Glasgow.

The Flemings' ticket

To return to the diary: 'The *Brilliant* cleared out from the Broomielaw about half-past one p.m. (April 24, 1845.) It was tugged down the river by a steamer, and we took farewell of my father, who followed to the end of the wharf and gave us three cheers.'

It was a fine spring day, the sun high in the heavens, and the two young exiles, though their hearts were full, could enjoy the ever-changing scenery as they glided down the Clyde. The towers and spires of Glasgow gradually disappeared in the distance; presently the travellers passed Dumbarton Castle; their vessel, piloted through such a mass of shipping as filled them with amazement, dropped down to Greenock, where a new pilot was taken on for the Firth of Clyde. 'Night comes on before we reach the Irish Sea, and we go to sleep for the first time on the deep. The steamer leaves us during the night.'

The following morning they are up at five, and on the deck examining with keen interest all the details of their floating home. The only land in sight is Ailsa Craig, due south, just visible in the mist. Some hours later they get a glimpse of the Mull of Kintyre to the north, and soon the last of Scotland drops below the horizon. In the afternoon the wind freshens, all loose articles slide about the cabin, the trunks are made fast in the hold, and the women passengers retire to their berths. The entry in the diary under Saturday, April 26, is brief but eloquent, 'Very sick. In bed most part of the day, and eat very little.' Sunday, still very sick in the forenoon, but the wind moderates and the young travellers find life again worth living. 'In the evening we had a pleasant sail with the vessel rocking majestically, although before we really thought it was going down.' During the night a jar of treacle broke loose in the cabin, and the sticky contents was spread about the floor.

A day or two of fine weather brought most of the passengers on deck, but the respite was only brief. A stiff westerly wind sent them below again.

The last days of April found the ship again in the grip of the storm. 'Slept little or none all night,' reads the diary, 'and we thought sometimes we were like to be pitched out of our berths. It was my turn to see about breakfast. Up early therefore. Could not walk very well along the deck. Got nothing, as there was trouble with the cook. One of the sailors came to the rescue. Got back to the cabin wet. We were all sitting on the trunks when the vessel took a great heave, the fastenings were loosened, and the trunks all slid to the opposite side of the cabin, some on their sides and others topsy-turvy. Back they came with the ship, and to and from, some of us betwixt them and others on top. David had been sitting on a box containing drinkables. In a short time the contents were spilt over everything and the floor swimming. Much laughter followed. The trunks and other things were secured with difficulty, and while we were at work, in comes a fellow passenger saying the trunks in the hold had broken loose. We all go down

and get them secured. The cracking and creaking there are fearful. We get back to the cabin and go to bed.'

The good ship *Brilliant* had run into a north-west gale, which steadily increased in violence and lasted several days. She had to change her course and run southerly under double-reefed topsails. Great waves swept across the deck. A wild night followed, the ship creaking and groaning; 'it seemed as if the sea was closing over us. We slept none all night. Next day, the wind fell and our condition altered, though it seemed for the worse, as the heavy swelling seas caused by the gale still remained, and the sails could no longer steady the vessel. There being no wind the canvas simply flapped. The ship rolled fearfully, and the cargo in the hold shifted from side to side. The cargo was partly iron bars, and we could hear them rolling from side to side with the ship, and pounding first on one side and again on the other. It did not seem possible that the ship could withstand such pounding much longer, and not knowing what might happen to us I felt that I would like to send some word to my father, so I got out my writing-desk which he gave me before I left home, and wrote a letter explaining our situation and what seemed to be our prospects. I sealed the letter in a bottle and threw it into the sea, thinking it might be the last letter I should write, and that it might perhaps reach my father. We were then far out at sea, possibly seven hundred miles from land, and had drifted four or five hundred miles southerly out of our course, from about the latitude of Glasgow to that of Paris. Towards evening the heavy sea fell, and next morning everything had changed for the better. When we got on deck the good ship, with her canvas spread to a favouring breeze, was sailing tranquilly toward the west.'

For some time the voyage was made up of a monotonous though no doubt most welcome series of fine days with clear skies, comparatively smooth water and plain sailing. The diary is a record of the trifling incidents that make up such a voyage: a schooner is seen homeward bound; a brig is sighted on the northern horizon; another sail is within speaking distance for half a day. The brothers play chess during the day, and join the other cabin passengers with singing and dancing in the evening. May 11 they are becalmed, and the boys amuse themselves watching the antics of a shoal of porpoises, and fishing for sea-weed which from its appearance must have floated north from the Gulf of Mexico; two or three whales are seen blowing just above the horizon, and another appears a few hundred yards from the ship; nautili float past, 'looking queerly like large mice'.

On the 13th of May they are half-way between land and land, to the delight of the passengers. The following day brought nasty weather again,

the ship laboured hard, the trunks again slid about the cabin and 'even the pillows had to be tied to the bed', a quantity of pig-iron broke loose in the hold, adding to the general confusion and filling the passengers with alarm. On the 18th they passed several large icebergs, and the following day were reported to have reached the Great Banks. 'A great many fishing schooners were seen, with small boats floating about; towards evening it gets foggy, and while sitting in the cabin we hear a great crying on deck: a large schooner lies at anchor, right ahead, not having been seen in the fog until we were a couple of ship's-lengths off; we would have struck her amidships if our course had not been immediately altered. That night we sailed with two lookouts and had bells ringing continually. Some of the passengers took precautions against the ship's sinking during the night, such as sleeping with their clothes on, pocketing their money, and having a bag of biscuits handy to throw into the small boats.'

'May 22. It is now four weeks to-day since we left Glasgow. We began to wash a few handkerchiefs, and I had just gone on deck to put them out to dry, when greatly surprised I was to see hills on the horizon; they had been hid before by the mist. Every one crowded on deck, some nearly dancing for joy. I made a sketch. It was the south coast of Newfoundland—the first I have seen of the new world, the first glimpse of our adopted country.'

Three days later they were called up to see St. Paul's Island in the early morning, and during the forenoon passed Bird Rocks. The following morning they sighted Gaspé shore and Anticosti. May 30, a pilot was taken on board, and June 3 they came to anchor at Grosse Isle. 'The captain went ashore with two cabin, two intermediate, and two steerage passengers. I had not the good luck to get off, which was rather disappointing as I wished to take sketches of the place. They brought us bread baked on the island and bunches of flowers, and among them I was glad to see the dandelion, as it reminded me of the land we had left behind. The numerous rocky islands covered with trees are most beautiful with high hills in the background.'

Two days later they had reached their destination. 'Called up on deck to see Quebec about 5 a.m. Just then opposite a waterfall (Montmorency). The river at Quebec was immensely crowded with vessels, and pilot boats were flying about in every direction. The tin roofs of the houses and the spires of the churches were shining in the rays of the sun. We packed our travelling things in the hope of getting away with the five o'clock steamer to Montreal. Some of us went ashore in a boat in the forenoon to see the town. Everything seemed strange, the steamers especially. Some were driven by horses, walking on deck, but the Montreal steamships were splendid. Very

happy to get our feet on terra firma once more. We set off to see the ruins of a great fire which had taken place a day or two before our arrival. It had an awful appearance; more than twenty acres of houses burned to the ground; nothing left but a forest of blackened chimneys, the houses having been built chiefly of wood. The pavements of the streets being also of wood were destroyed with the houses. The homeless inhabitants are living in churches and other large buildings, and subscriptions are being raised in every quarter for their relief.[1] The people here are almost all French, and have, of course, a very foreign appearance to us. After looking about for some time we returned on board to be in time for the Montreal steamer, but found we could not get away until the next day, as the custom-house officer had not yet come on board.'

The next forenoon, having still some time on their hands, the brothers again went ashore and wandered through the old town. 'We saw the inside of a Roman Catholic chapel; it was indeed richly adorned and elaborately finished. We visited the spot where General Wolfe fell, and saw where the battle with General Montcalm was fought. Returning to the *Brilliant*, we got our baggage removed to the steamer for Montreal. The custom-house officer was most reasonable, and only required that one trunk should be opened. We left our old ship and her crew with regret, having during the voyage, which lasted from the 22nd of April to the 6th of June, in all forty-four days, made a pleasant society on board. We said good-bye to the officers, with whom we had cultivated agreeable relations, especially in connexion with the observations and calculations necessary to be made from day to day in the navigation of the ship.'

A word or two may be added as to the fate of the letter thrown overboard in mid-Atlantic. Nearly seven months after it was consigned to the waves, the father, after hearing of his son's safe arrival in Canada, received the following message from Appledore, Port of Bideford, Devonshire: 'A bottle has been drifted on shore this day and been picked up by a poor fisherman. It contains a letter addressed to you. It bears date, Atlantic Ocean, May ulto., and excites great curiosity, having drifted about six hundred and thirty miles. This letter may be of consequence, and it shall be preserved for the owner.'

This ends the story, briefly told, of the voyage from the Clyde to Quebec by sailing ship in 1845. So the boy Sandford Fleming, after a passage of some six weeks, made his entry into the new world.

[1] This was the great fire of May 28, 1845, which destroyed 1,600 houses and other buildings.

CHAPTER II
MAKING A FOOTING IN THE NEW WORLD

Nearly a quarter of a century before the *Royal William* crossed the Atlantic, the first Canadian steamboat navigated the waters of the St. Lawrence. Built at Montreal in 1809, two years after Fulton had astonished the people of New York by steaming up the Hudson in the *Clermont*, the *Accommodation* was launched by John Molson and started on her maiden trip to Quebec. The run was made in thirty-six hours, and the venture proved so successful that Molson obtained a monopoly for fifteen years, and in 1811 built a second steamboat, the *Swiftsure*. These pioneer vessels, which were the pride of Montreal a hundred years ago, would appear ludicrously small and clumsy if one of them could be put beside a palatial river steamer of the present day; and even in 1845 rapid advances had been made in the size and equipment of the boats plying between Montreal and Quebec.

Certainly to Sandford Fleming and his elder brother David, after their long voyage on the sailing ship *Brilliant*, the steamboat *Queen* seemed a magnificent vessel of phenomenal speed. The boys found room on the crowded deck, and watched as long as daylight lasted the ever-changing panorama of the St. Lawrence. For several miles above Quebec the river was filled with sailing vessels taking on cargoes of lumber for the European market. Then the city was left behind, and the boat steamed past cultivated fields with here and there the comfortable home of an *habitant*. Presently a hamlet would appear on the river's bank, the neat white cottages of the villagers clustering around the village church, for all the world like a brood of chickens about the mother hen. Presently the cultivated field would give place for a time to a bit of comparatively wild, rocky scenery, with sombre forest in the background. Finally, darkness closed down over the scene, and the two young emigrants made themselves as comfortable as they could on deck, that being the only accommodation they could secure.

The following morning, June 7, they awoke a little stiff, but the discomforts of the night were soon forgotten in the glorious scene that lay before them. It was a beautiful clear morning, a typical Canadian midsummer morning; the river was as smooth as glass, untouched even by a ripple, and the *Queen* was sailing through that most beautiful part of the St. Lawrence between Three Rivers and Montreal. The travellers landed at Montreal about eight o'clock in the morning.

In the Montreal of 1845 there was much to remind Fleming of the old French town of Quebec, but there was much also that marked it as a town with different conditions and a different future. The old narrow streets, relics of the French regime, still remained along the water-front, with many curious old buildings that have since disappeared, but the city was already expanding back towards St. Catherine Street and Sherbrooke, and on the water-front a substantial beginning had been made with the splendid system of docks which now accommodates the commerce of half a continent.

It is difficult to realize the tremendous changes that have taken place in Montreal and in the country of which it is still the centre, since 1845. Montreal was then a city of about sixty thousand, one-tenth of its present population; the gigantic railway systems of the country were then represented by one little strip of track from Laprairie to St. John's, connecting Montreal with the Champlain Valley, and even this railway was shut down in winter; merely a beginning had been made with the St. Lawrence canals, upon which over one hundred millions have since been expended; the Cornwall Canal had been completed three years before, but the Williamsburg canals were only then in course of construction, and the enlarged Lachine Canal was not completed until 1848. The Allan Line and the great project of the Victoria Bridge were still in the womb of the future, and the men who had visions of Montreal as a great ocean port were not to see even a partial realization of their dream for some years to come. The removal of the seat of government to Montreal had given an impetus to this as to many other projects affecting the welfare of the city and the country, but Montreal in the middle 'forties was only on the threshold of her era of expansion. She still retained, as a well-known writer, Dr. S. E. Dawson, has said, much of her mediaeval aspect. Few vestiges are now left of the old town, but many existed in 1845. 'A visit to St. Vincent Street and to St. Amable Lane will give an idea of the narrow streets and sombre appearance that then characterized our present bright city. The streets were crowded, for it did not require much trade to crowd them, and the merchants lived over their warehouses, and their clerks oft-times lived with them. The few residences above St. Catherine Street were like manor houses among the fields which stretched down to Dorchester Street. The old town was solidly packed, and it was only on the new streets like St. James, Craig, and McGill that there were many gaps. If the city seemed sombre, the people were gay and sociable. There was, besides the western trade, an important retail trade, and the city was enlivened then, and for many years after, by a large garrison of English troops, whose presence kept the town in touch with English thought and manners and fashions. Their bugle-calls for the "assembly" and

other routine duties of a soldier's life are now replaced by steam whistles which summon or dismiss an army of thronging work-people. The relations between the garrison and the city were always friendly, and the parade at 11 a.m., or the trooping of the colours, attracted many citizens to the Champ de Mars, then the centre of the town, while the brilliant uniforms of the officers enlivened the ball-rooms of the evening parties.' It was such a town as this, through whose narrow old-world streets the young travellers wandered in 1845.

While the two brothers were still looking about them, eagerly interested in the many novel features of life in the new world, and a little uncertain as to what they had better do next, they had the pleasure of a visit from their old schoolmaster, Mr. Bethune, of Kennoway, who came down to the steamer with his wife. He had come out to Montreal from Scotland some time before, and was now about to start for the west, having undertaken the work of a missionary settler in the township of Walpole, on the north shore of Lake Erie. The prospect of congenial company induced the boys to hasten their departure from Montreal; they all took passage on a river steamer and made their way up the Ottawa River. At that time the only route to Upper Canada lay by way of the Ottawa River to Bytown, through the Rideau Lakes to Kingston, and thence along Lake Ontario.

The improvement of navigation was then in its infancy. Such canals as there were, were only adapted to small shallow-draught vessels, and the approaches had not been dredged. As a consequence the little boat in which they were travelling, being deeply laden, stuck in the mud a little below Lachine and lay all night. It rained very heavily, and, there being no cabin, the passengers were again compelled to sleep on deck under oil-cloths. The next day the vessel was taken up to the locks, but as it was contrary to the law to go through on Sunday, the boys took advantage of the opportunity to attend the Scotch church in Lachine.

Necessary repairs to the steamer detained them at St. Anne's until Tuesday afternoon, when they were off again through the Lake of Two Mountains and into the wild scenery of the Ottawa. Here the author of the diary was introduced to the North American mosquito, and, like most travellers on this continent, was sufficiently interested in its personality to record his impressions in his diary: 'Saw mosquitoes for the first time. Got several bites on my hand. They are very itchy, but if you do not scratch them they soon go away. If you do', he adds feelingly, 'they swell very much. Some people they do not sting, or at least they do not feel them.' The steamer made occasional stops at infant settlements on the river, and the lads

enjoyed the luxury of sweet milk, but they note that it is about twice as dear as in Scotland. On the evening of the 11th they reached the village of Carillon at the foot of the Long Sault Rapids. At Grenville they were again delayed by difficulty in getting the steamer through the locks. This was her first trip, and she had been built without due regard to the width of the locks. As a consequence it became necessary to unship the paddle-boxes before she could be passed through. After another night spent on the river, the travellers reached Bytown at six a.m. on June 14.

Let us attempt to see the little settlement of Bytown as it appeared in 1845. As the steamer ploughed her way through the dark waters of the Ottawa, the banks of the river below the town gave little indication of the presence of man. The low northern shore and the higher ground on the south side, rising to imposing cliffs, on which the city now stands, were still for the most part clothed in the same primaeval forest that Champlain had seen first of white men two hundred and thirty-two years before. Parkman's inimitable word-picture was as applicable to the river in 1845 as it was to the scene that met the astonished gaze of Champlain in 1613. 'The still surface of the river was flecked with spots of foam; islets of froth floated by, tokens of some great convulsion. Then, on their left, the falling curtain of the Rideau shone like silver betwixt its bordering woods, and in front, white as a snowdrift, the cataracts of the Chaudière barred their way. They saw the unbridled river careering down its sheeted rocks, foaming in unfathomed chasms, wearying the solitude with the hoarse outcry of its agony and rage.' Except that in 1845 a rustic mill stood above the Rideau Falls, and a graceful suspension bridge spanned the Chaudière, Parkman's description was as applicable as ever. As the boat rounded Nepean Point, however, and drew into the wharf, an entirely different scene opened up before the travellers. Before them rose the massive tier of locks leading to the Rideau Canal, spanned above by the Sapper's Bridge. On the heights to the right, now crowned by the splendid Gothic group of the Houses of Parliament, stood the barracks and stone hospital built by Colonel By, and a few scattered public buildings and private dwellings could be seen among the trees on either side of the canal.

While the boat made her leisurely way through the locks, the writer of the diary explored the little town, which many years afterwards was to become his home. Climbing the hill to Rideau Street, he crossed the Sapper's Bridge, and wandered down the road which skirted Barracks' Hill, and eventually brought him to the bridge over the Chaudière Falls. His brother took another course towards New Edinburgh, and looked up an old workman of their father's who had come out to Bytown eleven years before

and was now in comfortable circumstances. He was not in at the time, and they had to get back to the boat which all this time had been making her leisurely way through the locks and was now discharging cargo at the canal basin. Before she left, however, the old man was seen coming along the banks of the canal, dressed in honour of the occasion in his Sunday clothes, a dress coat with brass buttons and a white cravat. They told him all the news of Kirkcaldy and Kennoway, and in return learned from him a great deal about life in Canada. 'As we walked back with him to the bridge,' says the diary, 'I happened to be a few feet behind, and to my astonishment saw smoke coming from the tails of his coat. I rushed forward with a shout of warning. The old man turned quickly, caught sight of the trail of smoke he was leaving behind, and snatched out of his pocket a huge bandanna handkerchief and a venerable pipe. He had been smoking, it appeared, on his way down to the canal, and when he caught sight of us on the boat had hastily thrust the pipe into his pocket without remembering to empty it. The bandanna handkerchief made material for a tidy little bonfire, which was just discovered in time to save the tails of his Sunday coat.'

The long and rather tedious journey through the canal and the Rideau Lakes to Kingston was made without incident, beyond meeting another old Kirkcaldy man who had come out from Scotland thirty years before and was now lockmaster at Smith's Falls. 'Kingston', says the diary, 'is a pretty considerable town, wide streets and well laid out. There are some good public buildings, more especially the market-house, which is a large and fine building in the form of a T with colonnade and pillars in front supporting a dome and clocktower. There are some good churches, one a new Gothic structure, and a large plain college.' This was Fleming's first glimpse of Queen's College, of which he was many years later to become Chancellor.

The same evening they took passage on the *Princess Royal*, bound for Toronto, accompanied by several of their acquaintance from the *Brilliant*, who had come on ahead to Kingston. The *Princess Royal* was crowded with emigrants, chiefly Irish, an advance guard of the great exodus of 1847. At Cobourg they took leave of their friends, who were going on to Toronto, and turned north to their destination, Peterboro. 'Cobourg', says the diary, 'is a nice little town, and apparently thriving very well.' The lads were struck with the curious resemblance that this town, some seven hundred or eight hundred miles inland, bore to a seaport, and the novel experience of a limitless horizon on these inland waters.

A Peterboro farmer returning from Cobourg furnished a convenient means of transport. The luggage was tumbled into his wagon, and off they

started. The first few miles were over a rough road, nothing much more than a track through the bush. Then they struck the corduroy road from Port Hope to Rice Lake. The elder, ambitious to drive the wagon over this pioneer highway, so different from the carefully-built roads of the old land, managed to get into a deep rut and was pitched headlong into the ditch. This experience satisfied him for the time, and he was glad to hand the reins over to the farmer, more accustomed to the eccentricities of Upper Canadian roads. They arrived at Peterboro about sun-down, where they had a warm welcome from their kinsman, Dr. Hutcheson, one of the pioneer settlers of the county of Peterboro. The journey from Quebec to Peterboro, which can now be made in ten hours, took them over eleven days!

Peterboro did not impress Fleming very favourably when he got his first sight of the town. 'It looks rather a poor little place, the stumps of trees still in the middle of the streets, a wooden house here and there, with a few good villas with verandahs in the suburbs.' But he was to make his home here for several years, and many associations were to make the place dear to him. Indeed, a good night's rest and a bright sun the following morning had already made Peterboro more interesting and attractive. 'Went out with the doctor to see the town,' he says. 'There are some good shops, and a large court-house and cells which we went through. There were one debtor, a man and wife condemned for burning a house, and a lunatic here, this being the prison for the whole district of Colbourne. The place looks very well down about the river, which is more than half the size of the Clyde at Glasgow. A small steamer plies between Peterboro and Rice Lake. Part of this town is on the other side of the river, which is crossed by a wooden bridge. It contains about two thousand inhabitants.'

The following day Sandford and David drove out to Mud Lake with Dr. Hutcheson, calling at different farm-houses where the doctor had patients. For several miles from Peterboro the land was cleared and good farms under cultivation; the houses were only log shacks, but the farmers appeared to be prosperous. A visit was paid to an Indian village at Mud Lake, and the young Scotch lads were for the first time brought face to face with a live Indian chief in the person of Peter Noggy.

About two months were spent very pleasantly in the little town on the banks of the Ottonabee; not idle days by any means. The lads had been brought up in a community that abhorred idleness, and there were innumerable opportunities of usefulness about the home of the good doctor. Still they found time for fishing excursions, picnics, and rambles about the country, in which they discovered many familiar acquaintances among the

birds and flowers of the Canadian woods, and many too which were altogether unfamiliar.

Congenial friends were also found among the families of Peterboro, including members of the talented Strickland family, Catherine Parr Traill, her sister, Susanna Moody, and their brother, Major Strickland. Here, by the picturesque waters of the Ottonabee and in the neighbouring woods, Mrs. Traill gathered and put into shape the material for her delightful books, some reflecting the now vanished conditions of the pioneer settlements, and the lives of the true-hearted men and women, branches many of them of the best old English stock, who laid the foundations of the great province of Ontario; and others interpreting with rare insight and sympathy the life histories of the inhabitants of these Canadian woods and streams. Here too about this time Sandford first met a charming young girl, the daughter of Sheriff Hall, who some ten years afterwards was to become his wife.

Early in August the two lads left for Toronto, to seek their fortune. They drove to Port Hope, where they took the steamer for Toronto. Port Hope in 1845 was 'a nice thriving little town, finely situated between two hills, well covered with trees, and among the trees many beautiful little cottages. A considerable stream runs through the town, with good falls for the mills situated there. This place may be said to be like a Scotch town, but the houses being painted white, and some of them tastefully built, it looks even much better', which was praise indeed for a young man fresh from Scotland.

They left Port Hope at seven a.m., and after calling at several intermediate ports reached Toronto at one o'clock in the afternoon. Toronto was then a town of less than twenty thousand people, with several enormously long and very ill-paved streets. A number of important public buildings had lately been completed or were in course of erection, including several fine churches. The old Market House was still standing, and over it were the rooms of the Athenaeum, afterwards amalgamated with the Canadian Institute. The officials of King's College, now the University of Toronto, occupied part of the old Parliament Buildings. The city was lighted with gas, and water-works had already been established from the bay to the city. Steamboats connected Toronto with Kingston, Hamilton, Niagara, Queenston, and Rochester; stages carried passengers east and west over exceedingly rough road; omnibuses ran regularly out Yonge Street, which extended forty miles north into the country, passing through Richmond Hill, Thornhill, and other villages; and every hour from the market-place to Yorkville; a horse ferry-boat also connected the city with the island.

In 1845 the Kingston steamer landed at Brown's Wharf, near the foot of Church Street. To any one familiar with Toronto the changes that have taken place within the lifetime of Fleming are indeed marvellous. Practically the city was confined in 1845 to the area between Peter Street on the west and Parliament Street on the east. Queen Street was not open west of Sherbourne, where it was shut in by the Moss Park grounds of the Hon. William Allan, father of the late Senator Allan. The whole space between Queen and Bloor Streets, now a mile and a quarter of almost solid buildings, was then mostly in farms with a few straggling buildings up Yonge Street for perhaps half a mile north of Queen Street. One incident may serve to give an idea of the enormous strides taken by Toronto since Fleming first set foot on its streets nearly seventy years ago, an incident the particulars of which were related to him by one of the parties to the transaction. Andrew Sanderson, a farmer in the township of York, took a load of hay one autumn to Toronto to sell in the open market. Finding no sale, and unwilling to take the load back with him over very heavy roads, he offered it to the proprietor of Elgin's Hotel on Yonge Street on very easy terms. The latter, however, could ill spare the cash, and after some bargaining he offered Sanderson in payment for the load of hay the vacant lot on the north-east corner of King and Yonge Streets, which Sanderson reluctantly accepted. That particular lot was sold not long ago for a million and a quarter dollars.

After a night in the 'Edinburgh Castle' tavern, a comfortable room was obtained at a boarding-house on East Queen Street, directly opposite what is now Jarvis Street, which did not then exist. David was fortunate in obtaining work immediately, but Sandford was not so successful. Day after day his journal is a record of hope deferred. He called on Sir Allan MacNab and other notabilities with letters of introduction, but, though politely received, he found little or no prospect of employment as an engineer or surveyor. The Canada Company's surveys were completed, and there was nothing to hope for in that direction; Mr. (afterwards Sir) Casimer Gzowski could offer no work in the Department of Roads and Harbours, in fact he threw cold water over the ambitious hopes of the young engineer; told him there was nothing in the province; that the great works were nearly all finished, funds exhausted, that they were paying off men instead of taking them on, that indeed he thought it a very bad country for professional men, and wound up by advising him to return to Scotland, advice which Sandford decided to put aside until every avenue of success in the new world had been explored.

Finally, seeing little prospect of employment in Toronto for a time at least, he decided to go to Hamilton, partly to see what prospect there might be of work in that town, and partly to look up his friends of the *Brilliant*.

Surveyors and engineers seemed to be as little in demand there as in Toronto, but he was fortunate in finding Mr. Bethune and several others of the *Brilliant* passengers, with whom he spent a pleasant evening.

As Mr. Bethune was leaving the next day with his family to take up his farm, Sandford decided to accompany him. 'We went along the Port Dover road,' says the diary. 'It is planked to that place, a distance of thirty-six miles from Hamilton. We passed the village of Caledonia on the Grand River. A steamer runs from this place to Port Maitland on Lake Erie. We saw a good many flour- and saw-mills. We rolled along this smooth road almost like a floor, halting at several taverns and other places until we came to Mr. Secord's tavern, twenty-four miles from Hamilton, and then we walked about two miles through the bush until we came to Mr. Bethune's clearing.'

Here Fleming had his first experience of colonial life under absolutely pioneer conditions—the new settler with little other asset than his stout heart attacking the tremendous task of carving a home out of the wilderness. Mr. Bethune's farm consisted of a two-hundred-acre lot, a few acres of partially cleared land, the rest being bush. A primitive log house had been put up without so far even a chimney. That the young Scotch lad, however, saw nothing discouraging in the outlook of a pioneer farmer is clear from the fact that at this time he seriously contemplated buying a farm himself, and even went the length of examining one that happened to be for sale, and making inquiries as to possible terms of purchase. A sudden call to Hamilton on urgent business brought this project to an untimely end, fortunately for his adopted country. He might have made a successful farmer, but Canada would have lost perhaps her greatest engineer.

One little incident may appropriately close this phase of the young man's career, and the story cannot better be told than in his own words. 'I was anxious', he says, 'to find some way of helping my old schoolmaster, who, although he had no doubt found occasion to thrash me more than once, had endeared himself to me by many kindnesses. As his log house lacked a fireplace and chimney, I made up my mind to supply these defects. I had discovered that a quarry could be opened some little distance away, and with the aid of a pair of oxen and a sled or stone-boat, gradually managed to cut out and haul to the house sufficient stone for the purpose. Mr. Bethune's little girl, Isabella, a child of about three years, had become my stanch friend, and took great delight in driving back and forth behind the great lumbering oxen. Many interesting conversations we had, wee Easie and I, as we got out the stone and hauled it to the site of the chimney.

‘One evening I remember her mother came to me worrying because the child was restless and feverish, and nothing would do but she must sleep in my bed. With many apologies Mrs. Bethune asked if she might be put there until she fell asleep. But when I saw her curly little head on the pillow I could not bear to have her disturbed, and when I turned in for the night the wee one cuddled down beside me contentedly, and so we remained until the next morning’s sun summoned us to our pleasant labours at the quarry.

‘One day a message came from Hamilton that Dr. Hutcheson, my first and best friend in Canada, was seriously ill, not expected to live, and wished earnestly to see me. I had to leave at a moment’s notice. Fortunately Dr. Hutcheson’s illness proved less serious than had been anticipated, and in a few days he was well enough to be taken back to Peterboro.[2] One thing and another, however, made it impossible for me to revisit my dear friends near Lake Erie, and it was not until nineteen years after, when professional business brought me within half a day’s journey of the place, that I found the opportunity to revisit the scene of the pleasant days of 1845.

[2] Dr. Hutcheson died in July 1847, from typhus contracted as a result of his devoted and unselfish work among the suffering Irish immigrants at Montreal.

‘I reached Jarvis, a village which had grown up meanwhile not far from the old farm, and put up at the inn. After supper I asked the landlady if she knew of a family in the neighbourhood of the name of Bethune. “Oh yes,” she said, “the old gentleman is dead, but the daughter is still living here. She married a Mr. Cowan, who keeps a general store down the road.” I found the place without difficulty. The interior was the usual country store, filled with all sorts of miscellaneous articles. On one side a door, then ajar, led into the living-room. On entering the store I found a young man in charge, and asked him if Mrs. Cowan was at home. The words were no sooner out of my mouth than I heard a woman’s voice from the inside room crying “There he is!” and before I could take breath a handsome young woman rushed out and threw her arms around my neck, much to the confusion of myself and the young man behind the counter. This was my little Isabella of nineteen years before, whose memory of her old companion had been vivid enough to recognize him after all these years merely by the tones of his voice.’

But to return to Peterboro and the year 1845. Putting aside for the time all thoughts of Toronto, Fleming obtained temporary employment as a draughtsman with a Peterboro surveyor, Richard Birdsall. This occupied him until February 1846, when he conceived the idea of making a survey of the

town and publishing the plan. He had now entered his twentieth year. The survey was duly completed, and then the question of lithographing the plan had to be faced. At that time there were few, if any, lithographers in Canada; certainly none in Upper Canada. Sandford had learned the art in Scotland, and determined to do the work himself. He went up to Toronto, obtained the necessary stones, and in due time the plan was completed. A survey and plan of the Newcastle District were carried out the same year; and in 1847 Cobourg was added to the list.

Realizing the advantage of securing from the Government a commission as a provincial land surveyor, he articled himself to Stoughton Dennis, of Weston, and in due time obtained the certificate then required by the law. Armed with this document he set forth for Montreal, then the seat of government, in the late winter of 1849. The journey was long and tedious. From Peterboro to Kingston the journey was made by stage. At Kingston the traveller caught the first boat to Montreal, in company with a number of legislators on their way to the meeting of Parliament. The monotony of the journey was broken, or possibly increased, by the steamer becoming icebound in the St. Lawrence, and remaining there for the better part of a day.

At Montreal the young man presented himself for examination to that fine old gentleman, then Commissioner of Lands, Andrew Russel, passed the ordeal without misadventure, and obtained his commission from Lord Elgin on the very day of the famous riot over the Rebellion Losses Bill.

The Bill had been passed on April 25, 1849, and, after anxious consideration, the Governor-General had come to the conclusion that he had no justifiable alternative but to give his assent. Returning from the legislative building, Lord Elgin was surrounded by an angry mob who hooted him and pelted his carriage with rotten eggs. In the evening the mob, now grown to formidable proportions, gathered in the Champ de Mars, where inflammatory speeches were delivered, and when feeling had been worked up to fever pitch, some one cried, 'Burn the Parliament building.' The mob immediately took up the cry, and rushed off to wreak vengeance on the empty building. Sandford Fleming had been an interested spectator of the wild scene on the Champ de Mars, and now followed the angry crowd to watch the sequel. Down the dark narrow streets surged the mob, their excited faces lighted fitfully by the torches that many of them carried.

The legislative building was 'a two-story brick structure occupying the site of the old St. Anne's Market. The building has long since disappeared, and the ground it stood on is now Youville Square. It was built as a market,

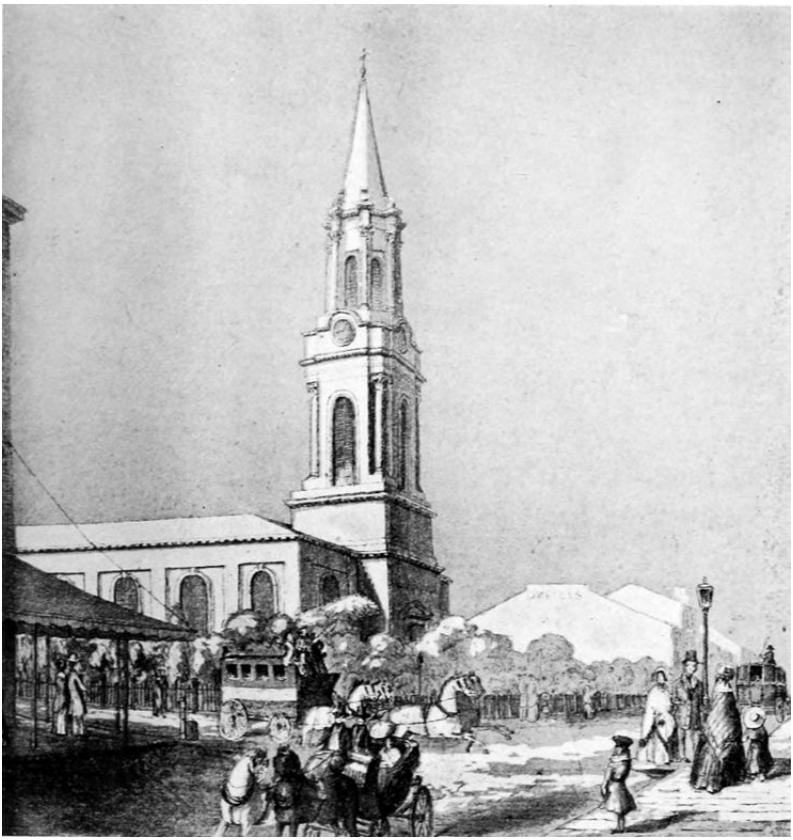
but was not then occupied as such, having been leased by the Government for legislative purposes. On the ground floor were the Government offices, while upstairs, at the head of a broad staircase, and leading off a wide passage, were two halls, one that of the Legislative Assembly, and the other that of the Legislative Council.'

The octogenarian Montreal notary, Mr. W. F. Lighthall, whose recollections supply the above description of the legislative building as it was in 1849, adds the following graphic little picture of the opening of Parliament in this eventful year: 'Soon it was announced that the Governor-General had arrived, from his official residence Monklands, on Mount Royal. He entered the Legislative Council and opened Parliament. The Speaker of the House and Black Rod rushed in with the mace, and we pressed in behind. Lord Elgin read the speech from the Throne, back of which hung the large oil painting of the young Queen Victoria, which later was rescued from the building when it was burning.'

This latter incident brings us back to Sandford Fleming, who was left following the angry mob to the legislative building. 'When they reached the building,' he says, 'they tore up the planks of the sidewalk and dashed them through the lower windows. Lights were then applied to piles of parliamentary papers inside, by throwing in the torches. The fire spread rapidly, and I could see that before long it would reach the library. Having spent several delightful days there examining old and rare books, I felt that the least I could do was to try to save some of them. I gained an entrance, but found that the fire had already taken possession of the library, and it was impossible to do anything there. Turning to the legislative hall, I saw the Queen's picture and determined to make at least an effort to save it. Three other men joined me, but we found it no easy task. The portrait was in a massive gilt frame, firmly bolted to the wall. At last, by putting our shoulders underneath and exerting our united strength we managed to loosen the fastenings, and finally the frame came down with a crash. Finding the frame too heavy to handle, we removed the canvas on its stretching frame, and the four of us carried it out of the building, a shoulder under each corner. We were only just in time, for as we climbed slowly down the stairs the flames were roaring overhead and we had to stoop low to prevent the picture being scorched. The picture was removed to a place of safety, and some years after was brought to Ottawa. It hangs to-day in the Senate. It was the work of John Partridge, as appears by the following entry in the proceedings of the Legislative Assembly under date March 23, 1848: "On motion of Sir Allan MacNab, seconded by Mr. Drummond.—Ordered that the Clerk of this House be directed to write to John Partridge, Esq., portrait

painter to Her Majesty the Queen, requesting him to forward the likeness of Her Majesty painted for this House." I remember reading in a Montreal newspaper, a few days after the fire, a lively account of the incident, in which, among other things, it was said that "the Queen's picture was carried off by four scoundrels". At the time I knew nothing of the identity of my companions in rascality, but many years afterwards I learned that one of them had been Colonel Wiley, formerly Chief of Police. Another was an employé of Parliament, an Eastern Townships man, whose name was, I think, McGillivray; and the third was an uncle of A. H. Todd, of the Library of Parliament. All three are now dead. It may be worth mentioning that a copy of the picture was made after the fire by Mr. Berthon, and presented by the late Senator G. W. Allan to the city of Toronto for the city hall.

'After the rescue of the Queen's picture, I returned to the legislative chamber to see if something else might not be saved from the fire, but found nothing of value which one man could handle. I did, however, carry out the gilded crown which had rested on a cushion over the picture. It was, of course, of no particular value except as a relic of the old legislative building, but it was new and bright with gold-leaf, and attracted attention as I carried it in my arms through the crowd on St. Paul Street. Several times I was threatened with arrest, but I explained that I was simply saving the crown from destruction, and that any person who had a better right to it than I would find it in my room at Mack's Hotel. I afterwards took it in a tea chest to Toronto, where it remained in my possession for some years. What subsequently became of it I do not know. Possibly it found its way into some Toronto museum.'



TORONTO IN 1848
From an engraving by Fleming

CHAPTER III
GENESIS OF THE ROYAL CANADIAN INSTITUTE

Among the many important projects with which Fleming has been associated, none has, perhaps, given him more satisfaction than the founding of the Canadian Institute, created the Royal Canadian Institute by His Majesty in 1914. When he returned from Montreal in the spring of 1849, equipped with all the necessary documentary authority to practise his profession in Canada, he had already determined to make Toronto his head-quarters. His was not, however, the nature to rest satisfied with a mere bread-and-butter existence. His vision even then reached beyond the practical details of his daily work. In June of the same year he, with several other land surveyors, civil engineers, and architects, practising in and around Toronto, met together in the office of Kivas Tully, near the corner of King and Yonge Streets, to organize a society for the mutual improvement of its members and the advancement of their allied professions. This society began its existence as a professional association, but the men who were behind it were too broad-minded to be satisfied with so narrow a field, and in 1851, when a royal charter was obtained, the society became known as the Canadian Institute, in the words of the Act of Incorporation, 'A Society for the encouragement and general advancement of the Physical Sciences, the Arts and the Manufactures in this part of our dominions.'

Before this stage had been reached, however, the society had suffered the vicissitudes of most such bodies. The original meeting was held on June 20, 1849, the anniversary of the Queen's coronation, but in spite of this happy coincidence the society experienced anything but 'Queen's weather'. The preliminary meeting was adjourned from month to month, little being accomplished, and the waning interest of the members made painfully evident by the rapidly diminishing attendance. Finally, in February, 1850, only two men attended the meeting, Sandford Fleming and F. F. Passmore. There was in Sandford Fleming's make-up, however, something more than enthusiasm. He was not born north of the Tweed without inheriting a share of the national tenacity. He had set his heart on organizing this society, and organized it should be though he had to do it single-handed.

After much silence and long waiting, in vain, for the other members to appear, Fleming addressed his colleague in these words, 'This looks bad. We must, however, proceed, as the saying is, to make a spoon or spoil the horn.

Let one of us take the chair, and the other act as secretary.' So it was agreed, and dispensing in the emergency with a quorum, the two young men passed a series of resolutions, with complete unanimity. No amendments were offered, and time was not wasted in long discussion. Those present deemed it an unnecessary formality to have movers and seconders to the motions submitted. As appears by the original minute-book, the meeting simply 'Resolved' this and that. One resolution adopted and formally placed on the records had far-reaching results. It reads: 'That the members of the Canadian Institute do after this date meet once a week, on each Saturday, at 7 o'clock p.m., in the hall of the Mechanics Institute.' The resolutions were printed in circular form and sent to all interested. The Society was galvanized into life. The meeting held the week following was well attended, and the discussions on various subjects were continued for several hours. The weekly Saturday meeting of the Canadian Institute, inaugurated by these two daring young enthusiasts in February 1850, has been regularly maintained for over sixty years!

The Canadian Institute, having been at last put in motion, was not permitted to stand still. At the meeting of November 16, 1850, Sandford Fleming submitted the prospectus of a proposed periodical, designed to be the official organ of the Institute. It was to be known as *The Canadian Journal*, and was to become the medium of publication of the society's transactions. In the language of the prospectus, it was 'intended to minister to the wants and promote the interests of a young yet enterprising and rapidly advancing people, and to fill up a blank in Canadian literature, the existence of which has been deeply regretted, and has of late been most seriously felt by artisans, manufacturers, and the public generally throughout the province'. The prospectus was approved, and the first number of the *Journal* appeared, after some little delay, in 1852. A change in the title of the *Journal*, in 1856, is significant. From 1852 to 1855 it was known as *The Canadian Journal, a Repertory of Industry, Science, and Art*, the title being changed the following year to *The Canadian Journal of Science, Literature, and History*. The aims of the society, at first largely utilitarian, were becoming more purely intellectual and scientific, and this was altogether desirable. The people of Canada are even to-day much too deeply engrossed in practical affairs, in the merely bread-and-butter side of life. Literature for its own sake, or science for its own sake, make but a small appeal to their sympathies. 'Does it pay?' is the touchstone, rather than 'Is it worthy?' If this is so to-day it was doubly true in the middle of the last century, when the very circumstances of life in Canada, the stress and strain of pioneer conditions, the constant pressure of merely keeping alive, left very little

room for interests that were not altogether practical. And yet it was as important then as it is now, and always will be, that men should be reminded that life has something higher and nobler than eating and drinking, clothing and shelter. To some extent at least, the Canadian Institute furnished a reminder.

There is, however, a utilitarianism that is unselfish, philanthropic in the larger sense, making for the greatest good of the greatest number. This sort of idealized utilitarianism has been one of the most active factors in Sandford Fleming's career. It marked his character as a young man; it will be revealed in many incidents of his later life. It is the natural and inevitable expression of his personality, for he is essentially a man of broad sympathies; a man of big, unselfish ideas; a practical and far-sighted patriot. He has always stood a little in advance of his times. He is a dreamer, but not a visionary. His dreams have always been practical and possible. He has had the courage to think independently, to preach great reforms, and he has had the patience to educate public opinion to the support of his projects. He has lived to see his dreams come true, simply because he would not rest until they had come true. He has had to meet on the one side the determined opposition of selfish interests, and on the other the much more formidable obstacle of public apathy or indifference, but in the end he has proved that even one man, with a good cause, and a thorough belief in both the cause and himself, must win.

Fleming's interest in his professional work as an engineer was always sincere and whole-hearted. It was much more to him than a means of livelihood. He loved it for its own sake. He gloried in the problems it presented, the hard work it entailed, its difficulties and dangers, its repulses and final victories. But even in his busiest years, when every hour of the day had its strenuous and exacting duties, he managed somehow to find time for other and larger plans; and when the time at last came when he felt free to retire from active professional life, it was simply to throw his tireless energies into those other channels.

His interest in the Canadian Institute was an early manifestation of this attitude. It would not have been like him to rest content with the successful launching of the society. For more than half a century he has identified himself with the life of the Institute, and in innumerable ways contributed to its success. The published transactions of the society reveal at least one form of his interests, and at the same time throw not a little light on the bent of his mind. To the early volumes he contributes papers on such subjects as the preservation and improvement of Toronto Harbour. Some years later we find

him introducing a subject to which he was to return again and again, both here and in many other periodicals, that of 'uniform standard time', and the adoption of a prime meridian. More will be said about this in another chapter. It is perhaps sufficient here to note the fact that while his first article on the subject in the transactions of the Institute appeared as long ago as 1879, he was still hammering away at the same reform in the transactions for 1894. In 1893 he takes up the question of electoral representation, and the rectification of Parliament; and in that and the following year we find him contributing a series of historical and other articles, on such subjects as ocean steam navigation, early steamboats, postage stamps and colour blindness, and historical pictures.

Many years ago Lieutenant Robinson, a retired British officer, found in one of the walls of the old French fort at Annapolis Royal, Nova Scotia, a stone inscription dated 1606. Lieutenant Robinson gave it to Thomas Chandler Haliburton, the author of *Sam Slick, the Clockmaker*, who handed it over to his son, R. G. Haliburton. Fleming, always on the lookout for material that would be interesting and useful to the Canadian Institute, secured the stone from Mr. Haliburton, and deposited it in the museum of the Institute.

Of the Institute itself, a few words may be said. The granting of a royal charter, in 1851, gave it an assured standing, and encouraged its members to embark on broader seas. Union with the Toronto Athenaeum, in 1855, not only strengthened the membership but gave the nucleus of a library that has since become one of the strongest scientific reference libraries in the country. Some years later the Institute, which had hitherto been in temporary quarters, moved into its own commodious building. In 1863 a medical section was formed; and about the same time an entomological section. In 1885 the Natural History Society joined the Institute, bringing a valuable museum, and taking up the work of the biological section. The following year five new sections were added, architectural, photographic, philological, historical, and geological and mining; also an ornithological subsection of the biological section. Archaeological work was taken up in 1887, and a splendid archaeological museum founded; and in 1888 a sociological committee was formed, which carried out a series of inquiries into the social and political systems of the Indians of the Canadian north-west. Some of the sections named later branched off as independent societies, but the original stimulus came from the parent organization. As already mentioned, the Institute was, in 1914, honoured by His Majesty the King, on the recommendation of His Royal Highness the Duke of Connaught, with the title of 'Royal'.

The Royal Canadian Institute has counted among its members many of the most eminent scholars, scientists, and statesmen of the country—men of more than national reputation. The character and standing of the society may be judged from the fact that it has been able to elect to its presidency such men as Sir William Logan, Sir John Henry Lefroy, Chief Justice Robinson, William Henry Draper, Sir Daniel Wilson, and Sir Oliver Mowat. When the Institute celebrated, in 1899, the completion of the first half-century of its existence, a celebration in which Sandford Fleming took an active part, it must have given him peculiar satisfaction to realize that the seed sown in 1849 had grown into a great and vigorous tree. One may fittingly quote the concluding words of his account, prepared for the occasion, of the early days of the Institute:

The 'writer vividly recalls', he said, 'the words and acts of the earnest well-wishers of literary and scientific progress, with whom he had the happiness to co-operate in establishing the foundations of this society. It is indeed a high privilege, at the dawn of a new half-century, to be permitted to allude to them and pay respectful tribute to their memory. He feels that he cannot better conclude this brief sketch than in the words of one who may be regarded as perhaps the greatest benefactor of the Canadian Institute, the late General Sir Henry Lefroy: "This society has a dignified, an honourable, and a patriotic object before it; the field is wide and ready for the harvest, if the labourers are still few; and if much of that knowledge, contingent upon a thousand advantages never as yet brought within our reach, which alone can truly appreciate or encourage their exertions, is at a low point among us, let us not doubt that it will gain ground with rapidity, and receive new impulses and new rewards from every endeavour we make to carry into effect the objects of our incorporation." To-day the objects before us are not less dignified, not less honourable, not less patriotic than when these words were spoken on January 8, 1853. The field is wider, the harvest more advanced, the labourers more numerous—every advantage has been increased and multiplied during long years of patient progress. The Canadian Institute unquestionably stands on better vantage-ground than it did half a century ago. From this new starting-point are we not encouraged to look forward to greater and greater usefulness? May we not anticipate a career in harmony with the progress of Canada in education, in material advancement, and in every phase of prosperity?'

And at the semi-centennial meeting, speaking after the Earl of Minto, Governor-General of Canada, Fleming once more emphasized the importance of the work accomplished by the Institute, and to be accomplished. 'We recognize', he said, 'that every society such as this is a

human agency employed to shape and develop movements for the common good. On this pleasant planet we find everywhere a field for such agencies. Each individual member of such societies is an agent. He is given an opportunity of co-operating with his fellow members in investigations, in acquiring information, or in assisting in disseminating knowledge obtained. In one way or another every right-minded person, by becoming a member, can extend a helping hand in promoting the general advantage. Members of the Canadian Institute have accepted the opportunity offered them, and we come to recognize that their united efforts have been crowned with a full measure of success.

'This society, as its name implies, is neither sectional nor local; it occupies a wide sphere of activity and usefulness. One of its functions has been to encourage workers in all parts of Canada, however remote, to induce them to bring forward the result of their investigations, and, when of sufficient importance, to publish them.

'For half a century the Institute has diligently followed its broad, elevated, and patriotic aims. Its published proceedings have regularly found their way to kindred societies in every civilized country, and by being placed in the great public libraries of the world they are made accessible to all peoples. Inquiry into the published proceedings goes to show that the society has given much attention to questions of public concern, and by its successful efforts in extending the domain of knowledge, it has been the means by which great benefits have been conferred upon the scientific and general public, both within and without the Dominion.'

Alluding to the fact that he attended the meeting as the official representative of Queen's University—of which he had been chancellor since 1880—Fleming reminded his hearers that he was there not only as the official head of a Canadian college, but also as one of the pioneers of the Institute. 'It is my happiness, as an early member of the Canadian Institute, to bear testimony to the progress made and the benefits which have resulted from the work which has been achieved.

'This is the fiftieth annual meeting. There are not many who can look back with me through the heat and haze of fifty Canadian summers and the snows of fifty Canadian winters to the beginning of this society in the year 1849. The first annual meeting was held on Saturday evening, December 7, 1850. At that date, the close of the first year of the society's existence, the membership counted sixty-four persons. Eight of these early members are still alive, and of the eight who survive, I am delighted to find in this assembly three who took an active part in founding the Canadian Institute so

many years ago. I rejoice again to meet at an annual meeting of the Institute my old-time co-workers, Kivas Tully and Thomas Ridout, both so closely identified with its early days. It will suffice if I mention that in the office of Mr. Tully the Canadian Institute was cradled, and it was to Mr. Ridout we were under great obligations in connexion with the securing of the royal charter.' Since these words were spoken both Kivas Tully and Thomas Ridout have passed over to the great majority.

'I am afraid', he continued, 'that I can only feebly and imperfectly put in words the feeling of genuine thankfulness we experience in being permitted to see realized the very sanguine expectations we long ago formed. It is a matter of profound satisfaction to find our society, after fifty swiftly-passing years, so prosperous; to see rallying round it so many distinguished men, and to be privileged to bear witness to its development and progress in the presence of the representative of our Most Gracious Sovereign the Queen.

'It is fitting that the society should celebrate the beginning of a new half-century of useful work. It is proper that its members should take a retrospective glance at the past, in order the better to pursue their useful and elevated aims. To-night we may be said to be taking stock. We are reckoning up the net result of the work in which the busy members of the Institute have been engaged for fifty years.'

After making a plea for the establishment of a public museum, and a gallery of historical paintings, in connexion with the Institute, and referring to the part the Institute had taken in the movement for a simplification of the system of reckoning time, he concluded:

'The name which your society bears, the articles of your charter, indicate the widest range of subjects for discussion; they suggest the cultivation of the spirit of investigation in order that additions to knowledge may be made to the common stock; they invite research in every field; they admit of the initiation of desirable movements in matters of general concern. The publications which have been widely circulated by the Institute, the hundreds of foreign societies which regularly send their proceedings in exchange, are memorable evidences that the Canadian Institute has done much to make known the good name of our country.

'Young members, this is no ordinary occasion. Entering on a new half-century, let me remind you that you are the heirs of fifty years of useful effort. It is for you to keep alive the lighted torch and pass it on to those who may come after you. It is for you to bequeath to another generation a record of work well done.

'In order that Canada may take her place worthily among the nations making up the British Empire, it is for you to see that she contributes a generous share of all that is best in letters, in science, and in art. On you is now placed a responsibility which I feel sure you will find pleasant to bear. It rests with you to do all in your power to foster and promote, as the years roll onward, every agency which has for its object the advancement of our country and our race.'

It is not at all too much to say that of the success achieved by the Royal Canadian Institute, a very material proportion is due directly or indirectly to the personality and influence of Fleming. At a meeting of the Institute held January 12, 1907, the following resolution was unanimously adopted:

'*Resolved*, That the members of the Canadian Institute, bearing in mind the invaluable services rendered to the Institute during all the years from its foundation to the present time by Sir Sandford Fleming, K.C.M.G., LL.D., and recognizing the important results of his labours as an engineer in connexion with the Intercolonial and Canadian Pacific and other railways, and also in the promotion of all-round-the-world cable telegraphs and in many other ways advancing the interests of the British Empire, congratulate him on his reaching his eightieth birthday, and on the extraordinary measure of health and strength which he enjoys in advanced years, and express the hope that he may yet have many more years of unalloyed happiness in store.'

CHAPTER IV
BUILDING THE NORTHERN RAILWAY

Three years after the founding of the Canadian Institute Fleming joined the staff of the Ontario, Simcoe, and Huron Railroad, afterwards known as the Northern Railway. He remained ten years with this railway, first as assistant engineer, and from 1855 to 1863 as chief engineer. Though comparatively uneventful, these were vitally important years to the young engineer. He was passing from young manhood to maturity, passing through the formative period of a man's life, and as the imaginative side found expression in the creation of the Canadian Institute, the practical engineer threw himself heart and soul into the novel problems of a pioneer railway, gaining thereby experience and breadth of vision for the infinitely larger engineering problems that awaited him in the future.

Before describing briefly the period of his employment with the Northern Railway, however, a few words may be said as to his life in and about Toronto, from 1849, when he returned from Montreal with his commission as a land surveyor in his pocket, to 1852 when he joined the staff of the railway. His moderate success with the plans of Peterboro and Cobourg encouraged him to complete a more ambitious survey of the city of Toronto, which had been commenced by Mr. J. Stoughton Dennis. A pupil of the latter, Mr. Charles Unwin, became associated with him in the undertaking. Mr. Unwin was afterwards appointed city surveyor of Toronto, which office he continued to fill for over half a century. Between them they completed the task, Mr. Unwin measuring 'every house in the then city', and Fleming plotting the notes and engraving the map on stone. One must see this plan to get any idea of the patience and skill required to carry out such a minute piece of engraving. The scale was twelve chains or 792 feet to the inch, and every detail was worked out with absolute accuracy, though much of the effect of the work was lost by reason of the extremely reduced scale on which the publishers decided to have the plan plotted.

Having completed the plan of Toronto, Fleming found leisure for an elaborate survey of Toronto Harbour and the adjacent shores of Lake Ontario. With characteristic patience and thoroughness he went out in a boat day after day for many weeks, taking soundings of every foot of the harbour, and embodied the results of his labours in an elaborate plan, the scientific value of which is appreciated to-day, though it was not at the time. From

these data, and a careful study of the geology of the surrounding district, he drew certain important conclusions as to the formation of the harbour and the means that should be adopted for its preservation and improvement, and these he made public in a series of carefully thought-out papers.

He was engaged for some months in carrying out surveys and plans for the Royal Engineers of properties controlled by the Imperial authorities in the neighbourhood of Toronto; and spent a winter in nautical surveys on Lake Huron, from the Christian Islands to Penetanguishene and Matchadash Bay. This latter work was done for a projected railway known as the St. Lawrence and Lake Huron, the principal object being to secure a satisfactory terminus for the road. Fleming discovered in what was then known as Hog Bay, and which he renamed Victoria Harbour, an ideal railway terminus. Although the then projected railway came to naught, his judgement has been confirmed, sixty years afterwards, by the selection of this very harbour by the officers of the Canadian Pacific Railway as the terminus of one of their new branches. The name has once more been changed, and henceforth it will be known as Port McNicholl in honour of the general manager of the railway. On the shores of this splendid natural harbour, on the 7th of January, 1851, Sandford Fleming spent his twenty-fourth birthday, sleeping at night in two or three feet of snow, with no tent, and the thermometer registering 14° below zero, his companions a dozen Indians and half-breeds.

One other incident of this period of the young man's life deserves to be mentioned. In an old scrap-book at 'Winterholme,' Fleming's home in Ottawa, is preserved a curious little relic of his industry as an artist and engraver sixty odd years ago. It is the faded proof of a Canadian postage-stamp, and beneath it is this note: 'This is the first proof from the copperplate of the first postage-stamp issued in Canada, designed by Fleming for the Postmaster-General, the Honourable James Morris, dated Toronto, February 1851.'

This same year 1851, which saw Fleming about to enter upon his first important undertaking as a railway engineer, was a notable one in the history of railway development in Canada. In that year Lord and Lady Elgin broke ground at Toronto for the first Ontario railway—the Ontario, Simcoe, and Huron; in the same year an act was passed by the Canadian Legislature providing for the construction of a main trunk line through the two Canadas; the Canadian Railway Committee had under consideration a bill for the construction of a railway through British North America to the Pacific Ocean; the battle royal of the gauges was fought before the same Committee; and delegates from the British North American provinces went

to England to arrange for the construction of the Intercolonial Railway. As the late George Johnson concisely puts it in his *Alphabet of First Things in Canada*, 'Thus in 1851 began the movement which has resulted in the Dominion possessing (*a*) a general system of railways numbering (in 1897) 136; (*b*) the Grand Trunk Railway system, by the amalgamation of twenty-five of these; (*c*) the Canadian Government Railway system; (*d*) the Canadian Pacific Railway system, in which are consolidated twenty-two railways; (*e*) seventy-six other separate railway organizations, formed by consolidations of eighty-nine railways.'

Before returning to Fleming's connexion with the Northern Railway, it may not be out of place to say a few words here as to the beginnings of the railway movement in what is now Canada. 'The agitation for railways in British North America', says George Johnson, 'began almost as soon as the success of George Stephenson's railway was assured. One of the earliest efforts was made in St. Andrews, New Brunswick, in 1827, two years after George Stephenson had completed the first railway in England. In 1828 John Wilson convened a public meeting in St. Andrews to discuss the question of a railway to Quebec. Four years later Henry Fairbairn, writing in the *United Service Journal*, turned the attention of the British public to the necessity of a railway system for British North America. He said, "I propose first to form a railway for wagons from Quebec to the harbour of St. Andrews, upon the Bay of Fundy—a route which will convey the trade of the St. Lawrence in a single day to the Atlantic waters." In consequence of his efforts an association was formed by the inhabitants of St. Andrews; explorations were made and reports submitted. In December 1835, a deputation went to Quebec to bring the question to the attention of the sister province. Resolutions favourable to the undertaking were adopted in the same month by both Houses of the Lower Canadian Legislature. The Committees of Trade in Quebec and Montreal appointed special committees to act in concert with the delegation. In January 1836 a delegation went to England, carrying with them a petition to the King. The Nova Scotian Legislature passed a resolution similar to that passed by the Lower Canadian Legislature, and the Legislature of New Brunswick passed an act incorporating the St. Andrews and Quebec Railway Company. The Imperial Government made a grant of $50,000 to be expended in the exploration and survey of the proposed line of railway from Quebec to St. Andrews. This survey was placed under the control of Captain Yule of the Royal Engineers, and work was begun on July 23, 1836. At that time the country through which Captain Yule prosecuted the surveys was held to be wholly British territory. In 1837, however, the United States Government made objections

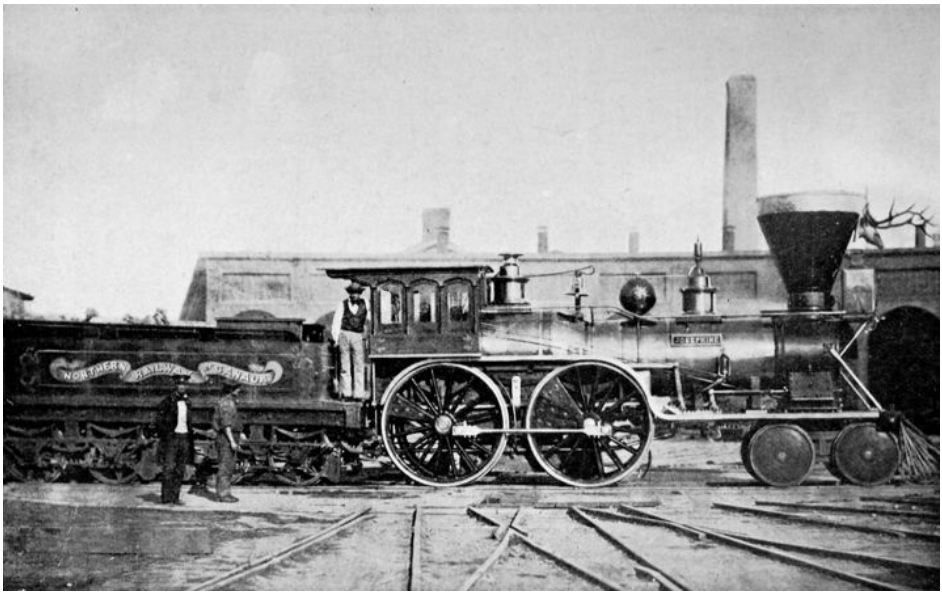
to the route proposed, on the ground that they claimed part of the territory. Notification of the fact was given to the Governor-General of Canada and to the Lieutenant-Governor of New Brunswick, and orders were given by the British authorities to stop work until the boundary line was settled.'

In the meantime a less ambitious railway project had not only been mooted but made an accomplished fact in Lower Canada, now the province of Quebec. A charter had been obtained in 1832 from the provincial legislature for a railway from Laprairie on the St. Lawrence River, to St. John's on the Richelieu, under the name of the Champlain and St. Lawrence Railway. The work was pushed forward, and on July 23, 1836, the first passenger railway in Canada was formally opened by the Governor-General, Lord Gosford. The first train consisted of four cars, and they were drawn by horses, the locomotive ordered for the railway having proved refractory.

Some further particulars of this first Canadian railway are given in Prout's *Railways of Canada*. 'The rails', he says, 'were of wood with flat bars of iron spiked on them, and from the tendency of this class of rail to curl or bend upward as the wheels passed over it, it became known as the "snake rail". From this awkward peculiarity it often happened that the rails came into contact with the body of the cars or other rolling stock, in which case both fared badly. The first locomotive used on the line was sent from Europe, accompanied by an engineer who, for some unexplained reason, had it caged and secreted from public view. The trial trip was made by moonlight in the presence of a few interested parties, and it is not described as a success. Several attempts were made to get the "Kitten"—for such was the nickname applied to this pioneer locomotive—to run to St. John's, but in vain; the engine proved refractory, and horses were substituted for it. It is related, however, that a practical engineer being called in from the United States, the engine which was thought to be hopelessly unmanageable, was pronounced in good order, requiring only "plenty of wood and water". This opinion proved correct, for after a little practice the "extraordinary" speed of twenty miles an hour was attained.'

The Ontario, Simcoe, and Huron was, as has already been said, the first railway opened in the province of Ontario. The preliminary work on the road had been undertaken by an American engineer, H. C. Seymour. In August 1852 the engineering staff was re-organized, and Frederick Cumberland, a man combining engineering skill with rare business and organizing ability, became chief engineer, with Alfred Brunel and Sandford Fleming as his assistants. The first section of the road from Toronto to Aurora, thirty miles, was opened to the public on May 16, 1853; the next section to Bradford, on

June 13th of the same year; the line was completed to Barrie on October 11th; and before the end of the following year to Collingwood on Georgian Bay. The line had already been located from Toronto to Barrie before Cumberland became chief engineer, and the work of construction was well under way, but it was found necessary to revise much of this work so as to make it more permanent and substantial, and from Barrie to the shores of Georgian Bay the route had not yet been decided. It was on this new section of the road that Sandford Fleming was for the most part engaged in 1852. Five separate routes were surveyed from Barrie: north-east to Penetanguishene; north-east to Victoria Bay; north and north-west to Nottawasaga; west and north to Nottawasaga; and west and north-west to Collingwood. Finally the last route was decided upon as the best from an engineering and commercial standpoint.



THE "JOSEPHINE"

Collingwood has been mentioned as the terminus of the route selected for the railway, but as a matter of fact no such place existed in 1852. A few years before a small settlement had sprung up on the shores of Georgian Bay, named Hurontario, after the pioneer road known as Hurontario Street. The place selected as the terminus of the Ontario, Simcoe, and Huron Railway was a little west of this, and was then known as Hen-and-Chickens, on account of the number of small islands that studded the shore. When Cumberland, Fleming, E. C. Hancock, Sheriff B. W. Smith, and others

interested in the proposed terminus, came over to the bay in 1852, they were met by several residents of the neighbourhood, and after going over the ground very carefully, the Hen-and-Chickens was found to be the most satisfactory point for the terminus and for the town that was to be.

A local chronicler says that 'while stopping at a rock which peered above the deep snow on the shores of the harbour, the discussion turned to the name of the new town. Mr. Cumberland suggested Victoria in honour of the Queen; others thought it well to retain the existing name of Hen-and-Chickens; while Mr. D. E. Buist offered the name of Collingwood, already borne by a neighbouring township. The latter name was accepted as the most suitable.' Thereupon the infant town of Collingwood was christened with a bottle of wine. In honour of the occasion, Mr. Stephens, a well-to-do farmer of Nottawasaga, gave a dinner to the directors and engineers of the railway, and a number of the prominent settlers of the district, nearly all of whom were Highlanders. A great dish of haggis stood at one end of the table, and behind it sat Captain Hancock, looking rather bewildered. As he was about to carve the mysterious dish, some one at the other end of the board cried out, 'What is that you have, Hancock?' 'Don't know,' replied Hancock, 'but it looks to me like a bran mash.' One can picture the indignation of the Highlanders. That the Sassenach should be ignorant of the greatest of Highland dishes was bad enough, but that he should dare to compare it to the vulgar mess fed to cattle was wellnigh intolerable.

A portion of the summer of 1852 had been spent in completing a line of levels from Toronto north to Barrie. The work was somewhat tedious, the weather unusually hot, and the engineers perennially thirsty. On one occasion, says Fleming, they came to a primitive tavern at Penetanguishene kept by one Jeffery. Cumberland and he went in, found the proprietor, and asked what he could give them to drink. Jeffery produced a decanter of what seemed to be whisky, and a couple of glasses. The tired travellers sat down expectantly. The proprietor chatted amiably of the weather. At length Cumberland's thirst got the better of his patience. 'Where's the water?' he cried. 'Oh!' replied Jeffery, 'I'll fetch some from the pump if you wish, but you won't need much, for I've watered it twice already.'

An even more disastrous attempt to quench their thirst is associated with the township of York, a few miles north of Toronto. Plodding along with their instruments, under a grilling sun, the engineers came in sight of an inviting-looking farm-house. The idea occurred to them simultaneously that a glass of cool milk would at the moment fulfil all their earthly desires. The hospitable goodwife invited them in, showed them into her best room, and

went off for a jug of milk. Cumberland and Fleming sat down in the grateful shade of the darkened room and waited. Presently the goodwife returned with a brimming jug of cool, refreshing milk. She put down the jug and went to a corner cupboard for glasses. It is well to repeat here that the blinds were down to keep out the glare of the sun. The glasses were brought forth, and the milk poured into them. The parched engineers smiled gratefully at their hostess and lifted the glasses to their lips. One never paused until the last drop had disappeared. The other got half through, and then halted irresolutely. He was still thirsty, but there was a mysterious metallic rattle at the bottom of his glass. He took it over to the window, held it up to the light, set it down hastily, and retreated in disorder from the farm-house. The old lady had poured his milk into the glass in which she kept her Sunday teeth!

Little incidents like these served to lighten the monotony of the surveys between Toronto and Barrie. This was a comparatively settled country, and the work presented no serious difficulties so far as travelling was concerned. From Barrie to Collingwood the conditions were very different. The route lay through an unopened district, with no roads, and heavy going—brush, rock, and swamp. However, the surveys were pushed ahead, and by the summer of 1854 trains were running to Barrie and the track laid on to Nottawasaga. About this time Fleming had important business to attend to at Collingwood, which demanded immediate attention. He took the train from Toronto to Barrie, and rode on a construction engine to the end of rails then near Nottawasaga Bridge. From there he pushed on through broken country to Collingwood, a few miles on horseback, and the rest of the way on foot.

On his return journey, on reaching Nottawasaga he found that the engine had returned to Barrie, and that he had very little time to get there before the one daily train left for Toronto. It was imperative that he should not lose a day. There was nothing for it, however, but to march over the ties to Barrie, and four miles an hour was about as much as any man could accomplish on such a road. He started off at his best speed, and was making fairly good progress with his eyes glued to the ties. Suddenly a shadow fell across the track before him, and he looked up hastily to see a huge bear sitting complacently on his haunches between the rails, not twenty paces ahead. What was to be done? Impassable swamp lay on either hand. The bear showed no signs of moving; seemed in fact to be very comfortable where he was; and only mildly interested in the man. So they faced each other, the bear and the man; the bear in perfect good humour, but determined to maintain the *status quo*; the man, thinking of that waiting train at Barrie, glared at the bear with rapidly rising indignation. Finally it boiled over, and, reckless of consequences, he rushed at the bear, waving his only weapon, an

old-fashioned umbrella, and yelling at the top of his voice. The bear stood his ground for a moment, and then ignominiously fled into the swamp. Fleming lost no time in idle reflections as to how it all happened, or more idle curiosity as to the second thoughts of the bear. He redoubled his speed over the ties, and caught the train at Barrie as it was pulling out of the station.

The railway was finally completed from Toronto to Collingwood, and proved a valuable asset to that part of the province. It subsequently fell into difficulties for a time, but as its vicissitudes form no part of the life of Sandford Fleming, they need not be enlarged upon here. Eventually it became a portion of the Grand Trunk system. Meanwhile in 1855 Fleming succeeded Cumberland as chief engineer, and remained in that position until the close of 1862, when he finally retired. The following testimonial, dated January 1, 1863, which was accompanied by a collection of signed photographs of all the principal officers and employees of the railway, illustrates the cordial relationship that existed between the chief engineer and his colleagues and subordinates:

'Presented to Sandford Fleming, Esq., C.E., by the officers, employees and contractors engaged in the construction and late restoration of the Northern Railway of Canada, as a token of their respect and admiration for his public character as an engineer, and of their highest esteem and regard for his private worth as a friend.'

In acknowledging the testimonial and the good wishes of his friends and associates on the railway, Fleming said: 'I need scarcely allude to the cause of my retirement from the position of chief engineer to the Company. You all know that I have finished my work, and that such an office as it was my privilege to fill is now no longer required. It is one of the misfortunes of the profession to which I am proud to belong that our business is to make and not to enjoy; we no sooner make a rough place smooth than we must move to another and fresh field, leaving others to enjoy what we have accomplished. We are, however, satisfied that it should be so; we take pleasure in having work to do, and a pride in it after it is done.' In taking leave of the staff, he handed over to them two relics of the road, which though of no intrinsic value might be worth preserving. The first is a portion of the first sod turned by the Countess of Elgin on Wednesday, October 15, 1851, in front of the old Parliament buildings in Toronto; and the second, a piece of the christening bottle used when Collingwood Harbour was named on Friday, January 14, 1853.

The year that saw his promotion to the position of chief engineer, was marked by a more important event in the life of Fleming. It has been mentioned in an earlier chapter that among the young friends who helped to make life pleasant for him at Peterboro was the daughter of Sheriff Hall. Friendship had ripened into a warmer sentiment, and on January 3, 1855, Ann Jean Hall became the wife of Sandford Fleming.

An incident of this period of Fleming's life may be briefly mentioned, as illustrating another side of his character. In 1861, when the 10th Royals were organized at Toronto, he was offered a captaincy, but found at first some difficulty in securing recruits. His company was still under strength, in fact very much so, when word came that Colonel Wiley was expected from Quebec to inspect the regiment. Here was a pretty kettle of fish. Whatever his fellow officers might do, Captain Fleming at least was determined that something better than a skeleton company must be forthcoming before the inspecting officer appeared on the scene. But Colonel Wiley was due in a very few days. Ordinary methods of recruiting were out of the question. This was a desperate situation, and required a desperate remedy. Putting all other duties aside, the zealous officer made a personal canvass of every home and workshop in the neighbourhood containing an able-bodied man. Getting each man up in a corner, he appealed directly to his local pride and patriotism. He would listen to no excuses. This was a case where Canada, where Toronto, where their own peculiar corner of Toronto, expected every man to do his duty. His eloquence and enthusiasm carried the day. There was scarcely an available man that had not been enrolled in Fleming's company; and when the fateful day arrived, the proud captain was able to muster some seventy odd men, where hitherto there had been scarcely more than a baker's dozen. The other officers, having been less industrious, or perhaps less ingenious in their methods, glanced with envious amazement from their own handful to the crowded ranks of Fleming's company. But more was yet to come. One of the new recruits, filled with enthusiasm at such a brave showing, suggested to the captain that a fife and drum band would lend éclat to the company. He himself could play the flute, and he undertook to provide a drummer if the captain would stand the price of a drum. The captain could and did. When therefore the 10th Royals mustered for drill in the new drill shed, Captain Fleming proudly marched his men around the other companies to the music of a fife and drum band, which made up in energy what it lacked in numbers. It deserves to be commemorated as the first volunteer band in the Canadian militia.

The previous year, in connexion with the visit of the then Prince of Wales, Fleming had proposed the creation of what was known as the

Prince's Walk, on the bank above the esplanade on Front Street, between Bay and Brock Streets, the walk to be a mile long, with a double row of trees, walnut and poplar alternating with spruce. Bishop Strachan, Sheriff Jarvis, and other prominent citizens of Toronto, planted the first trees opposite Bishop Strachan's house. The *Colonist*, in an editorial commending the project, suggested facetiously that 'if the fashions in ladies' dresses do not alter this coming summer from what they were last, then twenty feet is hardly of sufficient dimensions for the Walk'.

One further incident may be recorded as belonging to this period of the young man's life. 'I was subpoenaed', he says, 'as a witness in a water-power case at Brockville. The litigants were Coleman and Macdonald: the latter, father of Charles Macdonald who designed the Poughkeepsie Bridge. There were some twenty-eight witnesses. The first one called took an entire day. Thinking with dismay that at that rate the trial might last twenty-eight days, and very anxious to get home, I set about finding some shorter road to a settlement. At dinner at the hotel that night I asked my neighbour, who seemed good-natured and communicative, if he knew anything about the case.

'"I regret to say that I do," he replied. "I am one of the principals. My name is Coleman."

'It appeared from further conversation that he and his opponent had formerly been great friends, but that both they and their families had been estranged by reason of this wretched dispute.

'I asked him if he was anxious to see the case settled without further litigation.

'"Indeed I am," said he. "I would give a great deal if it could be arranged."

'"Will you come and talk it over in my room at 8 o'clock?" I asked. He promised to do so, and that much being settled, I went off to make the acquaintance of the other party to the quarrel, Macdonald. Him I found also anxious to reach a settlement, thoroughly tired of the whole business, but inclined to throw the blame on Coleman, with whom he seemed very indignant. Finally he also agreed to come to my room at 8 o'clock to talk the matter over. I was careful not to let either know that I had approached the other.

'At 8 o'clock sharp, Coleman arrived at my room. I placed him where he could not be seen from the door. We chatted for a few minutes, when there was another knock. I opened the door, let Macdonald in, and immediately

locked the door and put the key in my pocket. Then I turned to the two men, and gravely introduced one to the other. Both were, of course, indignant with me, but in view of the locked door, they decided to make the best of the situation. I trembled for a moment or two as to the success of my not altogether unselfish efforts as a peacemaker, but the atmosphere gradually became less frigid, and we dropped into a reasonably friendly conversation.

'Then when the time seemed ripe, I unlocked the door, sent a waiter for whisky toddy and biscuits, and we talked over the vexed question in dispute. As an unprejudiced outsider I was able to make some suggestions as a basis for settlement, and finally sat down and wrote out an agreement, which, after I had read it to them, both men signed, with I think a sigh of relief. Some one suggested the need of seals. Lacking the proper material, we used what we had within reach, and made fairly presentable seals out of chewed biscuit. Then, after a final round of toddy, we parted for the night. I told them I was tired, and would sleep late the next morning. Coleman and Macdonald both promised to show the agreement to their respective counsel in the morning. By the way, the former was represented by A. N. Richards, afterwards Lieutenant-Governor of British Columbia, and the latter by S. H. Blake.

'The following morning I was aroused by an agitated knock on my door, and found Coleman outside, "The fat's in the fire!" he cried. "My lawyer says the agreement won't do at all." Presently Macdonald arrives with a similar story from his learned counsel.

' "Tut, tut!" I said, "of course the lawyers will have none of it. No doubt from their point of view it's a most irregular and improper proceeding. But take the agreement into court, both of you, and read it to the judge, telling him that it is satisfactory to both of you, and that neither of you care to continue the case at his own expense." They did so, and the matter was settled in five minutes. The settlement was left in the hands of a board of arbitrators consisting of two hydraulic engineers and an umpire.

'Later in the morning I made my way to the station, with Coleman on one arm and Macdonald on the other, a procession of thirty or forty witnesses and others following. Blake and Richards, who evidently regarded me as an impudent interloper, stood coldly aloof. As the train was about to start, Coleman put in my hand a letter which turned out to be a very kind acknowledgement of appreciation and a handsome cheque from each—my first and last fee as an amateur lawyer.'

SANDFORD FLEMING IN 1860

CHAPTER V
PLEADING THE CAUSE OF THE RED RIVER COLONY

In 1863, the year that he severed his connexion with the Northern Railway, Fleming was asked on behalf of the people of the Red River Colony to present to the Canadian and Imperial Governments a memorial praying for the establishment of means of communication between the eastern provinces and British Columbia, by way of Lake Superior, the Red River Country, and the Saskatchewan.

At that time he had not visited the Red River Colony, but for some years had been a warm advocate of the policy of building a railway across British North America from the Atlantic to the Pacific, and as a preliminary measure the provision of a road from Lake Superior to the Red River Colony and the mountains. In 1858 he had published a lecture on the subject, and in 1862 had gone into the matter more fully in his 'Practical Observations on the Construction of a Continuous Line of Railway from Canada to the Pacific Ocean on British Territory,' published as an appendix to Henry Youle Hind's *Sketch of an Overland Route to British Columbia*.

Fleming's interest in the transportation problem was known to James Ross and William Coldwell, proprietors of the *Nor'Wester*, then the only newspaper in the colony. Ross and Coldwell were closely identified with the movement for connecting Red River Colony with the eastern provinces by an all-British route, and when the people were casting about for some one to bring their views to the attention of the Colonial and Imperial Governments, they at once suggested Fleming.

The Memorial was drawn up, approved at a public meeting, and sent to Fleming in January 1863. Because of its bearing on the later history of Canadian transcontinental railways, with which he was to be so closely identified, it is worth while to give the document in full:

'The people of the Red River Settlement hereby desire briefly to set forth their views and wishes in reference to the proposed opening up of the road from Canada to British Columbia through the Red River and Saskatchewan region, and the establishing of a telegraphic line along the same.

'The people of Red River have long earnestly desired to see the Lake Superior route opened up for commerce and emigration, and they rejoice to hear of the proposal to open up a road and establish a line of telegraphic

communication through the interior to British Columbia, entirely within British territory, believing that such works would greatly benefit this country, while subserving at the same time both Canadian and Imperial interests.

'With reference to that section of the country lying between this settlement and Lake Superior, it is respectfully submitted that the difficulties to be encountered in opening up an easy communication are entirely overrated.

'It is true that this route, for reasons which need not here be alluded to, has of late years been neglected; yet when the fact is generally known that this was the regular route by which the North-West Fur Company imported and exported heavy cargoes for more than a quarter of a century, and which the Hudson Bay Company have used more or less for nearly three-quarters of a century, it must be granted that the natural difficulties cannot be so great as they are commonly reported to be.

'We, the people of this settlement, are so anxious to have a proper outlet in this direction that we are quite prepared ourselves to undertake at our own expense the opening of a road from this settlement to Lake of the Woods, a distance of ninety or a hundred miles, if England or Canada will guarantee the opening of the section from Lake of the Woods to Lake Superior.

'From our intimate knowledge of the country lying between this place and the Rocky Mountains, we consider the project of a road in that direction perfectly practicable at a comparatively small outlay. At all times during the summer season, loaded carts go from this place to Carlton, Fort Pitt, and Edmonton, on the Upper Saskatchewan; and last summer a party of Canadians, about two hundred in number (*en route* to British Columbia), passed over the same road, and went with their vehicles to the very base of the Rocky Mountains; clearly showing that along the whole way there are, even at present, no insuperable obstacles to the passage of carts and wagons. And if, in its present natural unimproved state, the road is usable, it must be evident that only a comparatively small outlay will be requisite to make it all that could be desired.

'The whole country through which the proposed road would run, almost from Lake Superior to the Rocky Mountains, is remarkably level. The surface of this vast region is, generally speaking, like the ocean surface in a calm, and besides being so remarkably level, it is, for the most part, free from those heavy forests which, in Canada and elsewhere, cause such delay

and expense in road-making. We believe that a railway could be here laid at a cheaper rate than in most countries.

'Having thus cursorily alluded to the practicability of the road, on which point our local knowledge and experience ought to give our views some weight, and while admitting the intense interest and satisfaction with which we view the prospect of a work fraught with so much good to us politically, socially, and commercially, we might be allowed to point out very briefly the views we entertain regarding its importance to England and Canada alike.

'Canada would derive great benefit from the Overland carrying trade, which would spring up immediately on the establishment of this route, and the constantly growing traffic of this district and British Columbia would thereafter be an ever-increasing source of profit.

'Besides this, it may reasonably be presumed that the people of Central British America, present and prospective, would prove permanent and liberal customers in the markets of England and Canada. Be it remembered, moreover that a vast fur business is carried on in this country, and that, toward the Rocky Mountains, gold has been discovered in many quarters. Besides gold there are iron, lead, coal, petroleum, and other minerals which, together with the rich fur-trade, would prove a source of great wealth, not only to this country but to Canada; and although the colonization and settlement of the vast area of cultivable land would somewhat curtail the territorial limits of the fur business, still, the millions of acres north of the fertile tract will, in all probability, remain a rich fur country for centuries to come.

'This is the most natural highway by which commerce and general business with the East could be carried on. It would be also the most expeditious. And as a result of such commerce and traffic along this route, Central British America would rapidly fill up with an industrious loyal people; and thus, from Vancouver's Island to Nova Scotia, Great Britain would have an unbroken series of colonies, a grand confederation of loyal and flourishing provinces, skirting the whole United States frontier, and commanding at once the Atlantic and the Pacific. In this connexion we feel bound to observe that American influence is rapidly gaining ground here; and, if action is long delayed, very unpleasant complications may arise. Thus both politically and commercially the opening up of this country, and the making through it of a national highway, would immensely subserve Imperial interests, and contribute to the stability and glorious prestige of the British Empire.

'These views the people of Red River desire most respectfully to present for the consideration of the British and Canadian Governments; and they earnestly hope that this year may witness the formal commencement of operations with a view to a telegraphic line, and a road from Lake Superior to this settlement, if not through the whole extent of country from Canada to British Columbia.'

It will have been seen that the people of the Red River settlement wanted a road built from Lake Superior to the Red River, as part of a larger project —a road from Lake Superior to British Columbia; and they evidently regarded this latter road as the preliminary step toward a line of railway, or a combined rail and water route, that would eventually traverse British North America from ocean to ocean. This transcontinental railway scheme was one that had already engaged the attention of several far-sighted men, men of big ideas, men who like Sandford Fleming possessed that rare combination of common-sense and imagination that has been the driving force behind all great public enterprises. The average man could find in such a project, at such a time, nothing short of madness; and the enthusiast who urged it was branded as a crank. The former, with his eyes close to the ground, saw only a number of scattered and struggling colonies, east and west, with an immense wilderness between, practically uninhabited and, as he believed, uninhabitable. The idea of building a railway, or even a road, through such a country did not seem to him worthy of serious consideration. The man of ideas looked into the future, saw these isolated communities linked together with a chain of steel, and the uninhabited wilderness part of a continental dominion peopled from sea to sea. Because Fleming was a man of big ideas, with a firm faith in the destiny of his country, he threw himself whole-heartedly into the project which meant so much to the people of the Red River settlement.

He first brought the Memorial to the attention of the Canadian Government, of which John Sandfield Macdonald was then premier. In forwarding the Memorial, he supported it with an elaborate statement of his own views on the subject. 'The opening up of a means of easy communication between Lake Superior and Red River', he said, 'might fairly be advocated as an act of simple justice to our fellow subjects in that remote settlement, who have been practically exiled from civilization for more than two generations; who have endured hardships of no ordinary description in contending with many difficulties whilst endeavouring on those vast plains to cultivate the soil and earn a laborious livelihood; and who, if they have not increased so rapidly in numbers and importance as other colonists in settlements favoured by nature and good government,

have at least succeeded in establishing an important nucleus for further colonization.'

Elsewhere he gives an interesting account of the struggling little colony as it appeared in 1863: 'The community of settlers at Red River, isolated in many respects from, and, until lately, unnoticed by the rest of the world, is now exciting no small degree of attention. The people of Red River remained tranquil in their solitude so long as the vast areas to the south of the international boundary line were as wild and unoccupied as the plains which surround them on all sides. The progress of their republican neighbours in opening and organizing new territories has, however, awakened them to a knowledge of their true condition. They have been silent witnesses of the march of colonization westward from Lake Michigan across the states of Wisconsin and Minnesota to Dakota; they have seen an industrious population reckoned by hundreds of thousands introduced almost alongside of them, whilst their own settlement scarcely increases in numbers; they know that there is nothing in their own soil and climate to keep them from advancing; they are satisfied with the richness of the one and the salubrity of the other; but they cannot help feeling mortified at the strong contrast between the satisfactory progress of their neighbours, and the absence of prosperity with themselves. Justly or unjustly, they attribute their backward condition to the sway of the Hudson Bay Fur Company, and they clamour in a way that cannot be misunderstood, against a further continuance of a rule which they appear to believe is the chief hindrance to their progress.

WINNIPEG IN 1870

'The settlement was first formed half a century ago by immigrants from the old country; the population now consists of British-born subjects and their descendants; they live and have always lived on British territory, but

they are not yet literally a British colony. They know that they are subjects of the Queen, and this is their pride; they desire to be recognized at the Colonial Office, and this is their ambition; they wish to have a voice which, as British subjects, they claim they have a right to possess, in the management of local affairs. Had they the powers and privilege of an ordinary Township Council, they feel that they could do a great deal towards improving their condition and moulding their destinies; but this they have not, and this is their grievance and mortification. Whilst their own settlement is of fifty years' standing, they see Minnesota and Dakota, whose boundaries sweep past at the short distance of sixty or seventy miles, States only of yesterday but already enfranchised.

'Practically, too, the people of Red River settlement are at present cut off from all intercourse with the mother country except through a foreign state. The old route by which they had access fifty years ago has, for want of a small expenditure to keep it open, fallen into disuse; no wonder then that they grumble at the seeming indifference of the parent land.

'However valuable the possession of a road from Canada to British Columbia might be considered', he continued, 'simply as a means of intercourse between these two countries, it is obvious that their great distance apart would be an insuperable obstacle to its construction, were it not for the favourable character of the intervening territory of which the Red River district forms a portion.' He then proceeded to describe the character of the soil and climate of the prairie country, and its adaptability for colonization and settlement, marshalling the evidence of those who had first-hand knowledge of the country, such as the scientific officers of the Palliser expedition and the Hind and Dawson surveys. It is interesting to note the positive statement of Lorin Blodget, the American climatologist, made half a century ago, upon purely scientific data, that 'the basin of the Winnipeg is the seat of the greatest average wheat product on this continent, and probably in the world'. Blodget's prediction, laughed at in his own day, has since been amply justified.

In considering the formidable problem of connecting the Atlantic and Pacific colonies of British North America by means of a system of transportation, Fleming brought forward an ingenious scheme which he had first advocated some eight years before, a scheme which he believed would combine efficiency and economy to a larger extent than any other plan. The guiding principle of this scheme was that means of transportation should be neither too far in advance of population nor on the other hand lag too far behind; but that it should advance and develop with the population it was

designed to serve. And this principle involved the idea that means of transportation should follow lines of evolution, from the pioneer road or trail to the steam railway; the simple, rough pioneer road alone actually to precede the settler, while more elaborate and expensive means of transportation were to be developed gradually and systematically to keep pace with the needs of a growing population. There was, however, one exception to the evolutionary principle: the telegraph was not to wait for the railway, but was to be built at the very beginning, with the territorial or pioneer road.

Applying this ingenious scheme to the continental field under consideration, Fleming proposed that, in the first place, careful surveys should be made to ascertain the most practicable and satisfactory route from ocean to ocean. Then a simple territorial road should be built along this route, and a continuous line of telegraph constructed to connect the existing eastern system with British Columbia, the wooded districts to be cleared to a width of two chains along the road to safeguard the telegraph line. The next stage would be to convert the territorial road to one passable for wheeled vehicles. In the course of a few years this improved highway would be transformed into a macadamized road of the best description. The final stage of progress would be the building of a railway on the line thus in a great measure prepared for it.

This was the plan which Fleming proposed as the most practicable and economical means of meeting the legitimate demands of the people of the Red River settlement for transportation facilities, and at the same time laying the foundations of a transcontinental railway. Whether or not it would have been a wiser plan than that ultimately adopted to meet the peculiar political and other needs of British North America may be a debatable point. At the same time it may be pointed out that the first transcontinental railway across Canada, the Canadian Pacific Railway, was not commenced until the year 1881; and it is quite conceivable that, had Fleming's scheme been adopted in 1863, a territorial road at once constructed across the continent with a telegraph line, followed in a few years by wagon and macadamized roads, and ultimately by the railway, settlement would have flowed into the West years before the tide actually turned in that direction, the cost of the railway would have been enormously reduced, and the two rebellions in the North-West might have been avoided altogether. Certainly the scheme, applied to any locality, would have been much more logical and economical than the haphazard plan almost invariably adopted in the eastern provinces, of building pioneer roads in one direction, replacing these after a time by

macadamized roads following a different route, and finally abandoning these for a railway laid upon a third route.

'I can scarcely hope', concludes Fleming, 'that the plan of gradual development herein advocated will satisfy the precipitate or the impatient,—those, in fact, who would urge the immediate construction of the road, regardless or ignorant of the cost and the burdens it might in consequence entail on the country; yet there are many who, remembering the tortoise in the fable, will perceive that a slow yet certain movement will accomplish the desired end with as much certainty and perhaps more satisfactorily than if the work was undertaken with the most sanguine hopes of speedy achievement. It is very doubtful, however, if any one will on reflection assert that there is really a choice of methods, that is to say, a fast and a slow one. The line of artificial highway proposed to be constructed extends over not less than forty-five degrees of longitude, equal to one-eighth of the length of a circle of latitude passing entirely around the globe; the undertaking therefore becomes one of no ordinary magnitude, and when in connexion with it half a continent has to be redeemed in part at least from a state of wild nature, some considerable length of time must necessarily be occupied in the process. Even if it should take a quarter of a century, it would be equal to an average construction of one hundred miles of railway a year, as well as the annual introduction of one hundred thousand emigrants. And, after all, a quarter of a century is but a brief period in the history of a country; half that length of time has already elapsed since the railways of Canada were first commenced, and yet many are of opinion that it would have been better, in some respects, had only one-half the extent of existing lines been yet constructed. As the character of the work is so colossal, and the condition of the country such as to debar the idea of undertaking the construction of a railway through it in the usual way and as an ordinary commercial enterprise, I am emboldened to think that such a scheme as I have endeavoured to sketch might form the basis of a system possessing many recommendations, and which it is confidently believed might be advantageously adopted in any attempt to establish a great leading highway through the vast unoccupied territory between the settlements of Canada and British Columbia.'

Having brought the memorial of the people of the Red River settlement to the attention of the Government of John Sandfield Macdonald, and supported it by his own carefully thought-out proposals; and having also, by request, submitted the whole matter to the Governor-General, Lord Monck; Fleming, in accordance with his promise to the petitioners, sailed for England to lay the scheme before the Imperial Government.

The Duke of Newcastle was then Colonial Secretary, and when the matter was brought to his attention he at once sent for Fleming. The latter called at the hotel where the Duke of Newcastle had his apartments, and finding a flunkey in gorgeous livery in the hall, supposed him to be one of the servants of the Colonial Minister, and asked if the Duke was at home.

'Which duke?' demanded the resplendent being, in a lofty voice. '*My* duke is in Norway.'

Fleming meekly explained that he sought the Duke of Newcastle, and that he had not thought that dukes were quite so plentiful. The haughty representative of the absent duke condescended to point the way to the apartments of the Duke of Newcastle, and after encountering another overpowering doorkeeper, Fleming finally managed to have his card sent in. Somewhat to his surprise, for he was now prepared for any sort of a rebuff, he was at once admitted, and found himself in the presence of a quiet, unassuming gentleman, who welcomed him cordially, and listened with sympathetic attention to all that he had to say in regard to the Red River colonists and their plea for transportation facilities. In his questions and comments, both in reference to this and to other matters in Canada, the duke revealed himself as a keen and intelligent student of public affairs. He had made good use of his time while travelling through Canada with the Prince of Wales three years before, and since his return had kept in close touch with the progress of events on the other side of the Atlantic.

In so far as its immediate object was concerned, Fleming's mission to England bore no direct fruit. It was after all rather a matter for the Canadian than the Imperial Government, and the Canadian Government was not yet alive to the vital importance of transportation facilities in the development of that wonderful hinterland beyond the Great Lakes. Indirectly, however, this mission had results of far-reaching importance, involving both the transportation problem in Canada, and also Fleming's own life. It is not too much to say that the visit to the Duke of Newcastle was the turning-point in his career. How this came about will be seen in the next chapter.

CHAPTER VI
THE BIRTH OF THE INTERCOLONIAL

Fleming returned to Canada in 1863 on the then famous steamship *Great Eastern* sailing for New York. Most of the passengers were citizens of the United States, and as the Fourth of July found them in mid-ocean it was decided to celebrate the day in as imposing a fashion as the circumstances would permit. The principal event was a procession around the decks, in which all the passengers were to take part. Knowing that Fleming was a British subject, the organizers of the parade came to him and suggested that it would be a graceful act if he would agree to carry the United States flag at the head of the procession.

'I was at the moment', he says, 'in conversation with a very agreeable gentleman, an American, whose acquaintance I had made in London. On the spur of the moment I turned to the deputation and said I should be delighted to carry the flag they referred to or any flag, provided my friend would agree to support me by carrying the British flag, and that we would march at the head of the procession. It was so agreed, and I went off to one of the ship's officers and arranged with him that my friend was to be equipped with the very largest British flag available, while I was to have the smallest American flag on the ship.

'The flags were kept out of sight until the procession was about to start on its triumphant march, and then off we went with the steward's brass band in front, my companion (who was a true sportsman) almost buried under the folds of seven yards of Union Jack, while I marched beside him waving a diminutive edition of the Stars and Stripes about the size of a pocket-handkerchief.

'Some twenty years afterwards I happened to be in St. Paul, Minnesota, and was delighted to find my friend of the *Great Eastern* once more in the person of the mayor of that city. He was kind enough to invite a number of friends to meet me at dinner, when he told them, much to their enjoyment, the story of our Fourth of July celebration in mid-ocean.'

Fleming had not long arrived at his home in Toronto before he received an urgent message from the Premier, John Sandfield Macdonald, to come down to Quebec, then the seat of government. Arrived there, he was informed by Mr. Macdonald that, in accordance with an arrangement made

with the Imperial and other Governments concerned, it had been decided to carry out at once preliminary surveys for the proposed Intercolonial Railway between Quebec and the maritime colonies of New Brunswick and Nova Scotia. The surveys were to be entrusted to a commission of three engineers, one appointed by the united provinces of Upper Canada and Quebec, one jointly by Nova Scotia and New Brunswick, and the third by the Imperial Government. Mr. Macdonald added that he (Fleming) was the nominee of Canada.

No sooner was this decision communicated to the Governments of Nova Scotia and New Brunswick than Dr. Tupper representing the former and Mr. Tilley representing the latter agreed that Fleming should also be their nominee. The Imperial Government was informed of the joint appointment, and in October 1863 the following dispatch was received by the Governor-General from the Duke of Newcastle: 'The character of Mr. Sandford Fleming . . . is so unexceptionable . . . that I am quite ready to avail myself of his services as the representative of the Imperial Government. Your Lordship will accordingly be pleased to appoint Mr. Fleming at once to the situation. It is agreeable to me to feel that by selecting Mr. Fleming as the combined representative of Her Majesty's Government and of the North American Provinces specially interested in this important subject much delay has been avoided, and that the wishes of your Government for the immediate commencement of the survey have, so far as this appointment is concerned, been complied with.'

As the result therefore of a combination of circumstances, fortunate alike for the Governments interested and for the engineer who was to carry out this very important work, Fleming combined in his own person the commission entrusted with the survey of a route for the Intercolonial Railway.

Before describing the progress of this undertaking, it may be well to give a brief account of the movement for the construction of a railway to connect Nova Scotia and New Brunswick with what was known as the Province of Canada, or rather, before 1841, as the Provinces of Upper and Lower Canada. According to the late George Johnson, for many years Dominion Statistician, the movement dates back to the year 1827, when in the little town of St. Andrews, New Brunswick, the project of a railway from that place to the city of Quebec was first mooted. The first passenger railway in the world, the Stockton and Darlington line, built by George Stephenson, had been opened two years before, and the railway fever had crossed the Atlantic and among other communities had taken possession of this

ambitious town on the Bay of Fundy. But the fever did not run very high, or perhaps the time was not ripe for its development. It is recorded that a public meeting was called in St. Andrews by one John Wilson, in 1828, to discuss the question, and then nothing more is heard of a railway until 1832, when Henry Fairbairn revived the project in an article in the *United Service Journal*.

'I propose', he said, 'first to form a railway for wagons, from Quebec to the harbour of St. Andrews upon the Bay of Fundy, a work which will convey the whole trade of the St. Lawrence in a single day to the Atlantic waters. . . . Thus the timber, provisions, ashes, and other exports of the Provinces may be brought to the Atlantic not only with more speed, regularity, and security than by the River St. Lawrence, but with the grand additional advantage of a navigation open at all seasons of the year; the harbour of St. Andrews being capacious, deep, and never closed in the winter season, whilst the St. Lawrence is unnavigable from ice from the month of November to May. . . . Another great line of railways may be formed from Halifax through Nova Scotia to St. John in the Province of New Brunswick, and thence into the United States, joining the railways which are fast spreading through that country. . . . This railway will not only bring to the Atlantic the lumber, provisions, metal, and other exports of the provinces, but from the situation of the harbour of Halifax . . . it will doubtless command the whole stream of passengers, mails, and light articles of commerce passing into the British possessions and to the United States and every part of the continent of America.'

Mr. Fairbairn then proceeded to set forth, with remarkable prevision, the vital importance of railways to the development of the North American continent.

'Indeed,' he said, 'if the difficulties and expense of constructing these works in our North American colonies were tenfold greater, an imperative necessity would exist for their adoption, if it is desired by the Government of this country to maintain an equality of commercial advantages with the neighbouring United States. For the splendid advantages of the railway system are well understood in that country, where great navigable rivers are about to be superseded by railways of vast magnitude reaching over hundreds of miles. . . . Indeed, in no other country will the results of the railway system be so extensive as in the United States, for it will annihilate their only disadvantage, inland distance from the sea; and it will effect the work of centuries to connect, consolidate, and strengthen that giant territory, lying beneath all climates and spreading over a quarter of the globe. If then

we would contend with these advantages in our North American Provinces, it is only by similar works that we can bring to the Atlantic the agricultural exports of the Colonies, and secure the stream of emigration, which otherwise with the facility of inland transportation will be rapidly diverted to the western regions of the United States.'

This article reawakened the dormant interest of St. Andrews; a meeting was called in October 1835, at which resolutions advocating a line of railway between St. Andrews and Quebec were unanimously carried; the support of the Lieutenant-Governor of New Brunswick, Sir Archibald Campbell, was sought and obtained; a deputation was sent to Quebec, where resolutions favourable to the undertaking were adopted in December by both Houses of the Legislature; and early in the following year negotiations were opened with the Imperial Government with the view of securing financial assistance. In March 1836, the House of Assembly of Nova Scotia endorsed the project; and the same month a Bill passed the Legislature of New Brunswick incorporating the 'St. Andrews and Quebec Railroad Company'. Meantime the feasibility of the proposed railway had been established by an exploration of the route designed to be followed; and a grant of £10,000 was obtained from the Home Government for a more careful survey. This work was entrusted to Captain Yule, R.E., whose report was entirely favourable.

Everything seemed to be moving smoothly, when the whole project was brought to a standstill by the opposition of the United States Government, on whose behalf representations were made to the British Government to the effect that the proposed railway would run through disputed territory. As a result of these representations orders were received from England to discontinue all proceedings for the construction of the railway until the points in dispute had been settled. These points involved the boundary between New Brunswick and Maine, and it took several years to bring them to a final settlement. Unfortunately, when the Ashburton Treaty was signed in 1842 it was found that the country west of the St. John River through which Captain Yule had made his railway survey in 1837 had been ceded to the United States, and the project was therefore indefinitely postponed.

The Ashburton Treaty had driven a wedge of foreign territory into the heart of the country lying between New Brunswick and Canada; a direct line of railway between St. Andrews, or even St. John, and the city of Quebec, was no longer possible. It became necessary to consider other routes, and about 1845 a project was set on foot for a line between Halifax and Quebec. This scheme at once gained substantial support on both sides of the Atlantic, among others who were induced to take an interest in it being Sir Richard

Broun, who was endeavouring to organize a colonization company in connexion with the revival of the rights of the Baronetage of Nova Scotia, and who was also interested in the ambitious project of a continuous line of steam navigation and railways through British North America to connect Great Britain with Japan, China, and India.

Several routes were proposed for the railway. One followed the line of a suggested military road from Halifax by way of Truro, the bend of the Petitcodiac, Boiestown, Grand Falls and Lake Temiscouata. Another, starting from Canso, joined the first-mentioned line at Truro. A third, starting at Halifax, ran to Annapolis, with a line of steamers across the Bay of Fundy from Annapolis to St. John, and then proceeded up the St. John River to Fredericton and Boiestown. And a fourth, taking the last-mentioned route to Fredericton, followed the west bank of the St. John River to Grand Falls.

Lord Falkland, then Governor of Nova Scotia, urged upon the British Government the desirability of testing the practicability of the scheme and determining the best route by means of an accurate survey, to be carried out by competent military and civil engineers. As the result of these representations Mr. Gladstone gave instructions, in June 1846, to Captain Pipon and Lieutenant Henderson, of the Royal Engineers, to survey three lines: (1) From Halifax to some port on the Bay of Fundy whence steamer connexion could be made to St. John, thence to Fredericton and Grand Falls, thence by way of Lake Temiscouata to the mouth of the Rivière du Loup, and thence by the south bank of the St. Lawrence to Lévis opposite Quebec. (2) From Halifax to the bend of the Petitcodiac, thence in a practically direct line to Grand Falls, and thence as before described to the St. Lawrence. (3) From Halifax to the bend of the Petitcodiac, thence keeping to the north-west of Newcastle and Chaleur Bay, or its vicinity, to the St. Lawrence.

As a result of these surveys, in the course of which Major Robinson of the Royal Engineers replaced Captain Pipon, who was drowned in the Restigouche in an attempt to save the life of a boy in his party, a report was submitted in August 1848 recommending a route from Halifax to Truro passing over the Cobequid Mountains, thence by the gulf shore to the Miramichi River which would be crossed at the head of tide, thence proceeding by the Nipissiguit River to Chaleur Bay and along the coast to the mouth of the Metapedia, proceeding up the valley of the Metapedia to the vicinity of the St. Lawrence, and thence along the south shore to Rivière du Loup and Lévis. The estimate for the line was, in round numbers, £5,000,000.

This report of Major Robinson gave a renewed impetus to the project. It was discussed and approved in the various provincial legislatures, and an earnest effort was made to induce the Home Government to grant financial aid, the united resources of the three provinces being insufficient to carry through a work of such proportions. The demands on the Imperial treasury were, however, too numerous and pressing in 1849 to admit of any measure being submitted to Parliament for the aid required.

The project therefore remained stationary for a time, but it was widely discussed in the newspapers and was the subject of a number of pamphlets, notably that of Major Carmichael-Smyth in 1849, in which was advocated the utilization of the surplus labour of the United Kingdom in the construction not merely of a railway from Halifax to Quebec but of one from Halifax to the Pacific coast.

THE VALLEY OF THE METAPEDIA

In 1851, through the eloquent plea of Joseph Howe, the Premier of Nova Scotia, the British Government seemed at last awake to the Imperial importance of the proposed railway. The Colonial Secretary in a letter to Howe laid stress on the 'strong sense entertained by the British Government of the extreme importance, not only to the Colonies directly interested but to the Empire at large, of providing for the construction of a railway by which a line of communication may be established on British territory between the Provinces of Nova Scotia, New Brunswick, and Canada'. The Imperial

Government was now prepared to guarantee the interest on the cost of construction, but another difficulty appeared. New Brunswick and Nova Scotia were not merely interested in the project of a railway from Halifax to Quebec, but they were also interested in one from Halifax through St. John to Portland, Maine; indeed, New Brunswick had already promised substantial financial support to the latter line. They asked that the Imperial guarantee should cover this line also, from Halifax to the international boundary; but the Colonial Secretary replied that it would be impossible to ask Parliament to pledge the credit of the United Kingdom for any object which was not of importance to the Empire as a whole.

It is impracticable here to trace the rather intricate history of the Intercolonial Railway project throughout the next decade. It will be sufficient to say that as the Provincial Legislatures and the Imperial Government found it impossible to reach common ground, the former determined to go ahead at their own expense with the construction of such railways as were most urgently required. In this, however, the three provinces, Canada, New Brunswick, and Nova Scotia, acted quite independently, without any unity of plan. The result was that while between 1852 and 1862 many miles of railway were built the general project of the Intercolonial was by no means correspondingly advanced. Finally the provinces once more entered into negotiations with the Home Government, and it was eventually agreed that the Imperial Parliament should be asked to guarantee a loan of £3,000,000 for the Intercolonial Railway subject to certain stipulations, among others that as a preliminary step surveys should be carried out and the line proposed to be followed submitted to and approved by Her Majesty's Government. These are the surveys which, as already mentioned, the British and Colonial Governments agreed to entrust to Sandford Fleming.

Early in 1864 he left Quebec for Rivière du Loup, at that time the terminus of the Grand Trunk Railway, to commence in the depth of winter a reconnaissance of the country. His task was to carry a survey south-easterly from Rivière du Loup through two hundred miles of broken, elevated country, covered by a dense forest, destitute of settlements or roads, to the existing railway connecting St. John and Shediac, a small town on the Straits of Northumberland. From Moncton, on this line, the second section of the survey would run to Truro, the then terminus of the Nova Scotia Railway, through the Cobequid Mountains. The Chief Engineer and his assistants had to travel on snow-shoes through this wilderness, and what could not be carried on dog-sleds had to be borne on men's backs. Provisions, instruments, and equipment, everything in fact, had to be transported in this

primitive fashion, and what was not absolutely indispensable was of necessity left behind. Spartan simplicity marked the lives of those engaged on the Intercolonial surveys. Reading between the brief lines of his diary, jotted down hastily at the end of a hard day's travel, one gets some idea of the circumstances under which Sandford Fleming pushed this survey through from the St. Lawrence to Nova Scotia. Some thrifty official at Quebec had provisioned the parties with canned meat left over from the Crimea. Many a time the surveyors must have wished that it had been providentially sunk in the Black Sea. Fortunately the country sometimes afforded fish and small game, with an occasional moose, to break the monotony of the dubious rations of the army contractors.

The first Sunday was spent at Rivière du Loup, and the Chief Engineer with most of his assistants went to the little Episcopal Church and listened to an edifying sermon. When it came to the usual time for a collection, the worthy old rector, seeing an unusual number of people in the pews, beckoned to his churchwardens and retired with them behind a screen, which did duty for the vestry. The rector was somewhat deaf, and the conversation was therefore quite audible to the waiting congregation, which consisted principally of the members of the survey party. It appeared that the collection was not an invariable feature of the services in this little church, being regarded apparently by the regular attendants as largely a work of supererogation, but on the present occasion the rector made it clear that it might be proper to give the strangers an opportunity of helping along the good work of the parish. The wardens were dubious, but the rector somewhat insistent. Finally one of the wardens thrust his head around the screen and had a good look at Fleming and his men. Red flannel shirts, homespun trousers, and rough boots! One glance was enough. His expression would have told them at once that they had been examined and found wanting, but his audible whisper to the rector put the matter beyond all possible doubt. There was no collection that day.

From Rivière du Loup Fleming made his way to St. Flavie, familiar to present-day travellers on the Intercolonial as the welcome point at which the dining-car is taken on the train. From here he walked on snow-shoes to Lake Metapedia, with one Alexander Fraser of Pictou. They had small dog-sleds to carry their supplies drawn by three faithful dogs, Gaspé, Bruce, and Wallace, Fleming's companions on many a long journey. A hard day's travel brought them to the north end of Lake Metapedia, but a supper of trout and partridge, with a smoke and a chat afterward with an old Scotch settler, made up for much discomfort. The next day they arrived at the forks of the Metapedia.

‘Left at 7 o’clock,’ says the diary, ‘after breakfast on moose muffle and pancakes. Beautiful sunny morning. Down valley of Metapedia. Sleigh broke down; left it behind. Arrived at Evans’ shanty at noon; travelled 11 miles. Evans’ shanty say 20 by 15, walls 3 feet high. Contains family, a horse (the first we have seen since Métis), cocks, hens, and everything living about the establishment; home-made furniture, and a spinning wheel. On to mouth of Metapedia, over difficult ground. Journey to-day 33 miles.’

Another day brought them to Dalhousie, where the night was spent with David Saddler, a surveyor. Saddler had been through the terrible Miramichi fire of 1825 and could still recall the days of horror when whole districts were swept clean of every living thing. For him, however, the fire had not been wholly disastrous. Fortune had enabled him to save from drowning a young woman who, with others of her family, had fled to the river as a last refuge. In good time she became his wife, and took her place at his own fireside.

From Dalhousie the Chief Engineer drove to Bathurst and Newcastle, where he received a letter in connexion with the survey from Dr. Tupper, the Provincial Secretary of Nova Scotia. From Newcastle he travelled over to Fredericton to discuss the New Brunswick portion of the work with the Premier, S. L. Tilley. At the hotel in Fredericton he found an invitation from the Governor, Arthur Hamilton Gordon (afterward Lord Stanmore), to dine at Government House. Having nothing to wear but his grey homespun suit and red flannel shirt—the same that had so unfavourably impressed the churchwarden at Rivière du Loup—he begged to be excused. The Governor, however, would not hear of it, and urged him to come just as he was. ‘You can imagine’, says Fleming, ‘the sensation I made when I entered the drawing-room at Government House, filled with ladies in wonderful toilets and officers in full dress uniform. However, I was given a charming companion to take in to dinner, and enjoyed myself immensely.’

In Fredericton, then, as now, the capital of New Brunswick, the Chief Engineer had an opportunity of going over his plans with the members of the local government, and completing his arrangements for the various parties in the field.

While there he had a visit one morning from a young man who introduced himself as Lord Haddo, and asked to be allowed to accompany one of the survey parties through the Tobique mountains. ‘I immediately discouraged the idea,’ says Fleming, ‘pointing out to him that in travelling through such difficult and inaccessible country all provisions and supplies

must be carried on men's backs, and that it would be impossible to take a traveller or sportsman with the party.

'"But," he replied at once, "you misunderstand me. I am looking for work, not for game. Look at these hands," he said, holding them out to me. "You can see they are hard as nails. I have just come in from a lumberman's camp where I have been working and earning $14 a month and my board. I would be glad to get work on your survey, and I can serve as an axeman as well as any other fellow." "Oh," I said, "that is quite a different matter. If you are in earnest I can find you a place with one of the parties." I gave him a letter to one of the engineers, Mr. Tremaine, who was leaving Fredericton next morning. The same evening I left for Quebec by the way I had come.

'I returned to New Brunswick by rail to Boston and the English mail steamer to Halifax. When I landed from the Boston steamer I was surprised to find Lord Haddo on the dock embarking for Liverpool. "Hullo!" I said, "what are you doing here. I thought you were at the present moment working as an axeman on the survey in the Tobique mountains."

'"I expected to be there," he said, "but the very day you left Fredericton the English mail arrived, and I learned of the death of my father, and must return at once to Scotland." His father was the Earl of Aberdeen, and my young friend of the horny hands and the capacity for hard work had now succeeded to the title.

'He was a man of strong and original views, anxious to feel that he could make his own way in the world apart from the accident of birth, and anxious too to gain first-hand knowledge of the conditions that other men had to face in the new world.

'About a year after succeeding to the title he came out to New Brunswick again, and from there made his way to Gloucester, on the New England coast, where he joined the crew of a whaling-ship bound for the South Seas. From the day he sailed out of Gloucester harbour nothing was ever heard of him or of the ship and crew. The present Earl of Aberdeen, for some years Governor-General of Canada, was a younger brother of the man who went down in the Gloucester whaler.'

CHAPTER VII
PROBLEMS OF THE SURVEY

The survey for the Intercolonial was divided into two sections, one extending south-easterly from the St. John-Shediac Railway then in operation to the town of Truro, at that time the terminus of the Nova Scotia Railway; and the other north-westerly from the St. John-Shediac line to Rivière du Loup.

By the opening of spring in 1864 a large staff of surveyors was engaged at various points between Rivière du Loup and Truro, and before the close of that year the country had been pretty well explored, and more than one practicable line established. In fact the report of the survey, made in February 1865, outlined no less than fifteen different routes, divided into three groups: Frontier, Central, and Bay Chaleur. The first, covering three several routes, ran close to the international boundary between New Brunswick and Maine. The second, including nine routes, traversed the central portion of New Brunswick. The third, embracing three routes, followed the Gulf side of the province. The distances, between Rivière du Loup and St. John, ranged all the way from 301 to 486 miles; and between Rivière du Loup and Halifax, from 496 to 616 miles.

As the result of these surveys Fleming recommended one of the routes touching Chaleur Bay, which was subsequently adopted by the Government. In his historical sketch of the Intercolonial, published some years later, he reveals the same breadth of view that has marked his treatment of all the great national projects with which he has been connected.

'The Bay Chaleur', he says, 'is not only nearly a hundred and fifty miles nearer than Halifax to Liverpool, but at the same time it is two hundred and sixty-six miles nearer Montreal than Halifax is. Consequently the selection of a port on the Bay Chaleur for ocean steamers would shorten the whole distance between Montreal and Liverpool fully four hundred miles. Even between Liverpool and New York, one hundred and sixty miles would be saved by commencing the ocean passage at the Bay Chaleur.' The day may yet come when Sandford Fleming's idea of a great ocean port on the Bay Chaleur will be an accomplished fact; or in place of it, we may see the fruition of the still more daring project, which he also put forth at this time.

'The consideration', he says, 'of the shortest lines between America and Europe with reference more particularly to the conveyance of passengers and mails, pointed to the extension of the railway system across Newfoundland. The theory was advanced that there already existed, or that in all probability there soon would be, sufficient traffic to sustain a daily line of ocean steamers across the Atlantic. The idea of including Newfoundland in the scheme of intercommunication, and making a railway there, a continuation, as it were, of the Intercolonial line, with the prospect of the Island becoming part of the Federal Union, may have appeared to be visionary. But nevertheless some advance has been made in that direction. In the ten years which have elapsed (since Confederation), Newfoundland has been awakened by the spirit of progress, and she more thoroughly understands the importance of her geographical position. Last year the interior of the Island, scarcely before trodden by the white man, and full of natural resources, was passed over by a large staff of engineers sent by her Government to examine the practicability of a railway from the extreme east to the extreme west. Another decade may record results such as the chronicler of to-day records of what has been effected by the Dominion in the last ten years.'

In his report on the Intercolonial Surveys, made in 1865, eleven years before the above was written, Fleming had outlined his scheme for a Short Ocean Passage.

'Newfoundland, a large island off the mainland of North America, and Ireland, an island off the European coast, resemble each other in being similar outlying portions of the continents to which they respectively belong. Possibly they may have a more important similarity and relationship, through the remarkable geographical position which they hold, the one to the other, and to the great centres of population and commerce in Europe and America.

'A glance at the chart of the Atlantic will show that between Ireland and Newfoundland the ocean can be spanned by the shortest line. . . . Were it possible to introduce the locomotive into Newfoundland and establish steam communication between it and the cities of America, a route would be created from continent to continent having the ocean passage reduced to a minimum. . . .

'The track of steamers from the British coast to New York, and to all points north of New York, passes Ireland and Newfoundland, either to the north or to the south; the most usual course, however, is to the south of both islands. Vessels bound westerly make for Cape Race on the south-easterly

coast of Newfoundland; whilst those bound easterly make Cape Clear on the south-westerly angle of Ireland. Not far from Cape Race is the Harbour of St. John's, and near Cape Clear is the Harbour of Valentia; the one is the most easterly port of America, the other the most westerly port of Europe. They are distant from each other about 1,640 miles.'

An essential link in this scheme for a Short Ocean Passage was a line of railway from St. John's to St. George's Bay or Port au Port, on the Gulf side of the island. From thence, steamers would run to Shippigan, at the entrance to the Bay Chaleur, where a spur from the Intercolonial would give connexion with the railway systems of America. Such a combined rail and water route would, Fleming established, land passengers from London in New York in 171 hours, or a little over seven days. This was based on a speed of 40 miles an hour on the British railways, 30 miles an hour on railways in America, and 16½ miles an hour for the ocean passage. That was a reasonable estimate in 1865. To-day the same route would of course offer a very much quicker passage. In 1865 the mean average of all passages between Liverpool and Southampton and New York ranged from 11 days up to 13 days, 9 hours. The advantages in favour of the proposed Newfoundland route are obvious.

The Short Ocean Passage was advocated particularly for the accommodation of mails and passengers. 'At the present time (1865) ocean steamers generally carry both freight and passengers, and in this respect they are like what are termed "mixed trains" on railways. These mixed trains are employed to serve localities where there is not sufficient passenger and freight traffic to justify the running of separate trains.

'On railways doing a large business, the traffic is properly classified; fast trains are run to carry passengers and mails only, whilst slow trains are used to convey heavy freight. A similar classification of ocean traffic may be suggested. Freight will naturally go by the cheapest mode of conveyance, while passengers and mails will seek the speediest.

'It is well known that the shape of a steamship, other things being equal, governs her speed. The shape again depends upon the load she may be constructed to carry: if the ship is required only for mails and passengers and such voyages as require but a small quantity of fuel, she may be constructed on a model both sharp and light, and thus be capable of running more rapidly than if built to carry heavy and bulky loads. A steamship for heavy loads may be compared to a dray-horse, whilst one made specially for passengers and rapid transit may resemble a race-horse, and like the latter, the less weight carried the more speed will be made.

‘If these views are correct, it is clear that the speed of ocean steamships might be considerably increased when constructed for a special purpose.’ The modern ‘ocean greyhound’, built for mails and passengers, is a remarkable justification of Sandford Fleming’s prediction made half a century ago.

On the point of safety, he shrewdly observes that ‘the portion of a voyage between New York and Liverpool which seamen least fear is that from Ireland to Newfoundland. It is well known that the most dangerous part of the whole voyage is along the American coast between New York and Cape Race, where thick fogs so frequently prevail; this coast line is about 1,000 miles in length, and it has been the scene of the larger number of the disasters which have occurred. . . . The route which favours increased security from sea-risks, and which is the shortest in point of time, must eventually become the cheapest, and in consequence the most frequented. . . .

‘If, as it has been shown, this route would reduce the time between London and New York some three or four days, and bring Toronto one-third nearer Liverpool (in time) than New York is now; if it would give the merchant in Chicago his English letters four or five days earlier than he has ever yet received them; if it be possible by this proposed route to lift the mails in London and lay them down in New Orleans in less time than they have ever yet reached New York, then it surely possesses advantages which must eventually establish it, not simply as an Intercolonial, but rather as an Intercontinental line of communication.

‘These are purely commercial considerations, and however important they may be as such, the statesman will readily perceive, in the project, advantages of another kind. It may be of some consequence to extend to Newfoundland, as well as to the other provinces of British America, the benefits of rapid intercommunication. It will probably accord with Imperial policy to foster the shipping of the Gulf, and to encourage the building up of such a fleet of swift steamers as a daily line across the ocean would require. It must surely be important to the Empire to secure in perpetuity the control of the great highway between the two continents. It must be equally her policy to develop the resources and promote the prosperity of these Colonies —and to bind more closely, by ties of mutual benefit, the friendly relationship which happily exists between the people on both sides of the Atlantic.’

It may be noted here that Fleming was so convinced of the public advantages of his scheme, and particularly of one of the principal links—a

railway across Newfoundland—that at his personal expense he employed a party of engineers to make a survey of the route between St. John's and the Gulf coast of the island. The route then surveyed was practically that afterwards adopted for the existing railway.

It is singular enough that, with the almost feverish desire for quick transatlantic passages in the present age, and the popularity with many travellers of a route which reduces the ocean trip to a minimum, this route advocated by a Canadian engineer half a century ago has not yet been adopted. There is some reason for believing, however, that before many years have gone by, it will be possible to take a quick train from Montreal, or New York, to St. John's, Newfoundland, and at St. John's or some other point board an ocean greyhound for the nearest port on the Irish coast—thus practically realizing Fleming's dream of a Short Ocean Passage.

But to return to the Intercolonial. While the surveys were in progress, in 1864, a political movement of long standing, and far-reaching importance, was rapidly coming to a head. In September of that year representatives of Nova Scotia, New Brunswick, and Prince Edward Island, met in Charlottetown, to enter into negotiations for the union of the Maritime Provinces. To this conference came eight members of the Government of the then Province of Canada, with instructions to urge the larger scheme of a confederation of British North America. The men of the upper provinces took the meeting by storm, and it was decided to hold an interprovincial conference at Quebec in October. To this convention came such prominent leaders as John A. Macdonald, Charles Tupper, George Brown, Thomas D'Arcy McGee, Leonard Tilley, A. T. Galt, Oliver Mowat, George E. Cartier, and Etienne Taché; the famous Seventy-Two Resolutions were adopted; the resolutions were submitted to and received the approval of the Imperial Government; they were sanctioned by the provincial legislatures; the London conference met in 1866 and drafted the British North America Act, which was passed by the Imperial Parliament the following year; and on July 1, 1867, the new Dominion of Canada became an accomplished fact. The sixty-eighth Resolution, adopted at Quebec, provided that 'the general Government shall secure, without delay, the completion of the Intercolonial Railway from River du Loup, through New Brunswick, to Truro in Nova Scotia'; and on April 12, 1867, the Imperial Parliament passed a Bill entitled, 'An Act for authorizing a guarantee of interest on a loan to be raised by Canada, towards the construction of a railway connecting Quebec and Halifax.' Under the Bill the funds for the construction of the Intercolonial Railway were provided, to the extent of £3,000,000 sterling.

An incident in the history of Confederation which has never yet seen the light, and which is not without interest and significance, is the visit to St. John and Halifax of a party of Canadian legislators, in the summer of 1864, previous to the Charlottetown convention. This momentous visit was suggested by Fleming, and mainly due to his personal efforts. The story of the incident cannot be better told than in his own words.

'One of the men', he says, 'whose friendship I valued most highly was Thomas D'Arcy McGee. He was then Minister of Agriculture in the short-lived Taché-Macdonald administration, and occupied the same position in the succeeding coalition ministry, up to the date of Confederation. I had many opportunities of meeting him in Quebec, which was then the seat of government, and we had long and interesting conversations on matters that were then occupying men's minds. He was a warm advocate of Confederation, and also took a deep interest in the projected Intercolonial railway.

'I remember one evening we were discussing the political situation in the Lower Provinces, and the attitude of the people there toward the scheme for a general union of British North America. He could not understand, and was somewhat impatient with, the indifference of many people in Nova Scotia and New Brunswick to a project which appealed not only to his judgement, but also, by its very magnitude, to his quick Celtic imagination.

' "It seems to me", I said, "that the great obstacle in the way of union is the fact that the people of the upper and lower provinces do not know one another, that they are in fact absolute strangers. I have been for some time moving from place to place in New Brunswick and Nova Scotia, and I know that there is as much ignorance there as to this province and its people as if it were the antipodes; and I am not sure that the majority of the people here are any better off in their knowledge or lack of knowledge of the Maritime Provinces. There is, as you know, very little communication, and practically no commerce, between Canada and Nova Scotia and New Brunswick. The business relations of the latter are far more with Boston and New York than with Quebec and Montreal. You who are inland know nothing of the people down by the sea, and they know nothing of you. How can there be much sympathy or enthusiasm for union under such circumstances?"

' "I believe you are right," he said.

' "If", I continued, "you want to bring them around to your views, you must go down amongst them and rub shoulders with them, talk with them, eat and drink with them. There is nothing like the brotherhood of knife and

fork. Take some of your best men with you, and particularly take representatives of the press."

'"That is a good idea," said McGee, "but how can it be managed?"

'"I am going down in a few days," I replied, "and believe I can arrange it. If I send you a telegram, will you do the rest?"

'"With all my heart," said he.

'When I arrived in Halifax I saw Dr. Tupper, told him frankly of my talk with McGee and of the hopes we both entertained as to the happy results that might follow a social gathering of a number of representative men from the different colonies. "Now," said I, "the Canadian Parliament will rise in a few days. Could you not send an invitation to the Speaker, conveying to the members of the House an invitation to visit Nova Scotia?"

'"I heartily agree with everything you have said," he replied. "I have no doubt that such a visit would result in a better understanding, and help along the movement toward the confederation of all the provinces; but I do not quite see how it can be arranged, at the present moment. We must have some excuse for the invitation. If we were turning the sod of a new railway, or laying the foundation of a new building, it would be a simple matter to send an invitation to the legislature in Quebec to come down and take part in the ceremonies, but there is no such occasion at present, and I think the matter will have to stand for a while."

'I was disappointed, but not discouraged. If Nova Scotia would not take the matter in hand, there was still New Brunswick. That night I left for St. John, and arriving there, hunted up the only man I knew, a well-known local engineer. I told him what I had in mind. "I want someone in authority here to telegraph an invitation to Quebec to come down and visit St. John. How can it be managed?"

'"Easiest thing in the world," he replied cheerily. "Come with me and we will see the president of the Board of Trade!"

'The latter took the matter up with enthusiasm, and a telegram was sent the same day, on behalf of the Board of Trade, to the members of the Canadian Legislature, to pay a visit to St. John as soon as the House rose. I immediately sent a private telegram to D'Arcy McGee, asking him to see that the matter was not neglected.

'The following day I returned to Halifax, and told Dr. Tupper what had been done in St. John.

‘“Oh,” he said, “that entirely changes the situation. Now we can of course invite them to extend their visit to Halifax. I will have the president of the Board of Trade send a similar invitation.”

‘He was as good as his word, the invitation was sent, and, largely through D’Arcy McGee’s influence and enthusiasm, a large and representative group of Canadian statesmen visited St. John and Halifax, where they were royally received. The Canadian representatives, and their hosts of the Maritime Provinces, found that they had much more in common than they had ever before imagined,—the press was well represented—and this social visit eventually had not a little to do with the successful outcome of the negotiations for Confederation.’

At the beginning of this chapter, something was said as to the three routes, or rather three groups of routes, surveyed for the Intercolonial through New Brunswick; and the final selection of one touching the Bay Chaleur. This question of the routes, and the economic, military, and political considerations that governed the choice, occupied most of Sandford Fleming’s attention at this time, and became the subject-matter of several voluminous reports. Because of this, and the light it throws upon the peculiarly roundabout course of the Intercolonial, it may be well to give a brief account of the circumstances, as they are described by Fleming in his *Historical Sketch of the Intercolonial*.

‘The location of the line’, he says, ‘being necessarily confined to British territory, it was forced to make a considerable detour, to avoid entering the State of Maine. Had no national considerations presented themselves, or had the boundary been laid down according to the Treaty of 1783, or even in accordance with the settlement proposed, and, to some extent, pressed by the United States some years prior to the Ashburton Treaty, there would have been no difficulty in securing a direct, eligible route.

‘The railway would in this case, in all probability, have followed the general course of the route surveyed by Captain Yule in 1837, as far as the neighbourhood of the river St. John. . . . Owing to certain political influences Captain Yule was bound by his instructions to pass to the north of Mars Hill. Thus his line was deflected out of the direct course to the seaboard; and it is highly probable that untrammelled he would have followed a shorter route.

‘It is evident from an inspection of the map, and from the natural features of the country, that lines of railway might have been projected so as to bring Montreal within 380 miles of St. Andrews, 415 miles of St. John, and 650 miles of Halifax; and that the distance from Quebec to St. Andrews

need not have exceeded 250 miles—67 miles less than to Portland. Fredericton, the seat of local government, would have been on the main line to Halifax, and distant from Montreal about 370 miles; and these lines, moreover, would have been wholly within the limits of the Dominion, had the international boundary been traced according to the true spirit and intent of the Treaty of 1783. The distance between Montreal and Halifax might thus have been lessened nearly 200 miles. St. Andrews would have taken the place of Portland as the winter terminus of the Grand Trunk Railway, and would have commanded, together with St. John, a traffic now cut off from both places, and centred at a foreign port. . . .

'If, under such circumstances, an Intercolonial line to connect the cities of the Maritime Provinces with those of the St. Lawrence had been constructed, the building of 250 miles of railway representing an expenditure of $10,000,000 would have been unnecessary. Great as this saving would have been, the economy in working it and in maintenance would have been more important. The direct line would also have attracted certain branches of traffic which by the longer route must either be carried at a loss or be repelled. These considerations render the difference in favour of the direct line incalculable, and cause the more regret that the treaty made by Lord Ashburton, which ceded British territory equal in size to two of the smaller States of the Union, rendered such a direct line through British territory for ever impossible.'

The contest at first was mainly between the Frontier route and the Gulf or Northern route. It soon became apparent, however, that military considerations put the former out of the running, and the decision narrowed down to the Central and Northern routes. The only argument of any weight advanced on behalf of the Central route was that it would secure a larger amount of through freight to St. John as a shipping port. On the other hand, it was urged that the Central route had nothing in its favour which the Northern route had not, and that the latter possessed many special advantages over the Central and every other route. It would pass through much well-settled country including several important towns and villages; would traverse many outlets by which lumber was brought down from the interior; a considerable trade in grain and manufactures was to be anticipated; and the fishing industry would be encouraged. But behind every other consideration was the governing factor of national defence. The Northern route 'would undoubtedly fulfil the national object for which the scheme was first originated—the creation of a safe military road not open to sudden assault either by land or sea'. Finally the Chief Engineer, after examining the arguments advanced in favour of each route, placed on record

his opinion that beyond a doubt the line by the Bay Chaleur was the route to be adopted.

A minor controversy was also carried on for some time as to the route the railway should follow in Nova Scotia, but in this case the considerations were merely those of convenience and of serving the interests of certain mining districts near the Cobequid mountains. Six routes were examined and reported upon, and it was finally decided by the Chief Engineer that the one crossing the Cobequid mountains by the pass at Folly Lake and descending the northern slope of the hills to Amherst would best accommodate all interests, 'having primary regard to general interests'. Moved by certain local interests, however, the Government adopted a combination of this and another route.

'Thus', says Fleming, 'the controversy was ended; and hence arose that gigantic and conspicuous sweep which the railway traveller will observe on the southern flank of the Cobequid mountains, where the line describes nearly half a complete circle. So marked is this feature in the location that the popular voice has applied to it the term, "The Grecian Bend," which possibly may be retained so long as the railway endures.'

CHAPTER VIII
BUILDING THE INTERCOLONIAL

Fleming had taken his family to Halifax in 1864, when he assumed charge of the Intercolonial surveys, and he made his home there for the next five years. In 1869 the need of keeping in closer touch with the Government induced him to move to Ottawa, where he built 'Winterholme'. The delightful summer climate of Halifax, however, had captivated him, and before moving to Ottawa he had purchased from Samuel Cunard and others an ideally situated property on the North-west Arm. Here he built himself a summer home, 'The Dingle,' and here year after year when he could do so he escaped for a time from the stress of work and found rest and solace beside the waters of the Atlantic. From time to time he added to the property, and many years afterward reduced it again so that he might present a portion to Halifax as a public park and provide a site for the Memorial Tower dedicated by the Duke of Connaught in 1913. But this is getting too far ahead.

While the location surveys for the Intercolonial were still in progress in 1868, the Canadian Government directed the Chief Engineer to prepare plans and specifications for the construction of the railway. These were submitted to the Privy Council in November of that year, and with some minor amendments were adopted. Tenders were immediately called for the work. About the same time the Government appointed four Commissioners to assume the management of the railway.

At the first meeting between the Commissioners and their chief executive officer a sharp divergence of opinion appeared. Fleming had recommended that all the bridges along the line of railway should be of iron. The Commissioners were resolved that they should be of wood. The Chief Engineer, also, had recommended that the work of construction of the railway should be by measurement and price, as a schedule contract. The Commissioners, on the other hand, were persuaded that each section should be let at a bulk sum for the whole, and not by a schedule of prices, and insisted on putting this plan before the Government. Their view was that the contractor for each section should be held to complete the work for the amount of his tender, without advance of price for increase of work, or any deduction for diminution thereof.

Fleming contended that 'the knowledge of the work required on any section was insufficient to admit of letting the work for a bulk sum; that no contractor could exactly understand the extent of the obligation which he was assuming; and that contracts let on this system, as matters then were, would certainly end unsatisfactorily; and that difficulties would arise to perplex the engineers, the Commissioners, and finally, the Government. He also pointed out that all contracts should only be let on known data, but that if it were deemed advisable to commence construction before the measurements were completed, and the exact quantities established, the principle of measurement and schedule price should be adopted. A contractor would then perfectly understand that he would only be paid at the prices in his tender for all the work which he performed, and for that only.' The Commissioners were sustained by the Government, but the result justified the contention of the Chief Engineer. 'Before the expiration of twelve months, five out of the seven contracts had to be annulled and relet at a large advance.'

The 'battle of the bridges', as it has been called, had a somewhat different conclusion. 'The position', says Fleming, 'was one of difficulty. The Chief Engineer was desirous of avoiding all cause of difference with the Commissioners, but his deliberate opinion was on record. The ground assumed by him had not been lightly taken, and the more the subject was considered by him, the more convinced he felt of the correctness of the principles of construction which he had advocated. No argument, however, which he could advance, appeared to have the least weight with the Commissioners. They had determined to make certain changes; that the recommendations of the Chief Engineer should be set aside; and that iron should not be used, but that timber should take its place.'

Fleming put the case before the Premier, Sir John Macdonald; the Commissioners submitted their side; and the net result was that the latter were sustained. Five bridges, however, were exempted from the timber principle. The following year, 1870, the Chief Engineer returned to the attack with characteristic Scottish pertinacity. He submitted, for Parliament, an elaborate statement, embodying the arguments in favour of iron bridges, the cost, and the ultimate economy. The Commissioners held to their former opinion; that is to say, the majority did; one came over to the Chief Engineer's side. Their decision in favour of wooden bridges was again approved by the Privy Council. In July Fleming wrote a further letter to the Premier, and in August to the Commissioners. One of them, Mr. Brydges, replied in a communication to the Privy Council, disputing the figures of the Chief Engineer and arguing that the fear of wooden bridges catching fire

was groundless. The Chief Engineer rejoined by proving conclusively the accuracy of his figures, and by citing two distinct cases of wooden bridges on the Grand Trunk Railway, under the management of Mr. Brydges, having been destroyed by fire within a few weeks of the date of his letter. The Commissioners finally surrendered at discretion, agreeing that all bridges over sixty feet span should be of iron. Even this, however, did not quite satisfy the Chief Engineer. He persisted in his efforts to have every bridge on the Intercolonial, down to the smallest span of twenty-four feet, made of iron; and at last an Order in Council was passed, in May 1871, to have them so constructed. 'With the exception', dryly remarks Fleming, 'of three structures, built of wood by direction of the Commissioners, against the protest of the Chief Engineer, all the bridge spans, of whatever width, throughout the line, have the superstructure of iron.'

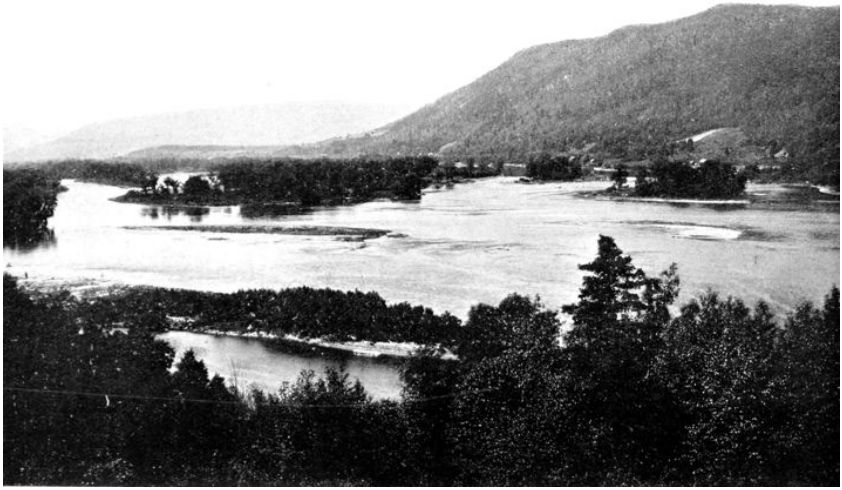
Too much space may seem to have been given to a dispute over technicalities, but the incident is illuminating as to the qualities in Fleming that made for success. Time and again, throughout his long life, he has had to face a situation in which his own deliberate judgement has been opposed either by those who happened to be his official superiors, or by that unwieldy master which we call the public. Once firmly convinced that he was right, however, he never surrendered; and in most cases he won out, though the battle might be long and stubbornly contested. It may be worth noting, too, that the building of railways was still in its infancy in 1870; that the Chief Engineer of the Intercolonial was somewhat in advance of his times; and that his views have since been completely vindicated.

But while devoting most of his time and thought to the gigantic task of building the Intercolonial, and thereby binding together the scattered provinces of British North America, Fleming was too broad a man to allow even this important work to absorb all of his energies. He still maintained his interest in the Canadian Institute; and even found time to join the militia. It will be remembered that in 1861 he had been instrumental in organizing the 10th Royals in Toronto. Five years later, while living in Halifax, the threatened Fenian raid from the State of Maine caused some apprehension, and Fleming immediately volunteered as a private in one of the regiments. The men were called out, and reviewed by Sir Hastings Doyle, at Halifax, but the threatened invasion petered out, and the Chief Engineer laid down his rifle for more peaceful pursuits.

In 1864 Fleming had been appointed Chief Railway Engineer by the Government of Nova Scotia, and among other projects in the province he was charged with the building of a line of railway from Truro to Pictou. The

policy of the Government, of constructing the road by a system of small contracts, did not work well, and toward the end of 1865 the Government in desperation appealed to Fleming to complete the undertaking, offering him a free hand as to the method. Legal and official difficulties arose, however. Among others, it appeared that the provincial statute prescribed that the railway should be built under contract. The Government was at its wits' end. It was of the utmost importance that the line should be completed by the end of May 1867, and the only man who seemed competent to undertake it was the Chief Engineer. Finally, Fleming was sent for, and asked if he would consent to resign his office and carry out under contract what he had so far accomplished as the official engineer. This was an entirely novel proposition, and one that demanded careful thought. Considerable capital would be required; the work involved was difficult, presenting a number of serious problems; and the date fixed for completion left very little time within which to carry it out. However, Sandford Fleming was equal to the task, and entered into a contract with the Government to build the railway within the specified time, for a specific sum, which sum by the way was $100,000 less than the original estimate made and submitted by himself the previous year as Chief Engineer.

His mettle in this new rôle of contractor was severely tested. With not much more than a year to complete the work, favourable weather and other conditions were of supreme importance. Unfortunately the summer of 1866 was 'unparalleled in this province for rain'. Also Fleming had certain very definite notions as to how a railway should be built, and now that the opportunity was thrust upon him, and the responsibility rested upon his own shoulders, he determined to construct a road that would be a credit both to himself and the province.



On the Restigouche

It is perhaps unnecessary to say that, having undertaken a public work, and conscientiously striving to do it worthily, Fleming was bitterly assailed both in the legislature and in the newspapers of Nova Scotia, his motives, his honesty, his methods, the character of his work, all being called in question. With wise self-control, he made no answer to his critics until May 31, 1867. That was the day appointed for the completion of the Pictou Railway, and on that very day, in spite of all difficulties and handicaps, the railway was opened for public use. On that same day, also, Fleming issued his first and only reply to his critics, in the form of a pamphlet, containing letters and reports, written by engineers of international reputation, who had personally inspected the railway, and gave their opinions thereon in unmistakable terms. The work, which the local critics had damned root and branch, is described by the engineers as 'the finest half-hundred miles of railway in British North America'.

In the late autumn of 1866, Fleming was invited to dine with the Governor, Sir William Fenwick Williams. Admiral Hope and several of his officers were also of the party. After dinner, the Governor expressed a wish to see a new steam shovel at work on the railway near Halifax. It was a very stormy day, with a horrible mixture of snow and rain, and the Governor with some of the officers presently found discretion the better part of valour. But the admiral was game. 'I'm going, any way', said he. So off they started, the admiral and his officers enveloped in oilskins. In spite of these, they were all soaked to the skin, but thoroughly enjoyed themselves nevertheless. Lawson, the engineer in charge of the work, had donned his best suit in

honour of the occasion, and when it came to the question of providing something dry for Admiral Hope to wear back to Halifax, nothing remained but Lawson's second-best trousers, which it appears were much too short. However, he managed to get into them, and the interesting spectacle was furnished of Her Majesty's chief naval officer on the North American station travelling to the provincial capital in a shabby pair of high-lows and an oilskin jacket.

About this time, or perhaps a year or two later, Fleming fell victim to the delights of salmon fishing on the Restigouche. In 1868 he leased thirty miles of the river, and had it all to himself for the next ten years. When the burden of things threatened to become intolerable, and the season admitted, he would jump on a train, drive up to his camp on the Restigouche, and forget all cares and worries in the tingling hope of a 25-pounder.

Meantime, he was busily engaged pushing to completion the construction of the Intercolonial. The work did not proceed without more than one set-back; in fact every year brought its grist of difficulties; but these were in the main purely technical problems, which would not properly find a place in a book of this nature, and the story of which has already been very fully told in Fleming's own history of *The Intercolonial*. It may not, however, be inappropriate to complete this chapter in his life by repeating the concluding words in his sketch of the great national railway, to the surveying and building of which he devoted so many years of his life.

'The Intercolonial Railway', he says, 'owes its existence to the creation of the Dominion, although it may be said that neither could have been consummated without the other. One of the first efforts of united British America has been the establishment of this line of communication, to make intercourse possible between the Provinces. It is the railway which brings the Maritime Provinces into connexion with Central Canada. At each extremity of the wilderness hitherto unoccupied except by the hunter or the Indian, and never traversed without difficulty, were found separate communities, each with the sentiment that all had interests in common; all equally belonged to the outer Empire of Great Britain; all were identified with her glories and greatness; all had been devoted to her in the hour of trial; yet all were denied means of intercommunication, and were unable to unite for a common purpose. There is no longer an unpenetrated wilderness to bar the hope of realizing all the benefits of union. The Provinces are now brought into daily connexion and association, possessing identity of political life, with institutions extending equal justice to all, covered with the ample

flag of the Empire, and with advantages which are unrivalled. If we but prove true to ourselves, our future prosperity is assured. . . .

'The railway will give easy access to many of the scenes of the long struggle between France and Britain for the mastery of the Northern Continent, terminated by the triumph of Wolfe at Quebec. The record of many of these events is still imperfectly written. The naval engagement on the Bay Chaleur, the fierce contests around the now grass-grown Forts of Lawrence, Beausejour, and Moncton, are seldom heard of, but the scenes of these conflicts are now made accessible; and some future historian may, by the inspiration of viewing the ground, be induced to perpetuate the events. The expulsion of the Acadians from their homes, which, Wolfe declared, 'added nothing to the renown of the King's arms', we may wish to forget. The ever-memorable Miramichi fire, half a century ago, still remembered, might well be entombed in similar oblivion; but the tale is to be told, and to be remembered.

'More than three centuries ago, Jacques Cartier, coasting by New Brunswick, landed on its shores, to abandon them for an exploration of the great river, with which his memory is for ever connected. At a still earlier date fishermen from the Basque Provinces left their Biscayan homes to enrich their country by the oil and ivory of the walrus, which in vast herds frequented the Bay Chaleur and the St. Lawrence, in those early days. Pushing investigation still farther back, we meet the Indians, who held the country as a possession from nature. We ask the remnants of this once fierce and numerous race, and we ask the ethnologist, equally in vain, whence they came, and from what stock they descended. The district traversed by the railway is full of suggestive associations, and cannot fail to awaken the attention and interest of inquiring minds.

'During the past forty years many public men, conspicuous in the Councils of the several Provinces, have been identified with this railway. Of late years another class, less prominent but more numerous, have been the direct and immediate instruments in bringing the work to its present completion. All may feel an honest pride in this connexion, whatever part they played. Some may have toiled for renown: others have patiently and silently laboured for duty or for bread.

'The traveller, who is borne onwards, moving in an hour a distance which would have taken weeks to traverse through the tangled forests, scarcely casts a thought on the thousands of the sons of labour, who toiled so many days and years in making smooth his path. Prominent in the list are those who explored the forest, who traced the line, and who directed the

work to its completion. Their professional brotherhood and official relationship with the writer suggests to him the duty of placing their names permanently on record.' (This he did in the Appendix to his book.)

'It appears, from the account of Jacques Cartier's first voyage, that on the 1st July, 1534, at a point between the Bay Chaleur and Miramichi, he first planted his foot on the new continent.

'On the 1st July, 1761, the great Indian Chief, Argimault, whose race had long warred against the British settlers, met the authorities at Halifax, and terminated the Indian wars by declaring perpetual submission to Great Britain, and with great solemnity buried the hatchet for ever.

'The Dominion came into being exactly 333 years after the bold navigator of St. Malo landed on the shores of Acadia, and the anniversary of its birth in the present year marks another important epoch in the history of the country. On this day, July 1, 1876, may be chronicled the completion of the Intercolonial Railway, and the full consummation of the union of the British Provinces in North America.'

To appreciate the foregoing, one must stand with Sandford Fleming on the 1st July, 1876, and look back with him some thirteen years to the day on which he and his devoted little band of engineers started out into the wilderness to survey a route for the Intercolonial; follow upward through the years the history of the work, the obstacles that had to be, and therefore were, overcome, the difficulties and discouragements that continually taxed the resources and patience of the Chief and his assistants; the completion of the surveys, and the selection of a route; the building of the railway itself, with an entirely new set of problems to solve and impediments to patiently overcome; finally the conclusion of the whole work. No one but Fleming himself can ever know the whole inner history of the Intercolonial, or how much of his own unconquerable personality went into the work and made possible its successful completion. But knowing as much as we do, knowing what it meant to the scattered provinces of Canada in 1876 to find the distance between them reduced from weeks to hours, and knowing the tremendous effect of the Intercolonial upon the subsequent history of the Dominion, we can readily enough stand beside Fleming on the 1st July, 1876, and, looking upon the completed work, say that it was good.

In submitting his final report to the Honourable Alexander Mackenzie, at that time Prime Minister and also Minister of Public Works, Fleming said: 'In placing this volume before you, I feel that I am performing the last act of duty in the office I have long held, and that I am separating myself from a

work to the prosecution of which, with many friends and fellow-labourers, I have devoted for many years the best energies of my life. A connexion of this kind is not broken without an effort; but any personal considerations must disappear in view of the completion of a work which realizes the national aspirations of half a century, by bringing within a few hours the old fortress of Halifax and the older citadel of Quebec, and which must form an important section of the railway destined ere long to extend from east to west through the entire Dominion.'

CHAPTER IX
THE CANADIAN PACIFIC RAILWAY

When in 1876 Fleming submitted his final report on the Intercolonial Railway, which took the form of the very interesting historical sketch referred to in preceding chapters, he had already been engaged for five years on an even more important project.

In 1871 he was offered the position of Engineer-in-Chief of the Canadian Pacific Railway. He hesitated to accept the appointment, feeling that the responsibilities of the Intercolonial were enough for one man to assume, but finally reluctantly consented on the Government representing it to him as a matter of public duty. The situation was unusual. The Canadian Pacific Railway, a gigantic undertaking viewed even from the standpoint of to-day, was in 1871 a project without a parallel, or anything approaching a parallel, in the development of transportation facilities. When one places oneself in the Canada of 1871 with its sparse population and undeveloped resources, it is impossible not to admire the splendid courage of the public men who launched the first transcontinental railway. With such a task to be carried through, it is not to be wondered at that the Government of the day turned to the one Canadian engineer big and broad and experienced enough to handle it successfully, and that they would not take a denial.

From 1871, therefore, to 1880, Fleming was engaged in directing a series of careful surveys for the line of the Canadian Pacific Railway, and to some extent in building the road. For five years he filled the dual positions of Chief Engineer of the Intercolonial and of the Canadian Pacific, and for a portion of that time he was also Chief Engineer of the Newfoundland Railway. No man without his extraordinary mental and physical vigour could have borne the tremendous strain. The task was herculean. The building of the Intercolonial was itself a work of sufficient magnitude, and it must be remembered that this man brought to every undertaking a conscientious care that extended to every detail. Yet at the same time he was planning and personally supervising the gigantic undertaking of a railway from the Atlantic to the Pacific, the first transcontinental road in North America, and at that time by all odds the most formidable railway project in the world. The work involved surveys through the extremely difficult country north of Lake Superior, among the snow-covered peaks of the Rocky Mountains, and through that veritable sea of mountains that

constitutes so much of the great province of British Columbia. The results of these surveys must eventually be brought together, and a route selected for the railway that would under all the circumstances be most advantageous to the country.

The railway during the period that Fleming was associated with it was a national project; to all intents and purposes it was an extension of the Intercolonial to the Pacific Ocean, designed to link the newly-created provinces of Manitoba and British Columbia to the rest of the Dominion, to create a channel of communication east and west, to open up to settlement the vast fertile areas of the western plains, to stimulate trade and industry, and to lead to the rapid development of the entire country. To the individual provinces it would be a vital factor in their material advancement. To the Dominion it would be a national asset of inestimable importance. To the Empire it would become an important link in the chain of communication between the mother country and her far-flung dependencies.

The project appealed to Fleming as a great and intricate engineering problem; but even more so as a matter of national and imperial significance. He was then, as he has always been, what may be described as a practical imperialist. He has dreamed dreams and formulated projects that were sometimes in advance of his times, but his dreams have never been impractical, and his projects have always been based on a firm foundation of common-sense. They have looked always to the knitting together of the scattered members of a world-wide empire by creating and improving the means of communication; and they have had behind them the conviction that as the greatest obstacle in the way of imperial consolidation is the ignorance on the part of each community of the life and environment and outlook of all the others, every breach in that wall of ignorance, every advance in the means of communication, must inevitably make for better understanding, closer fellowship and the only lasting form of imperial federation.

The project of a transportation route across British North America from ocean to ocean was the dream of far-sighted men for the better part of a century before its realization. The late George Johnson, in his interesting notes on the Canadian Pacific Railway, in *First Things in Canada*, reminds us that Alexander Mackenzie, the dauntless explorer who made the first overland journey to the Pacific in 1793, proposed ‘to open and establish a commercial communication through the continent of North America between the Atlantic and Pacific Oceans’; that McTaggart, an engineer connected with the building of the Rideau Canal in 1829, had advocated the

opening up of a water communication from Lake Superior to Lake Winnipeg, thence by the Saskatchewan to the mountains, and by the Columbia to the Pacific; that Sir Richard Bonnycastle prophesied in 1846, 'We shall yet place an iron belt from the Atlantic to the Pacific, a railway from Halifax to Nootka Sound'; that Major Carmichael-Smyth had three years later published a pamphlet attempting to demonstrate the practicability of a railway from Halifax to the mouth of the Fraser; and that in 1851 Joseph Howe said, at a public meeting in Halifax, 'I believe that many in this room will live to hear the whistle of the steam engine in the passes of the Rocky Mountains, and to make the journey from Halifax to the Pacific in five or six days.' He might have added that ten years later Thomas D'Arcy McGee, contemplating the Victoria Bridge from the summit of Mount Royal, was inspired to predict the day that would see railway trains crossing this bridge on their way to the Pacific. These are but a few of many writers and public speakers who at one time or another advocated the establishment of a line of communication through British territory from the Atlantic to the Pacific. Sometimes the project contemplated merely a wagon road; sometimes a system of water communication, or a water route with connecting portages, a combined water and rail route, finally an all-rail route from ocean to ocean.

Inevitably there were never wanting those who, for one reason or another, scouted the idea as impracticable or ridiculous. Probably the most serious of these opponents of the scheme was Captain Palliser, whose views both as a man of scientific attainments and because of his personal knowledge of much of the country to be traversed seemed entitled to particular consideration. In his Report to the British Government (1863) he concludes: 'The knowledge of the country on the whole would never lead me to advise a line of communication from Canada across the continent to the Pacific exclusively through British territory. The time has for ever gone by for effecting such an object, and the unfortunate choice of an astronomical boundary line has completely isolated the central American possessions of Great Britain from Canada in the east, and also almost debarred them from any eligible access from the Pacific coast on the west.' The sequel proved, as it has so often done, that even the most eminent authorities may sometimes go astray in their deductions.

A year earlier Henry Youle Hind had published his *Overland Route to British Columbia*, and supported his own contentions as to the feasibility of the project by the inclusion of a carefully thought-out paper by Fleming, 'Practical Observations on the Construction of a Continuous Line of Railway from Canada to the Pacific Ocean on British Territory', to which

reference has already been made. This pamphlet was more or less instrumental in inducing the people of the Red River settlement, who were deeply concerned in the establishment of such a railway or other means of communication, to ask Fleming to represent their interests before the Canadian and British Governments. His efforts to meet their wishes have already been described in another chapter. Although they led to no immediate results, so far as the people of Red River were concerned, they contributed to the appointment of Fleming as Chief Engineer of the Intercolonial Railway, and eventually, one may venture to say, to his selection as Engineer-in-Chief of the Canadian Pacific Railway.

In a lecture delivered as long ago as 1858 he had foreshadowed the very project upon which he was now engaged. Referring to the then proposed American railway to California, he said:

'In the United States the Pacific Railway has been regarded for more than ten years as the great practical problem. Two reasons have effectually prevented its being attempted. These are, want of means, and the difficulty of settling upon its proper route. The people could not build it, the Government could not build it, and it could not be expected that foreign capitalists would undertake it. To take up $100,000,000 of capital in the United States for any new undertaking would be simply impossible. The difficulties of routes are nearly as conclusive. No less than five have been proposed, and each in turn warmly urged, and yet all have grave faults. The extreme Northern is pronounced to be the best of all, so far as facility of execution is concerned, but it is admitted that a still better route might be obtained through British America or north of the 49th parallel.'

Of such a route through British territory he says: 'A railway in British America from Fort William on Lake Superior to Fraser River would be about nineteen hundred miles in length. For several hundred miles west of Lake Superior the line would traverse a fine country. It would cross the Red River of the North near the celebrated Selkirk Settlement, and would then proceed through a well-watered country by way of the Moose or Saskatchewan Rivers to the base of the Rocky Mountains. This great range, which has an elevation of 10,000 feet in the 41st parallel of latitude, gradually falls off as we go north. It is probable that a pass at an elevation of not over 6,500 feet could be obtained beyond the sources of the Saskatchewan. After crossing the Rocky Mountains and the Columbia River, the coast range of mountains, another lofty chain, would have to be passed. Throughout the route there is abundance of coal, while there is no scarcity of water.

'The growing necessity for the line of railway under notice will unquestionably enlist English skill and English capital in its execution. The advantages which it would confer are too obvious to require pointing out. In going from Liverpool to Fraser River the continental route would save some twenty days, the entire journey being made, as it would be, in seventeen days, while to go via Panama and San Francisco as at present occupies about forty days.

'A Pacific Railway was until very lately considered, if considered at all, as a wild hallucination, but the time appears to be rapidly approaching when the great work will be undertaken in sober earnest. Before much time passes away the question of location will come up, and if we can judge rightly, England will not be disposed to father an undertaking of this description on any soil but her own, nor will she rest satisfied with a means of communication between the two oceans which will be open only during the summer months. The Pacific Railway cannot stop short at Lake Superior; whatever difficulties may exist, the link between that lake and the Canadian system of railways must be completed. Let us take a map of North America and hastily glance at the limits between which this magnificent work must be constructed. There is no difficulty in at once placing one's finger on certain governing points. The northern bend of Lake Superior is one, the French River east of Lake Huron is another. Between these points the most direct course will be taken.

'The construction of the Pacific Railway is a work of the grandest magnitude and perhaps of universal importance. In regarding such an enterprise we pass at once from the sphere of ordinary undertakings, for the Pacific Railway would surpass in every element of magnitude and cost, and probably also in its physical difficulties and commercial results, any work ever undertaken by man. It would be of full two thousand miles length, through a country now uninhabited; it would cross one of the great mountain ranges of the globe; such a work could not be expected to be carried through for less than $100,000,000.

'British capital will not be wanting on the maturing of a properly devised scheme to extend in this channel the enterprise of British merchants, to bring nearer to England her Eastern Empire, to secure to her the perpetuity of her dominion upon this continent, to tie with a band of iron the interests and the affections of her subjects in Europe, Asia, and America, to colonize half a continent and to complete the foundation of her Canadian Empire.'

The young Canadian nation was now undertaking, with rare courage and foresight, the gigantic task which Fleming had proposed as an Imperial

project in 1858.

Under the terms of union with British Columbia, the Canadian Government, in 1871, undertook to secure the construction of a railway connecting the new province with Eastern Canada. The immediate result of this pledge was the appointment of Fleming as Engineer-in-Chief of the Canadian Pacific Railway. The organization of survey parties was at once taken in hand, and before many months had gone by these parties were at work toiling through the vast wilderness of the west, searching for practicable routes. As already indicated, the most serious problems confronting the Chief Engineer were presented by the rugged and almost unknown country north of Lake Superior, the formidable barrier of the Rocky Mountains, and the wild jumble of mountains and valleys between the Rockies and the coast.

In his Report on the Canadian Pacific Railway for the year 1877, Fleming says of that portion of the route lying between the Ottawa River and Fort Garry (Winnipeg): 'At the beginning of the survey a large extent of this region was but little less strange than the mountain region. No civilized man, so far as known, had ever passed from the valley of the Upper Ottawa through the intervening wilderness to Lake Superior. The country east and west of Lake Nepigon was all but a *terra incognita*. It is true that the chain of lakes and streams from Thunder Bay to the Lake of the Woods and Fort Garry, known as the Dawson Route, had been travelled, but this route was circuitous and much out of the way of a direct railway line.'

Some idea of the problems that had to be met and overcome in the preliminary surveys through this country may be gained from the fact that eleven strong survey parties were found necessary, the supplies for which had to be transported through an entirely roadless and sometimes exceedingly rough region. In fact, the difficulties encountered were so serious that, in spite of the utmost diligence, months had gone by before portions of the survey could be actually commenced. The little already known of the country had led to the conclusion that it was impracticable for railway construction. Along the north shore of Lake Superior it was known to be of an 'extremely rough and broken character; precipitous granite mountains, intersected by deep valleys, rising in all directions, with elevations varying from 500 to 1,000 feet above the level of the lake'. Parties were therefore sent north of Lake Nepigon, and it was found that the railway might be constructed there without exceptionally heavy work or gradients. But as this would involve a considerable detour, further attempts were made to obtain a line along the north shore of Lake Superior, and in

1874 this route was adopted, though it involved numerous tunnels and sharp curves, the line following in many instances the shores of deep indenting bays. Any one who has travelled along this portion of the Canadian Pacific Railway will realize the difficulties that had to be encountered both in surveying the route and building the railway.

The selection of a route through British Columbia involved the examination of many possible lines. These narrowed down to ten different routes projected from the Yellowhead Pass, which had been selected as the most practicable road through the Rocky Mountains. Two of these terminated at Port Moody, on Burrard Inlet; one extended to Howe Sound; two ran to Waddington Harbour on Bute Inlet; one to Dean North Bentinck Arm; two terminated at Kamsquot on Dean Inlet; one at Triumph Bay on Gardner Inlet; and the last at Port Essington.

In his 1878 Report, the Chief Engineer says: 'Upon carefully viewing the engineering features of each route, and weighing every commercial consideration, I am forced to the conclusion that, if these alone are to govern a selection, if a decision cannot be postponed until further examinations be made, if the construction of the railway must at once be proceeded with, the line to Vancouver Island (by way of Bute Inlet) should for the present be rejected, and that the Government should select the route by the Rivers Thompson and Fraser to Burrard Inlet.' And in his Report of the following year, he confirms his previous recommendation; but, to meet the strong opposition that had developed in British Columbia to the selection of the Burrard Inlet route, suggests that additional explorations should be made and more complete information obtained with regard to the northern country. These explorations were carried out, and the results communicated to the Government. On October 4, 1879, an Order in Council was passed ratifying the adoption of the route by way of the Yellowhead Pass to Burrard Inlet. The project of a railway to Bute Inlet, and from there across the Strait of Georgia to Vancouver Island, which had been enthusiastically advocated by many people in British Columbia, was shelved for a time; as well as the suggested line to Port Simpson through the northern part of the province. The latter route is substantially that of the Grand Trunk Pacific Railway. The idea of bridging the Strait of Georgia has been revived periodically since 1879, and there is no reason to doubt that before many years it will be possible to travel by rail from the mainland to Victoria.

In connexion with the selection of Burrard Inlet as the terminus of the Canadian Pacific Railway, it is interesting to note the elaborate report of Major-General Moody on the various routes through British Columbia,

published as Appendix 10 to the Report on the Canadian Pacific Railway for 1880. General Moody unhesitatingly endorsed Fleming's selection of the route to Burrard Inlet, and, among other considerations, recommended it from a military point of view. 'Burrard Inlet', he says, 'is remarkably adapted by nature for secure defence against any force by sea. It is secure from land attacks from the north, and the formation of the whole neighbourhood southwards to the frontier, and for many miles eastward, is such that an approach from the frontier would, under defence, be found all the way a peculiarly troublesome matter by an enemy.'

While serious difficulties had to be overcome in locating a line for the railway along the north shore of Lake Superior, and through the maze of mountain ranges and valleys in British Columbia, the real crux of the whole situation was the gateway through the Rocky Mountains, and to the solution of this serious problem the energies of Fleming and his capable staff of engineers were directed for several years. Previous explorations, dating back to the days of Alexander Mackenzie, had established the existence of many passes through the mountains north of the present international boundary, from the Kootenay in the south to the Peace in the north. Most of these were now examined by survey parties, the narratives of whose expeditions often furnish striking examples of pluck and endurance under exceedingly trying conditions. Finally the Yellowhead Pass route was decided upon, leading from Edmonton west to the upper waters of the Athabaska, by the Jasper Valley to Yellowhead Pass, thence down the Fraser to Tête Jaune Cache.

This was the situation in 1880, when Fleming finally severed his connexion with the Canadian Pacific Railway surveys. The line as then located extended from Fort William (eastward the route still remained in some doubt) to the Red River, which was crossed at Selkirk, with a branch to Winnipeg. West of Red River the original location north of Lake Manitoba had been abandoned, and the line carried south of the lake, thence in a general north-westerly direction to Battleford and Edmonton. West of Yellowhead Pass the route descended the North Thompson to Kamloops, thence down the Thompson and Fraser Rivers to the Pacific.

Between 1871 and 1880 the work had been carried on by the Government of Canada as a national undertaking. In the latter year, however, the great project was handed over to a private company, headed by George Stephen (now Lord Mount Stephen) and Donald A. Smith (afterwards Lord Strathcona), and the route west of Red River was entirely changed, the line selected running much nearer the boundary, and crossing the Rocky Mountains by the Kicking Horse Pass.

In 1872, shortly after he had assumed control of the surveys, Fleming made his first journey across the continent, by way of the Yellowhead Pass. In 1883, after he had severed his connexion with the work, he again crossed from ocean to ocean, this time by way of the Kicking Horse Pass. An account of this journey, as well as of the earlier one, will be given in subsequent chapters.

It will be convenient, however, to describe here the last dramatic incident in the building of the Canadian Pacific Railway—the driving of the last spike and the passage of the first through train in 1885. Fleming was one of the chief actors in the historic episode, and tells the story.

DRIVING THE LAST SPIKE

'On the evening of October 27, when the regular Winnipeg train left Montreal, a private car, the "Saskatchewan," was attached, with the design of proceeding to Port Moody, at that date the terminus, the new city of Vancouver having no existence. The car contained seven persons; five came the whole way from Montreal, one of them joined at Ottawa, and one on their way to Port Moody. . . . The train beyond Calgary became a "special" and reached the western crossing of the Columbia in fifty-six hours after leaving Winnipeg. The gap, however, was not closed, the work having been retarded by incessant rains, so the train could not proceed farther. Early on the morning of the 7th, the junction was verging to completion, and at 9

o'clock the last rail was laid in its place. All that remained to finish the work was to drive home one spike.

'By common consent, the duty of performing the task was assigned to one of the four Directors present, the senior in years and influence, whose high character placed him in prominence—Sir Donald Alexander Smith. No one could on such an occasion more worthily represent the company or more appropriately give the finishing blows which, in a national sense, were to complete the gigantic undertaking.

'Sir Donald Smith braced himself to the task, and he wielded the by no means light spike hammer with as good a will as a professional tracklayer. The work was carried on in silence. Nothing was heard but the reverberation of the blows struck by him. It was no ordinary occasion, the scene was in every respect noteworthy, from the group which composed it and the circumstances which had brought together so many human beings in this spot in the heart of the mountains, until recently an untracked solitude. Most of the engineers, with hundreds of workmen of all nationalities, who had been engaged in the mountains, were present. Every one appeared to be deeply impressed by what was taking place. The central figure in the group was somewhat more than the representative of the railway company which had achieved the triumph he was consummating. His presence recalled memories of the Mackenzies and McTavishes, the Stuarts and McGillivrays, the Frasers, Finlaysons, McLeods, and McLaughlins and their contemporaries, who first penetrated the surrounding territory. From his youth he had been connected with the company which for so long had carried on its operations successfully from Labrador to the Pacific, and from California to Alaska. To-day he was the chief representative of that vast organization which, before the close of the last century, had sent out pioneers to map out and occupy the unknown wilderness, and which, as a trading association, is in the third century of its existence. All present were more or less affected by a formality which was the crowning effort of years of labour, intermingled with doubts and fears and oft renewed energy to overcome what at times appeared unsurmountable obstacles. Moreover, was it not the triumphal termination of numberless failures, the successful solution of the frequently repeated attempts of the British people, ever since America had been discovered, to find a new route to Asia? To what extent the thoughts of those present were turned to the past, must with that undemonstrative group remain a secret with each individual person. This much may be said: to all, the scene was deeply impressive, and especially to the many hundreds of workmen, who from an early hour up to the last moment, had struggled to do their part, and who were now mute lookers-on

at the single individual actively engaged—at one who in his own person united the past with the present, the most prominent member of the ancient company of "Adventurers of England," as he was the representative of the great Canadian Pacific Railway Company.

'The blows on the spike were repeated until it was driven home. The silence, however, continued unbroken, and it must be said that a more solemn ceremony has been witnessed with less solemnity. It seemed as if the act now performed had worked a spell on all present. Each one appeared absorbed in his own reflections. The abstraction of mind, or silent emotion, or whatever it might be, was, however, of short duration. Suddenly a cheer spontaneously burst forth, and it was no ordinary cheer. The subdued enthusiasm, the pent-up feelings of men familiar with hard work, now found vent. Cheer upon cheer followed, as if it was difficult to satisfy the spirit which had been aroused. Such a scene is conceivable on the field of hard-fought battle at the moment when victory is assured.

'Not infrequently some matter-of-fact remark forms the termination of the display of great emotion. As the shouts subsided, and the exchange of congratulations were being given, a voice was heard in the most prosaic tones, as of constant daily occurrence: "All aboard for the Pacific." The notice was quickly acted upon, and in a few minutes the train was in motion. It passed over the newly-laid rail, and amid renewed cheers sped on its way westward.

'On the same night a telegram was sent to Ottawa and published in the eastern Canadian newspapers. It ran: "The first train from Montreal is approaching Yale, within a few hours of the Pacific coast. The last spike was driven this morning by Hon. Donald A. Smith at Craigellachie, in Eagle Pass, some 340 miles from Port Moody. On reaching the coast our running time from Montreal, exclusive of stoppages, will be five days, averaging twenty-four miles per hour. Before long passenger trains may run over the railway from Montreal to Vancouver in four days, and it will be quite possible to travel on special occasions from Liverpool to the Pacific coast by the Canadian transcontinental line in ten days. All are greatly pleased with the work done. It is impossible to fully realize that enormous physical and other difficulties have been overcome with such marvellous rapidity and with results so satisfactory." The train arrived at Port Moody the following morning, November 8. On the succeeding morning the principal newspapers in England published the substance of the above telegram, with the additional important fact that the first through train from Montreal had actually arrived at the coast.'

CHAPTER X
OCEAN TO OCEAN IN 1872

In the summer of 1872, Fleming, having carefully examined the reports of his engineers, thought it desirable to study with his own eyes the main features of the route that at least tentatively had been selected for the Canadian Pacific Railway.

Leaving Halifax about the beginning of July, he travelled to Montreal and Toronto, inspecting as he went the construction work on the Intercolonial, on which over 10,000 men were then employed. At Toronto he was joined by his son Frank, Dr. Moren of Halifax, John Macoun the botanist, and Rev. George M. Grant, whose entertaining account of the expedition, *Ocean to Ocean*, is largely drawn upon in this chapter.

From Toronto to Collingwood they travelled over the old Northern Railway, upon which Fleming had had his first experience in railway building in Canada. At Collingwood a steamer was taken to Fort William. An incident of the trip was the use on Sunday of a special service compiled the previous year for the Canadian Pacific Railway Survey parties, at the request of the Chief Engineer, by a committee of three Ottawa clergymen, representing the Churches of Rome, England, and Scotland. The steamer finally reached Thunder Bay on July 22—five days from Collingwood.

From Prince Arthur's Landing the party followed the Dawson Route, by wagon and canoe, to Fort Garry. Here saddle-horses were procured, with Red River carts for the baggage, and the expedition set out over the great plains for the mountains, travelling by way of Fort Ellice, Fort Carlton, and Edmonton. On the way they met or passed numbers of hunting or trading parties, traders going west and half-breeds returning east with carts well-laden with buffalo-skins and dried meat. 'A number of Red River people club together in the spring and go west to hunt the buffalo. Their united caravan is popularly called a "brigade", and very picturesque is its appearance on the road or round the camp-fire. The old men, the women, and little children are engaged on the expedition, and all help. The men ride and the women drive the carts. The children make the fires and do chores for the women. The men shoot buffalo; the women dry the meat and make it into pemmican.'

From Edmonton, the route lay over the Rocky Mountains by way of the Yellowhead Pass. Fresh saddle-horses were obtained from the Hudson's Bay Company, and the carts were abandoned for pack-horses accustomed to the peculiarities of mountain trails. A month out from Fort Garry they had their first view of the mountains—the foot-hills between the Athabaska and the McLeod. On the banks of the McLeod a relic was found of the party of Canadian emigrants who crossed the mountains in 1862, in the shape of a partly-obliterated record chalked on the side of a large spruce, and ending with the significant words 'a hard road to travel'.

September 9 they reached the Athabaska, with the snow-crowned summits of the Rockies in full view, though still some fifty miles to the west and south-west.

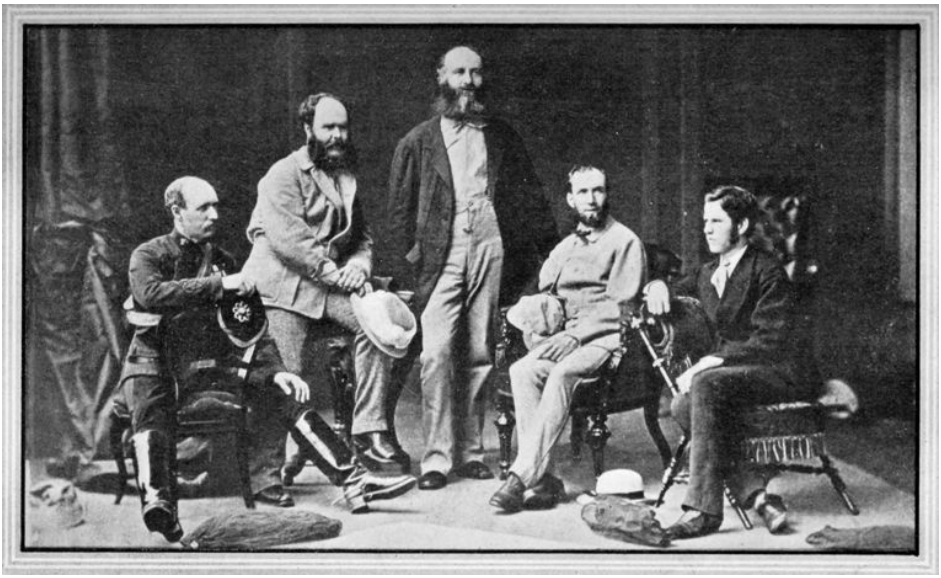
At the camp that night a curious relic of early days came to light. 'While hacking with his axe at brush on the camping-ground, just where our heads would lie, Brown struck something metallic that blunted the edge of the axe. Feeling with his hand he drew out from near the root of a young spruce tree an ancient sword bayonet, the brazen hilt and steel blade in excellent preservation, but the leather scabbard half eaten as if by the teeth of some animal. It seemed strange in this vast and silent forest wilderness thus to come upon a relic that told, probably, of the old days when the two rival fur companies armed their agents to the teeth, and when bloody contests often took place between them.' The old sword in its rotting scabbard hangs to-day on the walls of Fleming's home in Ottawa, among other mementoes of the far west.

As they continued their journey to the west, the mountains loomed up ever more imposingly across their path, except 'where cleft in the centre down to their very feet by the chasm that the Athabaska long ago forced or found for itself.' The summits on the north side were serrated 'as the teeth of a saw'. On the other 'the Roche à Myette, immediately behind the first line, reared a great solid unbroken cube, two thousand feet high, a "forehead bare", twenty times higher than Ben An's, and before and beyond it, away to the south and west, extended ranges with bold summits and sides scooped deep, and corries far down, where formerly the wood buffalo and the elk, and now the moose, bighorn, and bear find shelter.'

The trail presently brought them from higher ground down to the valley of the Athabaska. As this noble river wound through the dark green spruces, amid rose bushes and vetches, the 'soft blue of the mountains gleamed through everywhere, and when the woods parted, the mighty column of Roche à Perdrix towered a mile above our heads, scuds of clouds kissing its

snowy summit, and each plication and angle of the different strata up its giant sides was boldly and clearly revealed. We were entering the magnificent jasper portals of the Rocky Mountains by a quiet path winding between groves of trees and rich lawns like an English gentleman's park.'

Full of enthusiasm, the travellers pushed their way up the valley, stopping to drink to the Queen from the clear ice-cold waters of Rivière de Violin, now known as Fiddle Creek, and famous in the west by reason of the extreme suddenness with which it is transformed from a modest, unassuming stream to a tempestuous torrent. With towering peaks about them on every side, they 'could now sympathize with the enthusiast who returned home after years of absence, and when asked what he had as an equivalent for so much lost time, answered: "I have seen the Rocky Mountains".'



THE OVERLAND PARTY OF 1872

(L-R)
James Robertson Ross.
Dr. Moren.
Sandford Fleming.
George M. Grant.
Frank Fleming.

They were now beneath the towering front of Roche à Myette, and recalled the fact that Dr. Hector, who explored the mountains thirteen or

fourteen years earlier, had climbed 3,500 feet above the valley until stopped by a perpendicular wall that still towered two thousand feet above him. It was said that the summit had once been reached by a daring hunter, who gave his name to the peak.

Roche à Myette, rising some 9,000 feet above sea-level, hardly ranks among the higher peaks of the Rockies, but its peculiar form and position lend it distinction. As one travels west by the Grand Trunk Pacific its magnificent forehead dominates the landscape; and those who journeyed this way before the advent of the railway had the peak in view for days, until they began to think that it was bewitched and that they would never win to its base.

The water in the Athabaska being too high for pack-horses, it was decided to build a raft. On this the baggage was safely taken across, and a short ride brought Fleming and his companions to Jasper House, fifteen days after leaving Edmonton. This old post, supposed to have been named after a fur-trader named Jasper Howse, had practically been abandoned by the Hudson's Bay Company. In Dr. Hector's time the main building seems to have been somewhat pretentious, as he describes it as 'constructed after the Swiss style, with overhanging roofs and trelissed porticoes', but all that remained in 1872 were two log houses, the largest propped up before and behind with rough shores, as if to prevent it being blown away into the river. To-day not even these remain to bear witness to the departed glory of the once famous route of the fur-traders through the mountains.

'Jasper House is one of the best possible places for seeing to advantage the mountains up and down the valley. It is situated on a pretty glade that slopes gently to the Athabaska, sufficiently large and open to command a view in every direction. Roche à Myette, distant five or six miles, is half concealed by intervening heights and is here less conspicuous than elsewhere, even when seen from greater distances, but a gleam of sunlight brightens his great face and makes even it look lightsome. A score of miles to the south the Pyramid Rock gracefully uplifts its snowy face and shuts in the valley, the space between being filled by the mountains of Rocky River and the great shoulders of Roche Jacques. Looking westerly is Suette (Roche de Smet), his rampart rising cold, stern, and grey above his furrowed sides. Other peaks overhang the valley to the north, and between them deep wooded valleys are dark as night. Separated from these by the Snake Indian River, the true proportions of Roche à Bosche are seen for the first time. . . .

'There is a wonderful combination of beauty about these mountains. Great masses of boldly defined bare rock are united to the beauty that

variety of form, colour, and vegetation give. A noble river with many tributaries each defining a distinct range, and a beautiful lake ten miles long, embosomed three thousand three hundred feet above the sea, among mountains twice as high, offer innumerable scenes, seldom to be found within the same compass, to the artist.'

Rounding Jasper Lake, and a smaller lake that lay beyond, in whose dark green waters the pine-clad ridges were wonderfully reflected, the trail led them through tangles of fallen timber that made progress very slow for some time. These stretches of down timber, the result of great forest fires recent or remote, are the particular abomination of those who have occasion to travel over Rocky Mountain trails. In some places the trunks are piled one upon another to a height of ten or fifteen feet, until even the marvellous sagacity of the western pony is at fault and his rider must laboriously cut a way through with his axe.

'At the end of Jasper Lake a strath from two to five miles wide, which may still be called the Jasper Valley, bends to the south. Our first look up this valley showed new lines of mountains on both sides, closed at the head by a great mountain so white with snow that it looked like a sheet suspended from the heavens.' They were told by their guide that this mountain was known as 'La montagne de la grande traverse', and that the road to the Columbia country by the formidable Athabaska Pass lay along its south-eastern base, while their way would turn west up the valley of the Myette. The great snow-crowned mountain was probably that now known as Mount Geikie, one of the highest and most impressive peaks in this part of the Rockies.

About the middle of September, the party passed the site of an old trading-post of the North-West Company known as Henry House, and camped somewhere near the spot where the infant town of Jasper is to-day springing up, on the Grand Trunk Pacific. Here two great routes through the mountains fork, one leading up the Athabaska to the pass of the same name, and the other up the Myette to Yellowhead Pass, or Leather Pass as it was formerly called. Then as now it was a spot to charm the lover of mountain scenery, with Pyramid Mountain, streaked and banded with red and yellow, green and black, on one side, and the pine-clad slopes of Goat Mountain on the other, while the glittering summits of Geikie, Hardisty, and other remote peaks filled the horizon.

As they were turning up the Myette, they met Walter Moberly, one of Fleming's principal assistants on the surveys. He had travelled from the west to meet his chief, bringing with him a trail-cutting party who were now at

work some distance up the pass. After a hard and tiresome pull up through the muskegs and fallen timber of the Myette, they finally came in touch with the trail party a few miles east of the summit of the pass, and for a time enjoyed much better going.

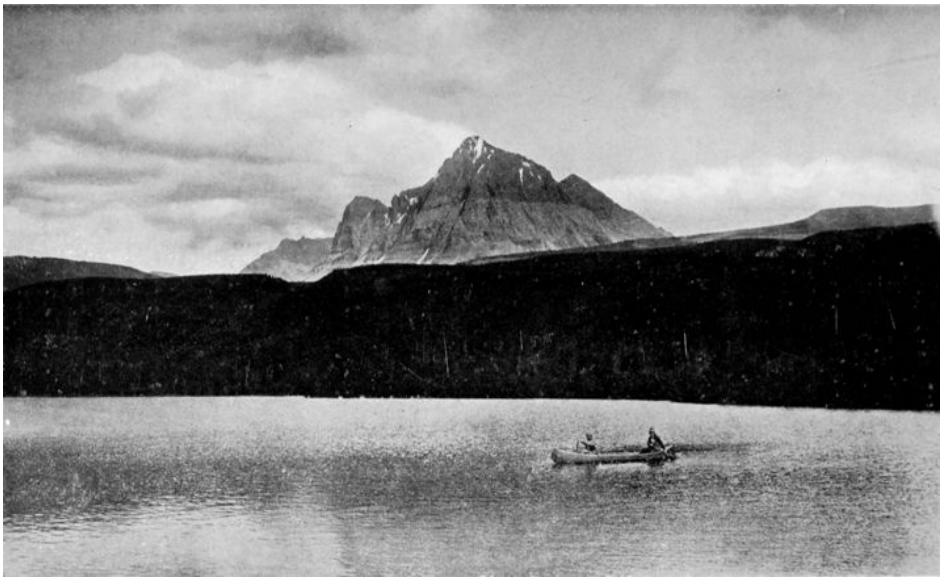
Camped at the summit of Yellowhead Pass, at an altitude of only 3,700 feet above the sea, and with the certainty that no formidable obstacles need be encountered between Edmonton and the western side of the main range, Fleming felt that he had solved the greatest problem in connexion with the route of the Canadian Pacific Railway, and that the successful completion of the great national project was now assured. Those who were subsequently responsible for changing the route through the mountains from the Yellowhead Pass to the Kicking Horse Pass, no doubt had what they considered good and sound reasons for their choice, but the fact remains that the route rejected by the Canadian Pacific Railway has now been adopted by the Grand Trunk Pacific, and that, in spite of the expenditure by the former of millions of dollars on tunnels designed to reduce the grade, the new transcontinental line will still possess a road through the mountains considerably lower than that of its great rival.

On September 16th, Fleming and his party turned down the western slope of Yellowhead Pass, and, a few minutes after parting with the eastward-flowing Myette, heard the sound of a rivulet running in the opposite direction over a red pebbly bottom. 'We had left the Myette flowing to the Arctic Ocean, and now came upon this, the source of the Fraser hurrying to the Pacific.' At the summit, Moberly had welcomed them into British Columbia, and they all now gathered on the banks of the infant Fraser and drank from its waters to the Queen and the Canadian Dominion.

A few miles farther down they passed Yellowhead Lake, its waters clear and sparkling on its firm pebbly beach; and after a hard day's travel reached the western end of Moose Lake. The following day brought them to the 'Grand Fork of the Fraser', where a tributary that takes its rise in one of the glaciers at the foot of Mount Robson, joins the main stream. They camped here for a day to rest their horses, and in hopes of getting a view of the Giant of the Rockies, but without success.

'Looking west down the valley of the Fraser, the narrow pass suddenly filled with rolling billows of mist. On they came, curling over the rocky summits, rolling down to the forests, enveloping everything in their fleecy mantles. Out of them came great gusts of wind that nearly blew away our fires and tents; and after the gusts, the rain in smart showers. Once or twice the sun broke through, revealing the hill sides, all their autumn tints fresh

and glistening after the rain, and the line of their summits near and bold against the sky; all except Robson's Peak which showed its huge shoulders covered with masses of snow, but on whose high head masses of clouds ever rested.'



ABOVE THE YELLOWHEAD

The following day brought the travellers to Tête Jaune Cache, a spot long famous in the annals of the fur-trade. The spot, as well as the mountain pass, are supposed to have taken their name from a fair-haired trader or trapper who many years before had journeyed to and fro through the mountains by this route, and had established his head-quarters at the Cache on the banks of the Fraser.

Here the trail left the Fraser, and turned southerly to the North Thompson River. The route which Fleming had taken through the mountains, and which he was now to follow to the North Thompson and ultimately to Kamloops and the Fraser again, was the route provisionally selected for the railway. Incidentally he was following practically in the footsteps of Milton and Cheadle, who had travelled overland to the Pacific in 1863, and embodied the incidents of their journey in that most interesting book of western travel, the *North-West Passage by Land*.

A few days later, while plodding along the trail, they were startled by the sound of a bell. 'In a few minutes a solitary traveller, walking beside his two laden horses, emerged from the woods ahead. He turned out to be one John

Glen, a miner on his way to prospect for gold on hitherto untried mountains and sand-bars. Here was a specimen of Anglo-Saxon self-reliant individualism more striking than that pictured by Quinet of the American settler, without priest or captain at his head, going out into the deep woods or virgin lands of the new continent to find and found a home. John Glen calculated that there was as good gold in the mountains as had yet come out of them, and that he might strike a new bar or gulch that would pan out as richly as Williams Creek, Cariboo; so putting blankets and bacon, flour and frying-pan, shining pickaxe and shovel on his horses, and sticking revolver and knife in his waist, off he started from Kamloops to seek fresh fields and pastures new. Nothing to him was lack of company or of newspapers; short days and approach of winter; seas of mountains and grassless valleys, equally inhospitable; risk of sickness and certainty of storms; slow and exhausting travel through marsh and muskeg, across roaring mountain torrents and miles of fallen timber; lonely days and lonely nights;—if he found gold he would be repaid. Prospecting was his business, and he went about it in simple matter-of-course style, as if he were doing business on change. John Glen was to us a typical man, the modern missionary, the martyr for gold, the advance guard of the army of material progress. And who will deny or make light of his virtue, his faith, such as it was? His self-reliance was sublime. Compared to his, how small the daring and pluck of even Milton and Cheadle! God save thee, John Glen, and give thee thy reward!'

They were now travelling down the valley of the Thompson, and it was hard going. 'It was constant up and down as if we were riding over billows. Even where the ground was low, the cradle hills were high enough to make the road undulating. The valley of the Thompson is very narrow for a stream of its magnitude; in fact it is a mountain gorge rather than a valley.' High wooded hills rose on either side, half-hiding, half-revealing ranges of glittering peaks. 'The forest is of the grandest kind—not only the living but the dead. Everywhere around lie the prostrate forms of old giants in every stage of decay, some of them six to eight feet through, and an hundred and fifty to two hundred feet in length. Scarcely half-hiding these are broad-leaved plants and ferns in infinite variety, while the branchless columnar shafts of more modern cedars tower far up among the dark branches of spruce and hemlock, dwarfing the horse and his rider that creep along across their interlaced roots and the mouldering bones of their great predecessors.'

The end of September brought Fleming and his party to Kamloops after a more or less eventful trip down the banks of the Thompson, passing Grand Canyon and Hell's Gate, where the waters of the river are forced raging and

boiling through a gap not more than thirty feet wide. Here they encountered one of the characteristic supply-trains on its way up to Tête Jaune Cache—fifty-two mules led by a bell-horse and driven by four or five men representing as many different nationalities. 'Most of the mules were, with the exception of the long ears, wonderfully graceful creatures, and though laden with an average weight of three hundred pounds, stepped over rocks and roots firmly and lightly as if their loads were nothing.'

Not far from Kamloops a visit was paid to one of the winter homes of the Siwash Indians. 'A deep and wide hole is dug in the ground, a strong pole with cross sticks like an upright ladder stuck in the centre, and then the house is built up with logs in conical form from the ground to near the top of the pole, space enough being left for the smoke and the inmates to get out. Robinson Crusoe-like, instead of a door, they use the ladder, and go in and out of the house during the winter by the chimney. As this is an inconvenient mode of egress they go out as seldom as possible; and as the dogs live with the family, the filth that soon accumulates can easily be estimated, and so can the consequence, should one of them be attacked with fever or small-pox. They boast that these houses are "terrible warm", and when the smoke and heat reach suffocation-point their simple remedy is to rush up the ladder into the air and roll themselves in the snow for a few minutes. In spring they emerge from their hibernation into open or tent life; and in the autumn they generally find it easier to build a new house or bottle to shut themselves up in, than to clean out the old one.'

From Kamloops, Fleming had a comparatively easy journey down to Lytton, at the junction of the Thompson and the Fraser, thence to Yale by the famous road, hewn in places out of the face of the rock hundreds of feet above the bed of the river; and from Yale down the river by steamer to New Westminster. A pleasant sail through the Straits of Georgia, with a brief visit to Bute Inlet, brought the travellers to Vancouver Island and the pretty little city of Victoria on the 9th October—a little over three months from the day they left Halifax.

CHAPTER XI
OVER THE MOUNTAINS BY THE KICKING HORSE

In the summer of 1883, while in London, Fleming received a cablegram from the president of the Canadian Pacific Railway Company, asking him to disentangle a peculiar situation into which the railway had been brought through the anxiety of the Company to hasten its construction. At that time, although the rails were actually laid as far as Calgary at the eastern entrance to the mountains, there was as yet no certainty that the railway could be carried through by the southern route. In fact no white man had yet made his way across the Selkirk Range from east to west anywhere near the line proposed for the Canadian Pacific Railway.

Because of his wide knowledge of the general situation in the west, and of all the known routes through the mountains, the Company naturally turned to Sandford Fleming to help them out of the difficulty.

He returned to Canada, and after a conference with the directors of the Canadian Pacific Railway in Montreal, started for the west, accompanied as on his former journey of 1872 by his eldest son, and Dr. George M. Grant, who joined the party at Winnipeg. Their route was by rail to Toronto and Collingwood, from there by boat to Port Arthur, and thence by the newly completed line of the Canadian Pacific Railway to Winnipeg. After making necessary arrangements there, the journey was continued by rail to Calgary, the temporary terminus of the road.

Fleming could not fail to be struck with the contrast between his present journey and that of 1872. 'When I crossed the continent eleven years ago,' he says, in his narrative of the present expedition, 'before Winnipeg as a city had even a name, I left Fort Garry on the 2nd August, and did not arrive in sight of the mountains until the 7th September. In that journey we did not spare ourselves or our horses, for we made over the prairies an average of over forty miles a day. On the present occasion we left Winnipeg on Monday morning, to come within sight of the mountains on Wednesday afternoon. The first journey occupied thirty-six days, and the last about fifty-six hours!'

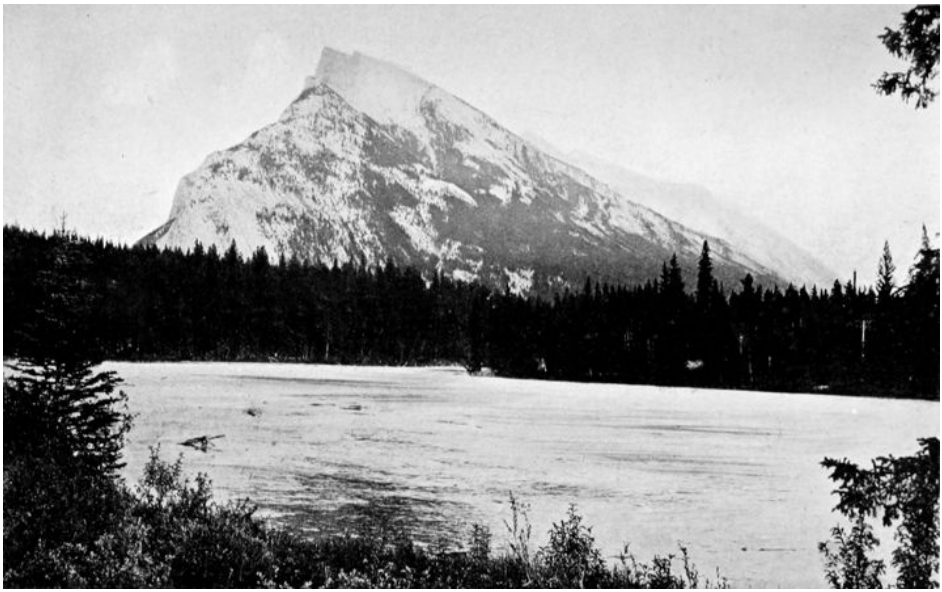
The problem now before the travellers was whether or not they could make their way across the two great ranges that lay between them and Kamloops, three hundred miles as the crow flies, but much longer as they must travel, as the route lay through peculiarly difficult country.

Finally it was decided to go forward, it being understood that the country had been definitely explored as far at least as the summit of the Selkirks. Packers were secured, provisions purchased, and the party set out on their long journey. They had, however, scarcely entered the main range before disquieting news came from one of the resident engineers. 'He had heard of no one having crossed the Selkirk Range. Major Rogers had made several attempts to do so, but he had only so far succeeded as to reach the summit, or one of the summits, but had not penetrated entirely through the mountains on a connected line. No one was known to have passed over from where we stood by the route before us to Kamloops; not even an Indian, and it was questionable if it were possible to find a route which could be followed.'

Fleming had no desire to assume the position of an original explorer, with the prospect of toiling onward for many days only to find himself in the end confronted by an absolutely impassable obstacle. It was understood, however, that Major Rogers, who was in charge of exploratory work for the railway in the mountains, was at the mouth of the Kicking Horse, and a final decision whether to go forward or back to Calgary, and around to British Columbia through the United States, was reserved until his opinion had been obtained as to the possibilities of the proposed route through the mountains.

The following day being Sunday was spent comfortably in the camp of the resident engineer. The weather was brilliantly clear and invigorating, and all anxiety as to the future was for the time thrown aside. 'Those living in cities', says Fleming, 'can with difficulty understand the effect on the spirits and minds of men away from civilization of a bright, cheery Sunday. In all well-ordered expeditions Sunday is a day of rest, and this view alone, denuded entirely of all religious feeling, which is to some extent dependent on early education, creates a scene of quiet and repose not always experienced to the same extent in civilized communities. To one bred like myself in the strict views of the Presbyterian Church, there is something more than this sentiment: it is as if you held it a privilege on these remote mountains to pay homage to the lessons of your youth, not from the merely mechanical acceptance of them, but from a heartfelt sense of their truth. I have felt, on such occasions, a sense of peace and freedom from the carping cares of life I never could explain; but that the thought is not peculiar to myself many circumstances have shown. You seem, as it were, at such times, only to commune with nature, and to be free from all that is false and meretricious in our civilization. You are beyond the struggles and petty personalities of the world, and you feel how really and truly life is better and happier as it is more simple.'

The scene is a memorable one. They are encamped within the threshold of one of the gateways through the mountains. 'The sun lit up in warm colours the great mountains encircling the valley. We were surrounded by these magnificent heights. Our camp was but a few miles distant from the valley, which leaves Bow River for the Vermilion Pass. The atmosphere was not so clear as we could wish, and the distant peaks were invisible. We had, nevertheless, a remarkable view of the towering battlements to the north, in themselves so lofty and so near to us, and the details so intricate that it would be impossible to portray them within the limits of ordinary canvas.'



EASTERN PORTAL TO THE ROCKIES

To this point they had been driven over a fairly good road, but, from now on, the trail must be followed on horseback, or probably sometimes on foot. To harden themselves to the saddle they therefore spent the latter part of the afternoon in riding up the valley about twelve miles, between mountains of the grandest description. 'To the south two heights of great prominence present themselves. They command a view of the depression leading to the Vermilion Pass. One of the peaks is crowned with perpetual snow, and is of striking beauty. The other has a cubical form of summit. A third, at no great distance, is pyramidal, and so on in every conceivable variety these mountains tower above us. Westward we see Castle Mountain to our right. The resemblance to Cyclopean masonry has doubtless suggested the name, for it is marked by huge masses of castellated-looking work, with turreted

flanks. After passing through a mile of burnt pine wood at its base, we reach Spillman's camp where we stay for the night. The fires in the valley are extinguished, but they are still running up the mountain side, and as night comes on the flames gleam with a weird light. We soon wrapped ourselves in our blankets. Although with a certain sense of fatigue, I could not sleep. My thoughts reverted to the journey before us. Uncertainty seemed to increase as we advanced.'

The next morning they continue their journey, following the banks of the Bow River, still a fairly large stream. Great peaks tower above them on every side. 'One is crested like a huge camel's back; one rises to a sharp cone; a third has the appearance of an extinct volcano, and the crumbling edge of the crater reveals the glacier within.'

A day or two later they reach the summit of the Kicking Horse Pass, and camp there. 'To-night we fall asleep on the continental "Divide". Hitherto we have passed over ground draining to the east. To-morrow we follow a stream flowing into the waters of the Pacific.'

They are up at half-past five, on a cold sharp morning, the horses are packed, and they start down the western slope toward the Columbia.

'It was a rugged and broken path which we entered upon. To our right two conspicuous twin summits were standing out in the range. The water of the streams which we were following was more heard than seen, for the trail exacted all our attention. Our horses were moving among sharp broken granite rocks and fallen trees. In about half an hour we passed by the side of Summit Lake. The northern mountains were now concealed from view by a forest of spruce through which we were passing. To the south the landscape is more magnificent than ever; a bold, rocky bluff rises thousands of feet directly in front of us, while mountains of great height, in groups, tower above it to the right and left. Some of them have crater-shaped peaks filled with snow. Our progress is slow, and much interfered with by the pack-horses getting continually off the trail and losing part of their load.

'We pass the second mountain lake, and about four miles from our morning camp we reach the third and largest lake, about a mile in length. We cross the path of a great snow slide, an avalanche divided into two forks, one about fifty yards and the other about one hundred and fifty yards wide. Thousands of trees, two and three feet in diameter, have been broken into shreds by it, and roots, trunks, and branches, in a tangled mass, have been swept away, and, with a multitude of boulders of all dimensions, hurled into the lake to form a promontory of which three or four hundred feet still

remain. To the south, beyond the lake, the eye rests upon a mighty mountain, streaked by snow-filled crevices, and reflected in the bright, glassy lake, presenting to our eyes a most striking picture. We cross the outlet by fording a stream some forty feet wide and about sixteen inches in depth. I looked upon it with no little interest, for it is the stream we are to follow for some days. There is often a history lying behind the nomenclature of these waters and peaks, and in the present instance it is said that Dr. Hector, who accompanied the Palliser expedition, was kicked not far from this spot. The Indians have translated it Shawata-nowchatawapta—Horse-Kicking River.'

So the journey runs day after day, the mountain trail sometimes high up on the mountain side and again following the gravel banks of the river. The morning's start is made in all kinds of weather, sometimes clear, oftener dull, and again in drenching rain. One day they set out in the midst of a dense fog. 'The mist hung like a thick curtain, concealing everything not directly near the camp-fire. But we start; the six pack-horses in front with their loads standing out from their backs, giving the creatures the appearance of so many dromedaries. Dave rides ahead with the bell-horse, then the pack-horses follow, and the horsemen bring up the rear to see that none stray behind. Our journey this day was over exceedingly rough ground. We have to cross gorges so narrow that a biscuit might be thrown from the last horse descending, to the bell-horse six hundred feet ahead, ascending the opposite side. The fires have been running through the wood and are still burning; many of the half-burnt trees have been blown down, probably by the gale of last night, obstructing the trail and making advance extremely difficult.'

The road does not improve as they advance, and for mile after mile it leads through burnt and fallen timber. 'Fortunately there was no wind. The air was still and quiet, otherwise we would have ran the risk of blackened trunks falling around us, possibly upon the animals or ourselves, even at the best seriously to have impeded our progress, if such a mischance did not make an advance impossible, until the wind should moderate. We move forward down and up gorges hundreds of feet deep, amongst rocky masses, where the poor horses had to clamber as best they could amid sharp points and deep crevices, running the constant risk of a broken leg. The trail now takes another character. A series of precipices run sheer up from the boiling current to form a contracted canyon. A path has therefore been traced along the hill side, ascending to the elevation of some seven or eight hundred feet. For a long distance not a vestige of vegetation is to be seen. On the steep acclivity our line of advance is narrow, so narrow that there is scarcely a foothold; nevertheless we have to follow for some six miles this thread of

trail, which seemed to us by no means in excess of the requirements of the chamois and the mountain goat.

'We cross clay, rock, and gravel slides at a giddy height. To look down gives one an uncontrollable dizziness, to make the head swim and the view unsteady, even with men of tried nerve. I do not think I can ever forget that terrible walk; it was the greatest trial I ever experienced. We are from five to eight hundred feet high on a path of from ten to fifteen inches wide and at some points almost obliterated, with slopes above and below us so steep that a stone would roll into the torrent in the abyss below.'

About three miles from the mouth of the Kicking Horse Valley they meet Major Rogers, and continue down with him to his camp on the banks of the Columbia.

From Major Rogers, Fleming learns to his immense relief that he has discovered a pass through the Selkirks by way of Beaver River and the Illecellewaet, and that a pack trail has been opened to the summit and a short way down the Illecellewaet. Beyond that point 'we have the wilderness in its native ruggedness, without a path for the human foot, with the river and mountain gorges only as landmarks and guides'. They must descend the Illecellewaet to the second crossing of the Columbia, and get through the Gold Range by way of Eagle Pass, and so to Kamloops on the North Thompson—and civilization once more.

After a day's rest they are off again, accompanied by Major Rogers for a portion of the journey. His nephew, Albert Rogers, is to go through with them to Kamloops. They descend the Columbia in a canoe to the mouth of Beaver River, where they are joined by the pack train, and camp for the night.

At daybreak they are climbing up the Beaver Valley, over a very rough trail, but thankful for small mercies, as they are coming to a point where there will be no trail whatever. The following morning they reach the summit through a rugged mountain defile, and turn down the western slope, noting for the first time the since famous Illecellewaet Glacier. Twenty-four miles from the summit they come to the end of the trail. It has been poor enough, but travelling over it is luxury to what lies before them.

'Last night it rained hard, with thunder and lightning. This morning everything is wet, and the trees are dripping in all directions; not a pleasant prospect for those who have to travel under them. There is, however, no halting in a journey such as ours. Our horses have left us. They were driven back to find pasture last night. The men must now carry on their shoulders

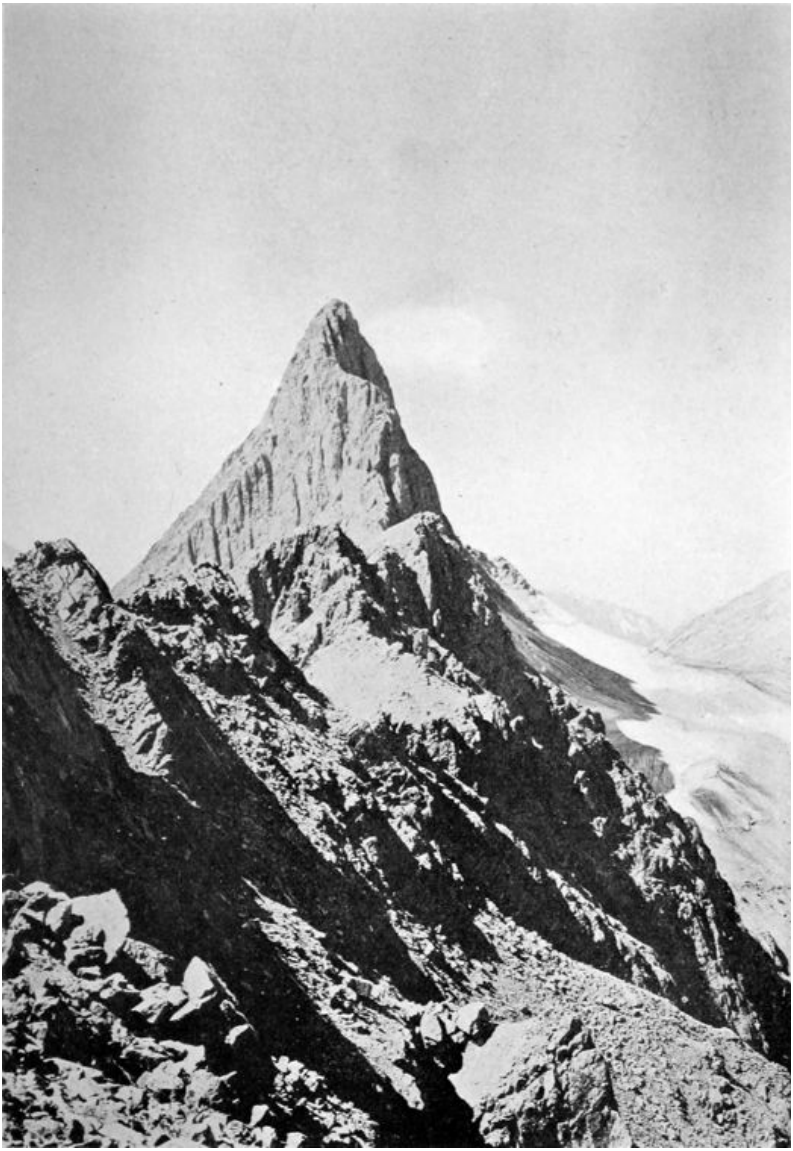
what we require, through an untrodden forest without path or trail of any kind. Clothing, tents, food and a few cooking utensils constitute what we have to bring with us. Fortunately we can always find water. It is a matter of some calculation and care putting these articles into proper packs, but the task is finally accomplished. . . .

'The walking is dreadful; we climb over and creep under fallen trees of great size, and the men soon show that they feel the weight of their burdens. Their halts for rest are frequent. It is hot work for us all. The dripping rain from the bush and branches saturate us from above. Tall ferns sometimes reaching to the shoulder, and devil's clubs through which we had to crush our way, make us feel as if dragged through a horse-pond, and our perspiration is that of a Turkish bath. We meet with obstacles of every description. The devil's clubs may be numbered by millions, and they are perpetually wounding us with their spikes against which we strike. We halt very frequently for rest. Our advance is varied by ascending rocky slopes and slippery masses, and again descending to a lower level. We wade through alder swamps and tread down skunk cabbage and the prickly aralias, and so we continue until half-past four, when the tired-out men are unable to go further. A halt becomes necessary. We camp for the night on a high bank overlooking the Illecellewaet. . . . Our advance on a direct line we estimate at four miles.' Not much to show for a long and hard day's work!

Sunday is no longer a day of rest. Supplies are limited, and they must push on or face the possibility of starvation. The conditions are disheartening. 'We make little headway, and every tree, every leaf, is wet and casts off the rain. In a short time we are as drenched as the foliage. We have many fallen trees to climb over, and it is no slight matter to struggle over trees ten feet and upwards in diameter. We have rocks to ascend and descend; we have a marsh to cross in which we sink often to the middle. For half a mile we have waded, I will not say picked, our way to the opposite side, through a channel filled with stagnant water, having an odour long to be remembered. Skunk cabbage is here indigenous, and is found in acres of stinking perfection. We clamber to the higher ground, hoping to find an easier advance, and we come upon the trail of a cariboo, but it leads to the mountains. We try another course, only to become entangled in a windfall of prostrate trees. The rain continues falling incessantly: the men, with heavy loads on their heads, made heavier by the water which has soaked into them, become completely disheartened, and at half-past two o'clock we decide to camp. Our travelling to-day extended only over three hours, we have not advanced above a mile and a half of actual distance, and we all suffer greatly

from fatigue. I question if our three days' march has carried us further than ten miles.'

So the journey goes day after day, with little relief from the interminable succession of swamps, tangled underbrush, and fallen timber. At last they emerge from the canyon of the Illecellewaet and reach the second crossing of the Columbia, with Eagle Pass directly opposite.



In the Heart of the Mountains

Here supplies from Kamloops were to have met the party, but to their disappointment and dismay there is no sign of the men. Only a few days' provisions remain, and the journey over the Gold Range is trailless and difficult. The following morning, however, brings the missing men—but as if every conceivable obstacle were to be placed in their way, Fleming learns that instead of bringing the supplies with them, they have *cached* them at a point five days distant. Yet he can see, though grimly enough, the ridiculous side of the situation. 'We were in the heart of a desert and asked for bread. We did not even get a stone, but we met five hungry Indians ready to devour the little store we had brought with us.'

By putting every one on very short rations and travelling by forced marches, they manage to reach the *cached* provisions. Their troubles are now over. With plenty of food the remainder of the journey becomes a simple tramp through the forest. The trail presently brings them to a good wagon road, and that to Shuswap Lake, where a steamer is waiting to take them on to Kamloops.

CHAPTER XII
THE BRITISH ISLES IN 1876

In July 1876, having been relieved of his duties in connexion with the surveys and construction of the Intercolonial, Sandford Fleming took a well-earned vacation. With his wife and six children he sailed from Quebec on the 16th of that month, and after a quick and pleasant passage landed at Londonderry on the 23rd. A day was spent in visiting the Giant's Causeway, another at Belfast and Lord Dufferin's Irish estate Clandeboye, and then off by boat for Glasgow.

An attempt was made to see Loch Long and Loch Lomond, but a depressingly persistent Scotch mist enveloped the west coast, and their enthusiasm was but half-hearted. As they waited in Glasgow, with what patience they could command, for some change in the weather, Sandford Fleming was reminded of his visit to the old town in 1863.

'I was a passenger on the *United Kingdom*, due at Glasgow. She had passed up the Clyde during the night, and arrived opposite the Broomielaw in the early morning. . . . I was impatient to get ashore, to touch the sacred ground of my native land.' This was his first visit since he had left Scotland in 1845. 'I arose that morning one of the first of the passengers, before the stewards were visible. . . . A boat came to the side. I jumped into her and went ashore. I strolled along the quay. My foot was not literally on "my native heath", but I enjoyed intensely the pleasure we all feel in revisiting our native shores, and in being near the scenes from which we have been long absent. Everything seemed so fresh and charming. I had no definite purpose in my wandering, but I was at home; it was Scotland.

'In my semi-reverie I was interrupted by a young voice in the purest Clydesdale Doric saying, "Hae yer butes brushed?" I looked down mechanically at my feet, and found that the cabin bootblack of our vessel had neglected this duty. . . . Moreover, it was the first word addressed to myself, and I should have felt bound to accept the offer if it had been unnecessary in the fullest sense. I commenced conversation with the boy. He was very young. I summoned to my aid my best Scotch for the occasion. His name was Willie Gordon, and he told me his widowed mother was a washerwoman, that he had a number of brothers and sisters younger than himself, that his earnings amounted to about half a crown a week, and that between him and his mother they managed to earn ten shillings in that time.

“And how do you live, Willie?” I asked. “Reel well”, he replied with the cheeriest of voices.

‘“And now, Willie,” I said, when I had paid him his fee, “it is many years since I have been here. I want to see the places of greatest interest in Glasgow.” “Ou, sir,” he promptly replied, “ye shuld gang ta see Corbett’s eatin hoose.” “Do you know the way there?” I asked. “Fine, sir. I ken the way vary weel. I’ll gang wi ye tae the door,” and his face looked even happier than before. I accepted his guidance, and, if my recollection is correct, the place was in Jamaica Street. The boy walked by my side carrying his brushes and box, and chatted gaily of himself and his life. Apparently no prince could be happier.

‘We reached the renowned establishment he had named. It was a species of home which a benevolent citizen had instituted, on the same principle on which the coffee taverns are now established: to furnish an early hot cup of tea or coffee to men going to work, to offer some other refreshment than whisky and beer, to give a meal at cost price with all the comfort possible, with cleanliness, good cheer, and airy rooms, warm in winter.

‘After some hesitation, and persuasion on my part, Willie shyly entered with me. The menu was on the wall. Porridge and milk one penny, large cup of coffee one penny, bread and butter, thick, one penny, eggs and toast one penny, &c., everything one penny. . . . We were a little early even for that establishment, so Willie and I sat down. The buxom matron gave us some account of the place and its doings. The Duke of Argyle had dined with her a few days before. She told us the establishment was well patronized and prosperous.

‘The time soon came for our order, for we were the first to be served. I set forth what I required for myself, and that was no light breakfast as I had a sea appetite sharpened by the early morning walk. I directed the attendant to bring the same order in double proportions for the boy, so that we had a splendid *déjeuner*. My little companion was in ecstasies. Never was hospitality bestowed on a more grateful recipient. He would not leave me, and he seemed bound to make a morning of it, and from time to time graciously volunteered, “I’ll tak ye ony gait, sir.” His customers were forgotten, but I trust he did not suffer from his devotion to me, for I did my best to remedy his neglect of professional duty. He followed me from place to place, carrying the implements of his day’s work, and he seemed anxious to do something for the trifling kindness I had shown him and the few pence I had paid for his breakfast.

‘But I was more than compensated by the pleasure I myself received. I listened to all he said with fresh interest, for he was open, earnest, honest and simple-minded. He was deeply attached to his mother, and was evidently proud to be able to add to her slender earnings, which were just enough to keep her and her family from want. He certainly seemed determined to do all in his power to make her comfortable.

‘He never lost sight of me till I left by the eleven o’clock train, and my last remembrance of Glasgow, as the train moved out, was seeing Willie waving his brushes and bootbox enthusiastically in the air. I often wonder what Willie’s fate is. He appeared to me to be of the material to succeed in life. In Canada he certainly would have worked his way up. I never heard of him again, but I certainly shall not be greatly astonished to hear of Sir William Gordon, distinguished Lord Provost of Glasgow.’

But to return to the party of 1876. Defying the weather, they are off for Oban where they spend Sunday. St. Columba Church offers significant evidence of the prevailing conditions, in a rack for umbrellas at the end of each pew, and provision for waterproofs at the back of the church. ‘It rained’, says Sandford Fleming’s journal, ‘without intermission the whole day.’ The following morning it is still coming down in torrents. ‘The kind landlord of the inn does his best for us by keeping his barometer fixed at *set fair*, but without result.’ Some of the party manage to visit the ruined castles of Dunstaffnage and Dunolly, and are reminded of the story of the Stone of Destiny.

The next day they take a small steamer to Iona and Staffa. As the boat threads her way through the somewhat intricate entrance to the Sound of Iona, they get their first glimpse of the venerable cathedral. They land in large boats, and are welcomed by a number of small girls with shells and other odds and ends to sell. Iona is about three miles long by one broad, much of it bare rock, with no trees of any kind. ‘It possesses now no natural attractions that one can perceive, except solitude.’

They were taken to see the ruins of the nunnery, and the chapel of St. Orain, the most ancient of all the buildings on the island. Orain was one of the disciples of St. Columba. Then to the cathedral, with its associations of days long gone by. ‘One cannot view these ruins of hoary antiquity without being impressed, and it somewhat grates on the ear to be obliged to hear the flat jest of some Yankee tourist.’ Near by is the cross of St. Martin, and the tombs of the kings, where forty-two of the rulers of Scotland are said to lie buried, as well as several of the ancient Irish kings, and even some from Norway. Here, too, are the tombs of the McLeans, once an all-powerful clan

in this part of Scotland. Macbeth is supposed to be the last Scottish king buried in Iona. The visitors are particularly impressed with the peculiar sharpness of the carvings and inscriptions, after having weathered the storms of centuries.

From Iona they are carried over to the island of Staffa, to have a look at Fingal's Cave. The island is uninhabited except by a few highland cattle. 'As we draw near to the great cave we descend by steps from the top to the bottom of the cliff, and walk over a rough floor of broken basaltic columns. The prisms are generally larger than at the Giant's Causeway; here they will measure on an average from 2.3 to 3 feet across, while those at the Causeway are not half that size. The latter, however, are more regular and embrace a larger proportion of perfect hexagons. The columns are of considerable height where exposed, probably over thirty feet, and in places much bent. The cave itself is probably seventy-five feet from the water-level to the roof, and the clear width fifty or sixty feet. The channel through which the sea surges is probably not over twenty feet wide. The Cave of Fingal is not wonderful on account of its great size—there are larger caves—but there is nothing like these walls of columns; and no cathedral has such music as the sea produces in this temple of nature.

'The contrast between Iona and Staffa is striking enough. Iona takes us back to almost prehistoric times; Staffa brings us face to face with the everlasting. There we had the century-long work of man; here we see the indelible record of the great forces of nature, at work to-day as they were countless ages ago.

'As we return, Iona is visible for a time in the distance. We can dimly see the old ruins, and with this exception the eye traces the very outlines traced in Columba's time some 1,300 years ago. The rocks are so hard that any changes they may have undergone are practically inappreciable.'

It had been planned to engage an open wagonette to carry the party through the Highlands, but the morning opening with a dense Scotch mist, 'if anything, worse than rain for wetting one through', the wagonette was abandoned in favour of a light omnibus, roomy enough to carry six or seven inside with the luggage on top. With no very grave regrets they take leave of the weeping western coast, and set their faces toward the sunny side of Scotland.

The rain follows them for a time, but they have opportunity to enjoy delightful glimpses of lofty mountains and deep glens, sparkling lakes, with here and there a ruined castle whose romantic story is dear to the heart of

every Scotchman. At Callander the rugged Highlands soften down to modest braes. They rest at Stirling to have an opportunity of seeing the grand old castle, and the Church of the Grey Friars, where three hundred years before James VI had been crowned, and John Knox had held forth. The following day they climb Abbey Craig, to see the Wallace Monument, and enjoy the wonderful view from the summit, castles and ivy-covered ruins, the historic field of Bannockburn, and the range of the Ochil Hills. From Stirling they take the train for Sandford Fleming's boyhood home, Kirkcaldy.

A day is spent in Edinburgh, then gay with flags and banners in honour of the Queen who is making a state visit to the Scottish capital. They have a good view of the royal procession from the windows of the National Bank of Scotland; the small Canadians cheer, and are rewarded with a gracious bow from Her Majesty.

After a short visit to St. Andrews and Dundee, they turn to the south and reach London September 9th, having Sir John Rose, formerly Minister of Finance of Canada, as a fellow passenger from Edinburgh. Leaving his family here, Sandford Fleming, after visiting some friends near Portsmouth and at Torquay, took the train to Penzance and then drove on to Land's End.

'At Penzance I find an old lumbering one-horse carriage waiting for me. For some miles the road passes through an avenue of beautiful old trees planted by the wayside, but four or five miles bring us to a treeless district. For the remainder of the sixteen miles no vegetation larger than a whin bush is to be seen. But the whins are turned to account in a way that I have not heard of elsewhere. They not only form the fences of the fields, but they are used for fuel. Each house or hut has its stack of whin carefully secured for winter use, just as you see turf in Ireland and peat in Scotland. It seems to be the only fuel used in this part of England.

'In due time, after an interesting drive through a bleak, unproductive-looking country, we reach Land's End. The horse is placed in the last stable in England, and we find ourselves in the last house in England, which is a small stone building, where it appears we can get a chop and a glass of Bass of the red pyramid brand, precisely the same as that which regaled our palates four years ago in the heart of the Rocky Mountains.

'Lunch for self and driver being ordered, I walked to the edge of the cliff and amused myself making some rude sketches of the end of England. First looking westerly towards Canada, then southerly, then northerly across the world of waters. Not a solitary object is to be seen except the lighthouse perched on a rock due west, and the smoke of a steamer on the southern

horizon. Here is a place to rest, away from the busy world, but perhaps the extreme silence and repose of Land's End would soon become more irksome than the clangour of busy London.

'Returning to the little inn I found lunch ready, and to my surprise another gentleman partaking of similar refreshment in the little room into which I was shown. Land's End is but thinly populated and has but few visitors in the late autumn, so I was pleased to see some one with whom I could exchange words. Forgetting the reticence of Englishmen who have not been introduced, I on the impulse of the moment broke through all rules and addressed my new friend cheerily as I entered the room, "Rather raw to-day."

'To this advance there was no response whatever. He went on with his knife and fork, ignoring my presence and existence. There was nothing left but to do likewise, and there at Land's End, away from civilized England, at a place almost as solitary and dreary as the North Pole, two men met and dined together at the same table in absolute silence.

'In due time the meal was over, the bill paid, the horse in the carriage, and the return journey commenced. We had not proceeded more than half a mile when we passed my dining companion. Curiosity led me to inquire if the driver happened to know who he was. I was promptly informed, "Oh, that is a deaf and dumb gentleman who stays here." '

Christmas was spent quietly in London with his family, a cable conveying best wishes from the staff of the Canadian Pacific Railway adding to the happiness of the occasion. Glancing in the newspapers a few days later, Fleming was agreeably surprised to see his own name in the list of New Year's honours, for a C.M.G.

Matters in connexion with the transcontinental railway requiring his presence in Ottawa, he sailed from Liverpool on the *Polynesian*. An incident of the voyage was a gale in mid-ocean which tested the seaworthiness of the big ship. 'Dressed in the dark and went on deck', one reads in his journal. 'The barometer was very low, the sea raging and tossing the huge ship about at its wild will, the waves occasionally washing across the decks, the vessel rolling until her upper decks touched the water, and the barometer swinging in the companion way some forty degrees to one side of the perpendicular. Sometimes heavy rain squalls would sweep by, between which the nearly full moon would break forth throwing a flood of light across the wild turmoil of waters through which we were slowly fighting our way.'

Soon after his return to Ottawa, Fleming was given a complimentary dinner by the members of his staff. In responding to his own toast as the guest of the evening, he paid a warm tribute to the engineers who had been associated with him in surveys and construction work on the Canadian Pacific Railway.

'Those who know me best', he said, 'will in some degree appreciate my embarrassment in finding myself in this prominent position—they will fully understand the difficulty I labour under in endeavouring to express even faintly, how much I feel this mark of kindness and attention. Engineers, as you all know, are not as a rule gifted with many words. Men so gifted generally aim at achieving renown in some other sphere—the pulpit, the press, the bar, perhaps the bench is open to them; some may even venture on the sea of politics; they may dream of reaching some day or other a pinnacle of honour and power such as that now occupied by one distinguished man, whom I am proud to see at this table. They would not, indeed they could not, all succeed were they ever so richly endowed—one in four millions or so, might possibly rise to a position approaching that level. Silent men, such as we are, can have no such ambition; they cannot hope for profit or place in law, they cannot look for fame in the press or the pulpit, and, above all things, they must keep clear of politics. Engineers must plod on in a distinct sphere of their own, dealing less with words and more with deeds, less with men than with matter; nature in her wild state presents difficulties for them to overcome. It is the business of their life to do battle against these difficulties and make smooth the path on which others are to tread. It is their privilege to stand between these two great forces, capital and labour, and by acting justly at all times between the employer and the employed, they may hope to command the respect of those above them equally with those under them. Gentlemen, many of us, indeed most of us, were gathered together about a year ago, but some, then here, are not here now. I, for one, regret their absence; we greatly miss their kindly countenances around the table, maybe hope that on some future happy reunion, when they have finished their work or obtained a respite from their labours, in the wilds beyond Lake Superior, they and we may see each other. Some, I see to-night, who were not present with us twelve months ago. They were then far away on the plains, in the woods, or in the mountains, doing their share of work, and well have they done it. It affords me the greatest possible pleasure to see them back in civilization once more. None have earned all the comforts and enjoyments of a brief sojourn with their friends more than they have. All England the other day gave a hearty British welcome to some of her sons who attempted to reach the North Pole. Glad was I to join in their cheers and

rejoicings; these brave British sailors had earned them all. Those I now refer to, seated at this table and some others who are not here, endured, I venture to say, hardships and deprivations scarcely less severe than many of the members of the Polar Expedition. Our men, however, did something more than the Arctic travellers. True, our engineers came back, some with scurvy, some with constitutions more or less shaken; but they returned with the great satisfaction of having accomplished, and most satisfactorily accomplished, the tasks they were sent to perform. Let me, therefore, ask those whom I had the great pleasure of meeting in this room a year ago, to join me in tendering a warm welcome to those who were then absent. My friend quite near me knows how much interested I am in the whole staff, how much I value them individually. He knows, and you all know, that I am not given to paying compliments when they are not deserved, but I am bound to acknowledge that at no time in Canada, perhaps at no time anywhere, was there ever such a staff of engineers in the service of any country. They have had long years of special training for their several duties. They are inured almost like Indians to the hardships which the geographical, climatic, and other conditions of the country require them occasionally to encounter, and I feel that I am justified in saying they are largely endowed with an enthusiasm which helps men to accomplish great deeds. Such being the character of the staff, I may be forgiven for entertaining feelings of pride in being connected with a body of men of this kind. Indeed, we may all be pardoned for taking an honest pride in a creditable connexion of any sort with so gigantic a national undertaking as the Canadian Pacific Railway. I am not going to weary you by dilating on this theme; I shall only add that I found not a few men in England who knew something of the great country through which the railway is being constructed, and who take the greatest possible interest in the work we have in hand. Six weeks ago this very evening it was my good fortune to dine with some of these men. I had the famous Dr. Cheadle on one side, and on the other the equally celebrated Captain Palliser. These gentlemen never ceased to inquire about our doings, and they were beyond measure surprised to learn that the iron horse had started on his march from Thunder Bay—that the telegraph, the harbinger of the railway, was already at Edmonton. I have, however, reminded you that it is the business of engineers to act, and not to say much. I have already hinted that although we deal largely with figures, they are not figures of speech. I think, therefore, that I should act professionally and become silent, leaving perhaps the best part of my speech unsaid. I must, however, again heartily thank you all for this magnificent welcome home, and I must especially thank the Honourable the Premier, as well as the other guests whom I see here, for their kindness

in coming to-night to take part in a reunion which will long remain green in my memory.'

Two years later Fleming again found himself in the capital of the Empire, and in an interval of leisure went out to Chelsea and called at 5 Cheyne Row, with a note of introduction to Carlyle. It had long been his desire to meet face to face the great prophet of the nineteenth century. While in Kirkcaldy he had spoken of this to Provost Swan, an old and intimate friend of Carlyle, and the Provost had gladly given him a letter of introduction.

Arrived at Cheyne Row, Fleming knocked at the door; a young maid came, and he asked, 'May I see Mr. Carlyle?' with a queer feeling that he should have asked for Tom Carlyle.

'I will see,' she replied, 'but Mr. Carlyle seldom meets any one now but old friends.'

'I am afraid I cannot claim entrance on that plea,' he said, 'but perhaps you will take him this note.'

He was shown into a dingy little room. In a few moments the maid returned and took him up to Carlyle's own room—a large room, he noted, with many books about the walls, but only one picture, that of Cromwell.

Carlyle met him at the door with a friendly shake of the hand, and they talked for a time of their mutual friend the Provost, and of other men and things in Kirkcaldy.

'When were you born?' he asked.

'The same year', replied Fleming, 'that your friend Edward Irving came to preach in the parish church, and there were so many people in the gallery that it nearly collapsed and caused a panic.'

'Ah, yes, I remember,' he said. 'That was one of the finest men that ever lived; at least the best that I have ever known.' He spoke about Irving's life in London and elsewhere. 'He went far wrong in the end, but he was a great and good man. You will find an account of him in a book by a Mrs. Oliphant, the woman that writes novels. There are a few good things in the book,' he added, with a sly twinkle in his eye, 'some of Irving's letters.'

The conversation drifted to Canada, with many shrewd questions and comments as to the conditions of life in the new land. The recent death there of Carlyle's brother Alexander lent a personal note to the subject. The vast possibilities and human significance of the Canadian Pacific Railway

appealed to him, and the political and social experiments that were being worked out in this younger Britain beyond the seas.

'At last', says Fleming, 'I felt that I had occupied enough of his time, and prepared to make my farewell. As I got up to leave I told Mr. Carlyle how impossible it was to say what pleasure it had given me to have the opportunity of talking to the author of *Sartor Resartus*. With that he grasped my hand and held it firmly for perhaps ten minutes, while with brightening eyes he gave me an outline of the birth of the great classic. "Do you know", he said finally, "it took me eight years to write that little book?" '

A slight aftermath of the interview is found in the *Descriptive Catalogue of the Carlyle's House Memorial Trust*. Among the books listed in the Back Dining-Room is the following: 'Fleming, S. Report on the Canadian Pacific Railway, 1877. Presentation copy.'

Before returning to Canada in 1878, Fleming paid a short visit to Paris to see the great exhibition. Leaving his hotel one morning, he met two gentlemen, one of whom he recognized as Sir John Rose. Rose turned to his companion and said, 'Your Royal Highness, let me present to you my friend Mr. Fleming.' The Prince of Wales chatted with him for a moment, and they passed on. The next day Fleming received a note from the Prince's secretary to attend His Royal Highness at the opera that evening in his private box.

He found his way to the royal box, and presently the Prince arrived and took an arm-chair in the middle of the box, inviting Fleming to sit beside him. He talked for some time about Canada, showing himself remarkably well informed as to the course of current events. Fleming reminded him that he had had the honour of travelling with him from Toronto to Collingwood in 1860, and the Prince questioned him with evident interest as to the changes that had taken place in Toronto during the past eighteen years.

The following day, Fleming again met the Prince on the streets, walking alone with a friend. He evidently felt as secure in Paris as in London.

In March of the following year, Fleming lost his father. Andrew Greig Fleming had followed his sons to Canada in 1847, and since 1854 had made his home at Craigleigh, near Collingwood, with David, who it will be remembered had come out in 1845. Of eight children, three sons survived at that time: Sandford and David, and Alexander, who had remained in Scotland.

A note in the diary for 1879 is suggestive of Fleming's manifold interests and activities. Under date of July 9, it reads: 'At sea [on way to England], busy correcting proofs of *Short Daily Prayers for Busy Households*.'

The diary for 1880 furnishes random glimpses of the hard-working engineer resting for a week or two on the banks of the Metapedia.

'July 11. Salmon fishing on the Metapedia. Dined with George Stephen [now Lord Mount Stephen] and Lord Elphinstone.

'12. Prince Leopold and Princess Louise arrived—guests of the Stephens—our camp directly opposite theirs—George M. Grant also arrived—we had a splendid bonfire.

'13. Preparing for canoe trip down Metapedia. Prince Leopold and the Princess sent word they would like to see us. Had few minutes with them before starting in our three canoes.

'14. Lunch and dinner with Donald A. Smith [afterward Lord Strathcona] who lives in Peter Grant's old house. Arranging for a start up the Restigouche.

'15. Left Metapedia with canoes and Indians. Lunched with Duke of Beaufort, an enthusiastic sportsman. Frank landed a twenty-five pound salmon. I lost one in gaffing—almost hooked another—finally landed two—very tired.'

CHAPTER XIII
THE PACIFIC CABLE

Probably none other of the great projects associated with the name of Fleming more strikingly illustrates his sheer tenacity of purpose,—quiet, unostentatious, almost apologetic, but none the less compelling,—than the movement for a British, state-owned cable across the Pacific. From 1879, when he first broached the subject in a letter to F. N. Gisborne, Superintendent of the Telegraph and Signal Service of Canada, to 1902, when the cable was actually laid across the Pacific from Vancouver Island to New Zealand and Australia, he kept the matter alive not only in Canada but in England and Australasia; kept it alive, and moving, though the forces arrayed against him, open and hidden, were enough to have daunted even a man of strong and untiring purpose.

It was, indeed, a long and uphill fight against tremendous odds. Fleming had to overcome first of all the apathy and indifference of the people of the great self-governing colonies; then the masterly inactivity of the British Government; finally the active, resourceful, and powerful opposition of the group of wealthy cable companies which held a monopoly of the business between England and Australia, and, naturally enough, were loath to part with it. Nevertheless, patience and perseverance won, as they generally do when enlisted in a good cause, and backed by brains.

In 1879 Fleming wrote the following letter to F. N. Gisborne:

'The Pacific terminus of the Canadian Pacific Railway will, in all probability, be finally determined this year, and the telegraph now erected from Lake Superior and carried almost to the base of the Rocky Mountains will then be extended to tide-water in British Columbia. In my last report laid before Parliament, I submitted the importance of connecting Lake Superior with Ottawa, the seat of government, by telegraph. . . . If these connexions are made, we shall have a complete overland telegraph from the Atlantic to the Pacific coast. It appears to me to follow that, as a question of Imperial importance, the British possessions to the west of the Pacific Ocean should be connected by submarine cable with the Canadian line. Great Britain will thus be brought into direct communication with all the greater colonies and dependencies without passing through foreign countries.'

'A question of Imperial importance';—that furnishes a key to Fleming's point of view. No one who has followed his life to this point can have failed to see that he has always been a practical idealist; a man of big and broad ideas, possessing not only the courage to fight for those ideas, but also the rarer capacity for methodically working out all the practical details. If genius consists in an infinite capacity for taking pains, Sandford Fleming unquestionably possesses that kind of genius. This very matter of the Pacific Cable involved technical problems that were not only intricate but to a large extent untried, and in which the opposing interests had marshalled on their side experts of world-wide standing. With all his courage he could scarcely have carried the movement to a successful conclusion, had he not been prepared at every stage to meet, by the evidence of hard facts, the arguments advanced against the practicability of a Pacific Cable. So careful indeed was he to work out all the details of the project, that his estimates of cost, traffic, and revenue, though differing widely from those computed by men employed in the cable business, were afterwards confirmed to an almost startling degree by the results of the actual laying and operation of the Pacific Cable.

Fleming's outlook, as already indicated, has always been broad. It has also been patriotic, not in the narrow sense of the provincial politician who bellows his loyalty and flaunts his flag in the face of his neighbour, but in the larger sense of one who would see his country leading the world in the arts of peace and the bonds of human fellowship. The question of the Pacific Cable appealed to him not merely as a practical project for the development of trade and commerce, but much more as a means of bringing together the scattered members of the British Empire, removing at one stroke the prejudices that are born of lack of knowledge of our brother's problems, and putting in their place the sympathy and sense of kinship that come with fuller understanding.

In his last report to the Government as Chief Engineer of the Canadian Pacific Railway, dated April 1880, Fleming went into the subject in detail, setting forth the practicability and cost of the proposed cable, and its vital importance to Canada, Australasia, and the Empire. He also prepared a map, showing the route as then suggested. This map Sir John Macdonald took to England and discussed with Lord Beaconsfield. Both these great statesmen, it is said, were impressed with the importance of the project from an Imperial standpoint. Being, however, shrewd politicians, as well as great statesmen, they were not prepared to take the matter up energetically in advance of public opinion.

The Canadian Government, however, with Fleming at their elbow, were not permitted to forget the project. The information that he had gathered for them they submitted to Parliament in 1880, 1881, and 1882, but there were obstacles and difficulties in the way, and the representatives of the people were slow to act. In 1885 the matter was again pressed upon the attention of Sir John Macdonald, and in this letter the direct route to New Zealand and Australia was advocated. The earlier proposals had been for a route to Asia by way of the Aleutian Islands, and thence to Australia, it being supposed that the nature of the bed of the ocean made a more southerly course impracticable. More complete knowledge dispelled these objections, and the manifest advantages of a direct route were impressed upon the Prime Minister, who was at the same time urged to take the matter up with the British and Colonial Governments.

The following year an Order in Council was passed recommending that 'advantage be taken of the Indian and Colonial Exhibition, now being held in London, and the presence in that city of representatives from the colonies interested, to obtain an expression of opinion on the project', both from them and from the Imperial authorities. The High Commissioner for Canada was directed to ascertain and report what assistance the Colonies and the United Kingdom would be prepared to give. Sandford Fleming promptly sailed for England to follow the matter up. The High Commissioner, Sir Charles Tupper, warmly entered into his plans, but the result of their united efforts was not encouraging. The British Government threw cold water on the scheme, and the representatives of Australia and New Zealand could do nothing in the absence of explicit instructions from their respective Governments.

It was rather an unfortunate thing for the opponents of the Pacific Cable, who were beginning to realize that they might have to fight for their monopoly, that Fleming was now free to give almost his entire attention to the project. He had severed a few years before his last connexion with official life, and had the leisure as well as the desire to carry the movement for an all-British cable to a successful conclusion. Not at all cast down by the cold reception his plans had met with in England, he returned to Canada more determined than ever to see the matter through. He had already enlisted the powerful assistance of the Press, and by means of speeches, pamphlets, and personal correspondence, was gradually spreading the leaven of the new idea throughout the Empire.

The Jubilee Conference of 1887 offered another opportunity of furthering the project, and particularly of getting in direct touch with the

representatives of the Colonies. The Colonial Secretary opened the way for a discussion of the Pacific Cable by including in his circular calling the Conference, 'the promotion of commercial and social relations by the development of our postal and telegraphic communications'. Canada appointed Sir Alexander Campbell and Sandford Fleming as her representatives.

The Conference opened in London on April 4, under the presidency of the Colonial Secretary, whose attitude toward the Pacific Cable proved to be far from friendly. The Eastern Telegraph system was also ably represented by its energetic chairman Mr. Pender, whose opposition to the proposed cable was tacitly or openly endorsed by many of the British officials. Mr. Pender argued that the scheme was impracticable on physical grounds by reason of the extreme depth of the Pacific Ocean. An official connected with the telegraphs of Great Britain, who was attending the Conference in an advisory capacity, being asked his opinion on this point, said he thought the depth went down in places to 11,000 or 12,000 fathoms, that is to say about thirteen miles! It was subsequently proved that he was about 8,000 or 9,000 fathoms out in his calculations. Mr. Pender also argued that the cable, even if capable of realization, would be a financial failure; that his companies were prepared to offer as low a rate for cable service; and that the scheme would in any event work great injustice to the existing lines.

Fleming now had the opportunity he had been waiting for. He had all the facts at his finger's ends, and was able to make out a convincing case for the Pacific Cable from every point of view. He touched first upon the larger aspects of the question. 'If we resort', he said, 'to the agencies of steam and electricity, the people of Australasia and the people of Canada may, for all practical purposes, become neighbours. And why, it may be asked, should they not be neighbours, as far as it is possible for art and science to make them? Are they not one in language, in laws, and in loyalty? Have they not substantially the same mission in the outer Empire, and would they not, as good neighbours supporting each other, and with their energies directed to a common cause, be of great advantage to each other? Would they not, so united by friendly ties, add strength to the power to which they owe a common and willing allegiance?'

'It is only necessary', he said again, 'to look at a telegraph map of the world to see how dependent on foreign powers Great Britain is at this moment for the security of its telegraphic communication with Asia, Australia, and Africa. In fact, it may be said that the telegraphic communication between the Home Government and every important

division of the Empire, except Canada, is dependent on the friendship (shall I say, protection?) of Turkey. Is not Turkey continually exposed to imminent danger from within? Is she not in danger of falling a prey to covetous neighbours, whose friendship to England may be doubted?'

Pointing out that Canada had opened the way to an all-British telegraphic communication by the completion of a telegraph line across the Dominion from the Atlantic to the Pacific, and that messages had already passed between London and Vancouver, he went on to say, 'Were a cable laid across the Pacific, from one British land to another, not only would there be a communication with Australasia, but, by the cables of the Eastern Telegraph Company, India and Africa would equally be in touch with the centre of the Empire, without dependence on any line passing through a foreign country.' While still in the middle of the fight for a Pacific Cable, Fleming's vision was already springing out toward the broader project of an Imperial cable system girdling the globe. That, however, will come up later.

Dealing with the objections of the Eastern Telegraph System, he refused to recognize their right to a monopoly of the telegraph business with the East. 'This is not the first time', he said, 'that a company or an individual has been called upon to relinquish a monopoly found to be inimical to the public welfare. Is it for a moment to be thought of that Canada and Australia are never to hold direct telegraphic intercourse because a commercial company stands in the way? Are commercial relations between two of the most important divisions of the British family for ever to remain dormant in order that the profits of a company may be maintained? Are the vital interests of the British Empire to be neglected? Is the permanent policy of England to be thwarted? Is the peace of the world to be endangered at the bidding of a joint stock company?'

A paragraph in the speech of Sir Alexander Campbell before the Conference illustrates strikingly enough the attitude of the Admiralty toward the Pacific Cable project,—what has been called their masterly inactivity. 'Canada', he said, 'proposed two or three years ago to assist in a survey [of the proposed route of the Pacific Cable]. The difficulty which the Admiralty urged was that they had no vessel to spare, and, therefore, they could not do it. Canada had several vessels of her own, and she found a suitable one, the *Alert*, an excellent ship for the purpose, which she offered, and in that way she seemed to have answered completely the difficulty raised by the Admiralty. Canada wrote over to the Admiralty telling them that she had a suitable vessel; and then they would not do it at all. Then we, and when I say we I mean Mr. Fleming and a friend of his, offered to pay half the expense

(about $90,000). Still the Admiralty would not do it, and there the matter stopped.' The net result of the Conference, so far as the Pacific Cable project was concerned, was the adoption of the following resolution proposed by Sir Alexander Campbell: 'That the connexion of Canada with Australasia by direct submarine telegraph across the Pacific is a project of high importance to the Empire, and every doubt as to its practicability should without delay be set at rest by a thorough and exhaustive survey.'

After the Conference broke up, Fleming remained in London to see what could be accomplished with the Admiralty in the matter of a survey, but the Admiralty would do nothing. The whole project in fact seemed for a time to have come to grief on this rock of the survey. Year after year dragged by, with endless official correspondence, and various suggestions from Canada and Australia as to their Governments sharing with the Imperial Government the cost of a survey, but all to no purpose. The inertia of the Admiralty was phenomenal.

In the year 1893 Mackenzie Bowell, Minister of Trade and Commerce in the Government of Canada, sailed for Australia on a special mission to promote trade between the two colonies. He was also to confer with the Australian Governments as to the Pacific Cable. At his own expense Fleming accompanied the Minister, as an unofficial delegate to further the interests of the cable project.

In personal interviews with members of the Australian Governments, and in public speeches in all the principal cities, the two delegates laboured earnestly to arouse the people of the Island Continent to the importance of the proposed cable. Everywhere they were received with the utmost friendliness, and it became evident that popular interest in the question was thoroughly aroused. Here, as in England, however, the open or secret opposition of the Eastern Telegraph Company met them on every hand, and, no doubt through the same influence, the various Australian Governments received from the Colonial Office, at the very time the Canadian delegates were urging the adoption of the scheme for a state-owned cable, two official documents carefully designed to discredit the whole scheme.

The whole situation suggested the desirability of a conference of delegates from the various colonies interested in the Pacific Cable. The attitude of most of the Australian Governments was now known to be sympathetic, but there were serious difficulties that could only be satisfactorily dealt with at a general Conference. It was found impossible to arrange a meeting while the Canadian delegates were in Australia, but an agreement was reached that it should take place in Ottawa the following

year. Accordingly, on the return of Mr. Bowell to Ottawa, and with the assent of the Imperial authorities, the Canadian Government arranged for a meeting of representatives of the various colonies in Ottawa in 1894. In addition to the Australian and New Zealand delegates, the Imperial Government and the Cape Colony Government were also represented.

The whole question was discussed in all its bearings, and with one or two exceptions the attitude of the delegates was distinctly favourable to the scheme, but, in spite of the eloquent and forcible appeal of Fleming, it seemed impossible to get away from the bugbear of a survey, or to make any real progress until some way had been found of settling beyond peradventure the moot point of the practicability of the cable. At the last moment, however, one of the delegates unexpectedly suggested a simple way out of the difficulty. Why not call for tenders, he said, for the completion of the cable by the various routes proposed, and leave the matter of surveys to the tenderers? That would settle the whole question of practicability within three months. The eminent gentlemen who made up the Conference must have wondered why such a simple and practical solution had not occurred to them long before.

A resolution was then adopted, which, taken with what had gone before, went a long way toward a satisfactory solution of the whole question. It was to the effect that 'the Canadian Government be requested, after the rising of this Conference, to make all necessary inquiries, and generally to take such steps as may be expedient, in order to ascertain the cost of the proposed Pacific Cable, and promote the establishment of the undertaking in accordance with the views expressed in this Conference'.

It may be doubted if some of the delegates quite realized the long step forward taken by the Ottawa Conference in adopting this resolution. Under other circumstances it might have shared the usual fate of such resolutions, but the Canadian Minister in whose hands the matter was left was Mackenzie Bowell, a warm supporter of the project, and the man who was actually entrusted with all the practical details was Sandford Fleming.

No sooner had the Conference closed than Fleming set to work upon the preparation of plans and specifications. Within a month they were ready, and the Government of Canada had publicly invited tenders for a submarine cable across the Pacific from British Columbia to Australia. The advertisement appeared in August. By the first of November the tenders were in the hands of the Minister of Trade and Commerce, and were immediately handed over to Fleming to be reported upon. Despite the gloomy predictions of the enemies of the cable, half a dozen or more of the

great cable-laying companies had no hesitation in tendering for the work, the practicability of the scheme was at once established, and the cost was found to be six million dollars below the estimate of the authorities of the British Post Office.

The inevitable result of this action by the Canadian Government was to transform the project from a more or less theoretical question to one that was recognized as practical. It rapidly gained friends throughout the Empire, and in 1896 an Imperial Pacific Cable Committee was appointed to examine into and report upon the whole matter. The Committee consisted of six members, two representing the Home Government, two representing Canada, and two from Australasia. Fleming had been appointed one of Canada's representatives, but preferred to take the position of expert adviser to the Committee, which gave him wider freedom in assembling and bringing forward the facts of the case. As some one has suggested, he practically filled the position of counsel for the cable project.

The Committee went into every detail with the utmost care and thoroughness, and its estimates of cost and revenue were very conservative. It reported that the project was quite practicable, favoured state-ownership, and recommended the route by way of Vancouver Island, Fanning Island, Fiji, Norfolk Island, and New Zealand and Queensland. The favourable report of the Committee was a triumph for Fleming, whose long agitation for the cable now had the support not only of the Imperial and Colonial statesmen constituting the Committee, but also of a majority of the acknowledged authorities on the subject.

The Jubilee Conference of 1897 had before it the report of the Pacific Cable Committee, but for reasons that have never been made very clear no definite action was taken. According to a statement made at the time, the scheme was left in mid-air. The sinister influence of the Eastern Telegraph Company was still powerful. Fleming immediately addressed a vigorous protest to the Prime Minister of Canada, Sir Wilfrid Laurier, setting forth the facts as they appeared at that time, and concluding as follows:

'Under these circumstances it is not improper to consider if there be any duty or obligation resting on us in Canada. The Dominion is now looked up to as the elder brother in the British family of kindred nationalities. If as Canadians we have faith in our destiny as no inconsiderable element of the great Empire, are we not called upon again to take the initiative? The Mother Country awaits a proposal. It cannot well come from disunited Australasia. If we are to be brought within speaking distance of the kindred communities in the southern seas, the first impulse must come from

ourselves. Shall the opportunity which circumstances have presented be seized and another proof given to the world that "the Canadian Government and people are determined, in all ways, to promote Imperial unity"?'

Although public opinion was now almost universally favourable to the Pacific Cable project, the influence of its opponents, the great Eastern monopoly, was still powerful enough to stave off from year to year a final agreement between the self-governing colonies and the mother country. In May 1899, Fleming published the following letter addressed to the British People:

'Within the last few days it has been stated that the Home Government has not responded to the proposals of Canada, Australia, and New Zealand respecting the establishment of the Pacific Cable, in the way that the Governments and the people of these countries had reason to expect, in consequence of which a feeling of disappointment and surprise is on all sides expressed.

'It had been arranged that the Pacific Cable should be established as a national work, the Governments of Canada, Australia, and New Zealand being joint partners with the Imperial Government.

'This arrangement has been slowly developed. It has been generally favoured by all the Governments for some time. The Home Government has frequently been asked to take the initiative in carrying it into effect, but the Colonial Secretary has always insisted that Canada and the Australasian colonies should take primary action by determining what proportion of the cost of the undertaking each would be willing to contribute.

'It has been a matter of much difficulty to reach an agreement on this point, and the difficulty has been enhanced by the great intervening distances, and the character of the means of communication, in consequence of which much delay has arisen. At length, however, conclusions have been arrived at. On the 20th of August last the Australasian colonies finally agreed to contribute eight-eighteenths of the cost, and last month Canada finally undertook to contribute five-eighteenths, making thirteen-eighteenths in all, thus leaving only five-eighteenths to be assumed by the Home Government.

'It appears that the Home Government, although it has not absolutely declined to enter into partnership and assume the remaining five-eighteenths share of the liability, has merely offered to bear five-eighteenths of any loss of revenue (not exceeding £20,000) which may result from operating the

cable, provided priority be given to Imperial Government messages, and that they be transmitted at half ordinary rates.

'As this proposal, at the eleventh hour, taken by itself, involves an entire change in the well-known plan upon which Australia, New Zealand, and Canada have been proceeding in their negotiations for more than two years, and, moreover, is in itself of no value in securing the establishment of so important a national work, it is impossible to believe that it is the full or final judgement of Her Majesty's Government, for the following reasons:—

'It would always be regarded as a recession on the part of the Mother Country, from a common understanding with Canada, Australia, and New Zealand.

'It would always be regarded as an attempt to retard the expansion and cripple the commerce of the Empire in the interests of a few rich monopolists.

'It would always be regarded by the people of Canada, Australia, and New Zealand as an unjustifiable and discourteous act to them.

'Its effect would be far-reaching, and its immediate effect would be a fatal blow to the scheme for establishing a system of State-owned British cables encircling the globe.

'It would be a very grave retrograde step in the Imperial movement, which aims to draw closer the bonds between the Mother Country and her daughter lands.'

This letter, with the announcement of the attitude of the Imperial Government, produced a storm of protest throughout the Empire. The representatives of the self-governing Colonies in London were instructed to make urgent representations to the Home authorities of the views of their respective Governments. Leading newspapers of Canada, Australia, New Zealand, and Great Britain, voiced the general disappointment of the people. The Minister of Public Works of Canada was sent to England as a special representative to explain in person the views of the Dominion Government.

The day before he landed, however, the Home Government yielded to the universal pressure, and in a generous and graceful spirit not only agreed to support the Pacific Cable, but went farther than either Canada or Australasia had asked or expected. So the long agitation for a state-owned British cable between Canada and Australasia was brought to a satisfactory conclusion.

It only remains to say that the necessary steps were immediately taken to have the cable laid and to arrange the details of its administration, and on October 31, 1902, the first message was sent over the new Imperial line of communication, a greeting to the King from the people of the Fiji Islands. The first message received in Canada was one of warm congratulation from the Prime Minister of New Zealand to Sandford Fleming.

CHAPTER XIV
A DIPLOMATIC MISSION TO HONOLULU

The narrative of Fleming's long fight for the establishment of an all-British cable between Canada and Australasia would not be complete without some account of his attempt to secure landing-places for the cable. It was peculiarly important that a suitable station should be secured midway between the two ends of the line, to avoid the difficulties of laying and maintaining an excessively long cable. In fact, it was believed at the time that the project would not be feasible unless a landing-station could be secured in or near the Hawaiian Islands. The writer has already told the story of the Necker Island episode in the chapter 'Stepping Stones in Mid-Pacific', in *Annals and Aims of the Pacific Cable*. The substance of that chapter is reproduced here to complete the history of the laying of the Pacific Cable.

The Hawaiian group consists of eight islands, ranging in area from 50 to 3,000 square miles each, with a soil in many parts of extraordinary fertility. The most eastern, and largest, island is named Hawaii. The others in their order are: Maui, Kahulaui, Lauai, Molokai, Oahu (on which the capital, Honolulu, is situated), Kauai, and Niihau. The two latter are separated from the main group by open water, at no point less than sixty-five miles in extent. Of all these islands Fleming considered that the most desirable for the purposes of the cable would be either the most eastern, Hawaii, or the most western, the twin islands Kauai and Niihau. The Hawaiians themselves would probably prefer to have it landed at Honolulu. Much though they desired cable communication, however, there was grave doubt if the Hawaiian Government would be willing to surrender one of these islands to England, and as there was a very strong feeling, both in Australia and Canada, that the cable should land only upon British soil, it became desirable to cast about for some unclaimed island in mid-Pacific.

It immediately became apparent that the choice was very meagre. A glance at the map will show how singularly barren of islands is this portion of the ocean, outside of the Hawaiian group. There was indeed Fanning Island, but Fanning Island stood at such a distance from the Canadian starting-point that the laying of the first link of the cable would be both very difficult and very expensive; indeed, some competent authorities insisted that it was an impossibility. Certainly, no such single length of cable had ever yet been laid the world over. While Fleming was, nevertheless, of

opinion that the Fanning route was quite feasible, he yet thought it preferable, if at all possible, to secure a landing-place more centrally located —one somewhere in the latitude of the Hawaiian group.

After examining the Admiralty charts, and making careful inquiries, Fleming found that there was a small rocky island, called Necker, lying in latitude 23° 35′ north, longitude 164° 39′ west, about 240 miles westward of the Hawaiian group, or something over 400 miles west of Honolulu. This rocky islet lies on the shortest and most direct course from Vancouver Island to the northern coast of Queensland, passing Apamana, in the Gilbert group, and San Christoval, in the Solomon group, both of these groups being British territory.

Very little was known about the island, as no one had ever landed upon it. What information there was had been published chiefly to warn mariners from its inhospitable shores. Necker Island is, in fact, a mere rock, from one-half to three-quarters of a mile long and one thousand feet broad, with an elevation at two points of 250 and 280 feet, on the south-east. Not a single tree is to be found upon the island, but there is stated to be abundant vegetation on the high land towards the summit. The shores rise steep as a wall, and the sea breaks with fury at all points. The island was discovered by La Pérouse, on the 1st of November, 1786, but was regarded as too insignificant for ownership.

In September 1893, as already stated, Mr. Mackenzie Bowell proceeded on a diplomatic mission to Australia, on behalf of the Canadian Government, and Fleming accompanied him, at his own expense, with the object of forwarding the Pacific Cable project.

While at Honolulu, *en route* for Australia, Fleming prepared a memorandum respecting Necker Island, which was forwarded to Ottawa by Mr. Bowell, and made the subject of an official dispatch from the Canadian Government to the Home Government, urging the immediate acquisition of Necker Island as a landing-place for the cable.

A copy of this memorandum was at the same time left with the British Minister at Honolulu, to be forwarded direct to the Foreign Office; another copy was sent to the Admiralty; and still another to Admiral Stevenson, commanding on the North Pacific Station, so that he might be prepared for any instructions the Admiralty should see fit to send.

This memorandum embodied such further particulars as Fleming had been able to glean touching Necker Island. It was uninhabited, possessed, in fact, no means of supporting life, and was consequently useless to any

nation, except for such a special purpose as a cable station. Its position is described as 'singularly commanding, not only in respect of a cable from Canada to Australia, but likewise to Japan and Hong-Kong'. A mid-ocean station in this part of the Pacific, entirely removed from foreign influences, being of supreme importance, and there being 'no certainty that one of the Hawaiian Islands could be obtained', Fleming strongly recommended that Necker Island should be formally taken possession of without delay in the name of Her Majesty.

On reaching Australia, Bowell placed the facts in relation to Necker Island before the Governments of New South Wales, Victoria, and Queensland, and in October 1893, each of these Governments, convinced of the importance of acquiring such an admirably situated landing-place for the cable—one, too, that had never yet been taken possession of by any nation, and could be had for the mere trouble of taking—sent instructions to their respective Agents-General in London to urge upon the Home Government the importance of taking immediate steps to secure the island.

In their interviews with the Governments of Queensland, New South Wales, and Victoria, Bowell and Fleming learned with deep regret that dispatches had quite recently been received from England, covering reports from officials in the Admiralty and Post Office Department, the tone of which was peculiarly antagonistic to the project of a Pacific Cable. It so happened, however, that the very severity of the British official criticism turned to the advantage of the Canadians, for the dispatches had laid stress upon the difficulty or impossibility of connecting Fanning Island with Vancouver by cable, and it was the more easy to convince the Australian ministers of the vital necessity of securing Necker.

Australia having thus approved of the Canadian proposals, it only remained to persuade the Imperial Government. It being sufficiently apparent that nothing could be gained by correspondence, it was decided that Fleming should proceed direct to England, and bring the importance of the project to the personal attention of the Imperial Ministers. Fleming accordingly proceeded from Australia to England, first writing the High Commissioner in London, informing him of the state of affairs, and the desirability of pressing the Necker matter upon the Home authorities.

The Secretary of State for the Colonies, Lord Ripon, sent a dispatch to Ottawa in reply to the dispatch of the Canadian Government urging the speedy acquisition of Necker Island. This reply is dated the 20th of December, 1893, and informs the Dominion authorities that 'the Secretary of State for Foreign Affairs will defer action in the matter, pending the

establishment of the Government of Hawaii upon a more permanent footing'. It will be remembered that the death of King Kamehameha had been followed by a revolution, in which the Queen was deposed, and a provisional Government established. The members of this Government were nearly all citizens of, and in active sympathy with, the United States. The British Government, always anxious to avoid hurting the feelings of the United States, possibly felt that to take possession of Necker Island might cause annoyance at Washington. At any rate, they evidently felt that it was necessary to consult the Hawaiian Government in the matter, though on what grounds it is somewhat difficult to determine, as Necker Island did not belong, either politically or geographically, to the Hawaiian group. As Fleming very forcibly put it, 'Necker Island is an unoccupied and unclaimed spot in the middle of the Pacific Ocean, wholly unfit for settlement, and destitute of the means of supporting life; it is valueless to any nation as a strategic point; affords neither a haven for ships nor a depot for commerce; is entirely outside the Hawaiian group of islands, and beyond the sphere of the Hawaiian Kingdom or state, being in fact as distant from Honolulu as Washington is from Ottawa, and double the distance that London is from Paris.'

Fleming, however, knew nothing, until the following summer, of this curious decision of the Imperial Government, and having arrived in London towards the end of December, at once saw the Canadian High Commissioner, and through him arranged an interview between the Colonial Minister and the Canadian and Australian representatives. After some delays, Lord Ripon met the delegates, on January 12, 1894, the following colonies being represented, in addition to Canada: New South Wales, New Zealand, Victoria, Queensland, and Tasmania. During the interview, Fleming read and handed to the Colonial Minister a memorandum setting forth the particulars regarding Necker Island, and urging the vital importance of securing it without delay as a mid-ocean telegraph station.

On the 16th January, the High Commissioner, Sir Charles Tupper, sent a report on this interview to Bowell. Lord Ripon, he wrote, 'seemed to be much impressed with our representations, and promised to place himself in communication with the Foreign Office with a view of ascertaining what action can be taken in the matter'. Apparently not a word was said during the interview of his Lordship's remarkable dispatch of the 20th December, 1893, announcing the singular decision of the Secretary of State for Foreign Affairs, to defer action in the matter of acquiring Necker Island, 'pending the establishment of the Government of Hawaii upon a more permanent footing'.

Fleming returned to Canada, immediately after the interview, buoyed up with the confident hope that the British Government had at last been awakened to the vital importance of taking possession of Necker Island, and that the requisite action would no longer be delayed.

The months of February, March, and April passed, but nothing could be learned in Ottawa, although frequent inquiries were made, as to any steps which had been taken by the Imperial authorities. Early in May, the Minister of Trade and Commerce cabled to Sir Charles Tupper to ascertain what had been done in the matter. The High Commissioner called at the Colonial Office, but no satisfactory reply could be obtained, and from what was learned it appeared that the matter was in exactly the same position as before the interview with the Marquess of Ripon. The Foreign Minister, Lord Rosebery, had 'expressed his desire that the Imperial Government should do anything possible in the premises; that Her Majesty's representatives at Honolulu had been requested to watch the matter closely; but he thought it undesirable, in view of the disturbed relations in the Sandwich Islands, that any definite steps should be taken for the present.'

Months passed, and although the importance of acquiring Necker Island at once had been repeatedly pressed upon the attention of the Imperial authorities, both by Canada and the Australasian Colonies, the Home authorities had apparently decided to forget the whole incident. The Colonial Conference at Ottawa was fast approaching, when the Pacific Cable matter would be threshed out in all its bearings, and the importance of Necker Island as a half-way house for the cable ventilated and made public, and it might then be too late to take possession of it.

Fleming, feeling that no time was to be lost, and realizing that nothing was to be hoped for from the Imperial Government in the matter, sought earnestly for some other solution of the difficulty. He talked the question over, confidentially, with those interested in the project, but they could offer nothing helpful. Finally, a suggestion came to him, in conversation with a high military official, who had served in India and whom he met when travelling. Their talk drifted to the Pacific Cable. Among other things, Fleming explained the highly unsatisfactory state of the Necker project. 'Ah!' dryly remarked the officer, 'the best thing to do in a matter of that kind, is to act first, and ask for leave afterwards.' His listener began to look interested. 'Perhaps', continued the official, 'you have not heard how we got the island of Perim?' The French had an eye on it, and sent an admiral to hoist the tricolour. The admiral went ashore at Port Aden, visited the British Resident, who dined him, and wined him, and presently learned the object of

his voyage. The British diplomat left the room for a moment on pretext of a bottle of extra good wine, and incidentally gave orders that with all possible expedition men should be sent to Perim to hoist the British flag, and take possession of the island in the name of Her Majesty. He then returned with the wine, and astonished and delighted the admiral with the charm of his conversation, the pungency of his wit, and the excellent quality of his wine. The two made merry far into the night. Next morning the French admiral took an affectionate farewell of the British Resident, and sailed over to Perim to fulfil the objects of his mission. Arrived there, what was his amazement to find a flag already floating over the island. It was not, however, the flag of France, 'That', concluded the military officer, 'is what will have to be done.'

Fleming took the hint. What a British official had done at Perim, on his own responsibility, he could do at Necker. He knew of a discreet man in Toronto—a retired naval officer—who could safely be entrusted with a delicate mission. He sent for him, explained the circumstances in connexion with Necker Island; that it had now become a question of securing the island at once by a private *coup*, or losing it altogether, and possibly putting an end to the project of connecting Australia with Canada by a direct cable. The naval expert agreed to undertake the mission, his expenses, of course, to be borne by Fleming.

The latter then outlined his plan. The naval officer was to proceed to Vancouver forthwith, where he would catch the first steamer for Honolulu. There he was to disembark, and there the special service would practically commence. At Honolulu he was to procure a vessel to take him to the vicinity of 'an unoccupied rocky island, situated about latitude 23° 35′ N. and longitude 164° 39′ W.'—in other words, the much-discussed Necker. Arrived at the island, he was to make an examination of the character of the shores, and ascertain the best point or points for landing an electric submarine cable; take such soundings in the immediate vicinity of the island as would enable him to report on the approaches; and make an approximate survey and sketch of the island. Finally, he was to 'leave behind him evidences of his visit'; in other words, he was desired to emulate the example of that enterprising official at Perim, plant a flag-staff, unfurl the British flag, and take possession of the island in the name of Her Majesty the Queen. Being a British subject, and a retired officer of the British navy, there would be no question as to the legality of such a claim, provided the Imperial Government chose to recognize it.

The mission was one of more than ordinary difficulty. It must be carried through with the utmost secrecy, and at the same time with the utmost expedition. The time available was extremely limited. The Colonial Conference was to meet at Ottawa towards the end of June. It was already the beginning of May, and Fleming considered it very important that the flag should float over Necker Island, and that he should be satisfied of that fact when the Conference met.

The naval officer returned to Toronto, and Fleming set himself to a study of Pacific time-tables. It appeared that a steamer, the *Warrimoo*, would leave Vancouver for Australia on the 16th May, and was due to arrive at Honolulu on May 24. The steamer *Arawa*, which was booked to leave Sydney on May 18, would be due at Honolulu on June 2, *en route* for Vancouver. There was no other steamer leaving Honolulu for the North American continent until June 23, on which date the *Australia* was due to sail for San Francisco, reaching the latter place on June 30. It was evident that, if the report on Necker Island was to be in Fleming's hands by the middle of June, his agent must leave Vancouver by the *Warrimoo* on the 16th and return from Honolulu by the *Arawa*. This would give him from the 24th May to the 2nd June within which to accomplish his mission, a trifle over a week; and during which time he must secure a vessel, without arousing the suspicions of the Hawaiian Government, steam to Necker Island, some 400 odd miles distant from Honolulu, effect a landing, which it must be remembered, had never before been accomplished, make a rough survey, take soundings, leave tangible evidence of his visit and its object, and be back in Honolulu in time to catch the *Arawa* on the 2nd June.

Fleming, having got thus far, telegraphed to the naval expert, on the 7th May, as follows:

'Outgoing steamer due at point of departure for special service May 24th. Return steamer due at same point June 2nd. I find service must be performed within those dates. Can you undertake?'

The reply came the same day, brief and to the point: 'Yes, weather permitting, and if arrangements now understood carried out.'

The arrangements referred to contemplated the securing of a suitable vessel at Honolulu in advance of the naval officer's arrival there, so that not a moment might be lost in proceeding to Necker Island. To this end Fleming sent a telegram to San Francisco, to be forwarded to Honolulu by steamer leaving San Francisco on May 12. The telegram would consequently anticipate the arrival of Fleming's agent at Honolulu by some five days. The

message was addressed to a reliable firm at Honolulu, the members of which Fleming had met on his trip to Australia the previous year, and they were asked to look out for 'a small seaworthy steamer or other suitable craft, for a gentleman arriving by the *Warrimoo* to make an excursion of a few hundred miles around the Hawaiian Islands, between the arrival of the *Warrimoo* and the sailing of the *Arawa* for Vancouver'.

All arrangements having been made, the naval officer left Toronto on the 9th May, armed with explicit written instructions, and caught the *Warrimoo* at Vancouver.

Having seen his lieutenant safely off upon this momentous journey, Fleming sat down and wrote a report to the Canadian High Commissioner in London.

'In view', he wrote, 'of the Conference to be held here next month, I felt that the decisive moment had come, and not a day to spare, and that circumstances appeared to throw the duty of taking action upon myself, and that I should at once set about it without counting the cost; I have, therefore, on my own responsibility as a private individual, and without the official knowledge of any one here, arranged to place the British flag in the Queen's name on this island in the Pacific, unoccupied and unclaimed by any maritime power. The gentleman I have sent left with my private instructions two days ago. He is a British subject, and was at one time in the British navy. . . . I have reason to believe the flag will float over Necker Island within the present month, and before the Conference meets I shall hope to learn that all has been satisfactorily accomplished. I believe the man I have selected is a discreet person, who will keep his own counsel, and he is instructed to report only to me. By this course I think Necker Island will pass under the British flag, without even my own name being known, and it will then rest with the British Government to see that it remains a British possession.

'As the Home Government may hear of the proceeding before long through some other channel, and you have direct relations with them, I think you should as soon as possible be placed in possession of the facts. I do not propose, for the present at least, to communicate them to any other person.'

Sir Charles Tupper took an early opportunity of communicating the substance of this important letter to the Imperial authorities; and on the 31st May, Fleming received from him the following cablegram:—

'Rosebery much annoyed at action. Will repudiate. Fears will destroy good prospect of obtaining Necker. Prevent action becoming public, if

possible.'

The following day (June 1) Fleming wrote the High Commissioner in further explanation of his action. He enclosed a copy of his private instructions to the nautical expert, from which he thought it was clear that 'there were no grounds for the fears expressed by Lord Rosebery'.

'When I wrote you,' he continued, 'I considered it only necessary to refer to one object of the expedition, that not even mentioned in my instructions, and only remotely alluded to in the words "leave behind you evidences of your visit". The other object is to gain some knowledge of Necker Island. We scarcely know more than that it exists, and the movement for a British cable between Australia and Canada has obviously reached that stage when we should know how far it may be suitable for a mid-ocean telegraph station. It is manifestly important that this knowledge should be obtained before the Conference meets, and it can only be gained by an examination such as that undertaken. With respect to either object, we all recognized that there was, and is, a difficulty in having anything done by the Government. In consequence of this the duty seemed to devolve upon some one outside of the Government to move in the matter, and it was necessary to do so at once. Rightly or wrongly, I assumed the sole responsibility. If wrongly, I must bear the whole blame, for although others privately knew, no one here disapproved of the action to be taken, and I took care that no one officially was cognizant of it. I deeply regret that anything was done which would cause even temporary annoyance in any quarter, and while all censure must rest on me, I can only say that the action was taken only to advance the public interest.'

Meanwhile the naval officer was speeding south to Honolulu, where he landed on the 24th May. Fleming had a note from the naval officer announcing his arrival at Vancouver and departure therefrom; and he presently received a fuller report from Honolulu. The time for action had arrived, and the agent entrusted with the matter lost not a moment in prosecuting his delicate mission. He called as early as possible the following morning upon the merchant to whom Fleming's telegram had been addressed, to present his letter of introduction, and ascertain what steps had been taken to provide him with a suitable vessel for the Necker Island expedition.

The senior member of the firm, who it appears was British Vice-Consul at Honolulu, was not in town, but his partner received the naval officer, read his introductory letter, and told him they had been somewhat at a loss to understand the message from Fleming, but supposed that the individual

mentioned as being *en route* was simply bent on making a pleasure excursion among the islands, to see the volcanoes, &c. Under this impression they had made inquiries, and had the offer of two boats, the only craft available and suitable for the purpose. One of these steamers, the *Lehua*, was ready the same day that the *Warrimoo* arrived, and the other, the *Iwalani*, would be available to-day. The former, which was a small, slow boat, could be had for $100 a day, and the latter, a much better and faster steamer, for $250 a day, all found. Neither had been definitely engaged, pending the arrival of the naval officer. It appeared also that these rates only applied to a trip among the Hawaiian Islands.

Finding matters thus, the naval officer deemed it necessary to explain that his objective point was beyond the Hawaiian group, and as this member of the firm was acting more or less as Assistant British Consul, he conceived it best to explain fully the purport of his mission. He did this, and showed him as well Fleming's confidential instructions, and after reading these, the acting Consul laid before him a sketch of certain negotiations then pending between the British Foreign Office and the Provisional Government of Hawaii. It appeared that the British Government had already recognized, apparently quite gratuitously, the right of Hawaii to the Island of Necker as an appanage of the Hawaiian Crown or Government, and had asked the Provisional Government on what conditions they would allow Great Britain to have control of the island, for the purpose of landing a cable there. It will be remembered in this connexion, that Hawaii had never yet landed a man on Necker Island, or established the remotest claim to it; that the island was uninhabitable, and commercially useless, except for such a purpose as a cable station; that it possessed no strategic value as a naval base, it being a mere rock, harbourless, and difficult and next to impossible to land upon; that it lay hundreds of miles outside the Hawaiian archipelago proper; that, in fact, Hawaii had no legitimate claim to the island, either politically, commercially, geographically, or by right of possession. As the sequel will show, the Hawaiians themselves were not satisfied that they had any claim to the island, which rested upon a secure basis, in international or any other law. As a matter of fact, the only basis that has ever appeared for any such claim, is the somewhat sweeping and visionary scheme of King Kamehameha to include all the islands of the Pacific in one magnificent, though perhaps a trifle unwieldy, ocean empire, of which he would be a monarch. In pursuit of this laudable ambition, he sent a certain Captain Patey, in 1857, off to the westward, with general instructions to explore the Pacific and raise the flag of Hawaii over any islands or reefs that might turn up around the horizon. Patey did so on several islands, but he merely saw

Necker at some distance, and we have his own report (now deposited in the Government Museum at Honolulu) to prove that he never set foot on the island. His report, which is accompanied by a chart, is as follows:

'Necker Island: Bears from Honolulu N.W. by N. ¾ N., distant 403 miles. This is very precipitous—300 feet high, one mile long, and half a mile wide. Its surface covered with grass patches, but no possible landing could be effected for boats, as the surf broke high all around the island. A bank of rocks and sand makes off south and west, extending from eight to ten miles. I found bottom at eighteen fathoms two miles off island, then bearing N.E.'

However, the Imperial Government were pleased to credit Hawaii with the ownership of Necker Island, notwithstanding representations to the contrary, and had asked the Provisional Government to grant them permission to land a cable. About April 12, the Provisional Government had sent a reply, through the British Consul, asking the requirements of the Imperial Government:

1st. As to whether the proposed cable was to be a Government cable or a private company's?

2nd. How long would occupancy of the island be required—in perpetuity or not?

3rd. How soon would active steps be taken for cable construction and laying?

Up to that time (May 26) no reply had reached Honolulu from London.

This, then, was the condition of affairs which the naval officer had to face. His instructions were no longer any guide to him, for they were conceived and given under the very natural impression that the Home Government had decided, for the present, at all events, to take no steps towards acquiring Necker Island. In the face of Lord Ripon's dispatch of the 20th December, 1893, and his explicit caution to the colonial representatives who interviewed him in London, on the 12th January, 1894, that 'they should all be extremely careful to avoid any public reference to the subject', it being most important that 'the whole matter should be held to be strictly confidential, inasmuch as any reference to it by the newspapers of the day might imperil the object they all had in view', it could hardly have been foreseen that the Imperial Government would forthwith proceed to confide the scheme to the very ones whom it was most essential to keep it from. The only sane interpretation that can be put upon the caution as to newspaper publicity, is that if the scheme got into the newspapers, the Hawaiians would

immediately forestall them, and take possession of the island. The Foreign Office adopted the more direct method of an official dispatch to the Provisional Government—a diplomatic stroke for which one searches in vain for a parallel.

Fleming's agent immediately came to the conclusion that Her Majesty's Government, having made overtures directly to Hawaii for permission to occupy Necker Island, it would no longer be proper or expedient for him to pursue his private mission. The circumstances were entirely changed, and Fleming's instructions became virtually as if they had never been written.

The agent abandoned all thought of visiting Necker Island, returned to Canada on the *Arawa*, and reported all the facts to Fleming, who fully approved of the course he had adopted.

The secret mission had been abandoned, but the last had not been heard of Necker Island. The day after the arrival of the *Warrimoo* at Honolulu, the larger of the two vessels which had been selected for the use of the naval officer, the *Iwalani*, was taken possession of by the Hawaiian Government, and the same afternoon she left for an unknown destination.

Such an extraordinary circumstance naturally aroused much curiosity in the usually placid atmosphere of Honolulu. The local newspapers indulged in the wildest speculations; and the excitement grew intense when it was learned that H.M.S. *Champion* had followed the *Iwalani*, that the latter vessel had on board a member of the Provisional Government, and that she carried an exceptionally large crew. A slight clue to the mystery was obtained when it became known that the *Iwalani* had taken on board at the last moment a large flag-pole. Evidently the Provisional Government intended to take possession of some unoccupied island, but where was the island; and why such anxious haste to acquire it? What, too, was the *Champion's* destination? Was she merely, as had been officially stated, out on target practice, or was her motive a more sinister one? Was she, in fact, racing the *Iwalani* for possession of some coveted island?

One of the Honolulu newspapers announced the following morning that the *Iwalani* was destined for Johnston Island, in latitude 16° 15′ N., longitude 169° 30′ W., but this statement was corrected by the same paper the next day. Johnston Island had, as a matter of fact, been taken possession of by the *Champion* in 1892, as a possible landing-place for the Pacific Cable, and had been restored to Hawaii, who claimed it (probably as a portion of King Kamehameha's Imperial domain), on the understanding that England should have the right to land a cable there, if it was desirable to do

so. The ownership seems to have been further complicated by a United States claim, the Washington authorities holding, it is said, that Johnston Island was taken possession of, as long ago as 1852, by one Captain Parker, an American citizen. However this may be, the destination of the *Iwalani* was not Johnston Island.

The same Honolulu newspaper was equally positive that the *Champion* was also bound for Johnston Island, to take possession of it in the name of Her Britannic Majesty. They professed to have inside information on the point, and surely they ought to have had the 'scoop', for they were indeed the Government organ. However, as it subsequently turned out, the *Champion* was not bound for Johnston Island, or any other island, neither had her present voyage the remotest connexion with that of the *Iwalani*. The rival newspaper, drawing a bow at a venture, had given Necker Island as the destination of the *Iwalani*, and so it proved to be. The Hawaiian Government had, in fact, completely turned the tables on Fleming. They had, quite unconsciously, adopted the very tactics he had contemplated, and were stealing a march on him, as the British Resident had stolen a march on the French admiral at Perim.

The *Iwalani* returned on the 30th May from her momentous journey. It appears from the captain's log that she left Honolulu at 5.10 p.m. on May 25, and arrived off Necker Island at 11 a.m. on the 27th. A boat was at once lowered, the weather being favourable, and a party consisting of Hon. J. A. King, Hawaiian Minister of the Interior, Captain Freeman of the *Iwalani*, one of his officers, and several sailors, were rowed ashore. After considerable difficulty, the party were safely landed. A hard climb up a rugged cliff some 260 feet high was successfully accomplished, when Hon. Mr. King hoisted the Hawaiian flag and read the following proclamation:

'I, James A. King, Minister of the Interior of the Provisional Government of the Hawaiian Islands, in pursuance of a commission granted to me by His Excellency Sanford B. Dole, President of the Provisional Government of the Hawaiian Islands, do hereby, in the name of the Provisional Government of the Hawaiian Islands, take possession of this island, known as Necker Island, as a part of the Hawaiian territory; the same lying within the Hawaiian Archipelago, in latitude 23° 35′ 18″ N., and longitude 164° 30′ W., and having been claimed by the Hawaiian Government as Hawaiian territory since the year 1845, when an expedition under Captain William Patey was sent to survey the island.

'Done at Necker Island, this 27th day of May, in the year of our Lord one thousand eight hundred and ninety-four.'

Thus at last, the Hawaiians had established a genuine claim to Necker Island, and had gained thereby what seemed at the time to be a secure hold on the Pacific Cable, sufficient to control the location of its landing-place in mid-Pacific.

Necker Island, according to Captain Freeman's description, is a large lava rock. It was evidently inhabited at some remote period, square walls having been found standing about 3 feet high, 3 feet wide, and from 30 to 40 feet long, on the top of which were large flat stones, standing on end, and about two feet apart. It was at first thought that some shipwrecked crew had made a landing there, but after a search nothing could be found to indicate that such was the case. Captain Freeman found several ancient images and idols in a good state of preservation, except for the injuries received by exposure to the weather. A number of these were brought back to Honolulu, and may now be seen in the Government Museum.

We know now the *Iwalani's* destination; and it is also perfectly clear why she went there; but one point still remains to be elucidated—why the Provisional Government of Hawaii was in such a desperate hurry to take possession of Necker? That after the application of the British Government they had determined to seize the island is tolerably certain. The Provisional Government recognized that they had no valid claim. To establish a claim they must land and take formal possession. Now, this barren rock, uninhabitable, and completely outside the sphere of Hawaiian activities, was useless to them in itself. It is perfectly safe to say that, had the Pacific Cable project not given the island a peculiar importance, Hawaii would never have taken the trouble to take possession, unless, indeed, another Kamehameha should arise, imbued with an equally wild scheme for territorial aggrandizement. It was first made known to them in or before the month of April 1894, by the dispatch already referred to from the British Foreign Office, that it was proposed to utilize Necker Island as a landing-place for the Pacific Cable. Consequently, when Fleming's agent arrived in Honolulu on the 24th May, the Provisional Government had known of the contemplated acquisition of the island for about two months—though, of course, they had no idea of the Canadian plan to take possession of it off-hand. For a couple of months past it had been open to Hawaii formally to annex the island at any time they chose to send a vessel. Yet they had not done so up to the time of the naval officer's visit. The natural assumption is, that they felt there was no pressing hurry about the matter. The British Government were negotiating in their own leisurely fashion, and had already recognized Hawaii as the owner of the island. Hawaii could send a vessel to

take possession of Necker and raise the flag when the negotiations had reached such a stage as to make that step desirable.

This was the state of affairs when they learned, on the arrival of the mail steamer, that a conference, to deal with the cable matter, was about to meet in Ottawa. The Hawaiian Government accordingly chartered a vessel, and sent her in hot haste to Necker, with a member of their own Government on board, to proclaim Hawaiian sovereignty over what one of the local newspapers not inaptly described as 'the little lava rock'.

Although the *Iwalani* incident was exhaustively discussed at the time by the Honolulu newspapers, and the wildest speculations were indulged in to account for the action of the Provisional Government, nothing was said that would indicate a knowledge of the actual presence in Honolulu at the time of an agent sent expressly to take possession of the island in the name of Her Majesty. It is not at all probable that the Provisional Government had been informed of any particular plan to seize the island, but it is certain that they had been told of the early meeting of the Cable Conference, and warned, either deliberately or unintentionally, that there was danger of the island passing into British hands.

Now the question arises: Where did the Hawaiian Government get their information? The explanation forms an essential portion of the Necker Island story, but as it involves the reputation of a gentleman who was at the time a Minister of the Crown, the regrettable incident is omitted from these pages.

It might have been supposed that the failure of his ingenious plan for securing Necker Island would deter Fleming from any further efforts in that direction. About the middle of August, however, he is again taking the matter up, as a result of certain recommendations made during the Colonial Conference at Ottawa, in the previous month. In a lengthy communication to Sir John Thompson, then Premier of Canada, he places before him a succinct account of the efforts which had been made (so far without success), since September, 1893, to secure a station for landing the cable which would be at a less distance from Vancouver than Fanning Island, the nearest British possession. He also urges that the desired mid-station should still be sought for, and if possible secured before the date which had been fixed by public advertisement for receiving tenders for establishing the cable. He is of opinion that, although Hawaii was now in rightful possession of Necker Island, it was still open to Great Britain to secure landing rights.

'The Hawaiians can have no desire to see the cable laid direct from Vancouver to Fanning Island, the nearest point controlled by Great Britain, as this route would deprive them of the much-required benefits of telegraphic service. There can be no doubt in my mind that if proper negotiations are entered into, as suggested by one of the resolutions of the Colonial Conference, the Hawaiian Government will see the advantage of making reasonable concessions. They may in fact be found willing to give up control of Necker Island, if, on our part, we undertake to give them a branch cable to Honolulu.'

So convinced was Fleming of the importance of securing Necker Island as a landing-place for the cable that he questioned whether it might not even be expedient, if nothing better could be done, to lay the cable from Vancouver to Honolulu at once, provided the Hawaiian Government would agree to give up to the British Government entire control of Necker Island. The cable laid via Honolulu would be considered a commercial line, and as in a few years a second cable would be required, it could then be established on the Necker Island route as a purely national line of telegraphic communication.

Whatever plan was ultimately adopted, Fleming urged the immediate importance of entering into negotiations with the Hawaiian Government and making the best possible terms with them. He felt satisfied that the most effective means of reaching a satisfactory arrangement with Hawaii was to have a special commissioner sent to treat with them directly. As it was important to close the matter with the utmost possible dispatch, and delay would doubtless ensue if a commissioner were sent out from England, Fleming suggested that the assent of the Home Government should be obtained to some person from Canada going to Honolulu as a special commissioner. There being already a resident British Minister at Honolulu, the Canadian commissioner could be associated with him in the negotiations. Fleming concluded by suggesting that, if possible, Mr. Bowell, who was fully conversant with the Pacific Cable project, should be sent as Canadian commissioner.

These suggestions were at once considered by the Canadian Government, and it was decided to send a commissioner to Honolulu, with the approval of the Home authorities. It was found impossible for Bowell to leave Canada at that time, and Fleming was consequently asked to accept the duty himself, which he consented to do.

On the 10th September a communication was sent to the President of the Hawaiian Republic, notifying him that Fleming had been appointed a special

commissioner to proceed to Honolulu for the purpose of submitting to the Hawaiian Government certain matters in relation to the Pacific Cable project. The Secretary of State for the Colonies had also decided to send Mr. W. H. Mercer, of the Imperial Colonial Office, to take part in the negotiations for obtaining neutral landing-ground for the proposed cable on one of the islands of the Hawaiian archipelago.

Mercer arrived in Ottawa on September 18th, and on the following day he and Fleming left for Honolulu, which they reached on the 6th of October. The President of the Republic, Mr. Dole, and the Attorney-General, Mr. Smith, were absent from Honolulu during the period of their visit; but the commissioners had frequent conferences with other members of the Hawaiian Government, the Foreign Minister and Acting President, Mr. Hatch; the Minister of Finance, Mr. Damon; and the Minister of the Interior, Hon. J. A. King.

While making inquiries in various quarters, as to possible landing-places for the cable, Fleming gained some information of an uninhabited island—Wihoa or Bird Island—150 miles nearer Honolulu than Necker Island, which he deemed it expedient to visit. On reaching the island a landing was effected, and Fleming satisfied himself that while Bird Island did not in all respects present the conditions desirable in a mid-ocean station for the proposed telegraph, it nevertheless offered certain advantages, and he recommended that a further and more thorough examination should be made.

After considerable negotiation, a draft agreement was drawn up, under which the Hawaiian Government agreed, subject to certain conditions and stipulations, to lease to the British Government either Necker Island, French Frigate Shoal, or Bird Island, or some other uninhabited island within their jurisdiction, whichever of them the British Government might select, for the purposes of the Pacific Cable.

It was noted, however, that the Hawaiian Government were debarred by their Reciprocity Treaty with the United States, from leasing or otherwise disposing of their lands, or from granting any special privileges to any foreign Government, and it therefore became necessary for the Hawaiian Government to obtain the sanction of the United States Government as a condition precedent to the granting of the proposed lease. They undertook to bring the proposed arrangement to the notice of the Washington Government at an early date, with a view to ascertaining whether the United States would waive the prohibitory clauses of the Reciprocity Treaty, so far as the proposed agreement in relation to the Pacific Cable was concerned.

The Hawaiian Government further agreed, in the event of the consent of the United States being obtained, to bring before their legislature a proposal for an annual subsidy of £7,000 to the Pacific Cable. The British Government, or the lessees of the cable, on their part, agreed to lay a branch cable from the leased island to Honolulu, so as to connect that place telegraphically with all points on the main cable; to accept telegraphic messages from Honolulu at special specified rates; not to fortify the island or use it as a naval station; and to surrender it to Hawaii in the event of the cable being finally and permanently abandoned at any time. The Hawaiian Government also suggested, as an alternative proposition, that in lieu of a subsidy, the British Government should accept the absolute sovereignty of Necker or such other uninhabited island as might be selected. The commissioners, however, were debarred by their instructions from considering this proposal, but promised to submit it to the British and Canadian Governments.

The negotiations having been carried as far as was possible, pending the decision of the United States for or against the proposed agreement, the commissioners returned and reported to their respective Governments, and the Hawaiian Ministers, pursuant to their promise, submitted the suggested agreement for the approval of the United States Government. In due course the matter came before the United States Senate, where it was finally disposed of by an adverse vote. Necker Island thenceforth dropped out of sight so far as the Pacific Cable was concerned.

Before finally dismissing Necker Island, however, it may be desirable, to complete the historical survey, to describe very briefly the several routes which depended upon that island. The shortest of all these routes, and one of the first suggested, was from Vancouver Island to Necker; thence to Apamana Island, in the Gilbert group; thence to San Christoval, in the Solomon group; and, finally, to a point at or near Port Denison, Queensland, Australia. This route did not include New Zealand, the proposal being to utilize the existing cable from Port Jackson to New Zealand.

Another route, after leaving Necker Island, ran to an island several degrees to the south-east of Apamana. There it branched, one section running to San Christoval, and thence to Australia; the other turning south to Fiji and thence to New Zealand. A third route suggested was from Necker direct to Fiji; and from Fiji to New Zealand. Apamana, San Christoval, and Fiji are all British possessions.

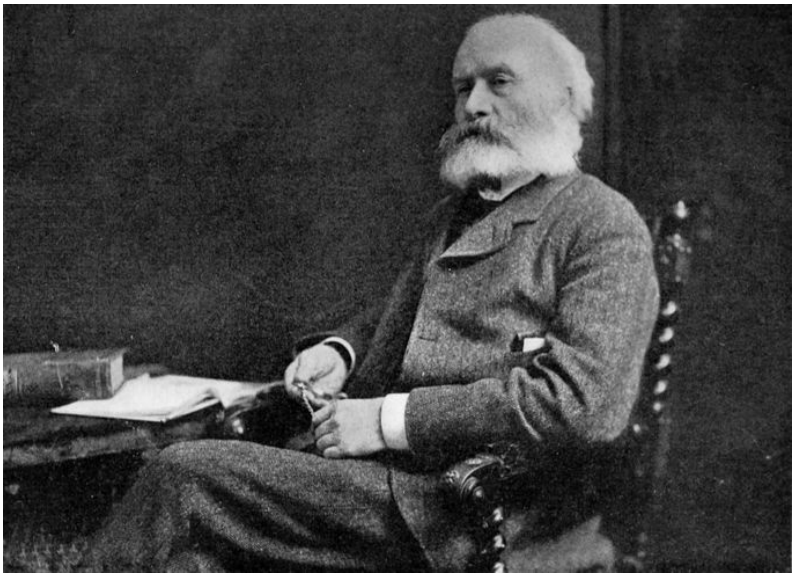
The tenders which had been called for laying the proposed cable were received about the time that the United States Senate finally gave the quietus

to the Necker Island project, and these tenders showed conclusively that it was perfectly feasible to lay the cable, as originally proposed, by the Fanning Island route. This route was consequently adopted.

It may perhaps be interesting to note, in this connexion, that the cost of laying the cable by the longer route to Fanning Island amounts to something like two and a quarter million dollars in excess of the cost via the Necker Island route. Moreover, it will not be possible to send messages as effectively—that is to say, at the same rate of speed—by the longer route now adopted. This represents the price that the Empire has to pay for the failure to secure Necker Island; a failure which, in the end, was certainly inevitable, but at one time could have been avoided at the mere cost of dispatching a British warship to take formal possession of the island.

Fanning Island (3° 51′ N. lat., 159° 22′ W. long.) is described in the *Colonial Office List* (1902) as a small atoll, nine miles by four, covered with coco-nut trees; copra and guano being exported.

Fanning Island was annexed by Great Britain in March, 1888, in view of the possibility of its being utilized in connexion with the projected cable. At the same time two other islands (Christmas and Penrhyn) were taken possession of for the same purpose. Christmas Island (1° 57′ N. lat., 157° 27′ W. long.) is an atoll ninety miles in circumference, barren, with only brackish water. A trading firm collects mother-of-pearl shells. Penrhyn Island (9° S. lat., 158° 3′ long.) is also a small atoll, thirty miles in circumference, partly covered with coco-nut trees, and having a population of about 300. Mother-of-pearl is exported. Suwarrow Island (13° 13′ S. lat., 163° 9′ W. long.) was also annexed as a possible landing-place for the Pacific Cable on the 22nd April, 1888. It is now proposed that Suwarrow, Penrhyn, and one or two other small islands which were taken about the same time, should be annexed to New Zealand. With the exception of Fanning Island, none of these small atolls would be available for the purposes of the Pacific Cable. How well they could have been spared, and that barren little rock, Necker Island, annexed in their stead! But it was not to be.



Sandford Fleming in 1895

CHAPTER XV
THE ALL-RED LINE

In the preceding chapter some account has been given of the movement for a British state-owned cable across the Pacific from Canada to Australia and New Zealand, a movement initiated by Sandford Fleming and carried to a successful conclusion mainly through his efforts, after nearly a quarter of a century of persistent agitation.

Long before the triumph of the movement for a Pacific Cable, Fleming's thoughts had turned to the larger scheme of a system of submarine cables and land telegraphs circling the globe, touching only British territory, and owned by the Empire. In fact it is altogether probable that from the beginning of his agitation for the Pacific Cable he had the wider project in mind, waiting for a fitting opportunity to bring it forward. That opportunity came in 1898, when he outlined his scheme in a communication addressed to the Secretary of State for the Colonies, after the close of the Jubilee Conference. Four years later he embodied the principal points in a Memorandum, prepared for the information of the members of the Coronation Conference, from which the following is taken:

'At the Colonial Conference held in London in 1887 the delegates discussed at some length various matters bearing on the telegraphs of the Empire. Again in 1894, at the Ottawa Conference, the discussions were renewed. At innumerable meetings of Chambers of Commerce, Empire Leagues, and other associations, the subject has again and again been considered. In the interval which has elapsed, the project of a British Empire telegraph service has been steadily developing. Its outline was submitted in a communication to the Secretary of State for the Colonies, dated October 28, 1898, and the main features of the scheme therein set forth may be described as one unbroken chain of State-owned telegraphs around the globe, touching or traversing all the great British possessions so as to bring each of them into direct electric touch with the mother country and with each other. In this manner Canada, New Zealand and Australia, India, South Africa, and the United Kingdom would be brought within the same electric circle. An essential feature of the scheme laid down is, that no part of the system should touch foreign soil, and that the cables should each and all avoid shallow seas, in proximity to any country likely at any time to prove unfriendly. The route of the telegraph was more precisely described as

extending from London to Canada, through Canada to Vancouver, from Vancouver to New Zealand and Australia, thence to Perth in Western Australia, from Perth to South Africa, with a branch from Cocos Island to India; from Capetown it was designed to extend to Bermuda, touching at St. Helena, Ascension, and Barbados; at Bermuda a choice of routes to England would be opened for selections. It might cross the Atlantic direct or, as an alternative, extend northerly to a suitable point of junction with the State line between Canada and England.

'Such a telegraph girdle of the globe would constitute a means of connecting all His Majesty's great possessions, and nearly all the coaling stations, with each other and with the Imperial centre in London. The sub-ocean connexions would be deep-sea cables in the least vulnerable position, and it may be added that the system would possess an advantage peculiar to a globe-encircling line of telegraph; each point touched would be telegraphically connected with every other point by two distinct routes, extending in opposite directions. This feature possesses special value, and in practice would prove the best security against interruptions from whatever cause.

'Since 1898, when the scheme was promulgated, progress has been made in its development: (1) a State-owned cable from Canada to New Zealand and Australia is on the eve of completion, and (2) a cable has been laid across the Indian Ocean from Australia to South Africa. The latter is, however, a private undertaking, from which have sprung the complications which perplex the Government of the Commonwealth of Australia. On this point a brief explanation is called for.

'It is well known that the telegraph companies have, from the first, placed themselves in opposition to the Imperial telegraph scheme, and have employed every conceivable means to stifle the proposal to establish a Pacific Cable.

'One main reason for their hostility to the Pacific Cable lies in the fact that it forms the most important section of the larger proposal, and that the Canadian route is absolutely the only route by which the globe may be girdled by a chain of all-British cables, the proposal to which they are so strongly opposed. When it became known that the six Governments concerned had resolved to establish the Pacific Cable, the telegraph companies combined, and determined to adopt drastic measures in order to defeat the new State policy. They saw plainly that a State-owned cable across the Pacific would speedily lead to similar cables across the Indian and Atlantic Oceans.

'Accordingly they arranged to preoccupy the ground by laying a private cable on the precise route which had previously been projected in the Indian, and partly in the Atlantic, Ocean for the State-owned line. Moreover, they made tempting overtures to the Governments of the Australian colonies, offering to reduce the burdensome telegraph charges hitherto exacted, provided these Governments granted them certain concessions; which concessions it was believed would enable the combined companies to ruin the commercial value of the Pacific Cable. There is likewise evidence to show that the cable combine took means to invoke the powers of the press to influence public opinion in their favour. Unfortunately the then Government of New South Wales listened to the overtures, and granted what the companies asked for. . . .

'It is not necessary to dwell on the enormous importance of having the globe girdled by an all-British State-owned telegraph, as its advantages are self-evident. When the proposal was made known in December 1898, the British and Colonial press, with extraordinary unanimity, expressed generally the opinion that the advantages to result are incontrovertible; that nothing would tend more to quicken a sense of unity and solidarity throughout the Empire; that at all times it would place it in the power of the Governments to regulate and moderate the rates for the transmission of messages between all the countries served; that the immediate effect would be to facilitate intercourse and foster trade, not only between the mother country and the colonies, but between the colonies themselves.

'One essential point to be insisted on is, that the Imperial telegraph girdle must be absolutely State-controlled, in order that the main lines of communication of the Empire be placed beyond the possibility of interference by trusts and combines, that is to say, that they shall remain inviolably British.

'The expenditure involved would be considerable, but it is far outweighed by the incalculable benefit to result. The original estimate of expenditure required to establish such a telegraph girdle around the globe was £5,000,000 to £6,000,000, but this included the Pacific Cable, which will cost close on £2,000,000. The Pacific Cable will shortly be completed. To provide and lay the remaining cables not far short of £4,000,000 will be required. . . .

'Our common object is the freest intercourse, and this object can best be attained by linking together all the great outposts of the Empire, precisely as Canada, New Zealand, and Australia are now being brought into close relationship by means of the Pacific Cable. The Imperial telegraph system

will embrace in its circuit round the globe three great oceans. Of these the Pacific will have its opposite shore telegraphically united in a few months. Then will remain the Indian and Atlantic Oceans to be traversed by nationalized cables. This, the crowning achievement, will cost, in round figures, £4,000,000, an insignificant expenditure of capital, in view of the immensely important results to be attained. It would do more for the Empire as a whole than twenty times the amount, spent in any other way whatever. It would set at rest the difficulty which has been caused in Australia. It would place the telegraph service of the Empire on a secure and satisfactory basis, and render alienation of the leading cables impossible. It would be a fresh tie between all the great colonies and the mother land of great practical utility; it would minimize transmission charges, and prodigiously increase the volume of telegraphic intercourse; it would benefit trade, vitalize the spirit of patriotism, and strengthen the sentiments which constitute the most enduring foundation on which the Empire of the future can be built up. The circumstances are such, and the benefits so many and so great, that whatever the cost, the pan-Britannic telegraph service should, as speedily as possible, be carried to completion.

'The establishment of such a service would affect the existing companies. The national telegraph encircling the globe would become the main or trunk line of communication between the great self-governing portions of the Empire. The existing private cables would, to a large extent, assume the position of branches to the trunk line, and as such would find employment in general and especially in international traffic. The charges for transmission by the trunk line would be lowered to a minimum, so as merely to cover cost of operating, interest and maintenance, and as a consequence the business would be immensely increased. The companies would gain by the increase, and likewise by the reduced charges on the main line, as they would thus be supplied with much profitable business for general dissemination.

'The private cables were for the most part established with commendable enterprise many years ago. They received generous Government assistance. They have done useful pioneer work, and this work has already yielded to the enterprising investors rich returns. The time has come, however, when circumstances demand a change. It has become a matter of public expediency that the State should control an unbroken line of telegraph established for the safety and well-being of the Empire. It is possible, therefore, that the companies may have to rest content with more moderate gains than hitherto, at least until there be a new development of business under the changed conditions. That a development of telegraph

business beyond all ordinary conception will result from the establishment of the Imperial service there can be no doubt whatever.

'In the event of a determination being reached to complete the Imperial telegraph service, before proceeding to lay a State cable across the Indian Ocean, the companies should be given the option to transfer, at a fair price, the private cable recently laid by them between Australia and South Africa, and arrangements should likewise be made to connect the Cape with the United Kingdom by a State-owned cable. These, with the Pacific Cable, will complete the globe-encircling telegraph line, designed to link together the trans-marine homelands of the British people on the five continents. It will prove an Imperial service in every sense. It will greatly promote the commercial and industrial well-being of all the parts. It will strengthen their relationship, and enable the whole fabric the better to withstand any stress or strain which the future may bring.

'There is a rapidly growing desire on the part of the British people, everywhere, to strengthen the ties and multiply the links which unite the mother nation with the daughter states. This feeling of attachment prevails in Australia and New Zealand. It is especially marked in Canada, and the writer feels himself warranted in expressing the foregoing views on behalf of Imperial-minded Canadians. Their name is legion, and they are prompted only by one spirit. Their ardent desire is to join cordially and actively in building up the Empire on an enduring basis, that it may long continue to confer benefits on the human race.'

On the successful completion of the Pacific Cable in October 1902, Sandford Fleming conceived the idea that the new link might be utilized to furnish a striking illustration of the possibilities of a world-encircling telegraph line. On the last day of October he handed in to the telegraph office at Ottawa the two following messages, addressed to the Governor-General of Canada, Ottawa, one to be sent to the westward around the globe, —the other, reversing the course, eastward. The first read: 'Congratulations follow the sun around the globe via Australia, South Africa, and England on completion of the Pacific Cable, initiating new era of freest intercourse and cheap telegraph service throughout the Empire.'

The second was as follows: 'Receive globe-encircling message via England, South Africa, Australia and Pacific Cable congratulating Canada and the Empire on completion of first segment State-controlled electric girdle, the harbinger of incalculable advantages, national and general.'

In an interview on the completion of the Pacific Cable, Fleming outlined his hopes for the future. 'The Pacific Cable', he said, 'is the first result of a co-partnership arrangement between the Australasian, the Canadian, and the Home Governments, and in that respect alone is of great importance; but it is as the initial section of a far greater project that I regard it with intense interest. A careful study of the question will satisfy any man that the Pacific Cable is the only possible key to an Imperial postal cable service with ramifications throughout every oversea British possession. In view of the larger project, the Pacific Cable should be regarded, not as a work completed, but as a great Imperial undertaking commenced. I make bold to think that circumstances already demand that every British Government should seriously consider the expediency of extending, at no distant day, a postal telegraph service to the whole Empire. I may add, that the postal telegraph service of the United Kingdom is so nearly perfect that, unless something better meanwhile be discovered, it may well be taken as the miniature model of the Imperial service of the future. . . .

'Some time will elapse before the great ultimate objects will be realized; that is to say, the extension of the postal telegraph service to every part of the Empire, but in the common interest, that comprehensive service should be steadily kept in view. To me it appears to be necessary, as a means of building up the new Empire in process of development, and likewise indispensable to its life and unity. In my judgement, it will not only be a direct means of promoting the welfare of our people, but indirectly prove an effective instrument in advancing the cause of civilization. Its general tendency will be to promote the peace and happiness of the human race. . . .

'Much as I think that the extension of State telegraphy to every part of the Empire should never be lost sight of, circumstances render it expedient to take one step at a time. The first step has already been taken, and it is a long step in the proper direction, for the Pacific Cable is the foundation upon which the whole fabric may be reared. The next step is to extend the State telegraph system from Australia across the Indian Ocean, via Cocos Island, to India, and from Cocos Island to South Africa. This done, and assuming that the line from Vancouver to London is also brought under State control, we shall have the United Kingdom, Canada, New Zealand, Australia, India, and South Africa brought within instant touch of each other by a continuous line of telegraph under the direct control of the State.

'The third step will be to establish a State-owned line of cables from South Africa to England, in order to complete the girdle of the globe. Manifestly, a belt of such cables round the world, under the one control and

management, will have its peculiar advantage. Each point in the encircling chain will be in direct connexion with every other point, by two routes extending in opposite directions, thus giving a double connexion in each case, so that, in the event of an interruption on any single section, communications may, nevertheless, be maintained.

'It is true there are telegraphs already connecting the Cape with London, but all these telegraphs are owned by joint stock companies, and for the most part they are laid in shallow seas, and thus rendered extremely vulnerable; they are likewise open to the further objection of touching at points not under the British flag. The proposal is to lay the State cable in the deep waters of the Atlantic, by extending it from the Cape to England via St. Helena, Ascension, Barbados, and Bermuda. . . .

'Such a chain of cables would prove of unspeakable value in countless ways. It would enormously cheapen telegraphing to and from all points on the line of the electric girdle, and within range of its influence. It would link together the widely-sundered British communities as nothing else could. An endless globe-encircling Imperial telegraph would, like the marriage ring, symbolize union, and above and beyond every useful purpose in the activities of trade and amenities of life, its tendency would be to establish the unity and maintain the indivisibility of the Empire.

'The all-Red Line would, in some respects, resemble the spinal cord in the human body; it would prove to be the cerebro-spinal axis of our political system, and give origin throughout its length to many lateral groups of nerves. This trunk line of State cables around the globe would virtually become an annular *Medulla Spinalis* to the world-Empire, through which would freely pass the sensory impressions and the motor impulses of the British people in every longitude.

'It cannot be denied that in the establishment of a State-owned all-Red belt of telegraphs such as described, some disturbance would be caused to the existing private cable system. From Australia to South Africa and from South Africa to Ascension, the belt line would cover practically the same ground as that now occupied by the allied cable companies. For this distance only would parallel cables be required, but if considered preferable for this distance the private cables could be expropriated and a fair price paid for them. In this event, the remaining cables, wherever they came in contact with the trunk State line, would assume the position of branches, and, at the points of junction, they would be fed with telegraph traffic at the very lowest rates, for general dissemination. Thus, it will be obvious that the all-Red globe-encircling belt may advantageously co-exist with private lines; that it

would actually prove a feeder to them, and give them scope for all reasonable profit. They, on their part, would reciprocate by bringing traffic to the trunk line.'

In 1907 the Council of the Ottawa Board of Trade, which had for years interested itself in the project of British State-owned cables, presented an address to His Excellency Earl Grey, then Governor-General of Canada, setting forth the advantages of such a system and praying that the subject be brought to the attention of the several governments interested. In replying to the address, Earl Grey paid a warm tribute to the father of the movement:

'For upwards of twenty-five years', he said, 'Sir Sandford Fleming has devoted his energies to the task of securing for Great and Greater Britain the advantages of cheapened telegraphic service. The bare recital of his efforts in this direction almost suggests the missionary fervour of St. Paul. He has without hope of personal gain visited five continents; he has traversed all the great oceans, the Atlantic many times; he has given himself, his time, and his substance, ungrudgingly and without stint to the service of the Empire, and in the realization of his hopes, which I trust is not far off, and in the general recognition that the life of Britons all the world over will have been made the happier by his efforts, he will find at the appointed time his well-merited reward.'

CHAPTER XVI
AN IMPERIAL INTELLIGENCE SERVICE

The record of Sandford Fleming's tireless advocacy of the scheme for a Pacific Cable, and the larger project of a world-encircling, State-owned British telegraphic system, would not be complete without some statement of his views as to the proposed Imperial Intelligence Service. To those who have read these pages it must be needless to say that Fleming has always been an Imperial Federationist, but his views as to the strengthening of the ties binding the various members of the Empire run in no narrow groove. He does not pin his faith to any one specific formula, nor does he believe that a movement of such magnitude can be hastened because a few impatient enthusiasts would have it so. Imperial Federation, if it is to mean anything to the British Empire, must necessarily be a thing of slow growth. To become permanent, it must have behind it the settled convictions of a majority of the people in each of the great British communities that such closer ties will make for their own best interests. In any scheme of Imperial Federation that can be evolved there must be a certain amount of give and take, but it will always be necessary to recognize the fact that the self-governing Dominions will never surrender the vital principle of autonomy.

As a means toward the ultimate achievement of Imperial Federation, Fleming conceived and advocated the idea of a system of State-owned British cables, with all that such a system would involve in bringing the peoples of the Empire into closer and more intimate touch with one another and with their respective interests. His views on the subject have been set forth in various public and private documents, but perhaps nowhere more clearly and fully than in his open letter to the Earl of Elgin, Secretary of State for the Colonies, dated January 26, 1906, from which the following is taken:

'More than a hundred and thirty years ago, the great and gifted Irishman, Edmund Burke, and the illustrious United Empire Loyalist, Joseph Galloway, on opposite sides of the ocean, each had visions of a mighty Empire; more than fifty years ago its organization was the dream of the great Canadian Joseph Howe; since then it has been the object of other great men of various races in various British communities, and in yearly increasing numbers.

'No scheme of Imperial organization is likely, however, to be readily and generally acceptable unless and until some effective means be taken by and through which the people of every portion of the Empire are made better acquainted than at present with each other, and with all matters concerning their mutual well-being. This points directly to the first step which the circumstances of the case appear to demand—the establishment of an adequate service for disseminating useful knowledge throughout the Empire for the mutual advantage of all. I am satisfied that such a service, established under Imperial authority, and properly organized to accomplish the desired ends, would prove a powerful and effective educating influence. I believe there is nothing which would more speedily tend to bring about the harmonious union of all British communities.

'At present we have, it is true, the Imperial postal service; but owing to distance and the time taken in transit, this service is entirely inadequate. No satisfactory exchange of thought, or general discussion, can be carried on when it requires two or three months to get a reply to any kind of postal communication. It may be said that delegates could be sent from one country to another to make speeches and deliver lectures; but the audiences in all such cases would be limited. The circumstances require not simply that lectures or post-prandial speeches be heard by a few on special occasions, but that the millions be reached frequently. This, I am satisfied, is the first problem to be solved, unless the consolidation of the Empire is to be indefinitely postponed. That it can be solved, and most effectively, I have no doubt whatever, by utilizing the electric telegraph, and by combining its use with the daily and other journals in each British community. Through the co-operation of Cables and the Press we would come into the possession of the very best medium for conveying selected intelligence to the millions who read the newspapers, and whose children attend school. Immense good can be done through the schools in the British world in giving direction to our political destiny, but that subject cannot be dwelt upon here.'

After referring to the proposals of Sir Frederick Pollock and his associates for an Imperial organization, as summarized in an article in the *Nineteenth Century* in December 1905, he goes on to outline his scheme for an Imperial Intelligence Service. 'In addition to a central board in the British metropolis', he says, 'there should be local boards and agencies in each self-governing community, where desired information would be collected. It would be the duty of each board to take proper means to arrange and edit the information for free transmission by cable to the other boards, and by them made available for simultaneous publication in the daily or weekly journals in all the great cities of the Empire. By this means the people of the whole

Empire would be brought into continuous touch. Each person on opening his daily newspaper would look into the column or columns under the heading "Empire Cable News" for the Imperial intelligence of the day, and would there find a trustworthy record of the matters of most vital importance and interest to every British community.

'No argument is needed to point out the advantages which would spring from such an agency. It is impossible to conceive any other means which would so speedily and so effectively enlighten the masses of the British people on all matters which concern their common welfare. Even small portions of such Empire news regularly furnished daily in the newspapers would be a thousand times better than the almost entire absence of such intelligence which now generally obtains. It undoubtedly would have a powerful educative influence, and the high political effect would be to foster a broad Imperial patriotism. It would open to the intelligence of all our people, within the circle of the Empire Cables, wider issues connected with the advancement and development of the Imperial fabric, and we are warranted in believing that it would stimulate the sense of common citizenship, and, in time, lead to reciprocal affinity eventually approaching a general unity of ideas. The machinery of a fully-equipped Intelligence Department once provided, we may then with confidence assume that the better union and the collective prosperity of the British Empire "may be wisely left to develop in accordance with circumstances, and, as it were, of their own accord".

'I share very fully with every one with whom I have conferred, the opinion that satisfactory results must reasonably be expected to follow the establishment of a wisely arranged Intelligence Department. The Imperial press service suggested would tell its story and perform its functions not once, not intermittently, but daily throughout every year. It would, like the continual dropping of water, produce effective results. By means of this perennial flow we may confidently hope to have the spirit and principles of the British Constitution in course of time pervading, invigorating, vivifying the whole Empire, and it is firmly believed that such results would be accomplished more speedily and more thoroughly in this way than by any other means. It is this spirit and these principles, inherited from the centuries, which would beget that sympathy and affection which, although as light as the air we breathe, would constitute the cohesive forces to bind together the Empire under one flag and one sovereign as with bands of steel.

'As an illustration of the great need of an Imperial Intelligence organization such as that which has been outlined, I may instance the

following facts. A remarkable address was delivered by the Honourable Alfred Deakin (now Prime Minister of Australia) on June 14, 1905. It was published in Melbourne, by the Imperial Federation League of Victoria, in pamphlet form, but as far as I know not a single copy of the address in any form reached Ottawa until January 25, 1906. On that day I read the address for the first time, and I unhesitatingly say that this very able and scholarly deliverance on a momentous question in which all citizens of the Empire are as much interested as Australians, should have long since been placed before every Canadian. The State Cable which unites Canada with Australia lies idle at the bottom of the Pacific for more than twenty hours in each twenty-four; it has a complete staff of the very best operators in constant attendance, and it would add absolutely nothing to the working expenses of the undertaking to have the cable usefully employed during some of its idle hours. The address containing probably 10,000 words could easily have been transmitted in one day, and still more easily by instalments in several days, in any case without interfering with ordinary cable business. This thoughtful utterance of an Imperial statesman of the first rank is precisely the kind of literature which a discerning officer of the proposed Intelligence Department would select for transmission by cable soon after its delivery, but it only reached Canada incidentally after seven months had elapsed.'

In an address before the United Empire Club of London, Fleming went more at length into the question of the practicability and advantages of a comprehensive and authoritative Imperial news service furnished by cable, without cost, to newspapers in every part of the Empire. 'It has been suggested', he says, 'that for high Imperial reasons the co-operation of the press should be sought. The press has much in its power to promote unity and progress; its highest functions are to spread knowledge, enlighten the people, and mould their destiny. But the press must have freedom, and it should enjoy every advantage in performing its beneficent work which science can devise.

'I have shown that the State-owned cable service, employed only half the day at a low tariff of charges, can be self-supporting. May we not fittingly inquire, is there no useful purpose to which we can apply during the whole or a portion of this other half-day this wonderful means of communication established at the public cost for the public advantage, in the sense of the free transmission of news under proper restrictions? I ask to what better purpose can the cable be applied during some of its idle hours than in co-operation with a free press to promote general intercourse and benefit the British people?

‘Before the days of telegraphy those who had emigrated to the colonies anxiously awaited the arrival of ships with the mails, and on the ship’s arrival they greedily devoured the newspapers. The mail is now inadequate as a means of conveying news between places widely separated by the seas. It is an incident of modern civilization that the people will not read old newspapers, however excellent they may be, at least not with the same avidity as cabled intelligence. The reader of to-day must have news that is not old. Few in Canada and still fewer in New Zealand or Australia read the London newspapers which for weeks have been buried in a mail bag. This age demands up-to-date news, and the demand can I believe easily be met by affiliating the press under proper arrangements with the cable service.

‘I venture to think that to organize an Imperial Intelligence Department such as has been indicated will come to be regarded as an eminently progressive movement. And I feel satisfied that in conjunction with the world-girdling chain of State Cables there is no other conceivable agency which would more speedily mould our great world-Empire into a living reality.’

In July 1906, Fleming addressed the Eighty Club in London on the same subject, and subsequently replied to certain criticisms that had been offered to his proposals.

‘The chief claim made for the proposal is,’ he said, ‘not so much that it may be regarded as a substitute for other schemes heretofore advanced having for their object the unification of the Empire, but that if any substantial progress is to be made in that direction, as it seems to me, the policy suggested must take precedence of any such schemes; that if it be pre-eminently necessary to have freer intercourse with fuller and closer political, commercial, and social relations between the different States which go to make up the Empire, there is no conceivable means by which these objects can more easily and more naturally be achieved.

‘The proposal is not solely in the interests of these islands, vastly important as they are; it is not for the benefit of any one class, or of any one section of the British people; it is projected in the interests of the entire Empire, and its object is to advance the concrete well-being of the British people throughout the world. It is designed for the benefit of every Britain beyond the seas equally with the mother of them all.

‘The burden of the criticisms by the speakers was the fear that in practice it would be no easy matter to arrange for the selection and transmission of news to be cabled from day to day or from week to week so as to give

general satisfaction. As this matter presents itself to my mind, the first thing necessary is the appointment of a proper controlling authority and impartial tribunal. In my view the first consideration is an efficient and responsible Board of Control with head-quarters in London, assisted by branch Boards in the several oversea communities which have been referred to. I am satisfied that there would be no difficulty in each government selecting a sufficient number of representative, independent, public-spirited, moderate-minded men to act in an honorary capacity as members of an Imperial Intelligence Board in each capital city.

'The chief duty of these Boards would be to direct the policy to be followed, and to appoint a staff of paid officers, including a chief and assistant editor, to carry out that policy efficiently. The staff would be responsible to each respective Board. The number of such paid officers would depend upon the plan adopted, and this I shall presently allude to. Whatever the number, it would be no more difficult for the Boards of Control to obtain on satisfactory business terms men equally able, equally faithful to their duties, as the editorial staffs employed by the great public journals, and we all know how well the world is served through the press in this respect.

'As the proposal is not an ordinary dividend-seeking project, but a great Intelligence Union with high Imperial aims, it is undesirable and it is quite unnecessary to maintain high rates for the transmission of messages. Cheap cable telegraphy must be recognized to be a powerful, indeed an indispensable, aid to Imperial consolidation. It is therefore felt that the policy should be adopted of reducing progressively the charges on messages transmitted by the circle of Empire Cables to rates which, while still leaving the service self-supporting, would be the lowest possible. It is capable of proof that if this policy be adopted two results will follow after providing for actual working expenses: (1) For several hours daily the Board of Control will be enabled to transmit free press messages for simultaneous publication in the United Kingdom, Canada, New Zealand, Australia, India, South Africa, and elsewhere. (2) The charges on ordinary paying traffic will steadily be lowered and will gradually approach a minimum. Under this policy we would have public messages transmitted free or at a mere nominal rate, and if we apply the principle of a uniform charge for all distances (as in Imperial penny-postage) there are the best reasons for anticipating a wonderful reduction in the rate for the transmission of ordinary paying messages by the route of the great girdle of Imperial Cables. I can see no reason why the charge should not eventually be reduced to the uniform rate of a penny a letter, or sixpence a word, between the mother country and each

of the countries named, as well as reciprocally between any two of them. The immense advantage of such a possible reduction will be readily appreciated when it is remembered that the present charge between Great Britain and Australia is three shillings per word, and at the time of the Colonial Conference of 1887, when the Pacific Cable was first earnestly considered, the common charge was nine shillings a word.' Although he nowhere suggests such an idea, it is worth remembering that if to-day we have a cable rate very much less than it was in 1887, with the prospect of still further reductions, we have mainly to thank Sandford Fleming.

'With respect to the course to be followed by the controlling Boards in carrying on the Intelligence Service,' he continues, 'two general plans suggest themselves for consideration.

'The first plan—each Board to take means through an efficient staff of paid officers to collect information of general interest desirable to be made known in distant parts. Such information, after being arranged and properly edited for publication, to be regularly transmitted by telegraph and made available for the press throughout the Empire free of charge.

'The second or alternative plan is to leave the question of the supply of news within the Empire in the hands of the press as at present, and to encourage and secure the transmission of a copious supply of desirable information by lowering the press charge to a merely nominal rate. I am reminded that this principle is already adopted in the United Kingdom, where the press rate is reduced to less than one-eighth of a penny per word (1s. for 100 words) for any distance. This reduction is made purely in the interest of the general public, and it seems to me that the same principle may with inestimable advantage be applied to the infinitely larger area of the British Empire by means of the globe-girdling Imperial Cable system.

'The second plan, if not so comprehensive as the first, would, if adopted, indefinitely widen the present most restricted and meagre scope of the press cable service throughout the Empire. It would leave the question of the selection of news in the hands of those well fitted for the duty. By promoting emulation among representatives of the press it would pave the way for a daily review in many instances of the progress of events and occurrences in the sisterhood of British States, which would do more than any other agency to foster an intelligent intimacy, mould a broad public opinion, promote mutual sympathy, and present the Empire as a living reality to all.

'The two plans have each distinct merits. While the first would best meet the needs of much of the outer Empire, the second would probably better

suit London and the populous colonial capitals. It would likewise, as it appears to me, remove every difficulty in respect to the selection of matter to be transmitted for publication. I incline to the opinion that the merits of both suggestions should be secured by a combination of the two plans; but this is a point that can be determined by a joint committee duly appointed, or by the Boards of Control when they come to be constituted.

'The essential feature of the scheme', he concluded, 'is to make for that knowledge without which attempts to organize the Empire may be fruitful of disaster if they in any way interfere with that complete local autonomy so jealously prized. I apprehend it will be obvious to all that the scheme submitted, embraces the principle of inter-Imperial co-operation, and is designed to form in a very practical manner a complete bond of union between the old land and all the new lands; that it is an instrument to enable us to ascertain what to avoid and what to accept; that its tendency must be to reconcile the interests of the whole with the interests of each part, and to foster a oneness of sentiment, a unity of sympathy pre-eminently necessary to bring home the feeling to our people the world over that they are part of a great political organism whose chief mission is progress and peace. I venture to think that every patriotic man will recognize in such a co-operative bond of union and friendship, embracing the widest geographical range, a powerful and peaceful means of giving shape and growth and solidarity to the modern Empire.'

CHAPTER XVII
THE STANDARD TIME MOVEMENT

On the shelves of the library at 'Winterholme' are three very fat volumes, containing the documentary history of the movement for Standard Time. The volumes consist of scores of pamphlets ranging in date from 1876 to 1896, a large proportion of them by Sandford Fleming.

Fleming in one of his diaries tells how the need for a reform in the cumbersome system of time-reckoning was first brought home to him. The story is a delightful example of the way great movements grow out of trivial incidents. In July 1876 he had landed at Londonderry, on his way to Scotland, to pay a visit to a friend near Sligo, somewhat remote from any railway. After consulting the *Official Irish Travelling Guide* he had determined on a route by which apparently he could reach his destination one day and return to Londonderry the night of the day following. The journey was by railway to Enniskillen sixty miles, thence by public car to Manor Hamilton thirty miles, thence by private carriage to Killennumery eight miles. Next day he proposed to leave in time to drive to Bandoran forty-two miles, in order to catch a train which the *Official Guide* indicated would leave at 5.35 p.m., enabling him to reach Londonderry at 10 o'clock the same evening.

The traveller set out, reached the house of his friend the first day without difficulty, and the following morning started in a conveyance specially engaged to take him to Bandoran in time for the 5.35 p.m. train. Incidentally, Fleming, finding horse and driver of the same leisurely race, and the chances of making his train somewhat uncertain, persuaded the driver to mend his pace not by abusing him, but by praising his steed.

The experiment was entirely successful, and the traveller actually reached Bandoran at 5.10 p.m., with apparently twenty minutes to spare. The station, however, was deserted, and no train anywhere in sight. After some difficulty the station-master was discovered and appealed to for an explanation. He asserted emphatically that there was no train that night, and on being shown the *Official Guide*, pointed triumphantly to his own printed time-table on the office wall, which read 5.35 a.m. instead of 5.35 p.m.

One result of this trifling typographical error was that Fleming had to remain at a dreary little station until the following day, and as all the

supposed connexions were upset by the error in time, he did not reach Londonderry until 1.30 in the afternoon of the third day, losing sixteen and a half hours, with a great deal of inconvenience to himself and others. Another and more important result was to convince him that the prevailing method of measuring time was cumbersome and antiquated. However well it may have suited our forefathers of stage-coach days, it was not at all designed to meet the needs of an age of rapid transportation. With Fleming to see a problem was to seek a remedy, and he immediately set himself to study the whole question of the measurement of time. The solution of the original problem was obviously the substitution of a twenty-four hour day for the system of dividing the day into two series of twelve hours. This led, however, to a much larger and more complicated question—the adoption of a uniform system of time-reckoning, and a prime meridian common to all nations.

Before the close of 1876 Fleming had prepared a memoir on the subject, which was immediately printed for private circulation under the title 'Terrestrial Time'. It attracted a good deal of attention among scientific men, particularly in America, where the planning and building of great transcontinental railways was already making the question one of serious importance. The memoir was subsequently rewritten and expanded as a paper for the Canadian Institute, and published in the *Proceedings* for 1879.

'The application of steam to locomotion by land and water', says Fleming, in the 1876 memoir, 'has given an enormous stimulus to progress throughout the world, and with the electric telegraph as an auxiliary has somewhat rudely shaken customs and habits which have been handed down to us from bygone centuries. We still cling, however, to the system of Chronometry inherited from a remote antiquity, notwithstanding difficulties and inconsequences which are constantly met in every part of the world, but which are so familiar to us that they are not regarded, or are silently endured. . . .

'To illustrate the points of difficulty, let us first take the case of a traveller in North America. He lands, let us say, at Halifax, in Nova Scotia, and starts on a railway journey through the eastern portions of Canada. His route is over the Intercolonial and Grand Trunk lines. He stops at St. John, Quebec, Montreal, Ottawa, and Toronto. At the beginning of the journey he sets his watch by Halifax time. As he reaches each place in succession, he finds a considerable variation in the clocks by which the trains are run, and he discovers that at no two places is the same time used. Between Halifax and Toronto he finds the railways employing no less than five different standards of time. If the traveller remained at any one of the cities referred to

he would be obliged to alter his watch in order to avoid much inconvenience, and perhaps not a few disappointments and annoyances to himself and others. If, however, he should not alter his watch, he would discover on reaching Toronto that it was an hour and five minutes faster than the clocks and watches in that city.'

Fleming points out that 'in the United States' (and the same argument would to-day apply equally to Canada), 'the inconvenience was even greater, . . . the difference in time between New York and San Francisco being nearly three hours and a half. Between these extreme points there are many standards of time, each city of any importance having its own. The railway companies have to conform to this state of things, and, as in Canada, are obliged to adopt local standards. Hence the discrepancies in time which perplex the traveller in moving from place to place.' The same difficulty was of course experienced in Europe, the time employed by the different railways changing constantly as one travelled east or west.

'Suppose', he says, 'we take the case of a person travelling from London to India. He starts with Greenwich time, but he scarcely leaves the shores of England when he finds his watch no longer right. Paris time is used for the journey until that of Rome becomes the standard. At Brindisi there is another change. Up the Mediterranean ship's time is used. At Alexandria Egyptian time is the standard. At Suez ship's time is resumed, and continues with daily changes until India is reached. Arriving at Bombay, the traveller will find two standards employed, local time and railway time, the latter being that of Madras. If he has not altered his watch since he left England he will find it some five hours slow; should he continue his journey to China it will have fallen eight hours behind.'

The memoir then goes into a discussion of the scientific aspect of the subject, the three natural measures of time, the solar, lunar, and sidereal days, which need not be repeated here.

The historical side of the question is more generally interesting. Fleming points out that 'in China and some other parts of the world no half-days are used. The Chinese divide the day into twelve parts, each being equal to two hours of our time; these they again divide into eight parts, thus subdividing the whole day into ninety-six equal parts. The Italians, the Bohemians, and the Poles have a division of the day into twenty-four parts, numbered from the first to the twenty-fourth—from one o'clock to twenty-four o'clock.

'In Japan there are four principal points of division—at noon, midnight, sunset, and sunrise—dividing the natural day into four variable parts. These

four parts are divided each into three equal portions, together making twelve hours. Each hour is again divided into twelve parts, thus making in all one hundred and forty-four subdivisions of the day. The six hours between sunrise and sunset differ in length day by day from the six hours between sunset and sunrise. During the summer the hours of the day are much longer than those of the night, and shorter on the contrary in the winter.

'The division of that portion of the day during which the sun is above the horizon into twelve parts belongs to the remotest ages of antiquity. The division of the other portion, which embraces the period of darkness, into the same number of parts, was introduced at Rome in the time of the Punic wars. The system of dividing the day by the rising and setting of the sun makes the hours indefinite periods, as they continuously change with the seasons. Except at the equinoxes the hours of the night and day can never be of equal length. Near the equator the variations are least; they increase with every degree of latitude until the Arctic and Antarctic circles are reached, within which a maximum is attained. Even in the latitude of Rome the length of the hours of daylight and darkness under this system have an extreme difference of seventy-five minutes.

'The day is reckoned to begin in China before midnight, the first hour extending from 11.0 p.m. to 1.0 a.m. of our mode of reckoning. The Jews, Turks, Austrians, and others, with some of the Italians, have begun their day at sunset. The Arabians begin their day at noon, and in this respect they resemble the astronomers and navigators of modern nations. It has been customary in Japan to adhere to the practice of the ancient Babylonians in beginning their day at sunrise.

'The Babylonians, Persians, Syrians, Greeks, and other ancient nations, began their day at sunrise, and had divisions corresponding to morning, forenoon, mid-day, afternoon, evening, and night. The ancient, like the modern, Arabians, began their day at noon. The Chaldean astronomers divided their day into sixty parts; like the modern Chinese they also had a division of the day into twelve hours. The ancient Egyptians (probably 1000 B.C.) divided the day equally into day and night, and again subdivided each half into twelve hours, numbered from one to twelve; the night with them commenced six hours before and terminated six hours after midnight; the day began six hours before noon and lasted twelve hours, or until six hours after noon. . . .

'From what has been set forth, it would appear that man has reckoned the day to begin at sunrise, at sunset, at noon, at midnight, at one hour before midnight, at six hours before midnight, and at six hours before noon;

and that he has divided it in a great variety of ways: 1st, into two, four, twelve, twenty-four, and one hundred and forty-four unequal parts; 2nd, into two, four, six, eight, twelve, twenty-four, forty-eight, sixty, and ninety-six equal parts, without including the small subdivisions of minutes and seconds. The common practice at present with most civilized nations is to divide the day into two series of twelve hours each, a custom which corresponds very closely to that followed by the ancient Egyptians long before the Christian era. Thus while we have made extraordinary advances in all the arts and sciences and in their application to everyday life, we find ourselves clinging to a conventional and inconvenient mode of computing time; one not materially different from that practised by the Egyptians perhaps thirty centuries ago.'

In discussing reforms in the methods of computing time, Fleming recognized at once that it would be much more practicable to so devise them that they could be engrafted on the deep-rooted present system, than to attempt to establish an entirely new system. He therefore took as the unit-measure of time the artificial day known as the mean solar day, this unit to be divided into twenty-four equal parts, and these again into minutes and seconds by a standard timekeeper or chronometer, hypothetically stationed at the centre of the earth. In practice the standard might be stationed anywhere on the earth's surface, or there might be any number of standards, the telegraph affording the means of securing perfect synchronism all over the earth. It was proposed that the twenty-four divisions should be known by the letters of the alphabet, that each should be assumed to correspond with a certain known meridian of longitude which would be known by the same letter, and that the machinery of the standard instrument should be so arranged and regulated that the index or hour hand would point in succession to each of the twenty-four divisions as it became noon at the corresponding meridian. The time indicated by these standard instruments was to be known as 'terrestrial' or 'universal' time, to distinguish it from local or other time. The general application of this system, particularly to railway and steamship lines, would remove the difficulties and inconveniences inseparable from the practice of regulating transportation by local time. In his memoir Fleming also gave details of various methods by which watches and clocks could without serious difficulty be made to indicate both terrestrial and local time.

It is pointed out that 'the scheme advocated would involve no great fundamental change. The ancient custom need not be discontinued. It is merely suggested that it be improved and that such modifications be introduced as are rendered necessary by the conditions of an age in which all

portions of the habitable globe are being occupied by civilized communities, and brought into constant communication by steamboat, railway, and electric telegraph.'

Having formulated his ideas, and put them into print, Fleming proceeded with his usual energy and perseverance to bring them to the attention of the civilized world. As might be expected it proved to be an uphill fight, for in such matters the world is for the most part stolidly conservative. Spasmodic attempts had indeed been made at various times and places to establish something in the nature of standard time—for instance, as early as 1842 the distribution of accurate standard time obtained by astronomical observations was first put into practice in Canada through the magnetic observatory at Toronto—but no serious attempt had hitherto been made to establish a system common to the world.

In 1878 Fleming brought the subject to the attention of the British Association for the Advancement of Science, feeling, as he says, that this society 'having been established for promoting the general welfare was the body above all others to which any proposition having so universal an application should be submitted.' He offered to submit a paper, and his offer was formally accepted. The paper was prepared and an outline sent to the Secretary of the Association. Fleming was informed that it would come before the section of Mathematics and Physical Science. Fleming went to Dublin, where the Association was meeting that year, and notified the Secretary that he was prepared to read his paper whenever called upon. He was put off from day to day. Finally he was informed that the Committee had decided his paper should be read on the 21st August. The meeting had opened on the 14th. The section closed its sessions on the 20th. Fleming's paper, although ample notice had been given, was at the end of the list, and was coolly ignored. 'I attended the section', he says, 'until the meeting closed, but no opportunity was given me to introduce it. There was still another day, so I approached the Secretary and endeavoured to make some arrangement for its being read in the morning. I was curtly told that the section would not meet again, as all the papers but mine had been disposed of, and he took upon himself to add that the reading of my paper was of little consequence. I deemed it my duty to bring the circumstances under the notice of the President of the Association, but my letter did not receive the slightest attention.'

Commenting on the subject some years afterward, on his return from the Pacific coast, he says: 'It struck me as a singular coincidence that among the first things that I read in the Chicago newspapers was the notice of a meeting

of the railway managers of the United States and Canada, to take definite action on the subject of regulating time, so unpleasantly disposed of in Dublin by the British Association, and that the Association itself was coming to Canada to learn that the managers of one hundred thousand miles of railway, travelled over by fifty millions of people on this continent, had taken the first important step in the scheme of cosmopolitan time-reckoning which, as an Association, it had officially and offensively refused to entertain.' As a result of this meeting in Chicago, in October 1883, the Standard Hour system went into force throughout North America the following month. But this is anticipating a little. In the interval the subject had been considered by various societies on both sides of the Atlantic, in a broader and more intelligent spirit than that shown by the British Association.

In 1880 Dr. Daniel Wilson, president of the Canadian Institute, in a memorandum on Cosmopolitan Time and a Prime Meridian Common to all Nations, drew particular attention to Fleming's proposed solution of the question, and in commending the idea quoted a communication from the Royal Society (of England) to the Governor-General of Canada, approving of the plan for a system of cosmopolitan time as simple and well devised. Fleming had also advocated, as an essential condition of his scheme, the universal adoption of a prime meridian through the Pacific Ocean entirely avoiding the land of any nationality. He argued that it would be much less difficult to secure the support of the different nations for such a meridian than for one, such as that of Greenwich, running through territory of a particular country. The Royal Society felt that it would be difficult to obtain the concurrence of individual nations even in such an ultra-national project, though admitting its manifest advantages. The Canadian Institute, the American Metrological Society, and several national scientific bodies in Europe, after careful consideration of the proposal, gave it whole-hearted support.

Dr. Wilson warmly recommended Fleming's scheme, and added: 'He has submitted his views free from all local bias, and has aimed at the selection of an initial meridian and time zero which while awakening no national susceptibilities would be generally acceptable to all civilized nations. It is earnestly hoped that this attempt to deal with an acknowledged impediment, alike to international scientific operations and to the rapidly extending relations of trade and commerce, will be considered in a liberal spirit, and that civilized nations may be found not unwilling to concur in a proposal which offers a ready means of bringing into use some scientific system of reckoning time such as the age seems to demand.'

Through the British Government, Fleming's proposals were brought to the attention of the Imperial Academy of Science of St. Petersburg. They were favourably reported upon by the Russian astronomer, Otto Struve, and received the support of the Academy.

The same year (1880) Fleming proposed to the American Metrological Society the organization of an International Committee on Standard Time, and stated that the Canadian Institute had already adopted a resolution to that end. The Metrological Society cordially agreed, and a joint committee of the two bodies was appointed. The next step was to appoint delegates from the two societies to the International Geographical Congress in Venice the following year.

Fleming attended the Congress as one of the delegates representing the American and Canadian societies, and on September 21st read a paper on the Adoption of a Prime Meridian, and proposed a series of resolutions. These were referred to a special committee, and subsequently recommended to the favourable consideration of the Congress, and adopted. It was also resolved that, with the concurrence of the Government of the United States, an International Conference should be held in Washington in May 1883, to deal further with the questions of the determination of a common prime meridian, and a system of universal time reckoning.

In December 1881, at the suggestion of Fleming, the Metrological Society presented a memorial to the President of the United States, requesting him to call an International Time Convention in Washington in 1883. The matter came before Congress in 1882, and by joint resolution the President was authorized to call the conference.

Meantime Fleming had personally brought the matter to the attention of the American Society of Civil Engineers, and the American Society for the Advancement of Science, both of which bodies gave it favourable consideration, the former appointing a Special Committee on Standard Time of which Fleming was made chairman. This committee sent out a circular of questions to scientists, engineers, railway officials, and others more or less directly interested in the standard time question, which made it clear that there was a widespread recognition of the importance and opportuneness of the movement. The matter was also favourably considered by the Association for the Reform and Codification of the Laws of Nations, at the Cologne meeting in 1881, and in this and the following years by learned societies in England, France, Spain, Germany, Italy, Austria, Russia, Belgium, and Switzerland. In October 1883, the International Geodetic Association met in Rome, and among other conclusions decisively

expressed its opinion in favour of the adoption of the meridian of Greenwich as the common zero of time longitude.

The International Prime Meridian Conference actually met in Washington in October 1884. In the official letter of the Secretary of State of the United States, inviting the Governments of other nations to send delegates to the Conference, it is pointed out that, 'in the absence of a common and accepted standard for the computation of time for other than astronomical purposes, embarrassments are experienced in the ordinary affairs of modern commerce; that this embarrassment is especially felt since the extension of telegraphic and railway communications has joined states and continents possessing independent and widely separated meridional standards of time; that the subject of a common meridian has been for several years past discussed in this country and in Europe by commercial and scientific bodies, and the need of a general agreement upon a single standard recognized; and that in recent European conferences especially, favour was shown to the suggestion that, as the United States possesses the greatest longitudinal extension of any country traversed by railway and telegraph lines, the initiatory measures for holding an international convention to consider so important a subject should be taken by this (United States) Government.' It is added that the President of the United States is convinced of the good to flow eventually from the adoption of a common time unit applicable throughout the globe.

Twenty-five independent nations were represented at the Conference, including practically all the countries of Europe, the South American Republics, Japan, Mexico, and Liberia. The Conference sat for about a month, discussing the question in all its bearings. At the outset Fleming submitted a series of recommendations with explanatory remarks, which were carefully considered. Other proposals were brought forward by the delegates of different nations. Finally the Conference adopted the following Resolutions, by a practically unanimous vote:

'I. That it is the opinion of this Congress that it is desirable to adopt a single prime meridian for all nations, in place of the multiplicity of initial meridians which now exist.

'II. That the Conference proposes to the Governments here represented the adoption of the meridian passing through the centre of the transit instrument at the Observatory of Greenwich as the initial meridian for longitude.

'III. That from this meridian longitude shall be counted in two directions up to 180 degrees, east longitude being plus and west longitude minus.

'IV. That the Conference proposes the adoption of a universal day for all purposes for which it may be found convenient, and which shall not interfere with the use of local or other standard time where desirable.

'V. That this universal day is to be a mean solar day; is to begin for all the world at the moment of mean midnight of the initial meridian, coinciding with the beginning of the civil day and date of that meridian; and is to be counted from zero up to twenty-four hours.

'VI. That the Conference expresses the hope that as soon as may be practicable the astronomical and nautical days will be arranged everywhere to begin at mean midnight.

'VII. That the Conference expresses the hope that the technical studies designed to regulate and extend the application of the decimal system to the division of angular space and of time shall be resumed so as to permit the extension of this application to all cases in which it presents real advantages.'

In the second Resolution, San Domingo alone voted in the negative; France and Brazil abstained from voting. In the fifth Resolution, Spain, Austria-Hungary, and Turkey voted in the negative. The principles embodied in the first and sixth Resolutions were adopted unanimously.

On January 1, 1885, the 24 o'clock system was adopted at the Greenwich Observatory, the seat of control for all the public clocks of Great Britain. As already mentioned, the railways of the United States and Canada had adopted standard time in October 1883. In a circular issued by the Canadian Pacific Railway in June 1886, the 24-hour system was officially adopted for use on the company's lines. Despite the action of the Washington Conference, however, the nations were slow to take action in the matter of the adoption of a prime meridian common to all. As Fleming had foreseen, national jealousies stood in the way of the general acceptance of Greenwich. Nevertheless, the agitation had been helpful in creating a recognition everywhere of the importance of agreeing upon a universal prime meridian, and sooner or later the efforts of Fleming and his associates all over the world will bear fruit. Meantime, he was able to announce in a paper read before the Royal Society of Canada in 1890 that standard time had been adopted throughout North America, including Canada, the United States, and Mexico, in Great Britain, Sweden, and Central Europe, and in the Japanese Empire. It was subsequently adopted in Australia.

In introducing a paper by Fleming on 'Universal or Cosmic Time' the Canadian Institute paid the following tribute to the man who had laboured so long and faithfully in the interests of the movement:

'To his own continued earnest and honourable labours in the cause Mr. Fleming has made no reference. This omission the Institute is constrained to notice in justice to Mr. Fleming and in justice to themselves. They may say what he has left unsaid, that his efforts have contributed in no small degree to the adoption of an initial Meridian common to all nations, and that he has unquestionably been the initiator and principal agent in the movement for reform in Time-Reckoning and in the establishment of the Universal day. The Institute cannot, perhaps, better express the debt of gratitude which the civilized world owes to Mr. Sandford Fleming in this connexion than by quoting from the accompanying paper from the pen of the distinguished Astronomer Royal of Russia, M. Otto Struve: "It is through Mr. Fleming's indefatigable personal labours and writings that influential individuals and Scientific Societies and Institutes in America and Europe have been won over to the cause." '

CHAPTER XVIII
A TRIP TO VENICE IN 1881

In the autumn of 1881 Fleming sailed for Europe, with his daughter Minnie and a friend, with the particular object of attending the International Geographical Congress at Venice, at which he was to represent the Canadian Institute and the American Metrological Society and to present a paper on 'The Adoption of a Prime Meridian'.

They left Halifax on August 19th, taking the Intercolonial to Rimouski, where they caught the *Sardinian*. The voyage was uneventful. They sighted the Irish coast on the 28th, wrapped in brilliant sunshine, and landed at Liverpool the next day in a downpour of rain. Rain followed them all the way to London, and they learned to their dismay that it had been raining steadily for three weeks. However, the weather cleared after a day or two, and they were able to spend a pleasant week shopping and sight-seeing.

One afternoon Fleming had been out for a stroll and was returning leisurely to his hotel. 'On the way back along Piccadilly,' he says in his manuscript journal, 'gazing into a shop window, I was startled by a slap on the back. Turning round, there was Sir John Macdonald, who was in town, and staying, I learned, at our hotel. We walked back together, and went out shopping with the girls.' A party was arranged the following day with Lady Macdonald to take the famous coaching trip to Virginia Water. The sun shines brightly; the good coach 'Old Times' and the quaint inns give an atmosphere of other days; and the beautiful country along the Thames is at its best.

September 7th, they are off for the Continent, by way of Queenboro' and Flushing. A brief stop in Rotterdam gives them an opportunity to correct some of their popular impressions of Holland. 'We expected to see portly Dutchmen in picturesque costumes leisurely smoking long Dutch pipes, but we were disappointed. They looked very much like Englishmen outwardly, and seemed to be quick, shrewd, and very much alive.' The old town, however, with its quaint gabled houses, high and narrow and brightly painted, and the countless canals crowded with sturdily built Dutch craft, left an impression worth remembering.

Their way lies through Arnheim, up the valley of the Rhine, whose turbid waters suggest not quite complimentary comparisons with the clear

and sparkling Restigouche, over the boundary and on to Cologne, where they have an amusing encounter with the German Customs. Their trunks have followed them, and must presently be examined at the railway station. Solemn officials have to be interviewed, and many formidable looking documents signed. 'At last the trunks were dragged from their place of concealment. They were double corded and sealed with leaden seals. Six officers in uniform are assembled; they are magnificently dressed and form a circle around the three small trunks. The keys are produced, the Custom House seals are broken, the Imperial cords removed. The lids are opened in the presence of the stern officials. One of them gives the word of command, and a subordinate raises the corner of one garment in each trunk and lays it down again. The ceremony is over, and the Imperial servants march off with unabated dignity.'

They leave Cologne, having duly visited and admired the wonderful cathedral, and continue their way up the Rhine. The flat, rich farming country is left behind, and the railway runs between the river and steep, vine-clad slopes. On the other side are the Drachenfels, their rocky peaks crowned with ruined castles. They cross the Moselle and have a clear view of the fortress of Ehrenbreitstein, and the ancient town of Coblentz. The Rhine is now justifying its reputation, and is a very different river from that which they had followed lower down. 'We have rivers in Canada,' now admits the journal, 'such as the Metapedia, the Restigouche, and the Saguenay, with banks as lofty and rocky and varied, but they are in a condition of nature, without cultivation, without ruined castles and cathedrals which carry one back almost to the dawn of history.' They have a glimpse of Bingen, and finally leave the Rhine and follow the Maine to Frankfort, where they spend the night.

An early walk about the old town the following morning revealed many things to interest the travellers, and particularly to remind them that this was the home of Goethe. Incidentally, in the window of an old book store in the market-place, they found something to remind them of Canada—a photograph of the Marquess of Lorne (now Duke of Argyll) at that time Governor-General of the Dominion. Leaving Frankfort, the route was through a fine farming country, which reminded them of Quebec, the fields in small patches, with long crooked furrows. The curious absence of fences, however, gave an unfamiliar touch to the scene. Wurzburg is passed, and they run down through Bavaria, with its vineyards and hop-gardens, the porches of the village stations festooned from pillar to pillar with the Canadian creeper. 'Why', exclaims the builder of Canadian railways, 'cannot our people at home show the same taste, at so little expense and

trouble!' A few hours' run through an exceedingly attractive country, hill and dale richly timbered, brings them to the Danube, and finally to Munich, where they again spend the night and the following Sunday, which gives them an opportunity to roam through some of the famous picture galleries.

Soon after leaving Munich they approach the mountains, and as the train carries them into a narrow valley Fleming is reminded of the entrance to the Jasper Valley and his trip through the Rocky Mountains in 1872. Bold, rocky sentinels guard the passage here, just as Roche à Myette does in the Far West; but here cultivated fields and picturesque villages take the place of the untouched wilderness of the Rockies. The traveller is lost in amazement as he passes village after village strung like beads along the railway, in a valley so narrow that the towering mountains rise on either side not more than a mile or two apart. 'What do the inhabitants do? How do they live? Does this narrow strip of land really support them? If so, what may we not look for from the broad acres of Canada?'

Innsbruck reminds them that they are in the Tyrol, and two large snow ploughs standing beside the railway shops suggest that Canada is not the only country with winter problems. The engineer is interested in the substantial character of this mountain railway, the heavy grades resembling portions of the mountain section of the Canadian Pacific Railway. Again they rest for the night; this time at Botsen, still in the Tyrol. One of the bedrooms in the inn turns out to have been at some remote period the chapel of some high ecclesiastic. The walls are covered with mural paintings, and in one is set a marble tablet surmounted by the papal crown and an inscription.

Leaving this quaint little mountain town, the way lies down an exceedingly beautiful valley, lofty mountains rising tier above tier, and about them the varying tints of woodland, vineyard, and maize field. 'The lifting clouds, the scattered mists, the picturesque villages, the fertile flats, and vine-clad slopes, offer a wonderful panorama, one long to be remembered.'

As they near the Italian boundary and the Plain of Lombardy, the character of the country and its inhabitants changes. Towns and villages multiply. The houses look old and battered, and there is a noticeable lack of the tidiness and cleanness of the north. The vineyards are luxuriant, the vines trained over high trelliswork, instead of in rows three or four feet high, as in Germany. An hour or so later, when they have crossed into Italy, the vineyards change again, the vines hanging in graceful festoons from tree to tree, the latter evidently planted in rows for the purpose. The trees seem

dwarfed and stunted, the greedy vines absorbing all the nourishment from the soil.

A wait of four or five hours between trains at Verona gives the travellers an opportunity of seeing the splendid amphitheatre and other relics of old Roman days. This is Dickens's 'Pleasant Verona, with its beautiful old palaces, and charming country in the distance, seen from terrace walks and stately balustraded galleries; its Roman gates, still spanning the fair street, and casting on the sunlight of to-day the shade of fifteen hundred years ago; its marble-fitted churches, lofty towers, rich architecture, and quaint old quiet thoroughfares, where shouts of Montagues and Capulets once resounded; its fast-rushing river, picturesque old bridge, great castle, waving cypresses, and prospect so delightful and so cheerful'. The narrow streets remind the travellers of those of the Lower Town in Quebec, but the inhabitants are not prepossessing, 'nothing but idle or half-idle people lounging about'.

At last they approach their destination. It is late, and in the darkness they discover that the train is running along a narrow embankment with a wide expanse of water on each side; then—Venice! They had telegraphed for rooms at the Grand Hôtel de l'Europe (all hotels are 'Grand' in Venice), and the commissionaire is waiting for them at the station. 'We are passed over to two gondoliers dressed in white and blue, who lead us through the crowd to a dazzling sight outside the building on the Grand Canal. Hundreds of gondolas are waiting to be engaged, their lights dancing in the water about them. We take our seats and glide away with many others, first along the Grand Canal and under the bridge of the Rialto. Then we thread our way alongside canals to shorten the distance, and again spring out into the Grand Canal, and so to our hotel, and a long night's sleep.'

The following day the International Geographical Congress is opened in the Doge's Palace by the King and Queen, with brilliant ceremonies. 'Each day', we read in the journal, 'Venice is thronged and excited by some new display. One evening the Piazza di San Marco is illuminated by one hundred thousand small lamps; the bands play, and 60,000 or 70,000 people surge to and fro, cheering the young King and Queen who appear at the window. Another day there is a grand regatta of gondolas, with richly decorated barges, the King and Queen taking part. One evening the Grand Canal is illuminated, and such a fairy scene would be impossible anywhere else.' Much of Fleming's time is of course taken up with the meetings of the Congress, particularly those relating to the adoption of a Prime Meridian common to all nations. His own paper is well received, and in fact becomes

the foundation of international action in this important matter, as described in another chapter. In spite of his preoccupation with the Congress and its doings, however, he and his companions manage to see at least some of the memorable things in the wonderful old town on the Adriatic, and as they wander about they feel, as so many have felt before them, the saddening influence of departed glories, memories that cling to her deserted piers and palaces, memories of a thousand years of triumphant grandeur, of commercial dominion, and the lordship of the seas.

After a week or so in Venice, they leave for Rome by way of Florence, where they spend a day among the art treasures of the palace of the Uffizi and the Pitti Palace. Gazing at the marvellous works in marble of the old masters, Fleming is reminded of Goldwin Smith's comment on his own inaugural address as Chancellor of Queen's College the previous year, in which he had made a strong plea for good translations of the classics. 'Goldwin Smith', he says, 'compared translations to plaster casts and Greek and Latin to the original marbles. Looking as I now do upon the original marbles, I confess I cannot altogether accept the force of his comparison. These marble figures are still beautiful, but they are stained and discoloured, fractured and repaired. Some have been so carelessly patched that the glory of the original is almost lost. Surely the eye would be better satisfied with a pure, stainless cast; not such casts as one buys in the streets, but reproductions by a master who would bring out every line and feature of the original, and restore it to its original beauty free from the hideous stains and fractures which the vicissitudes of time have unfortunately produced, and which it seems no mortal hand can remove.'

Sunday finds them in Rome, and after trying the Presbyterian Church outside the Porta del Popolo and the English Church in the same quarter, and finding them both closed, they abandoned themselves to sight-seeing. They manage to see something of the Colosseum, and the Pantheon, 'with the sixteen huge granite columns of its portico, which the battering of twenty centuries has failed to destroy'. The following day is devoted to St. Peter's and the Vatican. Among the wonderful frescoes in the Vatican, the journal mentions one of recent date commemorating the dogma of the Immaculate Conception, and a smaller one in the same room in memory of those who though opposing the dogma yielded to the voice of the majority. 'We fancied we discovered one face in the latter picture intended for the late Archbishop Connolly of Halifax,' an old and much esteemed friend of Sandford Fleming. The Sistine Chapel is also visited, but Michael Angelo's frescoes are 'dull and dingy,' and Sandford Fleming frankly admits that he prefers some of the more modern work.

‘We have still to visit the great library of the Vatican, and we enter and proceed along one gallery, the walls lined with book-cases. We are about to see the central portion when we have to give way to no less a personage than the Pope himself. The poor man, as is well known, is theoretically a prisoner in the Vatican, and only goes out to the Vatican gardens to take exercise. He was now about to do so, and, having to pass through the library from his private rooms, we were requested to leave, it being customary to have the way clear of strangers.’

Leaving the Vatican, and with a parting look at the glorious proportions of St. Peter’s, they drive out to the Catacombs, and the Appian Way. The construction of the latter merely as an engineering problem is found of peculiar interest. The remainder of the day is given to the Forum and the wonderfully interesting ruins on and about the Palatine Hill.

Four days in all are spent in Rome, time to get but passing glimpses of a few of the innumerable monuments of the past, but filled with vivid impressions of the Ancient City—how ancient they are reminded as they take the train for Naples, for ‘on a conspicuous place in the walls of the new railway station is a sculptured representation of the old legend of Romulus and Remus, a she-wolf nursing two little boys’.

A friend in Venice had recommended them to ‘Mrs. Macpherson’s’ as the most comfortable hotel in Naples. To Scottish ears the name was recommendation enough, and when they finally reach their destination, late at night, the man of the party, having no Italian, stands boldly on the railway platform and calls the name of his countrywoman. It brings an immediate response, and they drive through narrow streets to the Hôtel Britannique.

Both hotel and landlady live up to their reputation. Everything is thoroughly comfortable. From their room the travellers have a delightful view over the Bay of Naples, with Vesuvius in the distance and its waving plumes of silvery cloud. Mrs. Macpherson turns out to be a Scotchwoman who early in life had married an Italian. Her husband is dead, and she has resumed her maiden name, perhaps with a shrewd idea of its business value in catering to English-speaking travellers. Her two comely daughters offer the curious combination of Scotch features with Italian speech.

After luncheon the day following his arrival in Naples, Fleming takes the local train to a station near Pompeii, and drives over to the City of the Dead. After a glance through the museum, he finds more to interest him in the streets and buildings. ‘The streets are generally straight and narrow, from fifteen to twenty-five feet in width. They are invariably well paved with

large blocks of hard lava. They are bordered by paved side-paths and at the crossings large flat stepping-stones are placed, the openings between wide enough to admit the passage of wheeled carriages. The deep ruts worn in the hard lava give one an idea of the once busy life of this city of long ago. From thirty to forty streets are opened up. Each one with its buildings is an intensely interesting study. Here one sees a court-house, there a jail, a custom-house with weights and measures, a bakehouse with several sets of granite mill-stones for grinding the grain. The upper stone is hopper-shaped and has holes for inserting horizontal bars to turn it. Some of the private dwellings had a central court surrounded by marble pillars with a fountain in the centre. The ends of the leaden pipes for conveying the water were still visible. The walls of some of the rooms were covered with frescoes and had rich mosaic floors. Evidently they were the homes of men of distinction in Pompeii.'

The next day is given to seeing as much as possible of Naples. A heavy rainstorm forces them to the dubious expedient of a covered cab, 'the worst of its kind, a hundred times worse than a London four-wheeler, with an odour of the most peculiar offensiveness.' They stand this as long as possible, seeing what they may of the 'splendid and squalid Queen of the Mediterranean', as some one has called it. Then they return to their hotel, and Sandford Fleming wanders out alone, armed with waterproof and umbrella, to get some last impressions of the town; but the rain comes down in torrents and he is finally driven back to shelter.

After dinner they drive down to the dock and take the steamer for Leghorn. The decks are crowded with deck passengers, huddled together wherever a little shelter might be found from the driving rain. It is blowing a gale outside, and the boat remains in port until the morning. The clouds lift, the sun comes out, the water of the Mediterranean turns from a murky grey to a wonderful blue, and as they steam up the coast they get a magnificent view of Vesuvius in all his majesty.

Landing at Leghorn, they take the train for Pisa, getting a glimpse of the leaning tower, and on to Genoa. 'This is one of the most beautiful and interesting railway rides in the world. Our course is along the edge of the Gulf of Genoa, the Riviera di Levante. At one point the line runs along the rocky beach, at another through a mountain spur. We traverse innumerable tunnels, emerging from the darkness into lovely valleys covered with groves of fig-trees and lemon-trees, and vineyards occupying every available foot of the hill sides. The views of coast and mountain are exquisitely beautiful. Every opening has its little bay with picturesque fishing-boats, its villages

with quaint spires and venerable buildings, and gardens fenced with hedges of aloes.'

Sunday is spent in Genoa, and after attending the Scotch Church they enjoy a chat with the pastor, who turns out to be from Fifeshire. The beauties of the Riviera have rather spoiled them for a thorough appreciation of the famous churches and palaces of Genoa. They cannot, however, escape the striking contrast between this proud city and her ancient rival on the other side of the peninsula. Venice lives only in the past. Genoa boasts of an almost equally glorious past, but the spirit of her people still lives in her crowded harbour and busy streets.

Leaving Genoa, they spend part of a day in Turin, and then on to Paris. 'Turin is laid out very much like an American western town, in parallelograms. The buildings are modern in style and construction for the most part. I have no doubt there is an old town, as in Edinburgh, but we did not see it.' Leaving Turin they cross the western end of the great Lombardy plain, traverse a richly cultivated valley, and are in sight of the Alps. Several small tunnels lead at last to the Mont Cenis, with every detail of which the engineer is deeply interested. 'A wonderful piece of work!' he exclaims.

Emerging from the tunnel after half an hour in the heart of the mountain, they are carried down through the wildest of mountain scenery, where every foot of soil is carefully cultivated by the frugal villagers for themselves and their goats, down to Aix les Bains and its exquisite surroundings, and on to Macon, where they spend the night. In the morning they leave for Paris, where they meet old friends and rest for a day or two. A few busy days in London, and once more they are crossing the Atlantic. They return to Halifax by the Intercolonial after an absence of a little more than two months.

CHAPTER XIX
QUEEN'S UNIVERSITY AND THE CHANCELLOR

When the boy Sandford Fleming passed through Kingston in 1845, on his way to Peterboro', it could never have entered his imagination that thirty-five years later he would return to the picturesque little town on Lake Ontario as Chancellor of Queen's University.

In 1845 Queen's was in its infancy, having been granted a royal charter four years before. Work was commenced the following year, 1842, in a frame building on the north side of Colborne Street. The year Fleming first saw Kingston, the college was housed in a series of stone buildings, formerly dwelling-houses, on William Street. Between 1845 and 1880 the college suffered many vicissitudes, and it was not until the Rev. George M. Grant became Principal, in 1877, that Queen's began to take its proper place among the leading educational institutions of the country. It is an interesting fact that as long ago as 1839, when the fortunes of Queen's were at a very low ebb, a meeting was held in Kingston looking to the establishment of means for a liberal education of the youth of the province. At that meeting a resolution was adopted appointing a committee to collect subscriptions, and the mover of the resolution was a young man just entering into public life, whose name was John A. Macdonald.

Two candidates were proposed for the office of Chancellor of Queen's University in 1880, Samuel Hume Blake and Sandford Fleming. The latter proved to be the popular candidate. Goldwin Smith's name had also been mentioned for the Chancellorship, but it was found that he would be indisposed to accept, and therefore was not nominated. Fleming had for some time been interested in Queen's, but his interest had been quickened from the time that his friend Grant assumed the direction of the institution. Principal Grant, with characteristic energy, had not allowed the grass to grow under his feet. The year after his appointment he organized an endowment campaign for the university, in which he had the warm support of Fleming. In the life of the late Principal, by his son, one finds the following note: 'Rev. D. M. Gordon wrote from Ottawa that the subscriptions for the chair of Physics would be headed by two gifts of five thousand dollars each. One of the givers was Mr. Allan Gilmour. The name of the other benefactor was kept secret for a time. He was Mr. Sandford

Fleming, and it was largely through his influence that Mr. Gilmour had made this considerable gift.'

That Principal Grant fully reciprocated Fleming's high opinion of his friend was made evident in many ways. At the installation of the Chancellor in 1880, Grant made no secret of his satisfaction. 'While he would,' he said, 'have willingly accepted either candidate as Chancellor, he was extremely glad the decision had fallen on an old friend. He and Mr. Fleming had travelled together by sea and land, and he had learned to appreciate the rare qualities of his character. He did not know of a better example to set before the youth in the institution, and hoped there would be many students trained up to resemble him. There was no man living whom he would rather have at his back in an undertaking requiring patience, strength, and determination than the new Chancellor. It was not necessary to speak of his works. He had not only constructed a great railway, but had written the story in a manner which redeemed the dry details and made the most indifferent finish the work after he had commenced it. The history of the Intercolonial Railway was a prominent contribution to Canadian literature. Fleming's characteristics were loyalty, calm resolve, devotion to truth, and boundless tolerance of opinion. The new Chancellor was a man who could listen to every one, no matter what his opinions might be. He believed that a man might differ from him and yet be a thoroughly honest and able man. This was the kind of man for the head of a truly national university.'

In his first address as Chancellor, Fleming took occasion to sketch the history of Queen's University, and as the growth of this institution offers many points of interest it will be worth while to reproduce that portion of his inaugural.

'Queen's', he said, 'cannot lay claim to the hoary antiquity of the universities of the Old World; compared with them it is but of yesterday. It has a brief record that may be soon told. Less than half a century ago British North America was almost destitute of seminaries of learning, and wholly without the means of superior education. The first action which we have to record, which eventually culminated in the establishment of the University of Queen's, was in 1831. In that year the Synod in connexion with the Church of Scotland experienced the difficulty of obtaining ministers from the mother country; and, convinced of the importance of raising up from among its own congregations young men properly educated, memorialized the Government on the subject. The Synod represented the deep interest the Presbyterian body took in the advancement of learning in Canada, and their most anxious desire to see a college established under such a charter as

would render it generally available, and would secure to it the confidence and support of all denominations of Christians and all classes of the people. Year by year the most strenuous efforts were made to secure the great object aimed at, in connexion with what was then known as the King's College endowment. Although in different parts of the province meetings were held, committees and delegations appointed, and reports prepared, all efforts proved fruitless. In 1839 the Synod, adhering to the principle laid down by the mother Church from the earliest days—of maintaining a high standard of education for the ministry—determined that there should be no further delay in making arrangements for the establishment of a college. Kingston, being centrally situated, was chosen, and influential men, both lay and clerical, set vigorously to work to raise funds and to take other necessary means for founding a collegiate establishment for the education of youth, and for the proper training of native ministers. Among other steps taken, a document was prepared by a committee of the Synod and widely circulated. The words of this document, dated 9th October, 1839, show not only what were the immediate wants and ultimate aims of the founders of the college, but considering the limited resources and population of Canada in those days, they display the courageous spirit as well as the enlightened and patriotic sentiments with which those noble men were endowed.

'In another document, to which wide circulation was given, it was explained that although the establishment of the theological branch was then considered the most urgent, it was the desire and purpose of the founders to provide for and embrace a complete course of literary and scientific education. It was further explained that the Committee was pledged to raise $25,000 within six months as an endowment for one professor, and it was estimated that a total subscription of from $120,000 to $160,000 would be necessary. The active promoters of the scheme looked for some assistance from the Public Treasury; and they expected that the General Assembly of the Church of Scotland would endow a theological chair; but they relied mainly on private contributions for the means of establishing and maintaining the proposed seminary of learning.

'The design of the founders was sufficiently comprehensive, but they were wise enough to know their poverty, and prudent enough not to undertake more than was practicable. It was enough for them to originate an institution that, while making provision for present and actual needs, would admit of indefinite enlargement and keep pace with the growth of the country. Their design was to erect at first a humble superstructure sufficient for their most pressing wants, but to lay the substructure broad and deep, leaving to another generation the work of extending and completing the

edifice. By this prudent course they hoped to avoid the indiscretion of outrunning the limited means at their command. They saw that the establishment and complete equipment of such a collegiate institution as the future might demand was then beyond the wants, and still more beyond the means, of a young and struggling community, and that without abandoning the idea they would act wisely in postponing the attempt to reach its complete fulfilment.

'Legislative authority was sought, and early in 1840 the Governor-General gave his assent to a Bill entitled "An Act to establish a College by the name and style of 'The University at Kingston'." The year following, Her Majesty was graciously pleased to grant a royal charter by which the name of "Queen's" was authorized to be used, and the style, rights, and privileges of a university were conferred.

'The college was opened for the first time on the 7th of March, 1842, for half a session. For this purpose a small private house was hired, and two professors were engaged. Of the students who presented themselves for matriculation only three passed the examination. The small number of young men prepared to matriculate revealed the fact that education in Canada was then at an extremely low ebb, and it became necessary to open a junior class for those who failed to matriculate.

'This was not an auspicious commencement, but the promoters of the college had cause to rejoice that the long-cherished scheme which they had struggled to commence was assuming form, and that the actual beginning had been made. They were in no way discouraged by the prospect which presented itself. They remembered, doubtless, that although some of the ancient seats of learning in the Old World were founded by popes and sovereigns and were richly endowed by Church and State, a few of the most famous universities had a very humble origin, and were indebted for their subsequent progress to the liberality of private individuals. They would know that Edinburgh University began with only one professor, and that Cambridge—now with a cluster of eighteen or twenty colleges and halls—was established in the twelfth century and found shelter, it is said, in a farm outbuilding, under the auspices of an abbot and three monks. The early friends of Queen's had faith in the future, and they were encouraged to hope that the Canadian college which they had founded might some day—possibly far distant—resemble those famous seats of learning as much in the splendour of its career as in the lowness of its origin.

'The early years of the college were somewhat chequered. For some time it was sustained by direct and almost annual appeals for support to the

Kirk congregations throughout Canada. In 1854 the Summerhill property was purchased for college buildings, involving further appeals to liquidate the debt incurred. In 1867 the college was overtaken by a series of trials peculiarly severe. Two-thirds of the endowment fund, invested in the Commercial Bank, were lost in the failure of that institution, and about the same time the Government grant, which had been received for twenty-two years, was withdrawn. It therefore became more necessary than ever to fall back on private beneficence. In 1869 an appeal was made for $100,000. It met with hearty support in all parts of the country, and more than the sum asked for was subscribed. Prosperity dawned upon the institution, and in the next decade it made substantial progress. About two years ago it was considered that the time had arrived to extend the usefulness of the university. As the endowment fund was considered inadequate to meet the increased expenditure which would follow, fresh efforts to extend the fund became necessary.

'It was estimated that a new subscription of at least $150,000 would be required. Every friend of Queen's knows that Principal Grant undertook the task of personally visiting the towns and cities of Canada and as many country districts as possible to explain the objects of the application, and to afford to those who might desire it an opportunity of assisting by their contributions. This last appeal was eminently successful, and although the business of the country had been prostrated by financial depression, the subscriptions amounted to the sum deemed necessary.

'The college has undoubtedly during its brief career had many trials, but it has been tenacious of life, and has proved itself superior to all adversity. It is now on a firm and enduring foundation, and its success in the future may be considered assured. Other seats of learning may boast an origin far back in mediaeval and monastic times, they may receive the fostering help of Church and State, or may have inherited princely endowments, but Queen's University may justly claim the distinction of resting on the support and affection of thousands of friends and benefactors, and they all believe it will prove worthy of their friendship.'

In this same address as Chancellor, Fleming discussed in a very interesting way the functions of a modern university. We have known him hitherto as engineer, a builder of great national works, a leader in Imperial undertakings. It is instructive as to the breadth and diversity of his mind to find him addressing an audience of college men, on a question that lay much more in their field than in his, and revealing a knowledge and grasp of the subject which held their attention throughout.

'There are', he said, 'many who hold that centralization in university education would be the most advantageous arrangement; and, although much may be said on the other side, I confess that if it were attainable I would be inclined to favour the idea of a National University, with a great central college for literature, science, and every branch of non-denominational learning, while there might be clustered around the secular college, as a common centre, theological halls perfectly independent of each other, and under the management and control of the religious bodies to which they respectively belonged. I am inclined to think that if the whole question had to be dealt with *de novo*, a symmetrical scheme of this kind would commend itself to general favour. In such a case it would not be necessary for different religious bodies to establish and maintain separate universities. They would only have to see to the efficiency of their theological halls, and to endow such special professorships as were deemed necessary by them for training their youth for the ministry.

'It would be practicable for students of every creed to unite in the secular departments and to attend the same lectures in the central college. Thus, instead of having as many universities as there are different denominations, we would have the strength of all combined in one; which might, in consequence of the combination, be rendered as complete and efficient as it would be practicable to make it, and the whole circle of the sciences and every branch of study of a non-sectarian character might there be taught by the ablest men of the day. Some such arrangement is what the founders of Queen's contended for. Year after year they struggled to combine the leading religious bodies in one National University. Even six years after Queen's was organized a final but unsuccessful effort was made to unite with "King's", now Toronto University, on a broad, comprehensive basis. It is therefore no fault of the early friends of this institution that the college system of the province is as we now find it.

'At this stage in the progress of Canada, however, we are called upon to accept not what we would wish but what we have. It would be unwise and inexpedient to uproot the institutions which have grown out of the past condition of things, or to contend for a theory which is obviously impracticable. Instead of struggling for what is beyond our reach, it is infinitely better to accept what we possess, to make the most of what has been secured, and to look hopefully forward to that which is attainable.

'The time has gone by for seriously discussing whether there should be one university or several in Canada. It would be a step backward to unsettle the public mind with regard to their permanency. Nothing can be more

pernicious in horticultural pursuits than constantly disturbing plants at the period of their growth in order to examine their roots. So it is with seats of learning. They are of slow growth, and they take deep root amongst the institutions of the country, and in the feelings and sentiments of the community. How would a proposal be received to break up Oxford and Cambridge, with their forty-two colleges and halls, and to substitute universities in every county in England? Such a scheme may have substantial reasons to support it, and, if everything had to be founded afresh, would meet with many advocates; but Oxford and Cambridge are the growth of some eight centuries. They have played no unimportant part in the history of England, and are almost as firmly established to-day as the august sovereign on the throne.

'Turning to another portion of the British Isles, what would be thought of a proposal to centralize collegiate education in Scotland, and to abolish the old universities of St. Andrews, Aberdeen, Edinburgh, and Glasgow—institutions which, with one exception, were established by Papal authority and have flourished from a period anterior to the Reformation, and within whose halls intellects have been trained that have left their impress on the Empire?

'In this Dominion, as in the mother country, we must hold on to that which is good, and do our best to build up and give stability to those institutions which are calculated to advance the happiness and prosperity of mankind. May we cherish the idea that Queen's University is one of those institutions, and that it has an important mission to perform on this broad continent during centuries which are to come.

'This idea is pregnant with questions, and we are led to ask ourselves: "What is the proper work of Queen's, and how should it be performed? What should our country expect of this university, and what does our time especially need?" In attempting to answer these questions, I feel that we are called upon to consider not simply what course of education has been pursued in other generations or in other countries in order that we may follow it, but we are called upon to ascertain what is the best for Canada at this particular stage in her history.

'At various times within the past hundred years university education has been the subject of warm controversy, one party contending that a certain course of study is absolutely necessary, and another school urging that the importance of some other branch of learning is paramount. By one it is claimed that instruction should aim at exercising and training the mental faculties; by another, at imparting positive and useful knowledge. It is held

on one side that the ancient classics are indispensable as a means of culture, and of the highest value and importance as sources of information, that their study best develops the intellectual faculties, and has a strong humanizing tendency. On the other hand it is contended that the language and literature of ancient Greece and Rome should, to a large extent, be superseded by the physical sciences, and by other studies which, from a utilitarian point of view, may be deemed more practical. As in other controversial questions which are discussed with great force, it may be that both sides are correct, and yet neither absolutely true under all circumstances. There may be a half-way point where men may settle their differences; or, possibly, a purely classical education may be the best for one college or century or country, but not the most desirable under all conditions.

'Be that as it may, the question of university education has been exhaustively discussed by some of the ablest scholars and educationalists, and if they have been unable to agree as to the course which would best meet the necessities of the age, it might be deemed presumption were a layman like myself to venture a positive opinion one way or the other. My own crude views, which must be taken for what they are worth, are presented suggestively and diffidently, rough-hewn from the mental quarry.

'It will be conceded that the great object of education is the development of the human faculties, by the operation of such influences as will subdue our evil natures, will strengthen our best natures, and will cultivate and enrich the mind, so as to form the best possible individual characters. Its grand aim is to ennoble the propensities and tastes, to strengthen the moral sense, and to fit man to discharge his duties as an intelligent being, in the best manner of which he is capable in the land in which he lives, and in the age in which God has given him life. If this definition be accepted, it is clear that the system of education to be followed at this institution should be that which best meets the conditions laid down—that the University of Queen's, in order properly to perform its functions, and fulfil the hopes and expectations of its friends, must provide an opportunity for the Canadian youth to acquire a sound intellectual culture, and to enrich his mind with stores of thought, in order that he may be prepared well to perform his part in elevating the condition of his race, and in raising the character of his country in the scale of nations.'

The Chancellor sketched the history of education, and the circumstances which gave to the classics a pre-eminent place in the course of instruction. He suggested that, under the peculiarly complicated conditions of modern life, it was a question if the benefits to be derived from a classical education

were worth the serious expenditure of youthful years, years that could never be recalled.

'The child born to-day', he pointed out, 'in order to be abreast of the age in which he lives, has very much more to learn than the man who lived one, two, or five centuries ago. While the empire of learning has been prodigiously extended, human life has not been prolonged, intellectual capacity has not been enlarged, and the limited time which any individual can devote to college work has not been increased.

'It appears to me self-evident that educational training cannot be the same under all circumstances, and that what may be best at one period may require modifications as circumstances change and time rolls on. Although the thoughts of wise men among the ancients have been handed down to enrich the mind of the modern student, it must be borne in mind that great books have been written in more recent times, that human thought and life are spreading out in ever widening circles, and that modern literature, science, and philosophy present claims to a conspicuous place in any course of study; and it must be conceded that to become familiar with the highest efforts of the human intellect, modern as well as ancient, is surely a main purpose of a liberal education in the age in which we live.

'The learned gentlemen who are called upon to determine the course of study to be pursued at Canadian Universities will recognize that this age and this country have strong utilitarian tendencies, that the people of Canada want no superficial training, no half education at the higher seminaries of learning—that they desire to have the education of their youth as complete as possible. They expect university teaching to be made thorough, but they demand that the means placed at the disposal of the governors of the universities shall be applied to the best possible advantage, that high education shall be disseminated over the widest possible area, and that the time of those attending college shall in no way be wasted.

'It will be borne in mind that this country is widely different in some respects from the mother country—that we have no class who live on inherited wealth as in England, where many young men attend college simply as a condition of their social standing, to spend pleasantly the educational years of their early manhood; that in Canada there is but little accumulated wealth, that all are struggling to better their condition and to promote the general progress. Here all are children of activity, obliged to toil with head or hand, and the young men who attend college enter on a few years of earnest academic life for the purpose of receiving mental discipline and the best possible preparation for the work that lies before them, either in

the learned professions, in country life, or in the various industrial pursuits which may be open for them.

'With all the facts, all the experience, and all the arguments on both sides, the question for consideration appears to reduce itself to this: What would the same time, and care, and educational energy now spent on classics effect if devoted to the systematic study of modern literature, the sciences, and the literature of every race which may be had in our ordinary tongue, in the language which we speak and write and think? My own reflections, however diffidently they may be expressed, clearly point to a curriculum in which Greek and Latin will not predominate, in which these studies will not be imperative, and in which they will be largely curtailed of their exclusiveness, in order to place all important studies on an equal footing.

'My idea would be to restore to universities their original character, and to carry out the old scheme of a university in its widest sense. It would not be necessary to sacrifice any study now enforced, but it would be expedient to place them in their proper position, to extend all desirable studies, and to arrange the curriculum so as to cramp and dwarf no man's powers by forcing them into grooves which they cannot possibly fit. On the contrary, the fullest opportunity should be afforded for expanding the individual intellectual faculties in the direction in which nature intended they should grow. Individuality is one of the great wants of our time, and if not the sole, it should certainly be a chief, end of true education. Do we not, therefore, want a system which would bring out distinctions of character, and the best mental and moral peculiarities of our youth—a system which will give them, in addition to general culture, such solid attainments as will have the very strongest tendency to make them moral, useful, and refined?'

After an eloquent plea for the establishment of several new chairs at the university, the Chancellor turned to the students. 'I cannot', he said, 'too strongly impress upon you—students of Queen's University—that you should value highly the privileges to which you are here admitted. The importance of a sound college education is very great. True, there are many instances of men prospering in life without the benefits which flow from it, but these men are very heavily handicapped in the race. Occasional success proves nothing. Besides, it cannot be doubted that if men with capacity and industry have made their way in the world against every obstacle, without a college education, they would have accomplished more, and with much greater ease, had they been blessed with all the advantages which you will here enjoy. The education of men who have distinguished themselves in any

way without university training has been laboriously and in most cases imperfectly obtained through private study; and as exercise invariably strengthens the faculties whether physical or mental, the very obstacles which they have overcome have been of service to them in obtaining any degree of cultivation that they may have reached. But if you ask such men, they will tell you that their path to success would have been infinitely easier, and that they would in all probability have occupied a much larger sphere of usefulness to mankind, if circumstances had favoured them as they are now favouring you.

'Let me advise you not to throw away or neglect your grand opportunities. Do not trifle with your precious college days. You may not all win prizes or attract attention at examinations. The race is not always to the swift. Do not be discouraged if your morning star does not shine brightly. The shining may come later on in the day. Bring to bear on your work earnestness of purpose, self-reliance, perseverance, sobriety of speech and of behaviour, and you will be certain to vanquish every difficulty. Be determined to spend your college days to some purpose, and you will surely carry with you into the world treasures which no thief can steal, and a fortune which no adversity can take from you. You will be the indisputable owner of stores of thought and of happiness for all the days of your life. You will be the possessor of a trained and cultivated intellect, ready to do honour to the highest or the humblest calling, and able to leave your race and the world better than you found them.'

Fleming is still Chancellor of Queen's University, having been elected again and again to the high office. In his various addresses at convocation he has touched upon a wide variety of subjects, and has managed to put into them all the same spirit of broad-mindedness, tolerance, and kindly sympathy. His keen interest in the university, and all that it stands for, has never slackened. In a characteristically unostentatious way he has helped the institution financially on many occasions, and has always been ready and willing to give his time and thought to any movement looking to its betterment.

SANDFORD FLEMING, CHANCELLOR OF QUEEN'S

In April 1908 Queen's recognized his services to the University and the nation by conferring upon him the degree of LL.D. He had already received the same distinction from St. Andrew's University in 1884, and from Columbia University in 1887. While upon the subject of honours, it may be convenient to mention here the fact that, in recognition of his public services, he was created a Knight Commander of the Order of St. Michael

and St. George in 1897. He is a Fellow of the Royal Society of Canada, the Royal Geographical Society, the Geological Society, the Royal Historical Society, and the Victoria Institute, and a member of many historical, scientific, and engineering societies.

As Chancellor, Fleming has always been careful, while helping the university in any way within his power, to avoid interfering with the functions of the Principal. The framing of policy he left to the Principal, but in many ways, both inside and outside the university, he found it possible to be of very real service. His position and influence were of service outside, and his personal dignity and kindliness made him invaluable in smoothing over little difficulties among the members of the staff. He probably had a good deal to do with the choice of Dr. Gordon to succeed Principal Grant; and in this connexion a characteristic story is told by a member of the faculty. 'When Principal Grant died, and Sir Sandford and I were discussing the question of his successor, I suggested the name of one of the staff. "No," said the old man in his soft voice, "when I was an engineer at the head of surveying parties, I always found that it did not pay to make one of the gang head of the gang!" '

Fleming enjoyed the ceremonial part of his duties as Chancellor, and was in his element on such occasions as the reception in 1901 to the Duke and Duchess of York (now the King and Queen), and the conferring of an LL.D. upon Earl Grey in 1905. His simple kindliness and natural dignity lent a very real charm to such ceremonies.

The convocation of 1905, with the presence of Earl Grey, suggested to the Chancellor an incident of his childhood, which may very well close this chapter. 'The passing of the Reform Bill in August 1832', he said, 'was followed by public rejoicings throughout the country. The glens and parks of my native land had enthusiastic gatherings, in which all classes and all ages participated. My oldest recollection is of one of these gatherings with feasting and much rejoicing, bands playing and flags flying. Thousands of children were present, some of them, like myself, very young. A small flag was placed in my hands as we marched in procession, and again and again our shrill voices raised three cheers for Earl Grey, the great Prime Minister who had secured the passage of the measure, and the grandfather of His Excellency the Governor-General. These joyous acclamations of more than threescore and ten years ago made an impression so strong that they seem even now to re-echo through my memory. This was the first public function in which I had the privilege of joining.'

CHAPTER XX
AROUND THE WORLD IN 1893-4

The critical state of the Pacific Cable negotiations in 1893 induced Fleming to make a voyage to Australia, to assist the Minister of Trade and Commerce, the Hon. Mackenzie Bowell, in furthering the project in the antipodes. His daughter Minnie accompanied him.

They left Ottawa early in September for Vancouver, Fleming studying with never-failing interest the extraordinary changes that were taking place in the west. 'I thought I recognized an old camping-ground at Rat Creek (now Burnside) of our journey in 1872, when we met a party of Sioux. This was then the most westerly settlement. Now for miles on miles the steam thresher is gathering in the grain and leaving mountains of straw out to the far horizon.' A few days later they board the *Warrimoo* at Vancouver and are off on the long voyage to Australia.

For the first few days they experience cloudy and wet weather, but before long run into sunshine and warmth. Cape Flattery, the last of the American continent, had been left behind, and they will see no land again until they touch at Honolulu. 'The air is balmy, the breeze fans our faces gratefully, for we perceptibly feel that we are going south at the rate of over 300 miles a day. There is nothing to look at beyond the bulwarks of the ship but the white fleecy clouds which fleck the sky and the intensely blue water on every side, broken only by the foam of the vessel as she plows her way onward. Even the gulls seem to have tired following us. So we are a little world within ourselves, and we begin to find among the strangers who started with us from Vancouver more than one pleasant companion.'

A day or two later one reads in the journal, 'We are entering decidedly new seas, as flying-fish are discovered darting through the air a few feet above the water. The heat is perceptibly greater, but not uncomfortable.'

Two weeks from the day they left Ottawa, the ship enters the harbour of Honolulu. Native boys amuse them, while they wait to land, by diving for silver. They call on Major Woodhouse, the British Resident, and on the deposed Queen. 'We found her fully as dark as any of the natives, her manners very graceful, natural, and dignified. She talked with each of us for a few minutes. I ventured to say that I had already had the satisfaction of seeing Her Majesty in Westminster Abbey in June 1887, which evidently

gave her pleasure.' Time is also found for a drive out to the Punch Bowl, from which they have a splendid view of the interior of the island with its luxuriant tropical vegetation; and for a visit with the British Resident to the flagship *Philadelphia* of the United States squadron. They are off again a little after sunset, 'the receding island and the sparkling lights of Honolulu slowly vanishing in the full moon'.

No land again for ten days; and nothing to be seen but flying-fish with an occasional shark or porpoise. About noon on September 29th they cross the equator. 'Standing erect one has no shadow whatever. The sun is vertical over our heads. Strange to say, we did not feel the heat to-day nearly as much as on many previous days.' Two days later they cross the anti-prime meridian, and according to custom drop a day out of the reckoning. It is Sunday, October 1st, and the next day will be Tuesday, October 3rd.

The Fiji Islands are passed, but at too great a distance to be visible, and ten days after leaving Honolulu they are abreast of Walpole Island, near the eastern end of New Caledonia, treeless and uninhabited. A remark in the journal brings home to one the vast loneliness of the Pacific, even in this age of rapidly increasing ocean traffic. They had been on the Pacific for three weeks, and in all that time have seen only one vessel of any description, a full-rigged bark somewhere north of the Hawaiian Islands.

Exactly a month from the time they left Ottawa they are sailing into Sydney Harbour. 'A glorious day, the water like a silver mirror, albatross floating above the surface of the sea, porpoises leaping like salmon; then a bold headland, and we are steaming up the magnificent harbour, one of the finest in the world, seven miles of it, with varied and picturesque shores, and before us the great new city of the southern seas.'

The following day is spent in making official calls on the Governor, the Premier and other members of his Cabinet, and in a drive around Centennial Park, 'as well laid out and apparently larger than Regent's Park in London', also the Botanical Gardens, with their unfamiliar but peculiarly beautiful trees and shrubs, and the Art Gallery, where there are a number of fine European pictures and several excellent Australian landscapes.

Several days are spent at Sydney, discussing the Pacific Cable with Sir George Dibbs, the Premier, the Hon. H. M. Barton, Attorney-General, and other members of the New South Wales Government. The former entertains them at his beautiful home, 'Emu Plains,' and the latter takes them for a drive through miles of orange groves, ripe fruit and flowers on the same tree,

and the air laden with perfume. A cable to Ottawa, at about $6.50 a word, furnishes a practical illustration of the advantages of a State-owned system.

Monday morning they leave for Queensland, reach Newcastle at noon, an important mining town, cross the boundary the following morning, and change to the narrow-gauge railway of Queensland. 'We enter the Darling Downs, a magnificent pastoral prairie-like country of immense extent, the soil deep and black, like that of Manitoba. Great herds of cattle and sheep are seen on every side.' Another day brings more sheep, occasional orange groves, a wild high country, called the Liverpool range, where they run through half a dozen tunnels, then miles of fine timber, where kangaroo are occasionally seen, and Brisbane in the evening, where they are met by the Premier, Sir Thomas McIlwraith, and learn incidentally that it has been 101 in the shade during the day.

A day is spent sailing about Moreton Bay as the guest of the Premier, with the Governor, Sir Henry Norman, and a large party of representative men of the colony. The Premier publicly announces his support of the Pacific Cable project, and authorizes the press to publish a special memorandum Fleming has prepared. Dinner at Government House, where they meet Sir Samuel Griffith, who had represented Queensland at the Colonial Conference in 1887. As they are leaving the following morning for a trip to one of the famous gold-mining stations, 'the morning papers are full of the Pacific Cable, the general tone of the comments most encouraging'. A special train takes them to Bundaberg, through palms and immense fields of sugar-cane, 'growing with great luxuriance in a rich volcanic soil'. A day or two later they return to Sydney, and leave for Melbourne.

At the station in Melbourne the traveller is greeted with a cheerful cry, 'How are you, Sandford?', and recognizes his old friend Peter Martin, whom he had last seen fifty-four years before in Kirkcaldy. They had kept up a correspondence for a few years, but Fleming had to admit that he had been a little tardy in replying to Martin's last letter, received thirty-nine years before. 'Peter and I went arm and arm along the streets of Melbourne, and had much to say to each other of all that had taken place in the long years that had passed. It is curious to contrast our quick passage from Vancouver with his voyage of 1839, when he took five months to sail from the British Isles to Australia.' Conferences follow with the members of the Victoria Government about cable matters; they dine with the Governor, the Earl of Hopetoun (afterward first Governor-General of the Commonwealth); and the following day Fleming addresses the Chamber of Commerce on the Pacific Cable.

From Melbourne a visit is paid to Adelaide, the capital of South Australia, where they are the guests of the Lieutenant-Governor. Conferences with the ministry follow, and they return to Melbourne in time for the Australian Derby—100,000 people and tremendous enthusiasm—and back again to Adelaide, where, after a month in Australia, they sail for England on the *Britannia* by way of Ceylon and the Red Sea.

Under date of November 17, the journal contains the following entry: 'Aroused from bed at 4.30 a.m. to see the Southern Cross. I have looked for it in vain since we left Honolulu. It has happened in the early part of the night to be under the horizon. To-day I have seen the constellation in a clear sky, but fifteen minutes later would have been too late, as the sky became overcast. However, I have seen it before leaving the southern hemisphere, and I must confess it is disappointing.' Three days later they once more cross the equator, 'quite warm, but a pleasant breeze'; and two more days brings them within the breakwater at Colombo. A day is spent on shore driving about in jinrickshas, visiting Buddhist temples, and shopping in the bazaar. When they return to the ship Fleming is pleased to find that among the new passengers is Henniker Heaton, whom he had met in London.

The voyage across the North Indian Ocean is all that could be desired. 'The ship glides forward through smooth tropical seas, a pleasant balmy breeze from the north-west, and with our light clothing we feel perfectly comfortable. Games of various kinds on deck under the shady canvas; and a dance in the evening which all seem to enjoy.'

On the morning of St. Andrew's day they enter the harbour of Aden, with its bold rocky headlands jutting out to sea. The deck is soon crowded with Arab traders selling odds and ends, and, as at Honolulu, the water is crowded with native boys diving for small coins, 'and keeping dexterously out of the way of sharks'. A diversion is furnished on the way up the Red Sea by a down steamer crossing the bows of the *Britannia* during the night and narrowly escaping a collision. In the morning they get a glimpse of the coast of Nubia and Abyssinia in the far distance, but for the most part they are out of sight of land.

The ship is held up for several hours at the first station in the Suez Canal. The Khedive is making a trip through to Suez, and must have the right of way. 'Barren sand on either side running up to high hills on the horizon.' They land at Ismailia, bid farewell to the ship, and take the train to Cairo.

After a day in sight-seeing, visiting the principal mosques and the bazaars, they take a river steamer up to Memphis and Sakkara. 'We land at a

village, and are met by a swarm of Arabs with their little donkeys, who struggle for possession of each member of the party. So we drive to Memphis, and among its ruins try to reconstruct the magnificent city of long ago. On the way to Sakkara we pass on one side a collection of primitive mud huts, and on the other the colossal statue of Rameses II lying prone. A few miles bring us to the pyramid of Sakkara, and the burial-place of the sacred bulls, an underground gallery with twenty-four great granite sarcophagi. With the everlasting cry of "Backsheesh!" ringing in our ears we ride wearily back to our boat on the river, and return to Cairo.'

The next day is given to the Great Pyramid. They enjoy the drive from Gizeh through the acacias, and are interested in the labourers in the fields digging with heavy hoes, and rude wooden ploughs pulled by oxen, and the solemn camels that pass them on the road with their heavy loads of merchandise. Also they stand respectfully before the Sphinx, but ask her no questions.

The afternoon train takes them to Alexandria, 'through a wonderfully fertile land much like that of the Red River country'. The sun sets behind the pyramids, and a little after dark they have reached their destination. The following morning they take one of the steamers of the French Line to Marseilles. Among the passengers is the son of an old Edinburgh acquaintance of half a century ago. The sea is rough, and after crossing the Pacific and Indian Oceans, they have their worst experience in the Mediterranean Sea. The next day or two are uneventful, with glimpses of Etna and Vesuvius, the north shore of Corsica, the romantic isle of Monte Cristo, and Elba, with its memories of Napoleon. They pass the north cape of Corsica, and leave the island behind, looking back in silent admiration at its snow-covered peaks gleaming gloriously in the sunshine, with the blue sea all about.

From Marseilles they travel to Bordeaux, and after resting for a few days at a neighbouring watering-place, leave for Paris and London, where several busy weeks are spent in furthering the interests of the Pacific Cable. The last day of the year finds London 'black with fog and smoke, and wretchedly cold', but they go to hear Archdeacon Farrar. Sir Charles Tupper arranges a meeting with the Colonial Minister, Lord Ripon, and Sydney Buxton, the Under-Secretary, and Cable matters are discussed to some little purpose. Another entry in the Journal mentions a board meeting of the Hudson Bay Company, of which ancient fur-trading corporation Fleming was a director for more than a quarter of a century. A note is prepared for Lord Ripon on

Necker Island and the importance of securing it as a landing-place for the Pacific Cable.

January 7, reads the Journal: 'My birthday. I am sixty-seven years of age to-day, well on to the allotted span of threescore and ten. Lunch with Lady Mount Stephen, and walk through St. James's Park, where we see children skating.'

A week later they sail from Liverpool on the *Etruria* for New York, having a very rough passage with almost continuous gales. They return to Ottawa January 22, after an absence of some four and a half months.

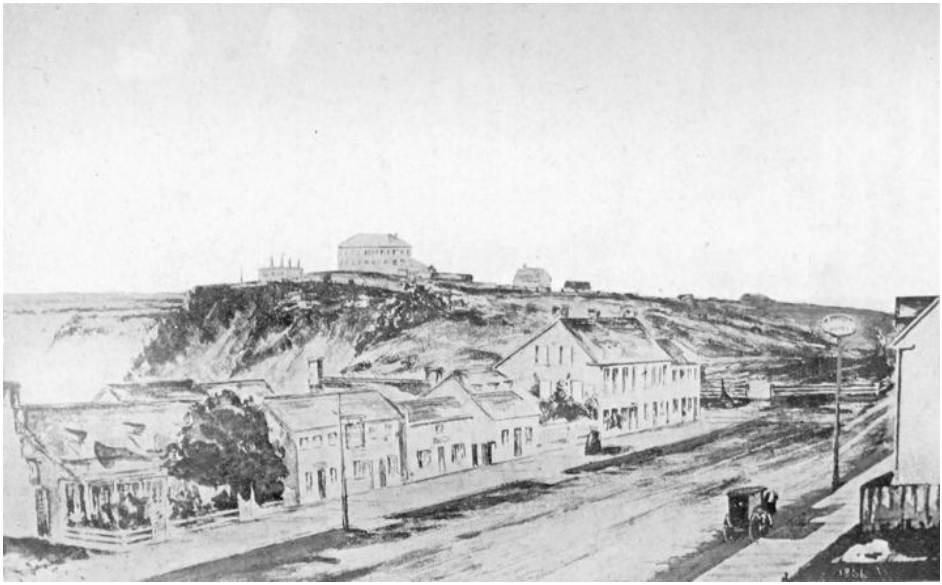
CHAPTER XXI
'BUILD UP CANADA'

In an address to the Canadian Club of Toronto, in February 1904, under the above title, Fleming not only reviewed the progress of transportation in Canada, with which he had himself been so intimately connected, but also, in the light of what had already been accomplished by the young Dominion in the latter half of the nineteenth century, confidently laid down an even broader policy for the bigger and stronger Canada of the twentieth century.

He told his hearers that nearly half a century before, in the town of Port Hope, he had discussed the same broad subject of transportation. It is worth while to be reminded occasionally what gigantic strides have been taken in the development of lines of communication within that period.

'Let me, in the first place,' he said, 'remind you that in 1858 there was not throughout the whole extent of North or South America a single transcontinental railway; that there was scarcely a mile of railway in the United States west of the Mississippi, and a very small mileage west of Chicago; that the greater and by far the most valuable portion of what is now known as the Dominion of Canada was held as a vast hunting-ground by the Hudson Bay Company, and it was indeed fortunate that it was so held, as the present and future generations of Canadians will testify. At that date the eight or ten provinces and territories west of the longitude of Lake Superior were not thought of. British Columbia itself was not even a Crown Colony. The city of Ottawa as the capital of the Dominion was unknown. Winnipeg did not then exist. Ten years later, there were only a few people around Fort Garry and along the banks of the river, chiefly Scotch and French half-breeds, known as the Red River settlers. Exclusive of pure Indians, there were probably not more than eight thousand people in the whole North-West. The settlers were shut off from the outer world, except by such means of communication as that furnished by dog-trains in winter and canoes in summer, together with Red River carts. It is a remarkable fact that in 1868 the inhabitants of that country which now exports yearly tens of millions of bushels of wheat were nearing starvation for want of it, owing to the devastation of a plague of grasshoppers. The Red River settlers gratefully received some thousands of bushels of grain purchased by the generous minded in the Eastern Canadian cities and transported in carts across the

plains from the nearest railway station, some five hundred or six hundred miles south of what is now the metropolis of Manitoba.



OTTAWA IN 1845

'Long before this date the British North American provinces were not without pioneer builders. There were the far-seeing men who projected and subsequently built the Welland Canal, the Rideau Canal, the St. Lawrence Canals, and designed the Trent Valley Canal. We must likewise bear in remembrance those who projected the Shubenacadie, the Baie Verte and the two Georgian Bay Canals, one of the latter projected to terminate at Toronto, the other to use the River Ottawa. If all these projects have not become accomplished facts, we must nevertheless extend to those who promoted them the credit which is due to their patriotic intentions. In 1858 there were striking illustrations of progress within the Empire; in that year the first Atlantic cable was laid, and the *Great Eastern* was launched.

'In 1858, too, the railway era had commenced in Canada. We had in operation the line from Toronto to Collingwood, the Grand Trunk in part and the Great Western in part. There were several smaller railways extending northerly from Lake Ontario and the St. Lawrence into a region rich in pine. In that day there were a few public-spirited, sanguine men who had the hardihood to peer through the pine forests and the wooded wilderness of a thousand miles to Canada's richest heritage, the prairie region. Again their

mental vision carried them across the rolling prairies another thousand miles to gaze on the mountains with the setting sun and the ocean beyond them.

'These daring—shall I say visionary?—spirits did not think Canada was destined to stop short at the Georgian Bay and the tier of counties lying eastward of Lake Simcoe. There were dense forests to subdue. The Ottonabee, the Trent, the Ottawa and other rivers had abundance of water-power to prepare for exportation the timber then growing in the tributary forests. It required no seer to see that these forests would become exhausted, and that new fields and other sources of industry would have to be sought out. Precisely as we have to-day, there were men then who inscribed on their banners the words "Build up Canada", and visionary and impracticable as it seemed to many, they formed the resolution to carry their standard across the home of the buffalo and the distant Rocky Mountains.

'Here we have the inception of the Canadian Pacific Railway. To a large number of people it undoubtedly was regarded as an idle fancy, the dream of chimerical men never to be realized. The enormously large works involved were not common at that stage in the history of engineering undertakings. The proposal to build a railway through uninhabited British North America, over one of the great mountain ranges of the globe, across a roadless continent, respecting much of which nothing was known, when looked at soberly by the practical man presented to him a project which passed at a single leap from the plane of ordinary undertakings to the lofty sphere of enterprises of the grandest description. It surpassed in every element of magnitude and cost, and probably also in physical difficulties, any work ever previously undertaken by man.

'But what were the purposes to be achieved? Were they not inestimably important? Wonderful commercial results could be counted on, and it was felt that the national, the imperial, advantages and possibilities were far beyond the conception of the most sanguine of far-seeing men. The undertaking would have an immediate effect in expanding Canada, then limited to two provinces in the valley of the St. Lawrence; it would be of the greatest advantage to the mother country in opening up new channels for the enterprise of British merchants. The railway from the Atlantic to the Pacific when completed would bring nearer to England her Eastern Empire; it would unite with a new bond the interests and the affections of the Queen's subjects in Europe, Asia, Australasia, and America; it would secure in perpetuity British dominion upon this continent; it would promote the occupation and civilization of half a continent, and go a long way to lay the foundation of what might be regarded as a Canadian Empire.

‘In erecting an ordinary house, or in carrying out any undertaking, every intelligent man sets before him a general plan. In building up a state precisely the same course should be followed; and above all things the prudent, far-seeing state-builder will endeavour to secure the elements of strength in the foundations and in the framework of the national structure. In this respect let us see where we stand. We have certainly commenced on no insignificant scale. We have taken possession of the great inheritance which the mother country has generously passed over to our ownership—a vast inheritance fronting on three oceans. We have assumed all the responsibilities of ownership and occupation. We have made a beginning towards its development; among other things we have established a continuous line of railway from the most eastern to the most western province. This is a beginning, but it is far from being adequate. We all know that no edifice will remain erect on a single wall, that no tower will stand with but one corner-stone. It is patent to every person that any structure whatever, in order to stand the stress of time, must be given a broad and sure foundation.

‘Taking our railway system as an index of our development, let us spread before us a railway map of the Dominion. What do we find? Ontario east of Lake Huron, Quebec bordering the St. Lawrence, and in part New Brunswick and Nova Scotia are provided with a network of railways. Manitoba, at least its southern half, is gridironed with railways, and railways are rapidly being extended westward. East of Manitoba, however, as far as Lake Huron, indeed almost to the River Ottawa, there is comparatively little to indicate progress. There is, in truth, absolutely nothing for hundreds of miles north of Lake Superior if we pass out of sight of the single track of the Canadian Pacific Railway. In this one fact we have disclosed a remarkable circumstance which in my judgement demands serious and immediate attention.

‘The railway development in and beyond Manitoba is an indication of the rapid settlement of that portion of the Dominion. Looking forward into the future, it is easy to see that the population of the west will be rapidly increased. It may indeed be regarded as a certainty that the time is not remote when there will be as many inhabitants west of Lake Winnipeg as east of Lake Superior. What then will follow, if meanwhile no sufficient effort be made to reclaim the vast intervening territory? Obviously our people will be geographically divided. Within the limits of the Dominion there will be two great groups distinctly separated by a vast unpopulated wilderness, constituting a dangerous area of cleavage. It is impossible to forecast the outcome of this separation of the Canadian people. We are

unwilling to think that political separation will follow, but we must not hide our heads in the sand and remain in a fool's paradise. We must look at facts, and we shall see that there is a grave danger of a gradual alienation of the separated inhabitants, with the possibility of some new political combination. We have no means of foretelling what may come in another generation, but this we know, that mighty changes often come suddenly. The physical link between the two widely sundered halves of the population would be exceedingly slender, even if the single railway line along the coast of the lake be double-tracked or quadrupled. We can imagine how easy it would be for a flotilla any day to render the railway useless, or a filibustering organization to land any night at a preconcerted hour and at a score of places destroy the line of communication. Such expeditions need not necessarily be connected with the neighbouring Republic. The agents of any foreign unfriendly power would have little difficulty in secretly arranging a sudden descent at a critical moment.

'I have indicated in a few words that there is a vital problem presented for solution, a problem which cannot with safety be neglected. Ordinary foresight points out to us a real and a double danger. (1) Under certain circumstances the unity of the Dominion, it may be said, will practically hang on a thread. (2) If the unity of the Dominion be left insecure, the integrity of the Empire will be imperilled. I would ask, by way of illustration, how could the globe-girdling British telegraphs be maintained if disjointed at Lake Superior? The nerves of the Empire can follow no route across North or South America between the two oceans except through united Canada. Again, how could British sailors be sent across the continent to man the Pacific fleet if the continuity of the communication be broken between the two oceans? These mere random illustrations to show the jeopardy of our situation will suffice, as in such a matter one is as good as a hundred.

'Forewarned is forearmed. I have pointed out a great and unmistakable weakness. To substitute strength for weakness obviously is a matter which concerns our country to its inmost depths. A solution of this vital problem will be found in the watch-words "Build up Canada".

'For twenty degrees of longitude east of Manitoba and stretching far north of the latitude of Lake Superior there extends a vast territory respecting which comparatively little is known. In order to comprehend its extent let us look at the map. Draw a line from the north-east angle of the Province of Saskatchewan (the old boundary) to the River Saguenay where it enters the St. Lawrence after passing the farming settlements around Lake

St. John. West of these settlements the line drawn is somewhere about 1,100 miles in length. The line is generally parallel to the Canadian Pacific Railway between Manitoba and the River Ottawa, and some 350 or 400 miles north thereof. Between the two lines there is a space equal in area to more than four Provinces of Manitoba. This space remains entirely in a state of nature. It is almost unmapped, wholly unopened, wholly unsettled, wholly unoccupied, practically without a white inhabitant.

'It is not an outlying tract, away from the body of the Dominion. The map shows that much of it is in the geographical centre of our country and may be regarded as the body itself. So far as known, its climate is not widely different from that of other parts of Canada which have long been settled. From recorded meteorological observations Moose Factory on its northern side and on the margin of Hudson Bay has a winter and summer temperature much the same as Winnipeg, and the average snowfall is less than half that of Montreal or Quebec. It cannot be compared in general fertility or readiness of access to the rich open prairie, yet the worst that can be said of this great region is that it is a woodland wilderness. It would scarcely be correct to speak of it as an inhospitable waste, for the same may be said of all such lands in their natural condition and until opened up by railways and roads and made available for human industry. In a country so extensive as this, a tract of virgin wild land more than double the superficial area of England, Ireland, and Scotland combined, we may look for varied natural assets awaiting development.'

After a brief reference to the agricultural, mineral and other resources of this northern region, he went on to say:

'Looking forward but a few years the Dominion may come to possess in the hinterland of Ontario a new seaport. As is well known, the northern boundary of this province reaches Moose Factory on the south coast of Hudson Bay, and it is worthy of note that the great seaman who discovered the Canadian Mediterranean which has always borne his name reached this quarter on Michaelmas Day in the year 1610. The following day, having sailed round to the mouth of Nottaway River, his small ship was laid up for the winter, and there remained from November 1 until the following June. Perhaps Moose Factory may not be the best naval point on that great inland sea, but whatever point may be favoured the new seaport would in some respects resemble Archangel. That Russian port is in a parallel of latitude thirteen and a half degrees (or more than 900 miles) farther north than Moose Factory. Archangel is a seaport of importance, with a dockyard and a prosperous shipping trade. Its population is not inferior to some of our

Canadian cities, and before the founding of St. Petersburg it was long the only seaport within the limits of Russia. Can any person now living foretell what the only seaport of Ontario may yet become?' (Ontario has since been given a much better port at the mouth of the Nelson River.)

'In an address at the Guildhall, Mr. Chamberlain pointed out that one hundred and thirty years ago a great statesman of the neighbouring republic, Mr. Alexander Hamilton, bequeathed a precious legacy to his countrymen when he said to them, "Learn to think Continentally." The late Secretary of State for the Colonies gave an equally precious message to those whom he addressed when he said, "Learn to think Imperially." We in Canada will do well to take to heart both messages and learn to think at one and the same time Continentally and Imperially. What, I ask, might too soon follow if we remained inert in thought and sluggish in action? What if we spurn the advice of both statesmen and at this stage in our history remain basking in fancied security? The grave matter I have touched upon is not a local question. It does not alone concern any one city or any one province. It is a large question in which the whole Dominion is profoundly interested. The citizens of Toronto, of Montreal, of Winnipeg, equally with the citizens of Halifax, Quebec, and Vancouver should think of it Continentally and Imperially. If they so view it, I am satisfied each and all will reach the conclusion that in the whole range of the Dominion there is no question which demands more wise and more patriotic consideration. Between the Atlantic and the Pacific there is nothing more urgently needed than the opening up, the settlement and the development, of that vast unpeopled wilderness to which I have directed your attention. It is with the utmost deference I submit, in the interests of the Canadian people, that their representatives in Parliament will inadequately discharge their responsibilities if they fail to adopt the most effective means of building up Canada where breadth and strength and consolidation are wanting so conspicuously.'

He then outlined the railway plans of the Dominion Government and the Governments of Ontario and Quebec, and strongly urged the establishment at the earliest possible moment of a second transcontinental railway across Canada 'on the shortest line from Quebec to Port Simpson', which would be by way of Norway House at the northern end of Lake Winnipeg. In support of this route he offered the following reasons:

'(1) It will be universally recognized that it is not in the public interests to have all the great lines of communication of the Dominion between the east and the west passing along the immediate shore of Lake Superior. This

admitted, every argument applies, only in a less degree, against bringing all the through avenues of traffic so near the frontier as Winnipeg. Obviously our plans for the future should be formed so as to avoid the concentration of the whole traffic of the great North-West at any one point near the frontier. The physical features of the country do not render it necessary, and such a course is manifestly undesirable in the interests of Canadian commerce. Does not a large bulk of Manitoba grain now find its way through the United States to be shipped from United States seaports? According to reliable authority, six, eight, and ten millions of bushels a year have been so shipped. Sir Thomas Shaughnessy stated to the Canadian Club that last year it reached nearly fifteen million bushels, and it may be expected that this transfer from Canadian to United States channels will go on increasing with the increase in the total yield.

'(2) Winnipeg is the metropolis of Manitoba, but the fertile plains of Manitoba constitute but a fraction, perhaps not an eighth, of the vast fertile area of the North-West. If we add to Manitoba all the prairie country westward to the mountains and as far north as the Province of Saskatchewan, we have an extensive region which may properly be regarded as tributary to Winnipeg. There remains to be opened up by far the larger half of the productive North-West. An inspection of the map will satisfy any one that unquestionably the northern half can best be served by the construction of a trunk railway on a northern route.

'(3) A railway built on the northern route would be the shortest line between the two oceans, besides being the most direct for the products of the northern half of the prairie region to the nearest Canadian shipping ports.

'(4) By establishing on the northern route a modern first-class railway devoid of gradients and every other hindrances to cheap transportation we would possess the means of carrying the products of the northern half of the prairie region to Canadian tidal ports at all seasons of the year at less cost than by any other route whatever. The advantages of the lake route have been much extolled. Transportation by water certainly has advantages under certain circumstances, but it also has limitations due to climatic and geographical conditions. In all probability the country west of Winnipeg, and Winnipeg itself, will continue to enjoy during summer all the advantages which the lakes can yield, but there is a vast cultivable country farther north and west from which it is believed freight may be carried to Quebec by railway on the northern route at less cost than by the lake route. Of course it will be understood that this is conditional upon the line to be constructed being free from such gradients as we find on ordinary Canadian

railways, a condition which can only be definitely determined by adequate surveys. Should such a favourable line be established as is believed possible, I venture to state that, owing to the reduced total mileage, and still more owing to the reduced gradients on the new line, grain may be carried to Quebec by the direct route at less cost than by the southern route, even if carried almost free of charge across the lakes from Fort William to Dépôt Harbour, Owen Sound or Sarnia. This of course only applies to the half-year of open navigation; during the other half-year the northern route would be without a rival worthy of the name.

'(5) A railway constructed on the northern route would at all times and seasons be a reliable outlet from the granary of the Empire in the heart of Canada to tide-water. Moreover at Quebec in summer and at the open ports of the Maritime Provinces in winter the ships transporting produce to Great Britain would when necessary be placed under the express protection of the British fleet.

'(6) Such a railway constructed between Quebec and the western prairies on the northern route would be a national highway in every sense. Its immediate effect would be to broaden the Dominion, to add strength where strength is so much needed, to establish many new centres of industry, and thus the country would steadily become populated and consolidated. What is now a widespread wilderness would be converted into one of the most important divisions of the Dominion.

'I have submitted to you in an imperfect fashion a sketch of some circumstances connected with the development of the leading lines of intercommunication in the Dominion. All that now belongs to the past; it may be regarded as the pioneer and preliminary work in the evolution of a nation. We have now reached the beginning of a new chapter in our history when, with unabated interest in all that concerns our welfare, new energy and fresh vitality are demanded in the work of consolidation. I am not advocating any far-away project. I have felt it my duty to point out that there is a vast new and neglected field practically at our doors. By the progress of events Canada is now brought face to face with a great threefold problem: (1) To reclaim an unpopulated wilderness of immense extent and of unknown value near the heart of the Dominion. (2) To establish a second transcontinental railway on the shortest practicable route between the tide-water of the Atlantic and the tide-water of the Pacific. (3) To construct the eastern half of the transcontinental railway as a national highway, an Imperial highway, to convey the products of our illimitable wheat-fields to our own seaports for transportation to market at lower rates than by any

other route. If such can be accomplished, as I believe it can, I am satisfied that nothing else would so much make for national solidarity. Nothing else would so much advance Canada and fit her to take her permanent and proper place in the galaxy of British States constituting the new Empire.

'Those of us who have always had a living interest in the welfare of our country will see from what I have submitted that there are dangers to be guarded against, to which we should not shut our eyes. All will recognize that we should be on the alert, that we should take time by the forelock and seek to avert such dangers; that we should continually make progress, but that our progress should be made in harmony with the dictates of prudence and common-sense.

'In the words of our Finance Minister, there is abundant evidence to prove that "the Canadian Government and people are determined in all ways to promote Imperial unity". I submit that we can materially promote the unity of the Empire by discharging a duty very near us, a duty vital to our own permanency and prosperity. Many of us, perhaps all of us, have had from early days faith in the future of Canada. For my own part I am more convinced than ever that through the powerful and peaceful influence by sea and land of the twin sisters of civilization, steam and electricity, rightly directed our future is assured.

'We are proud to feel that our country is no small factor in the great British Empire of the twentieth century. We have room and to spare in our wide domain for a large augmentation of our industrious, intelligent, and moral population, and we throw open our doors to all such as may be prepared to face a somewhat rigorous climate and to overcome difficulties in subduing the wilderness. To such as may join us in developing the resources which nature has so lavishly bestowed we gladly offer to share the fruits which will follow our joint labours.

'Our aim is to make the Dominion compact, strong, and prosperous. Our design is to have one Canada from the St. Lawrence to the Pacific. Under the free institutions which we have inherited from the mother land, with a virile population which has sprung from the foremost European races, united in this favoured land by common interests and common sentiments, we look forward to our destiny without fear and with much hope. We desire to make our country a great northern nation, in family affinity with an Empire whose noblest aspiration is peace and good-will to all the nations of the earth.

'This is the high ideal we set before us in our strenuous efforts to build up Canada.'

CHAPTER XXII
AN IMPERIAL MONUMENT

In a debate in the Legislative Council of Nova Scotia, in the session of 1908, we were reminded that one hundred and fifty years ago was held the first meeting of the legislative assembly of Nova Scotia, that the assembly has met annually from that day to this, and that next to the Mother of Parliaments it is therefore the most venerable body of its kind in the British Empire.

The significance of the fact appealed to Fleming's patriotism. Here was an opportunity of bringing home to Britons the world over the priceless boon they enjoyed of self-government. In a letter to the mayor of Halifax, early in May 1908, he referred to the fact that 'the first house of representatives of the people, who were elected under instructions from His Majesty the King, assembled in Halifax on October 2, 1758, arrangements having been made by Governor Lawrence, representing the King, the previous May—this very month 150 years ago'. 'The fact alluded to', he continued, 'is of great significance, and has an intimate relationship to the development of the Empire. To-day representative government, essentially an outgrowth of the love of justice and liberty inherited from the races forming the British people, reached its present stage through centuries of conflict dating back to the conquest of 1066. The spirit of representative government is inherited from England, and it is worthy of note that the first legislative assembly in the Dominion—the first in the present Empire outside of England—was assembled under instructions from the British King in Nova Scotia in 1758. After the lapse of a century and a half, when representative government is becoming co-extensive with civilization, is it not fitting that Nova Scotians should in some marked manner denote an historical fact in which they are so much interested and directly associated?'

A month later he took the matter up with the Lieutenant-Governor of the province. 'The event', he says, 'appears to have been the beginning of a new order of things in colonial administration. At this date we must recognize what it signified, that it was actually the first step in the enfranchisement of the people in the oversea possessions of England, and that it may indeed be regarded in its essential principle as the foundation stone upon which has been steadily developing and is to-day being firmly built up in both hemispheres, the British Empire of the centuries to come.

'Nova Scotians may rightly claim the 150th anniversary of such an event as an occasion of which they may well be proud, and all must agree that it should be celebrated in some becoming manner.' He then went on to suggest what seemed to him an appropriate memorial of the occasion—the erection by popular subscription of a tower that would stand to all future generations as a tangible reminder of their inestimable heritage.

In addressing a public meeting in Halifax the same month, he said:

'The monumental edifice contemplated should in some distinct manner indicate the purpose of its erection. It should commend itself by the extreme simplicity, massiveness, and grandeur of its general outline; at the same time every course of masonry should have its distinct meaning. The whole structure might most fittingly, I think, take the general form of an Italian tower. The foundation course would testify to the beginning of representative government in the outer empire.' He went on to suggest an architectural treatment of the upper portions of the tower that would appropriately illustrate the development of representative government, and commemorate the great names associated with its history.

To show his own interest in the project, he offered the finest site on his property on the North-West Arm for such a tower, or any other suitable monument that might be decided upon, and at the same time promised to convey to the city of Halifax seventy or eighty acres of land surrounding the site, to be set apart as a public park.

Further consideration of the proposed memorial led to the conclusion that its significance would be enhanced by making it a national rather than a provincial monument. The matter was therefore placed in the hands of the Canadian Club of Halifax, through whom contributions were invited from public bodies and individuals throughout the Dominion. The responses were so widespread and so generous that the cost of erecting the tower was amply provided for, and on the one hundred and fiftieth anniversary of the day upon which the first provincial assembly was opened in Halifax the Lieutenant-Governor of Nova Scotia laid the foundation-stone of the building.

Before the work was proceeded with, however, it was brought to the attention of the Canadian Club that not only Canada but other parts of the Empire would be interested in the Memorial Tower, and it was decided to again broaden the scope of the undertaking so that it might take the form not merely of a provincial, or a Canadian, but of an Imperial monument. Fleming had already been in communication with some of the leading public

men of Australia, New Zealand, South Africa, and other parts of the Empire, all of whom expressed the deepest interest in the project, and in January 1910 a circular letter was addressed by the Canadian Club of Halifax to 'The Governments and People of New Zealand, Australia, South Africa, and Canada', setting forth the history and objects of the movement.

'It will be apparent', says the circular, 'that there is nothing narrow or provincial in the earnest desire to obtain the sympathy and co-operation of the sister states of the Empire in the project of a Memorial Tower at Halifax. It will be obvious that we are simply taking advantage of an exceptional opportunity, an opportunity which should not be neglected, of enlisting our fellow-subjects beyond the seas in a common sentiment and a common purpose. If nothing else resulted, the mere effort to bring them thus together, with the corresponding awakening of interest and sympathy, must have an important and highly beneficial effect on our mutual citizenship. The character of the building itself, its architectural design, or the amount of money to be expended upon it, are matters of comparatively minor importance. The vital consideration is the spirit that lies behind the project. This building will commemorate one of the most significant events in history, it will tend towards a sympathetic union of the far-flung members of the British Empire, and thus enhance a thousandfold the value of the memorial. In the Halifax Tower will centre memories, hopes, and ambitions that will gain significance and importance as the years roll on. It will take its place not as a merely local or provincial monument, or one whose appeal reaches only to the utmost boundaries of the Canadian Dominion, but as an embodiment of the spirit which animates the people of the Empire in both hemispheres, an attestation of the partnership of the sisterhood of nations all under one Crown.'

Accompanying the letter is the following list of the twenty-four autonomous communities within the circle of the British Empire, with the year and place of the first Assembly in each case:

1. Nova Scotia..... in 1758 at Halifax.
2. Prince Edward Island..... in 1773 at Charlottetown.
3. New Brunswick..... in 1786 at St. John.
4. Newfoundland..... in 1833 at St. John's.
5. Cape Colony..... in 1853 at Cape Town.
6. New Zealand..... in 1854 at Auckland.
7. New South Wales..... in 1855 at Sydney.
8. Victoria..... in 1855 at Melbourne.
9. Tasmania..... in 1856 at Hobart.
10. South Australia..... in 1856 at Adelaide.
11. Quebec..... in 1867 at Quebec.
12. Dominion of Canada..... in 1867 at Ottawa.
13. Ontario..... in 1867 at Toronto.
14. Manitoba..... in 1871 at Winnipeg.
15. British Columbia..... in 1872 at Victoria.
16. Queensland..... in 1879 at Brisbane.
17. Western Australia..... in 1890 at Perth.
18. Natal..... in 1893 at Pietermaritzburg.
19. Commonwealth of Australia.. in 1901 at Melbourne.
20. Alberta..... in 1906 at Edmonton.
21. Saskatchewan..... in 1906 at Regina.
22. Orange River..... in 1907 at Bloemfontein.
23. Transvaal..... in 1907 at Pretoria.
24. United South Africa..... in 1910 at Cape Town.

The responses to this appeal were as gratifying as in the former case, and the Memorial Tower was rapidly brought to completion. On August 14, 1912, it was formally dedicated on behalf of the people of the British Empire by His Royal Highness the Duke of Connaught, Governor-General of Canada. It stands as a perpetual monument to the liberties of the British race, and as a beacon to lead them onward. 'We may rest assured', says Fleming, 'that the British Empire, built up on the principles of freedom, justice, equal rights, and the self-government of all its autonomous parts, is not destined to pass away like the empires of history. The new empire is inspired by a spirit unknown to the empires founded on absolutism. It is a union of free and enlightened communities, dedicated to the cause of

commerce, of civilization, and of peace; and who can doubt that such a great political organization is destined to endure? Every improvement in transportation, in postal arrangements, and in telegraphy by land and sea, is calculated to facilitate inter-communications and to foster friendships among kindred people, and thus to perpetuate their attachment to the cradle of the British race, to the source of that unequalled constitution which is their highest inheritance.'

CHAPTER XXIII
EVENTIDE

In the study at 'Winterholme' is a desk piled high with books and papers, and beside the desk stands a little table kept scrupulously clear of everything but writing materials. Walls of books rise from floor to ceiling on every side, and their titles tell the tale of the life-work of the man whose personality dominates the place—Reports on the Intercolonial and the Canadian Pacific Railway, volumes of pamphlets on the Pacific Cable and the Standard Time Movement, publications of the Canadian Institute, and material on many subjects touching the welfare of Canada and the Empire. With these are also many works of standard literature, history, biography, travels, science, for the owner of this library is a man of catholic taste, a student and a wide reader as well as a man who has done things.

Before the little table he sits, writing to or answering letters from correspondents in every quarter of the globe, glancing through a magazine article or a pamphlet on some question of national or imperial policy, or perhaps making notes for a contribution of his own to one or other of the various subjects which he has made peculiarly his own, and in which his interest is as keen and shrewd as it was twenty-five or fifty years ago.

His manners are those of the old school, nor will he accept the privilege of his years to dispense with any of the courtesies which he considers are due to his guest, be he an intimate friend or the most casual of visitors. He may be in the middle of a letter or article when you are announced, but he rises immediately and welcomes you with a warm clasp of the hand and a kindly smile. His tall figure is still erect, in spite of the burden of more than eighty-seven years, his face is full of character—one sees in it humour, kindliness, and strength—and his finely-chiselled head with its crown of silver hair, and its suggestion of moral and intellectual power, makes a picture that one is not likely to forget. It matters little what subject you have come to see him about, you are sure of a friendly and patient hearing, and you can count, too, on the benefit of a judgement that is broad and fearless, though never hastily formed, that has seldom been at fault, and that has ripened in the light of long experience. When you take leave of him the same perfect courtesy impels him to escort you to the threshold of his home, and you carry away with you the memory of a personality in which are most rarely blended the elements of physical, mental, and moral worth.

In this sketch of his life he has been described as an Empire Builder, and the narrative of his career must be singularly at fault if it has not more than justified the title. Few men in the Old Land or the Dominions beyond the Seas have by their works more abundantly earned the name. It is close on seventy years since Sandford Fleming first landed in Canada, with no other assets than his own brave heart and indomitable will. He came with a young man's ambition to make a place for himself in the New World. Looking back across these seventy years one finds that he did this and something more, something very considerably more. His life has been one of action, of essentially constructive effort. The bent of his mind is both too practical and too optimistic to waste time on the destruction of other men's failures. These can always safely be left to fall of their own weakness. Whether he is building a railway, or advocating some measure of imperial importance, his plans have been invariably carefully thought out, thorough and eminently workable; and they have been designed always to make for the welfare of mankind.

His patriotism is none the less real because it is not narrow. He has worked untiringly for the betterment of his own people, for the strengthening of the ties binding together the scattered members of the British Empire; but behind all his efforts was the firm conviction that a united empire was a step in the direction of world-peace, that every advance in sympathy and understanding among the peoples owning allegiance to the British flag foreshadowed a similar advance toward their neighbours in other lands.

His philosophy cannot be better described than in these words of his own, uttered on another occasion, but equally appropriate as a summing-up of his life's work:

'I have often thought how grateful I am for my birth into this marvellous world, and how anxious I have always been to justify it. I have dreamed my little dreams, I have planned my little plans, and begrudged no effort to bring about what I regarded as desirable results. I have always felt that the humblest among us has it in his power to do something for his country by doing his duty, and that there is no better inheritance to leave his children than the knowledge that he has done so to the utmost of his ability.

'It has been my great good fortune to have had my lot cast in this goodly land, and to have been associated with its educational and material prosperity. Nobody can deprive me of the satisfaction I feel in having had the opportunity and the will to strive for the advancement of Canada and the good of the Empire. I am profoundly thankful for length of days, for active,

happy years, for friendships formed, and especially for the memory of those dear souls who have enriched my own life while they remained on this side.'

Sandford Fleming died at Halifax, on Thursday morning, July 22, 1915.

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Transcriber's Notes

Misspelled words and printer errors have been corrected. Where multiple spellings occur, majority use has been employed.

Punctuation has been maintained except where obvious printer errors occur.

The footnotes have been renumbered sequentially throughout the entire book.

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[The end of *Sandford Fleming, Empire Builder*, by Lawrence J. Burpee]