CANADIAN

Pacific Railway Routes.

The Bute Inlet and Esquimalt Route No. 6,

— AND THE —

Fraser Valley and Burrard Inlet Route No. 2,

COMPARED AS TO THE ADVANTAGES
AFFORDED BY EACH TO THE
DOMINION AND TO
THE EMPIRE.

By WM. FRASER TOLMIE, M. P. P.,

VICTORIA DISTRICT, V. I., BRITISH COLUMBIA.

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INTRODUCTORY, ETC.

Less a two years absence, the writer of what follows has, since 1833, resided in these parts, having the previous year entered the service of the Hudson's Bay Company as surgeon and clerk. He has since been stationed at various points at or near the Pacific coast from Oregon to Alaska.

At the H. B. post, Fort MacLoughlin, Milbank Sound, having for two years incited the natives to search for that mineral, he had the good fortune in 1835 to ascertain the existence on the N. E shore of Vancouver Island, of good bituminous coal, which was tested less than a year after on board the Company's new steamer Beaver just out from London.

He has by land and water travelled over the great Northwest from Jasper's House to Winnipeg; has been more than once through the Walamet Valley, Oregon, and has seen a great part of the beautiful bunch grass country of British Columbia south of N. lat. 51°.

Later in life, when resident at Victoria and concerned in the management of the Company's business in British Columbia, the writer had much occasion and opportunity of acquiring information regarding the coasts and harbors of our inland seas, as well as of the farming and grazing capabilities of the trans-Cascade mainland north and south.

Since a few years ago—retiring from the Company's service—he has, from every available source, collected facts bearing on the subject in question, and for such information has been indebted to many. He has now specially to thank Captain Devereaux for essential aid often and freely rendered. To Captains Pamphlet, Rudlin and others too numerous to name, his thanks are also respectfully offered. The statements of fact and opinion in this pamphlet have been made in as moderate a fashion as seemed compatible with a fair presentment of the case advocated. Many of the same facts and conclusions have been clearly set forth in the substantially unassailed speech of the Hon. A. deCosmos, during the first day (April 20) of the long debate on the "Pacific Railway" in the House of Commons, Ottawa, session of 1877; but this was unknown to the writer, until the conclusion of his pamphlet was in type; then, obtaining perusal of Hansard, he was rejoiced to find that during the debate there had been unanimity regarding the pressing need of the Pacific Railway, as the great means of Canada's further development and expansion.

Thoroughly persuaded, as the writer is, that adoption of Route 6 will be largely conducive to the general good, he the more earnestly desires that every settled section of our Province should be placed in the way of well-doing, by such aid as the Dominion and Provincial Governments can afford.

Seven years ago, the historian Froude urged our British rulers to avail of the calm, sure to follow the close of the Franco-Prussian war, to bring to a more definite and satisfactory condition her then and still anomalous relations with the Colonies. A year ago a Canadian writer of ability, "A. M. B., Ottawa," in the Canadian Monthly of Nov. '76, referred to Scottish experience since 1707, and to Canadian of later date in proof that our English friends need to be importuned by complaint and remonstrance, ere they will do or concede anything. "A. M. B." last year urged that Canada should take the initiative.

When the present Eastern war comes to an end, another calm may ensue, during which action should surely be taken and the great Western question treated as its importance warrants. Canadians must cheerfully assume a fair share of the financial responsibility involved in closer connection with the Parent State, in view of the multiform benefits thence to accrue to all concerned.

Premier Mackenzie must have uttered the sentiments of his adopted countrymen, when at Dundee, Scotland, in July, 1875, he said in public. "I believe that the Colonies are essential to British supremacy in the world. I don't say so because we are desirous of the slightest favor financially from Great Britain. We are able and willing. God knows, to bear our full share of all Imperial responsibility whenever required for the common interest, and we are doing so at the present moment."

Further on in Mr. Mackenzie's reported speech explanation is given of what he meant by British supremacy. It cannot prove offensive to any, being "universal freedom, emancipation from everything degrading." Soon may such be the case, wherever the flag flies—at home and abroad.

"A. B. M." and others, though ardent for Imperial federation, admit that Canada's material interests would benefit by annexation to the United States. That may be a general opinion, but nevertheless closer connection with the Parent State is preferred. Sentiment, as the venerable Carlyle has truly said, always rules great movements, religious and political, and not "the checks and balances of profit and loss."

It may be well for civilized communities generally, and in particular for the timid in Europe, that in the New World, two distinct experiments in Democracy should amicably advance side by side; while amongst older nations, Britain and France progress carefully and deliberately, but unfailingly in the same direction. England must reconsider her free trade theories and practices to which other peoples have not given the expected adhesion.

America, which appears to have taken a "new departure" for good objects, should, with her accustomed forecast, weigh well the possible future effects of the "Chinese wall of protection" now surrounding her.

A kind and frank interchange of ideas on commercial and tariff matters between Britain, America and Canada seems now a great desideratum. Why not a conference of delegates to meet either at London or Washington.

THE WESTERN ROUTE AND TERMINUS

— OF THE —

CANADIAN PACIFIC RAILWAY.

A VOICE FROM THE OCCIDENT.

Canadian Pacific Railway Routes.

The Bute Inlet and Esquimalt Route (No. 6) and the Fraser Valley and Burrard Inlet Route (No. 2) compared as to the advantages offered by each to the Dominion and to the Empire.

No. 1.

[June 30th, 1877.]

EDITOR COLONIST:—I have for some time past thought of writing on the railway routes and have been induced to offer the present communication to your widely read paper, by perusal of the speech of Mr. Dewdney, M. P., at Ottawa, 24th April last, correctly produced, it is presumable, in your issue of the 24th inst. It may be inferred that when Mr. Dewdney had the floor at Ottawa his fellow-members from Columbia, having previously taken part in the debate, were precluded from reply.

Alluding to a recent contention in the House between himself and the member for Victoria, Mr. DeCosmos, as to whether the population along the Fraser route exceeded or not that on the Bute line, and in which the Victoria member read from the voters' list in proof that the larger population was on the latter route, Mr. Dewdney did not attempt contradiction; but, in military parlance, manœuvred into a new position—to a certain extent, "changed the subjeet"—and adroitly avoided the real issue by an elaborate showing in figures that in 1875 the number of records under the Land Act of 1870 was on the Bute line, including Vancouver Island, 89, "while on the Fraser River route, the number was 551, out of which there were in the New Westminster and Yale districts through which the line ran 479." "In 1876 (according to Mr. D.) there were on Vancouver Island and Bute Inlet route 42 records; and on the Mainland 378, of which 312 were in the districts of Yale and New Westminster. Mr. Dewdney claimed a triumph from these showings. I have not verified, neither do I call in question his figures as presented, nor yet have I been at the Land Office to find how many of the records mentioned are those of absentee land speculators who may not yet have paid up. I shall presently submit to Mr. Dewdney, and to your other readers everywhere, facts and figures "galore" on the matter of present relative Mainland and Island populations, to which, although the Island has the preponderance in number more importance seems to be attached at Ottawa than it merits as a factor in the great questions of route and terminus.

Mr. Dewdney, who, I will say, is an able and untiring advocate of what he considers Mainland interests, at the outset of his speech claims to be a "British Columbian knowing his province thoroughly, probably as well as any man in it." He nevertheless showed lack of knowledge or political smartness—it is for himself to say which—in omitting mention of the fact — all important in connection with his figures — that, since the summer of 1873 the best and most attractive lands on the Bute Inlet line and those nearest the already existing settlements, have been out of the market. I do think that in the heat of debate Mr. Dewdney must have overlooked this. As others besides himself may have forgotten, or do not know the fact, I will now mention that when in 1873 the Macdonald administration, not without knowledge or in any haphazard fashion, but with the surveys of 1871 and 1872, and correct information about harbors, before them, decided to locate a railway line from Esquimalt harbor to Seymour Narrows," a belt of public land between these points and along the East Coast of Vancouver, twenty miles wide was reserved from "sale or alienation." What sort of land this is, I will let the geologist, Mr. James Richardson, say. Mr. Richardson in his able report on the coal measures of the Island examined by him contained in the report of Progress of the Geological Survey of Canada under A. R. Selwyn, Esq., for 1871-72, speaks of the coal deposits of this district as extending from the vicinity of Cape Mudge (near Seymour Narrows T.) on the north-west, to within fifteen miles of Victoria on the south-east, with a length of about

130 miles." Referring to this tract, which he thoroughly examined, Mr. Richardson adds "it possesses generally a good soil, and may hereafter be thickly settled. It is mostly covered with forest, but in some parts presents a prairie or parklike aspect with grass-covered ground, studded with single trees or clumps of them, and offers great encouragement to agricultural industry.

Like the Fraser valley west of the Cascade mountains, the valuable agricultural country just described will need clearing, and *its* timber will be saleable; but unlike many of the best parts of the Fraser it will nowhere require the very costly process of dyking, etc., nor like the arable lands of the settled upper country—(New Westminster and Yale districts)—will it want the not inexpensive work of irrigation.

Better than all, our East Coast farmers will in the coal towns, and in the iron-smelting and manufacturing towns, and villages of the future, have a home market for all they can produce, not omitting sawlogs and firewood, and, when their fully developed ability fails to meet the ever-increasing demand, it will, by railway, be supplied from the Columbian and Saskatchewan Mainland, so that eventually a great interchange ef products will ensue; thus affording local business to the railway in addition to what, in no inconsiderable degree, would, from the first, arise between Esquimalt and the coal mines and agricultural districts north of it.

The foregoing is quite relevant to the population question; now for the facts and figures thereanent promised in a preceding paragraph:

First, however, let it be premised that others besides the Mainland M. P. need to be set right in this matter. How it comes, perhaps Mr. Dewdney can tell; the strange belief has recently found utterance in Ottawa and Toronto, that of the sparse population of this Province as a whole the greater part is to be found in Mr. Dewdney's pet districts already named. A leader in the "Weekly Globe" of 27th April last has the following—"What there is of population in British Columbia is located chiefly along the Fraser and Thompson Valleys," and the usually accurate and cautious Premier Mr. Mackenzie in the Commons at Ottawa, 20th April last, speaking on the Pacific Railway, said—"There is no doubt the bulk of the population of British Columbia is settled in the Fraser Valley."

The facts are decidedly against this statement, as will now be proved in more ways than one.

The electoral districts of New Westminster and Yale are vast in extent, including the greater part of the as yet settled Fraser Valley, and all of the Thompson Valleys north and south fit for arable farming, besides to the south, the settlements of Okanagan, Nicola Valley and Similkameen, and on the coast the Burrard Inlet sawmills and logging camps. These districts in 1858 and succeeding years offered the greatest attraction to immigrants of any part of the Province, as on the Fraser bars, and the Thompson and Similkameen mines, gold in paying quantities was found. These localities have always (unlike the east coast of Vancouver for the four last exciting years) been open for settlement without let or hindrance; yet, for all this, the B. C. voter's list of 1876 shows for these two Mainland districts 851 voters, and for the compact districts of Victoria District and Victoria City 1057 voters, or a difference of 25 per cent. in favor of the Island. Adding to the two Mainland districts 118 voters for New Westminster city electoral district, we have a total of 969; and adding to the total of the two Island districts, named as a foreshadowing of what Vancouver's east coast will yet be, 338 voters for Nanaimo district we have a total of 1395, or about 50 per cent excess for the Island. The 445 voters for Cariboo and the voters of Lillooet and Kootenay help up the Mainland count; yet notiwthstanding the disabilities pointed out the whole Island exceeds the Mainland by about 9 per cent. For lack of a census of population the voters' list has to be referred to. The Provincial census of school population for 1876 throws other light on the question at issue. It indirectly points to the comparative number of married couples and families on the Island and Mainland, thus to a certain extent indicating how far each population may be counted on as fixed. On the Island the census gives 1790 as the number of children of school age of whom a few are from the Mainland attendiug the higher public and private schools of Victoria. The whole Mainland has 700 as its school population.

The imposition and collection of assessed and school taxes for the year 1876-77 affords yet another way of viewing the matter in dispute. The revenue from the Island under this head comes to $31,364
and from the Mainland to 19,269
Showing in favor of the Island an ———
excess of $12,095

I have been careful as to the accuracy of the facts and figures herein presented, and upon them rest the case for the Island as against the statistics above quoted from Mr. Dewdney's speech, and the erroneous assertion copied from the Toronto "Globe," that the bulk of Columbia's population is along the Fraser and Thompson valleys.

In a further communication I will deal with more serious matters, on which I am compelled to differ with Mr. Dewdney and some other Mainlanders.

No. 2.

[July 16th, 1877,]

EDITOR COLONIST:—Under the above heading in a letter of 30th June last in your paper, facts and figures were adduced by me to prove the preponderance of population in this Province to be on the Southeast and East coast of Vancouver Island and not in the valleys of the Fraser and Thompson, as had mistakenly been affirmed in the House of Commons, Ottawa, and within the columns of the Toronto *Globe*.

This superiority, it was shown existed, notwithstanding the fact—all important in view of the aforementioned comparisons made in Ontario—that, since 1873, the public lands of Vancouver on the East and South Coasts had been reserved from sale or alienation in consequence of the decision, that year, of the Macdonald administration to "locate a railway line from Esquimalt harbor to Seymour Narrows."

Now must briefly be noticed a few of the many matters—mostly irrelevant—brought up by the *Mainland Guardian*, in its two editorials on that letter.

RIVAL ROUTES.

The *Guardian* views the subject of rival routes "as worn threadbare; as to the mind of any intelligent person, the question has been finally settled." Not so have I read the last report of Engineer-in-Chief Fleming, on the Canadian Pacific Railway, 1877. Not so have I understood the purport of the two last published dispatches to our Government from Earl Carnarvon.

ACCURACY.

It matters not where any particular Islander, or any one or more Mainlanders, may have their personal interests. All are alike bound to aim at strict accuracy in statements publicly made on the railway terminus question, and it is the imperative duty of any one, aware that, on such a vitally important question, inaccurate and misleading representations have been published, to call these in question, in order that, by free discussion, the truth may be elicited and if necessary "proclaimed from the house tops." There is no earthly need of, as the *Guardian* hints, stirring up sectional strife. Nothing is more undesirable or ridiculous. There need be no strife save that of sound argument based on the inexorable logic of such facts as "winna ding and daurna be disputed."

MISTAKES OR INACCURACIES.

An inaccuracy to be noted occurs in the Toronto *Weekly Globe*. April 13, 1877, p. 256, under the caption "Pacific Railway." The real choice (says the writer) "will to all appearance, lie between Bute Inlet and Burrard Inlet, each of which has some advantages in its favor. If the railway is ever to be constructed to Esquimalt along Vancouver Island, it becomes a matter of necessity to adopt Bute Inlet as the present terminus. As a military road this line would be the most serviceable, since a line along the Fraser valley would be for a considerable distance in close proximity to the Canadian frontier. But the latter has the advantage in respect both of distance and *the harbor at its terminus*." The italics are mine.

The author of the foregoing leader in the *Globe* had probably read a letter in the London *Times* of last January or early in February, dated New Westminster, British Columbia, December 4th, 1876, and signed "Old Settler." The *Globe* scribe had also, perhaps, heard or read the statement in the House of Commons, Ottawa, by Mr. Dewdney, M. P., on the 6th April, 1876, that (his words are quoted) "the navigation from the southern extremity of Vancouver Island to Burrard Inlet is excellent,"

"Old Settler's" letter does not overflow with the milk of human kindness towards Victoria or Victorians; but let that alone as far as may be. The following quotation is, however, unavoidable. "A good route (O. S. says) has been found passing through, or close to, the settled parts of the Province, and terminating at the magnificent harbor of Burrard Inlet—a harbor capable of containing all the navies of the world, with plenty of room to spare; a harbor which Victorians in their blind rage stigmatize as difficult and dangerous of access, but into which sailing ships have been brought under sail and without a pilot."

ATTEMPTED CORRECTION OF MISTAKES.

Now will "Old Settler," over his "nom de plume," or, as he may prefer, kindly inform the readers of THE COLONIST, how many shipmasters, in the last twelve years he has known to bring their vessels into Burrard Inlet from the Fucan Straits without a pilot? how many of these to go out without a pilot, and how many to repeat the venture of sailing in from the Straits, through the intricate channels of the Haro Archipelago, across the Gulf of Georgia and through the dangerous Narrows at the entrance of the Inlet—but 300 yards wide at one place? Since 1871 I have sought information from every source, relative to the principal harbors of this Province, that prima facie, seemed suitable for the Western terminus of the British Transcontinental Railway. As to the sailing of ships from Royal Roads to Burrard Inlet with or without a pilot, two instances thereof have come to my knowledge, but these vessels, small in size, were piloted if not towed out. There may have been a few other like cases. I have been told of shipmasters having come to grief in making the attempt. The rule now is for vessels to be towed to and fro. Far indeed is Burrard Inlet from being the extensively capacious harbor "Old Settler, the *Guardian* editor, and others would have the world imagine. Instead of, as they assert, having room for the navies of the world, it has of good anchorage at Granville, or Coal Harbor, only about 1 square marine mile in extent, and, off Moodyville, north shore, only about ½ a square marine mile in extent. In English Bay there are about 3 square marine miles; but that roadstead is exposed from W. S. W. to W. N. W., whence the strongest winds blow from the Gulf of Georgia, and, with northerly winds, there is a long fetch of sea in from the Gulf. Here ships anchor with their tugs, while awaiting turn of tide, ere they pass through the Narrows to Burrard Inlet.

The remaining space or mid-channel of the Inlet outside the second Narrows is unsafe for anchorage owing to the strength of its tidal currents and eddies. It is from about 20 to 30 fathoms in depth.

Esquimalt has, with the exception of a few spots, some day to be dredged, of safe anchor-

age about 3 square marine miles in extent, and of wharf frontage about 4½ miles in extent. Its adjacent outer harbor, Royal Roads, has 3 square marine miles of good holding ground, where well found ships, such as Plimsoll would approve of, ride out S. E. gales, the only wind this roadstead is exposed to.

No. 3.

[August 13th, 1877.]

ESQUIMALT HARBOR.

EDITOR COLONIST:—On the 26th ult, it was in your columns made to appear that, despite of sundry boastings to the contrary, Esquimalt has of safe anchorage about thrice the extent possessed by Granville, Burrard Inlet, and twice as much as there is in the whole expanse of the Inlet, inside the first and out side the second Narrows.

VICTORIA HARBOR.

In connection with the comparison as to extent of safe anchorage in Esquimalt and the "Inlet" it is proper to mention that Victoria harbor, not long since by a facetious correspondent of the Mainland "Guardian" termed "a mudhole in a rock," can by dredging and by the blasting of two rocks, each smaller than the already broken up "Beaver rock," have a wharf frontage of about six miles in all, equal for accommodation of merchant shipping to the enclosed artificial docks of older countries. At the shallowest part of the entrance of Victoria harbor, the depth at low water will be about 24 feet on completion of the dredging; now on account of hard times, temporarily suspended by the Dominion Government.

At high water in ordinary tides the depth at the entrance, now 20 feet, will then be 24, and ships of the latter draught of water can, after harbor dredging, lie afloat at the wharves. That such dredging is practicable has been by boring satisfactorily proved.

Where else on this coast anywhere can such a contiguity of good safe harborage and anchorage be found so near to and so accessible from the ocean as at Royal Roads, Esquimalt and Victoria? To what other places are the sea approaches nearly so good as to these?

Appendix V of Mr. Fleming's last Railway Report to January, 1877, consists of letters and statements by "master-mariners, pilots and others resident in the Province or locally engaged."

SEA APPROACHES.

First in this appendix is a letter dated Victoria, 6th February, 1877, from Captain James Cooper, of Victoria, to the Governor-General "respecting the sea approaches to British Columbia, and certain of the harbors on the coast." In said letter Cpatain Cooper's first position is indisputable and will surely have the fullest consideration from those on whom may at length devolve the grave responsibility of selecting the western terminus of the Canadian Transcontinental Railway. "Sea approaches," Cooper says, "are in my judgment the first essential consideration in finally deciding upon a terminus site." Although this affirmation is by him made only in reference to the seven Mainland inlets categorically inquired about at the Admiralty by Mr. Fleming, it is clearly as applicable to Barclay Sound and Esquimalt on the West coast of Vancouver's, as it is to the more inland and unapproachable waters, of which Burrard Inlet seems, as far as is yet known, to be the most eligible.

How as to sea approaches and other essential conditions for a terminal harbor the three localities just named compare, will be seen as we proceed.

Treating of the inland navigation north of the Fucan strait, Captain Cooper says, "Vessels do, however, frequently make the passage to and from the lumber and coal depots without the assistance of steam." In this I am at issue with the Captain, for as stated in my last letter in the COLONIST "The rule now is for vessels to be towed to and fro." Captain Cooper justly condemns Milbank Sound, the main entrance from the sea, leading to Dean's Canal, Gardner's Inlet, &c., "FOR THE WANT OF SOUNDINGS AND THE DANGER OF THE SEA APPROACHES." Bear this in mind, my readers, "having in view (the Captain considerately adds) *the purposes for which this Inlet might be selected.*" Italics mine.

PORT ESSINGTON.

Captain Cooper next presents much against the northern route to Skeena. Port Essington he says is a bar harbor and freezes hard in winter.

BURRARD INLET.

"It has been demonstrated (he says p. 306) that Burrard Inlet is a safe and commodious harbor, for, since the establishment of the two large sawmills in that port, the first in 1864, at least six hundred ships of large tonnage, to say nothing of local and smaller crafts, have entered to load and have left the port, not one of which received any damage; and the dasualties incident to navigation in the inland waters would compare most favorably with any part of the world."

WESTERN HARO CHANNEL.

At p. 307 the Captain states as follows:—"One common road for the inland navigation from the Straits of Juan de Fuca, via the Haro Straits, which has two separate and distinct navigable channels, through both of which any sized ship could pass. The channel nearest to Vancouver Island, which could be used if required, would lead a ship at a minimum distance of 4½ miles from the American possessions) continuing through Active Pass direct into Burrard Inlet."

MARINE MISHAPS.

Investigation of the comparative merits of rival routes, in which I have been engaged, necessarily involved ascertainment of the marine disasters on each proposed line during a given period.

Between Royal Roads and the Ocean there has not been disaster to shipping, since, in 1860, Race Rocks Light first guided the mariner to safe anchorage at the Roads, or thence

to that wide and safe passage to the Ocean, De Fuca Strait.

For six years between 1868 and 1874, fourteen (14) casualties are said to have occurred between Royal Roads and Burrard Inlet, and eighteen (18) between the Roads and Nanaimo. The worst mishap on the Inlet line was the wreck of the barque "Cornelis." Next was the sale of a ship, stranded while steam aided. Another stranded ship had to sacrifice her deckload ere getting afloat. Seven vessels struck and got off in the Burrard Inlet Narrows, and four in the Haro Strait. Of the number of narrow escapes little is known. The foregoing does not accord with Captain Cooper's herein quoted statement regarding "casualties incident to navigation." On the Nanaimo line four ships have been wrecked when unaided by steam, and three when thus assisted. Three steamships of war struck and got off. The same happened to five ocean-going steamers of the mercantile marine. One ship had two anchors down in seventy-five fathoms of water and got off, after the masts had been cut away. One was ashore and got off and another vessel struck and got off.

CONTRADICTORY STATEMENTS.

And yet this Nanaimo route is "the channel nearest to Vancouver Island" through which Capt. Cooper, as above quoted, has reported to the Governor-General that "any sized ship could pass."

In addition to the various dangers in this channel so clearly described in the pages of the "Vancouver Island Pilot," there is said to be, in some patches of it, only two and three fathoms of water. How would this suit the largest ocean-going ships by night, or in fog or storm, navigating to and from the terminal harbor, in the days when the Canadian Pacific Railway will be "an accomplished fact?"

"Active," better known as "Plumper's Pass," is not suited for (to borrow the words of Mr. Fleming in his former Railway Report, Jan., 1874,) "the largest ships that now or hereafter may navigate the Pacific." In July, 1860, H. M. S. Termagant, drawing 18 feet of water, struck so severely in this passage, and that, be it observed, with a favorable tide, that after repairs, &c., in San Francisco costing it is said, £30,000 sterling, she was, on reaching home, at once condemned and sold. Admiral Richards and Staff Commander Pender, R. N., have each had a practical experience of years in the survey of the southern and middle coasts of this Province. The results of their work up to 1864 are given in the "Vancouver Island Pilot," which from p. p. 1 to 70 treats of the Fucan Strait and the Haro Straits west of the international (sea) boundary line, marked on recent maps. Both of these officers have furnished answers to the twenty-eight (28) questions submitted by Mr. Fleming to the Lords of the Admiralty.

Question 9 is as follows:—"At what minimum distance would vessels have to pass San Juan Island, or other islands on the coast of the United States, in their passage by the southern channel to Burrard Inlet, &c., &c.?"

To this Admiral Richards replies:—Vessels need not pass within three miles of San Juan, but they must pass within two miles of Stuart and Patos Islands, unless indeed they take the inner channel along the coast of Vancouver Island; and the passages from these channels to the Strait of Georgia *are dangerous, and they would not be used unless in case of emergency.*" Italics mine.

How completely the opinion of Admiral Richards just quoted runs counter to that of Captain Cooper, as above given in his own words.

Desiring only that the "Truth, the whole Truth, and nothing but the Truth," should be elicited by the discussion invited in this and previous letters, I now respectfully ask Captain Cooper to set me right, if now or heretofore, as he may think, I have aught misstated.

No. 4.

[August 28th, 1877.]

EDITOR COLONIST:—First, I must briefly notice Captain Cooper's polite and cleverly devised letter in THE COLONIST of the 20th inst. Therein the Captain, in true "Sir Oracle" fashion, declines discussing in "a newspaper controversy" his *soidisant* "unassaible" position as to the fitness of the western Haro Channel for navigation by night, and in fog or storm by the largest sailing ships or steamers. Railway routes, and the comparative merits of harbors, as projected termini, being the chief subjects of his letter to the Governor-General; this is what his assertions therein must mean. They can have no other plain meaning.

The words in the communication to His Excellency, (*re* the Haro Channels,) "through both of which, any sized ship could pass" being without the slightest qualification as to times or seasons, it must be obvious to a gentleman of Captain Cooper's well known acuteness that he cannot get off by the hackneyed expedient, the stale strategy, of imputing obtuseness to his controversial antagonist and implying that his own meaning has hence been misunderstood. In this matter the good Captain's zeal seems to have outrun his discretion.

The availability, for shipping, of any inland channel, has to be judged of, not, as it may be, under summer skies with smooth seas, but, as it presents under the worst conditions of weather and darkness, known to occur in the locality; just as the strength of a hawser or chain cable—cannot safely be reckoned as greater than is the resisting power of its weakest part. That Captain Cooper's assertions as to the channel in question are quite untenable, has in my last, been demonstrated as well by reference, to the highest authorities

in print, as by mention offacts, verifiable by every shipmaster and pilot acquainted with our inland waters from Clover Point to Nanaimo.

As to the good Captain's pleasantry about my having a "nautical ally," I gladly avow having had not merely one, but many such,—men of varied position, experience and nationality, with whom I have often been conferring since in 1870-71, the investigation, forming the subject of these letters, was commenced. Such of these worthy persons, as are still "to the fore" and happen to be here, concur in the estimate of the Western Haro Channel presented in my last.

SEA APPROACHES.

As the consideration of these is so intensely important,and as Captain Cooper's position thereon is so thoroughly "unassailable" a reproduction of his words in large type seems warrantable. "SEA APPROACHES ARE (he says) IN MY JUDGMENT THE FIRST ESSENTIAL CONSIDERATION IN FINALLY DECIDING UPON A TERMINUS SITE."

From the valuable appendix V. of Mr. Fleming's oft cited report p. 308 quotation is now made out of a document entitled "Statement by Captain John Devereux respecting harbors in the Straits of Georgia, and on the West Coast of Vancouver Island."

Capt. Devereaux, long and favorably known in Victoria, is the only master-mariner resident in the Province, who, in addition to a practical knowledge of this coast acquired in command of coasting steamers, has brought to bear on the queetion of sea routes to the projected western termini of the C. P. R. R. a most useful insight, gained by years of service as an officer in the ocean mail steamers of the Old Country. Some of my nautical allies have had experience in Her Majesty's navy, in command of coasting steamers and of ocean-going sailing ships as well as of coasters and pilot boats.

"Burrard Inlet (Devereaux states) has a safe and commodious anchorage two miles inside the first narrows at Coal Harbor, also another seven miles inside the second narrows at Port Moody, twelve miles from the entrance; but there is one great objection to either of these places, viz: both the first and the second narrows respectively are but about about a cable and a-half wide, through which the tide runs about nine knots an hour, creating whirls and eddies and rendering it unsafe for large steamers to enter or leave port at night, or at certain stages of the tide, leaving out altogether interruption by fogs and thick weather, which occur more frequently inside than out."

"Next is the outer harbor of Burrard Inlet, known as English Bay; there, at a place marked on the chart as Government Reserve, is a good anchorage with every facility for a breakwater, or even docks, both wet and dry, and by erecting a lighthouse on Passage Island, entrance to Howe Sound, one on East Point, one on Turn Point and another on Discovery Island, the largest ships in the world might be conducted thither in safety; but there are three months in the year, viz: from part of August to the same time in November, when this coast is subject to dense fogs, rendering it unsafe, if not utterly impossible to navigate Haro Strait and the Gulf of Georgia with large steamers such as the Royal Mail, Cunard, and Pacific Mail Company's ships."

"This point will, I think, be conceded by all who know anything about such ships, and the straits in question where the tide runs from four to six knots an hour, with boiling rips and overfalls, narrow channels and outlying reefs, deep water, and no anchorage that could be reached in such weather; and to stop a steamer in such a plight would simply mean to the mariner to lose his reckoning, as he would be carried off by the tide and not know whither to go. On the other hand if the engines of a large ship were kept going like those of the small steamers on this coast she would neither answer to her helm nor turn astern quick enough to avoid running ashore, as it frequently happens the fogs are so dense here that land cannot be seen one hundred yards off."

The eastern Haro or boundary channel is the one referred to in the foregoing quotation from Captain Devereaux. Its depth where ships must pass is from sixty to one hundred and eighty fathoms, and its anchorages, difficult of approach in thick weather, do not afford swinging room enough for ships of from three to four thousand tons burthen. Such as these, and larger craft, will in "the good time coming," be resorting to the terminal harbor, if quite accessible at all seasons from the oeean. If otherwise, their destination may be to American ports; for commerce ever seeks the safest routes, and those where delay need not be incurred from any bad weather short of hurricanes, or from other causes such as waiting for tides, for daylight or for lifting of fog.

About eight hundred tons may be considered as the average size of lumber ships now going to the Inlet. A few of from twelve to sixteen hundred tons have been there.

In the eastern Haro Strait, between Turnpoint, Stuart's Island, U.S.A., and Cooper's Reef, B.N.A., ships would have to pass within less than two miles of possibly hostile batteries.

What has been or may be stated about Burrard Inlet and its approaches from Royal Roads cannot disparage the present undisputed commercial importance of that place as the site of two large saw-mills.

These statements are set forth simply in view of the possible purposes for which this inlet might be selected. They receive the strongest confirmation from Staff Cammander Pender, R N., who in one pithy sentence thus summarises his opinion in reply to Mr Fleming's last and twenty-eighth question: "For reasons given (says Commander Pender, p. 300, report cited) in No. 27, Burrard Inlet is in my opinion preferable to either of the places named (the other six mainland inlets inquired about by Mr Fleming, T.;) it is also the most easy of access from the ocean, BUT EVEN HERE THE RISKS ATTENDING NAVIGATING WITH LARGE STEAMSHIPS AGAINST TIME AMONGST THE ISLANDS LYING BETWEEN FUCA STRAIT AND THE STRAIT OF GEORGIA ARE TO ME VERY GREAT."

In his letter to the Governor General Captain Cooper forcibly dilates on the manifold risks to be incurred "in a gale of wind and thick weather" off Milbank Sound, or thence to Kamsquot, head of Dean's Canal, "by a steamer having on board Her Majesty's mails and probably several hundred passengers bound east" "with scarcely an anchorage for the whole distance that the commander of a valuable steamship would risk his ship to swing in." "It is questionable (adds the Captain) whether any insurance offices would take the risk on such navigation"

Outside Milbank Sound such a ship in stormy weather might get to sea. Inside her plight would be unsafe indeed. At the best there would be serious and vexatious delay, causing passengers to chafe and to declaim against such a dangerous route.

And now with a deep sense of their importance, and with due regard to Imperial or in other words, general, interests, let me ask Captain Cooper, how it would fare with his large mail steamship in a S. E. gale and thick weather, or, in one of our long enduring and densest autumnal fogs, supposing her course to be from Trial Island, Haro Straits to Burrard Inlet. Would not her risks be nearly as great in the latter direction as in the former? According to the quotation just made from Commander Pender's evidence and to merchant-seamen recently consulted by me, they certainly would. Such a large mail steamer as is mentioned, would *necessarily* be NAVIGATING AGAINST TIME.

Again, supposing our transcontinental railway to terminate so far from the ocean as at Burrard Inlet, how many casualties to ocean steamers or large sailing ships, how many alarms and narrow escapes, how many even of annoying detentions involving, no one could tell, how much loss to the diverse large interests at stake, how many of such mishaps could occur on this line, without inevitably diverting passenger and goods traffic, express business, correspondence, and everything else from East and West, to foreign railway termini on or near the Fucan Straits? It is for the Captain to respond, or to adhere to the Carlylean maxim that "Silence is golden,"&c.

AUTUMNAL FOGS.

The prevalence of fogs on this coast in autumn is in their answers dwelt upon by Admiral Richards and Staff-Commander Pender. It is also noticed, I think, by Captain Cator. In September, 1868, coasting steamers were by fog for ten days confined to Victoria harbor. In November, 1869, as nearly as I can ascertain, several steamers were fog bound in Nanaimo harbor, and amongst others the "old Beaver," in which Commander Pender, R N., was then bringing to a close his valuable labors on this coast. At this time the commander of an ocean-going American steamer, doubtless *more pressed for time* than the others ventured out first, and wrecked his boat. This shipwreck was omitted in the detail given in a former letter of casualties on the route from Royal Roads to Nanaimo.

RIVAL FOREIGN RAILWAY ROUTES.

Whether British and Americans are hereafter always to be friends is beyond human ken. Often the unexpected happens in national, as well as in individual affairs. The future being hidden, due precaution in selecting the railway route and terminus on strategical consideration should be exercised by those having the guidance of Imperial interests in this quarter of the world. Americans and English have long been keen commercial rivals and are likely to continue so. Notwithstanding this, and the irritations it usually engenders, they have lately, like sensible kinsmen, become better friends. On the Fucan Straits, almost opposite Esquimalt, and seventeen miles distant, is the much prized American harbor, by Vancouver named Ediz Hook, now better known as Port Angeles, and jocularly termed "Cherbourg." This port is, at p. 188 of the U. S. Pilot (Washington Territory) termed "an excellent and extensive harbor." At page 190, of the same authority, is the statement that "coal of fair quality is reported to have been found within three miles of the harbor. Port Angeles could by a railway of from 150 to 175 miles to Tenino, be joined to the line going south from Tacoma to Kal

ama, Washington Territory, U.S.A. This line, it is said, will ultimately be joined in California to the Central Pacific Trans continental line. Between Kalama and Portland the connection is made by steamer on the Columbia and Walamet rivers, but from the latter town southward a railway route is in operation throughout the length of the Walamet valley to Roseburg in the Umpqua valley, a distance of about 170 miles.

OTHER AMERICAN PORTS IN WASHINGTON TERRITORY.

A few years ago American capitalists projected the North Pacific Railway to connect with lines in the East. They explored extensively in Washington Territory, finding the most favorable opening through the Cascade Mountains at Snoqualimi Pass; and their terminal point at Holmes' harbor, sixty miles southeasterly of Port Angeles and facing on the eastern, or more inland shore of Whidby Island.

Land at and around this locality of course rose greatly in value. For the sake of reaching this harbor, it was then proposed to bring the railway, by a long circuit, north to opposite Fidalgo Island, thither by bridge, thence south, and by bridge across Deception Pass to Whidby Island, and on to Holmes' harbor, which was, by a short ship canal, to be connected with Admiralty Inlet, the straight, and comparatively safe, southern furcation of DeFuca Strait.

A point in some degree suitable might perhaps have been found at Mukilteo, or elsewhere on Possession Sound, in a westerly and more direct course from the Cascade mountain pass; and, on the mainland shore, are Simiamo, Birch, and Bellingham Bays, all like Burrard Inlet (B. C.) separated from the Fucan Strait by the islands of the Haro Archipelago. From the nearest to the Strait of these, Bellingham Bay, where, says the W.T. Pilot, the anchorages are "from 4 to 20 fathoms in good sticky bottom," coal has in sailing vessels been for years exported. The capitalists mentioned nevertheless seem to have been resolved to get to the east shore harbor, most accessible from the Fucan Strait, and the costly operations contemplated, in order to compass this end, clearly indicate the paramount importance attached to it.

If it be of extreme consequence to Americans to have railways from the East terminate on the seaboard at the points most accessible from the Pacific Ocean, must it not, in equal measure, be so, Mr. Editor, for the wide spread British people. The whole Empire is interested in having the best selection made.

No. 5.

[October 13th, 1877.]

EDITOR COLONIST: True it is as stated in my last that the selection of the best route for the Canadian Pacific Railway is of vital import not only to the United Kingdom and the Dominion but likewise to all British interests, present and prospective, in Polynesia, Australasia and Eastern Asia. It cannot be doubted that "the high contracting parties" to the original railway compact fully agreed that the line should pass where it would afford the most widespread advantage to the varied interests of the several divisions of British North America, settled and yet to be settled; and, on the Pacific seaboard, lead to the harbor in every respect most eligible for commerce—aye and for defence—but not for defiance, save to a foe.

The recent newspaper advocates of Burrard Inlet as the terminus set much store on its value as a hiding place, but even in this respect being by land so easily assailable it could only be made to afford the sort of safety the pursued ostrich has been said to seek by concealing its head amid the scant herbage of the desert.

In the just quarrels for which alone Britons now feel it a duty to fight, may the day never arrive when they will hesitate to "meet the enemy in the gate," yea, and outside of it too, if they can have at him on "the mountain wave" the scene of yore of Britannia's greatest triumphs—triumphs, too, let the nations remember, which early in this century so much tended to relieve a large portion of Europe from apprehension of an abhorred foreign despotism.

New Westminster editors, but without a particle of proof thereof, continue to insist that the choice of the powers that be has already, for route and terminus, fallen on route No. 2. Firmly persuaded that according to Earl Carnarvon's despatches to our Government, the question is still open, I ask our New Westminster friends to calmly consider the following quotations from Mr. Fleming's last report published some four months ago, and referred to in my previous letters.

At page 65, Mr. F. says: "It is most desirable that the railway should terminate on the coast at a harbor which from its general excellence and geographical position would be best calculated to accommodate the shipping of the Pacific and attract commerce from distant countries. This question has an important bearing on the choice of route." Then at page 66, Mr. Fleming dwells on the importance of selecting such a route and terminus for the railway "as would best attract ocean traffic and would admit of successful competition with foreign lines." Again at

page 71, he says: "An unbroken line of railway from the eastern Provinces of the Dominion to one of these harbors on the outer coast of Vancouver Island would be exceedingly desirable. ALL THE DIFFICULTIES OF NAVIGATION TO BE ENCOUNTERED IN REACHING THE MAINLAND FROM THE OCEAN WOULD THEN BE AVOIDED." (Emphasising mine) It must also in fairness be stated that in the same page Mr. Fleming adds "the bridging from the Mainland to Vancouver's would be unprecedented in magnitude and its costs would indeed be enormous."

But as Mr. Fleming, at page 72, says: "By extending the railway along the western side of Bute Inlet and thence across to Frederick Arm—a feasible scheme but one exacting a heavy expenditure, "Nodales channel," a completely sheltered and an easily navigated sheet of water is reached. *This channel is reported to be free from strong currents, shoals, or other difficulties, and could be used by a railway ferry at all seasons of the year.*" (Italics mine.)

As to the proposed bridging being of magnitude unprecedented—what wonders in the way of unprecedented achievements engineering and other, has not the world within the last century witnessed, say since 1777, when the sick and grief-worn Earl of Chatham in a last bootless appeal to his infatuated sovereign ere the news of Saratoga had reached home, urged the staying of fratricidal strife by an offer of federal union, between England and her American colonies.

Bridging can be dispensed with for some years. The excellent ferry-line from some point on Frederick Arm to the snug harbor Otter Cove, Vancouver's, will serve every purpose until, owing to the greatness of "through traffic" and the wants of the millions yet to occupy our country west of Ontario, through railway connection may be deemed essential.

The navigation of the Frederick Arm and Nodales channels is by nautical men considered as safe as that on the Thames between Blackwall and Gravesend, or on the Clyde between Broomielaw and Dunbarton. At a convenient point fronting on the south shore of the ferry channel, Chameleon harbor, easy of access, offers safe and good anchorage which on emergency might be of great avail. This good and conveniently placed harbor will yet be the site of sawmill and other industries.

One more quotation. At page 74, Mr. Fleming's remarks on the "Route via Bute Inlet:" "If it be considered of paramount importance to carry an unbroken line of railway to one or more of the harbors on the western coast of Vancouver Island, and there is a likelihood that this project will, regardless of cost, hereafter be seriously entertained, then Route No. 6 becomes of the first importance and really the only one open for selection."

BRIDGING.

When bridging is to be a necessity much depends on how soon the mother country and the Dominion learn to work heartily and unselfishly together in fairly proportioned joint outlay, for, amongst other things the settlement of the vast and fertile though yet unpeopled wastes of the great North-west, soon surely to be to the British Isles "the butchers' and bakers' department" with "an Imperial cooperative store." These words are from the very able pamphlet by Captain Colomb, R.M.A., already quoted from in THE COLONIST and entitled "Imperial and Colonial Responsibilities in War."

Of course Colomb thinks the Imperial government should take prominent part in the construction of the Canadian Pacific Railway. He speaks well of what Canada has already done in the way of defence, saying at page 16: "Considering that an Englishman in Canada bears a far greater military burden than an Englishman in the United Kingdom, surely in common justice we would be bound to sacrifice our whole naval power rather than permit her being invested by blockade." At page 19, British Columbia is mentioned as "the North Pacific gem, set as it is with black diamonds," and of great strategical value to the Empire, while the neglect of Columbia's defence is condemned. At page 20, the Canadian Pacific Railroad is said to be "the short cut from Britain to the infinite supply departments of Australia, Tasmania and New Zealand."

There is much of deep interest to us all in Colomb's pamphlet. It is circulating in Victoria and should, by such as feel interested in federation of the Empire, be carefully read and pondered over. This Pan-Britannic unification, the dying desire of the great Chatham, the sentiment for which united empire Americans a century ago sacrificed home and kindred, this noble aspiration is now becoming more deeply felt, and its realization more longed for by English-speaking people at home and abroad. It is for the United Kingdom and the Dominion to take the initiative. The Australian colonies will soon join in and Colomb's most sensible and pressing suggestions will be carried out in their entirety while yet there is time. Enlightened Americans of the United States, well aware that they already have enough of social and political problems to work out, look with favor on this British federation movement, knowing that Britons are their own co-workers in all that tends to the upraising of humanity; and that

each of the great kindred Anglo-Saxon nationalities learning, one from the other what to imitate and what to avoid, may thus "strive together in well doing," while having no other contention. Elihu Burritt, the well known learned and philanthropic New Englander, has in the *Canadian Monthly* for August last an article on the "Integration of the British Empire" that does him infinite credit. There is more pith in this short essay than in Sir Francis Hincks' recent lukewarm dealing with the great subject in the same periodical; or than in tomes of able and well-meaning Goldwin Smith's theorising about disintegration in other monthlies.

Mr. Editor, I may in part of the foregoing have seemed to digress, but the digression, if a y, has been more seeming than real. The Canadian Pacific Railway by the best possible route from ocean to ocean, and soon to be completed by "a strong pull and a pull altogether," is indeed the first step and the *sine qua non* to the much needed consolidation of the empire.

No. 6.

[November 5th, 1877.]

EDITOR COLONIST:—Inasmuch as England, after all the good she has for some three hundred years past been effecting in North America, is likely through what seems the "manifest destiny" of Imperial Federation to be an abiding power on this continent, it has happily ensued, in the Divine order of events, that on the Pacific she owns the Northern, while her first born and biggest daughter, the United States, possesses the southern shore of that great inland sea, the Fucan Strait, which presents more advantages to the mariner than any other inlet on the Anglo-American Pacific Coast; aye, or from the Magellan to the Bhering Strait.

The Fucan Strait, extolled above all others on our coast by the naval authorities consulted by Chief Engineer Fleming, is excellently described by Captain Devereux, p. p. 309-10 of Fleming's Report, 1877. Although from August to November it is occasionally subject to fog, "sometimes very dense over the entrance for days together," "these are not nearly of such freqnent occurrence as on the neighboring coast of California, where they prevail almost uninterruptedly during the summer, and as late as the middle of October." Both the foregoing extracts are from the Vancouver Island Pilot, p. 5. The United States Pilot for California, Oregon, and Washington, at p. 69, mentions the sunset fogs on the San Francisco bar and outside of it as of frequent occurrence in summer. At p. 70 the same authority states that "during heavy Southeasters the sea breaks upon the San Francisco bar, clean across the entrance, presenting a fearful sight." The sound can be heard at the anchorage in front of the city." At p. 183, referring to the Fucan Strait, the Coast Pilot mentions that "in winter the S.E. winds draw directly out, and create a very heavy cross sea off the entrance, the great Southwest swell meeting that rolling out. In such cases trading vessels try to gain Neah Bay or San Juan Harbor and remain at anchor until the wind changes." Both these harbors need breakwaters to make them thoroughly effective for shelter; but that for each country is a work of the future. An immediate and pressing want on the British side of the Strait is telegraphic extension to Cape Beale lighthouse in order that sailing vessels, now occasionally delayed outside by calm, fog, or foul wind, may thence indicate their arrival and need of a tug.

DEEP SEA SOUNDINGS.

Owing to the fortunate irregularity of soundings, and variety of bottom on the ocean banks reaching for more than forty miles outside Fuca Strait, powerful steamers can enter during dense fog, or during a S. E. gale with its usual attendant, thick weather.

This being in either case impossible off San Francisco bar, it is obvious that from the nautical point of view ports on the Fuca Strait are better suited for commerce than any to the Southward. This strait will yet be a great highway for British and American trade, and the Empire must have its chief North American port thereon, just as necessarily as that a London merchant prince must be established for business within hearing of Bowbells, and not at Islington or Croydon.

The time occupied in land travel by rail, and in ocean travel by steamer, can approximately be calculated; but the delay and risks caused by the intricacies of inland navigation cannot be reckoned on.

FOGS.

In this quarter fog may last from half-a-day to more than eight days, that being a much longer period than is occupied in crossing the continent by railway. In dry seasons, fog is more enduring, being then prolonged and intensified by the smoke of extensive forest fires. The early rains, in September, have this autumn prevented such a combination of the "powers of darkness." Fog is not unknown in British waters, and it must have been in avoidance of this and other dangers incident, less or more, to all inland navigation that at home the points of arrival and departure for ocean-going mail steamers have, since the Atlantic was first steamed across, been gradually shifting ocean-wards from London, until, at length, the ultimates of Cork and Falmouth have been reached.

WHAT OCCURRED DURING OUR RECENT FOG AND ITS TEACHINGS.

Not long ago the large American steamer Alaska, bound from Puget Sound to Esquimalt for the British Columbia outgoing mail and passengers, was fog-bound thirty hours in one and sixteen hours in another United States port; besides, as the fog continued, having been navigating slowly and with circumspection in her course towards Esquimalt. Now, let us uppose,

First—That transcontinental railways in operation terminate at Port Angeles, W.T, and English Bay, B.C., respectively.

Second—That each of equal speed, and, during fog, proceeding towards the termini just named, an American (A) and a British mail steamer (B) at the same time enter the Fucan Strait and that while A is landing mails, passengers and specie at Port Angeles, B—unable to proceed further with safety in such weather—is seeking anchorage in Esquimalt Roadstead.

In such case, and from what has in previous letters been set forth, is it not an obvious conclusion that, should our supposed fog—by no means a "vain imagination"—last as long as the real one which lately delayed the Alaska, passengers, etc., by the line from Port Angeles, would be considerably more than a thousand miles advanced on the journey eastward, 'ere those bound for English Bay, Gulf of Georgia, could set foot in a railway car?

It has been well remarked by a late American writer that "Commerce, as every one must realize, who carefully considers modern methods, depends upon speed and regularity of communication, not merely in the movement of goods, but far more in the carrying of mails. The merchant who can get in his order, his offer, or his remittance most promptly gets the cream of the market."

This is perfectly true, and in view of the varied commercial competition in all likelihood yet to ensue on the Pacific beteen Britons and Americans, it ought now to be keenly appreciated by all whose interests lie north of the United States boundary.

The Imperial and Dominion authorities cannot, in the general interest, neglect to avail to the utmost of every natural advantage our province possesses, and the harbor and roadstead of Esquimalt on the Fucan Strait are amongst the greatest of these.

Esquimalt roads (or on the chart Royal Bay) is becoming more and more resorted to by ships seeking freight. Here they can anchor free of pilotage or other charge, and from Victoria, some five miles off, telegraphic communication can be had to the more important parts of the world, while within less than a hundred miles are the lumber ports of Puget Sound and Burrard Inlet, on the continent, and the coal depots of Nanaimo and Departure Bay on Vancouver.

Great, indeed, will be the attraction to Esquimalt and its roadstead after the graving dock there is ready for the repair of merchantmen, and when the largest sailing ships afloat can at its coalbins be expeditiously laden with the coal brought from the north by railroad. When ships off Cape Beale lighthouse can telegraph their arrival to Victoria and, if necesssry, be towed in, the inducement for large ships to take a coal cargo from Esquimalt will be much strengthened.

Merchantmen from San Francisco sail to Royal Bay in from six to ten days. Sailing up the Straits is so far the rule. A wheat cargo can only in season be obtained in Oregon and California ports. It takes considerable time to obtain and ship a lumber cargo, but coal could, from properly constructed bins in Esquimalt, be poured in fore and aft so as to shorten the trimming process and let large ships off with a cargo in a very few days. The advantages of this are obvious.

Now, with the probability of a widespread war, in which England, and of course her dependencies, can hardly escape being involved, the coaling of Her Majesty's ships at Esquimalt in the safest and speediest manner possible must surely be a consideration of pressing import. So, likewise, must be the preparation of the graving dock for the promptest repairing of these ships during war. In commerce, time judiciously saved is always money gained. In war, time saved is often money saved, and that besides which, to Britons the world over, is much more precious. It is indeed fervently to be desired that the solemn and not overcharged monitions of Colomb as to the existing lack of land defences in British dependencies are having due attention from our rulers at home. Time and tide wait neither for man nor nation, and history abounds in proofs of the truism that "opportunities lost can never be recalled."

No. 7.

[December 14th, 1877.]

EDITOR COLONIST :—As promised in the sixth paragraph — headed "Sea Approaches"—of the third letter of this series, brief comparison must now be made between Esquimalt and Uchukleist, Barclay Sound, recommended p.p. 298-9 of Fleming's report by Capt. Cator, R.N., as the fittest point for our railway terminus in the west. Thereanent no better referee can be found than Admiral Richards, in the Vancouver Island *Pilot.*

Except its two good, but by no means extensive, anchorages, "Snug Basin" at

the head and "Green Cove" at the entrance, the soundings in Uchuklesit vary from twenty to forty fathoms. Depth of water is an objection to the greater part of Barclay Sound. Three miles long, Uchuklesit is but half mile wide, and not one and half miles, as stated by Capt. Cator, F. R. p. 299.

WEST COAST OF VANCOUVER'S.

In the V. I. P., p. 181, Richards, treating of the island ocean shore, north of "Fuca Strait to Sydney Inlet," says "the coast is fringed by numerous and hidden dangers, especially near the entrance of the Sound, and the exercise of great caution and vigilance will be necessary on the part of the navigator to avoid them, even with the present admiralty charts." The nature of the bottom where there are deep sea soundings is so uniform "as (p. 182) not sufficiently to afford any guide for ascertaining a vessel's exact position on the coast."

As to Barclay Sound specially, Richards (p. 184) says : " Off the entrance, and in the southern part of the Sound, are innumerable rocks and islands with navigable channels between them," and (same page) "the three navigable channels into Barclay Sound all require great caution in navigating."

The Provincial Government steamer Sir James Douglas, owing to the uniformity of soundings as to depth and character, has, as lighthouse tender, been in fog compelled to anchor with a kedge within a few hundred yards of Cape Beale lighthouse, her officers being unable to ascertain either the position of the light or of the entrances to Barclay Sound. See Devereux, p. 309, F. R. on Uchuklesit and the west coast of Vancouver's generally north of Fuca Strait.

Obstructions in respect of sea approaches added to some sixteen miles of intricate, and, in bad weather, dangerous inland navigation, relegate to their proper level in the scale of fitness, the harbor in question and Barclay Sound, irrespective of their comparative inferiority, as regarded from the commercial and other points of view.

A digression is here necessary, as an editorial in the *Mainland Guardian* of New Westminster (Dec. 5, 1877) without shadow of proof, stigmatises as "undoubtedly false" some unspecified statements in a pamphlet on the railway question recently published in London, and with which I have had to do. Most of the statements in the pamphlet have been at greater length reproduced in the foregoing letters, with ample reference to authorities. The *Guardian* editor has it : "He says the tides rush at the rate of ten knots an hour through the first Narrows !" This is a quotation shamefully garbled. At p. 8 of the pamphlet, par. 4, occurs the following : "For two hours spring tides are said by experienced men to average ten knots an hour through the Narrows." This has been proved in the following way : A master mariner, commanding a boat capable of running ten knots an hour in still, smooth water, has, when under orders to proceed with all speed for the Inlet, been for two hours steaming against the tide in the first Narrows without gaining an inch." This happened in January, when and in June the strongest spring tides run.

At p. 110, V. I. P., Richards states "the strength of the tide in the narrowest part of the first Narrows is from 4 to 8 knots. Admiral Richards, let it be noticed, does not here specify spring tides.

Unless the tidal currents and eddies of the first and second Narrows, as well as of Burrard's Inlet, mid-channel, were the ever-recurring obstacles to "navigation against time," they are in this quarter of the Dominion well understood to be, why should Captain Cooper, at p. 307 of Fleming's report, at the end of the 21st paragraph of his already quoted letter to His Excellency the Governor-General, as a "means of reducing the current at the entrance of the Inlet probably one-half or two-thirds of its present velocity," modestly have suggested the Cyclopean and perhaps impossible undertaking of "blocking up" the north arm of said Inlet, and why should another gigantic work have been spoken of, to wit : The dredging of the first Narrows. A third project that has been mentioned is the construction of a breakwater in English Bay, which, although, like the Inlet, difficult to approach from Fuca Strait during a fog or storm, has been talked of as a possible site for the terminus. Spanish bank (see chart) a prolongation around Point Grey of the Fraser sand heads, would, in the roadstead, be the only site shallow enough for such a costly erection, if it afforded a sufficiently solid foundation ; but on two occasions a merchant steamer aground on the bank through the action of her propeller displaced so much sand as to have been afloat before the rise of the tide enabled her to move over the rim of the basin thus scooped out. Spanish bank may be more solid elsewhere.

THE RIVAL ROUTES COMPARED ON THE MAINLAND.

In continuance of the investigation, from the first contemplated in these letters, Routes 2 and 6 must now be regarded otherwise than merely in respect of the nautical, commercial, strategical, and

geographical disabilities or advantages inherent in each. Either line proceeding eastward must reach Edmonton on the North Saskatchewan. From Edmonton westward towards "the most eligible harbor on the Pacific Coast," that line must, if reason rules, be adopted, which, in the immediate future, in continuation of existing settlements, will be the most densely peopled, and that which on the mainland has, north and south of it, the largest extent of country suitable for colonization. Such a railway line can yet by land and water from various points have connections greatly increasing its wayside and export traffic.

From Edmonton, via Leather Pass to Fort George, there is not much farming land. Neither can much be found from Edmonton by way of the North Thompson to Kamloops or Savona, most of the productive districts of the mainland up to N. Lat. 51° lying south, east, or west these localities. Nor yet is there much cultivable country from Savona along Route No. 2 to Chiliwhack on the lower Fraser.

At page 68 of the Geological Report of Progress, 1875 and '76, occurs the following from the pen of the well-known Mr. Selwyn, F.R.S , Director of the Geological Survey of Canada :—"Taking Edmonton, on the Saskatchewan, and Fort George, on the Fraser, as the initial points, it will, I believe, be found that by Pine River Pass the line could not only be carried almost the whole distance through a magnificent agricultural and pastoral country, but it would actually be shorter than the Leather Pass route, and it would probably not present any greater engineering difficulties !" Mr. Selwyn says much more on this most important matter ; but the permissible limits of this letter forbid further quotation. Let Columbians and others feeling more than a passing interest in the subject refer to the report itself, and to all that in their several reports is stated by Professor Macoun, Mr. G. M. Dawson, and others about this vast north and west country in respect of fitness for settlement, its wealth of timber, its wealth of fisheries, and its promise as to metals and minerals.

Commencing beyond the 51st paralel of latitude, or say 51° 30, it constitutes with the mainland west of the Cascade mountains, Vancouver's and the other islands, about three-fourths of the area of the province. It contains in greatest abundance our three most important resources, namely, those of the mines, the forests and the fisheries, and it will unquestionably always have the preponderance of population and wealth.

Anonymous writers and others upholding route and terminus No. 2 have erred in assuming the whole mainland to be as a unit for the railway line of their choice. There is manifest improbability in such a supposition. The farmers and miners north of Lat. 51° 30 declare for route No. 6 as best for their own and the general interests.

The adoption of the Edmonton-Fort George line suggested by Mr. Selwyn, besides affording wayside traffic throughout would supply the most direct outlet towards the Fuca Strait and Pacific for the great country of Peace River.

Even connected with Edmonton by the other route, Fort George will be an important centre of farming and pastoral country as well as of water stretches north, west and south, when rendered suitable for light draught steamers.

Improvement of the Fraser for such navigation, perhaps from Boston Bar to above Fort George, would be a natural sequence of the construction of the railway via Bute Inlet. The canyon at Big Bar, two miles long, would perhaps best be passed at first by a rail or tramway. Mr. G. B. Wright has, after careful survey, reported elaborately to the Dominion Government on the obstacles to navigation and supposed cost of their removal. Three hundred and seventy miles of the river, if not more, could be rendered travelable for steamers whereby wayside and export traffic by the railway would be greatly promoted. Mr. Wright states in some valuable notes furnished me that a great proportion of produce from a country bordering the Fraser could at or near Fort George be taken from the deck of the steamer to the railway cars He says "extensive farming lands near Lillooet would furnish their quota, and even the productions of Bounaparte and Cache Creek valleys would seek this cheap and speedy method of transport to the sea, while the mines of Cariboo and Omineca, rendered profitable by the influx of low-priced food and labor, would again yield their tribute as in former years."

Mr. Wright's own words are given, as he knows the upper country as well as most men. The crushing of quartz in Cariboo, a new industry there, will, if productive, vastly add to the importance of all that northern region. Success at Cariboo may lead to similar and successful ventures at Omineca and Cassiar, which are also permanently habitable, should mining attractions suffice. Several parts of Cassiar abound in summer grass, and that means a good deal.

A gentleman, acting as surveyor for the Western Union Telegraph Company, some ten years ago, and who had previously

been over most of the southern mainland, considers the lands extending north-west of Westroad River, embracing an area of about five million acres, and including most of the "lake country," at least as good as any in the province for stock and farming purposes. See, in their reports, what Messrs. Selwyn, Macoun and G. M. Dawson have set forth about this country as to its agricultural value, &c. On the long valley of the Wastonqua, a tributary of the Skeena, my informant found gooseberries and strawberries as large as garden sorts, and in a few places the red currant similar to the cultivated kind. The haughs and braes of the Wastonqua, the delight of cattle drovers to Cassiar, wave in summer with luxuriant grasses and vetches, The stream flows sluggishly, and could, it is said, at small outlay, be rendered navigable for river steamers.

The lakes and streams of the north country abound in excellent fish. Its climate is suited for the growth of turnips, being moister in summer than that to the southward.

The northern limit of fall wheat growing in the Dominion has yet to be skilfully tested from Norway House, if not further east, to Fort Stager, N. Lat. 55°. 20, if not beyond. There, in 1866-67, a bullock wintered out, and was found in spring in fair condition.

It is very gratifying to observe that the value of our province as a whole is becoming better and better appreciated throughout the Dominion. Cordiality should prevail between east and west, and, above all, amongst ourselves. Victorians desire the real welfare of the southern mainlanders. As an evidence of what a careful observer and close reasoner, Principal Dawson, of Montreal, thinks of our province as a whole, I ask you to print as an appendix to these letters when issued from THE COLONIST press in pamphlet form, the accompanying extract from Dr. Dawson's address (18th May, 1877) to the Natural History Society of Montreal.

APPENDIX.

EXTRACT FROM ADDRESS OF THE PRESIDENT,

PRINCIPAL DAWSON, L. L. D., F. R. S.,

— AT THE —

Annual Meeting of the Natural History Society of Montreal,

May 18, 1877.

"I have reserved to the last some remarks connected with the subject of my own paper on the Geology of the Intercolonial Railway, and which subject I desire here to refer to in somewhat broad and discursive manner, demanded I think by the present condition of science and the industrial arts in this country. I would in this connection desire to direct your attention to the immense importance of that great public work, and to the effects which would flow from a further extension of similar enterprise in the west. I can remember a time when the isolation of the Maritime provinces from Canada proper was almost absolute. There was a nearly impassable wilderness between, and no steamers on the waters, and the few whom business or adventure caused to travel from Halifax or St. John to Quebec or Montreal, had to undertake a costly and circuitous journey through the United States, or to submit to almost interminable staging through a wilderness, or to the delays of some sailing craft on the St. Lawrence. In later times steamboats have supplied a less tedious mode of communication, and now we see placards informing us that the Intercolonial carries passengers from Quebec to Halifax in twenty-six hours. But it has done more than this. The traveller may now see the coal of Nova Scotia travelling upward to Quebec, and the fresh fish of the Atlantic coast abundantly supplied in our markets, while the agricultural products of the interior travel seawards in return. This is however but the beginning of a great change. A delegation of coal owners was in Ottawa endeavouring to attract the attention of members of the Legislature to the fact that Ontario might be cheaply supplied with coal from Nova Scotia in return for her farm products. The representation led to no immediate practical results, but it foreshadows a great future change. Living as we do on the borders of that great nation without any name, except that of America, which does not belong to it, and which builds an almost impassable wall of commercial restriction along its frontier, we cannot long endure the one-sided exchange of commodities which takes place at present so much to our disadvantage. The Nova Scotian cannot buy flour and manufactured goods from a people who refuse to take his coal and iron in exchange; and the Ontarian or Quebecker cannot afford to have the commercial connection with the mother country severed in favour of a nation which will not take the products of our fields, our forests, our mines or our granaries in exchange. We shall have in self-defence to cultivate our own internal trade, and even if we must bring the products of the Pacific and Atlantic Coasts across a whole continent to meet each other, this will be cheaper in the end than to sacrifice our own interests and those of the empire to the Chinese policy of our neighbours in the South.

The diversities of products in countries depends much on differences in latitude, but there are also diversities depending on longitude, and, fortunately our country possesses these in no small degree. On our Atlantic coast we have rich fisheries and minerals not possessed by the interior regions. In these last, through all the great regions extending from Quebec to the Rocky Mountains, we have vast breadths of fertile soil besides many of the elements of mineral wealth, and varied kinds of manufactures are growing up both on the coast and inland. What is to hinder a direct exchange of commodities within ourselves instead of an indirect exchange under the most serious disadvantages with the United States. Further, such direct exchange would increase our trade with Great Britain and the West Indies, and bind together the somewhat divergent sections of our own population. The opening up of railway communication across the great western plain might do for us what a similar process has done for New York. But from a railway terminus on the Pacific shore we could stretch our commercial relations over that great ocean, and bring all the treasures of the Orient to enrich our markets. Further in establishing communication with British Columbia, we are not merely establishing a landing place on the Pacific, though this would be an inestimable advantage. British Columbia is the mining point of view, one of the richest portions of the earth's surface. It is of more value acre

for acre than any portion of the Eastern States or of Canada proper. In an appendix attached to a recent report on the Pacific railway, Mr. G. M. Dawson has collected some details as to the mineral wealth of this region. He mentions gold-fields yielding now more than a million and a half dollars annually. In eighteen years British Columbia with only 10,000 inhabitants has exported gold to the amount of 40,000,000 of dollars; and it is no exaggeration to say that with a larger population and better means of conveyance this yield might be increased twentyfold.

Coal exists on Vancouver's Island and the neighboring mainland in inexhaustible abundance, and of excellent quality, and represents the sole supplies of that mineral on the Pacific coast of North America. British Columbia might supply the whole Pacific coast and a vast interior region, and might produce many millions of tons annually.

Iron, silver and copper are known to exist in productive quantities, and there is reason to believe that mercury, lead, and platinum might be added.

In short, British Columbia possesses all that mineral wealth which has enriched California and the States adjoining it; and the opening up of communication between it and other parts of the Dominion would be the beginning of a series of events that would build up great and wonderful cities and populous seats of industry in a region now scarcely inhabited, and cut off from direct intercourse with the other provinces politically connected with it.

What the Intercolonial has begnn to do for our relations with the Atlantic provinces, the Canada Pacific must do for our relations with the Pacific province; and if I could present before you in a prophetic picture all that would follow from the establishment of such a connection, and the trade of the great sea and lands beyond, which might flow through our country, you as citizens of a commercial city, as well as in the capacity of votaries of science and scientific art, would at once say that at almost any sacrifice this great work should be executed. The difficulties in the way are undoubtedly great—so that this generation of Canadians should scarcely be called upon to overcome them unaided, but they are not insurmountable, and the mode of meeting them is certainly at present the greatest public problem that our statesmen have to solve. It is further undoubtedly the duty of those whose scientific studies show them the grandeur of this great question and the nature of the practical results of its solution, to aid in every way that they can the progress towards an unobstructed highway through the territory from the Atlantic to the Pacific.

If it is in our power thus to bring together the resources of the whole breadth of the Continent, we may hope to consolidate our connection with the Mother Country by making ourselves indispensable to her interests, to relieve ourselves from the galling commercial yoke laid upon us by our neighbors, to provide homes and work for the surplus population of our older provinces, to build up the wealth of great trading centres, and to render vast and naturally wealthy regions productive of subsistence for millions of men.

When I look forward to the future of this country and base my anticipations, not on the merely human elements of to-day, but on the geological treasures laid up in past ages, I see the Dominion of Canada with a population as great as that of the United States, and with some of the greatest and wealthiest cities of this continent in Nova Scotia and British Columbia. Geologists are not merely prophets of the past, they know something of the future as well. It might perhaps be well if we could inoculate our statesmen with a healthy belief in the geological future of Canada, or even with some faint idea of the billions of dollars of accessible treasures that lie beneath the soil of Nova Scotia and British Columbia. We might then see them put forth some effort to realize this El Dorado within the time of those now living, rather than contentedly allow it to wait the action of men wiser and more energetic than ourselves."

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