

the upper lakes will be able to proceed from the western ports to Montreal and the Atlantic ports without trans-shipment at Kingston and other places. These canals will be enlarged on a uniform system, so that all the locks will have 270 feet length of chamber between the gates, 45 feet in width, and 12 feet of clear draught over the mitre sills. Measures are also in progress to improve the navigation of the St. Lawrence river between Montreal and Quebec, with the view of allowing the largest ships to come up directly to the former city and, in order to attain this result it will be necessary to deepen Lake St. Peter to 24 feet, and otherwise make it equal to the passage of the sea-going crafts in question.

A work of great magnitude is also to be reconstructed in the Maritime Provinces. If our readers will take up a map of Nova Scotia, they will notice how narrow is the Isthmus of Chignecto, that separates that province from New Brunswick, and will at once be struck with the fact that a canal across that neck of land must afford immense facilities to commerce. The total distance across the Isthmus is only fifteen miles, and the country is level and easily excavated; but, nevertheless, there have been some engineering difficulties suggested on account of the difference in the range of tides. Few spectacles of nature are more calculated to awaken awe in the mind of the spectator than the irresistible march of the tides of the Bay of Fundy into its various estuaries. "At low tide"—we quote from Dawson's geology—"wide flats of brown mud are seen to extend for miles, as if the sea had altogether retired from its bed, and the distant channel appears a mere strip of muddy water. At the commencement of flood, a slight ripple is seen to break over the edge of the flats. It rushes swiftly forward, and covering the lower flats almost instantaneously, gains rapidly on the higher swells of mud, which appear as if they were being dis-

solved in the turbid waters. At the same time the torrent of red water enters all the channels, creeks, and estuaries—surging, whirling, and foaming, and often having in its front a white, breaking wave, or 'bore' which runs steadily forward, meeting and swallowing up the remains of the ebb still trickling down the channels. The mud flats are soon covered, and then, as the stranger sees the water gaining with noiseless and steady rapidity on the steep sides of banks and cliffs, a sense of insecurity creeps over him, as if no limit could be put to the advancing deluge. In a little time, however, he sees that the fiat, "hitherto shalt thou come and no farther," has been issued to the great bay tide. Its retreat commences, and the waters rush back as rapidly as they had entered." The extreme range of tides in Bay Verte does not reach beyond eight feet, while high water in Cumberland Bay rises about 23 feet above the level of medium tides. These and other obstacles, however, can be surmounted; and it is proposed to go on with a work which must give a remarkable stimulus to the commerce of the Maritime Provinces. The canal will render more accessible a vast amount of mineral wealth which now wants a market. By affording a shorter and cheaper route than that round the Atlantic coast of Nova Scotia, freights will be lessened and the transport of heavy merchandise to Canadian ports on the St. Lawrence stimulated. With the completion of this work, the inland navigation of the Dominion may be considered perfect: for the large propellers of the west will be able to make a rapid and secure voyage without breaking bulk from Chicago to Boston or Portland.

Not only will Canada control the transport of the surplus produce of the Great West, but she must develop a large Intercolonial trade, the moment her canal system is enlarged and perfected from Erie to the Bay of Fundy. Commercial men have long