of the United States, voted unanimously for a renewal of the Reciprocity Treaty, yet they were not able to influence the political intriguers at Washington whose energies were directed by their desire to force annexation on British America.

A favorite object with the commercial representatives from the States bordering on the great Lakes was the enlargement of the St. Lawrence Canals and the construction of a ship canal round the Falls of Niagara, and ever since the convention the Detroit people have let no opportunity pass without pushing this popular subject before the public.

In our last issue a synopsis of a memoir by Gen. T. J. Cran, of the United States corps of Engineers, read before the Board of Trade of the City of Detroit, was published, and the enlargement of the St. Lawrence Canals was the principal feature of the scheme then unfolded. A recapitulation of the project is as follow :—A railway from Puget Sound on the Pacific to the western end of Lake Superior, which he states to be a distance of 1,775 miles, and thence by lakes, canals, and rivers to the Gulf of St. Lawrence, 1,493 miles, making a total from sea to sea of 3,268 miles. In this navigation Gen. Cran assumes a canal round the Falls of Niagara eight miles in length and proposes to overcome the fall of *three hundred feet* by a *single lock*, and he proposes to throw two locks now existing on the Sault Ste. Marie's Canal into a lift of fifty feet, the difference of level between Lakes Huron and Superior being twenty-eight feet.

The estimated cost of this vast project, which includes the deepening of a channel through Lake St. Clair, to sixteen feet, is set down as $102,253,605, and it would be most decidedly the cheapest work ever constructed, especially when it is considered that the Suez Canal, only 86½ miles in length, has cost over $60,000,000 and is not yet completed, although it had no obstructions in the shape of heavy falls to contend with and consequently no locks to build.

The possibility of constructing a lock with a single lift of fifty feet or one of *three hundred* is a problem which some enterprising officer of the United States Engineers may yet solve, but its utility is quite another matter, and for this reason in passing a vessel from one level to another the greatest speed that can be attained would be to lift her one foot per minute, and the larger the chamber to be filled the slower the process from the fact of the great velocity attained by the descending water; now it would take five hours to make one lockage in the proposed ship canal, so that four vessels would pass through every twenty-four hours, and as those would be of 1,000 tons burthen only 4,000 tons could pass in that time.

The Welland Canal is 28 miles in length and has 27 locks of 12 feet lift each—these locks are not so concentrated but that a vessel can pass within twelve minutes of another clearing out—the length of channel can be cleared in *fourteen hours* at *two miles* per hour—the lockage in five hours—total for one vessel of 400 tons 19 hours, leaving four hours and thirty-eight minutes which at twelve minutes between each vessel would pass twenty such vessels, making a total of 4,400 tons on the smaller canal—so that no advantage would accrue from the Ship Canal with *one lock*. Apart from this consideration its conception is a blunder. If the enlargement of the Welland Canal is objectionable because "it is wholly on a foreign soil"—what can be said of the St. Lawrence Canals which are in the same condition and without which the Ship Canal would open from one *culde sac* to another. In fact as far as this question of internal navigation is concerned Canada holds the key, and the American people must recognise the fact sooner or later—and it stands thus—the enlargement of the Welland Canal would be a tedious and costly operation to be undertaken only on condition of the abolition of the American coasting laws and the free navigation of Lake Michigan; its capacity would be limited to the passage of 21 vessels every twenty-four hours during the season of navigation—say 250 days—and assuming the vessel to be 1000 tons burthen 4,830,000 would be its maximum value, so that its effect on the Western commerce would soon cease to be appreciable.

The prism or channel of a canal is necessarily limited; the greatest work of the present day, the Suez Canal, without a lock requires from 19 to 28 hours to pass through, the mean rate of speed being only about four miles per hour. In the smaller channels proposed a much less rate can be attained—the detention at or during lockage is not that which tells on the capacity or value of the channel, *but its width*. Now Canada possesses in the Ottawa and French Rivers the elements of a navigation which would be free from all the difficulties with which the route proposed by General Cran is encumbered—in the first place the whole length of canal will not exceed thirty miles, and it is in detached pieces, widely separated, the greatest length of any one section not being over three and a half miles.

In comparison with General Cran's plan the route to the Pacific in this case would be as follows :—Taking the figures to Montreal from his (memoir) from the Gulf to Montreal 560 miles, then by way of the Ottawa and French Rivers to Lake Huron 430 miles, thence to Sault Ste. Marie 165 miles, thence to Fort William 380 miles, and by rail to Port Waddington on Puget Sound by Fort Garry 1,646 miles—total distance from the Gulf of St. Lawrence to the Pacific 3,181 miles.

General Cran's distances are manifestly incorrect from Montreal to Fort William on Lake Superior, 160 miles east of where his railway would touch that lake is 1,555 miles, as follows :—Montreal to Lake Ontario, 180 miles; thence to the mouth of Welland Canal, 180 miles; Welland Canal, 28 miles; Lake Erie, 250 miles; Detroit River, 24 miles; Lake St. Claire, 20 miles; River St. Claire, 28 miles; Lake Huron to Sault Ste. Marie, 260 miles; Ste. Marie River, 45 miles; thence to Fort William, 380 miles; if to this is added 560 miles from the Gulf to Montreal, and 160 miles from Fond du Lac or Lake Superior City, where Gen. Cran's proposed railway would touch Lake Superior, a total distance of 2,015 miles from the Gulf of St. Lawrence to the head of Lake Superior, and 1,775 for railway would make the distance through the States to the Pacific 3,890 miles instead of 3,268 miles.

A fair and practical consideration of this subject will establish the fact that the Ottawa route wholly through British territory is the shortest between the Pacific and Atlantic, and as far as navigable facilities are concerned would be far preferable to any other. What must ever remain a barrier to the improvement of the natural outfall of the waters of the Great Lakes is the Niagara Falls and the great length of canal necessary to overcome that obstruction.

THE corporation of the City of Montreal have completed a magnificent drill shed,—the Adjutant-General and Lieut-Col. Wily have gone to inspect it and are to report to the Minister of Militia here the result of their opinions as to its applicability for the purpose to which it is to be applied. The cost of the structure and site is said to be $120,000. With the heavy Volunteer force Montreal maintains such a structure was necessary, and is highly creditable to the enterprise and patriotism of that city.

In Ottawa a structure for similar purposes is required, but, of course, not to the same extent. A sum of $12,000 would supply a suitable building in this city for the use of its Volunteers, and there can be no doubt if the corporation was applied to means would be found to erect it. A suitable site could be obtained on Cartier Square, and a want supplied the need of which is felt every day. This city boasts of no very fine buildings apart from the Legislative halls, and not one belonging to the corporation. A well built drill shed and armory would not only be ornamental but highly useful and absolutely necessary.

A STRAIGHT line drawn from Cape Catoche in Yucatan to Cape Sable in Florida, a distance of 450 miles, would pass close to Cape St. Antoine, the western extremity of the Island of Cuba, which is distant from Cape Catoche 110 miles, forming with it the Yucatan Channel of the Gulf of Mexico. Cape Sable is distant from Cardenas, the nearest point of Cuba, 120 miles. The position of Cuba controls the possession of the Gulf of Mexico and has always been eagerly coveted by the people of the United States long before English stupidity and the treachery of