

To protect the wall from the wash of the sea and battering by drift logs, a belt of granite has been placed in the face of the wall as shown. Holes were drilled through the granite and $\frac{3}{4}$ -inch diameter rods placed therein set with neat cement, thereby double clamping each stone. In the event of the cement mortar between the courses showing signs of disintegration the joints are to be raked out and caulked with lead wool. The lower part of the wall up to the shoulder, excluding the granite, is in the proportion of 1:3:6 concrete and all other concrete is in the proportion of 1:2:4. All concrete was of a "wet" mixture and the cement used was Portland. The exposed face of the concrete is of cement mortar in the proportion of 1 part Portland cement to 3 parts sand deposited at the same time as the concrete, and lifting plates were at first used to ensure the bond, but spading was afterwards adopted as being found more satisfactory.

At the back of the wall a layer about 1 foot thick of broken rock is placed for facilitating drainage and a weeping drain of 3-inch drain tile placed in wall between each counterfort. The length of the wall is 1,680 feet, the greater part of which has an average height of 30 feet. It is finished on top with an iron pipe railing supported by reinforced concrete posts at 10 feet centres.

The work was done by contract and the total cost amounted to \$119,020, divided up as follows:—Wall, \$112,130; Convenience and steps to beach, \$3,810; Railing, \$3,080.

Work was commenced in January 1911 and completed in February 1912, but a great deal of delay occurred and time was wasted through disputes.

The plans were prepared in the Public Works Department by the author, acting under the instructions of Mr. Edward Mohun, M. Can. Soc. C.E., etc., who designed the work. Mr. A. E. Foreman, A. M. Can. Soc. C.E. was supervising Engineer and the Contractor was the Pacific Coast Construction Co., Ltd., Victoria.