

the same situation, that it does not absorb cold in winter nor heat in summer to the same extent that stone, brickwork or concrete would do, and consequently, it is more comfortable and healthy for the workmen than either of those materials. Also, that it is much easier to keep the dock clear of accumulations of ice and snow when the altars are of wood than if of any other substance. Its disadvantages are that it is a foreign and expensive wood, and that its durability cannot be assured.

The conclusions at which I have arrived, after giving these matters careful consideration are, that a well-constructed dock, built with concrete backing and a granite face, would be the best in this port. That a concrete dock with pitch-pine facing would stand next as regards cost and would prove an excellent and serviceable structure for a number of years. That a dock built almost entirely of concrete would be a good and durable structure, and that it would be considerably cheaper than the dock faced with pitch-pine. Finally, that a dock faced with timber and backed only with clay puddle—in the usual way that wooden docks have thus far been built—while being probably the cheapest, would not prove satisfactory for any length of time in this country.

There are several other descriptions of docks and appliances which have been invented in order to enable workmen to obtain easy access to the bottoms of vessels for the purposes of examination or repairs. Of these the best known in this port is probably the Marine Slip or Railway, of which we have three, the largest being capable of drawing a ship of 2,500 tons out of the water. The principal other kinds of docks are:

1. *The Balance or Floating Dock.*—This is a huge wooden construction, into which the vessel is towed or hauled. The water-tight compartments are then pumped out and the dock, with the ship upon it, gradually rises out of the water. The great drawback to this dock here would be that the bottom would soon be destroyed by worms and it would be inaccessible for repairs.

2. *The Sectional Dock.*—This may be compared to a Balance dock, cut transversely into separate pieces or sections of about 30 feet in length. The sections are made of timber, and as many are placed together as may be needed to raise a ship of any length. There are connecting beams joining the several sections together, which are keyed up after the vessel has been lifted, so that the different parts become as one structure. Vessels can be transferred from the dock to ways upon the shore by means of a cradle worked by hydraulic power, but the operation is said to be one requiring great care and has not unfrequently resulted in accidents of a serious nature.