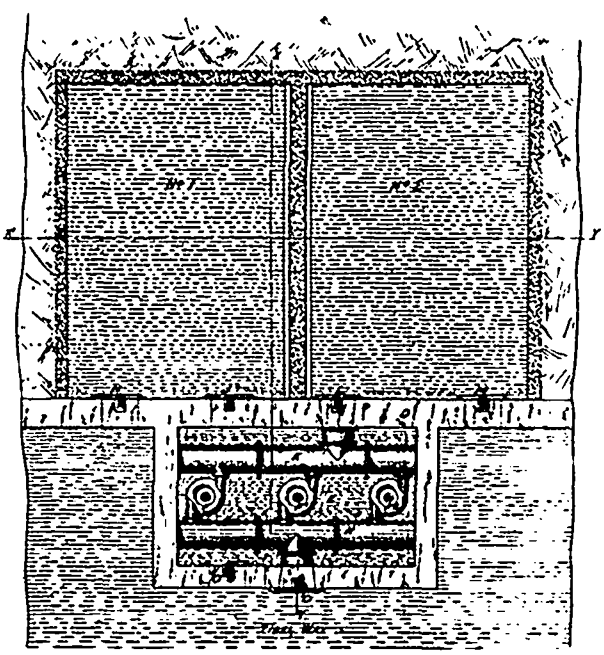
If this can be obtained out of the low tides of the British coast, it would be interesting to know what power could be got out of the Bay of Fundy, where, between the two coasts of Nova Scotia and New Brunswick, the tide rises and falls at some points over 60 feet.

On pages 124 and 180 of our last volume, reference was made to a tidal motor invented by Edward Davies, an English inventor of extended experience, who put in a small experimental plant in a tidal inlet in England, and operated a dynamo for three months in lighting a house. The experiment was quite successful, and Mr. Davies claims that the cost of running a tidal motor would be only one-fifth that of steam, while the wear and tear would be next to nothing.

Mr. Davies favors THE CANADIAN ENGINEER with the following description of the tidal motor with the accompanying diagrams, showing the method of its operation :

FIG. 1.



DAVIES' TIDAL MOTOR.

"According to this invention I employ two reservoirs of dimensions suitable to the power required, and which I call No. 1 and No. 2 reservoirs. By the aid of the two reservoirs, and working from the tide direct, I can keep turbines or other suitable water motors going continuously during the 24 hours, and if necessary throughout the year. The bottom of No. 1 reservoir will be about on a level with low tide, but may be higher; and the bottom of No. 2 reservoir may be about level with the tide when about half high, more or less. A turbine race is arranged in front of the reservoirs next to the tidal way. In this race are fixed, as a rule, two turbines; but there may be more or only one to suit circumstances. The turbines will be fixed 3 feet, more or less, above the bottom of the turbine race, which will be on a level with the bottom of No. 1 reservoir, or may be higher. There is a water supply pipe on each side of the turbines to work them. One pipe receives the water direct from the tidal way through a sluice valve. When the turbines are a considerable distance away from low tide the water can be brought up the trough or pipes that take away the used water from the turbines to low tide, and so to the feed pipe above mentioned. The other feed pipe on the other side of the turbines receives its water through a sluice valve from No. 2 reservoir. The turbines discharge their water on to the bottom of the turbine race, from whence it runs through a sluice gate into No. 1 reservoir for a given time, and for the rest of the time through a sluice gate into the tidal way through troughs or pipes or other means.

FIG. 2

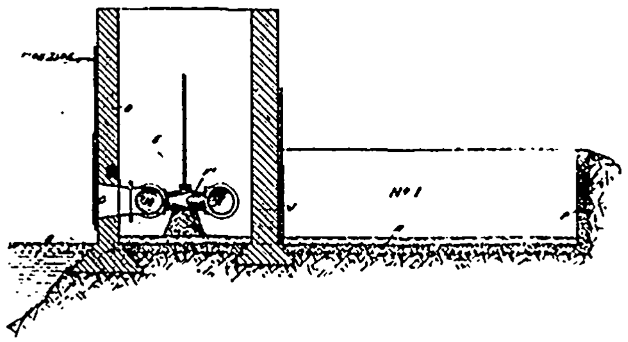
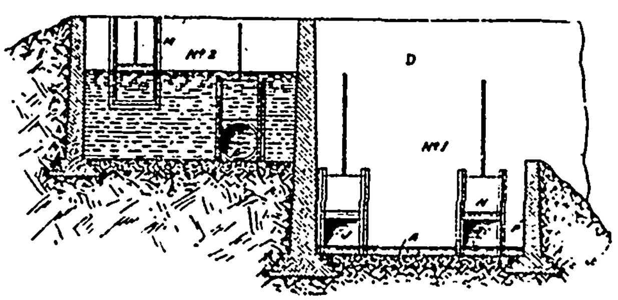


FIG. 3.



DAVIES' TIDAL MOTOR.

"The above arrangement in practice works as follows: Dealing with a tidal rise and fall of 21 feet : assuming the turbines to be 3 feet above the bottom of their race, this will give at high tide an eighteen feet head of water. At high tide No. 2 reservoir is full of water and No. 1 reservoir is empty. The tide will rise and fall 3 feet 6 inches per hour. To commence work the tidal water is admitted to the turbines, which are kept going for 1¾ hours, the water being delivered from them into No. 1 reservoir, which must be of a suitable size for the purpose; the tide will have lowered in the 1¾ hours 6 feet 1½ inches, leaving 11 feet 10½ inches clear head of water: I now stop the water from the tidal way and work the turbines from the water in No. 2 reservoir for 3 hours, still delivering the water from *the turbines into No. 1 reservoir. The tide has lowered* in the 4¾ hours 16 feet 7½ inches; I keep on working from No. 2 reservoir for 1¼ hours longer, the turbines delivering the water into the tidal way. The turbine has now been working 6 hours and it is low tide (and No. 1 reservoir is emptied into the tidal way). I still keep on working the turbine from No. 2 reservoir for 1¼ hours, the water being delivered into the tidal way. The tide has risen in the 1¼ hours 4 feet 4¼ inches. I still keep on working from No. 2 reservoir, delivering the water from the turbine into No. 1 reservoir for 3 hours, making 4¼ hours from low tide. The tide has risen in the 4¼ hours, 14 feet 10½ inches. I now shut the water off from No. 2 reservoir and commence to work the turbines from the tidal way for 1¾ hours, delivering the water into No. 1 reservoir; this makes 6 hours, and it is again high tide (as when I started at first) and No. 2 reservoir is again filled; so that I go on with the same cycle of working continuously every hour, day and night (if required) throughout the year. The turbines can be started to work at any time, day or night, and at any height of the tide, and even at low tide.