

A. ROY.
 DRY DOCK.
 APPLICATION FILED SEPT. 23, 1912.

Patented Apr. 8, 1913.

1,058,106.

Fig. 1

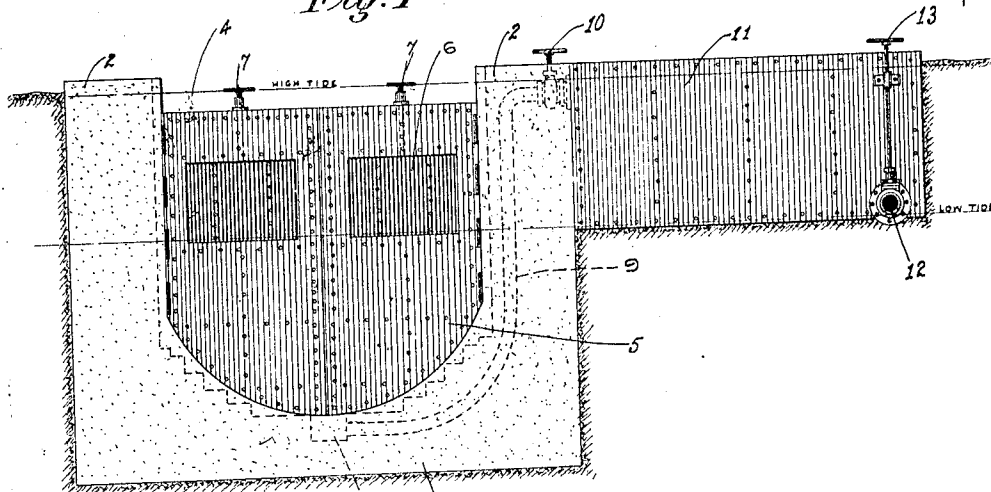
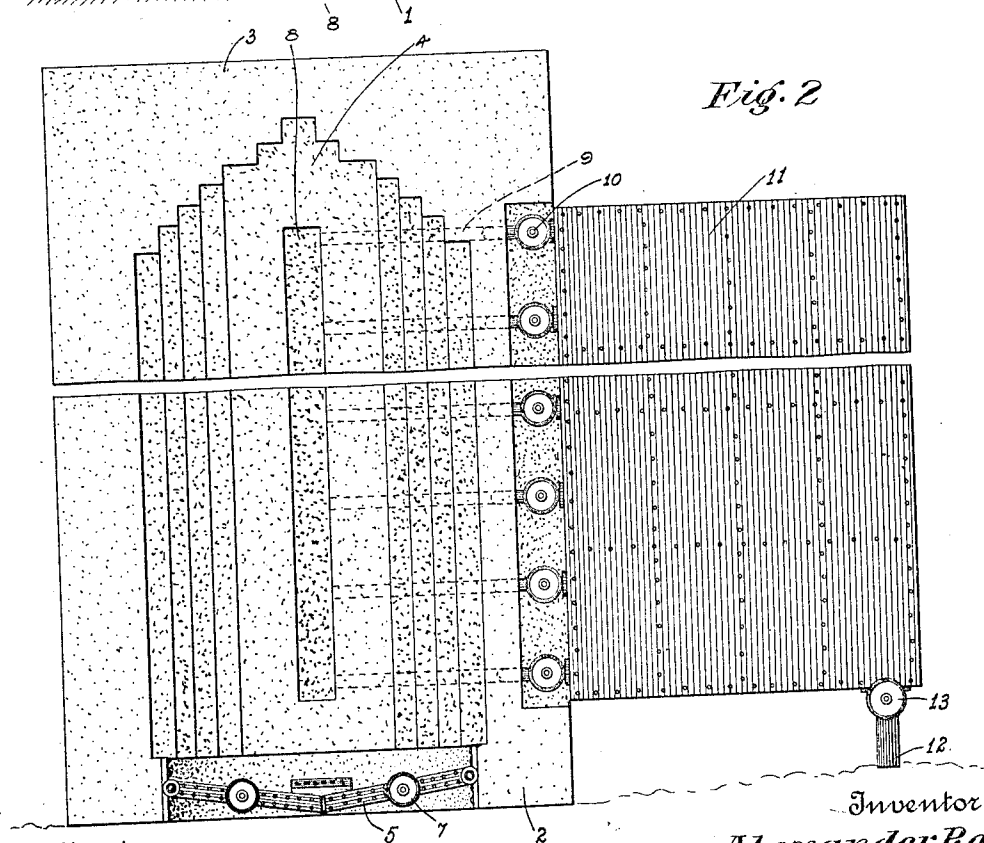


Fig. 2



Witnesses

Frank H. Carter

Clarence Smith

Inventor
Alexander Roy

By *Percy S. Webster*
 Attorney

UNITED STATES PATENT OFFICE.

ALEXANDER ROY, OF SAN FRANCISCO, CALIFORNIA.

DRY-DOCK.

1,058,106.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed September 23, 1912. Serial No. 721,768.

To all whom it may concern:

Be it known that I, ALEXANDER ROY, a subject of Great Britain, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Dry-Docks; and I do declare the following to be a clear, full, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

15 This invention relates to improvements in dry docks, the object of the invention being to produce a dry dock from which the water may be exhausted without the necessity of using pumps or similar power operated devices, but in place of such power operated devices the invention provides a siphoning means which will exhaust the water from the dry dock by means of using the rising and falling of the tide to produce a vacuum 25 in an auxiliary tank connected with the dry dock, which vacuum exhausts the water remaining in the dock at low tide. In other words, the vessel is floated into the dock at high tide which will submerge the auxiliary tank and then when the water lowers to low tide, the difference between the high tide and low tide is drawn off from the dry dock through gates and the lowering of the tide draws the water out of the auxiliary tank 30 which causes a vacuum which exhausts the balance of the water left in the dry dock into said auxiliary tank.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

40 These objects, I accomplish by means of such structure and relative arrangement of the parts as will fully appear by a perusal of the following specification and claim.

45 On the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a front elevation of the dry dock. Fig. 2 is a top plan view of the same partly broken out.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 designates the bottom of the dry dock, the numeral 2 the side walls, and the

numeral 3 designates the rear wall. These walls may be formed of concrete or any other suitable material. The forward end of the dock is provided with hinged gates 5 adapted to be opened and closed as may be desired. In said gates just above the low tide water line are sliding valves 6 with suitable operating handles 7. The dry dock is provided in its bottom with a channel or groove 8 communicating with which are 65 pipes 9 having valves 10, which pipes at their other ends communicate with the upper end of an auxiliary tank 11 made of any suitable material and suitably reinforced and braced to withstand the strain 70 of the suction and pressure of the water passing therethrough. The upper end of said auxiliary tank 11 is disposed at substantially the water line of high tide and the lower end at substantially the water line 75 of low tide. A valve 12 provided with an operating handle 13 discharges from the tank 11 just above the low tide mark as shown in the drawings.

In practice, the ship is floated into the dock at high tide and the gates 5 are then closed. Then as the water recedes to low tide, the valves 6 are opened which lets the water out of the dock to the level of low tide by means of gravity alone, after which 85 the valves 12-10 in the chamber are opened and as the water recedes to low tide it drains the water out of the tank 11 to its level which leaves a vacuum between the level of the water in said tank and the top of said 90 tank, which vacuum will then exhaust the water from the dry dock below the valves 6 and thus when the tide has receded to its lowest ebb, the tank 11 will have exhausted the water from the dock which will leave 95 such dock dry.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfils the objects of the invention as set forth herein. 100

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit 105 of the invention.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

A device of the character described com- 110

prising a dock having gates, valves in said
gates disposed at a predetermined point
thereon, an auxiliary tank connected with
the lower end of such dock by pipes, and a
5 valve leading from such tank at a point
substantially in alinement with the lower
end of the valves in said gates, as described.

In testimony whereof I affix my signature
in presence of two witnesses.

ALEXANDER ROY.

Witnesses:

M. E. DARTNELL,
D. E. ALEXANDER