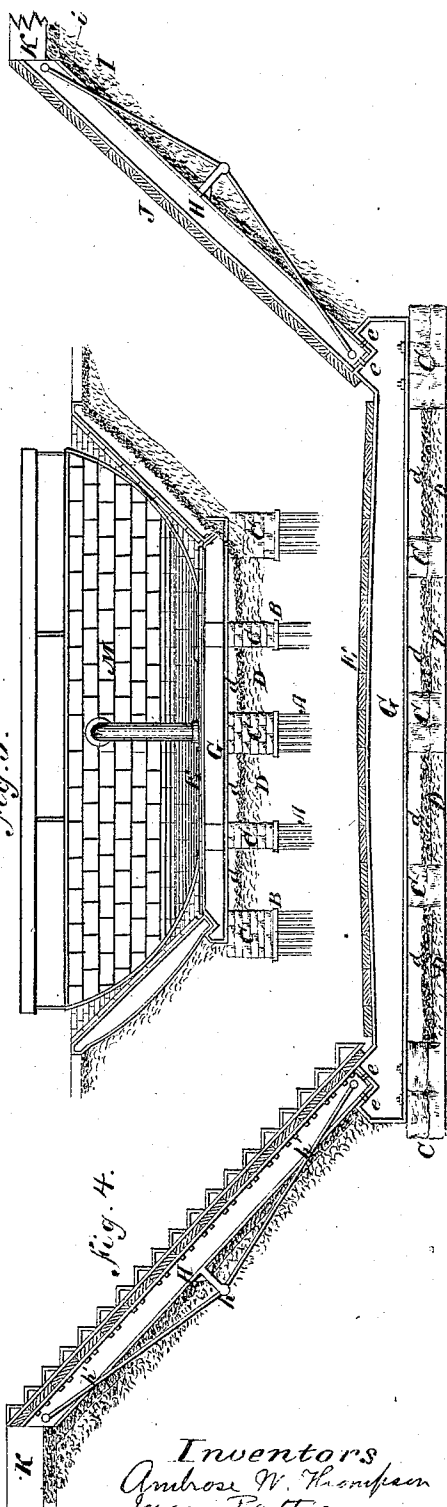
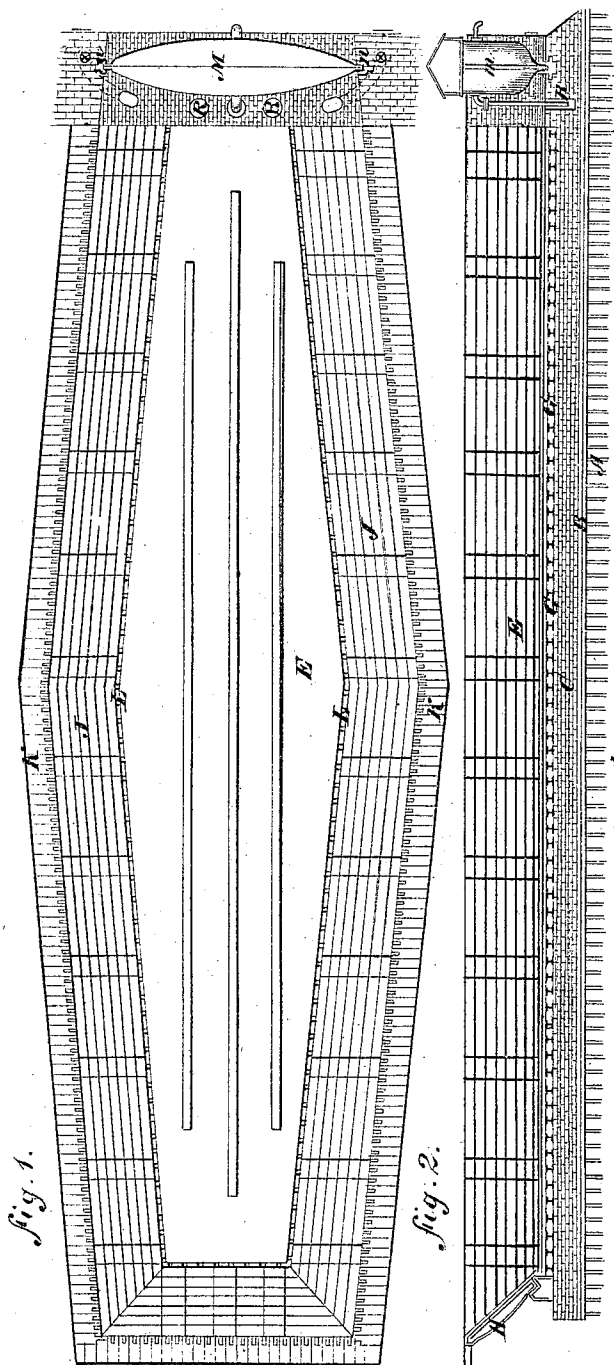


A. W. THOMPSON & J. PATTISON.

Building Docks.

No. 136,560.

Patented March 4, 1873.



Witnesses.
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J. Z. Ellsworth.

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By their Attorneys,
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UNITED STATES PATENT OFFICE.

AMBROSE W. THOMPSON AND JUAN PATTISON, OF NEW YORK, N. Y.; SAID
PATTISON ASSIGNOR TO SAID THOMPSON.

IMPROVEMENT IN BUILDING DOCKS.

Specification forming part of Letters Patent No. 136,560, dated March 4, 1873.

To all whom it may concern:

Be it known that we, AMBROSE W. THOMPSON and JUAN PATTISON, both of the city and county of New York and State of New York, have invented certain new and useful Improvements in Building Docks; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top-plan view; Fig. 2, a longitudinal vertical section; Fig. 3, a transverse section; and Fig. 4, a transverse section.

Similar letters of reference in the accompanying drawing indicate the same parts.

This invention relates to the construction of docks wherein vessels are built or repaired; and its object is to avoid the dampness and cold experienced in docks constructed entirely of masonry and imperfectly drained, as heretofore. To this end the invention consists in constructing the dock of wood, iron, and concrete, substantially as we will now proceed to set forth.

After the necessary excavation has been made for the dock site, we drive piles A A at proper distances apart, to secure a permanent bearing for the superstructure. On the piles we place two or more layers of timber, B, and on this timber we build the masonry C, in any requisite number of lines, in the direction of the length of the dock. Between the piers C we lay rubble or dry masonry D, and place thereon a layer of concrete, *d*, well tamped down and made smooth on the surface to shed water and allow rain or drainage to flow off to the collecting-chambers R R, Figs. 1 and 2. Transverse iron floor-beams G are laid on the masonry at any desired intervals apart, and the floor planking E is placed on the beams, as shown, and properly calked

In constructing the sides and inner end of the dock we arrange inclined iron-beams H, as shown in the drawing, said beams being made of **I**-iron, and strengthened by a strut, *h*, and tie-rods *h'* *h'* to prevent them from bending under the pressure of the water when the dock is full. These beams, secured at their lower ends to the floor-beams by means of bolts and nuts *e*, and allowed to rest at an easy inclination against the blocks

of masonry K, are covered with wooden planks J, fastened by bolts or other suitable means, and calked tightly to prevent the water from leaking through.

Between the inclined beams H, as between the piers C, we lay rubble or dry masonry I and cover it with concrete *i*. This admits perfect drainage below the concrete, and gives a shedding-surface for the water that may leak through the seams or get between the planking and the concrete, whereby said water will be at once carried off to the gutter L surrounding the dock, and thence to the wells R R, from which it is pumped out from time to time as it accumulates. For this purpose the caisson-gate M is provided with a suitable pump and a steam-boiler. The caisson itself is made of boiler-iron or boiler-plate, riveted water-tight, and along the bottom and at each end extends an iron piece, *m*, in the shape of a projecting flange, which fits into grooves provided for its reception in the segments *n* of cast-iron imbedded in the masonry for the purpose of supporting the caisson when the water is pumped out. To make the contact perfect between the flange *m* and the groove, so that there may be no leakage, the groove may be packed in any suitable manner with India rubber or other suitable material.

The mode of filling and emptying the docks, opening and shutting the gate, and taking vessels in and out being well known to the public, it is not necessary to give here any further description thereof.

Having thus described our invention, what we claim is—

The building-dock, herein described, constructed with the courses of rubble stones or dry masonry immediately on the ground, the surface of concrete on the rubble stones, the iron floor and side beams above the concrete to sustain the planking, and the wooden planking thereon, suitable spaces being left between the planking and the concrete for the water to drain off into the wells R R, substantially as and for the purposes herein set forth.

AMBROSE W. THOMPSON.
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Witnesses:

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