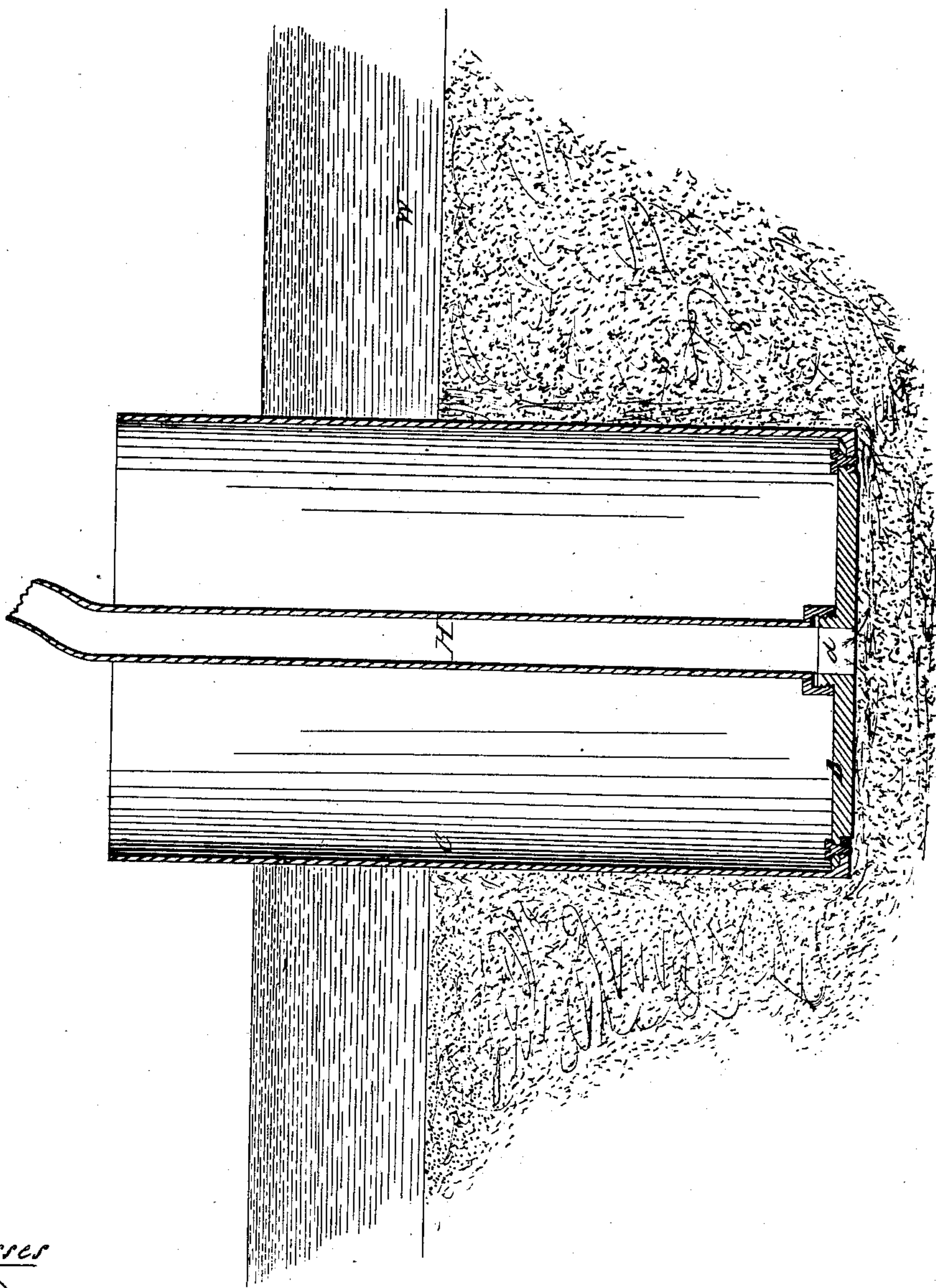


No. 62,444.

PATENTED FEB. 26, 1867.

C. H. SANBORN.
COFFER DAM.



Witnesses

Joseph W. Clarke
J. H. Fitcherton

Inventor

Chas. H. Sanborn

United States Patent Office.

CHARLES H. SANBORN, OF ROXBURY, MASSACHUSETTS.

Letters Patent No. 62,444, dated February 26, 1867.

IMPROVED COFFER DAM.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES H. SANBORN, of Roxbury, in the county of Norfolk, and State of Massachusetts, have invented a new and useful improvement in Coffor Dams for laying foundations in sand-beds; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, forming a part of this specification, which is a vertical section of the apparatus.

My improvement in laying foundations in sand-beds consists in the employment of a coffer dam, so arranged that the water is excluded from it, and in converting into a temporary quicksand the bed through which it is to sink to reach a solid foundation, at the same time removing the quicksand from beneath the dam by the same force which creates it.

Let us suppose that S is the bed of sand on which or through which we desire to erect a pier, and W is the tide or river-water covering it. I take a large iron cylinder, C, having a removable bottom, B, pierced at the centre, as shown at d. To the interior face of the bottom is attached a pipe coupling, and upon this is fastened a hose, H. The bottom of the cylinder resting on the bed of the river, water is forced through hose H by a powerful force-pump, converts the sand-bed into a quicksand, and at the same time washes the quicksand away around the sides of the cylinder, which sinks rapidly through the sand-bed to hard bottom. When deep enough, the bottom is removed, and if desirable the cylinder may be filled with masonry, and a solid foundation thus secured. Instead of a stream of water thrown against the sandy bottom, a stream of any other fluid may be used, but water is probably the cheapest and handiest fluid to use.

It is obvious that by carrying a water pipe down by the side of a pile we are driving into sand, and directing a current of water through said pipe, the pile can be sunk by pressure only, in the same way as the dam is done, as I have described. I consider this employment of the force of running water below water as the novelty and usefulness of my invention.

I claim as my invention, and desire to secure by Letters Patent—

A coffer dam or cylinder or box, so constructed that a stream of water may be directed through it, or so arranged that an artificial current of water may be directed under it, as and for the purposes described.

CHAS. H. SANBORN,

Witnesses:

THOS. WM. CLARKE,

JNO. CRITCHERSON, Jr.