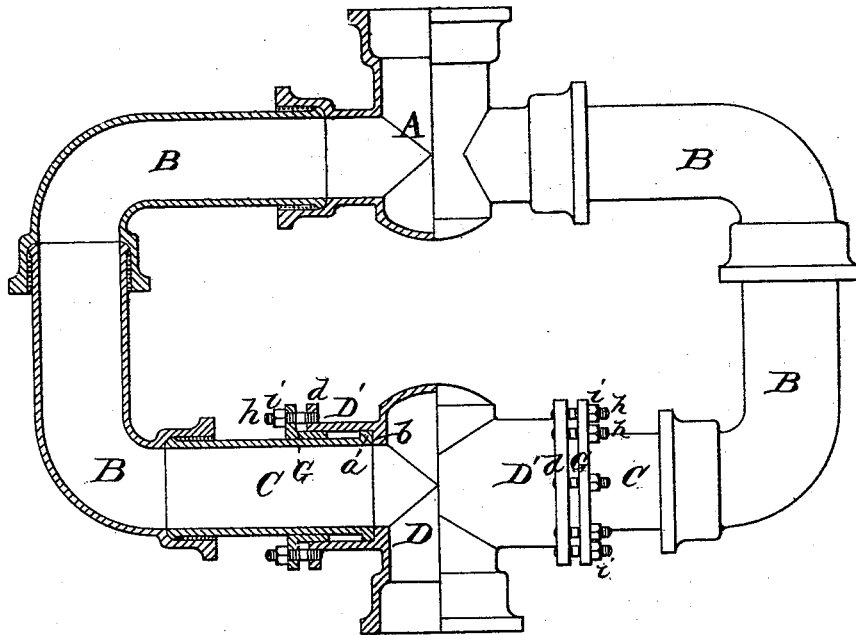


J. CURRAN.

VIBRATING JOINT FOR DEEP-WATER PIPE-LAYING.

No. 181,917.

Patented Sept. 5, 1976.



Witnesses:
Henry N. Miller
Frank L. Outland

Inventor:
James Curran.
Alexander Mason
Atty

UNITED STATES PATENT OFFICE.

JAMES CURRAN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN VIBRATING JOINTS FOR DEEP WATER-PIPE LAYING.

Specification forming part of Letters Patent No. **181,917**, dated September 5, 1876; application filed August 18, 1876.

To all whom it may concern:

Be it known that I, JAMES CURRAN, of Baltimore city, in the county of Baltimore, and State of Maryland, have invented certain new and useful Improvements in Laying Pipe in Deep Water—viz., a vibrating joint to facilitate the line finding the profile of the bed of the stream; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

The nature of my invention consists in the construction and arrangement of a pipe-connection or vibrating joint, which will facilitate the line conforming to the bed on which it is laid, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a plan view, part in section, of my pipe-connection.

A represents an ordinary T-joint, to the center arm of which one section of the water-main is to be connected in the usual manner. To the side arms of the T-joint A are attached suitable elbows B B, terminating with short tubes C C, directly opposite and parallel with

the side arms of the T-joint. The outer ends of the short tubes C C are formed with circumferential flanges *a*, and fit against shoulders *b* made in the side arms D' of a vibrating T-joint, D. The end of each side arm D' is formed with an exterior flange, *d*, and a flanged stuffing-box, G, is inserted in the end of each arm, D', surrounding the tube C, and said stuffing-box is connected to the flange *d* by nuts *h*, having nuts *i* screwed upon their ends. To the center arm of the T-joint D the next section of the water-main is to be connected in the usual manner.

It will readily be seen that by reason of the vibrating joint D the water-main will adjust or accommodate itself to the profile of the bed on which it is laid without any strain whatever on the pipes or joints.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The vibrating joint D, with side arms D' and stuffing-boxes G, in combination with the tubes C, elbows B, and T-joint A, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of August, 1876.

JAMES CURRAN.

Witnesses:

J. M. MASON,
C. M. ALEXANDER.