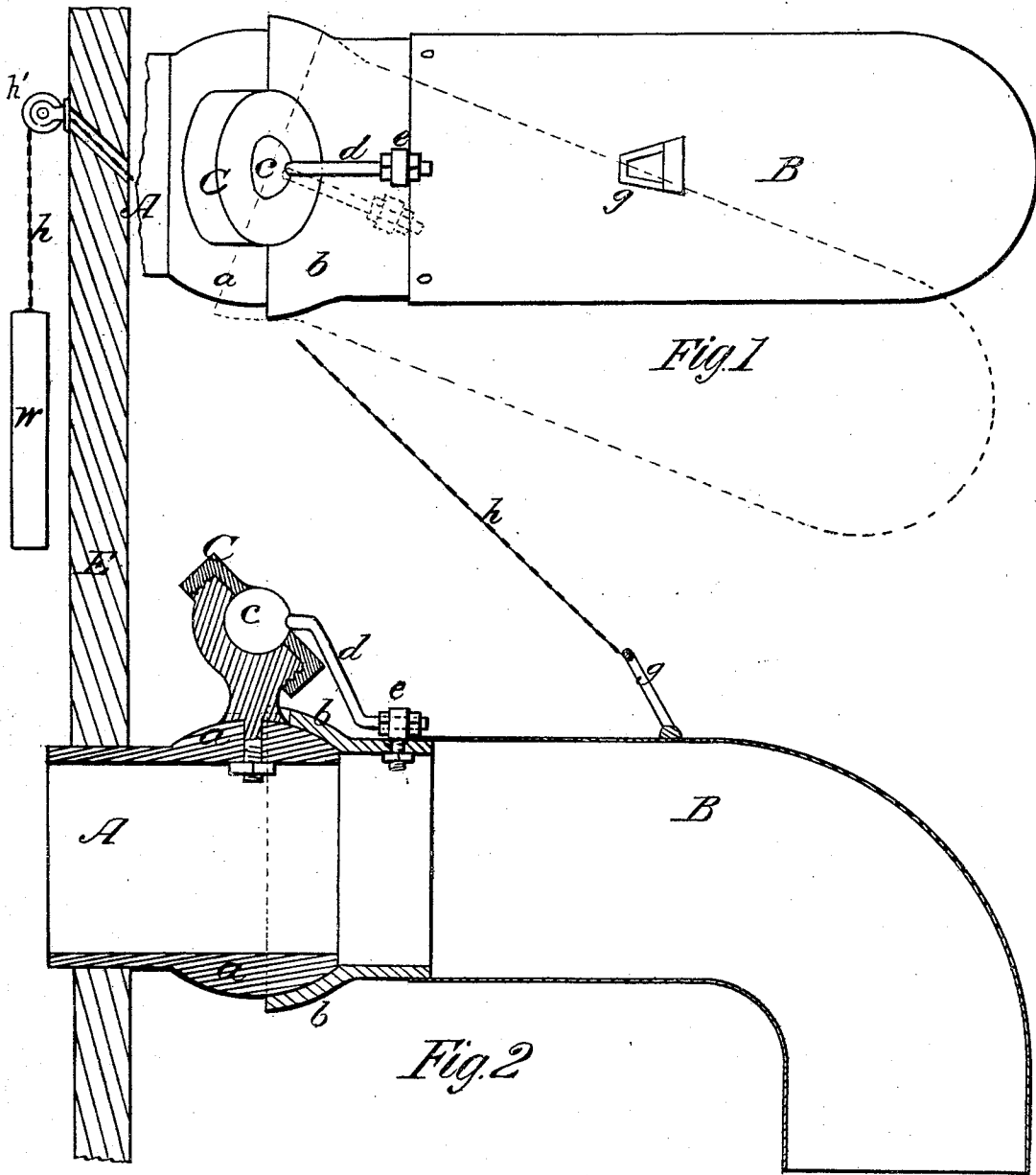


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Railroad-Tank Water-Pipes.

No. 151,854.

Patented June 9, 1874.



Witnesses.
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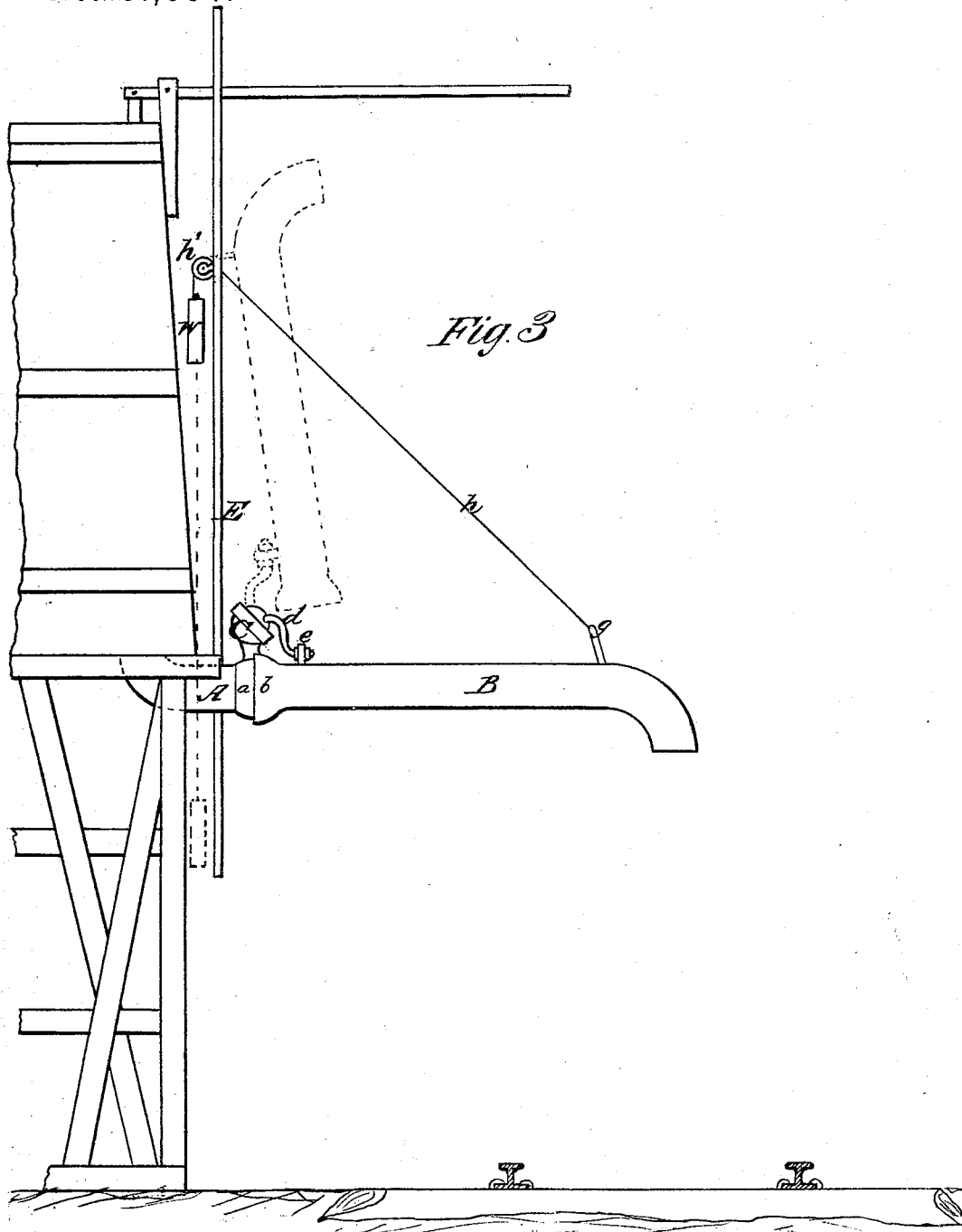
Inventor
 George R. Crane,
 Chipman, Hosmer & Co.,
 Attys.

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UNITED STATES PATENT OFFICE

GEORGE R. CRANE, OF PAINESVILLE, OHIO.

IMPROVEMENT IN RAILROAD-TANK WATER-PIPES.

Specification forming part of Letters Patent No. **151,854**, dated June 9, 1874; application filed April 4, 1874.

To all whom it may concern:

Be it known that I, GEORGE R. CRANE, of Painesville, in the county of Lake and State of Ohio, have invented a new and valuable Improvement in Fall-Pipes; 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 annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view of my fall-pipe, and Fig. 2 is a sectional view of the same. Fig. 3 is a side view.

This invention has relation to fall-pipes for railroad water-tanks; and it consists in a fall-pipe which is composed of tubular sections connected together by means of ball-and-socket joints, which will allow the outer or delivery section to receive a universal movement, for the purpose of facilitating the taking of water, as will be hereinafter explained.

In the annexed drawings, A designates a section of a fall-pipe, which section is rigidly applied to the tank from which the water is drawn to supply locomotive-tenders, and which extends through the wall E of the tank-house. On the outer end of this tubular section A an enlargement, *a*, is formed, which is the section of a sphere, and on which is received a socket, *b*, formed on one end of a tubular section, B. I thus form a ball-and-socket joint, which should be ground water-tight. On the top of the section B, near the socket *b*, is a lug, *e*, to which is rigidly secured one end of a curved rod, *d*, which rod extends upward and inward, and has rigidly secured to it a ball, *c*. This ball *c* is applied in a socket which is formed in a post, C, secured to the upper side of the ball *a*, as shown in Fig. 2.

Near the outer end of the section B is a loop, *g*, to which a suspension-chain, *h*, is attached, which is carried upward and passed over a pulley, *h'*, applied inside of the wall E, and attached to a weight, W.

It will be seen from the above description that the pipe-section B is free to be swung laterally and vertically; that it can be thrown up to the position indicated in Fig. 3 when not in use, and sustained in this position by means of the weight W.

The fall-pipes now in use are very objectionable, for the reason that engineers are required to bring their engines to rest so that the man-hole in the tender-tank must be in a position which is directly opposite the point of attachment of the fall-pipe to the supply-tank, and the variation from this position can be but a few inches either way. This is a difficult thing to do with a heavy train, a slippery track, and, as often occurs, when the station is located on a down-grade.

This objection I obviate by my laterally-swinging fall-pipe.

What I claim as new, and desire to secure by Letters Patent, is—

In a fall-pipe, the convex circular enlarged portions *a a* of the section A, and the concavo-circular portions *b b* of the section B, forming a water-tight ball-and-socket joint, in combination with the ball *c*, socket-clamp C, and rod *d*, attached to section B and ball *c*, substantially as and for the purposes described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE R. CRANE.

Witnesses:

J. B. BURROWS,
GEORGE E. UPHAM.