

E. S. DUVAL.

WATER TANKS FOR RAILWAYS.

No. 178,516.

Patented June 13, 1876.

Fig. 1

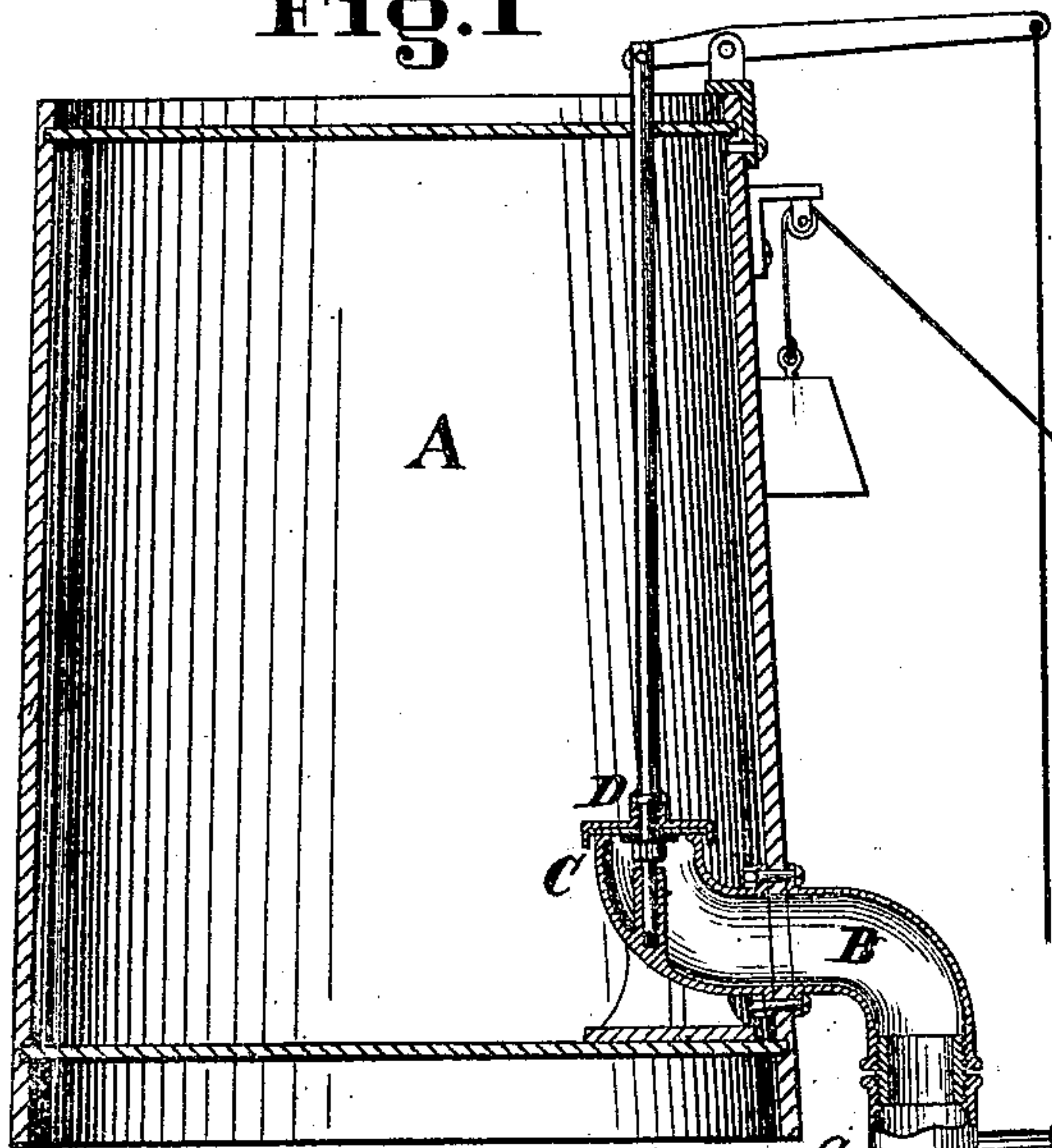


Fig. 3

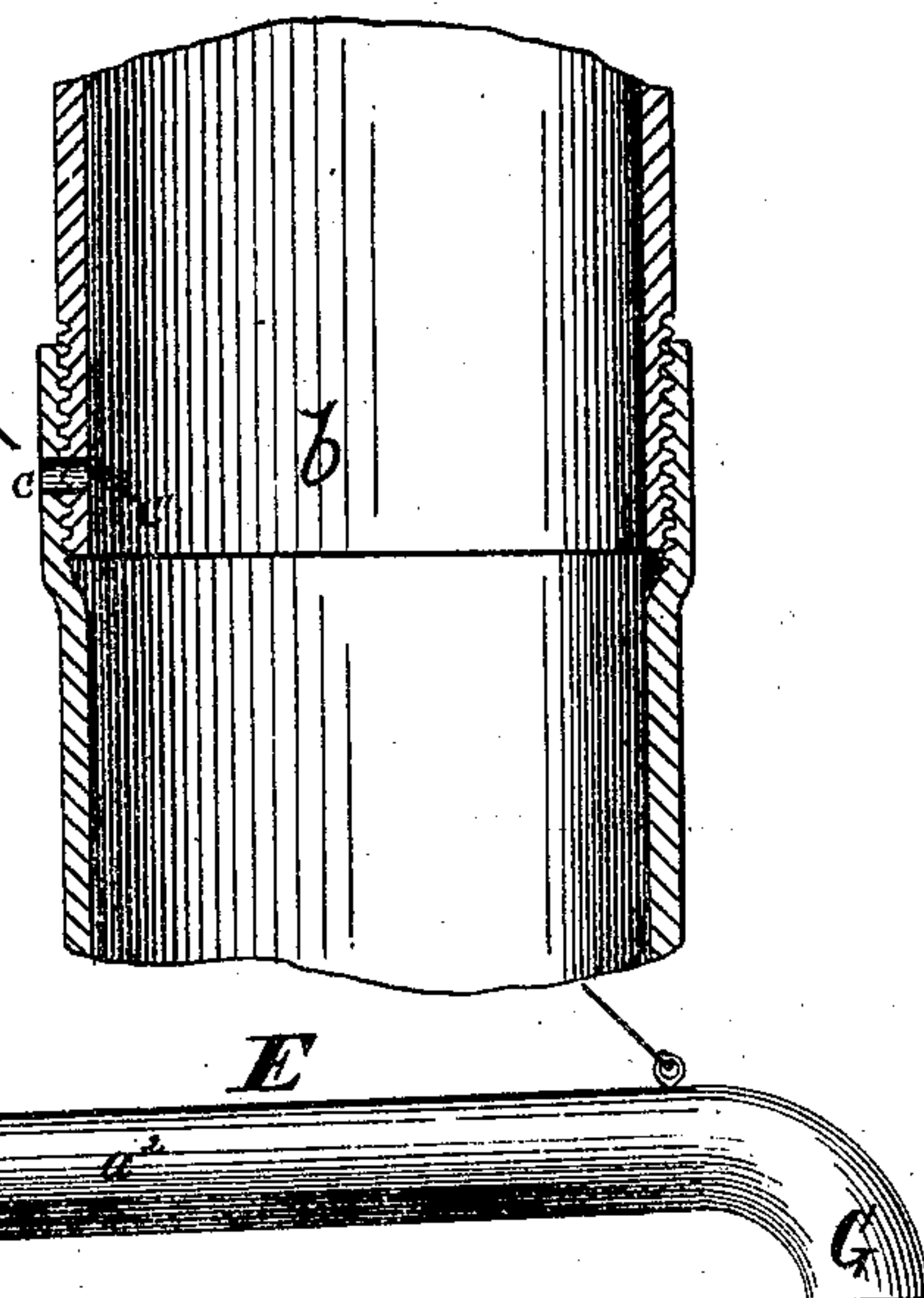


Fig. 2

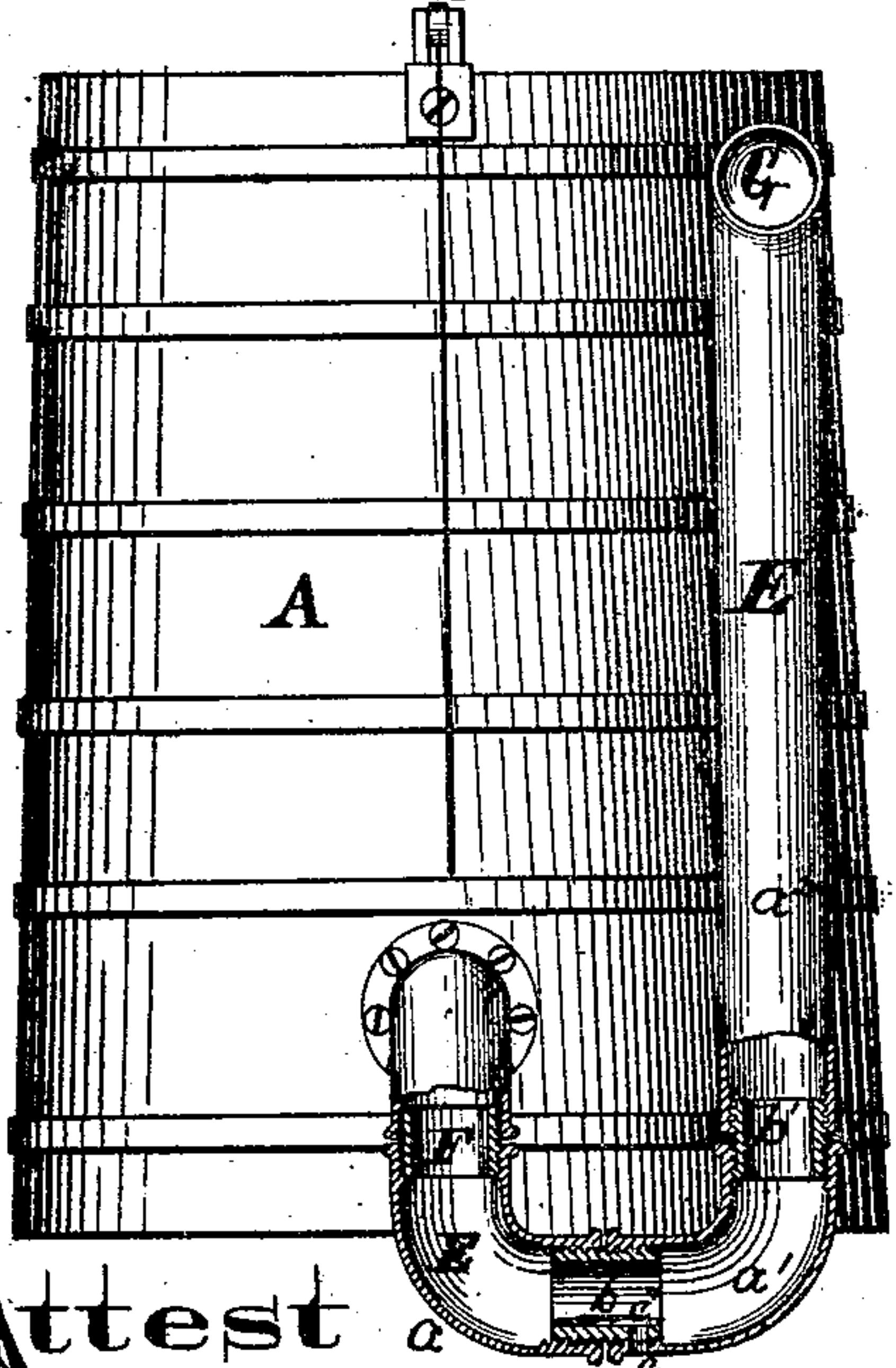
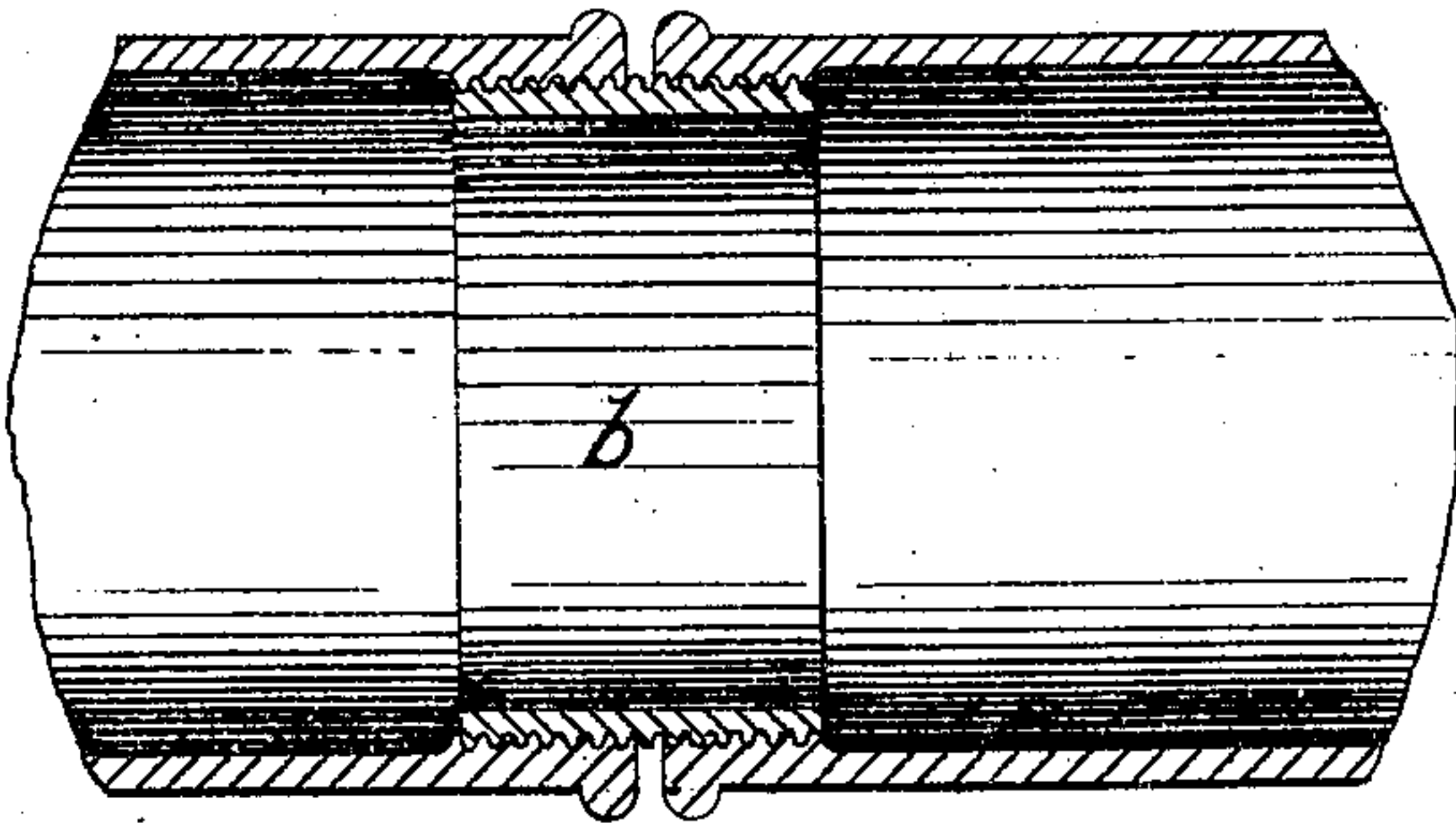


Fig. 4



Attest  
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# UNITED STATES PATENT OFFICE.

ENOCH S. DUVAL, OF MITCHEL, INDIANA.

## IMPROVEMENT IN WATER-TANKS FOR RAILWAYS.

Specification forming part of Letters Patent No. 178,516, dated June 13, 1876; application filed January 28, 1876.

*To all whom it may concern:*

Be it known that I, ENOCH S. DUVAL, of Mitchel, in the county of Lawrence and State of Indiana, have invented certain new and useful Improvements in Water-Tanks for Railways, of which the following is a specification:

The object of my invention is to provide a continuous, reliable, and simple method of communication between a stationary railway water-tank and the supply-tank of a locomotive; and the invention consists in the combination, with a water-tank for railways, and a pipe passing through the side of the water-tank, of a valve governing the inner open end of the supply-pipe, a suitable mechanism for operating said valve, and another pipe connected with the end of the other pipe by means of male and female connections, as will more fully hereinafter appear, whereby the delivery-pipe can be moved from a horizontal to a vertical position, the object of which will be hereafter described.

In the accompanying drawings, Figure 1 is a vertical section of a railway water-tank and delivery-pipe of my invention, with the delivery-pipe represented in a horizontal position. Fig. 2 is a vertical elevation of the same, representing the delivery-pipe partly in section. Fig. 3 is a partial longitudinal section taken through the screw-connection of the delivery-pipe, and Fig. 4 is a similar view of the same, but representing another way of making the connection.

In the annexed drawings, A represents a water-tank mounted upon a suitable platform at any convenient altitude. B is a supply or delivery pipe passing through the side of the tank A near its bottom, and firmly secured to the tank at its side and bottom. The open end C of the pipe B is governed by valve D, operated by any suitable means, and when

open the water from the water-tank A is free to pass through the supply or delivery B into the pipe E. On leaving the tank A the supply or delivery pipe is formed into an elbow-shape extending vertically downward until it meets with the upturned end of the pipe E, where they are joined by male and female screw connections F. The pipe E is made with three elbows,  $a$   $a^1$   $a^2$ , each joined to the other by loose-fitting male and female screw connections  $b$   $b'$  in such a manner as to permit the end G to move in any direction from a horizontal to a vertical position. The joint  $b$  is furnished with drain-holes  $c$   $c'$  arranged to open and close by the movement of the pipe E from a horizontal to a vertical position. When the pipe E occupies the position shown in Fig. 1 the drain-holes are closed, and when it occupies the position shown in Fig. 2 the drain-holes are opened by the movement of the male part of the screw-connection within the female part thereof, and is then in a position to carry off any water left in the pipes, or that may leak through the valve D.

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

In combination with a water-tank, A, having a pipe, B, passing through the side of the same, a valve governing the inner open end of the supply-pipe, a suitable mechanism, substantially as described, for controlling said valve, and a pipe, E, connected with the pipe B by male and female connections F and  $b$ , all substantially as and for the object herein set forth.

In testimony whereof I have hereunto set my hand this 13th day of January, 1876.

ENOCH S. DUVAL.

Witnesses:

HENRY MILLWARD,  
JOHN M. FOSTER.