

J.H. McGowan.

Elastic Coupling for Water Tanks.

109332

PATENTED Nov 15 1870

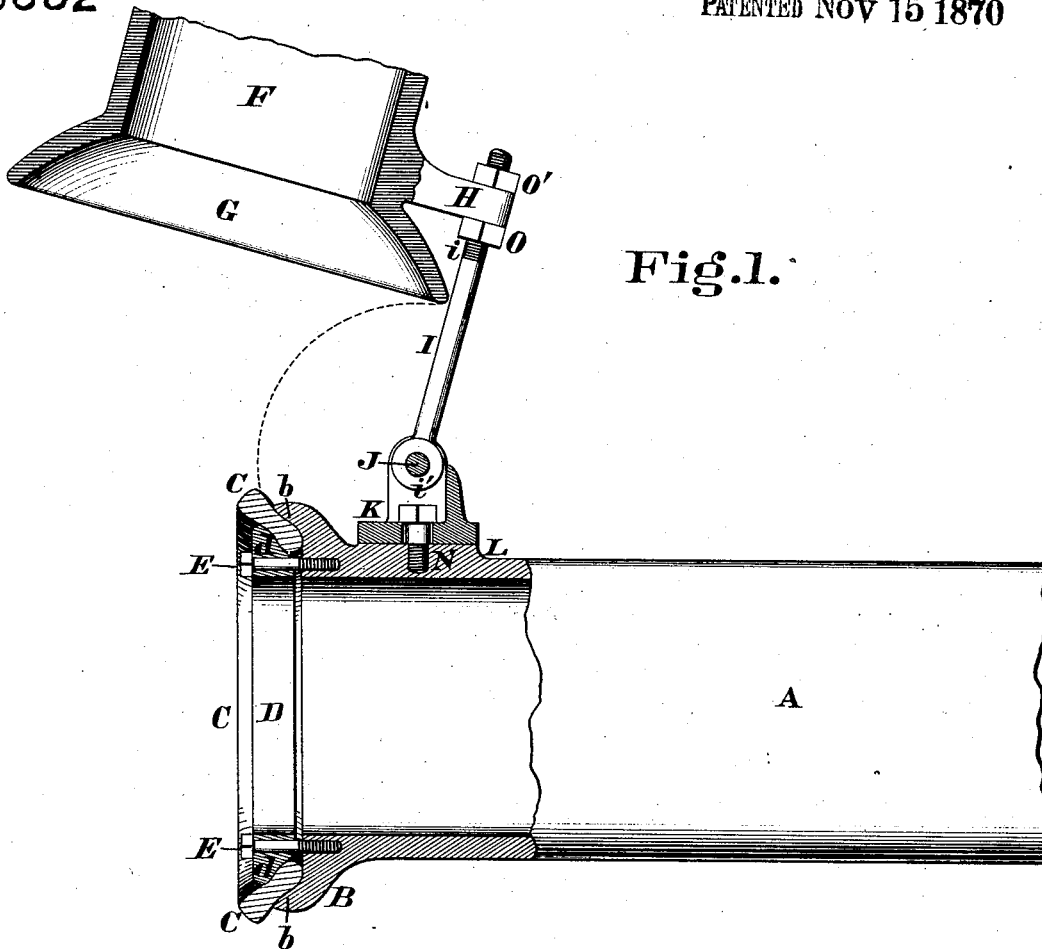


Fig. 1.

Fig. 2.

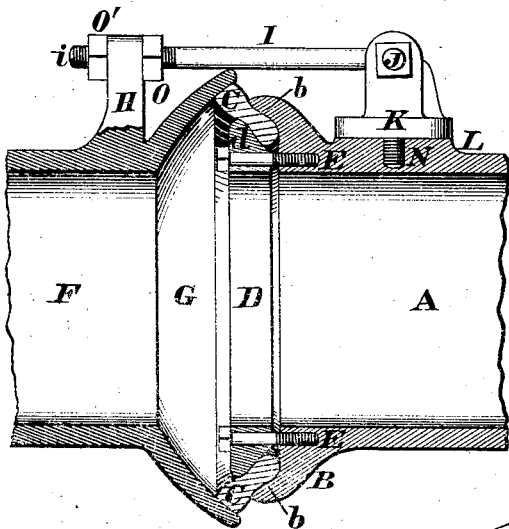
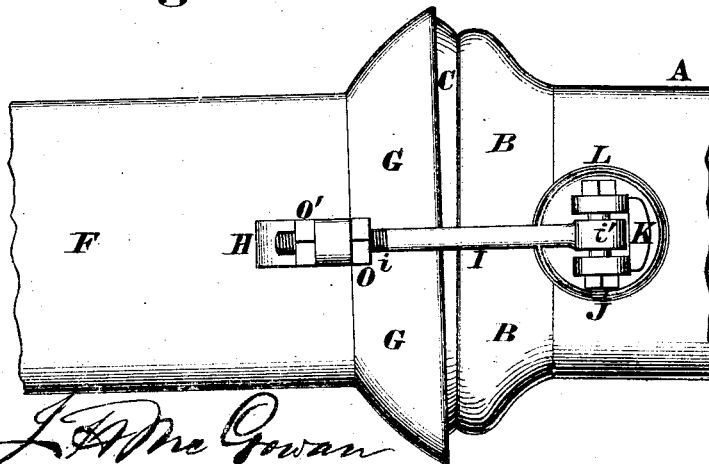


Fig. 3.



Attest.

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JOHN H. MCGOWAN, OF CINCINNATI, OHIO.

Letters Patent No. 109,332, dated November 15. 1870.

IMPROVEMENT IN PIPE-COUPPLINGS.

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

I, JOHN H. MCGOWAN, of Cincinnati, Hamilton County, Ohio, have invented a new and useful Elastic Pipe-Coupling for Water-Tanks, of which the following is a specification.

Nature and Object of the Invention.

This invention relates to an improved joint or coupling for the spout or goose-neck of railway water-tanks, whereby it is prevented from leaking, the said joint or coupling, in its preferred form, being also such as to permit a slight lateral flexibility to enable the spout to be conducted without difficulty to the well-hole of the tender, even should it be not precisely in line with the tank-pipe.

General Description with reference to the Drawing.

Figure 1 is a vertical section of the contiguous portions of my improved tank-pipe and spout in their open condition

Figure 2 shows the same parts in their closed condition.

Figure 3 is a top view of the same parts, also in their closed condition.

A represents the customary fixed pipe which communicates with the tank or reservoir, the inner end of said pipe being provided with any approved form of valves or cock for controlling the flow of water.

The outer end of this pipe terminates in a bell-mouth, B, having an inwardly-sloping face, b, which serves as a seat for the elastic packing-ring or gasket C, preferably of India rubber, which ring is securely held in position by the annular clamp D.

The effective or nipping-surface of the clamp is undercut or excavated, as shown, in order to prevent the accidental dislodgement of the gasket.

The annular clamp is secured within the bell-mouth by means of bolts E, which permit any amount of pressure being brought to bear on the gasket.

The movable and adjustable spout F is provided with a flaring mouth, G, having the form of a hollow spherical segment, which is adapted when said spout is brought in line with the pipe A to fit snugly around and against the face of the gasket, and thereby to form a perfectly water-tight joint between the two members A and F.

In order to secure an equal bearing around the gasket, and at the same time to permit some lateral deflection of the spout to suit the position of the well-hole in the tender-tank, the movable spout F is preferably both hinged and swiveled to the fixed pipe A in the following manner:

Projecting from the upper side of the spout F is a bracket or lug, H, that is traversed by a bolt, I, one

end of which is screw-threaded, as at i, while its other end is provided with an eye, j, for the reception of a pivot, J, with which said bolt is united to a swivel-bearing, K.

The swivel-bearing K turns upon a boss, L, on the upper side of pipe A, and is connected to the said boss by a pivot-bolt, N.

Nuts, O O, upon the bolt or rod I, enable the spout F to be adjusted in such a manner as to cause its mouth G to fit accurately and equably against and around the elastic packing-ring or gasket C, whenever said spout is brought in line, or nearly so, with the fixed pipe A.

As the elastic packing-ring C projects some distance beyond the edge of the bell-mouth B, it is evident that the spout F may be moved in any direction without destroying the water-tight coupling between the two members A and F, and this joint, owing to the elastic nature of the gasket and the spherical form of the mouth G, will remain free of leakage notwithstanding any slight deflection of the spout.

As the spout F overhangs some distance beyond the discharging-end of fixed pipe A, the weight of the former causes its mouth G to press against the gasket C with sufficient force to insure a water-tight joint for the ordinary flow of water from such tanks to the tender.

The use of the elastic packing-ring C permits the parts A and F to be plain castings without ground-joints or other expensive finish, which joints are liable, notwithstanding their cost, to become inoperative, either from corrosion or the freezing together of their contiguous surfaces.

For the above reasons my arrangement affords both a cheaper and more reliable, as well as a more enduring coupling.

In some cases it may be preferable to attach the gasket to the spout, and not to the pipe as here represented.

Claim.

I claim as new and of my invention—

The combination, substantially as described, of the fixed pipe A B b, elastic packing-ring or gasket C, annular clamp D d E, and hinged spout F G, for the object set forth.

In testimony of which invention I hereunto set my hand.

JOHN H. MCGOWAN.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.