H. SMITH.

Water Pipe Joint for R.R. Tanks.

105268

PATENTED JUL 12 1870

Fig. 1.

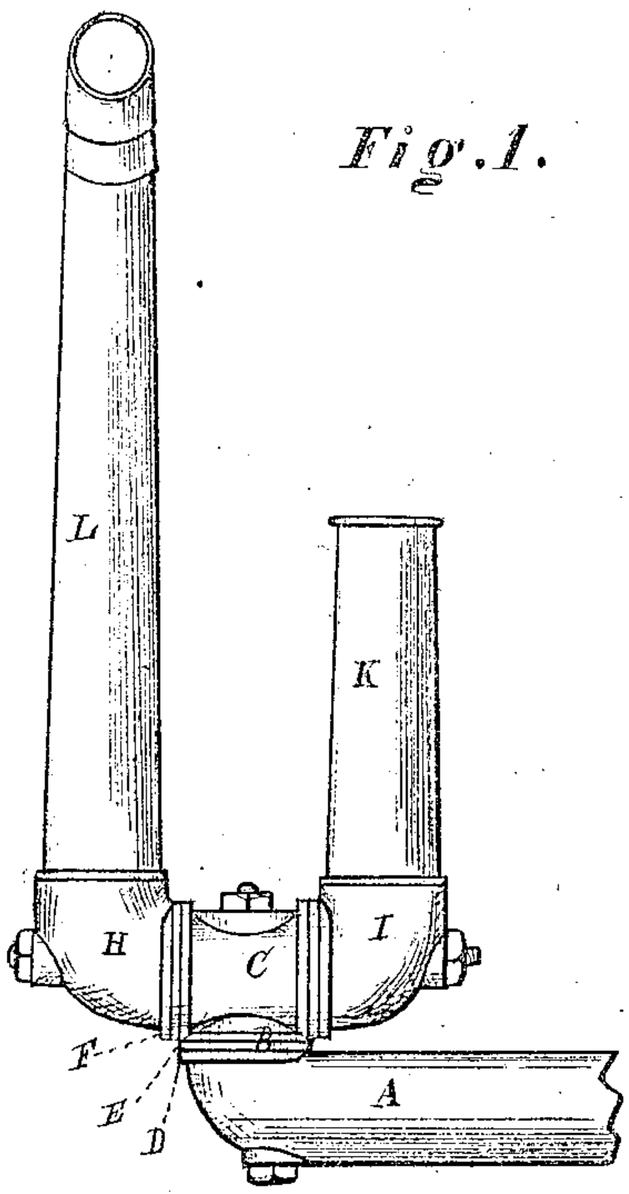


Fig. 2.

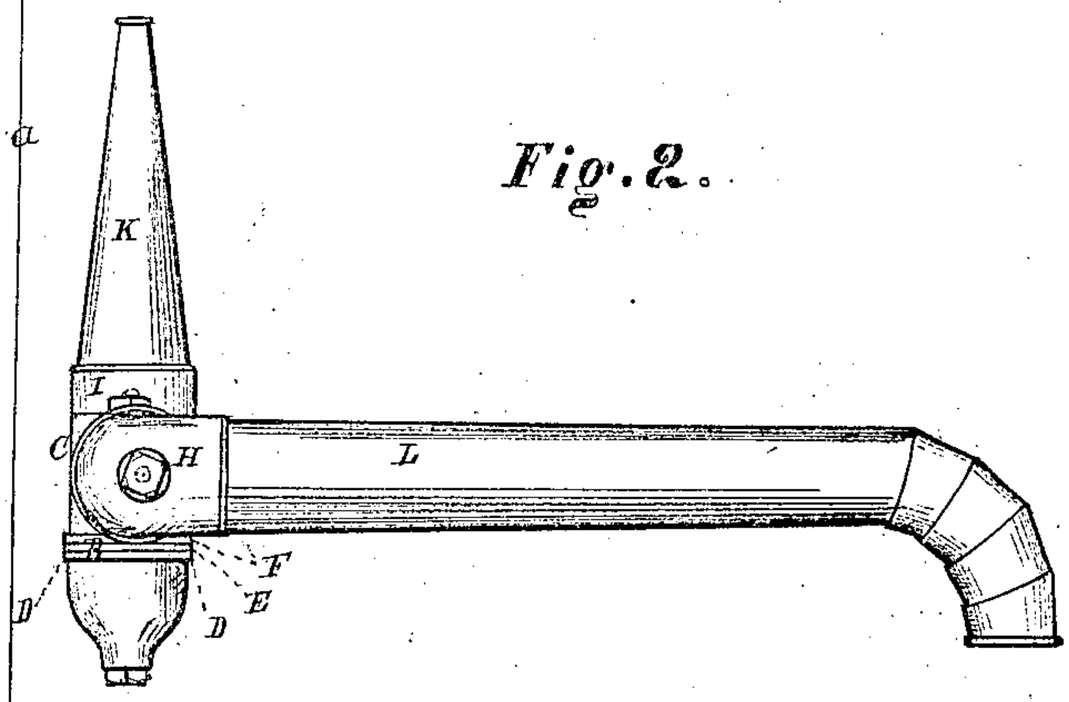


Fig. 3.

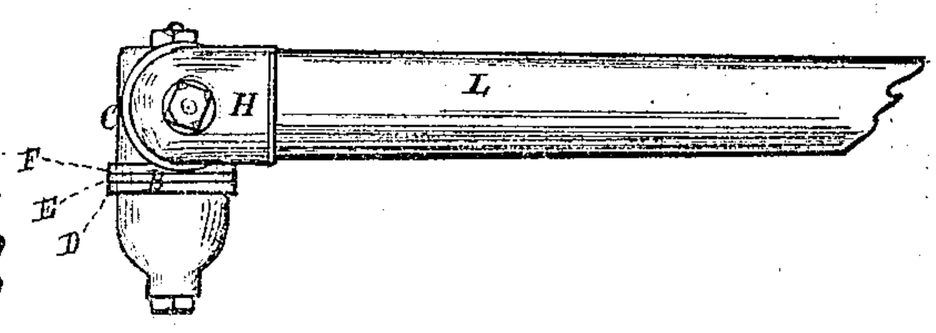


Fig. 4.

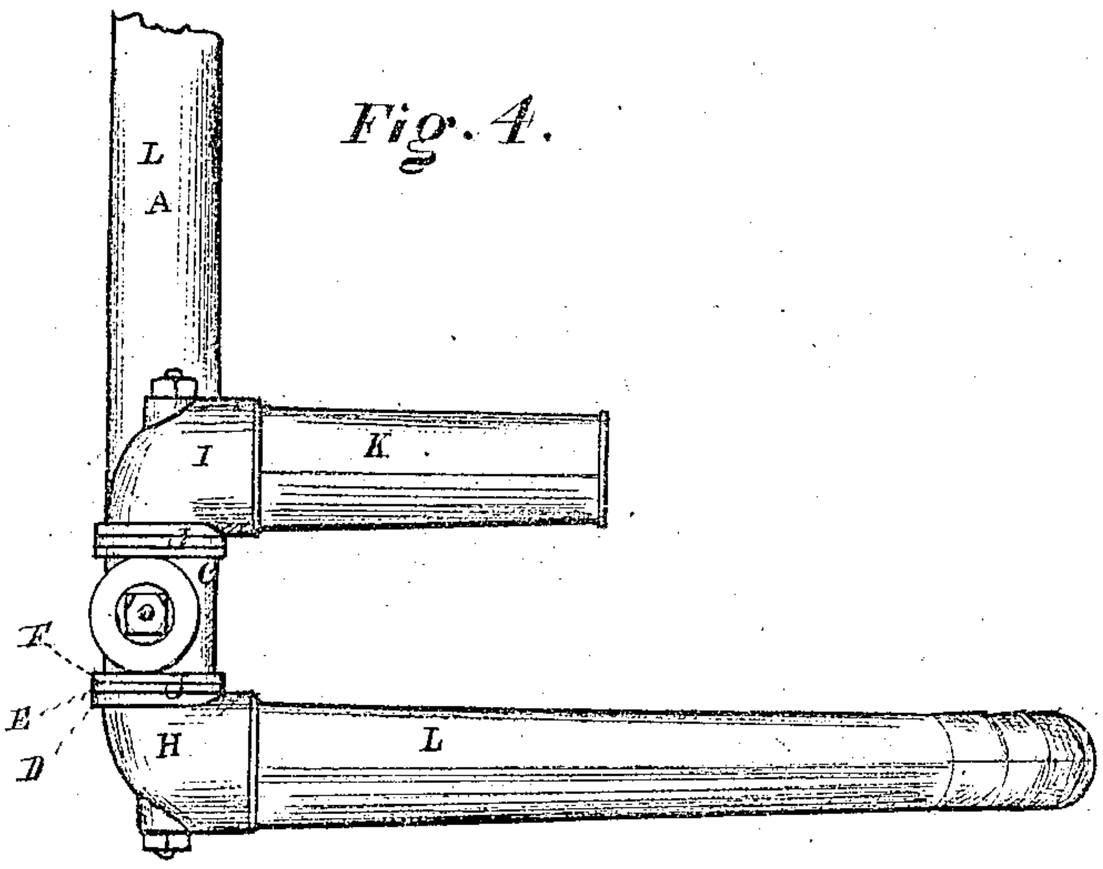
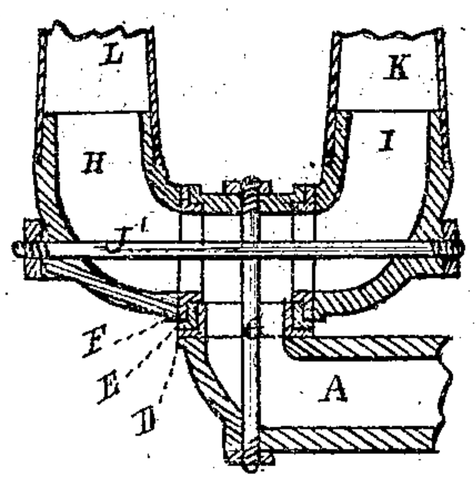


Fig. 5.



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HIRAM SMITH, OF NORWALK, OHIO.

Letters Patent No. 105,268, *dated July* 12, 1870.

IMPROVEMENT IN PIPE-JOINTS.

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, HIRAM SMITH, of Norwalk, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Water-pipe Joints for Railroad-Tanks; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a front view of the water-pipe joint.
Figures 2 and 3, side views of the same.
Figure 4 is a view of the upper side.
Figure 5 is a vertical section.

Like letters of reference refer to like parts in the several views.

This invention has for its object the supplying locomotive engines with water from a tank, and for wetting down hogs, the same being done by means of a free-jointed pipe, as hereinafter more fully set forth.

In fig. 1—

A represents a section of pipe leading from the water-tank.

To one end thereof is connected, by a free joint, B, a T-pipe, C. Said joint consists of a circular flange, D, surrounding the bore of the pipe, to which is fitted a washer, E, provided with a collar fitted to the inside of the bore of the T-pipe, into which it projects, as shown in fig. 5.

The bore of the T-pipe is also provided with a flange corresponding in size and character to that of the pipe, as shown at fig. 4.

Between the two said flanges the washer is placed. Said washer is made of brass or other like composition, and forms a surface on which the flange D of the pipe A, or that of the T-pipe, slides on being rotated.

The joint is secured by a bolt, G, fig. 5, passing vertically through the elbow of the pipe A and the T-pipe C.

By this joint the T-pipe is allowed a horizontal rotary movement, by one face of the washer moving upon the face of the flange.

The washer being fixed to one of the flanges by dowels projecting from the face of the flange into the face of the washer, hence one flange only turns on the face of the washer.

To each end of the T-pipe is connected a pipe-elbow, H I, by a free joint, J, constructed in the same manner as that above described, and which is also secured by a bolt, J', fig. 5. Said joint allows to the elbows a rotary movement, so that the conductors K L, attached thereto, have relatively a vertical movement, for a purpose presently shewn.

It will be obvious that, by this arrangement of joints, the two conductors K L may be turned horizontally or vertically, so that they be brought to point in any direction required.

The practical application and use of the above described apparatus are as follows:

The pipe A referred to is connected to the water-tank, and from which it projects toward the railroad to the extent to bring the joints and elbows to the outside of the tank-house, and close thereto, and in such relation therewith that the joints and elbows range parallel to the side of the building, as shown in fig. 3, in which the line *a* indicates the side of the tank-house.

Water-tanks are placed near the track, and engines receive water therefrom through conductors made of leather or canvas, or through metal pipes connected to the tank with but one free joint, which allows the pipe to move in a vertical or in a horizontal direction only.

The objection to the leather and canvas conductors is, they soon become worn and leaky, and in cold weather icy and stiff to handle, therefore often impracticable.

The metal conductor, though not open to these objections, are objectionable from other reasons. They having but one joint, and that which allows the conductor to move in a vertical or in a horizontal direction only, requires that the engine be stopped exactly at a certain point opposite the pipe, in order that it may reach the engine's tank. Should the engine be too far ahead, the pipe will not reach the tank, and if not far enough, the same trouble results; hence, it not unfrequently requires some minutes to bring the tender in line with the water-pipe, so that it may reach the tank; also, the conductor or water-pipe, having little or no horizontal movement, is liable to be broken, should the train move in either direction before the pipe is removed from the tender. These objections are all avoided in the use of my jointed pipe, which, in consequence of its horizontal movement, can be turned either to the right or to the left, as the position of the engine may require; hence, the stopping of the engine at one exact spot is not necessary, as my conductor can be made to reach it, though some feet distant from a direct line therewith, in virtue of its capacity to rotate horizontally, and its vertical movement allowing its adaptation to the variable heights of different engines or tenders.

The conductor, extended for use, is shown in fig. 2, and when not in use it can be turned upward out of the way, as shown in fig. 1.

The pipe or conductor K is intended for wetting down car-loads of hogs, which, in warm weather, requires to be frequently done for the comfort and preservation of the animals. This pipe, like that for fill-

ing the engine-tank, is capable of being moved upward and sidewise, and which is therefore readily brought into proper position for throwing water upon the hogs.

The nozzle of the conductor is made flat, so that a thin broad stream may fall upon the animals, and thus more effectually sprinkle them.

To prevent the water that may be left in the conductors, after using them, from falling down upon the platform or the side of the tank-house, a small hole is made in the under side of the pipe A, through which the waste water may be conveyed back into the well, or away from the building.

The two conductors are not required on every tank, but on certain ones only; hence the joint and conductor for wetting down hogs may be omitted on most of the tanks, and the supply-pipe L only used, as shown in fig. 3.

Claim.

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

The herein-described water-pipe joint, when constructed with joint B, and one or more joints, J, so as to operate conjointly, substantially in the manner as described and for the purpose set forth.

HIRAM SMITH.

Witnesses:

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