

H. HOWE.

Apparatus for Supplying Locomotives with Water.

No. 167,765.

Patented Sept. 14, 1875.

Fig 1

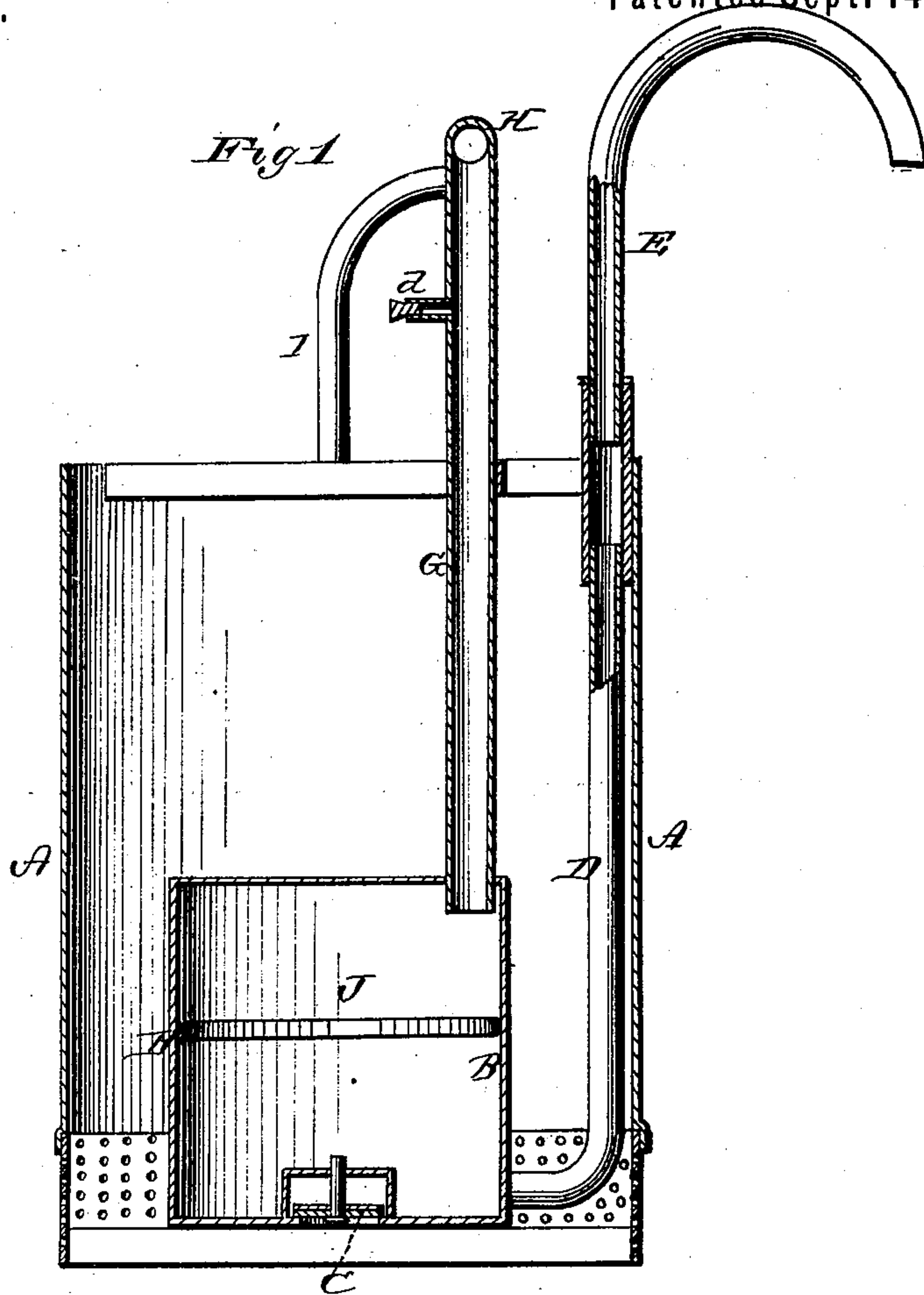
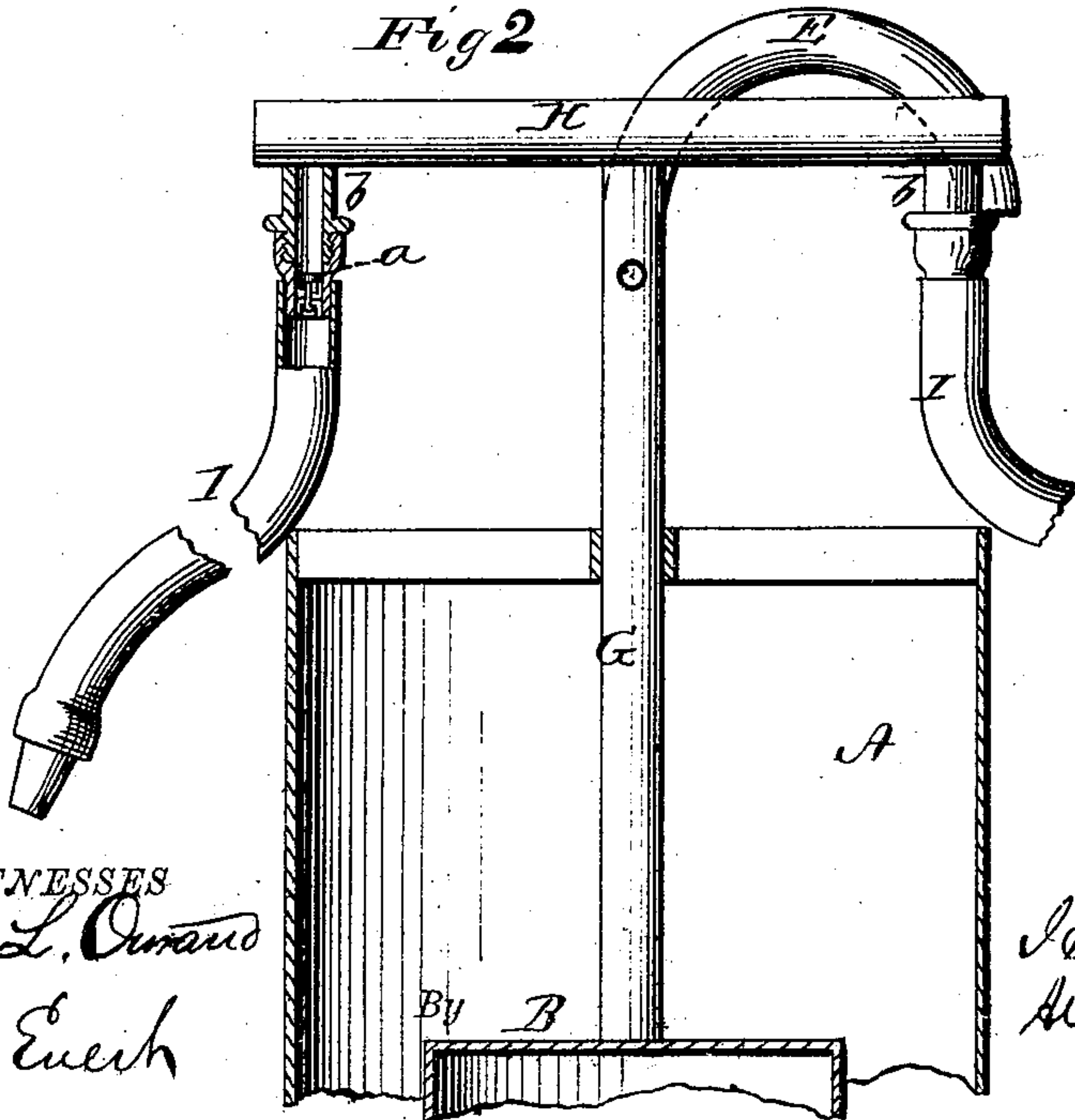


Fig 2



WITNESSES
Frank L. Orando
C. R. Euerh

INVENTOR
Henry Howe
Alexander M. Mott
Attorney

UNITED STATES PATENT OFFICE.

HENRY HOWE, OF COUNCIL BLUFFS, IOWA, ASSIGNOR OF ONE-HALF HIS
RIGHT TO WALTER R. VAUGHAN, OF SAME PLACE.

IMPROVEMENT IN APPARATUS FOR SUPPLYING LOCOMOTIVES WITH WATER.

Specification forming part of Letters Patent No. **167,765**, dated September 14, 1875; application filed
June 26, 1875.

To all whom it may concern:

Be it known that I, HENRY HOWE, of Council Bluffs, in the county of Pottawattamie and in the State of Iowa, have invented certain new and useful Improvements in Apparatus for Supplying Locomotives with Water; 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 a part of this specification.

My invention relates to devices for supplying locomotive-tenders with water; and it consists in a tank submerged in a well or other water-source, and provided with suitable pipes arranged in such a manner that the steam from the locomotive may be admitted into the tank for forcing the water into the tender, 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, in which—

Figure 1 is a longitudinal vertical section of my invention. Fig. 2 is a cross-section of the upper part of the same.

A represents a well of any suitable construction. Within the well, immersed in the water, is a tank, B, provided with a valve, C, in the bottom. From near the bottom of this tank a pipe, D, extends upward for a suitable distance above the ground, and on the upper end of this pipe is attached a swiveled spout, E, through which the water is forced out, and this swiveled spout can thus be turned out of the way of the track after using. From the top of the tank B extends a pipe, G, a suitable distance above the ground, at the top of which pipe is a cross-pipe, H, and at or near each end of this cross-pipe is a nozzle, *b*, to which a flexible pipe, I, is attached. In each nozzle or connection *b* is a check-valve, *a*, of any suitable construction. Either of the flexi-

ble pipes I is to be connected with the boiler of the locomotive, so as to allow steam to enter the tank to force the water down and out through the pipe D. The check-valves *a* operate so that when steam is passing through one of the flexible pipes it lifts the valve on that side and closes the one at the other end. By means of these valves, also, when the pipes I are disconnected from the boiler, the steam in the tank cannot escape, but must condense and form a vacuum, and cause the water to rush in and fill the tank. By having a flexible connecting-pipe at each end of the cross-pipe H, one of said pipes I will always be at the proper place for the engine in going either way. In the pipe G is a small stop-cock, *d*, to let the air pass out of the tank at the first filling, after which it will not be needed, as no more air can get in. In the tank B is used a float, J, in order that the steam may not come in immediate contact with the water.

With my invention the locomotive-tender can be filled very rapidly without the aid of machinery for pumping water into an elevated tank, as is now generally done.

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

The combination of the submerged tank B, having float J and valve C, the pipe G and cross-pipe H, having flexible pipes I I, with valves *a a*, and the pipe D, having swiveled spout E, all used for supplying water to the tender by means of steam from the locomotive acting upon the float in the water-tank, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of May, 1875.

HENRY HOWE.

Witnesses:

W. R. VAUGHAN,
THOS. OFFICER.