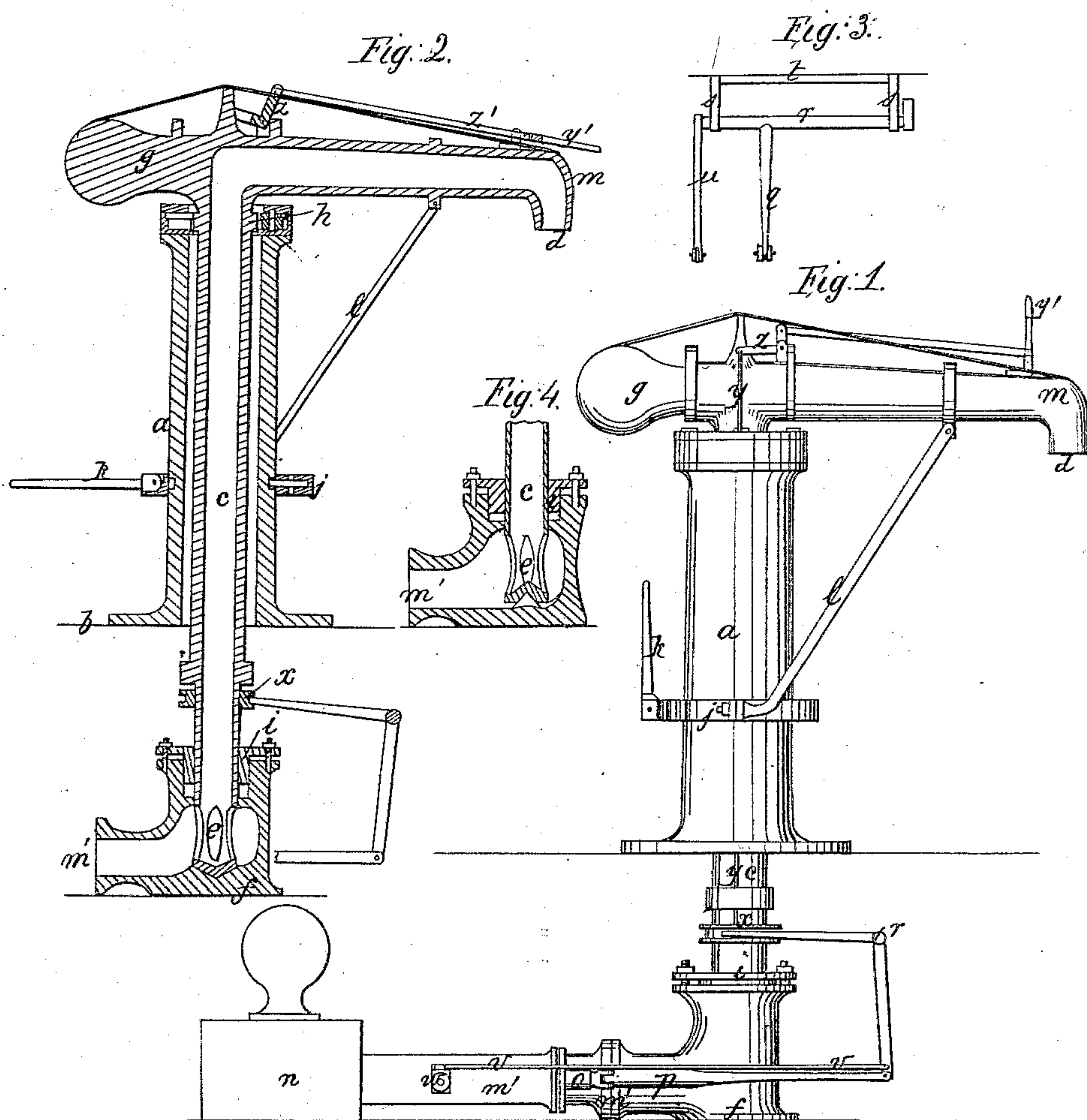


*L.Y. Ketcham,*  
*Water Tank,*  
*No 62,038,                      Patented Feb. 12, 1867.*



*Witnesses;*  
*T. Smith*  
*L. Jones*

*Inventor;*  
*Lewis Y. Ketcham*  
*by Atty Geo. D. Everett*



# United States Patent Office.

LEWIS Y. KETCHAM, OF PORT JERVIS, NEW YORK.

*Letters Patent No. 62,038, dated February 12, 1867.*

## IMPROVEMENT IN WATER-CRANES FOR SUPPLYING LOCOMOTIVES.

*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, LEWIS Y. KETCHAM, of Port Jervis, in the county of Orange, and State of New York, have invented certain new and useful Improvement on Water-Cranes for Supplying Water to Locomotive Engines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters and marks thereon.

My invention is designed for use at any station or point along the line of the railroad where it is desirable or necessary to supply the locomotive engine tank with water, and may be so arranged as to be connected with a water-forcing apparatus, or with a reservoir or supply source, depending upon the natural flow or weight of the water. The construction and arrangement of my improvement allow of its being operated by the engine-man, either while standing upon the engine tank or tender, or by getting off and standing upon the platform of the water-crane.

The drawings, forming part of this specification, represent my improvement—

Figure 1 thereof being a view by elevation, the means for operating the water-controlling valve being shown in the one position; and

Figure 2 being a view by vertical section, the means for operating the valve being shown in another position; the first-named position being that when the valve is closed, and the second-named position that when the valve is open, permitting the flow of water.

Figure 3 is a view of the arrangement of a rocker-shaft for opening and closing the water-valve; and

Figure 4, a sectional view of the lower part of the tubular shaft, with the bearing surfaces in contact reversed from what is shown by fig. 2.

In each of these figures, where like parts are shown, like marks and letters are used to indicate the parts.

A hollow pedestal or cylinder, *a*, the lower part or end of which rests on the ground, or on the platform, at the ground line, *b*, surrounds and gives support to the tubular shaft *c*; which tubular shaft is the water-conveyer, having its discharge at *d*, and its inlet orifices *e*. This tubular shaft *c*, by a pointed end, as shown by fig. 2, or by a recessed end, as shown by fig. 4, has a suitable bearing, as indicated by these figures, on the bottom plate or part of the water pipe or cylinder *f*. The water-shaft *c* has a balancing-head, *g*, and at the upper end of the pedestal *a* has a collar, *h*, surrounded by anti-friction rollers, recessed in the end of the pedestal, to facilitate the rotation of the water-shaft. Where the water-shaft enters the cylinder *f*, there is a stuffing-box, *i*, suitably constructed to make a water-tight joint. A ring or frame, *j*, surrounds the pedestal *a*, having a lever, *k*; and braces, *l*, pass up from the ring to the horizontal part of the water-shaft. This arrangement of means is intended for rotating the water-shaft while the engine-man is standing on the ground or platform *b*. When he is standing on the tank or tender he can rotate or turn the water-shaft by handling the turned end *m*, or discharge end of the shaft. From the cylinder *f* a pipe or cylinder, *m'*, passes along to the water-chamber *n*. In this water-chamber is a valve, opening inward, which has a rod, *o*, attached to it, the rod *o* being connected to a pitman, *p*, the outer end of which is attached to the lever or arm *q* of the rocker-shaft *r*. This rocker-shaft *r* is sustained in bars, *s*, which are united to the platform by the bar *t*. The rocker-shaft has an arm, *u*, which is connected to the rod *v*, passing to the stem *w* of an outlet-valve in the pipe *m'*, for allowing the water in the water-shaft to escape when the water-valve is closed, after the tank of the engine has been supplied, so that there will not be any water in the water-shaft when not in use. An arm from the rocker-shaft *r* passes to and surrounds a sleeve or collar, *x*, on the water-shaft, from which collar go up rods, *y*, to a forked bell-crank, *z*, and by a rod, *z'*, the bell-crank is connected to the hand-lever *y'*. By this arrangement of means the engine-man can operate the water-valve while he is standing on the tank or tender. When the water-valve is open, the outlet-valve will be closed; and when the water-valve is shut, the outlet-valve will be open. The position of the means, when the water-valve is open, is shown by fig. 2; and the position, when that valve is closed, is shown by fig. 1. Whenever it is desirable to have the water-shaft used in connection with a supply tank in a building, or the tank-house, the supply tank being above the line of the platform, the water-shaft may be shorter than is here shown; and instead of the balancing-head, a vertical extension may have a bearing in a horizontal arm, affixed to an upright and suitable lever, and other means be connected therewith for operating the water-valve in the tank, and the outlet-valve of the water pipe

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

1. The water-shaft *c*, within the pedestal *a*, constructed, arranged, and operating substantially as described.
2. The arrangement of means or devices for operating the water-valve and the outlet-valve, as herein shown and described.

This specification signed this 23d day of October, 1866.

LEWIS Y. KETCHAM.

Witnesses:

GEO. CLAUSEN,  
JOSEPH BECKER.