

A. N. Todd,

Steam Pump.

N^o 48,853.

Patented July 18, 1865.

Fig 2.

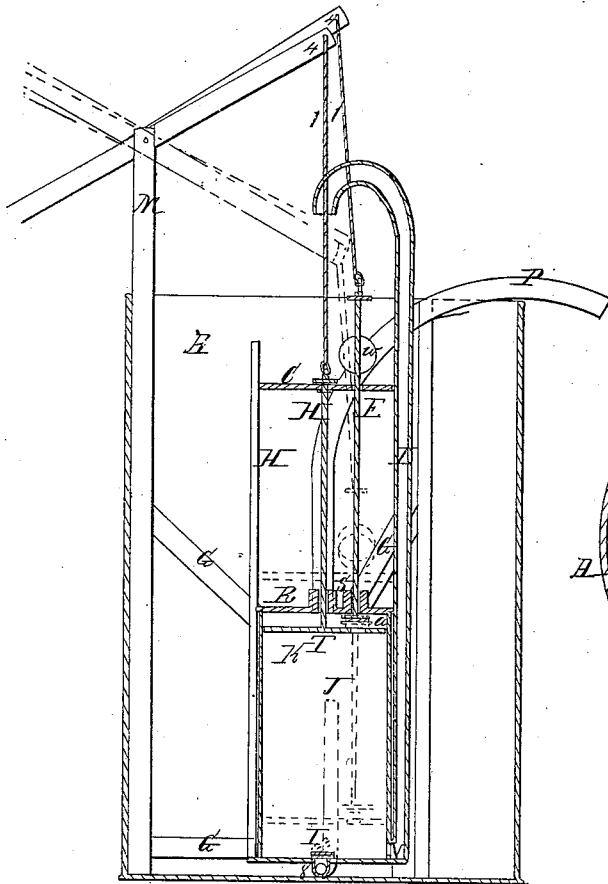
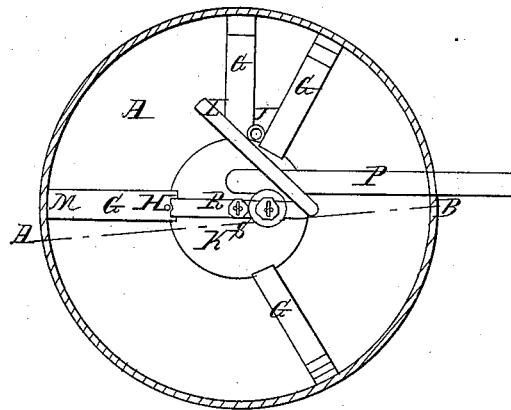


Fig 1.



Witnesses

G. W. Stanford
James Stanford

Inventor.

A. N. Todd

UNITED STATES PATENT OFFICE.

A. W. TODD, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN STEAM-PUMPS.

Specification forming part of Letters Patent No. 48,853, dated July 18, 1865.

To all whom it may concern:

Be it known that I, A. W. TODD, of the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Pumps for Supplying Locomotive-Tenders and other Reservoirs with Water; and I 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 part of this specification, in which—

Figure 1 is a plan or top view of my pump, and Fig. 2 a sectional elevation thereof.

Similar letters and figures of reference indicate like parts.

This invention consists in the combination and arrangement of the steam-cylinder, its piston, levers 4 4, valve-rod E, inlet-pipe J, pipe L, cross-head C, rod H, pipe P, fulcrum M, and ropes 1 1, whereby the tender of a locomotive-engine or other reservoir may be filled with water or other liquid by one stroke of the piston of the said steam-cylinder.

The inlet-pipe J (indicated by dotted lines) commences about midway on the outside, and runs down and turns underneath the cylinder K to an opening, No. 8, in the center of the bottom of it, which opening is covered with a valve, I. The upper head, R, of the cylinder K has two stuffing-boxes, S S, with their respective piston-rods D and E. D has its head T and opening O (see dotted lines) and cross-head C secured by nuts at c.

The rod H and pipe L are secured to the outside of the cylinder K, and answer as guide-rods to the cross-head C.

The rod E works loosely through the cross-head C. The upper end of the rod E has a round weight, W, fastened on it, which causes the valve on the lower end of it to close the opening O in the piston-head T, in which position, the piston being above the water, steam is let on through the flexible pipe P, the inner end of which is permanently attached to an opening in the upper head of the cylinder K. The pipe P should be long enough for the outer end to reach the locomotive when stopping on either side at its usual distance from the well.

A suitable fixture on the top of the locomotive and at the end of the pipe will enable the person in attendance to readily attach and detach the pipe. By this pipe steam is commu-

nicated to the cylinder K above the piston, whereby the water in the cylinder is forced out through the opening V, the valve I having closed, and up through the pipe L into the tender. Each discharge of the contents of the cylinder is expected to be sufficient to supply one tender. When the steam is cut off the pressure of the water in the pipe L and the pressure through the pipe J from without, acting in concert, will force its way through the valves or openings I and O and fill the cylinder from above mud and sand. The steam being cut off, and the piston being left near the bottom of the cylinder, and the water having again filled the cylinder through the openings, as above described, and the levers 4 4 being in the position as indicated by the dotted lines, have ropes suspended from their outer ends, (not seen in the drawings,) the piston is drawn above the water by seizing the said ropes and by keeping the rod E a little ahead of the piston, so as to keep the hole O open, so that all the water may pass freely below the piston, at which time the rod E is released, and the weight W will cause it to drop the valve on the lower end down upon the opening O below it, when the cylinder is again ready to receive the steam, which operation is represented by the levers 4 4, fulcrum M, and ropes 1 1, which ropes are secured to rods D and E and levers 4 4 in any suitable manner. As the piston will stop at about the top edge of the opening V the water in the pipe L will pass through the opening O on its way back the moment the steam is cut off, thus avoiding freezing usually attending tanks above ground.

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

The combination and arrangement of the cylinder K, levers 4 4, piston T, valve-rod E, inlet J, pipe L, cross-head C, rod H, pipe P, fulcrum M, and ropes 1 1, substantially upon the principles and in the manner herein set forth.

A. W. TODD.

Witnesses:

JAIRUS STANFORD,
G. W. STANFORD.