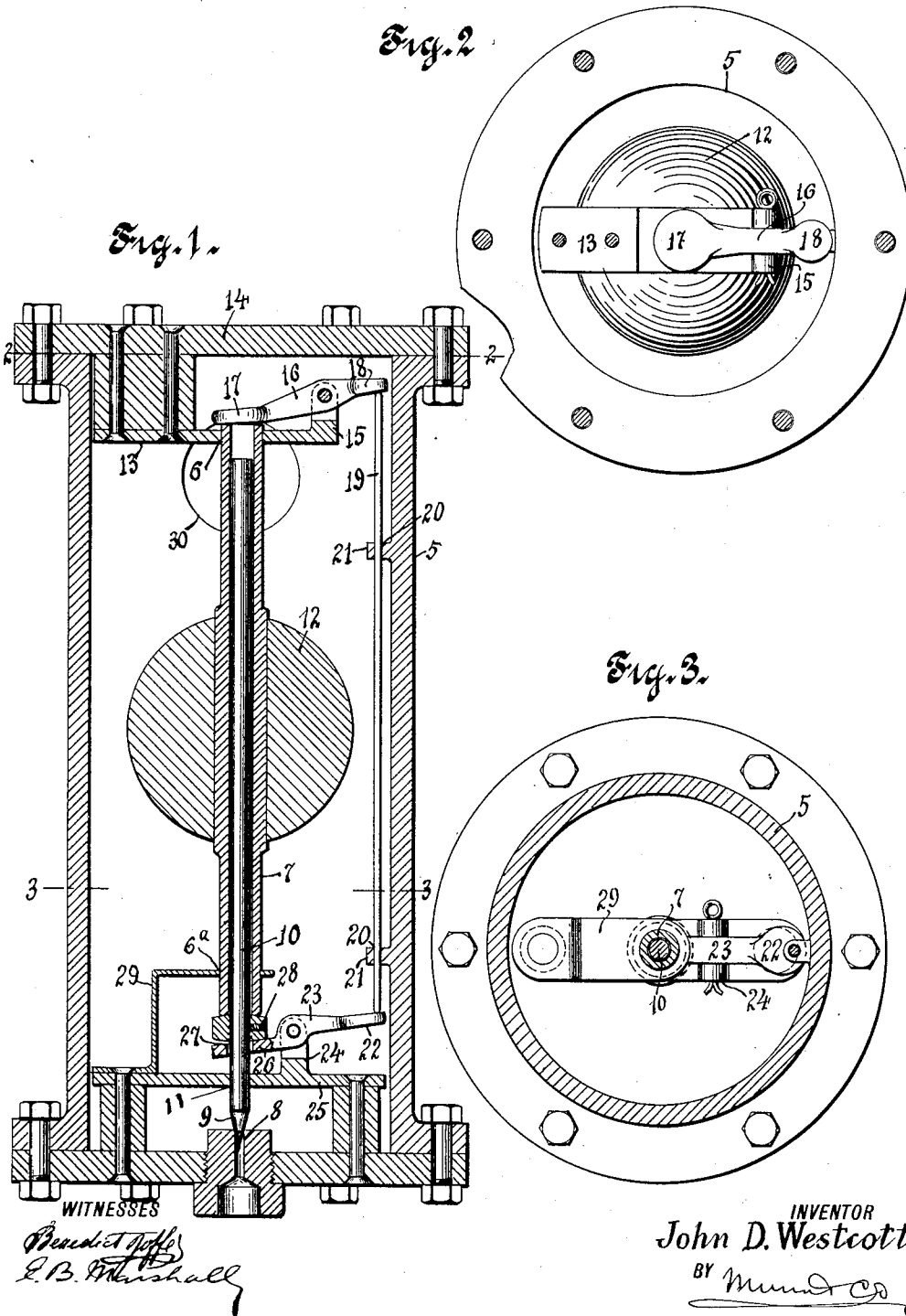


J. D. WESTCOTT.
STEAM TRAP.
APPLICATION FILED SEPT. 16, 1911.

1,039,621.

Patented Sept. 24, 1912.



UNITED STATES PATENT OFFICE.

JOHN D. WESTCOTT, OF UNION CITY, PENNSYLVANIA.

STEAM-TRAP.

1,039,621.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed September 16, 1911. Serial No. 649,599.

To all whom it may concern:

Be it known that I, JOHN D. WESTCOTT, a citizen of the United States, and a resident of Union City, in the county of Erie and State of Pennsylvania, have invented a new and Improved Steam-Trap, of which the following is a full, clear, and exact description.

My invention relates to steam traps, and it has for its object to provide one in which the valve stem has free movement in a tube moving with the valve stem, and to which a float is secured, the tube engaging a lever at the top of the trap, which operates through a rod, a lever at the bottom of the trap, the lower lever engaging the member secured to the valve stem to raise the valve. The levers insure the opening of the valve which the float alone will not do when the valve is closed while under pressure.

Additional objects of the invention will appear in the following complete specification in which the preferred form of the invention is disclosed.

In the drawings similar characters of reference indicate corresponding parts in all the views, in which—

Figure 1 is a sectional elevation of the invention; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; and Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

By referring to the drawings it will be seen that in a casing 5 there are guides 6 and 6^a, in which the tube 7 moves, there being a valve seat 8 at the bottom of the casing, and a valve 9, which coöperates therewith, the valve 9 having a valve stem 10 which is disposed in a guide 11 and which projects into the tube 7. Secured around the tube 7 there is a float 12, and the guide 6 is formed in a bracket 13 secured to the head 14 of the casing 5, the end 15 of the bracket 13 serving as a fulcrum for the lever 16. The long arm 17 of this lever 16 is disposed over the tube 7 and the short arm 18 of this lever 16 is disposed over the rod 19, this rod 19 being disposed for moving in guides 20 formed in lugs 21, integral with the side of the casing 5. The lower terminal of the rod 19 rests on the long arm 22 of a lever 23, this lever 23 being fulcrumed on lugs 24 which extend upward from the bracket 25 in which the guide 11 is formed. The short arm 26 of the lever

23 has an opening 27 through which the valve stem 10 is disposed the said short arm 26 of the lever 23 normally engaging a collar 28 secured to the valve stem 10 below the tube 7. The guide 6^a is formed in a bracket 29, which is secured at the top of the bracket 25.

In using the invention when the steam enters the casing 5 through the opening 30 all waters of condensation will accumulate at the bottom of the casing 5, and until the waters of condensation reach a height at which they will raise the float 12, the valve 9 will remain on its seat 8. However, when the float 12 is raised it will carry with it the tube 7, the tube 7 raising the long arm 17 of the lever 16 which will cause the short arm 18 of the said lever to move downward, this short arm 18 pressing downward the rod 19 which moves the long arm 22 of the lever 23 downwardly, thereby raising the short arm 26 of the last-mentioned lever to raise the collar 28 and with it the valve stem 10 and the valve 9. It will be seen that when the valve 9 is raised, there will be very little friction along the valve stem 10 to retard the movement of the valve, since the tube 7 will move with the valve stem. It will also be understood that by the operation of the two levers sufficient force will be applied at the bottom of the collar 28 to raise the valve stem and with it the valve, even though the valve should become closed while under pressure.

Having thus described my invention I claim as new, and desire to secure by Letters Patent:

1. In a steam trap, a valve seat, guides, a tube for moving in the guides, a float secured to the tube, a valve for coöperating with the valve seat and having a stem disposed in the tube, a collar on the valve stem, a lever having an arm disposed below the tube and having an opening in which the valve stem is disposed, the arm engaging the collar for moving the valve stem, a lever having an arm disposed above the tube to be operated thereby, and a rod connecting the second-mentioned lever with the first-mentioned lever for operating the latter.

2. In a steam trap, a valve seat, guides, a vertically disposed tube for moving in the guides, a float secured to the tube, a valve for coöperating with the valve seat and

having a stem disposed in the tube, a lever
having an arm resting on the top of the
tube, a second lever having an arm engaging
a member on the valve stem below the tube
5 for moving the valve stem, and means by
which the first mentioned lever is adapted to
operate the second mentioned lever.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

JOHN D. WESTCOTT.

Witnesses:

S. R. MINER,

ANNA TIERNEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
