

P. D. Wesson.

Steam Trap.

No 31,842.

Patented Mar. 26, 1861.

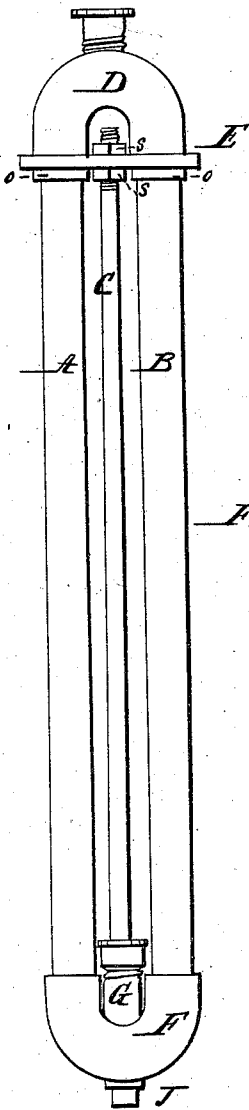


Fig. 1.

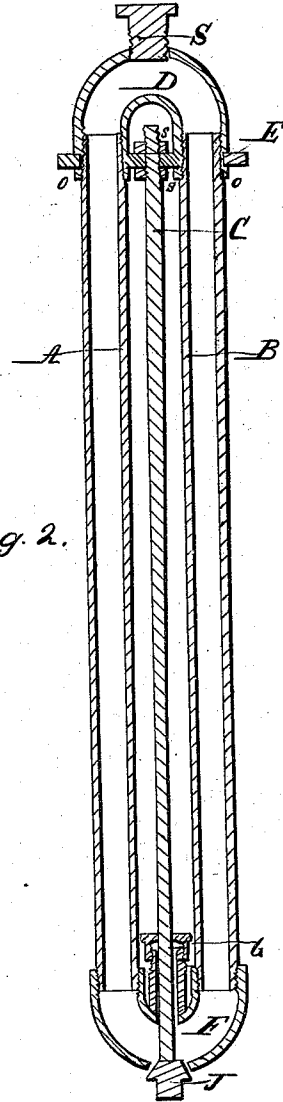


Fig. 2.

Witnesses:

Thomas C. Greene

Benjamin Mould

Inventor:

Philip D. Wesson

UNITED STATES PATENT OFFICE.

PHINEAS D. WESSON, OF PROVIDENCE, RHODE ISLAND.

IMPROVED STEAM-TRAP.

Specification forming part of Letters Patent No. 31,842, dated March 26, 1861.

To all whom it may concern:

Be it known that I, PHINEAS D. WESSON, of Providence, in the county of Providence, in the State of Rhode Island, have invented a new and Improved Steam-Trap for the Purpose of Relieving Steam - Pipes of the Water Produced by the Condensation of the Steam; and I do hereby declare that the following is a full and correct description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The same letters in all the figures denote like parts.

In the drawings, Figure 1 is a front elevation of the trap. Fig. 2 is a section of the same, taken through its center in a plane parallel to its front.

The construction of my improved steam-trap is as follows: Two tubes A B, of brass or other suitable metal, are placed parallel to each other at a small distance apart and connected together at their ends by the tubular connections D F, which may be made in semi-circular curves, as shown in the drawings, or with angles. At the upper ends of the tubes A B is put a plate or bar E, extending across the tubes, which project through it, the plate being held in place by two screw-nuts o o on the tubes, which press it up against the ends of the connection. In the under side of the lower connection F is placed a valve J, opening outward, and attached to the rod C, of iron, (or of other material, if preferred,) which rod passing through the stuffing-box G, placed on the inside curve of the connection F for the purpose of making its passage through that side steam-tight, extends up between the tubes A B, and passing through the plate E at the top is secured to it by a screw-nut upon each side of the plate E upon the rod. An aperture S is made in the connection D for

the purpose of connecting the trap to the steam-pipe to be relieved. The valve-rod C, being exposed to the air, is maintained at a comparatively even temperature, and, moreover, being made of a material less affected by heat and cold than the tubes A B, keeps the valves J in proper position during the operation of the trap, which is as follows: The valve-rod C is so adjusted by means of the screw-nuts s s at its upper end as to hold the valve open when the trap is cool and the tubes A B contracted. In this condition the water of condensation from the steam-pipe to which the trap is attached will flow down through the tubes A B and escape at the open valve J at the bottom. When all the water has run out and steam from the relieved pipe enters the trap, the temperature of the tubes A B will be raised by it, and by their consequent expansion will push the seat of the valve J down against the valve, thus closing the opening and preventing the escape of the steam. As the water again collects from the condensation of the steam in the pipes, it runs into and fills the trap, until from its low temperature it cools the tubes A B sufficiently to cause them to contract far enough to raise the seat of the valve J and again allow the water to escape, when the steam enters and closes the valve, as before.

Having thus described my improved steam-trap, what I claim as my invention, and desire to secure by Letters Patent, is—

The use and employment of the tubes A B, valve-rod C, and valve J, when arranged and operating substantially as herein described, and for the purpose set forth.

PHINEAS D. WESSON.

Witnesses:

THOMAS C. GREENE,
BENJAMIN ARNOLD.