

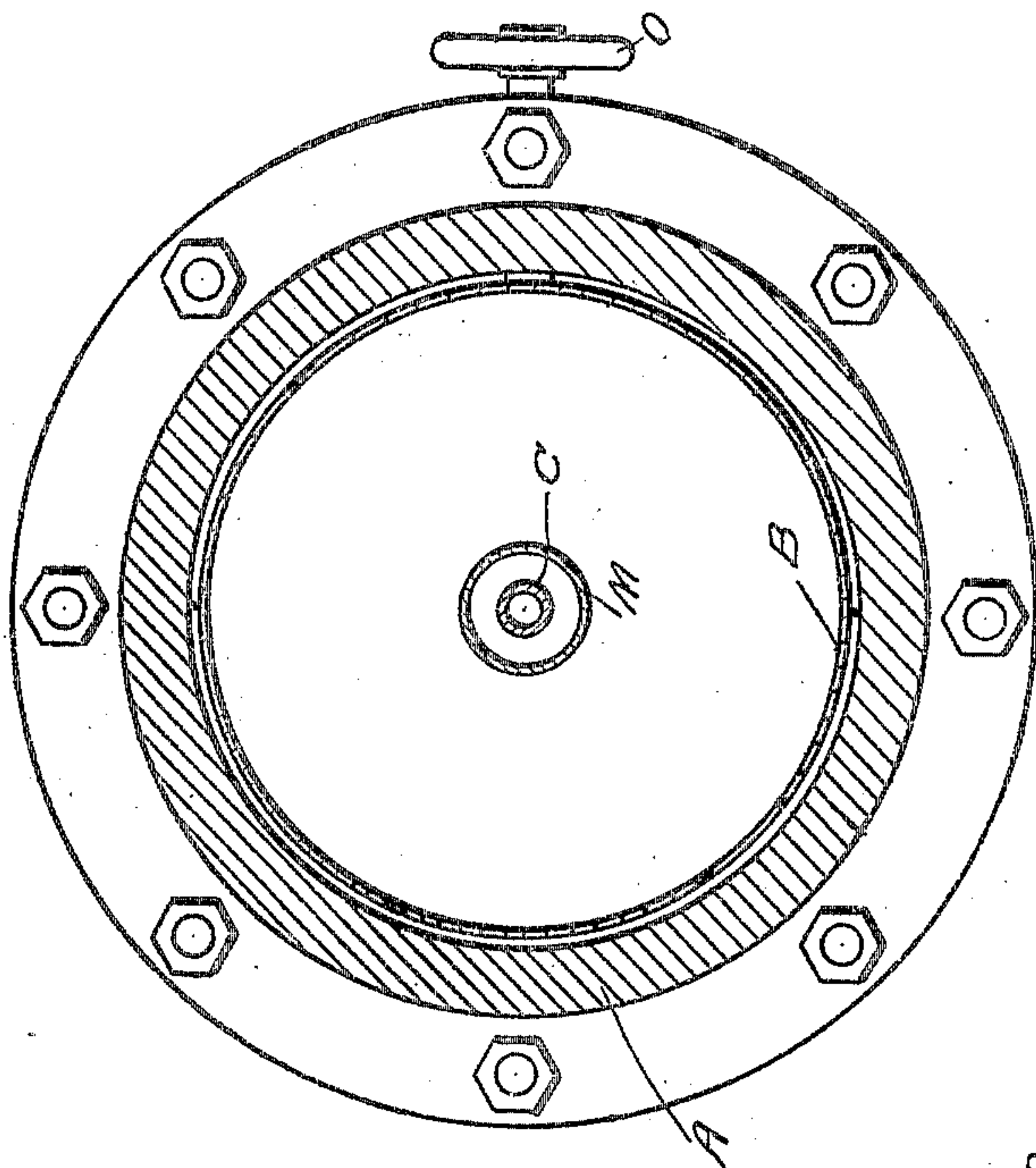
No. 797,663.

PATENTED AUG. 22, 1905.

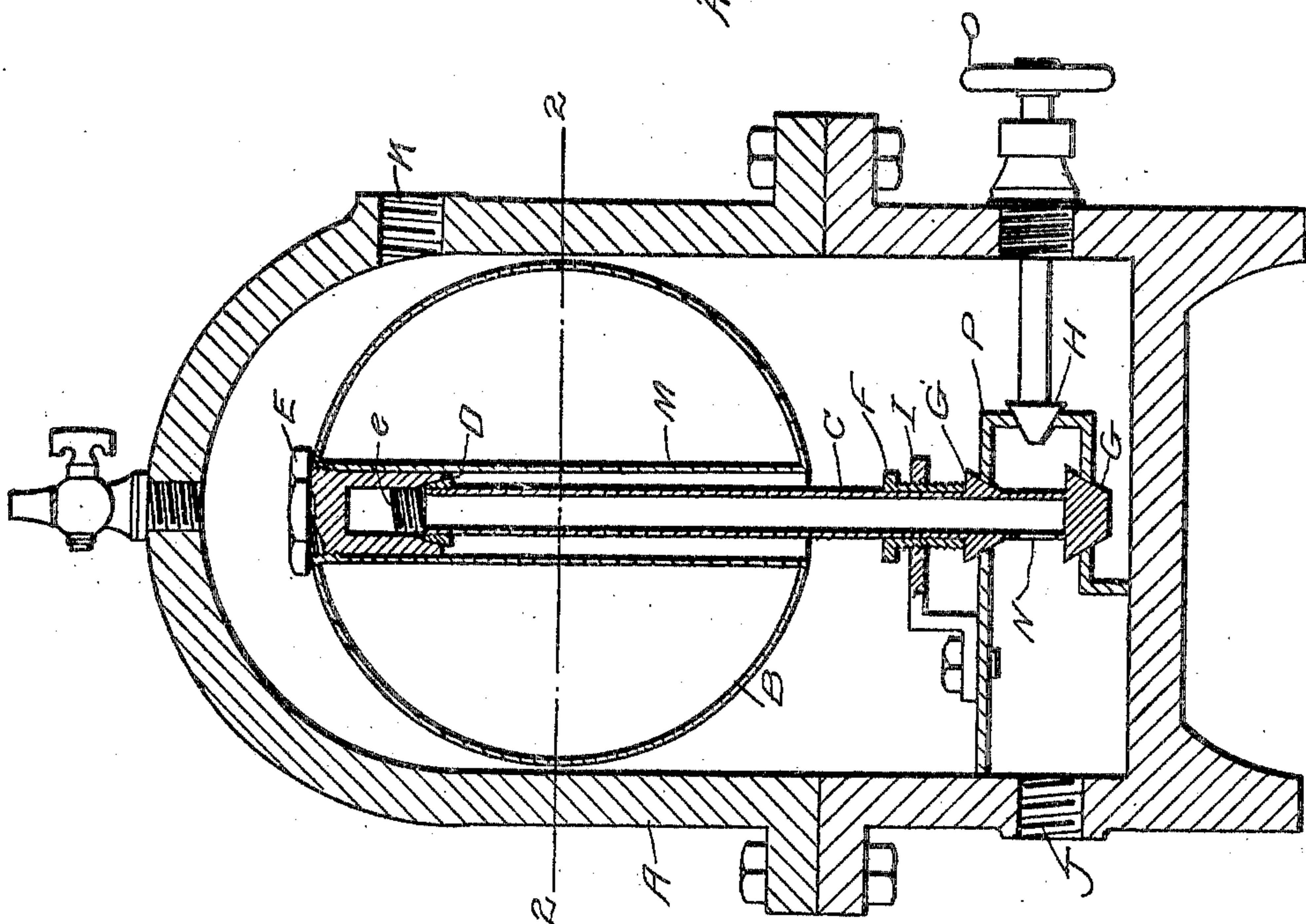
J. W. COTTINGHAM.

STEAM TRAP.

APPLICATION FILED FEB. 25, 1905.



*Fig. 2.*



*Fig. 1.*

Witnesses

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*Geo. E. Tew*

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# UNITED STATES PATENT OFFICE.

JOHN WILLIAM COTTINGHAM, OF LEIPSIC, OHIO.

## STEAM-TRAP.

No. 797,663.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed February 25, 1905. Serial No. 247,285.

*To all whom it may concern:*

Be it known that I, JOHN WILLIAM COTTINGHAM, a citizen of the United States, residing at Leipsic, in the county of Putnam and State of Ohio, have invented new and useful Improvements in Steam-Traps, of which the following is a specification.

This invention is a steam-trap designed particularly for use on either high or low pressure service and having means whereby it can be converted from one to the other, as more fully described hereinafter.

In the accompanying drawings, Figure 1 is a vertical section of the apparatus. Fig. 2 is a horizontal section thereof on the line 2 2 of Fig. 1.

Referring specifically to the drawings, A indicates a casing with an inlet at K and an outlet at J.

B indicates a float contained within the casing, and this float has a central vertical tube M, into the upper end of which is screwed a cap E.

C indicates a tube which extends through the tube M and has at the top a rim D, against which the cap E seats, forming a valve which controls the inflow to the top of the tube C. At the lower end the tube C has two plug-valves G, which fit appropriate seats in the partition P, formed within the casing. The tube also has an outlet at N between said valves.

F indicates a sleeve exteriorly threaded and supported in a bracket I, which projects above the valve-seats in the partition P. The sleeve forms a support and guide for the tube C, which fits therethrough. When the sleeve F is screwed down, it holds the valves G tight to their seats and fixes the tube C rigidly in place. When the sleeve F is screwed up, the tube C is slidable therein to a corresponding extent. The cap E has a threaded bore (indicated at e) arranged to screw on the upper end of the tube C when the valve D is unscrewed therefrom.

For low-pressure service the nut F is screwed down and the valves G held closed, with the tube C in rigid position and the valve D in place. Thus when the water accumulates to that extent it will lift the float B and flow up through the tube M, over the valve D, down through the tube C, and out at N and J.

For high-pressure service the valve D is re-

moved and the cap E screwed onto the upper end of the tube C, thus locking the float and said tube together. The sleeve F is then unscrewed or backed off from the valve G, so that when the water rises the float B will lift the tube C and valves G and allow the water to flow out.

H indicates a by-pass valve operated by hand-wheel O on the outside of the casing, so that the trap can be manually drained when desired.

The location of the valve D at the top of the pipe C has the advantage that it prevents the accumulation of sediment around the valve, which is an objection incident to those valves which are located in the bottom of a trap.

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

1. In a steam-trap, the combination with a casing and a float therein, of an upright tube within the casing having a valve at each end controlling the outlet from the casing, and float-actuated means to operate either valve.

2. In a steam-trap, in combination, a casing having a partition therein between the inlet to and outlet from the casing, an outlet-valve in said partition, a tube connected to and extending through said valve and having an opening below the same leading to the outlet, an inlet-valve at the upper end of the tube, a float controlling said inlet-valve, and means to connect the float to the tube and close said inlet-valve.

3. In a steam-trap, the combination with a casing having an inlet, and an outlet valve, of a tube extending through and fixed to said valve and having an inlet-opening above and an outlet-opening below the same, and a float controlling the inlet-opening and capable of attachment to the tube to operate the said valve.

4. In a steam-trap, the combination with the outlet-tube C having an inlet-valve at the top and an outlet-valve G at the bottom, of the float having a tube into which said tube projects, and the cap E normally controlling the inlet-valve and capable of being screwed on the said tube C to connect the float therewith.

5. In a steam-trap, the combination with the casing having a partition with the outlet-valve G therein, of the outlet-tube C connected to and extending through said valve

and having openings above and below the same, the adjustable sleeve F supported above said valve and through which the tube extends, and arranged to screw down upon the valve and hold the same closed, and the float controlling the upper inlet to the tube and constructed to be attached thereto.

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

JOHN WILLIAM COTTINGHAM.

Witnesses:

A. A. SLAYBAUGH,  
W. A. BELL.