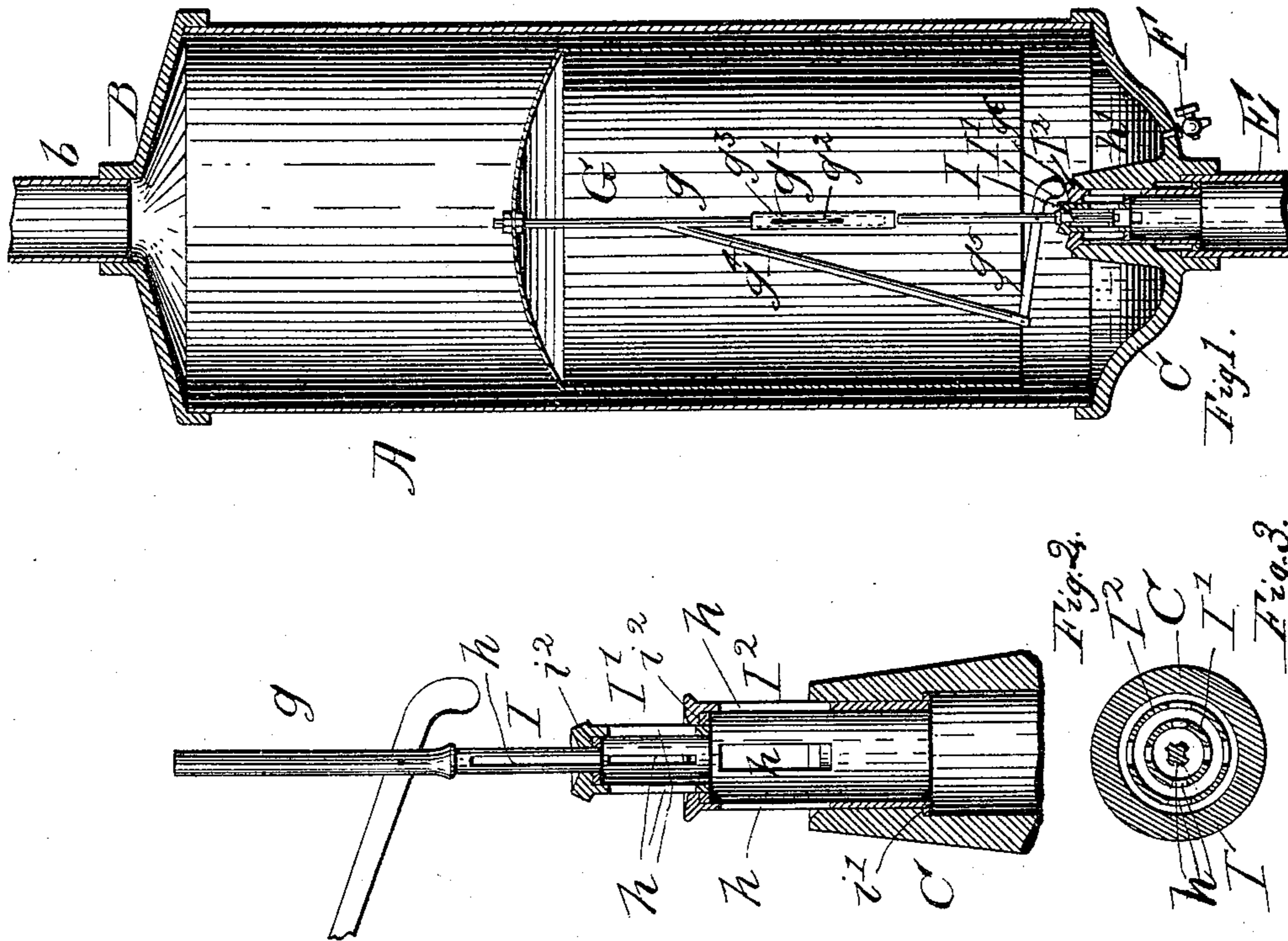


(No Model.)

E. D. STOCKTON.
STEAM TRAP.

No. 436,294.

Patented Sept. 9, 1890.



Witnesses

Luke F. Hayden.

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UNITED STATES PATENT OFFICE.

EDMOND D. STOCKTON, OF ATLANTA, GEORGIA.

STEAM-TRAP.

SPECIFICATION forming part of Letters Patent No. 436,294, dated September 9, 1890.

Application filed May 31, 1890. Serial No. 353,871. (No model.)

To all whom it may concern:

Be it known that I, EDMOND D. STOCKTON, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have invented a certain new and useful Steam-Trap, of which the following is a specification.

This invention relates to devices for catching and automatically discharging the water of condensation from steam-coils used in heating buildings or for other purposes, the object of the invention being to so improve such class of devices as to render them capable of being cheaply constructed and at the same time reliable and efficient in their operation, the improvements whereby these ends are attained being hereinafter fully described, and the parts thought to be new pointed out in the claims.

In the accompanying drawings, Figure 1 is a central vertical section through the device. Fig. 2 is a sectional view of a portion of the trap, being a central vertical section of the valve-seat and valves, showing their construction and their relative position when fully open to outflow. Fig. 3 is an enlarged cross-section through the valves and the seat, showing them closed and showing more clearly their ports and conformation.

In the figures like reference-marks indicate corresponding parts in the several views.

The cylindrical casing A, which is of pipe of proportion of, say, twenty inches long by eight inches diameter, and is screw-threaded on both ends, receiving at the top the cap B, into which is screwed the drain-pipe *b* from the heating-coil, and at the bottom the cap C, having an aperture in its center formed of flanges extending from both sides of said cap, having on their top a valve-seat, the lower flange being enlarged and internally screw-threaded to receive the pipe E, which discharges the water of condensation from the trap. A suitable drain-cock F is preferably screwed into the lowest point in the trap to drain same of water, mud, or other accumulation. The valve-seat is elevated somewhat above the extreme bottom of the interior chamber, in order that there may be no danger of choking up thereof, which also allows sufficient room for any possible accumulation

of sediment. The float G, contained in the casing A, is in the form of an inverted cup, which is provided with a downwardly-projecting interior stem *g*, which has connection with the valve I, seated in a concave seat in the valve I', which in turn is similarly seated on the valve I², which has a seat in the head C, a flange *h'* on each of the valves I and I', progressively contacting with the shoulders *i*² thereon, lifting the valves I' and I², a like flange on the valve I² limiting the upward movement of said valves by contacting with a shoulder *i'* in the head C. These valves I, I', and I² are grooved or pointed in and for the usual manner and purpose.

In order to open the valve I against a very heavy pressure, the following construction has been devised, which is found by experiment to be the simplest effective construction: The stem G is divided at the desired point and a sleeve B' secured to one part, while the other works therein, its motion being limited by means of a pin *g*², working in a slot *g*³ in said sleeve. Above the break in said rod *g* is secured a rod *g*⁴, which connects with the long end of the lever *g*⁵, fulcrumed in the lower half of said rod and having an extending end, on which is a cam-surface *g*⁶, which bears on some suitable point and forms a fulcrum for the lever *g*⁵ as soon as the float begins to rise, and owing to the advantage obtained from the action of the lever *g*⁵ the valve I will be lifted against any reasonable pressure, which will at once relieve the pressure and allow the easy lifting of the other valves.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a device of the class specified, as a means of lifting the valve I, the lever *g*⁵, pivoted in the stem of said valve and having a bearing-point *g*⁶, contacting with a suitable stationary point, and connection between its long port and the float G, substantially as specified.

2. In a device of the class specified, the combination of the two valves or more of differing diameters, the smaller seated over an aperture in the larger, the longer seated in a suitable seat in the casing, each having a flange *h'*, as specified, the lever *g*⁵, having

bearing-point g^6 , the rod g , connecting the
valve I with the float G and being secured
and sliding in the sleeve, and the rod g^4 , con-
necting the lever g^5 with the float G, all com-
5 bined, arranged, and operating substantially
as shown and described, and for the purpose
specified.

In testimony whereof I hereunto affix my
signature in presence of two witnesses.

EDMOND D. STOCKTON.

Witnesses:

WILLIAM L. REEDER,
ALBERT P. WOOD.