

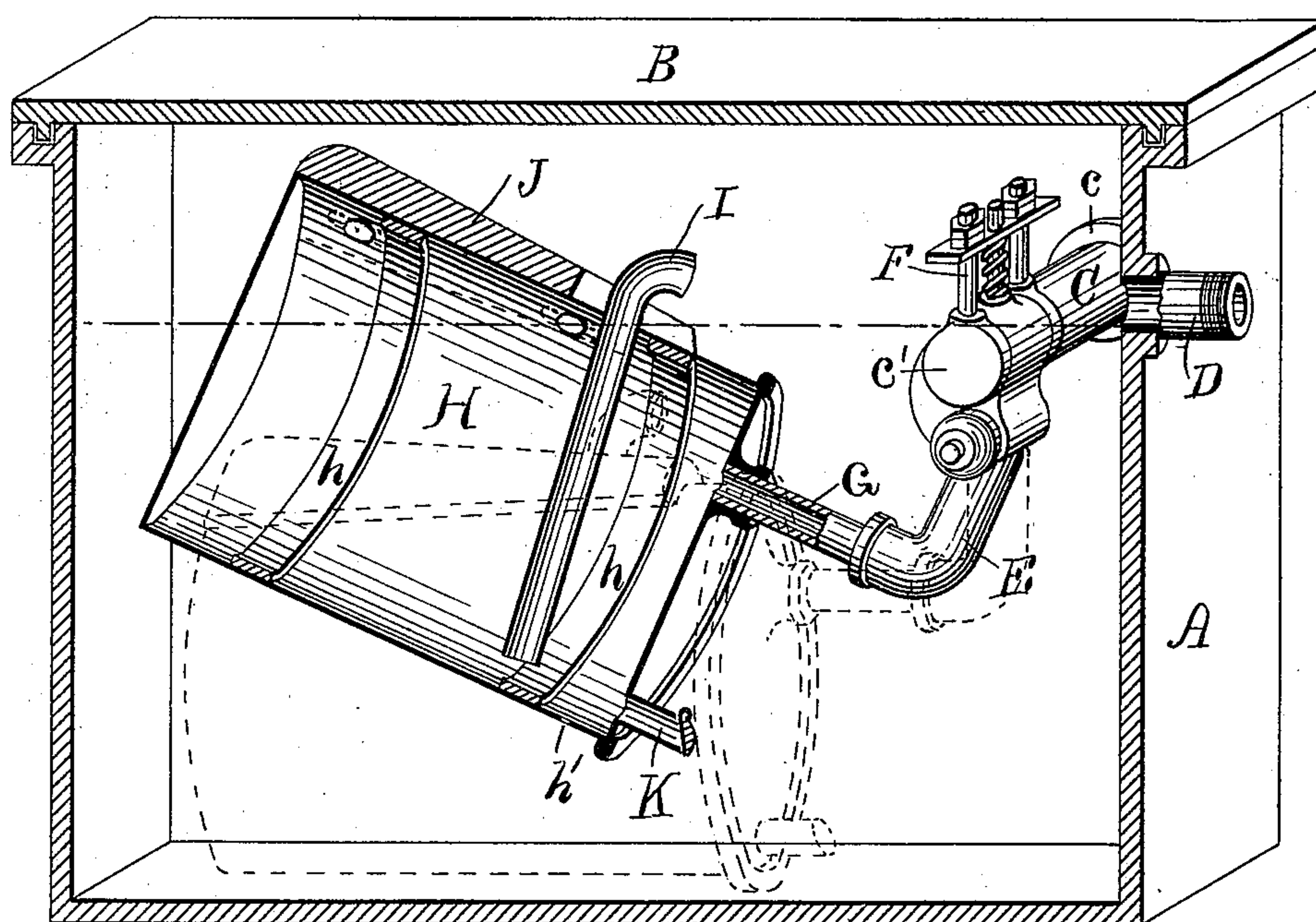
(No Model.)

R. NEWTON.

STEAM TRAP.

No. 334,272.

Patented Jan. 12, 1886.



WITNESSES:

Chas. H. Luther Jr.  
Jno. L. Condon.

INVENTOR:

Robert Newton  
by Joseph A. Miller & Co  
Attys

# UNITED STATES PATENT OFFICE.

ROBERT NEWTON, OF PROVIDENCE, RHODE ISLAND.

## STEAM-TRAP.

SPECIFICATION forming part of Letters Patent No. 334,272, dated January 12, 1886.

Application filed January 2, 1885. Serial No. 151,824. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT NEWTON, of the city and county of Providence, and State of Rhode Island, have invented a new and  
5 useful Improvement in Steam-Traps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

10 My invention relates to that class of steam-fixtures which are designed to discharge the water of condensation without allowing any escape of steam; and the object of my invention is to increase the rapidity of action of  
15 this class of devices and to economize the amount of space required by the floating chamber; also, to so place the valve-chamber and the inlet that they shall be below the water-level, and thus produce a better lubrication of the valve and a more thorough separation of the liquid of condensation from the  
20 steam.

To the above purposes my invention consists in the peculiar and novel features of construction hereinafter described and claimed.  
25

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawing, in which the figure illustrates the trap in longitudinal vertical section.  
30

In the said drawing, A designates the tank or receptacle in which the water of condensation is collected, and in which the valve is operated.

35 B designates the cover of the tank, C the tubular inlet, and D the outlet, the water-line being indicated by a broken line on a level with the outlet through which the water escapes, and by which the water-level is maintained. At one end the inlet C extends through  
40 the side of the tank and carries a flange or shoulder, *c*, between which and the inner surface of the side of the tank any suitable packing may be placed. The opposite end of the  
45 inlet is provided with a valve-chamber, *c'*, to which a tubular elbow, E, is movably attached. The character of the valve-chamber and the valve mechanism and attachment F

may be understood by reference to Letters Patent No. 284,469, granted to me September 50 4, 1883.

G designates a tubular arm or pipe, which connects the elbow F with the floating chamber H. This chamber is of cylindrical form, and is braced internally by two rings, *h h*.  
55 Said chamber is also provided with the small hole *h'*, through which the chamber is gradually filled.

I designates the discharge-pipe or vomit, J the weight for the chamber H, and K the  
60 drip-pipe, the outer end of which is closed by a valve, *k*, which opens outwardly.

By the peculiar construction above described the inlet and its valve are submerged, and thus a more perfect discharge of the water of condensation is effected, while at the same time the valve is lubricated. When the water of condensation is to be discharged, it escapes through the pipes I and K, and hence a very rapid action is produced.  
70

The chamber H, by its cylindrical form, not only affords an opportunity for the use of the weight J, but occupies much less space than if formed otherwise.

The cylindrical chamber H may be used  
75 with either the outlet I or the outlet K alone, and still maintain the advantage of rapid discharge herein referred to.

The purpose of the weight J is to steady the action of the chamber H, and in order to  
80 insure the proper action of the weight it is rendered adjustable upon the chamber by means of bolts which work through elongated slots in the weight, and by which the weight is secured to the chamber. The end of the  
85 weight is recessed, so as to permit of the movements of the weight. These features are illustrated in the drawing, and by them the action of the weight in facilitating the fall and retarding the rise of the chamber is properly  
90 regulated.

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

1. In a steam-trap, the combination, with the tank A, provided with the overflow D,  
95 placed above the valve-chamber *c'*, of the cyl-



inder H, provided with weights and connected by a tubular connection with the lower part of the valve-chamber  $c'$ , as described.

2. The combination, with the tank A, having a cover, B, and an outlet, D, of the inlet C, having the flange  $c$  and valve-chamber  $c'$ , submerged below the water-line, the cylindrical chamber H, having the rings  $h$ , the hole  $h'$ , and the pipes I K, and the arm G and elbow E, as specified.

3. The combination, with the cylindrical chamber and its connections with the valve, of the pipes I K and the weight J, as described.

ROBERT NEWTON.

Witnesses:

M. F. BLIGH,

J. A. MILLER, Jr.