

No. 621,159.

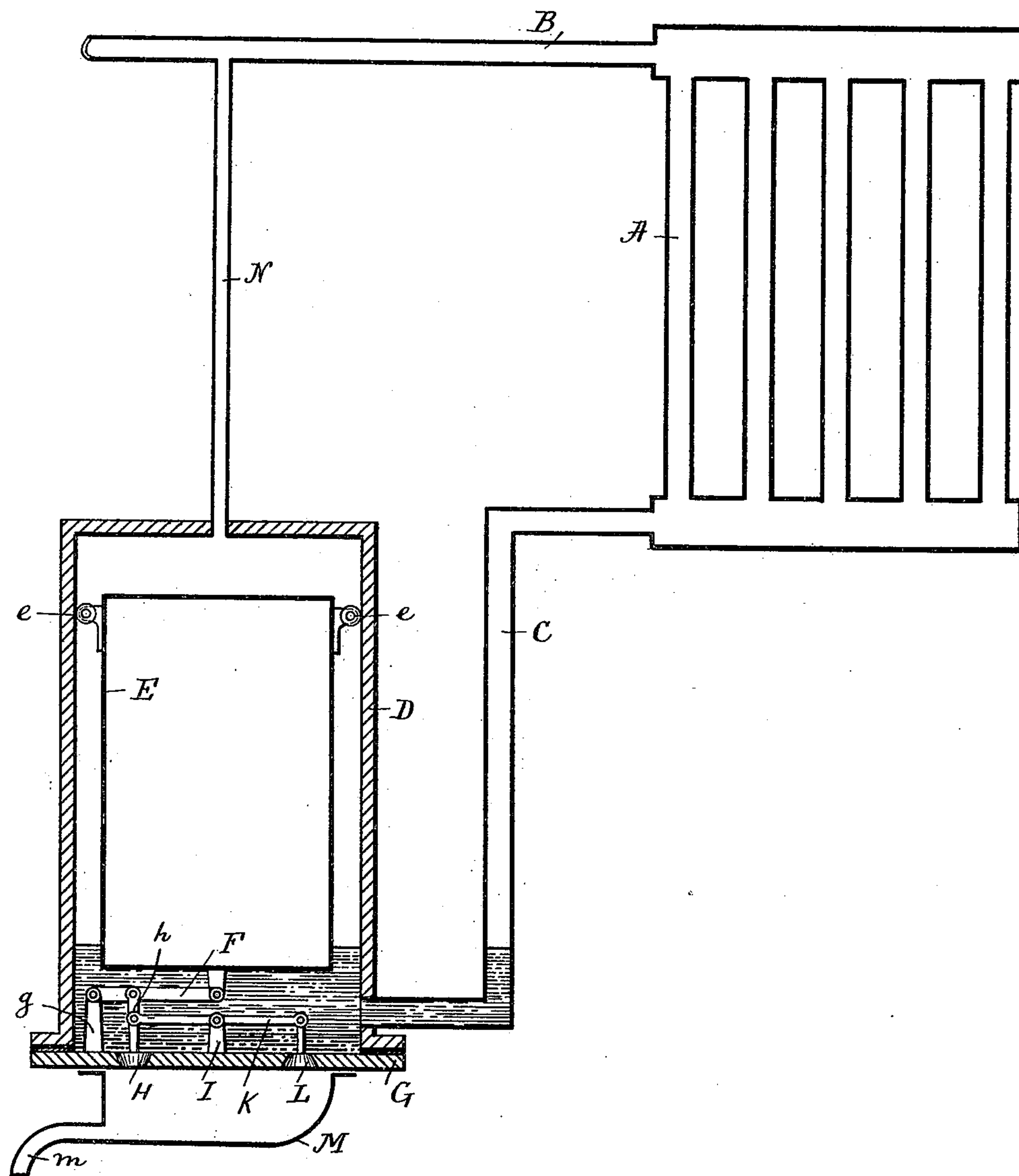
Patented Mar. 14, 1899.

E. F. SEISEL.

STEAM TRAP.

(Application filed July 30, 1898.)

(No Model.)



Witnesses:

Charles E. Maxwell
Karl A. Andrien.

Inventor:

Emil F. Seisel.
by Alban Andrien.
his atty.

UNITED STATES PATENT OFFICE.

EMIL F. SEISEL, OF NORWOOD, MASSACHUSETTS.

STEAM-TRAP.

SPECIFICATION forming part of Letters Patent No. 621,159, dated March 14, 1899.

Application filed July 30, 1898. Serial No. 687,342. (No model.)

To all whom it may concern:

Be it known that I, EMIL F. SEISEL, a citizen of Germany, residing at Norwood, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Steam-Traps, of which the following is a specification.

This invention relates to improvements in regulators for steam-heating and steam-pressure devices; and it is carried out as follows, reference being had to the accompanying drawing, which represents a vertical section of the invention.

In the drawing, A represents a steam-heating or steam-pressure device, and B represents the steam-supply pipe leading to said steam-heating or steam-pressure device from the source of steam-pressure, as usual.

C is a pipe leading from the lower portion of the steam-heating or steam-pressure device A to the lower portion of a closed chamber D, into which the water of condensation is conducted from the steam-pressure device A, as shown. In the chamber D is located a vertically-movable hollow float E, preferably provided at the outside of its upper portion with guide-rollers *ee*, bearing against the interior of the chamber D for the purpose of properly guiding said float during its up-and-down motion within the said chamber D, as shown. To the underside of the hollow float E is pivoted a lever F, the other end of which is pivoted to a bracket or projection *g*, preferably secured to or made in one piece with the cover G, which is secured steam and water tight to the lower open end of the chamber D, as shown.

H is a valve seated in a perforation in the cover G and provided with a valve-stem *h*, the upper end of which is pivotally connected to the lever F, as shown.

I is a bracket or projection on the upper portion of the cover G, and to it is pivoted a lever K, one end of which is pivotally connected to the valve-stem *h* of the valve H and the other end of said lever K is pivotally connected to the valve L, seated in a perforation in the cover G, as shown. Below the

valves H L is preferably secured to the under side of the cover G a receiver M, provided with a discharge-pipe or outlet *m*, as shown.

N is a pipe connecting the upper end of the chamber D with the pipe B for the purpose of establishing an equilibrium of pressure between the steam heating or pressure device A and the interior of the chamber or receiver D for the water of condensation, as shown.

The operation is as follows: As the steam condenses in the heating or pressure device A it is conducted through the pipe C into the lower portion of the chamber D, thus causing the float E to rise, by which the valves H L are opened, respectively, upward and downward, thus allowing the condensed water to flow out through the valve-openings in the cover G into the receiver M and out through the delivery-pipe or discharge-opening *m*. During the discharge of the condensed water from the chamber D the float E is caused to descend by its own gravity, causing the valves H L to be automatically closed after the proper quantity of water has been so discharged, and so on from time to time.

It will thus be seen that the device is automatic in its action for the purpose of discharging from time to time the water of condensation from a steam-heating or steam-pressure device.

I have shown my invention in the drawing as applied to a steam-heating device; but it may equally well be used in connection with steam-engines or other steam-pressure devices without departing from the essence of my invention.

What I wish to secure by Letters Patent and claim is—

In a regulator for steam-heating or steam-pressure devices, the combination with a steam-radiator or its equivalent, a steam-supply pipe communicating with said radiator, and a discharge-pipe for the water of condensation leading from the lower end of said radiator, of a cylindrical float-chamber communicating from its upper end with said steam-supply pipe and receiving said discharge-pipe at its lower end, a float within

said chamber having guides thereon, two balanced valves, controlling discharge-openings in the lower end of said chamber adapted to open and close when moved simultaneously in opposite directions, a lever fulcrumed intermediate of its ends, connecting said valves, and a second lever fulcrumed at one end on a stationary part, and pivotally connected at its free end to said float, and at a point in-

intermediate of its ends to the stem of one of said valves, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EMIL F. SEISEL.

Witnesses:

ALBAN ANDRÉN,

EUGENE W. WELD.