

(No Model.)

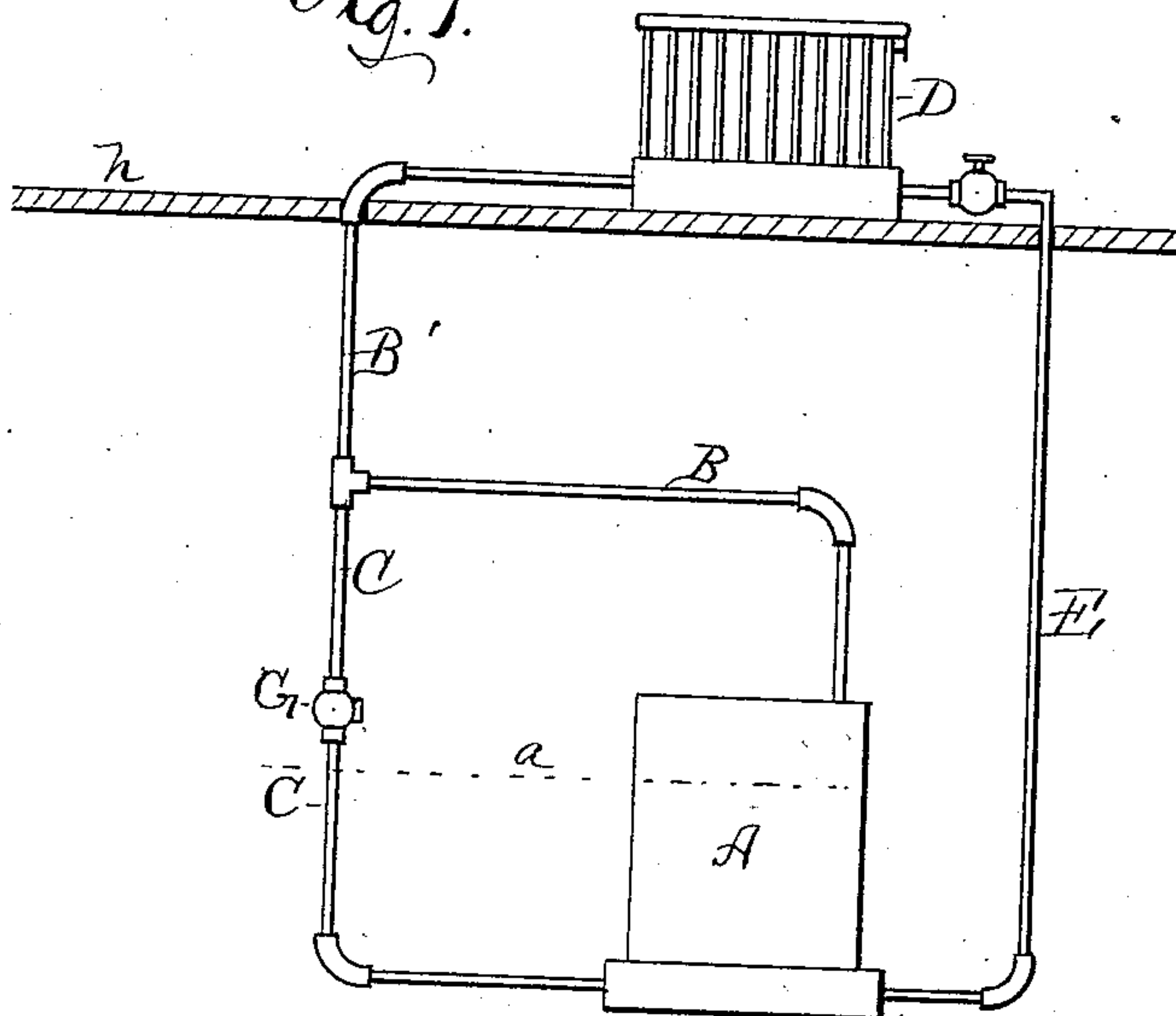
W. H. WILLSON.

VALVED TRAP.

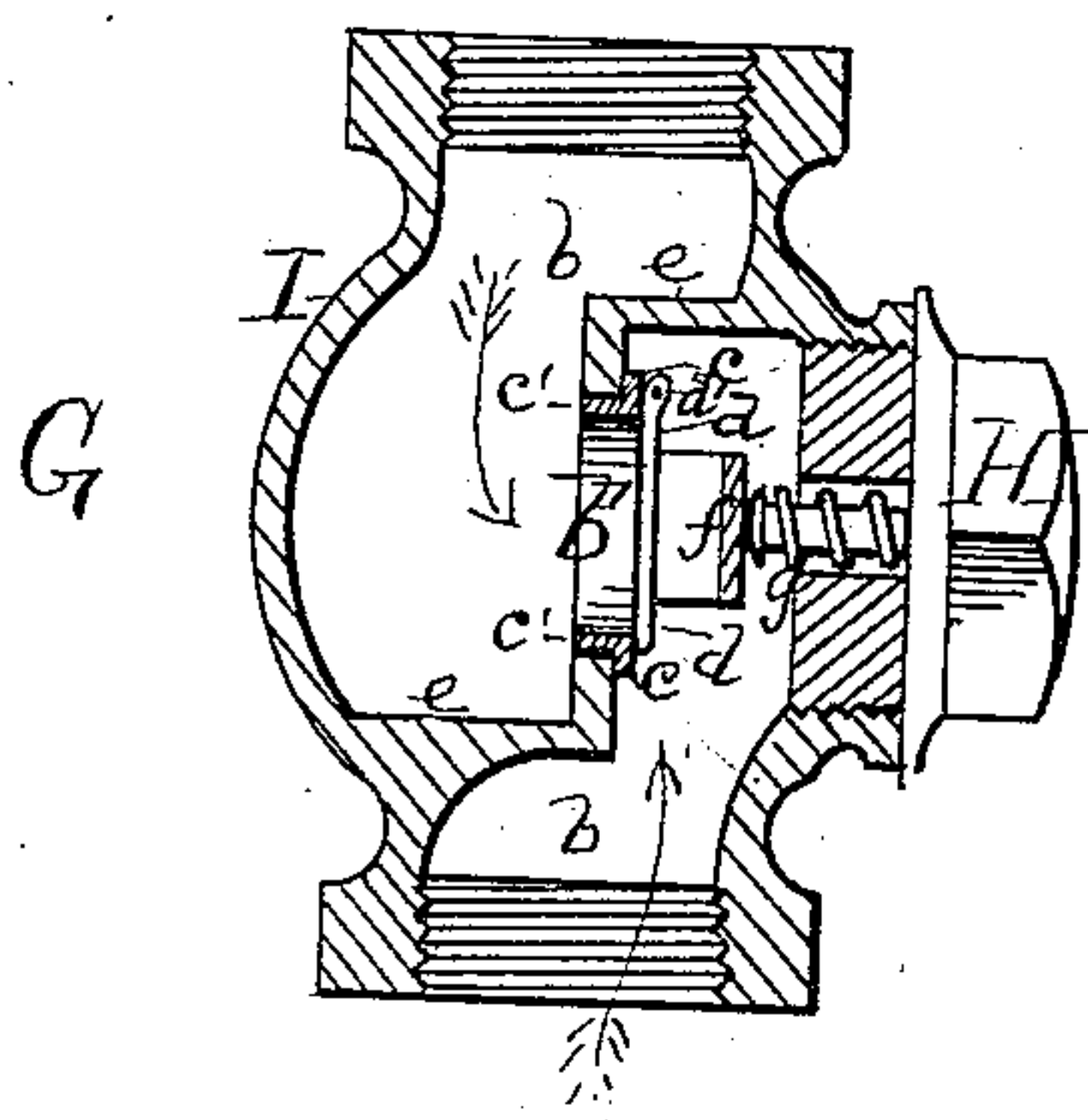
No. 300,746.

Patented June 17, 1884.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*J. H. Garson.*  
*J. R. Drake.*

*W. H. Willson,*  
*Inventor, by*  
*J. R. Drake,*  
*Atty.*

# UNITED STATES PATENT OFFICE.

WILLIAM H. WILLSON, OF WESTFIELD, NEW YORK, ASSIGNOR OF ONE-HALF  
TO ROLLIN D. ROCKWELL, OF SAME PLACE.

## VALVED TRAP.

SPECIFICATION forming part of Letters Patent No. 300,746, dated June 17, 1884.

Application filed July 9, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. WILLSON, a citizen of the United States, residing at Westfield, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Valved Traps for Steam-Heating Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the construction and combination of parts, and will be understood as hereinafter set forth and claimed.

In the drawings, Figure 1 is a side elevation of a steam-heating apparatus, showing the trap in place; Fig. 2, vertical cross-section of the trap and its valve.

A represents a boiler; B, the steam-conducting pipe from boiler to T-joint, uniting it with the drip-pipe C below the joint, and making a combined steam and drip pipe, B', above the joint, which leads to the first radiator, D, on the first floor, *h*, of a building, one only being shown to illustrate the working of the whole.

E is another relief-pipe running from the other end of the radiator, which also returns water to the boiler A, in which, if desired, another trap may be set.

G is the trap, screwed at both ends into the drip or relief pipe C. Its precise position is not very important; but usually it will be set above the water-line *a* and below the steam-pipe connection of pipe B'.

The construction of my valved trap is as follows: I represents the case, having the usual projections, *ee*, above and below, inside, to form the through-passage *b*. Against the vertical circular opening *b'*, which is about in the mid-

dle, is set a brass circular seat, *c*, having a rim, *c'*, projecting a short distance into the opening *b'*. Outside and against this seat is hung by a top hinge, *d'*, a brass vertical flap-valve, *d*, which closes the opening of the seat and the passage-opening *b'* of the trap, shutting off any upward flow of air or water, as any pressure, however slight, from below pushes the valve *d* firmly against its seat, while the slightest downward pressure from pipes B' or C above the trap will open the valve and allow the drip of condensed steam or water to flow down through and back into the boiler.

To keep the valve-seat and its attached valve in place, I provide a hollow frame, *f*, which is secured to or bears against the seat, and forms a bridge over the valve to allow its opening and closing. The frame is held in place by means of a pin forced out against it by a spring, *g*. The pin and spring *g* have a seat in the screw-cap H of the valve. When the water and steam are of equal pressure, there is no action of the valve, and no water will get into the radiators.

I claim—

The valved trap G, having the case I, with inner passage-projections, *ee*, and through-opening *b b'*, the valve-seat *c c'*, the flat top-hinged vertical valve *d*, and held in place by the frame *f*, and spring *g*, all substantially as specified.

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

WILLIAM H. WILLSON.

Witnesses:

J. R. DRAKE,  
C. E. WILSON.