

(No Model.)

M. O. ROBERTS.  
WATER HEATER OR STEAM BOILER.

No. 596,718.

Patented Jan. 4, 1898.

Fig: 1.

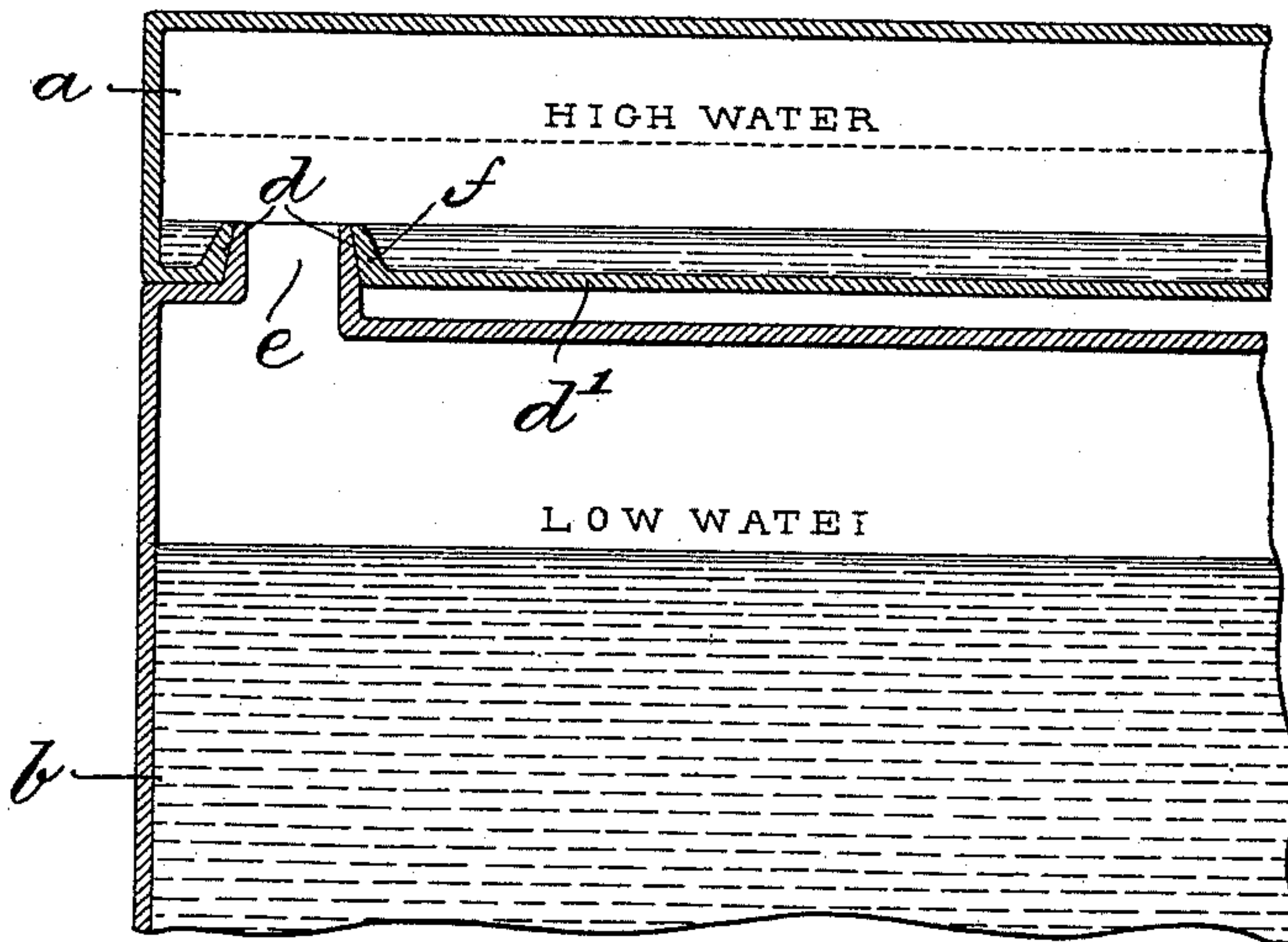
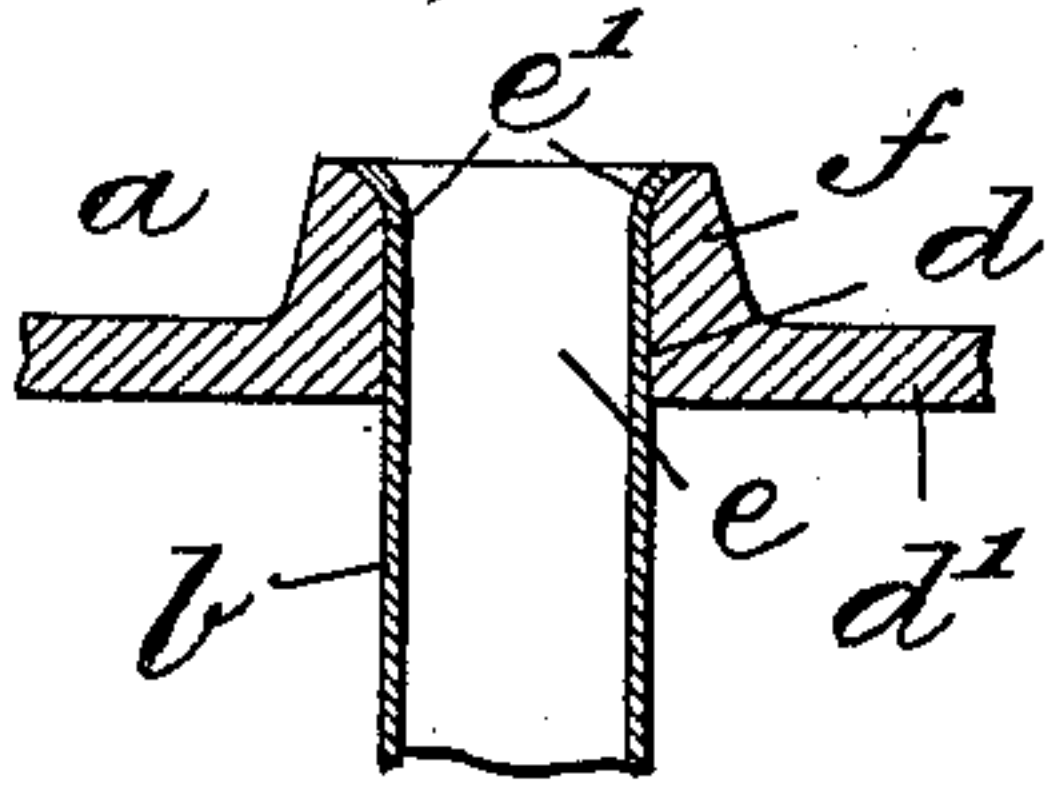


Fig: 2.



Witnesses:  
Thomas M. Smith.  
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# UNITED STATES PATENT OFFICE.

MILTON O. ROBERTS, OF COLLEGEVILLE, PENNSYLVANIA, ASSIGNOR TO  
THE ROBERTS MACHINE COMPANY, OF SAME PLACE.

## WATER-HEATER OR STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 596,718, dated January 4, 1898.

Application filed May 22, 1897. Serial No. 637,672. (No model.)

*To all whom it may concern:*

Be it known that I, MILTON O. ROBERTS, a citizen of the United States, residing at Collegeville, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Water-Heaters or Steam-Boilers, of which the following is a specification.

My invention has relation to a water-heater or steam-boiler of the type known as "sectional," and in such connection it relates particularly to the means whereby a section or sections may be connected with an upper dome or reservoir.

The principal object of my invention is to provide in a sectional water-heater or boiler a simple, efficient, and easily-adjusted connection between the dome or reservoir and the sections; and to this end my invention consists in forming integral with the floor of the dome or reservoir an upwardly-projecting inlet and upon the top of the section an upwardly-projecting outlet or thimble adapted to enter the inlet of the dome and to be expanded therein to firmly embrace said inlet.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a vertical sectional view of lower-situated and higher-situated sections or parts of a type of hot-water heater or boiler, the inlet to said higher-situated flanged part being provided with an integral upwardly-extending wall or rim, and the said view embodying main features of my invention; and Fig. 2 is an enlarged sectional view of a modified form of the connection between the outlet of a lower-situated part with the inlet of a higher-situated part of a heater or boiler of my said invention.

Referring to the drawings, *a* represents a dome, water-reservoir, or higher-situated water-containing part of a heater or boiler, and *b* represents a water-section or lower-situated part of a heater or boiler. The reservoir or higher-situated part *a* has an inlet *f* integral with its base or crown-sheet, which registers with an outlet *e* of the water-section or lower part. The outlet *e*, as shown, consists of a tube or thimble *d*, formed integral with the

reservoir or water-section *b*, which enters the inlet *f* of the dome and is expanded therein to firmly embrace said inlet. 55

In Fig. 2 the water-section or lower-situated part *b* of the heater or boiler has its outlet *e* expanded, as at *e'*, upon the upper surface or wall of the thimble *f*, formed integral with the elevated water-reservoir or higher-situated part *a*. 60

In the two different forms of connection of the higher-situated part or reservoir *a* with the lower-situated part or section *b* the inlet is provided with a tube or thimble which serves as a retaining-wall or dam to prevent escape of water from the higher-situated part or reservoir *a* back into the lower-situated part or water-section *b* when the water-level has reached a point lower than that of the base or crown-sheet of the higher part or member, and this wall also serves to retain all condensation in the reservoir striking against and falling from the roof thereof onto the crown-sheet or base *d'* to prevent burning out or destruction of the same. 70 75

The connection between the inlet to the dome and the outlet from the section is simple, efficient, and easily adjusted. When the outlet is expanded as shown within the inlet, the outlet will firmly embrace said inlet to form a water-tight connection which will not be disturbed or impaired by expansion or contraction of the parts of the heater. 80

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is— 85

In a water-heater or boiler, a reservoir or dome having an integral upwardly-extending inlet *f*, in its floor, and a water-section having an integral upwardly-extending outlet consisting of the thimble *d*, said thimble adapted to enter the inlet *f*, and to be expanded therein as at *e'*, to firmly embrace said inlet and form a tight joint therewith, substantially as and for the purposes described. 90 95

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

MILTON O. ROBERTS.

Witnesses:

J. WALTER DOUGLASS,  
THOMAS M. SMITH.