

C. J. WELD.

Water-Regulators for Boilers.

No. 141,302.

Patented July 29, 1873.

Fig. 1.

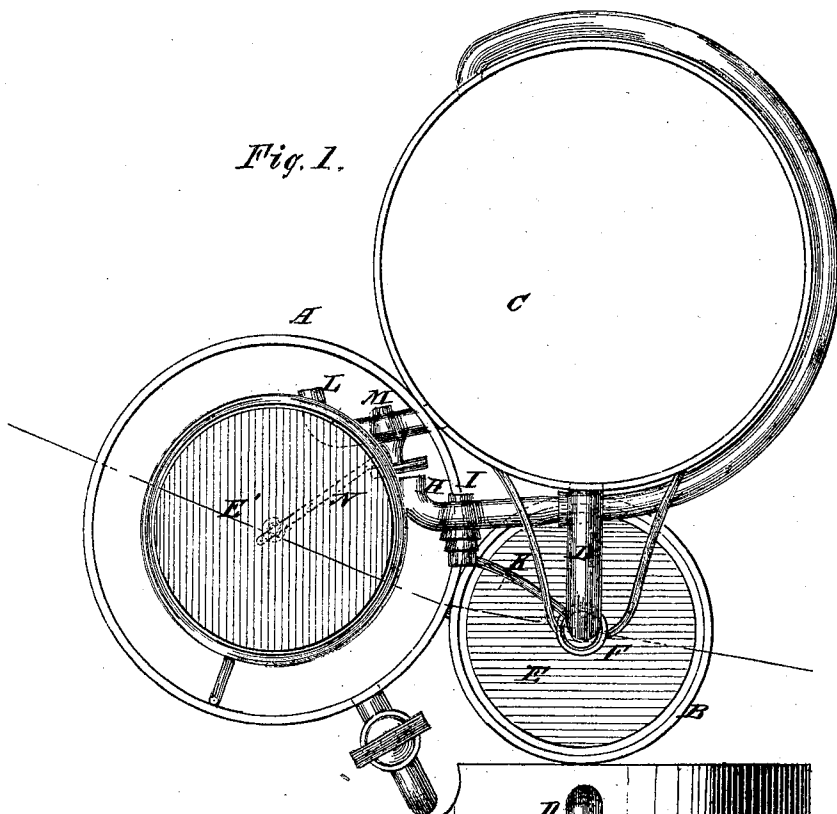
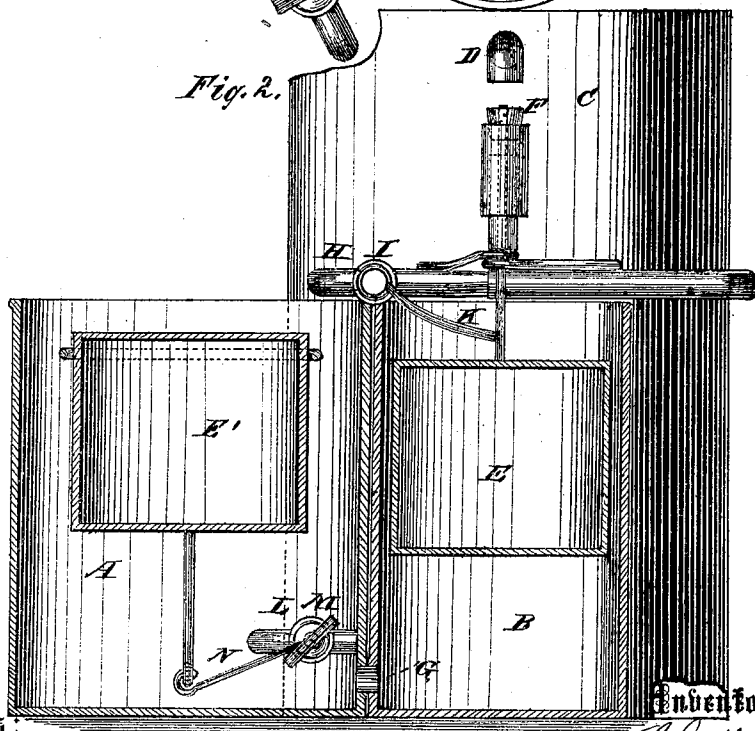


Fig. 2.



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UNITED STATES PATENT OFFICE.

CALVIN J. WELD, OF BRATTLEBOROUGH, VERMONT.

IMPROVEMENT IN WATER-REGULATORS FOR BOILERS.

Specification forming part of Letters Patent No. **141,302**, dated July 29, 1873; application filed February 15, 1873.

To all whom it may concern:

Be it known that I, CALVIN J. WELD, of Brattleborough, in the county of Windham and State of Vermont, have invented a new and Improved Water-Regulator for Boilers, of which the following is a specification:

My invention consists, mainly, of the employment of a small tube or cistern by the side of the principal receiving cistern or vessel—say, a boiler on a cooking stove or range, or a sap-boiler or steam-generator—into which small cistern the water is or may be received, and flows from it or by it into the boiler, and in which is arranged a float or buoy, having such connection with the cock or valve for shutting the water off from the boiler that, when the water rises to the required level in the boiler, it will close the passage, and open it again when the water falls. The float or buoy may be in the boiler or cistern itself; but in sap-boiling apparatus, in which the float might be lifted on the foam if in the boiler, it is better to have the separate tube or float cistern. It is also more desirable in the case of boilers on stoves and ranges, from which it is necessary to take out water with dippers, pails, and the like, because the float will obstruct the taking of water out with dippers, &c.; and it is also more desirable with steam-generators.

Figure 1 is a horizontal section of apparatus in which my invention is applied both to the boiler and the small cistern or regulator. Fig. 2 is a sectional elevation of the boiler and regulator, and a side elevation of a reservoir from which the cistern is to be supplied.

Similar letters of reference indicate corresponding parts.

A represents the sap-boiler, or the ordinary hot-water cistern or reservoir. B is the regulating cistern or vessel by the side of it, into which the water flows from the main reservoir, hydrant, or other source, C—say through the spout D, or any other—and in which is a float, E, with a stopper, F, arranged to rise and close the spout D when the water has risen as high as it is wanted in A, to which it flows through passage G.

I may, however, have the water flow directly into A from the pipe H, and have the stopcock I connected to the float E by an arm, K, by which the supply will be shut off.

As before stated, the float may be arranged in the boiler A, as shown at E', and the water admitted directly to it, say through a pipe, L, the cock M of which is connected to the float by an arm, N; but as the actual height of the water can be determined better in the cistern B, where it is not subject to the disturbances incident to it in the boiler, and the dipping of water out of the boiler is not obstructed by it when in the tube, I prefer to arrange the float in it.

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

The combination, with boiler A, of the auxiliary cylinder B, connected with reservoir by a pipe, D, and provided with a float, to which is attached a stopper, which shuts the said pipe at the times and in the manner described.

CALVIN J. WELD.

Witnesses:

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