

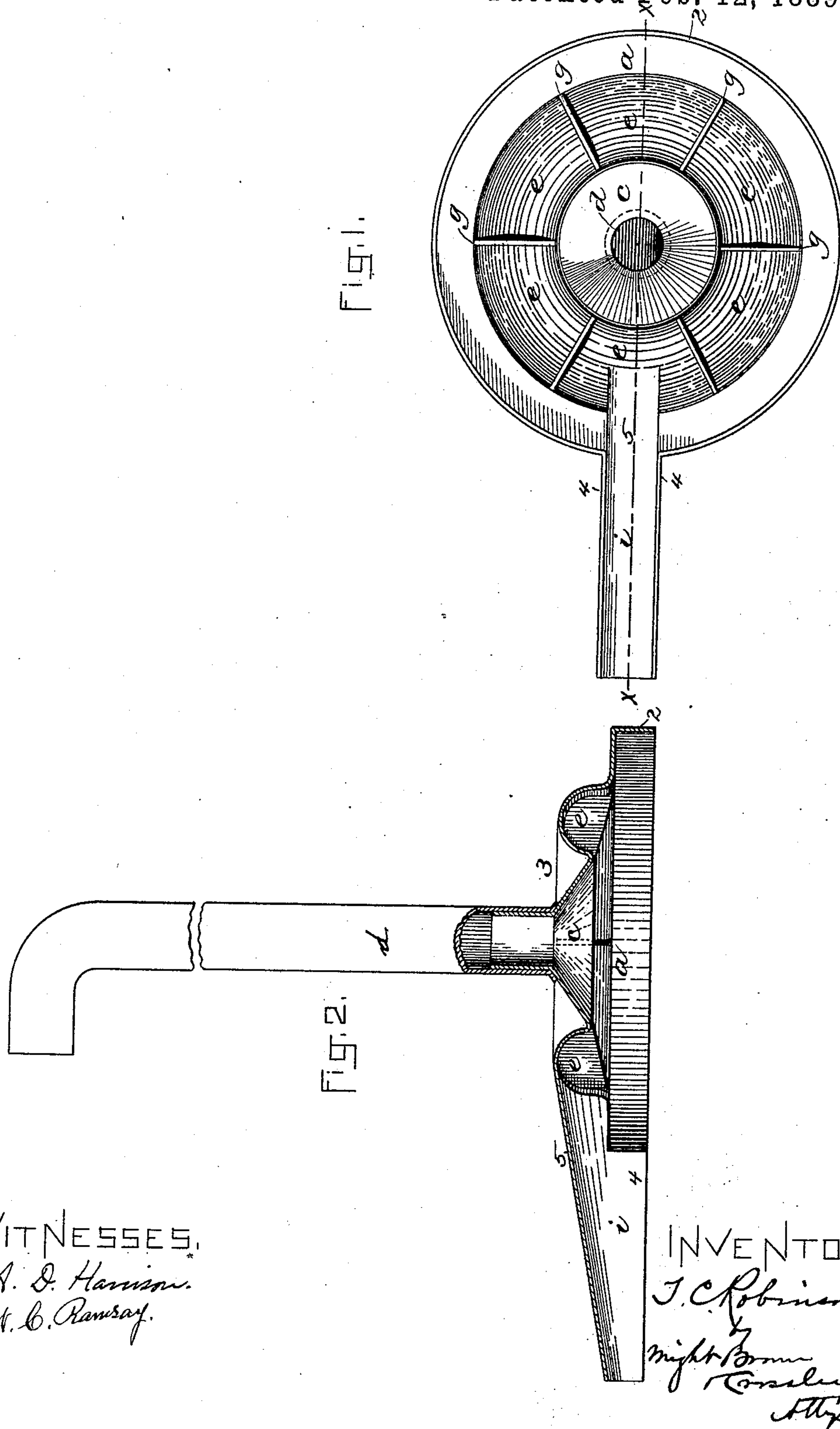
(No Model.)

T. C. ROBINSON.

WASH BOILER.

No. 397,873.

Patented Feb. 12, 1889.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

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## WASH-BOILER.

SPECIFICATION forming part of Letters Patent No. 397,873, dated February 12, 1889.

Application filed April 2, 1888. Serial No. 269,222. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS C. ROBINSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fountain Attachments for Wash-Boilers, of which the following is a specification.

This invention relates to so-called "fountain-washers," or attachments to be placed in wash-boilers and constructed to cause the boiling water to be forced up by the pressure of steam in said water through a tube and discharged in a stream on the fabrics in the boiler.

The invention consists in certain improvements in the construction of devices of this class, which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a bottom view of a fountain attachment for wash-boilers embodying my invention. Fig. 2 represents a vertical section on line *x x*, Fig. 1.

The same letters of reference indicate the same parts in both figures.

In the drawings, *a* represents a bottomless chamber, having for its walls a circular vertical flange, 2, and a dome or cover, 3, all formed in one casting adapted to rest on the bottom of a wash-boiler. The dome 3 is formed with a central conical outlet-passage, *c*, surmounted by a vertical tube, *d*, which conducts water from the chamber and discharges it at the upper portion of the boiler. The dome is also formed with a series of pockets or recesses, *e*, between the flange 2 and outlet *c*, said pockets being raised above the bottom of said outlet. The outer sides of said pockets extend downwardly to points near the outer flange, 2, and their inner sides extend downwardly to the lower edge of the outlet *c*, the inner sides of the pockets being higher than their outer sides, as shown in Fig. 2, so that steam accumulating in said pockets will pass into the outlet *c* and force water upwardly through the latter and through the tube *d*.

I prefer to make the pockets by casting the dome 3 with an annular ridge or arch, form-

ing the top and sides of the pockets, and radial partitions *g*, forming the ends of the pockets.

Water enters the chamber *a* through an elongated, open-bottomed, covered passage, *i*, the sides 4 4 of which join the marginal flange 2, while the top 5 joins the dome 3. The top of the outer or receiving end of the inlet-passage *i* is lower than the top of the inner end, which latter is preferably carried up to the top of one of the pockets *e*, as shown in Fig. 2, the outer end of said passage being lower than the inner side of the pocket with which the passage communicates, so that steam forming in the pocket *e* will not pass outwardly through said passage.

When the device constructed as described is placed on the bottom of a wash-boiler, the steam generated within the chamber *a* accumulates in the pockets *e* and exerts sufficient pressure on the water at the base of the outlet-passage *c* to force said water in a practically continuous stream upwardly through the tube *d*, the water being discharged upon the fabrics in the boiler. By the described form, whereby the inner sides of the pockets are made higher than the outer sides, the pressure of the steam is exerted inwardly from said pockets, or toward the outlet *c*, and is therefore fully utilized in forcing the water upwardly through said outlet and tube.

It is obvious that if the partitions *g g* were removed, so that the annular arch would constitute a single annular pocket, the latter would be an equivalent of the series of pockets here shown and described.

I prefer to employ a series of pockets, however, as shown, because said pockets, each confining steam independently, insure a continuous discharge of water through the outlet *c* and tube *d*. In case the heat is greater at one side of the outlet *c* than at the other side the steam formed in the pockets at that side will discharge the water, whether steam is formed in the opposite pockets or not; but if there were but one pocket extending around the outlet the steam-pressure would have to be equalized through the entire extent of the pocket before the steam would act to elevate the water, so that the discharge with a single



pocket would be more liable to be intermittent than with a plurality of pockets.

I claim—

1. The improved fountain attachment composed of a base containing a chamber, a central outlet in the dome of said chamber, and a series of pockets surrounding said outlet and having their inner edges higher than their outer edges, whereby the pressure of steam in said pockets is directed inwardly on the water in said outlet, as set forth.

2. The improved fountain attachment composed of a base containing a chamber, a central outlet in the dome of said chamber, a series of pockets surrounding said outlet, and an elongated covered inlet-passage having its outer end lower than the inner sides of said pockets, as set forth.

3. The improved fountain attachment composed of the dome having the marginal supporting-flange, the annular arch, and the outlet surrounded by said arch, as set forth.

4. The improved fountain attachment composed of the dome having the marginal supporting-flange, the annular arch, the central outlet surrounded by said arch, and the inlet having its receiving end lower than the lower portion of said outlet, as set forth.

5. The improved fountain attachment composed of the dome having the marginal supporting-flange, the annular arch divided by partitions *g* into a series of pockets, the central outlet surrounded by said arch, and the inlet having its receiving end lower than the lower portion of said outlet, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 5th day of March, A. D. 1888.

THOMAS C. ROBINSON.

Witnesses:

C. F. BROWN,  
ARTHUR W. CROSSLEY.