

GEORGE F. STONE.

Improvement in Fountains for Wash Boilers.

No. 120,218.

Patented Oct. 24, 1871.

Fig. 1.

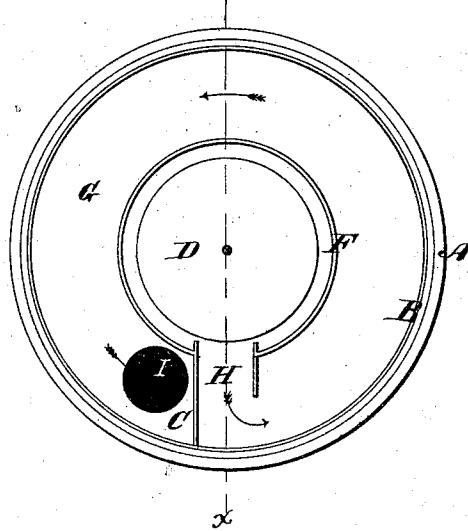


Fig. 2.

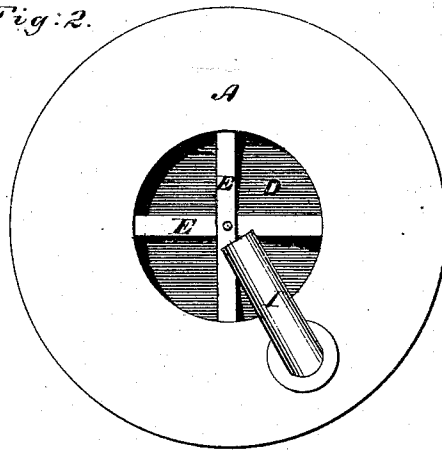
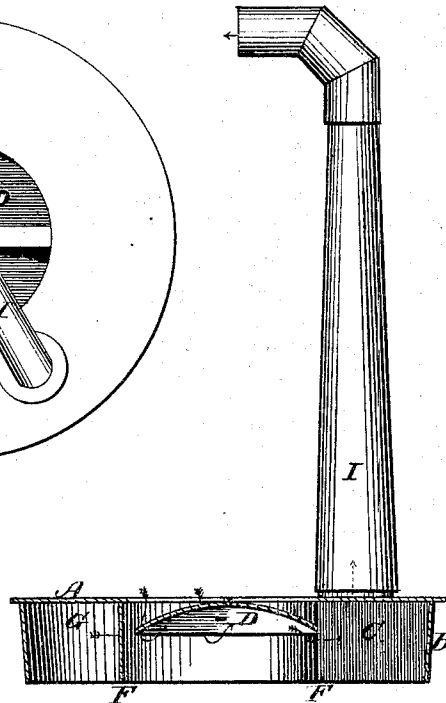


Fig. 3.



Witnesses.

C. F. Brown.

Geo. E. Brown.

Inventor.

George F. Stone
By Hill & Cresswell.
His Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE F. STONE, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN FOUNTAINS FOR WASH-BOILERS.

Specification forming part of Letters Patent No. 120,218, dated October 24, 1871.

To all whom it may concern:

Be it known that I, GEORGE F. STONE, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful Automatic Fountain Attachment for Wash-Boilers, Coffee-Pots, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is an inverted plan view of my improved fountain attachment. Fig. 2 is a top-plan view of the same, and Fig. 3 is a central vertical section.

Similar letters of reference indicate corresponding parts in the several figures of the drawing.

My invention relates to that class of fountains which are employed in wash-boilers, coffee-pots, and other vessels, to cause the automatic circulation of the heated water therein, and known to the trade as automatic boilers. The invention has for its object to increase the circulation of the water so that the article or articles subjected to its action shall be more thoroughly and rapidly cleansed or treated; to this end the invention consists in providing a flat-bottomed or pitted vessel, either permanently or temporarily, with a fountain of an improved construction, as I will now proceed to describe.

In the accompanying drawing, A is a metal plate, made circular or of any other suitable form and provided upon its under surface, at or near the edge, with a wide flange, B. The center of the plate is cut away or provided with suitable openings, such as perforations, a gauze cover, &c.; and immediately beneath the opening is arranged a concavo-convex plate, D, which, in the example of my invention shown in the drawing, is held in place by the bars E extending across the opening. It may be held in place, however, by any other suitable means, the essential requisites being that its edges shall be a short distance below the edges of the opening, and that the diameter of the plate shall be a little larger than the diameter of the opening. F is a second flange, secured to the under surface of the plate A so as to leave a channel or water-passage, G, between it and the outer flange. One end of the flange F is bent outward and attached to the

flange B so as to form a cut-off or partition, C, in the water-passage. The opposite end of this flange is also bent outward a trifle so as to leave a passage, H, between it and the partition communicating with the space within the flange and around the plate D. I is the discharge-pipe and nozzle mounted upon the plate A near one edge and communicating with the water-passage G at its end so as to leave the partition between it and the passage H, as shown in Fig. 1.

The device thus far described may be either secured permanently to the wash-boiler or other vessel, or made separate and applied thereto when desired. The attachment being applied in either manner to a vessel containing water brought to the boiling point, the operation is as follows: As the water continues to boil that portion beneath the plate D having no other means of escape impinges with great force against the concave surface of said plate, and is by it directed through the space H into the water-passage G, along which it is driven, without obstruction, by the constantly-increasing heat and the accumulation of water behind it until it reaches the discharge-spout, through which it is forced with great power. Such, in fact, is the force of the discharge that the water can be projected several feet into the air. This increased force is due to the fact that the water beneath the plate A is caused to take a circuitous course along the heated bottom of the vessel before it reaches the discharge-spout, and is therefore subjected to the action of the heat a longer time than it would be if the passage to the discharge-spout was direct.

It will be observed that the water passes to the discharge-spout in a clear channel—that is to say, without encountering projections—so that it is not obstructed, but rushes in a large volume to the discharge. The water from the discharge-nozzle falls upon the upper surface of the plate A or upon the articles placed thereon, and from thence flows downward through the central opening in the plate and is directed by the plate D into the space inclosed by the inner flange. The concave under surface of this plate prevents its return through the opening, but guides it, as previously stated, outward into the passage G.

Having thus described my invention, what I claim as new, is—

1. The fountain for wash-boilers, constructed as described, so that the water entering at its center flows through an exterior channel to the discharge-pipe, substantially as and for the purpose specified.

2. The plate A provided with a concavo-convex disk D suspended beneath its central opening, substantially as described, for the purpose specified.

3. In combination with the plate A and flange

B the suspended disk D and inner flange F provided with the cut-off C, substantially as described, for the purpose specified.

4. In combination with the channel G, partition C, and flange F, the discharge-spout I, substantially as described, for the purpose specified.

GEORGE F. STONE.

Witnesses:

E. A. ELLSWORTH,
C. F. BROWN.

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