(No Model.)

# J. M. WATSON.

## WASH BOILER.

No. 420,753. Patented Feb. 4, 1890.

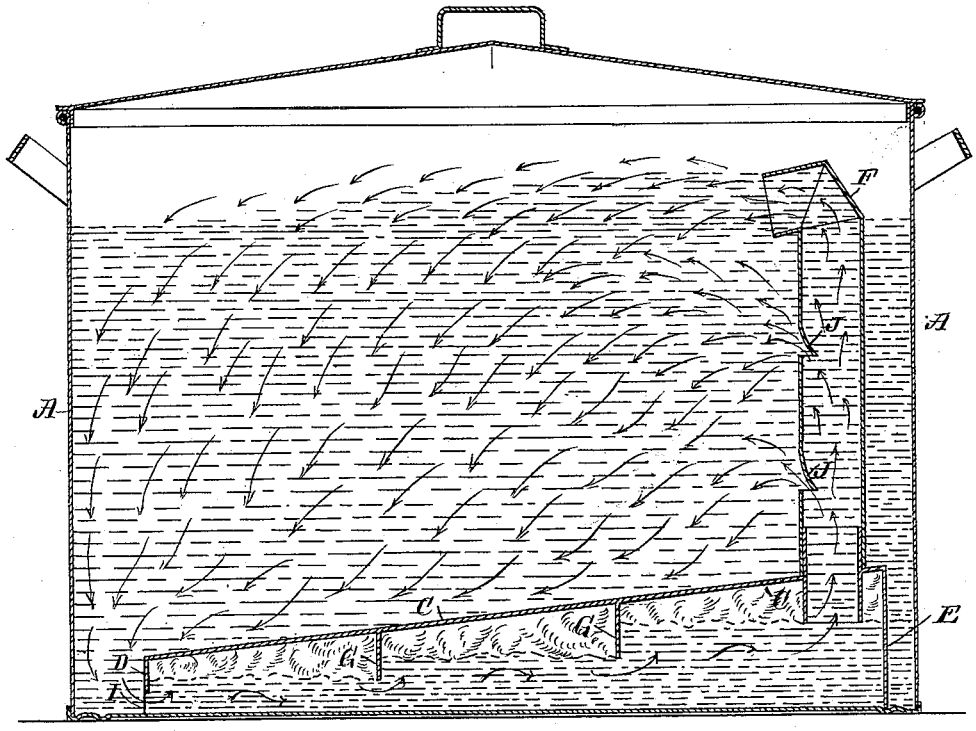



Fig. 1

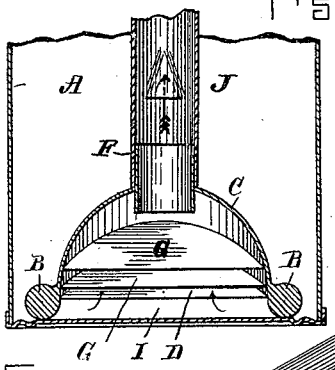
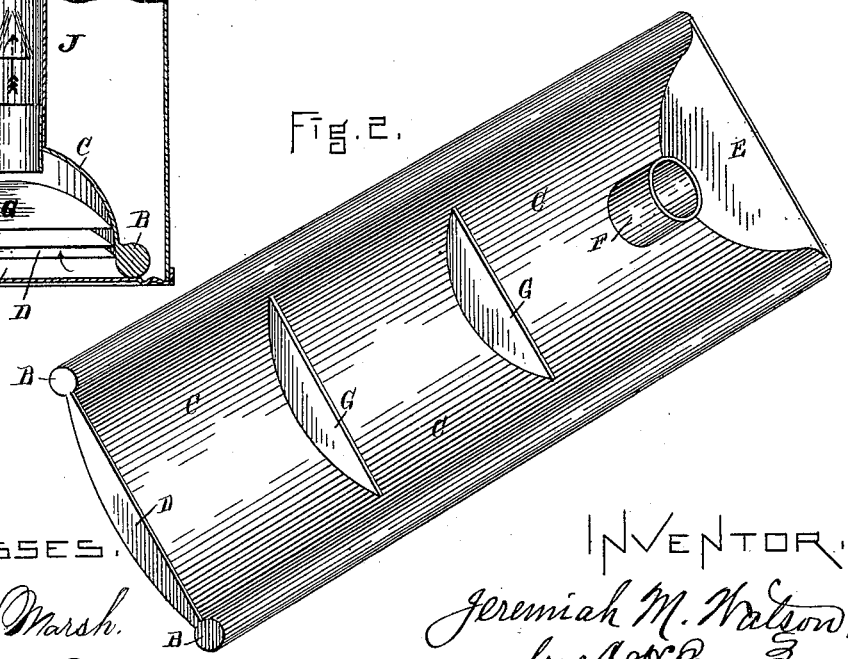



Fig. 3.

Fig. 2.




WITNESSES.

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# UNITED STATES PATENT OFFICE.

JEREMIAH M. WATSON, OF BOSTON, MASSACHUSETTS.

## WASH-BOILER.

SPECIFICATION forming part of Letters Patent No. 420,753, dated February 4, 1890.

Application filed October 9, 1889. Serial No. 326,379. (No model.)

*To all whom it may concern:*

Be it known that I, JEREMIAH M. WATSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fountain Clothes-Washers, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to that class of clothes-washing apparatus known as "wash-boiler fountains," in which a constant current of water or soap-suds is maintained through an upright pipe extending from a water and steam chamber in the bottom of the boiler up to and above the top of the clothes.

My improvements consist in certain details of construction hereinafter described, designed to promote the circulation of water through the clothes, and thus to make the apparatus more effective.

The drawings show in Figure 1 a vertical longitudinal section through a common wash-boiler and through my apparatus placed therein. Fig. 2 is a perspective view of the under side of such apparatus; and Fig. 3, a transverse section, looking toward the smaller end of the shell.

A is a wash-boiler of the ordinary flat-bottomed form.

B B are side bars forming the base of the device.

C is the shell or chamber, curved in cross-section or arched upwardly from said bars, and gradually rising from its open inlet end D to its opposite closed end E.

F is an upright pipe rising from the space beneath the larger end of the shell and turned over at the top to direct the current discharged through it toward the opposite end.

A feature peculiar to the shell C, in addition to its gradually-increasing height, is the subdivision of the concavity beneath it by depending transverse partitions G into two or more steam-pockets H, of gradually-increasing height, through each of which in succession the current of boiling suds is forced so long as ebullition continues. The bottom of the first partition is somewhat higher from the bottom of the boiler than is the lower edge of the wall D at the small end of the device, where the water enters, and the second partition is correspondingly higher than the first, so that the steam caught in the shallowest pocket escapes on the side of least resistance into the second, with pressure upon the water beneath that part of the shell. From the second pocket the like pressure carries the current forward to the third, which is beneath the highest part of the shell from which the discharge-pipe F rises, the lower end of said pipe extending down into the interior, so that the steam surrounding such lower end shall by its expansion tend to force the water up through the pipe, so as to keep the current constantly advancing.

In order to distribute a part of the current among the clothes placed in the boiler above the shell C, I form, when desired, one or more lateral openings from the pipe F on the side toward the foot of the shell C. These openings are preferably made by cuts through that side of the pipe, and by pressing inwardly and obliquely the metal just above such cuts, so as to form concave deflectors or spouts J, which intercept a part of the upward current and distribute it in a lower plane than the portion discharged at the top. By thus diverting a portion of the current positively among the clothes in the interior of the mass in the boiler I increase the efficiency of the apparatus and wash more thoroughly the goods to be operated on.

I claim as my invention—

1. In a fountain clothes-washer, the convex shell or false bottom C, having a gradual inclination from end to end, partitioned to form successive steam-chambers, and provided with a water-inlet at its lower end, as shown, in combination with a discharge-pipe communicating with the higher end of said shell, for the purpose set forth.

2. The shell B C, closed at its end E, decreasing in height toward the opposite end D, and having beneath said lower end a shallow inlet I, in combination with the discharge-pipe F, leading from the larger end, and with the transverse partitions G, each higher from the boiler-bottom than the end D and successively increasing in height toward the discharge-pipe, substantially as set forth.

3. The shell or false bottom B C D E, provided on its concave under side with depend-

ing transverse partitions G, forming a succession of rising steam-pockets, in combination with a discharge-pipe F, leading from the highest pocket, and with a lateral deflector or spout J, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 17th day of September, A. D. 1889.

JEREMIAH M. WATSON.

Witnesses:
A. H. SPENCER,
JAMES P. PRINCE.