(No Model.)

G. S. HURD, N. B. STANZA & W. A. WOODSON.

STEAM WASH BOILER.

No. 344,782. Patented June 29, 1886.

Fig 1

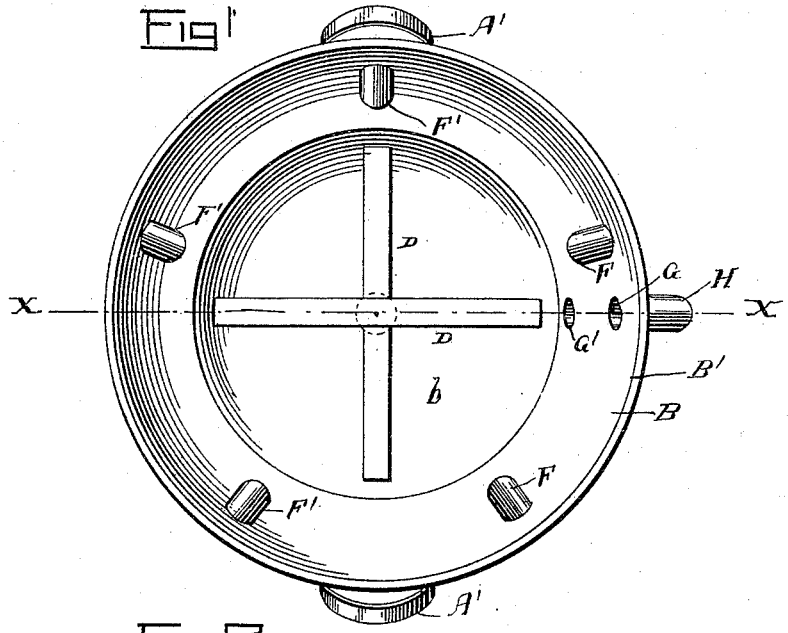
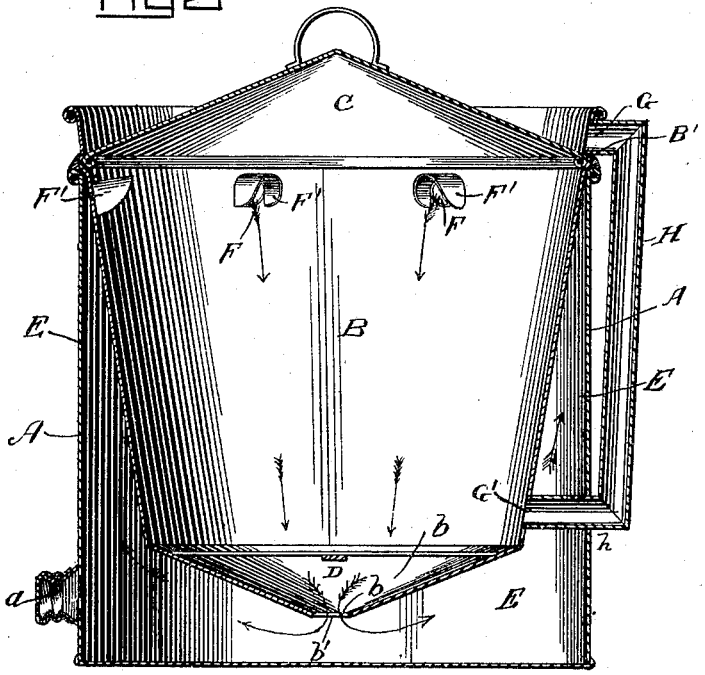


Fig 2



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE S. HURD, NATHANIEL B. STANZA, AND WILLIAM A. WOODSON, OF TROY, MISSOURI.

STEAM WASH-BOILER.

SPECIFICATION forming part of Letters Patent No. 344,782, dated June 29, 1886.

Application filed September 11, 1884. Serial No. 142,816. (No model.)

To all whom it may concern:

Be it known that we, GEORGE S. HURD, NATHANIEL B. STANZA, and WILLIAM A. WOODSON, citizens of the United States, residing at Troy, in the county of Lincoln and State of Missouri, have invented certain new and useful Improvements in Steam Wash-Boilers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to steam-washers, and has for its object to provide a simple machine which can be made at slight cost, and will efficiently cleanse the clothing by forcing streams of hot water therethrough.

To the ends stated the invention consists in certain constructions and combinations of parts, as will be more fully described hereinafter, and particularly pointed out and claimed.

In the drawings, Figure 1 is a plan view of our device with the lid removed. Fig. 2 is a longitudinal section on line *x x*, Fig. 1, with the lid in place.

The outer tank, A, is made in cylindrical form and provided with a suitably-capped opening, *a*, for use in drawing off the water and ventilating the said tank in order to better dry the same. We also provide the outer tank with suitable handles, A′, by which the device may be conveniently manipulated.

The inner tank or clothes-receiver, B, is made of a tapering form, as shown most clearly in Fig. 2, and is provided or formed near its upper end with a bead or crimp, B′, which forms an annular groove on the inner side of the receiver and a corresponding flange on the outer side. The diameter of the receiver immediately below the crimp B′ is equal the inner diameter of the top of the outer tank, and the receiver is fitted in the tank A with the flange resting on the top of the same, and it is closely and permanently secured by soldering to the tank at such point of contact. The flange serves to brace the joint and relieve the same of the downward pressure of the receiver, which, when the latter is filled, is considerable, as will be appreciated. The groove formed on the inner side of the receiver at B′ provides a proper seat for the lid C, which is forced thereinto, the rim of the lid springing slightly to permit the application and removal of the lid, and yet serving to hold the lid from displacement by jolts or jars, so that it will retain the steam, as is desirable. The bottom *b* of the receiver is depressed toward its center, at which point we form the discharge-opening *b′*. Slats D D are arranged within the receiver above the concave bottom, and serve as supports for the clothing. The concave bottom *b*, with the central discharge, serves to direct the dirt and sediment forced out of the clothing out of the receiver into the tank, where it settles to the bottom out of the circulation.

The upwardly-inclined under side of bottom *b* directs the currents circulating upward through chamber E within the tank and on the outer side of the receiver. The receiver is provided close to its point of connection with the tank with a series of steam-openings, F, arranged in a horizontal plane, over each of which we arrange deflectors or hoods F′, which project forward into the receiver.

An opening, G, is formed through the side of the receiver near its upper end and above the lid-seat, and a similar opening, G′, is formed through it near its bottom. These openings G G′ are connected by the overflow-pipe H, which is connected at its upper end with opening G and extends thence down on the outside of the tank to a point opposite opening G′, where it is provided with a branch, *h*, extending through the side of the tank and connecting with the opening G′ through the receiver. This pipe conducts the overflow into the bottom of the receiver for the purpose of preventing it from interfering with the currents in the operation of the device.

In operation the washer is supplied with a sufficient quantity of water, and the clothes are placed in the receptacle, resting on the slats D, leaving the concave bottom clear for the passage of sediment, dirt, &c. The lid is applied, and the washer is placed on a stove, furnace, or other heater. As the water in the tank becomes heated, it circulates upward, and, striking the inclined bottom of the receiver, is deflected upward along the outer sides of same

to the joint of tank and receiver, where the water is forced by the action of the steam generated by the heat through opening F, and by deflectors F′ is directed down on the clothing, through which it is drawn by the suction or circulation caused by the upward current before described. In this manner the circulation is kept up, as indicated by the arrows in Fig. 2, the water rising as heated and being forced down through the clothing. This constant circulation of hot water through the clothing will thoroughly cleanse same, and the dirt and sediment be removed into the tank.

As before stated, the overflow-pipe discharges into the receiver at the bottom thereof and not into the tank.

It is manifest that the overflow water being somewhat cool, and being discharged into the lower end of the receiver by reason of its greater density passes therefrom into the tank, thereby materially aiding and increasing the circulation. If this cool water were delivered into the tank direct, it would have a tendency to check or retard the circulation, which is objectionable.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a steam-washer, the combination, with the tank A, of the receiver B, having an annular bead or crimp, B′, and soldered permanently to the tank A and having a concave centrally-perforated bottom, *b*, steam-openings F, hoods or deflectors F′, the slats D, and the lid C, sprung into the groove formed at B′ in the receiver, substantially as set forth.

2. The steam-washer, substantially as herein described, consisting of the tank A, the receiver N, placed and secured in the tank and having inclined sides, steam-openings F, provided with hoods or deflectors F′, and a concave bottom, *b*, provided with a central opening, *b*′, the slats D, arranged above the opening *b*′ and to support the clothing, the lid C, and the overflow-pipe H, having one end connected with the receiver near the upper end of same and extended thence down on the outside of the tank, and having its lower end extended through the side of the tank and connected with the receiver near the lower end of the latter, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE S. HURD.
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