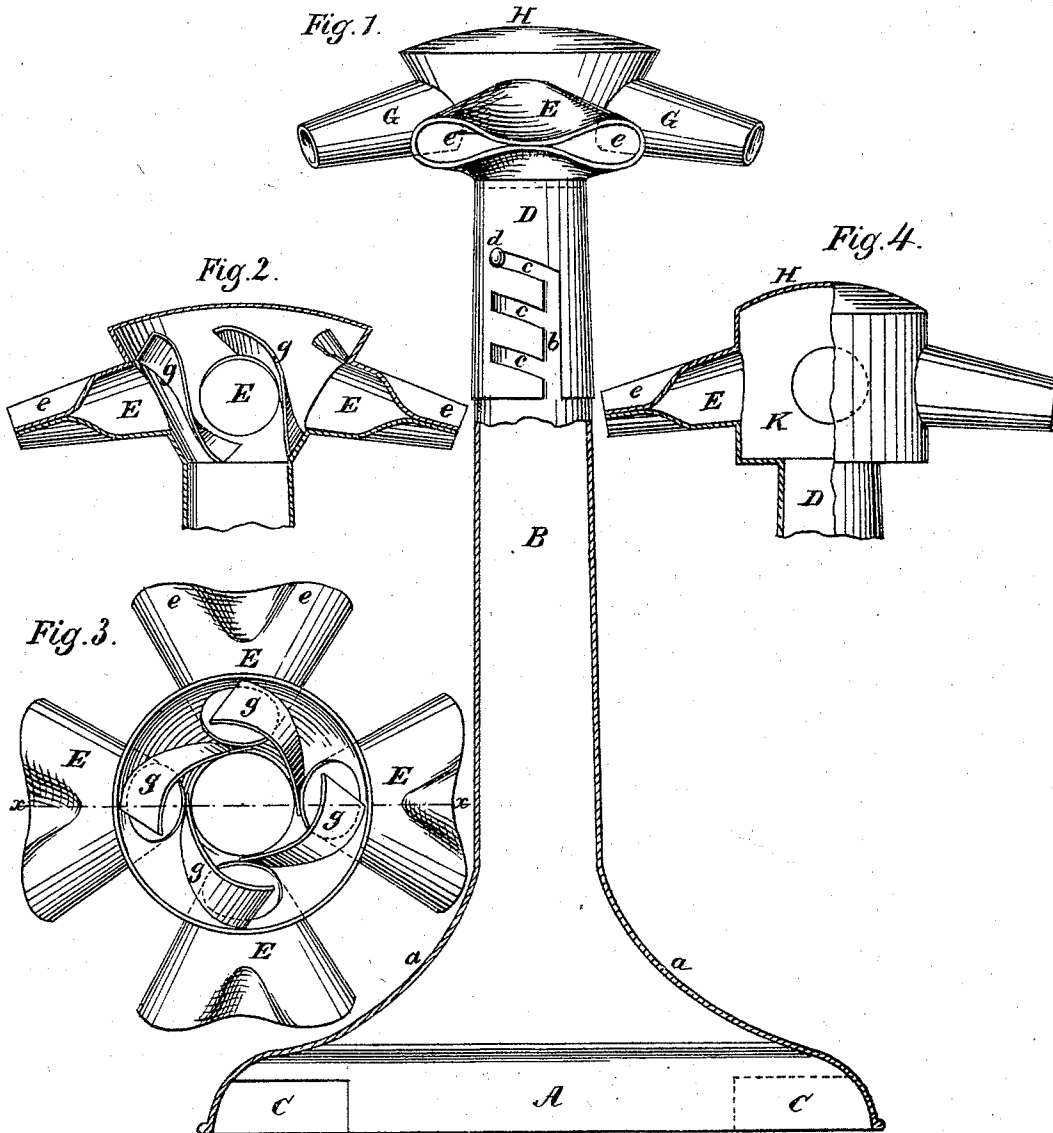


R. A. McCAULEY.

Attachments for Wash-Boilers.

No. 134,999.

Patented Jan. 21, 1873.



Witnesses:

Wm J Peyton.

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UNITED STATES PATENT OFFICE.

REUBEN A. McCAULEY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN ATTACHMENTS FOR WASH-BOILERS.

Specification forming part of Letters Patent No. 134,999, dated January 21, 1873.

To all whom it may concern:

Be it known that I, REUBEN A. McCAULEY, of the city of Baltimore, in the State of Maryland, have invented a new and useful Improvement in Attachments for Wash-Boilers, of which the following is a specification:

The object of my invention is to wash clothes in boilers by the action of the circulation of currents in the boiler from differences in the temperature of the suds, therein producing an automatic flow of the washing-suds from the bottom to the top of said boilers, as is well understood in such devices; and the improvement which forms the subject-matter of this patent consists of a wash-boiler attachment, the circulating tubular cap whereof is secured to the column or base tube by a bayonet-fastening, made adjustable thereon to suit different heights of boilers, or for the attachment of caps to columns of different heights, to suit different depths of boilers in use; in combining with the discharging-tubes of the cap interior curved strips or vanes, the object whereof is to deflect the currents of steam and hot suds and cause them to more readily enter the discharge or vent-tubes, and thus facilitate the circulation through the cap; also, combining with the cap double-vented tubes having opposite inclinations from the same outlets to insure a greater number of washing-streams upon the clothes without increasing the openings in the cap; and in the attachment for wash-boilers having its parts constructed and arranged for operation, as will be more fully hereafter described.

In the accompanying drawing, Figure 1 represents a sectional elevation of a wash-boiler attachment embracing my improvements. Fig. 2 represents a vertical section of the circulating-cap. Fig. 3 represents a view of the cap with its cover removed; and Fig. 4, the adjustable cap without the interior curved deflecting vanes.

The base A of the column B is provided with suitable inlet-openings C for the hot suds from the boiler, upon the bottom of which it rests. The sides of the base A are contracted, as shown at *a a*, sufficiently to form the column B through which the hot suds rise by the action of the steam to a cap, H, having a pipe, D, extending from its under side, of a size just

sufficient to allow it to be easily fitted over and upon the column B, to form the circulating device. This pipe D is secured to the column B by a bayonet-fastening, in the example shown being slots *b c* in the pipe D, and a pin, *d*, in the column, as shown in Fig. 1, whereby the two can be readily connected and adjusted to different heights, the one upon the other, or the cap to long or short standards to suit the depth of boilers with which it may be used. This is an important advantage, as the telescoping attachment admits of the use of the cap with the columns of different lengths, and hence in boilers of different depths; while, with the same column, caps of different size can be employed for larger boilers. The cap may be of any suitable form, but always larger than the column-pipe. It is provided with a number of radial outlet-tubes, E, having a downward inclination so as to discharge the hot suds or fluid at an angle upon the clothes—the cap for that purpose being always above the surface of the clothes in the boiler. The discharge-tubes have each two vents, *e e*, being formed by crimping their outer ends, as shown in Figs. 2 and 3, to cause a more general distribution of the hot fluid upon the articles in the boiler, the said vents *e e* extending in opposite directions from each other from the same outlet in the cap. The interior of the cap may be provided with curved strips or vanes *g*, arranged with respect to the outlet-openings, so as to extend from one side and top thereof in a manner to deflect the ascending currents from the column and cause them to readily enter the discharge-tubes.

The bayonet-connection of the cap and column can be made either by a long pipe, D, or a short column, B, as may be deemed best for convenience and use.

The steam generated in the bottom of the boiler rises in the column through the opening C in its base, and forces the hot fluid up into and through the cap, from the tubes of which it discharges upon the clothes continuously, and by this circulation washes them in the boiler.

The telescoping bayonet-fastening of the boiler attachment may be used with any suitable form of cap that will produce the proper circulation.

Having described my invention, I claim—

1. In an attachment for wash-boilers, the base column B and cap-tube D, made adjustable in length to adapt the device to wash-boilers of different depths, as described.

2. The cap H having interior curved vanes g, in combination with the discharge-tubes, as and for the purpose described.

3. In a wash-boiler attachment, the double-vented and oppositely-inclined tubes E e e from single openings in the cap, as and for the purpose described.

4. The wash-boiler attachment having its several parts constructed and arranged for joint operation, substantially as herein described.

In testimony that I claim the foregoing, I have hereunto signed my name this 24th day of May, 1872.

REUBEN A. McCAULEY.

Witnesses:

CHARLES T. ALLENBAUGH,
WM. H. BAYZAUD.