

CHARLES BEACH.

Improvement in Attachments for Wash-Boilers.

No. 128,097.

Patented June 18, 1872.

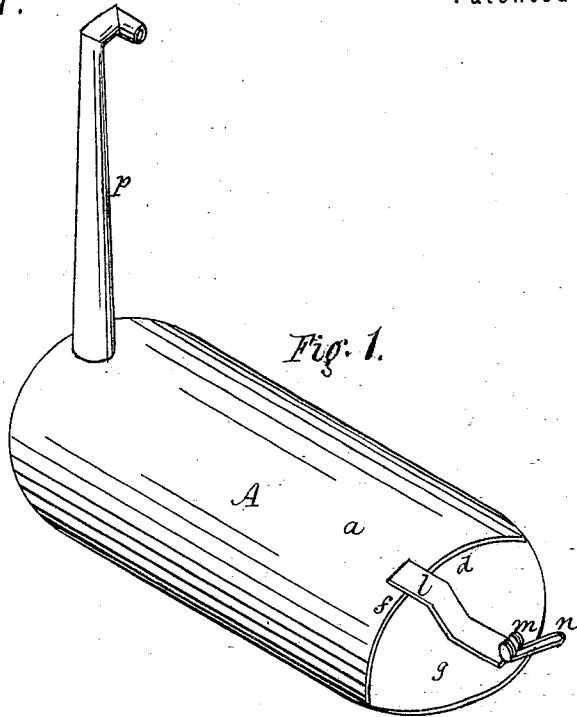


Fig. 1.

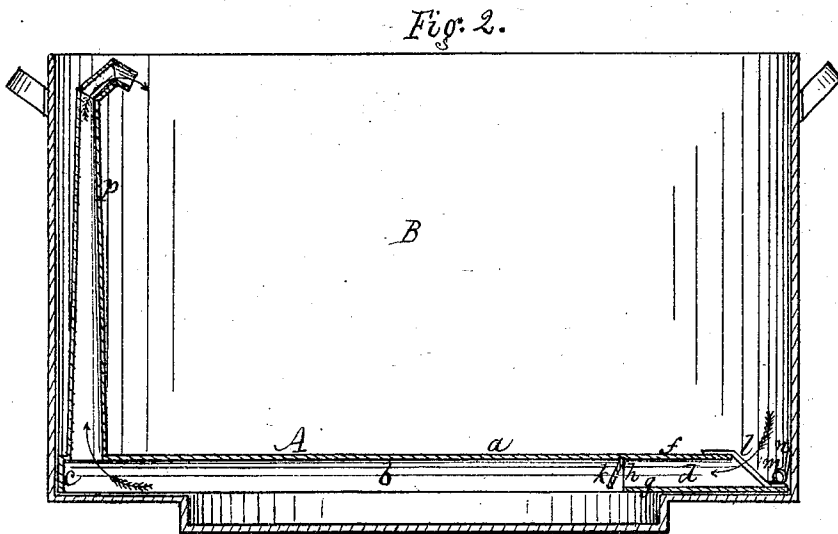


Fig. 2.

Witnesses.

Archie Baine,
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UNITED STATES PATENT OFFICE.

CHARLES BEACH, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN ATTACHMENTS FOR WASH-BOILERS.

Specification forming part of Letters Patent No. 128,097, dated June 18, 1872.

Specification describing a certain Improvement in Attachments for Wash-Boilers, invented by CHARLES BEACH, of the city of Rochester, in the county of Monroe and State of New York.

Nature of the Invention.

My improvement belongs to that class in which a portable cover or diaphragm is placed in the boiler, for the purpose of throwing a column of water upward to fall upon the clothes. The invention consists in the construction of the attachment, with a steam-chest, valve, shield, and spring, as and for the purpose hereinafter described.

General Description.

In the drawing, Figure 1 is a perspective view of my improvement; Fig. 2, a vertical section of a wash-boiler, with my improvement applied.

A represents the attachment, which is placed in the bottom of the boiler B, being made of such shape as to fill the whole cross area of the boiler. The top *a* of the attachment is perfectly made of concavo-convex form, so as to form a steam-chest, *b*, on the under side, which rests over the pit of the boiler. At one end it has a square shoulder or head, *c*, while at the other it has a water-way, *d*, formed by the two plates *f g*, which are parallel to each other. At the inner end of the water-way is a square seat, *h*, against which rests an ordinary flap-valve, *k*, hinged at the top. The bottom plate *g* extends to the walls of the boiler, but the upper plate *f* projects only part way, thereby leaving a throat, which connects the boiler-space with the water-way. A narrow stay, *l*, connects the upper plate with the lower one, and at the outer end is a coiled spring, *m*, having an outer arm, *n*, that bears against the wall of the boiler to hold the attachment in place. The ordinary curved spout *p* is employed for conducting the column of water upward, and discharging it on the clothes in the top of the boiler.

The operation is as follows: The attachment is placed in the bottom of a boiler, with the clothes on top of it; in this condition the valve *k* hangs stationary against the seat *h*. As the steam is generated in the steam-chest *b* it closes the valve tightly outward, so that there can be no ingress of water from the water-way; but, as soon as sufficient pressure of

steam is attained to throw the water through spout *p*, then the valve opens to admit more water to supply the exhaustion. This intermittent action is sustained while the heat lasts, so that a constant stream of water is poured through the spout with great force, which is effective in washing clothes. It will be noticed that the steam-chest is tight and has no holes through its top as in other devices of the kind; hence there can be no passage of steam upward except through the spout, and steam cannot escape into the room. A better effect is produced upon the clothes, as the whole effect is expended through the spout, which thus has great force. The turn to the end of the spout carries the steam down with the clothes. The valve prevents any back action, and is important in its functions to produce a vigorous and steady flow. The water-way is necessary to give a proper direction to the water; and the upper plate *f*, with its stay *l*, serves as a shield to prevent the clothes from passing downward to obstruct the passage. The spring *m* is of that peculiar form to balance the square shoulder *c*, at the opposite end, by means of its arm *n*, extending upward the same height. By this means the attachment is held evenly in place, and can be easily inserted or removed.

I am aware that attachments for a similar purpose, having a spout for throwing water, have before been used; such I do not pretend to claim broadly. The novelty in my case consists in the special arrangement of the tight steam-chest, valve, water-way, shield, and spring, whereby the device is rendered more effective in use.

Claim.

What I claim and desire to secure by Letters Patent, is—

The attachment for wash-boilers, above set forth, when constructed with the close steam-chest *b*, valve *k*, water-way *d*, shield *f*, and spring *m*, the whole arranged as described, and operating conjointly in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES BEACH.

Witnesses:

R. F. OSGOOD,
ARCHIE BAINE.