A. BECKER.

Wash-Boilers.

No. 140,398. Patented July 1, 1873.

Fig I

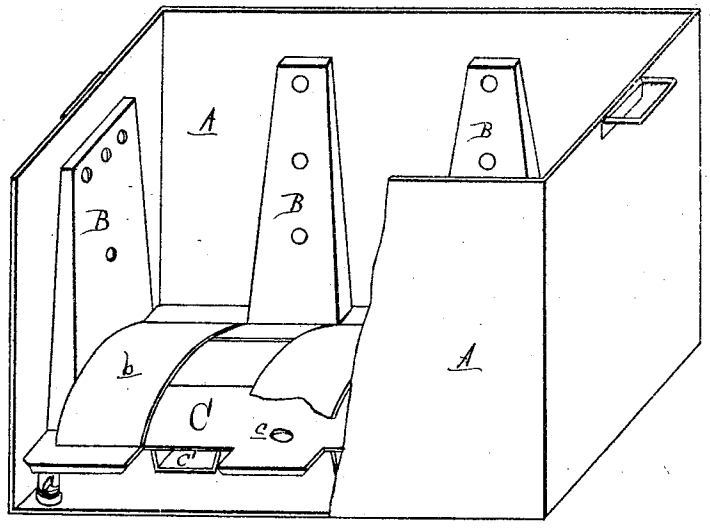


Fig II

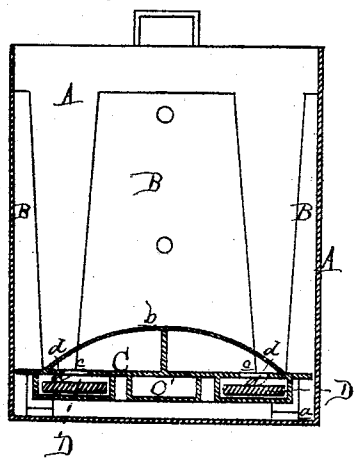


Fig III

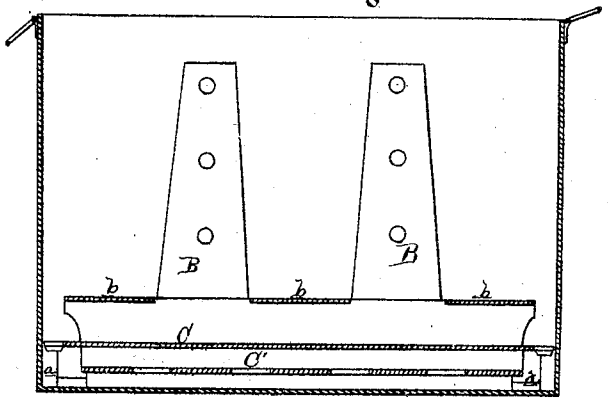
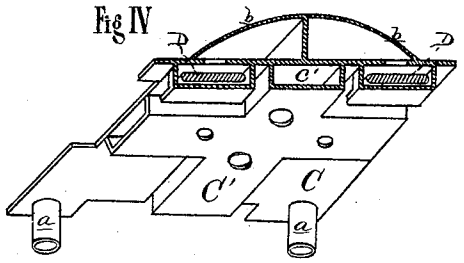


Fig IV



Attest

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UNITED STATES PATENT OFFICE.

ARP BECKER, OF PEOTONE, ILLINOIS.

IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. **140,398**, dated July 1, 1873; application filed March 28, 1873.

To all whom it may concern:

Be it known that I, ARP BECKER, of Peotone, in the county of Will and State of Illinois, have invented a new and useful Improvement in Wash-Boilers; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a sectional perspective view. Fig. 2 is a cross-section on *x x* in Fig. 1. Fig. 3 is a longitudinal vertical section taken on the line *y y* in Fig. 2. Fig. 4 is a bottom perspective of Fig. 2.

Like letters refer to like parts in the several figures.

The nature of this invention relates to an improvement in the construction of circulating wash-boilers, having for its object to allow the circulation to proceed in but one direction, and, by the employment of certain wooden floats, acting as check-valves, to prevent the reversal of the currents. The invention consists in the peculiar construction and arrangement of the false bottom, each of whose two openings has a wooden float under it confined in an open cage with relation to the tubes in sides and ends of the boiler, as more fully hereinafter set forth.

In the drawing, A represents a rectangular wash-boiler, in the ends and sides of which are secured the vertical tubes B, closed at the top, open at the bottom, and perforated with several small apertures in their faces. C is the false bottom, notched at the ends and sides so as to fit accurately the walls of the boiler and around the tubes. It is supported by a leg, *a*, at each corner, and is provided with three arched ribs, *b*, to support the fabrics above the body of the said false bottom. Under the central rib an opening, *c*, is formed in the plate C, near each side thereof. Under each hole *c* is a pendent cage, *d*, which confines a wooden float, D, having free play in horizontal plane. To the under side of the plate C I secure a cruciform channel-way, C′, its outlets terminating opposite the lower ends of the tubes B. The channels are perforated at intervals to allow the water to enter them.

To use the boiler, a small quantity of sliced bar soap is placed in the bottom in water to the depth of the channel-way. The fabrics are then placed across the ribs of the false bottom when, under the application of heat, the water under the false bottom expands and raising the floats, which thus close the holes *c c* in the false bottom. The water now has no other outlet than the tubes B, up which it rises and is discharged over the mass of fabrics, down through which it percolates to the false bottom until it accumulates to such volume that its weight is greater than the pressure below upon the floats, when the latter fall and allow it to pass down into the space below the false bottom, when the circulation recommences as before, each downward passage of the water through the fabrics carrying with it the dirt extracted, which it deposits as sediment on the bottom of the boiler.

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

The construction and arrangement of the false bottom C provided with the arched ribs *b b b*, the openings *c c*, the cages *d d*, the floats D D, and the channel-ways C′, with relation to the tubes B in the boiler A, substantially as shown and set forth.

ARP BECKER.

Witnesses:
WM. H. LOTZ,
EMIL HARKER.