(No Model.) 2 Sheets—Sheet 1.

A. DUNLOP & A. BALEY.

WASHING MACHINE.

No. 360,003. Patented Mar. 29, 1887.

Fig. 1.

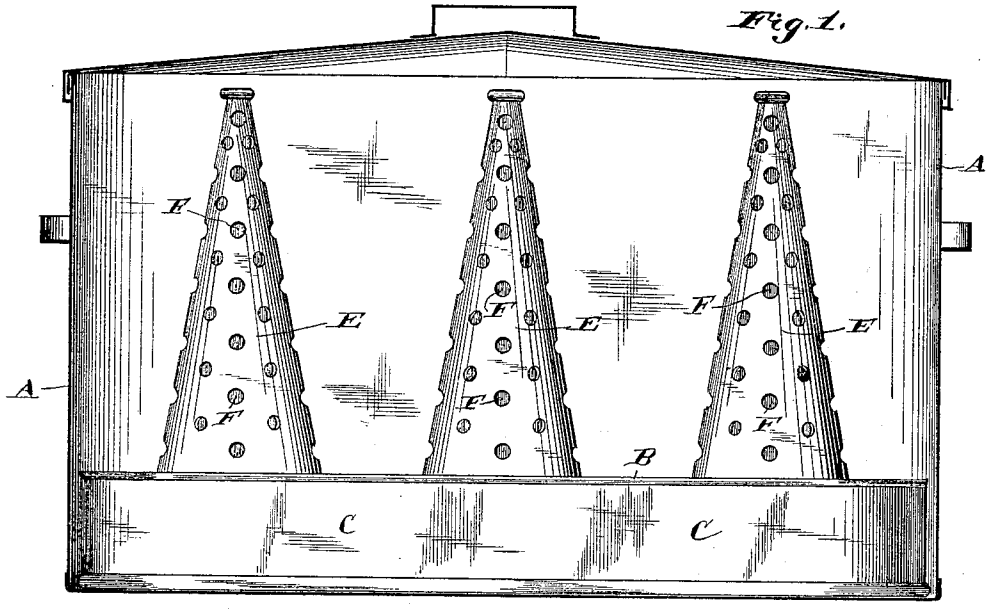
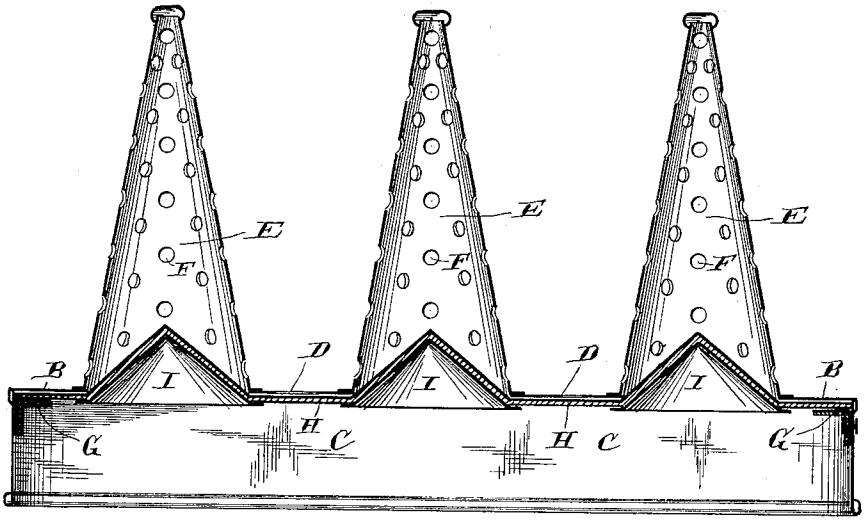


Fig. 2.



Witnesses
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(No Model.) 2 Sheets—Sheet 2.

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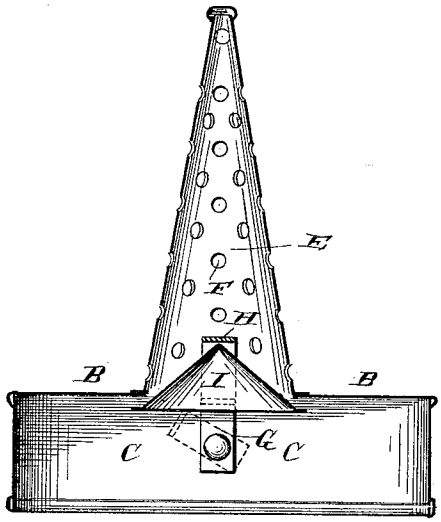
Fig. 3.



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UNITED STATES PATENT OFFICE.

ALLAN DUNLOP, OF LYONS, AND AMOS BALEY, OF DORRANCE, KANSAS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 360,003, dated March 29, 1887.

Application filed September 23, 1886. Serial No. 214,351. (No model.)

To all whom it may concern:

Be it known that we, ALLAN DUNLOP and AMOS BALEY, citizens of the United States, residing at Lyons and Dorrance, in the counties of Rice and Russell, respectively, and State of Kansas, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification.

Our invention relates to an improvement in washing-machines; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is an elevation of a washing-machine embodying our improvement, located in a clothes-boiler, the latter being shown in section. Fig. 2 is a vertical longitudinal sectional view of our washing-machine. Fig. 3 is a vertical transverse section.

A represents a clothes-boiler of the usual construction.

B represents a plate or diaphragm, which is placed in the boiler, and forms a false bottom therefor, and is provided around its sides with a depending vertical flange, C, which rests upon the bottom of the boiler and supports the plate B at a suitable distance therefrom. The plate B is provided with a series of perforations, D, which should be about half an inch in diameter, and from the upper side of the said plate projects a series of conical tubes, E, the upper ends of which are closed, and the lower ends of which are open and communicate with the space under the plate B. These tubes are each provided with perforations F, which are preferably about one-sixth of an inch in diameter, and the said perforations extend entirely over the surface of the conical tubes.

In the end portion of the depending flange C, and immediately under the plate B, are projecting flanges or brackets G.

H represents a metallic strip, which corresponds in length to the plate B, and to the said strip is attached a series of conical cups or spreaders, I. The ends of the strip H are adapted to be inserted between the flanges or brackets G and the lower side of the plate B, so as to secure the strip under the said plate, and the conical cups or spreaders are so arranged on the strip as to register with the lower ends of the conical tubes E, and extend upwardly in the same for a suitable distance; but the said cups or spreaders are out of contact with the lower sides of the said perforated tubes, and thereby annular spaces are left between the said spreading cups and the lower sides of the tube.

The operation of our invention is as follows: The washing-machine, previously described, is placed in the boiler, and a sufficient quantity of suds is poured therein to nearly but not quite reach the level of the plate B. Steam is generated in the boiler by placing it on a stove, and the articles to be washed, which have been previously soaked and soaped, are placed on the upper side of the plate B, and are arranged around and between the vertical perforated tubes. A sufficient quantity of clothing is placed on the plate to reach to the upper ends of the tubes. The steam, which is generated in the boiler, passes between the spreading cups and the lower sides of the perforated conical tubes and passes upwardly through the said tubes, and is discharged therefrom through the perforations F, and is thus caused to act upon the fibers of the clothing, so as to thoroughly cleanse the same. The water resulting from condensation and carrying the dirt and impurities with it finds its way back to the bottom of the boiler through the openings D in the plate B, and the function of of the cones or cups I is to prevent the impure water from being forced upwardly through the perforated conical tubes into the clothing.

From the foregoing description it will be readily understood that the clothing is cleansed entirely by the action of the steam, and is absolutely protected during the operation of washing from contact with the dirty suds.

Having thus described our invention, we claim—

1. The combination, in a washing-machine, of the perforated plate or diaphragm B, having the vertical perforated tubes E on its upper side, the strip H, supported below the diaphragm, and the conical cups I, attached to the said strip and supported in the lower ends of the perforted tubes, and out of contact with the sides of the same, substantially as described.

2. In a washing-machine, the combination of the perforated plate or diaphragm B, having the perforated tubes E on its upper sides, and the depending flange C, provided with the brackets or ledges G below the diaphragm or plate, and the strip H, having the conical cups I, arranged to enter the lower ends of the perforated tubes, the said strip resting on the ledges or brackets G, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ALLAN DUNLOP.
AMOS BALEY.

Witnesses:
W. A. WEAVER,
WM. HAFFA.