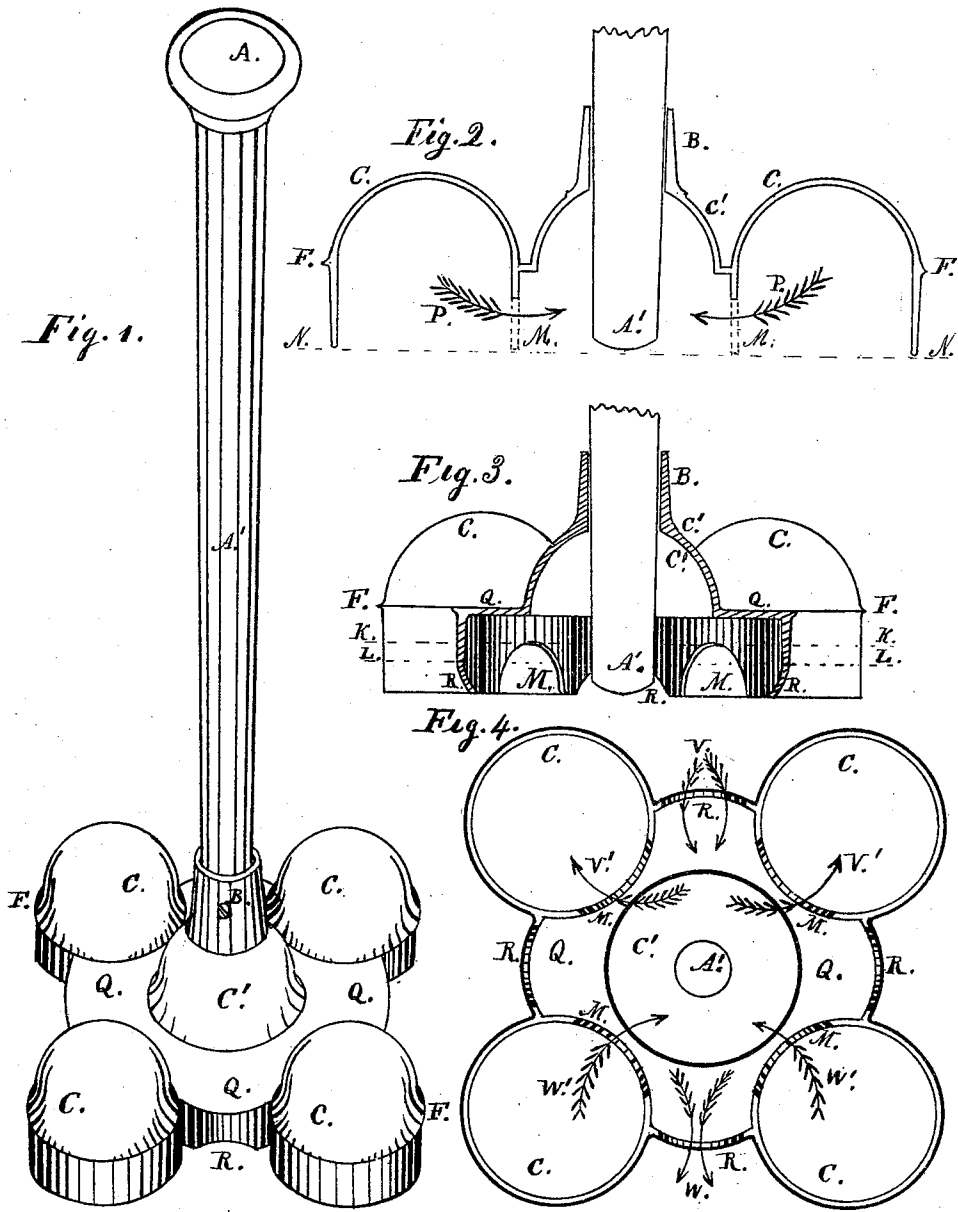


T. WEAVER.

Improvement in Clothes-Washers.

No. 130,168.

Patented Aug. 6, 1872.



Witnesses.
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THEOPHILUS WEAVER, OF HARRISBURG, PENNSYLVANIA.

IMPROVEMENT IN CLOTHES-WASHERS.

Specification forming part of Letters Patent No. **130,168**, dated August 6, 1872.

To all whom it may concern:

Be it known that I, THEOPHILUS WEAVER, of the city of Harrisburg, county of Dauphin and State of Pennsylvania, have invented an Improved Atmospheric Clothes - Washer, of which the following is a specification:

Its construction consists in a group of dome-covered cells, arranged about a handle or shaft, and provided with interior vents, paired diametrically opposite each other to regulate the discharge and pressure; in providing the platform uniting the cells with exterior or exit vents to limit and control the splash; and in arranging the cell-mouths and handle-stub in the same plane to equally press and release the fabric.

In the drawing making a part of this specification Figure 1 is a perspective view of the washer. Fig. 2 is a vertical section thereof, taken diagonally through the quadrangle of cells. Fig. 3 is a vertical section thereof, taken transversely through the platform uniting the cells; and Fig. 4 is a bottom view of the washer.

I construct my washer of cast metal, preferably of tinned or galvanized iron, in form substantially as follows: Two, or a duplicate number of dome-covered cells, C N, are joined by a platform, Q, to a central dome, C', on which is mounted a socket, B, for the insertion of a handle or shaft, A A'. The platform joins the cells in or near the plane, from which the domes or covering C of the cells rise, and extends around each cell about a quadrant next the platform center, thus disposing the cells regularly, and allowing space between them for a skirting, in which are formed the exterior vents R. The wall of each cell is scalloped at the mouth, on the side or quadrant toward the platform center, and therefore diagonally opposite the like scallop in its mate of the pair, thus forming a series of interior vents, M, the discharge of each of which is counteracted by that of its opposite. The exterior vents R, shown by the line L, Fig. 3, are less incised than the interior vents M, as shown by the line K, and the latter are not incised quite as deep as the platform line F. The reason of this relative arrangement and graded incision of vents is that in plunging the implement into the suds the vents R may close first in the descent of the stroke,

acting as a cut-off, thus allowing the interior vents M an instant more time before they are closed to distribute the volume of air confined in chamber beneath platform Q, so that each cell or dome C C' may have an equal fill or pressure the instant they are cut off, or divided, or isolated. During the balance of the stroke the pressure is subdivided, so that each cell acts as a separate column, and the compressed air in each dome as an independent force, to drive or inject the suds through the stratum of fabrics to the bottom of the tub, eliminated air also rushing into the same place. Moreover, the vents R being cut off before the maximum pressure is reached, and while the currents of air and suds are encountering each other, as shown at P, Fig. 2, the splash caused by lost volume is not only confined and directed through the straits between the adjacent cell-walls, but is deadened by the depth of immersion of the implement, at which the air and suds make their exit. Besides, the exterior vents may have formed over them slant shields or hoods to throw the liquid downward. When only two cells are employed the exterior vents may be dispensed with, so far as the splash is concerned, as the interior vents will counteract each other. The converse action follows during the upstroke of the implement, each cell acting first by separate suction, drawing suds up through the fabric, until the interior vents M open or rise above the liquid level, the suction thereafter being diffused an instant over the whole bottom, and the next instant ended by the rise of the exterior vents R above the suds, thus admitting air to release the fabrics from the bottom of the implement an instant before the cell-mouths are out of water. The clothes are, therefore, never pulled up by violent action of the operator. The direction of the currents of air and water made by the up and down strokes are indicated, respectively, by the arrows V V' and W W', Fig. 4.

The cell-mouths are arranged or lie in the same plane that they may press evenly and equally, like a seal, upon the fabrics, thus utilizing the whole area of the bottom of the implement and taking in the largest possible volume of air, thus enabling the operator also to thoroughly wash the whole contents of the tub, the cell-mouths being fully as pregnant

with action as the center of the bottom. No unwashed circle of clothes next the tub-wall can thus escape its action, as is the case with washers where the tubes project through an inclosing-band. The handle A A' passes through the washer-head, making a stub, A', whose end is in the plane of the mouths of the cells, as shown by the line N, Fig. 2, thus serving to keep the fabrics out of the irregular mouth, made centrally by the cuts for the interior vents.

The implement is made in this honey-comb form to enhance the precision of the atmospheric injection and suction, as well as to add

strength with little outlay of material, its weight being rather a merit than a demerit, to regulate the efficiency of action.

I claim—

The cast-metal implement composed of dome-covered cells C N, arranged around the platform Q or its equivalent, provided with marginal vents M R, substantially as and for the purpose specified.

THEOPHILUS WEAVER.

Witnesses:

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