(No Model.)

# J. W. BUTLER.

## WASHING MACHINE.

No. 454,028. Patented June 16, 1891.

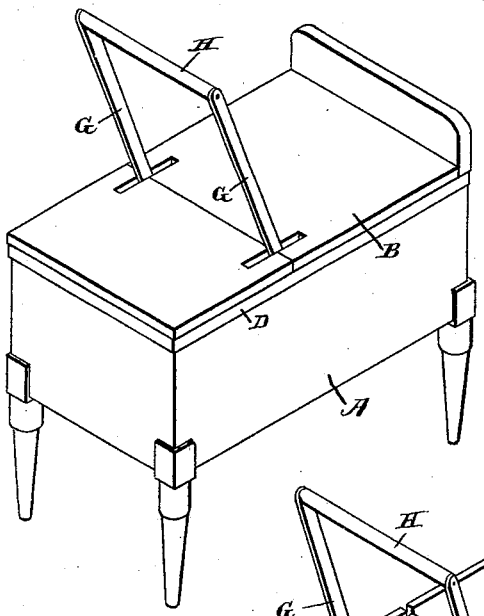


Fig. 1.

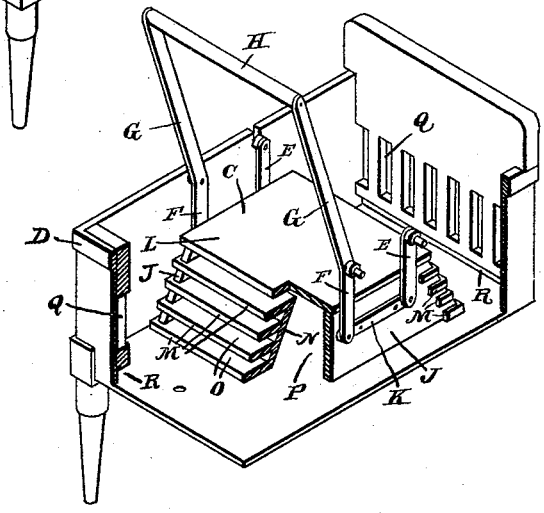


Fig. 2.

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Witnesses:
P. P. Sheehan.
M. S. Belden

Inventor
by James W. See
Attorney

# UNITED STATES PATENT OFFICE.

JOHN W. BUTLER, OF HAMILTON, OHIO.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 454,028, dated June 16, 1891.

Application filed September 3, 1890. Serial No. 363,875. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. BUTLER, a citizen of Great Britain, who have declared my intention of becoming a citizen of the United States, residing in Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to clothes-washing machinery, and my improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of my machine closed; and Fig. 2, a perspective view of the machine with the top removed, one of the side and end walls of the box being cut away to exhibit the dash, and one corner of the dash being cut away to exhibit its parts in vertical section.

In the drawings, A indicates the rectangular box in which the washing is to be done, this box being formed, preferably, of sheet metal; B, the lid of the box, made readily removable; C, the dash supported within the box midway between the two ends and adapted for reciprocating motion to and from the ends of the box, the dash being a structure rectangular in plan and shorter at its top than at its bottom and having a width somewhat less than the interior of the box and a depth considerably less than the depth of the box, the bottom of the dash being an inch or so above the bottom of the box, the inclined ends of the dash being provided with openings and pockets, as hereinafter explained; D, a strengthening-band around the top edge of the box, stiffening the box in case it is formed of sheet metal; E, a pair of links within the box between the dash and the walls of the box, the lower ends of these links being pivoted to the dash near one end of the dash, while their upper ends are pivoted to the walls of the box above the dash; F, a second pair of links similarly disposed with reference to the other end of the dash; G, upward prolongations of the links F, projecting well up through the lid of the box, which is slotted to permit their oscillation; H, a horizontal hand-bar joining the upper extremities of the prolongations G and forming a handle by which the link system may be oscillated and the dash reciprocated; J, the sides of the dash, the same being disposed parallel with the side walls of the box and sufficiently far therefrom to permit of the presence of the links; K, a bearing-bar firmly secured against each side of the dash and carrying the pivots to which the lower ends of the links are attached; L, the top piece of the dash, being a rectangular board secured to the top edges of the side pieces J, this top piece presenting its respective end edges to the inner faces of the end walls of the box and eight or ten inches therefrom in the case of a machine for ordinary family washing; M, a series of shelves disposed across the two ends of the dash and presenting their outer edges toward the end walls of the box, the lowermost of the shelves being considerably in advance of the front edge of the top piece, while the intermediate shelves are less in advance, the entire series of shelves at either end of the dash, when taken in connection with the top piece, giving to the end of the dash an inclined step-like surface with openings in the steps; N, a back board disposed within the dash against the inner edges of the shelves, this board being inclined to correspond with the incline of the series of shelves, the board not extending above the top shelf; O, facial pockets formed in the ends of the dash by the shelves and back piece and side pieces, these pockets extending inwardly to the back piece, the upper pocket, however, the one roofed by the top piece, extending to the interior of the dash; P, the general interior of the dash walled by the side pieces J and by the incline back boards N and roofed by the top piece L, this interior chamber being open below and in free communication with the upper pockets; Q, shallow pockets formed in the inner surface of each of the end walls of the box in that portion of the end walls opposite the end faces of the dash, and R a horizontal pocket formed in each end wall of the box at its extreme base. The dash is freely suspended by the links, and oscillations of the hand-bar will produce reciprocations of the dash, so that its ends alternately approach and recede from the ends of the box, the two ends of the dash and the two ends of the box being alike, the dash moving in an arc, and hence rising and falling to and from the bottom of the

box. The gravity of the dash tends to hold it in normal central position, and as the dash is reciprocated it partakes of a slight rising-and-falling motion due to the arcal movement of the lower link pivots.

In using the machine, the box is charged with hot clean suds, and the clothes, preferably soaked beforehand, are apportioned into two lots and one lot placed in each end of the box. The lid is then applied and the dash reciprocated. The effect is alternate compression and release between the pocket-faces of box and dash, and as the release takes place suction occurs at the pockets. The inclinations at the end of the dash tend to give rotation to the mass of clothes, so that all sides of the mass become eventually subjected to the action of the dash. While the mass at one end is being compressed and the suds being expressed from that mass, the mass at the other end is being released from compression and receiving the suds which readily transfer themselves from one end of the machine to the other through the uppermost pockets and under the dash and over the dash. As the suds become charged with dirt some of the suds may be withdrawn and replaced by clean suds. Clothes may, if desired, be finally subjected to the action of the machine in the presence of clean rinsing-water.

I claim as my invention—

In a washing-machine, the combination, substantially as set forth, of a rectangular box, a dash provided with an interior chamber opening downwardly and having at its top two pockets opening outwardly and opening inwardly to said interior downwardly-open chamber and having lower pockets opening outwardly and closed at the back, and means, substantially as set forth, for moving the dash in an arc in said box.

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Witnesses:
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