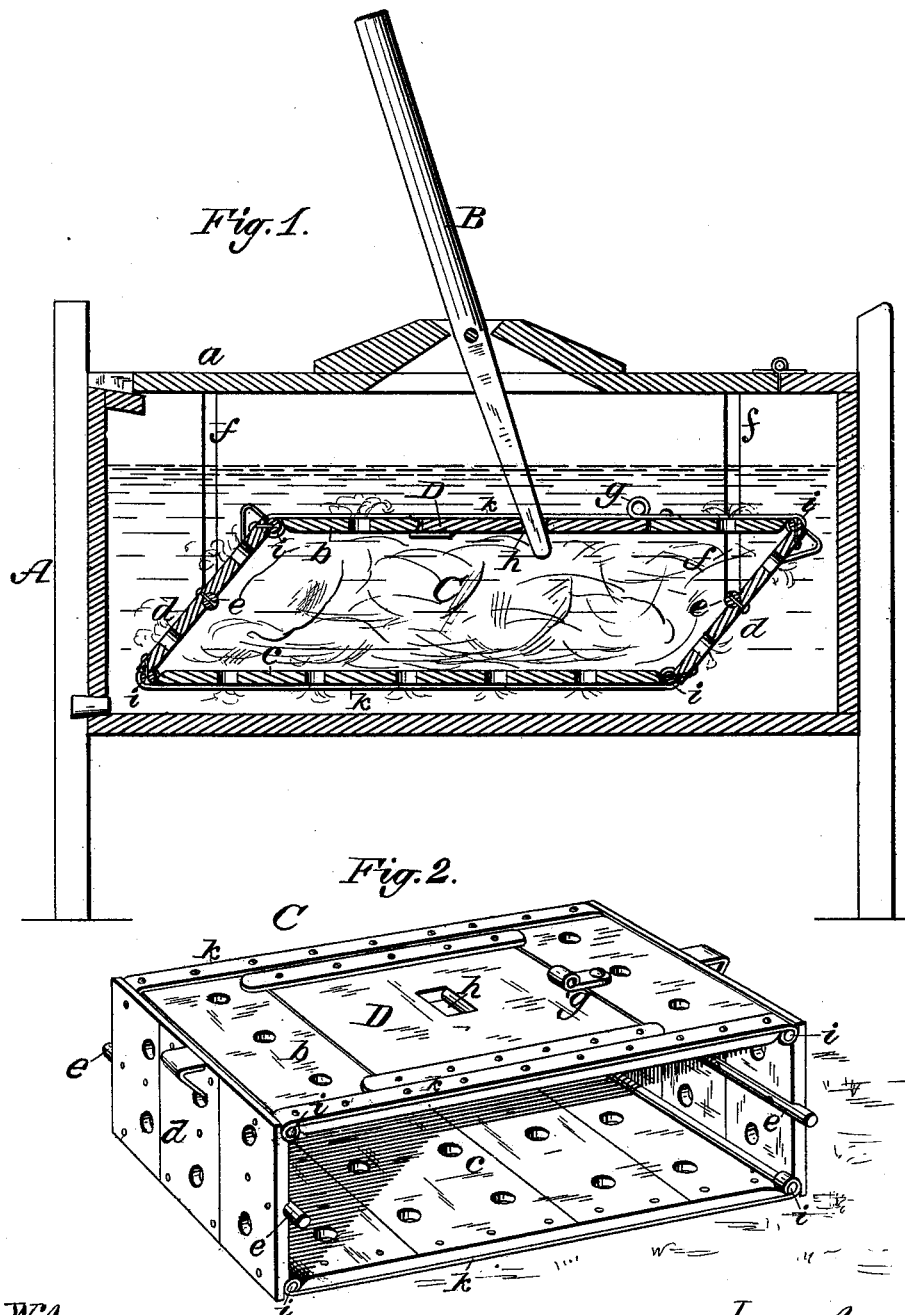


D. WARNOCK.
Washing-Machine.

No. 220,739.

Patented Oct. 21, 1879.



Witnesses:
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UNITED STATES PATENT OFFICE.

DAVID WARNOCK, OF LIVING SPRING, IOWA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **220,739**, dated October 21, 1879; application filed July 18, 1879.

To all whom it may concern:

Be it known that I, DAVID WARNOCK, of Living Spring, in the county of Pottawatomie and State of Iowa, have invented certain Improvements in Washing-Machines, of which the following is a specification.

My invention consists in certain improvements on the washing-machine for which Letters Patent were granted to me September 7, 1875, numbered 167,483, said improvements consisting in substituting for the roller-frames formerly used a collapsible receiver closed on all sides, with the exception of small perforations, and otherwise constructed in the peculiar manner hereinafter described.

Figure 1 represents a longitudinal vertical section through my improved machine, and Fig. 2 a perspective view of the receiver or holder removed from the tub.

In the machine above referred to the articles were cleansed by the rubbing and squeezing action of two reciprocating roller-frames moving in opposite directions, between which the articles were placed. In the present case, however, the cleansing is effected by forcing the water or cleansing-liquid through the articles, thereby avoiding the injury and wear of the articles likely to result from the rubbing action.

The manner in which I produce this improved action may be best understood by reference to the accompanying drawings, in which A represents a tight rectangular tub or body, preferably mounted upon legs, and furnished with a hinged lid or cover, *a*, through the center of which passes an upright hand-lever, B, pivoted in a block on the lid, as in my former patent.

C represents the receiver or holder, in which the articles to be cleansed are placed. As represented more clearly in Fig. 2, this receiver consists of two horizontal plates or boards, *b* and *c*, hinged, respectively, to the upper and lower edges of vertical end boards, *d*, each of said parts extending from side to side of the tub, leaving only sufficient space to permit their moving freely, and each furnished with perforations, as shown.

Extending horizontally across the middle of each end board, *d*, is a rod or bar, *e*, the ends

of which project past the boards *d* and extend into vertical slots *f*, formed in the sides of the tub, as shown in Fig. 1. An opening for the insertion and removal of articles into and from the receiver is formed in the upper side or plate, *b*, of the same, and a lid or cover, D, is furnished for closing said opening, the lid being held in place by a turn-button or catch, *g*. In the center of the lid or cover D is formed an opening, *h*, to receive the end of the operating-lever B.

The parts being thus constructed, the receiver C is placed in the tub and supplied with the articles to be cleansed, the journals *e* resting in the lower ends of the slots *f*, the tub is supplied with the cleansing-liquid, the lids D and *a* are closed, and the machine is ready for operation, the end of the lever B passing through the opening *h*, as above mentioned.

From the above it will be seen that the upper and lower boards or plates, *b* and *c*, approach each other as the rocking end boards are carried out of a vertical position, and recede from each other as the rocking boards assume such position. The effect of this action is to alternately expel the liquid from and draw it into the receiver C, the articles being thoroughly squeezed or pressed each time the liquid is expelled, thereby causing the liquid to pass through every portion of the contents of the receiver, the liquid passing back and forth through the perforations. It is preferred to make the perforations sufficiently small in size or number to hold the water back somewhat and prevent its passing out too freely, in order to cause it to permeate more thoroughly the articles in the receiver. When the washing is completed, the entire receiver may be lifted out and the articles removed through its side; or they may be taken out by removing the cover D, the receiver being left in the tub.

The construction of the receiver may be varied somewhat; but in practice I prefer to rivet to the upper and lower edge of each rocking end board *d* an iron rod, *i*, and to connect the end boards by iron straps or rods *k*, having eyes to fit the ends of the rods, and having the boards or plates *b c* secured to them by screws or rivets. The straps or bars

k and the rods or journals *e* and *i* may be cast, if preferred, and attached by screws or otherwise. It is, however, preferred to extend the latter entirely across the end boards, to prevent warping or splitting.

The receiver *C* is furnished with handles, by which it may be lifted from the tub.

Having thus described my invention, what I claim is—

The collapsible holder *C*, consisting of the end boards provided with rods *e* and *i*, the top and bottom plates, and the connecting-bars *k*, as shown.

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Witnesses:

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