

UNITED STATES PATENT OFFICE.

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WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 452,788, dated May 26, 1891.

Application filed November 5, 1890. Serial No. 370,393. (No model.)

To all whom it may concern:

Be it known that we, CAS. E. HUTCHESON and FRANKLIN L. HUTCHESON, citizens of the United States, residing at Weatherford, in the county of Parker and State of Texas, have invented a new and useful Washing-Machine, of which the following is a specification.

Our invention relates to washing-machines; and has for its objects to provide a device which will thoroughly cleanse the clothes with a minimum of labor and in which the heavier particles of dirt from the pieces washed will be separated from the main washing-chamber and thus kept out of contact with the clothes.

With these objects in view the invention resides in the various novel details of construction and in the combination of parts, hereinafter more fully described, and pointed out in the claim.

In the drawings, in which we have illustrated our invention and in which like letters of reference indicate corresponding parts, Figure 1 is a plan view of our improved washing-machine, showing the operating mechanism. Fig. 2 is a similar view, the top having been thrown back; and Fig. 3 is a vertical sectional view taken through the body of the machine.

In the drawings, the letter A designates supports for the body, which is indicated by the letter B. This body B is rectangular and has hinged to one of its sides the top or cover *b*.

The cover *b* provides a support for the stub-axle C, on which turns the sprocket-wheel *c*. A lever *c'* is fast to the sprocket-wheel *c*. *c*² is another sprocket-wheel fast on the outer end of a shaft *c*³, which is journaled in the cover and passes through it on both sides. On the under side of the cover the shaft *c*³ has bolted to it the arms *c*⁴, which carry the beaters *c*⁵. These beaters may be attached to the arms *c*⁴ in any practical manner. As shown in the drawings, they are inserted in holes in the arms and are held therein by their ends swelling after coming in contact with water. A chain *c*⁶ connects the two sprocket-wheels *c* and *c*², and it will

readily be seen that an oscillating movement imparted to the lever *c'* will give a vibratory motion to the beaters *c*⁵.

On the inner side of the box-like body B are vertical cleats *b'*, which extend from the bottom of the box nearly to the top. Leaf-springs D extend from each corner nearly to the center and serve as yielding supports for the perforated diaphragm or partition E, which divides the interior of the body into an upper chamber and a lower chamber into which the heavier particles of dirt fall.

The diaphragm E is guided in vertical movement by the cleats *b'*, the perforated partition E being provided with notches *e* to receive the said cleats. A plug at *b*² in the bottom of the box is provided for the purpose of draining the water therefrom when necessary.

In operation our washing-machine is used as follows: The perforated partition E is slid down upon the springs D. The clothes are then put in the upper chamber and sufficient water and soap poured upon them. The lid is now closed, thrusting the beaters into the water at the same time. When the beaters are vibrated, the water is greatly agitated and is alternately thrown against the opposite sides of the cleats *b'*, which help to reverse the currents of the water and increase the agitation, thus lessening the time it takes to wash the clothes. As this process goes on, particles of dirt, dust, or grease are detached from the clothes, and by their specific gravity fall to the diaphragm E, which being perforated they pass through the holes into the lower chamber, where after sufficient time they may be drawn off by means of the plug *b*², and fresh water having been added the washing continued to the end.

It is especially to be remarked that in using the perforated diaphragm E the clothes are saved from the stripes and streaks of dirt that are sometimes noticed in ill-washed clothes.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a washing-machine, the combination, with a rectangular body having vertical cleats upon each of its inner sides, of a perforated

diaphragm having its edges beveled on the
upper side and having rectangular grooves
for the cleats and leaf-springs rising from the
bottom of the body, having their free ends
5 extending inwardly toward a common center
and supporting the perforated diaphragm,
substantially as and for the purpose specified.
In testimony that we claim the foregoing as

our own we have hereto affixed our signatures
in presence of two witnesses.

CAS. E. HUTCHESON.

FRANKLIN L. HUTCHESON.

Witnesses:

S. G. KERR,

WRIGHT D. TAYLOR.