J. R. BARNES.

Washing-Machine.

No. 161,854. Patented April 13, 1875.

Fig. 2.

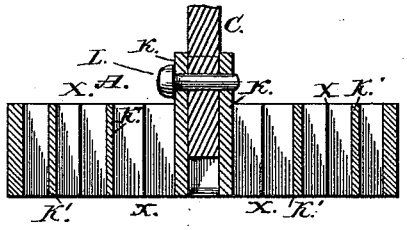


Fig. 1.

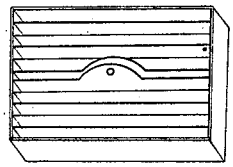


Fig. 4.

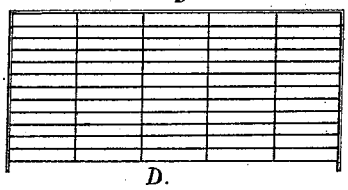
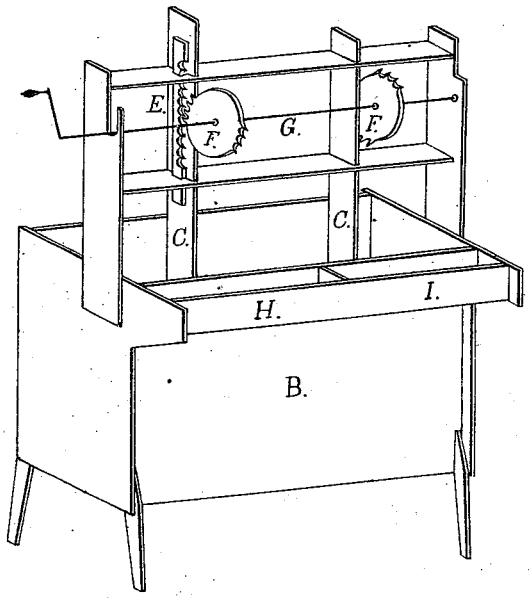


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSIAH R. BARNES, OF ELIZABETH, NEW JERSEY.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **161,854**, dated April 13, 1875; application filed January 2, 1875.

To all whom it may concern:

Be it known that I, JOSIAH R. BARNES, of the city of Elizabeth, State of New Jersey, have invented a Clothes-Washing Machine, of which the following is a specification:

The object of my invention is the washing of clothes rapidly and easily, and with the least possible injury to the fabric, by means of two pounders shown at Figure 1 in the drawing, made of thin slats, part of the slats being of wood and part metallic. Fig. 2 is a sectional view. Sufficient metallic slats are used, in making them the desired weight, to cause them to sink in any depth of water, when, if constructed entirely of wood, they would float. This weight is absolutely necessary in order to overcome the resistance of the water and give a decided and effectual blow to the clothes in the tub B. These pounders, by falling, drive the water through the clothes with such force as to cleanse them thoroughly and quickly.

The pounders are hung loosely to the uprights C C, Fig. 3, by a pin, so as to accommodate themselves to any unevenness in the surface of the clothes.

The pounders are more specifically described as follows: They are constructed of a framework of wood, A, of the dimensions required for the size of the machine, and of a thickness to give them sufficient strength, and three inches, more or less, high. Into this frame two wood slats, K K, are framed just far enough each side of the center to admit the thickness of the upright shaft C between them. This upright shaft is attached to these center slats by a pin, L, or its equivalent, through a rounded elevation in the center or otherwise. Between these center slats and the frame, on each side, are inserted thin slats of wood K′ K′ and metal X X alternately, more or less in number, according to the size and weight required for the machine for which they are intended, and with a false bottom, D, (shown in Fig. 4 in the drawing,) for the tub, made of narrow slats so constructed as to give the water free circulation under them. By this device the work is greatly facilitated, as the clothes at the bottom are cleansed as thoroughly and quickly as those on the top.

The pounders are raised to the same distance from the top of the clothes on which they rest, whether there are few or many in the tub, by means of a straight line of cogs, E, Fig. 3, shaped somewhat like saw-teeth, attached to the sides of the uprights, so that the bearing is over the center of the weight to be raised, thereby reducing the friction to a minimum, into which cogs on wheels F F match. There are two sets of cogs on each wheel, on opposite sides, and the wheels are set on the shaft G so that the cogs stand at right angles. The cogs on the wheels are so shaped and spaced that, in revolving the wheels by the crank, one set of cogs will raise an upright and pounder to a given height, and as they play off or let go, and the upright and pounder fall, the cogs on the other wheel catch, whereby a steady and easy motion is insured in working the machine, and four blows, two by each pounder, are given for every revolution of the shaft.

There may be more or less cogs in a set on the wheels, but they must occupy a given space, one-eighth the circumference of the wheel. If spaced for twenty-four cogs there must be three in a set; if for thirty-two, four in a set.

The running-gear may be constructed of any suitable metal or of wood.

The extension on the side of the tub is designed, H, for attaching a wringer, I, for a soap-box.

I am aware that the cog-gearing described and shown in this application is not new, and therefore I do not claim the same; but

What I do claim is—

In a washing-machine, the beater or pounder consisting of thin slats of wood and metal, as shown and described, for the purpose specified.

JOSIAH R. BARNES.

Witnesses:
JOHN MUNDY,
JEREMIAH M. MARRIS.