

UNITED STATES PATENT OFFICE.

ROBERT McCAIN, OF ROOTSTOWN, OHIO.

WASHING-MACHINE.

Specification of Letters Patent No. 27,643, dated March 27, 1860.

To all whom it may concern:

Be it known that I, ROBERT McCAIN, of Rootstown, in the county of Portage and State of Ohio, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters and marks thereon.

The improvement under this invention is more specially designed for the washing of hair for use in mattresses, cushions, etc., but is susceptible of being used for the washing of any article. In the machine having my improvement are embraced means for pounding the hair, or article being washed, and means for rubbing the same, and the two sets of means are so arranged in relation to each other that the hair, or article being washed, may readily be taken from the pounding chamber and placed upon the rubbing table, and as to allow of the rubbing part of the machine and the pounding part to be used at the same time, or of their being used separately; while the arrangement also permits of the entire removal of the rubbing part.

Of the drawings forming part of this specification Figure 1, is a longitudinal section of a washing machine having my improvement; and Fig. 2, is a top view of the machine.

In each of these figures like marks and letters are used to designate like parts.

The pounding part of this machine and the rubbing part are both embraced in a frame of rectangular form, which is supported by legs or standards (*a*), connected together by a base strip (*b*), and at the top united by side and end pieces (*c*) which extend downward not quite half the depth of the frame, or to such distance as may be desirable. These side and end pieces in connection with a bottom plate (*d*) and a partition plate (*e*), a top plate (*f*) and a door (*g*) form the pounding chamber.

To the partition plate (*e*), which forms the back of the pounding chamber are attached half tubes (*h*), and to a pounder or traveler (*i*) are also attached like half tubes (*j*), the rounded surfaces of the one set of half-tubes fitting into the spaces (*k*) between the half-tubes of the other surface. The pounder (*i*) in its movements is guided by bars (*l*) attached to the sides of the cham-

ber, and it is moved backward and forward across the inclined bottom (*d*) and against the half-tubes (*h*) of the back (*e*), by a rod or bar (*m*) affixed to it at one end and hinged or pivoted to a vertical lever (*n*) at the other end. This vertical lever (*n*) is pivoted to the horizontal bar (*b*) of the frame; it is also rigidly connected to the horizontal lever (*o*) and to a brace-bar (*p*)—the horizontal lever (*o*) having a cross foot-bar (*q*) and a strengthening bar (*r*).

A hand frame (*s*) is hinged to the foot-bar (*q*), and by the upward and downward movement of this hand-frame the levers for operating the pounder (*i*) may be actuated by hand-power either alone or in connection with the power of the foot acting upon the foot-bar (*q*). Thus the foot and hands of the operator may both be made available to operate the pounder or only the foot or the hands alone.

The rubber bed, as is shown by the drawings, is of curved form in the line of the traverse of the rubbing roller. This bed (*t*) is detachable, one of ends resting upon the top of the back (*e*) and the other end resting on the top of the end piece (*c*),—the flanges at each end serving to keep the bed in place. The roller (*u*) has helically arranged ridges upon its surface and rotates upon its shaft (*w*), which is attached to a vertical lever (*x*), and the lever (*x*) has a hand bar (*y*) by which it may be moved backward and forward, and a foot-bar (*z*) attached to a frame (*z'*), to the side bars of which the lever (*x*) is pivoted. Thus the rubbing roller may be moved either by the hands of the operator alone, or by the hands and foot acting together; which allows of its pressure upon the hair, or article, being washed, greater or less as may be desirable, and enables the operator to use the roller to press out the washing water and thus aid in drying the hair or whatever article is being washed.

The movements of the roller are facilitated by a wire or cord (*y'*) extending to a spring (*x'*) which is attached to the bottom plate (*d*). The bed (*t*) also to a certain extent may be made to assist the spring, if the bed be constructed of sheet metal, or if it be made to rest on springs.

As has formerly been stated, the arrangement of the means herein described allows of the rubbing means being used either alone or in connection with the pounding means, or of the pounding means being used alone

in connection with the rubbing means; and, as is obvious, the arrangement also allows of the one or the other set of means being used separately and distinct from the other
5 in a machine constructed for pounding only or in a machine constructed for rubbing only.

What I claim as my invention and desire to secure by Letters Patent is—

10 In a washing machine, constructed substantially as described, the arrangement of levers and hand and foot bars of the pounding and of the rubbing parts of the ma-

chine in their relation to the rubber and the pounder and in their relation to each other whereby the operator may move the pounder and the rubber by the foot and hands together or by the hands alone as herein set forth.

This specification signed this 27' day of 20 February 1860.

ROBERT McCAIN.

Witnesses:

T. T. EVERETT,

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