

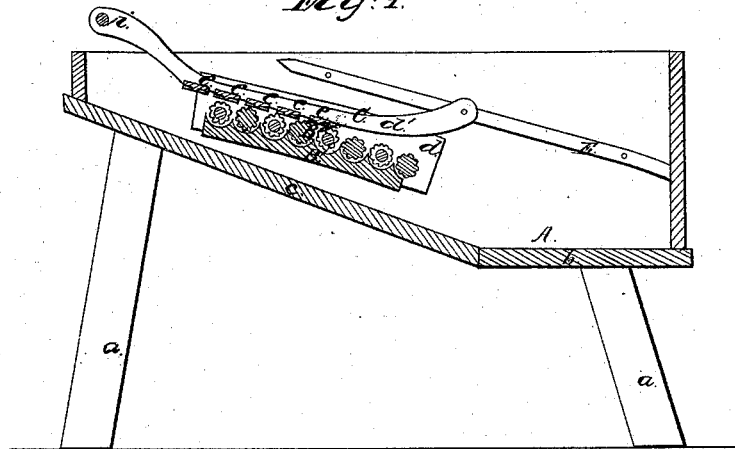
*H. L. Buckwater,*

*Washing Machine.*

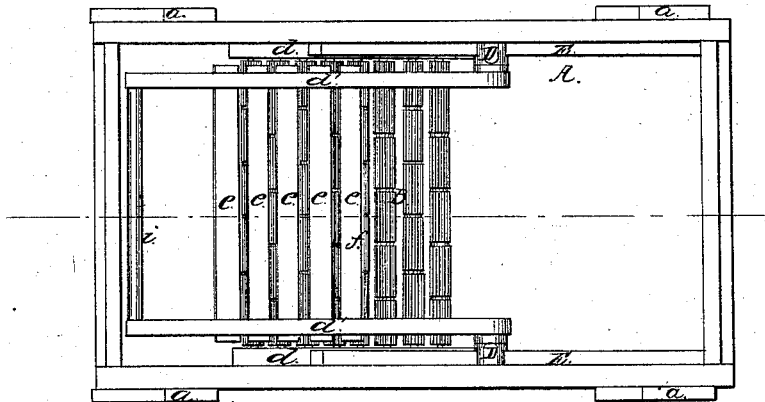
*N<sup>o</sup> 47,678.*

*Patented May 9, 1865.*

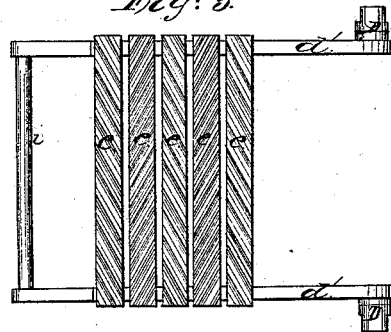
*Fig: 1.*



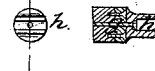
*Fig: 2.*



*Fig: 3.*



*Fig: 4. Fig: 5.*



*Witnesses:*

*W. C. Brown  
C. S. Pliff*

*Inventor:*

*H. L. Buckwater  
per Munn & Co  
Attorneys*

# UNITED STATES PATENT OFFICE.

HENRY L. BUCKWATER, OF KIMBERTON, ASSIGNOR TO HIMSELF, T. A. BUCKWATER, OF KIMBERTON, AND E. PRICE, OF PHOENIXVILLE, PENNSYLVANIA.

## IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 47,678, dated May 9, 1865.

*To all whom it may concern:*

Be it known that I, HENRY L. BUCKWATER, of Kimberton, in the county of Chester and State of Pennsylvania, have invented a new and Improved Clothes-Washing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same; Fig. 3, a detached under view or an inverted plan of the rubber pertaining to the same; Fig. 4, a detached end view of one of the guide-rollers pertaining to the rubber; Fig. 5, a section of Fig. 4, taken in the line *y y*.

Similar letters of reference indicate like parts.

This invention relates to a new and improved clothes-washing machine of that class in which a stationary bed of rollers is employed in connection with a reciprocating rubber.

The object of the invention is to obtain a simple and efficient machine for the purpose specified, and one which may be operated with facility.

A represents a suds-box, which may be supported at a suitable height by legs *a* or any proper framing. The suds-box has a portion, *b*, of its bottom horizontal and another portion, *c*, inclined, as shown clearly in Fig. 1.

B represents a series of fluted rollers, the journals of which are fitted in strips *d*, attached to the inner surface of the sides of the suds-box. These rollers are fluted longitudinally and grooved circumferentially at certain and equal distances apart, as shown in Fig. 2. They are not placed in a plane, but form a slightly curved bed, the upper surface of which is convex, as shown in Fig. 1, said bed being over the inclined part *c* of the bottom of the suds-box, as shown in Fig. 1. Underneath these rollers B there is a bottom plate, *B'*, which has its upper surface grooved to receive the lower parts of the rollers B, as shown clearly in Fig. 1. This bottom plate, *B'*, ex-

tends the whole length of the rollers, and it may be constructed of wood.

C represents a rubber, which is composed of two parallel bars, *d' d'*, having parallel transverse slats *e*, attached to them, said slats being grooved obliquely at their under sides, the grooves of one slat having a reverse position to those of the slat immediately adjoining it. (See Fig. 3.) These slats are placed at a short distance apart, and are in one and the same plane, and the lowermost slat is beveled at the upper side of its lower edge, as shown at *f* in Figs. 1 and 2. To the lower or inner end of each bar *d' d'* there is attached a swivel-head or roller, D, which works freely on pins or screws *g*, which pass into each bar *d'* at their outer sides. These guide-rollers are slotted longitudinally, as shown at *h*, so that they may fit and work on guides E, attached one to each side of the suds-box A. The guides E E are slightly curved, the curves being less than that of the roller-bed, as shown in Fig. 1. The outer ends of the bars *d d* are connected by a cross-bar, *i*, which serves as a handle.

The suds-box is provided with a requisite quantity of suds, and the clothes to be washed are placed on the roller-bed and the rubber moved back and forth over them, the pressure of the slats *e* on the clothes varying alternately at the upper and lower parts of the rubber, owing to the difference in the curve of the guides E and the roller-bed, and causing alternately an absorption and expulsion of the suds, greatly facilitating the cleansing of the fabric.

The swivel-heads or rollers D admit of a free movement of the rubber and the lower beveled slat prevents the splashing of the suds when the machine is in operation.

The grooved bottom plate, *B'*, retains the suds underneath the rollers B, insuring a sufficient quantity of the former in close proximity to the clothes and rendering the cleansing operation more thorough and efficient than it otherwise would be.

I claim as new and desire to secure by Letters Patent—

1. The convex roller-bed B, in connection with a reciprocating rubber, C, composed of

grooved slats, arranged as shown and controlled or guided in its movement by the slightly-curved guides E E, substantially as and for the purpose specified.

2. The swivel-heads or guide-rollers D, constructed and applied to the rubber and fitted on the guides E E, substantially as and for the purpose set forth.

3. The combination of the convex roller-bed B, reciprocating rubber C, guides E E, and swivel-heads or guide-rollers D, all arranged

to operate substantially as and for the purpose specified.

4. The combination of the grooved bottom plate, B', and grooved rollers B, with a reciprocating rubber, all being constructed and arranged to operate substantially as herein set forth.

HENRY L. BUCKWATER.

Witnesses:

BECKIE L. PRICE,  
WILLIAM BACH.