

H. Behn,

Washing Machine,

N<sup>o</sup> 32,175.

Patented Apr. 30, 1861.

Fig. 2.

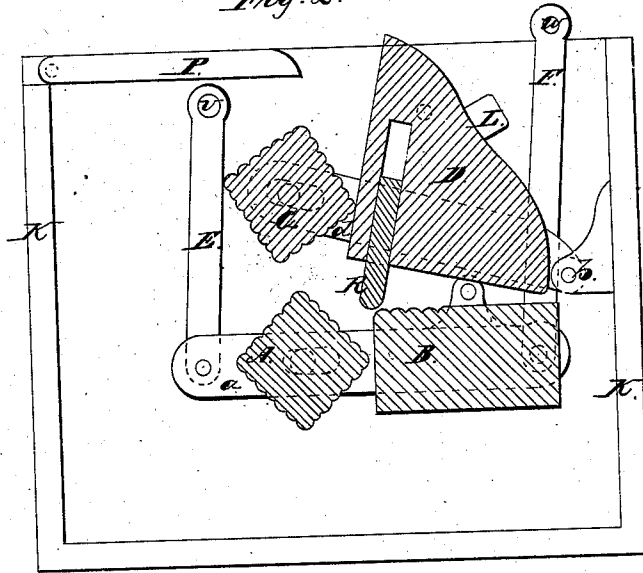
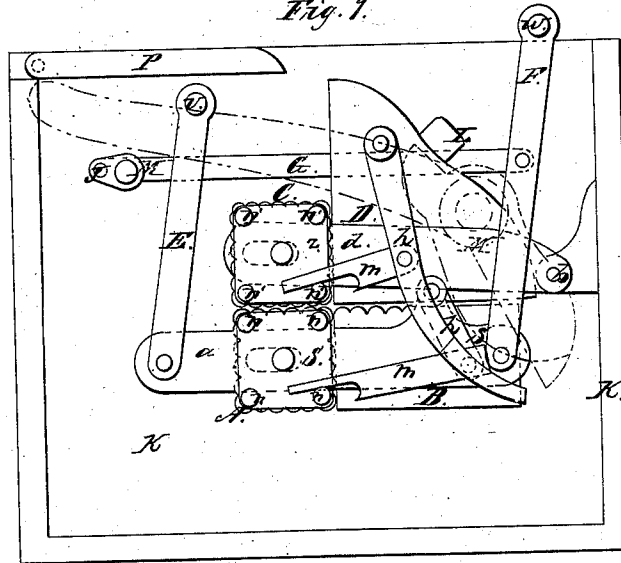


Fig. 1.



Witnesses  
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# UNITED STATES PATENT OFFICE.

HENRY BEHN, OF NEW YORK, N. Y.

## WASHING-MACHINE.

Specification of Letters Patent No. 32,175, dated April 30, 1861.

*To all whom it may concern:*

Be it known that I, HENRY BEHN, of New York, in the county and State of New York, have invented a new and Improved Washing-Machine; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the characters of reference marked thereon.

Figure I represents a side view of the machine with the side of the box removed showing the mechanism and Fig. II represents a section of the machine.

The nature of my invention consists first in the arrangement and construction of the upper and lower washboard, in such a manner, that said washboards shall hold the fabric fast while that part lying between the washboards, is being washed and rubbed and secondly in the manner of operating said washboards or a part thereof, whereby the washed and rubbed part is taken away and other parts brought between the boards to be operated upon.

In the accompanying drawing A, B, form the lower and C, D form the upper washboard.

A, and, C, which form the forward ends of these respective washboards, are square rollers ribbed or fluted lengthwise, and supported in suitable braces, *a, a*, fast to the boards B and D, capable of turning around their axis. These rollers are held by means of springs (not shown in the drawing) against the faces of the respective boards B and D so as to hold the fabric between said rollers and the ends of the boards while that part of the fabric lying between is rubbed and washed. The braces, *a, a*, on the lower washboard, A, B, are supported by rods E F, turning on fixed centers, *v, w*. The rod, F, is connected by means of the rod, G, with a crank, J, fast on the end of a shaft H and operated through a crank or fly wheel, by which arrangement a forward and backward motion is communicated to this lower washboard A, B. The upper washboard, C, D, is hinged at its after end to the washtub, K, capable of turning on said hinges, C. A part of the lower washboard B is likewise ribbed or fluted, so as to present always a rough surface, to act upon the fabric.

On the end of the roller A a plate, *s*, provided with four pins, *n*, is fastened, against which a lever, *m*, supported by the rod, *h*, turning on a fixed center, (2,) fast on the

board, B, is made to act. On the end of the roller, C, a similar plate, *z*, provided with four pins, *n'*, is fastened, against which a lever *m'* supported by a rod, *h'*, turning on a fixed center (3) fast on the board, D, is made to act. On the top of the board, D, a projection L, is fastened.

M, is a cam (shown in red lines in the drawing), turning on a pin, 6, and operated by a lever, N, (shown in dotted red lines in the drawing) situated on the outside of the washtub K. This cam M is made with three projections 4, 5, and 8, acting upon the projection L, lever, *m*, and rod, *h*, as will be hereafter described.

P, is a table or board on the top of the washtub K to pass the fabric into the machine and for the purpose of soaping the same.

R is a slide, selfacting by its own weight, situated in the board, D, and so arranged as to rest always upon the lower washboard B to prevent the fabric from going toward the after end of the machine.

The operation of the machine is as follows: The washtub K is filled with soap suds, so as to cover the surface of the lower washboard. The clothing or fabric is then soaped upon the table or board P, and the lever N turned upward, by which latter operation the cam M is turned when the projection, 4, will come in contact with the projection L fast on the top washboard D, turning the same together with its front roller, C, upward, around the hinge, C. At the same time the projection, 8, of said cam will come against the lower end of the lever, *h'*, acting upon the same in such a manner, that through said lever, *h'*, the rod, *m'*, will operate upon one of the pins, *n'*, (fast on the plate *z* fixed on the end of the roller, C,) so that thereby said roller, C, is turned one quarter around. An opening being during this process made, between said roller, C, and the end of the board, D, into which the clothing or fabric is placed, and which is then held firmly between said roller and the end of this board. Simultaneous with this operation the roller A of the lower washboard is likewise turned, by the projection, 5, of the cam M camming against the end of the lever or rod, *m*, by which the same is made to operate upon the pin, *n*, so as to turn said roller A one quarter around. The lower end of the fabric or clothing is taken hold off by this operation between this

roller A and the end of the board B, and held thereby perfectly fast. When the lever N is again lowered the different rods and levers, relieved from the action of the projections on the cam M are brought back again in their original position by means of springs or weights, and the top washboard, C, D, will fall down by its own weight. The shaft H is then set in motion, whereby a forward and backward motion is communicated to the lower washboard A, B, by which the loose part of the clothing situated between the two washboards is rubbed and washed. When sufficiently rubbed the lever N is again raised whereby the above described operation is repeated, and the before rubbed part of the clothing is brought between the roller A and board B, while the roller, C, pushes by its action a fresh part of the clothing between the boards and at the same time pulling more clothing from the table, which is then held again tight and fast between said roller C and the end of the board D. The slide R will by its own weight move out of the board D as soon as the upper washboard C, D, is turned up-

ward, resting always upon the board B and prevents thereby the clothing from going backward instead of going between the roller A and the end of the board B.

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

1. The arrangement and construction of the upper and lower washboards, in such a manner that the clothing shall be held fast by said washboards, while that part of the clothing situated between the two boards is being rubbed and washed, substantially as described and set forth.

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2. The arrangement and use of square rollers on the ends of the washboards, forming a part of the same, and the manner of operating said rollers, for the purpose herein specified.

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3. The arrangement of the slide R in combination with the upper washboard in the manner and for the purpose substantially as described.

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