

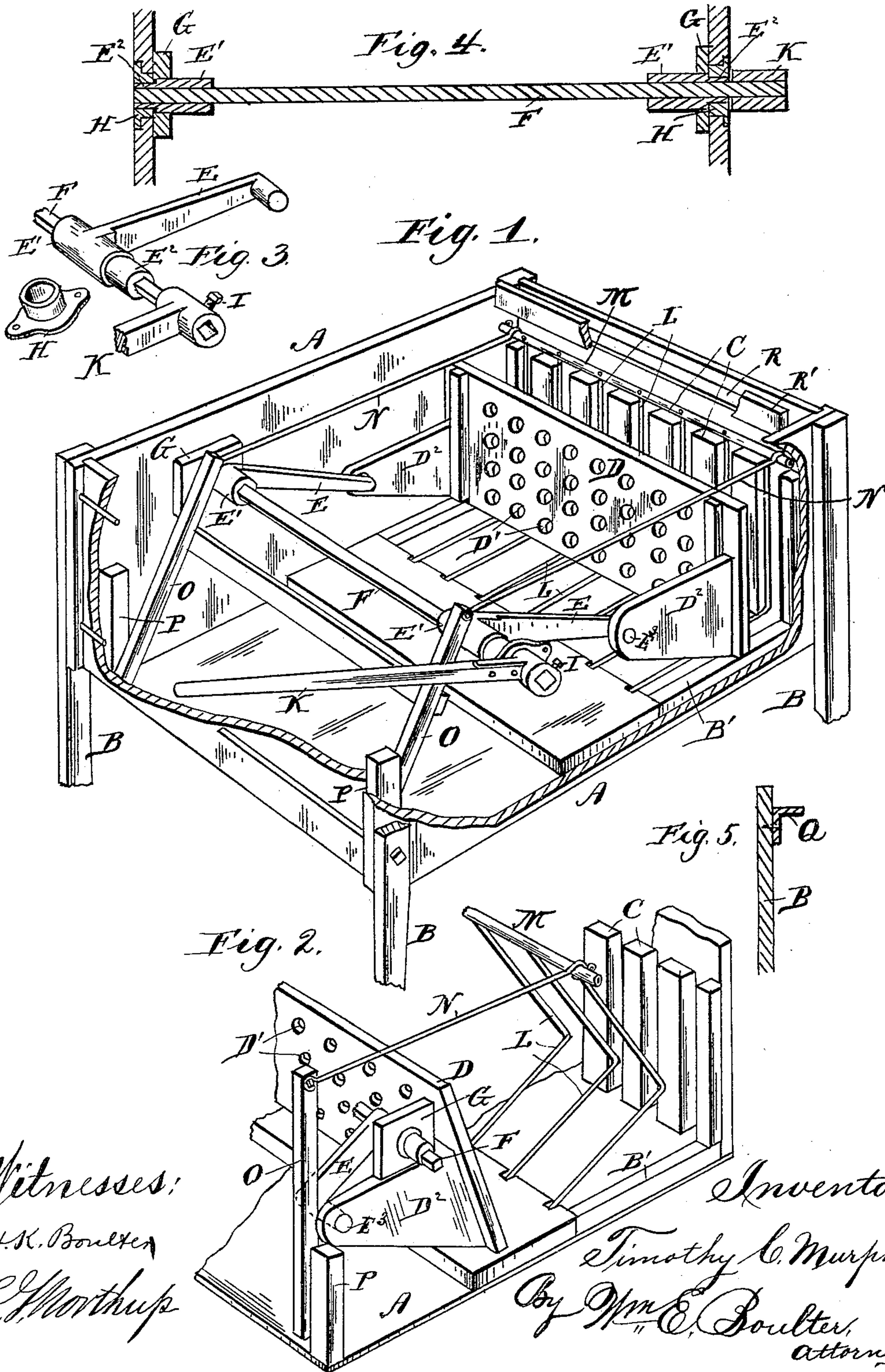
No. 620,605.

Patented Mar. 7, 1899.

T. C. MURPHY.  
WASHING MACHINE.

(Application filed Apr. 8, 1898.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

TIMOTHY C. MURPHY, OF DUBUQUE, IOWA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 620,605, dated March 7, 1899.

Application filed April 8, 1898. Serial No. 676,898. (No model.)

*To all whom it may concern:*

Be it known that I, TIMOTHY C. MURPHY, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to washing-machines, and more particularly to that class thereof wherein the clothes are subjected to a pounding, pressing, or squeezing action exerted thereupon by a reciprocating pounder; and my present invention embodies improvements upon the machine disclosed in my prior patent, No. 536,643, dated April 2, 1895.

My present invention consists in the novel construction, arrangement, and combination of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a portion of a washing-machine constructed in accordance with the present invention, the cover or top being removed and parts being broken away to show the internal parts. Fig. 2 is a similar view of a portion of the machine, showing the parts in the position assumed when the pounder has been drawn back after its squeezing action. Fig. 3 is a perspective view of one end of the handle-shaft and attached parts. Fig. 4 is a sectional view showing the handle-shaft mounted in its bearings. Fig. 5 is a sectional view showing one of the supporting-legs provided with a lug or arm to support the operating-handle.

The object of this invention is to simplify the movements of the operative parts, rendering the construction more economical and durable, and also to provide for an additional turning movement of the clothes, and the above and other objects, which will herein-after appear, are accomplished by the construction which I will now describe in detail.

A indicates the clothes receptacle or box, which may be constructed in various sizes and of various shapes, preferably square or rectangular, as shown, the same being supported by suitable legs B and adapted to be closed by a cover, if desired. I preferably cover the

bottom of the receptacle with galvanized iron or the like metal.

D indicates the pounder, the same consisting of a rectangular board provided with a number of openings D' for the passage of the wash-water. Extending longitudinally of the box A, at opposite sides, are pieces B', upon which is adapted to bear and reciprocate the lower edge of the pounder, and at one end the box is provided with a series of upright ribs C, similar to those described in my prior patent, having spaces between them, and which ribs, in conjunction with the pounder, serve to exert a pressing or squeezing action upon the clothes, which latter are laid within the space between the ribs and pounder when the latter is at or near the limit of its backward movement.

In my before-mentioned patent the pounder partakes simply of a horizontally-reciprocating movement, the working face whereof is always in a vertical or upright position at all points in its reciprocations. Thus said pounder does not of itself serve to effect any turning movement of the clothes being washed; but it is my purpose in the present case to have the pounder serve to impart more or less of a turning movement to the clothes or permit the latter to assume a different position to expose a different portion thereof for action, and this I attain by the following-described means.

Rigidly secured to the rear face of the pounder, near each end, is a rearwardly-projecting piece D<sup>2</sup>, shaped somewhat as shown, and to each of the same is pivotally connected one end of arms E, which are provided with the outwardly-extending lugs E<sup>3</sup>, which enter apertures in the pieces D<sup>2</sup>. It will be noticed that the arms are pivoted at the inner sides of the pieces D<sup>2</sup>, whereby they may be more readily disconnected from the pieces D<sup>2</sup> when necessary. The opposite ends of the arms E are fixedly mounted upon a squared shaft F, said arms having for the purpose sleeve portions E', through which the shaft passes, and said sleeve portions having a reduced annular portion E<sup>2</sup>. The larger portion of the sleeve has a bearing in wooden blocks G, secured to the inner faces of the sides of the box, and the reduced portions E<sup>2</sup> fit in metal sockets H, secured within apertures in said sides.



One end of the shaft F projects beyond the side of the box, and upon it is secured by screws I one end of an operating-lever K. It will be noted that the lever K and arms E extend in a line with each other for a purpose presently apparent.

It will be seen that when the operating-handle is swung from the position indicated in Fig. 1 toward the right as viewed in said figure the pounder will gradually change its position from the vertical position (seen in Fig. 1) to the inclined or tilted position, (seen in Fig. 2,) and as the pounder thus tilts it also causes or at least permits the clothes to change their position, so that upon the next forward movement of the pounder a different portion of the clothes will be acted upon by said pounder. To assist the clothes in their turning movement at each backward movement of the pounder, I employ a series of angular wire rods L, similar in construction to and operating like those described in my prior patent before referred to—that is to say, the said rods are pivotally connected at one end to the bottom of the box A and secured at the opposite ends to the transverse bar M, and to which bar are pivotally connected one end of rods N, whose opposite ends are pivotally connected to the upper ends of vertically-arranged bars O, the lower ends whereof are pivotally connected either to sides of the box or to uprights P. When the pounder is at the limit of its forward movement, the bars O rest against or in proximity to the sleeve portions of the arms E. When the lever K is operated to draw the pounder rearward, the arms E will at a certain point in their oscillatory movement abut against the bars O and move them into a vertical position, which effects the swinging movement of the rods L into the position seen in Fig. 2, thus separating the clothes from the ribs C and giving them a turning movement.

One of the supporting-legs may be provided with a lug or arm Q, upon which the lever K may rest when the pounder is at the limit of its forward movement and the machine is not in operation.

By constructing the sleeve portions of the arms E with the enlarged portions and reduced portions and mounting them in their bearings as set forth I prevent water which is thrown upon the shaft F from flowing down the outside of the box A. At the forward end of the box, adjacent to and above the ribs C, I provide a soap-receptacle formed by an overhanging ledge R and upright piece R'. This construction also prevents water which is dashed up vertically at each working stroke

of the pounder from splashing out of the box, and at the same time such construction is adapted to retain a wringer without interfering with the employment of a cover for the machine, if the same be desired.

It will be noted that in the present machine I dispense with the employment of the guide-ribs P, Q, and R and the corrugated ribs F of my prior patent.

What I claim, and desire to secure by Letters Patent, is—

1. In a washing-machine of the character described, the combination with a clothes-receptacle, of a transverse handle-shaft adapted to be oscillated, a pounder adapted to be reciprocated and to be tilted as described, rearwardly-extending pieces rigidly secured to said pounder, arms E pivotally connected at one end to the outer end of the said pieces, whereby the pivotal point is in rear of the pounder to permit the arms when oscillated in opposite directions to tilt the pounder from a vertical to an inclined position, and vice versa, the said arms E being fixedly secured at their opposite ends to the shaft to partake of the oscillations of the latter, angular rods pivoted at one end, pivoted arms O adapted to be operated upon by the arms E as set forth, and pivotal connections between the arms O and the angular rods, all combined for coöperation as and for the purposes specified.

2. In a washing-machine of the character described, the combination with a clothes-receptacle, of a reciprocating pounder adapted to be tilted as described, an oscillatory handle-shaft, rearwardly-extending pieces secured to the pounder, arms E pivotally connected at one end to the outer end of the said pieces whereby the pivotal point is in rear of the pounder to permit the arms when oscillated in opposite directions to tilt the pounder from a vertical to an inclined position and vice versa, angular rods pivoted at one end, pivoted arms O adapted to be operated upon by the arms E as set forth, pivotal connections between the arms O and the angular rods, bearing-sleeves on the arms E reduced to form circular bearing portions, receiving the handle-shaft, bearing-blocks secured to the sides of the receptacle in which the larger bearing portions of the sleeves are mounted, and the reduced bearing portions of the sleeves having a bearing in sockets in the sides of the receptacle, all as and for the purposes specified.

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Witnesses:

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