

(No Model.)

2 Sheets—Sheet 1.

T. C. MURPHY.
WASHING MACHINE.

No. 536,643.

Patented Apr. 2, 1895.

Fig. 1.

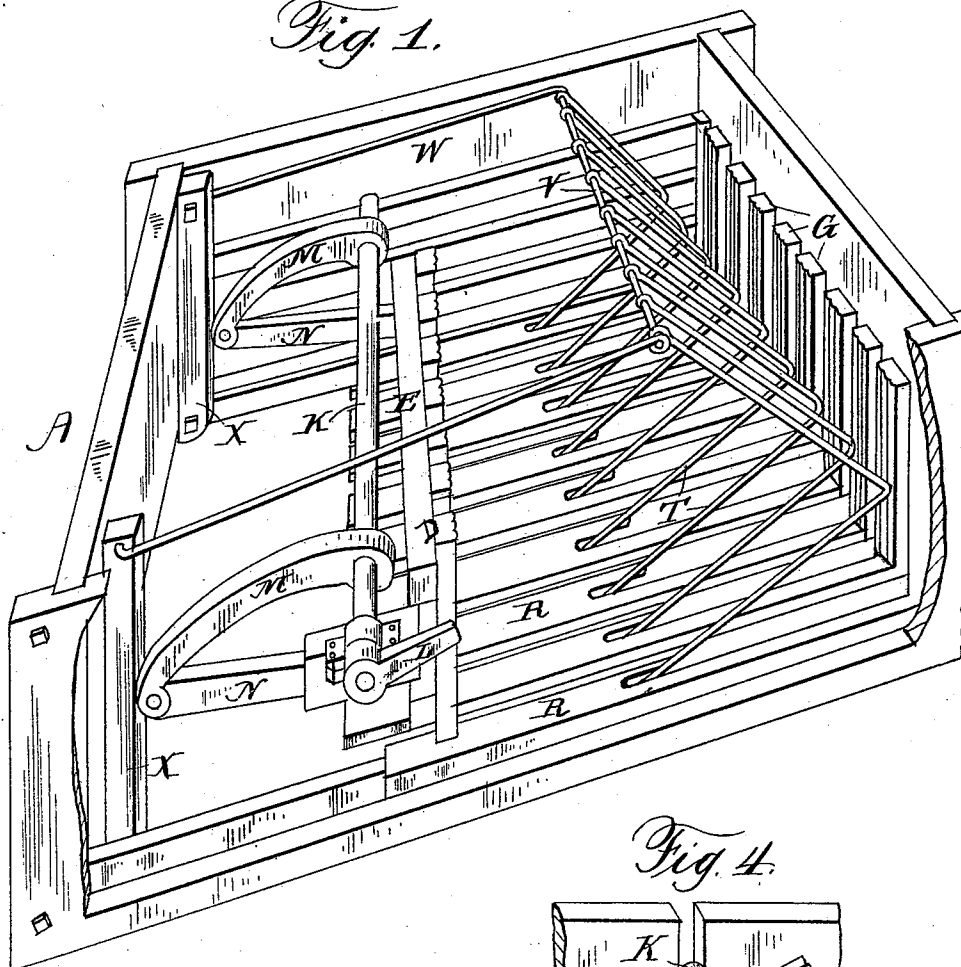


Fig. 4.

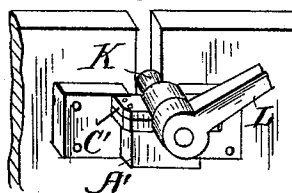


Fig. 5.

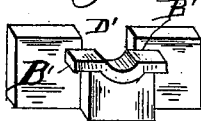
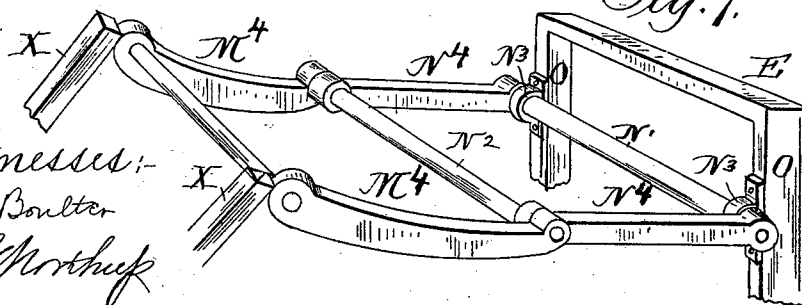


Fig. 7.



Witnesses:
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C. G. Northrup

Inventor:
Timothy C. Murphy
by H. K. Boulter,
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Fig. 2.

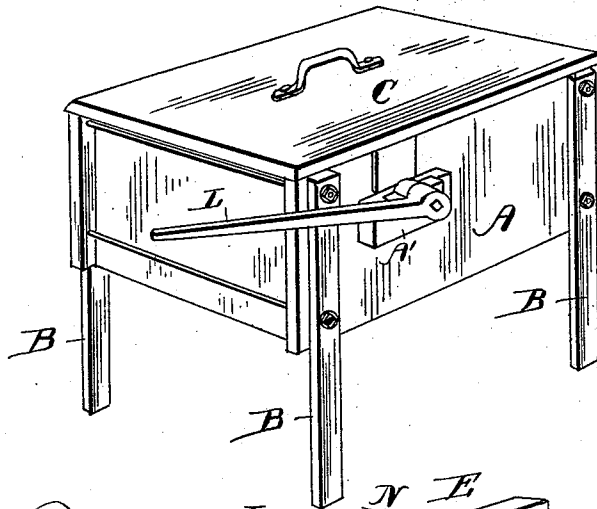
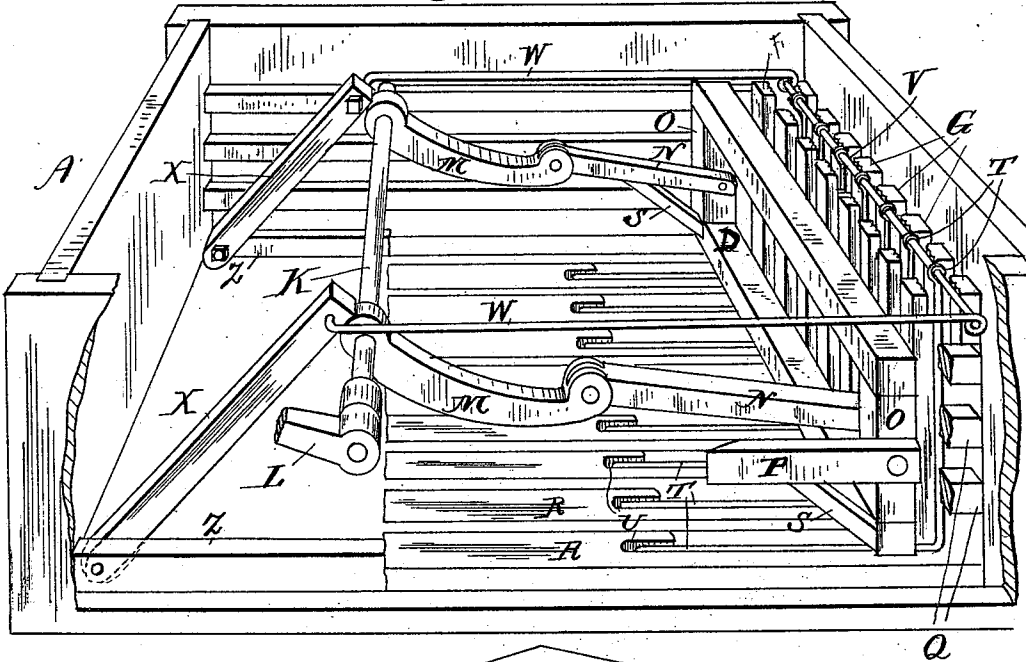


Fig. 6.

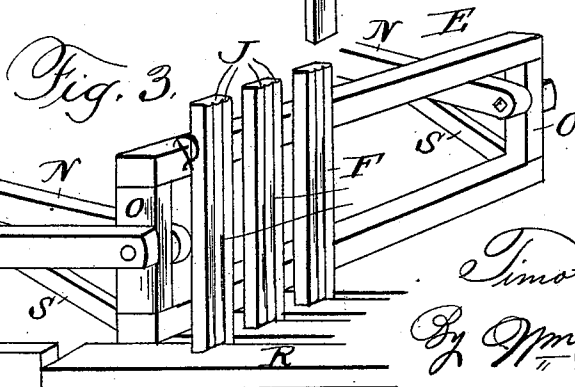


Fig. 3.

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UNITED STATES PATENT OFFICE.

TIMOTHY C. MURPHY, OF DUBUQUE, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 536,643, dated April 2, 1895.

Application filed April 2, 1894. Serial No. 506,041. (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 among the objects sought to be attained by my invention are to provide a washing machine of the character described which is simple, inexpensive and durable and efficient in operation, and to provide such a machine with means whereby the clothes are automatically turned to thereby present different portions to the action of the pounder thereby effecting a complete and thorough washing of the clothes and with the above and other objects in view, my invention consists in the novel construction, arrangement and combination of parts constituting my improved washing machine, all as hereinafter fully described, illustrated in the drawings, and pointed out in the appended claims.

In the drawings:—Figure 1 is a perspective view, parts being broken away to show the interior arrangement of parts and said view representing the interior parts in the position assumed when the pounder is at the extreme limit of its throw in one direction. Fig. 2 is a similar view representing the position of the interior parts when the pounder is at the extreme limit of its working stroke. Fig. 3 is a perspective view more clearly showing the construction of the pounder, some parts being broken away. Fig. 4 is a similar view showing the bearing for the operating shaft. Fig. 5 is a similar view showing the bearing block and bearing for the operating shaft detached. Fig. 6 is a perspective view of the washing machine complete. Fig. 7 is a perspective view showing a modified arrangement of the operating means for the pounder.

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 means of a cover C.

D indicates the pounder, the same comprising a rectangular open frame E, extending across the clothes box nearly the entire width thereof and to which frame are secured a series of upright ribs F having spaces between them, to enable the water to find egress there-through in the action of pounding or pressing the clothes as presently described.

With the pounder are adapted to co-operate a series of upright ribs G secured to one end of the box A and having spaces between them similar to the ribs F the latter and the ribs G serving to exert a pressing or squeezing action upon the clothes which latter are laid within the space formed between said ribs when the pounder is at the limit of its throw indicated in Fig. 1.

In order to exert a more thorough action upon the clothes and at the same time prevent injury thereto I construct the working faces of the ribs F, G, with a series of flutes or corrugations J extending vertically thereof.

For the purpose of operating the pounder, I employ the following-described means: K indicates a shaft arranged within and extending transversely of the box A, and having suitable bearings in the sides thereof, one end of which shaft projects beyond the box and is provided with an operating crank or handle L. M indicates curved or arched arms or levers, one end of which is keyed to the shaft and the opposite end is jointed to one end of arms or levers N which latter extend forwardly within the box and are pivotally connected to the vertical portions O of the pounder frame. The pounder is guided in its reciprocating movements by horizontally arranged arms P secured to the portion O of the pounder frame and adapted to reciprocate between horizontally arranged guide ribs Q secured to the sides of the clothes box, and said pounder is further guided in its movements by horizontally arranged ribs R secured upon the bottom of the box A and having spaces between them to receive the lower rabbeted ends of the ribs F. In order to impart firmness to the guide arms or ribs P, I employ brace arms or supports S, one end of each of which is connected to the guide arm and the other end to the base of the pounder frame. For the purpose of automatically reversing or turning the clothes after each work-

ing stroke of the pounder to thereby present different portions to the pounding or pressing action thereof, and effect a thorough washing of all parts of the clothes, I employ a series
 5 of rods T bent into right-angular form, one end of which is pivotally connected to ribs R within slots U formed in said ribs, which rods are adapted to lie within the spaces between
 10 the said ribs below their upper faces, and between the ribs G when the pounder is at or nearly at the limit of its working stroke as represented in Fig. 2 to thereby offer no obstruction to the clothes as the latter are forced
 15 toward the ribs G by the pounder. The upper ends of the rods T are connected to a transverse rod V, to which latter are pivotally connected one end of rods W whose opposite ends are similarly connected to the upper
 20 ends of vertically arranged bars X, the lower ends whereof are pivotally connected to the ribs Z secured to the sides of the box A. Owing to the arrangement of the right-angled rods, rods W, and bars X, the weight of said
 25 rods T acts to normally pull upon the bars X and hold the same in contact with the arched arms M to thereby be operated upon by the latter to effect the turning of the clothes. As
 30 seen in Fig. 1, the arms are held in an upright position by means of the arched arms thus maintaining the rods T in the inclined position seen in said figure, which inclination is sufficient to effect the turning of the clothes, and when the pounder has been reciprocated
 35 and occupies the position seen in Fig. 2, the arms will have been pulled into the inclined position seen, to be again acted upon by the arched arms when the pounder makes its return stroke.

40 I preferably mount the projecting end of the operating shaft in the bearing seen in Figs. 4 and 5 wherein A' indicates a bearing block secured upon the outside of the box A and having the lower bearing B' adapted to
 45 receive the upper bearing C' for the shaft. Said block A' is also provided with a vertical recess or slot D' whereby to allow all rust, wear and oil from the shaft to fall there-through without entering the box A.

50 If desired, the described method of mounting the end of shaft K may be carried out for the opposite end thereof.

In Fig. 7 I show a modified arrangement of the operating devices for the pounder. In
 55 this arrangement I show the arms N⁴ mounted upon transverse rod or shaft N' which is mounted in suitable bearings N³ secured to the pounder frame, the opposite ends of the arms N⁴ being also mounted upon a trans-
 60 verse rod or shaft N², upon which shaft are mounted also the ends of the arched arms N⁴.

The operation of my improved washing machine may be briefly described as follows:—
 65 A the handle L is turned to carry the pounder into the position seen in Fig. 1, after which the clothes to be washed are placed within

the space between the pounder and the rods T. The handle L is then turned to cause the pounder to force the clothes toward and
 75 against the ribs G thereby subjecting said clothes to a pressing or squeezing action, and as the pounder makes its return movement the rods T will be caused to turn or reverse
 75 the clothes so that upon the next forward or working stroke of the pounder the same will act upon fresh surfaces of the clothes and subject the same to the pressing or squeezing action described. In this manner the clothes
 80 are thoroughly and completely washed in all parts and without injury thereto.

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

1. In a washing machine, the combination with a clothes receptacle of a horizontally-
 85 reciprocating pounder and means for turning or reversing the clothes consisting essentially of a series of right-angled rods pivotally connected at one end with the bottom of the receptacle, said rods being adapted to be oscil-
 90 lated as described for the purpose specified.

2. In a washing machine, the combination with a clothes receptacle, of a reciprocating pounder, a series of ribs carried by the bot-
 95 tom of the receptacle, a series of ribs carried by one end of the latter, and a series of right-angled rods adapted to be oscillated as described and to lie within the spaces between the said ribs in the manner and for the purpose
 100 specified.

3. In a washing machine, the combination with a clothes receptacle, of a horizontally-reciprocating pounder and means for turning or reversing the clothes consisting of a series
 105 of right-angled rods pivotally connected at one end with the bottom of the receptacle at points intermediate the end of the receptacle and the limit of the throw of the pounder in a direction away from said end, and said rods
 110 being adapted to be oscillated simultaneously with the throw of the pounder and being arranged so as to bring one portion of the rods into a vertical plane and the other portion into a horizontal plane to permit the pounder,
 115 to move over said horizontally-lying portions of the rods, in the manner described.

4. In a washing machine, the combination with a receptacle, a transverse shaft within the same, a reciprocating pounder, arms M
 120 secured to the shaft, arms N pivotally connected to the said arms M, and the pounder, a series of right-angled rods pivoted at one end, rods W pivoted to the other end of the said right-angled rods, and pivoted arms pivotally connected with the rods W and adapted
 125 to be acted upon by the arms M, in the manner specified.

In testimony whereof I affix my signature in presence of two witnesses.

TIMOTHY C. MURPHY.

Witnesses:

THOS. F. MAGUIRE.

M. D. NAGLE.