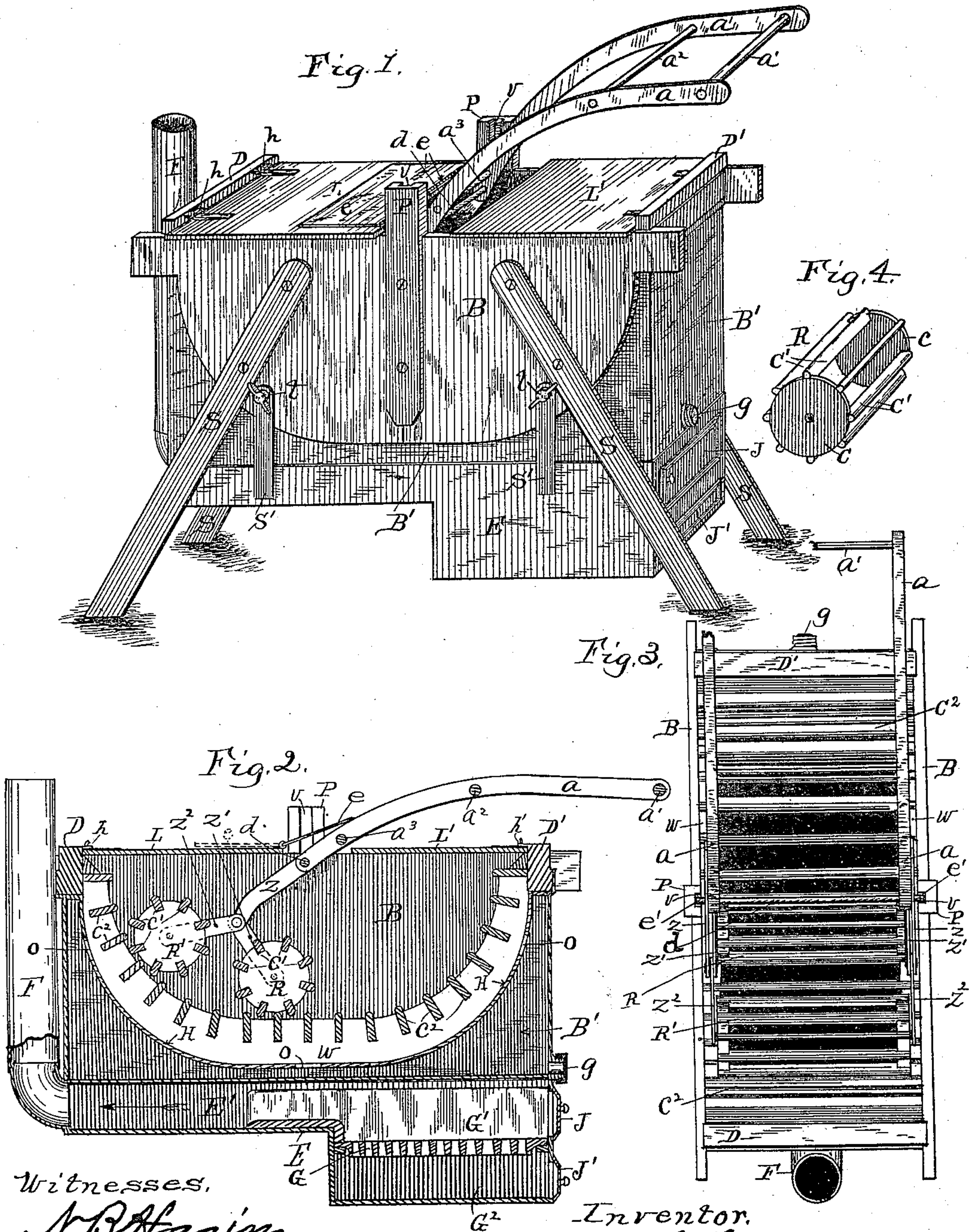


(No Model.)

J. H. LOWREY.  
WASHING MACHINE.

No. 440,774.

Patented Nov. 18, 1890.



Witnesses,

*N. B. Hagin*  
*W. C. Hutchins*

Inventor,

*John H. Lowrey.*  
*By W. C. Hutchins*

*Atty.*



# UNITED STATES PATENT OFFICE.

JOHN H. LOWREY, OF NEVADA, MISSOURI.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 440,774, dated November 18, 1890.

Application filed November 16, 1889. Serial No. 330,527. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. LOWREY, a citizen of the United States of America, residing at Nevada, in the county of Vernon and State of Missouri, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings, and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a perspective elevation of my invention, showing the exterior thereof. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a top plan view of the same having the cover removed, and Fig. 4 is a detail perspective view of one of the rubbers thereof.

This invention relates to certain improvements in washing-machines wherein a rectangular body-receptacle mounted on four standards is provided with a series of cross-bars raised from the receptacle-bottom and divided from the lower portion of the receptacle by a perforated partition, and a pair of pivoted roller-rubbers having similar cross-bars are arranged to operate in conjunction with the receptacle cross-bars by means of pivotally-connected handles which extend from the receptacle, and wherein water in the body-receptacle is heated from the influence of fire in contact with its bottom, which is made in a furnace removably attached to the machine, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, B represents the wood sides of the body-receptacle, connected together at the ends by means of the cross-rails D.

D' and B' represent a metallic appendage thereto, the two parts B and B' forming what is termed the "body-receptacle."

H is a metallic partition fixed in said receptacle between the sides thereof, with its center portion near the bottom of the receptacle and its end portions curved up and connected to the cross-rails D D', as shown in Fig. 2, and O O O are perforations or openings through said partition to permit water, steam, &c., to

pass freely from one part of the receptacle to the other.

W W is a pair of side rails curved at either end to conform to the form of partition H, which are removably seated adjacent the sides of the receptacle, resting on said partition, and c<sup>2</sup> is a series of cross-bars fixed at their ends in said side rails W at intervals along their length and a distance from the partition H, as shown in Figs. 2 and 3.

P P is a pair of posts fixed to the sides B of the receptacle, as shown in Fig. 1, and are each provided with a slot or groove V, facing each other and extend down to the inner walls of sides B, as shown in Fig. 2.

S represents the machine-standards, which are secured to the sides B and support the machine, as shown in Fig. 1.

a a is a pair of handles having the connecting cross-roads a', a<sup>2</sup>, and a<sup>3</sup> and the pivotal cross-rod d, which rod extends at either end from the handles and has said extending ends arranged in the grooves V, respectively, and thus forms a pivotal bearing, from which the handles are operated, and Z Z are extensions of handles a a and of thinner material, which extend into the body-receptacle adjacent the sides thereof—one at either side.

R and R' are roller-rubbers, each consisting of two circular heads c c and a series of equidistant cross-bars c', which cross-bars correspond in form and distance apart with those of the receptacle, and are coupled together at each end by means of two thin metallic links pivoted to their axis and also to the end of the handle-extensions z, as shown in Figs. 2 and 3, whereby they are adapted to be given motion to traverse the bed in the receptacle formed by the side rails W and cross-bars c<sup>2</sup> by means of operating the handles a a on their pivotal rod d to give a swinging motion to their extending arms Z Z, and by reason of each roll having independent links they are adapted to independently adjust themselves to the various inclinations over which they are subject to travel.

L and L' are lids, respectively and removably hinged to cross-rails D and D'—one



either way from posts P—as a cover for the receptacle when in use, and  $h$   $h'$  represent the hinges of said lids, the two parts of which will unhook and separate when the lids are raised to a vertical position, so the lids may be removed, and  $e$  is a center lid hinged to lid L at one edge, so as to swing between posts P P, and is adapted to rest with its opposite edge on lid L' when the handles  $a$   $a$  and roller-rubbers are removed, and is for the purpose of closing the space between said posts when heating water or boiling clothes.

E represents a furnace of the same rectangular form in horizontal section as the body-receptacle, and is provided at either side with a pair of upwardly-extending arms S', and is held in contact with the under surface of appendage B' of the machine by means of thumb-screws  $t$  or their equivalent, which are entered through holes in the upper end of said arms and into the sides B of the machine, and thus removably secure the said furnace to the machine.

G is the furnace-grate, which may be arranged with its bars extending either way to accommodate both wood or coal.

G' is the combustion-chamber above said grate, and communicates with the broad flue E', leading under the machine receptacle to the rear, where it communicates with up-leading exit-flue F, as shown, and G<sup>2</sup> is the ash-pit below said grate.

J represents a front fuel-door opening into the combustion-chamber, and J' a similar door opening to the ash-pit for giving draft to the furnace, removing ashes, &c.

As a means of drawing off water from the machine, the appendage B' of the receptacle is provided with an exit-hole at one end at its bottom part, covered with a removable screw-cap, (shown at  $g$ ,) which when the cap is removed will permit all the water in the machine to flow out, and when in place will retain the water in the receptacle.

In use the lids are first opened or removed, as are also the handles  $a$   $a$  with their attached roller-rubbers R R'. Water is then placed in the body-receptacle from the top, from whence it flows through perforations O, thus entering into both parts B and B' of the receptacle and in contact with the entire bottom surface of appendage B', and in a sufficient quantity to submerge the lower portion of the series of cross-bars  $c^2$ . Fire is then made in the furnace, and the influence of the heat therefrom heats the water in the receptacle and keeps it hot during the entire use of the machine. During the time of heating the lids may be adjusted over the receptacle to retain the generating heat and steam, and thereby heat the water in less time than otherwise. After the water has become hot the lids are opened, and the articles to be washed are placed in the receptacle upon the cross-bars  $c^2$ , which support them off the recepta-

cle-bottom, so as not to permit them to come in direct contact with the heated bottom, where they would be liable to burn. When all desired articles are thus placed in the roller-rubbers and handles are again adjusted to their place, where the said rolls will rest upon the articles partially submerged in water, and by means of working the outer end of the handles up and down their connected rolls are caused to traverse the submerged articles, operating in conjunction with cross-bars  $c^2$ , and thus rubbing the articles, agitating the water and air, and thus by means of such rubbing and agitation action the dirt is loosened and removed from the articles and taken up by the water. At the same time the generating steam from the receptacle appendage is seeking its way up through the center perforation  $o$  and pouring through the upper of said perforations above the articles, and thus they are submerged in both hot water and steam, which intense heat quickens the loosening and removal of dirt, and consequently saves much hard labor in washing. After the clothes are washed the water is run off through the exit-hole, as described, and clean water may be put into the receptacle, the fire removed, and the clothes replaced therein and rinsed, saving the use of other receptacles. If desired, for the purpose of repairing the machine or the like, the furnace may be detached and removed from the remainder of the machine, and, further, when the furnace is removed other heat, such as is generated from oil or gasoline burners, may be used in its stead.

It is intended that the curved side rails W W and cross-bars  $c^2$  shall be firmly secured together, so that they may be lifted out from the receptacle for the purpose of access to the partition H in cleaning or repairing the machine.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. In the washing-machine described, the combination, with the body-receptacle B B', provided with the perforated cross-partition H, curved upward at either end thereof, and the bed consisting of the curved side rails W W and cross-bars  $c^2$  and the grooved side posts P P, of the pivotal handles  $a$   $a$ , provided with extensions Z Z, reaching down into the receptacle, the rubbers R and R', consisting of the heads  $c$   $c$  and cross-bars  $c'$ , and the links Z' Z<sup>2</sup>, respectively and independently coupling said rubber with the said handles, whereby the said rubbers are adapted to traverse said bed and independently adjust themselves to the various inclinations thereof, in the manner substantially as and for the purpose specified.

2. In the washing-machine described, the combination, with the body-receptacle B B', provided with the perforated cross-partition H,



the bed consisting of the series of equidistant supported cross-bars  $c^2$  and the grooved side posts  $P P'$ , and the screw-capped exit-hole  $g$ , of the handles  $a a$ , provided with the pivotal  
5 rod  $d$ , entered at either end in the grooves of said posts, and the extensions  $Z Z$ , projecting into the receptacle adjacent the sides thereof, the rubbers  $R R'$ , the links  $Z' Z^2$ , respectively

and pivotally connecting said rubbers with said handles, and the removable lids  $L, L'$ , 10 and  $e$ , substantially as and for the purpose specified.

JOHN H. LOWREY.

Witnesses:

JOHN F. BRANDEN,  
J. B. HARRIS.