R. TALMADGE.

WASHING-MACHINE.

No. 190,386. Patented May 1, 1877.

Fig. 1.

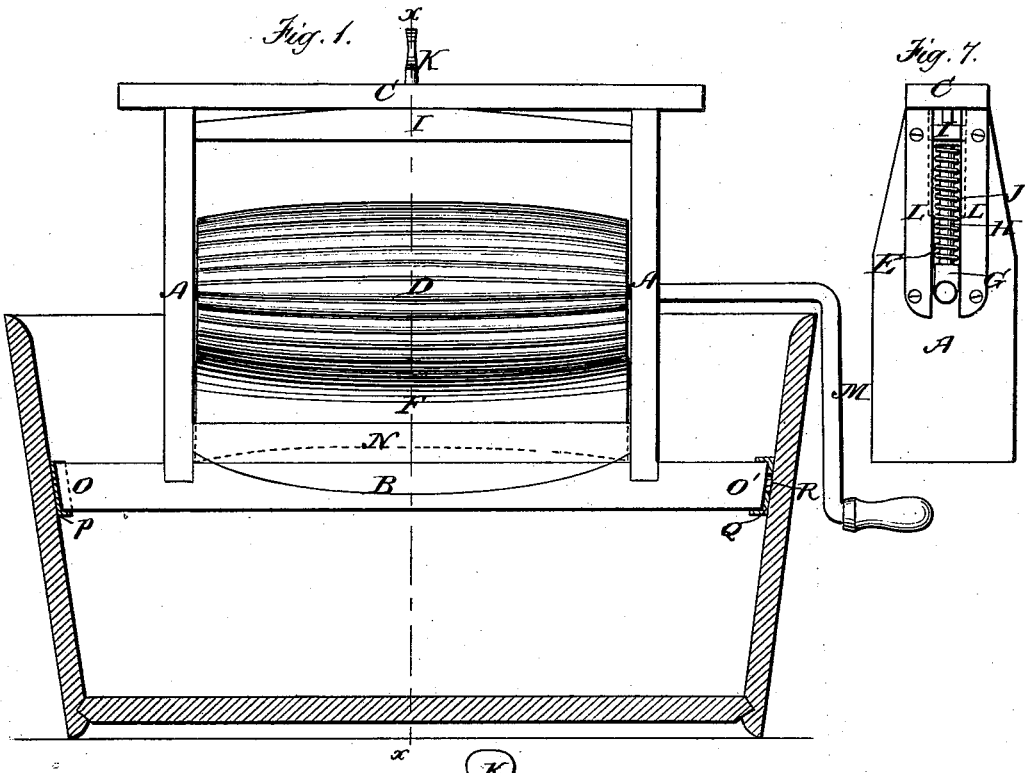


Fig. 7.

Fig. 2.

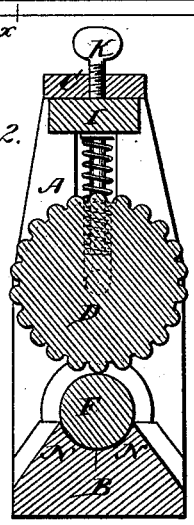


Fig. 3.

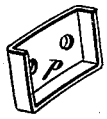


Fig. 4.

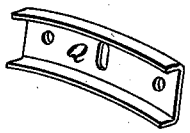


Fig. 5.

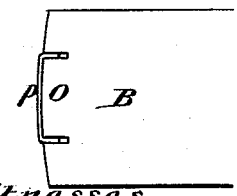
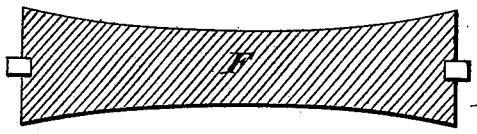


Fig. 6.



Witnesses.
C. T. Brown.
E. S. Karner.

Inventor
Robt. Talmadge
by his Attys.
Hill & Ellsworth

UNITED STATES PATENT OFFICE.

ROBERT TALMADGE, OF COSHOCTON, OHIO.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **190,386**, dated May 1, 1877; application filed October 20, 1874.

To all whom it may concern:

Be it known that I, ROBERT TALMADGE, of Coshocton, in the county of Coshocton and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a section through line *x x*, Fig. 1; Figs. 3 and 4, views of the devices for attaching the machine to the tub; Fig. 5, a top view of one end of the base of the frame, showing its application to one of the sockets; Fig. 6, a longitudinal section of the lower roll, and Fig. 7 an end view of one of the uprights.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention has for its object to improve the construction and efficiency of washing-machines; and to this end it consists in a fluted convex roller, combined with a smooth concave roller in such a manner that the clothes to be washed are acted upon with a yielding pressure, and as they pass between the rollers are subjected to a rubbing action, and drawn toward the centers of such rollers, to prevent the clogging of the machine.

In the accompanying drawings, A A are the uprights, B the base, and C the top cross-piece, of the roller-frame, constructed in any preferred manner of wood or metal. D is a large convex fluted roller, having its bearings in the base of slots E E, formed in the uprights A, and F is a small concave roller, having its bearings also in the uprights, and arranged beneath the fluted roller, so as to receive the pressure thereof.

G G are half-boxes, fitting the tops of the fluted roller-journals, and provided with stems H, which extend upward through a pressure-bar, I, and the cap-piece of the frame.

The stems are surrounded by helical or spiral springs J, between the pressure-bar and top piece, and the pressure-bar is operated to increase or decrease the tension of the springs, and, therefore, adjust the pressure of the roller by means of the thumb-screw K, as shown.

L L are metal plates secured to the outer face of the uprights, so as to slightly overlap the edges of the slots, for the purpose of holding the half-boxes in place, and preventing the roller-journals from wearing the slots.

One of the journals of the fluted roller is extended to form the crank M, for operating the machine, as shown in the drawings; or the crank may be made separate, and attached to one of the journals, as preferred.

N N are concave bars or blocks interposed between the concave roller and base of the frame, for the purpose of guiding the clothes between the rollers, and preventing them from being carried around and wound about the lower roller.

The machine thus constructed is attached to an ordinary wash-tub in the following manner:

The base of the frame is provided with a tenon, O, on one end, adapted to fit within a socket, *p*, secured to the inside of the tub, and this socket is formed with a bottom and two side flanges for holding the tenon in place. Q is a second flanged socket, attached to the inside of the tub, to receive and support the opposite end O′ of the base-piece, and R is a stud or pin driven into the end of the base-piece, and adapted to fit within the vertical slot of the socket Q. In introducing the frame into the tub the end O′ of the base-piece is first inserted within its socket and held below the opposite end. The latter is then introduced within its socket and pressed down into place, as shown, the vertical slot in which the pin works allowing this movement to be easily accomplished.

When the machine is in operation the clothes are passed between the two rollers, and since the diameters of each are varied the lower concave roller acts as a guide or support for the clothes, while the upper fluted roller operates upon them with a rubbing action similar to that produced by rubbing the clothes upon the common corrugated hand-board. The degree of pressure with which the upper roller shall bear upon the clothes is regulated by adjusting the pressure of the springs, as above described. By this means the clothes are thoroughly washed, and cleansed with but little expenditure of time and labor.

The concave and convex forms given to the two rollers tend to draw the clothes toward the centers of each, and therefore prevent them from being carried to the sides or uprights of the frame to clog the machine.

This tendency of the clothes toward the centers of the rollers is assisted materially by the weight of the former, as will be readily understood.

I am aware that it is not new to flute the rollers of a washing-machine, and I am also aware that a machine has been made with rollers having a convex surface, for the purpose of carrying a band on which the clothes were moved along. My invention therefore is an improvement, in which a fluted convex roller acts in conjunction with a smooth concave roller. The fluting in this construction assists in carrying the clothes along, and the convex form of the carrier draws them from the ends of the roller toward the center. The construction is a simple and cheap one, and operates, as has been found in practice, effectively, and without the tendency to clog against the sides.

I claim as my invention—

In a washing-machine, the combination of an upper convex fluted roller, D, and a lower smooth concave roller, F, substantially as described, for the purposes specified.

ROBERT TALMADGE.

Witnesses:

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