

(No Model.)

F. M. WEBSTER.
WASHING MACHINE.

No. 477,162.

Patented June 14, 1892.

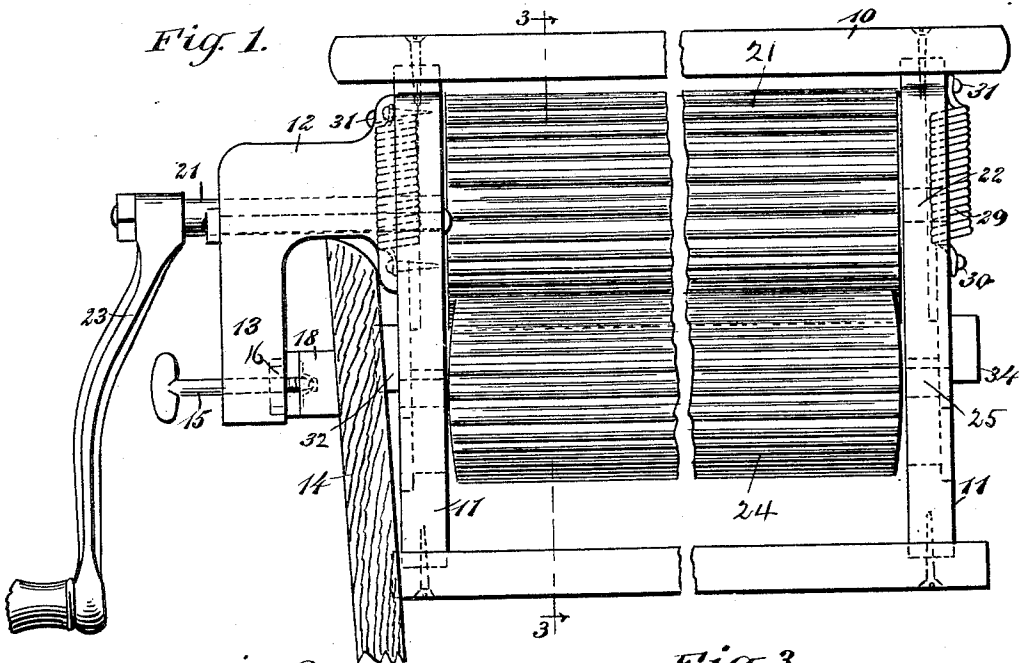


Fig. 2.

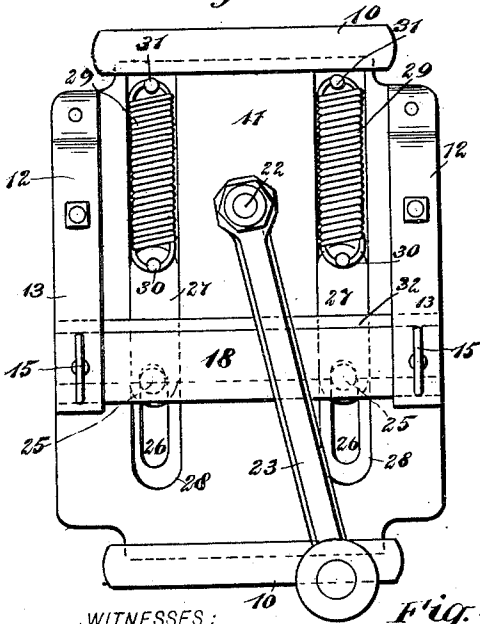
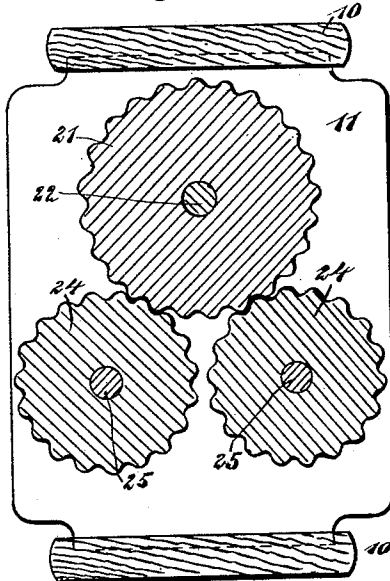


Fig. 3.



WITNESSES:

J. A. Griswell.
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Fig. 4.

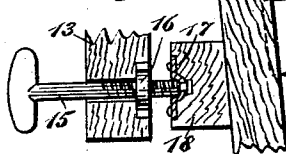
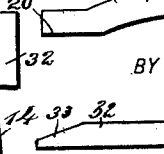


Fig. 5.



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FREDRICK M. WEBSTER, OF SOMERVILLE, MASSACHUSETTS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 477,162, dated June 14, 1892.

Application filed December 19, 1891. Serial No. 415,645. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK M. WEBSTER, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

My invention relates to improvements in machines for washing clothes; and the object is to produce a simple, durable, and cheap machine which may be conveniently applied to either a set or a portable washtub, which is adapted to operate in a way to keep the clothes well covered with suds, and which will rapidly and cleanly wash the clothes without injuring them.

To this end my invention consists in a washing-machine the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken side elevation of the machine embodying my invention, showing it applied to a tub. Fig. 2 is an end view of the machine. Fig. 3 is a cross-section on the line 3 3 in Fig. 1. Fig. 4 is a broken detail sectional plan of the clamping mechanism, and Fig. 5 is a broken detail plan of the clamping-jaws.

The machine is provided with an essentially rectangular frame having top and bottom pieces 10, which are united by wider end pieces 11, and secured to the outer side of one end piece, near the top, are outwardly-extending arms 12, the outer portions of which are bent downward, as shown at 13 in Fig. 1, thus forming recesses adapted to receive the side of a tub 14. In the lower portion of each arm and extending transversely through the part 13 is a thumb-screw 15, which turns in a nut 16, carried by the arm, as shown in Fig. 4, and which is journaled in a socket 17 of the outer clamping-jaw 18, which jaw extends nearly parallel with the side of the tub and is held by the two arms, as described. The jaw 18 has a concaved central portion, as shown at 19 in Fig. 5, so that it may fit a round or a portable tube, and it has nearly flat end portions 20 to adapt it

for attachment to a set tub, which usually has a flat side.

Mounted in the upper portion of the frame 10 is a corrugated roller 21, which roller is secured to a shaft 22, journaled in the frame, the shaft extending outward through one end of the frame and carrying a crank 23, by means of which it and the roller may be revolved. The roller 21 meshes with two smaller rollers 24, which are also corrugated and which are arranged one in front of the other, as shown in Fig. 3, the rollers 24 being fixed to the shafts 25, which extend through the end pieces 11 and move in vertical slots 26 in the same, the ends of said shafts being journaled in metallic strips 27, which are held to slide in grooves 28 in the end pieces 11 of the frame, the strips 27 being normally drawn upward by spiral springs 29, which are held in the grooves 28, the springs having their lower ends secured to studs 30 on the strips 27 and their upper ends secured to similar studs 31 on the upper part of the end pieces 11. It will thus be seen that the springs will serve to hold the rollers 24 in close contact with the roller 21, and the latter will serve as a driving gear-wheel, so as to revolve the smaller rollers 24. It will also be seen that as each roller 24 has independent bearings the rollers will yield separately when a wrinkled or heavy piece of clothing passes over them, and either end may move in relation to the opposite end of the roller. This makes the machine perfectly adjustable, so that it will wash very light or very heavy fabrics with equal ease and nicety. The sliding strips 27, which carry the lower rollers, are held in place by cross-strips 32 and 34, which are secured to the opposite ends of the frame 10, the strip 32 serving as one of the clamping-jaws, and said strip is straight for a greater part of its length, so that it may fit a stationary or flat-sided tub; but it has beveled ends 33, as shown in Fig. 5, which enable it to fit a portable or round tub equally well.

It will be noticed that the fastening or clamping attachment of this machine is at one end, and consequently the machine may be quickly applied to a tub, and the peculiar form of fastening enables it to set well down into the tub, so that while the clothes are be-

ing washed they will be well covered with suds.

The operation of the machine is as follows: The crank 23 is revolved, so as to revolve the several rollers, and it will be seen that the upper roller will turn in the opposite direction to the lower rollers, and the clothing in the tub is raised piece by piece and put between the rollers. As the clothing is drawn between the upper and lower rollers the crank 23 may be oscillated, so as to work the rollers backward and forward and give the clothing the necessary amount of rubbing and squeezing, which is effected by the corrugations of the rollers.

I am aware that it is not new to provide a machine with corrugated and meshing rollers, and I am also aware that it is not new to provide the upper or lower of said rollers with spring-bearings, and I do not claim these features as my invention.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

A washing-machine comprising an open rectangular frame having parallel vertical slots 26 in its end pieces 11, slides 27, mounted in ways in the outer faces of said end pieces over the slots, spiral springs 29, drawing the slides upward, two rollers the journals or shafts of which extend through said slots and are mounted in the lower ends of the slides, a third roller above and intermediate of the said two rollers and provided with an operating-crank, and means for securing the said frame in a tub, substantially as set forth.

FREDRICK M. WEBSTER.

Witnesses:

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