(No Model.)

T. MAITLAND.

CLOTHES POUNDER.

No. 408,311. Patented Aug. 6, 1889.

Fig. 1.

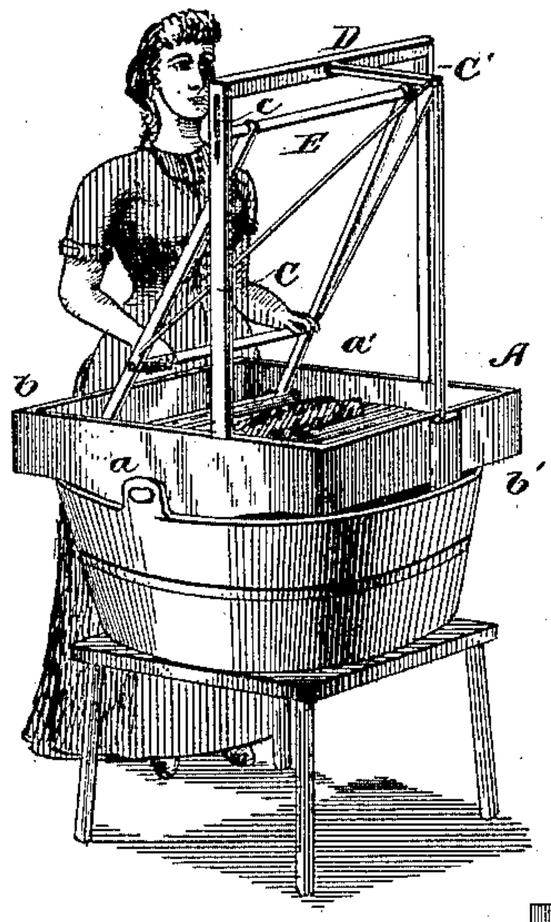


Fig. 2.

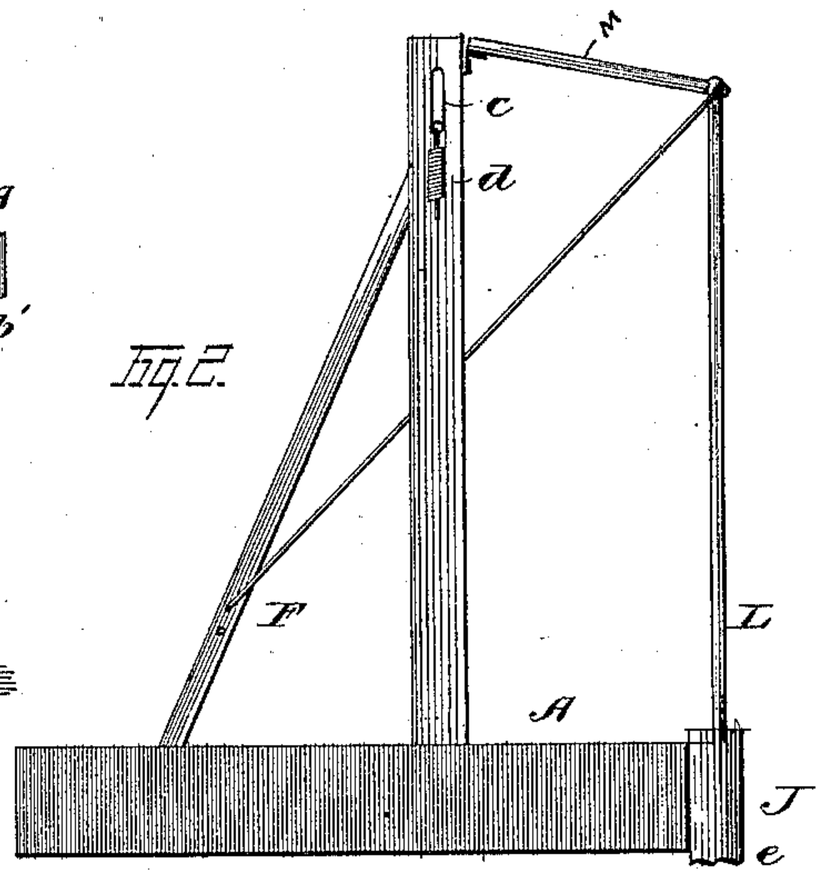
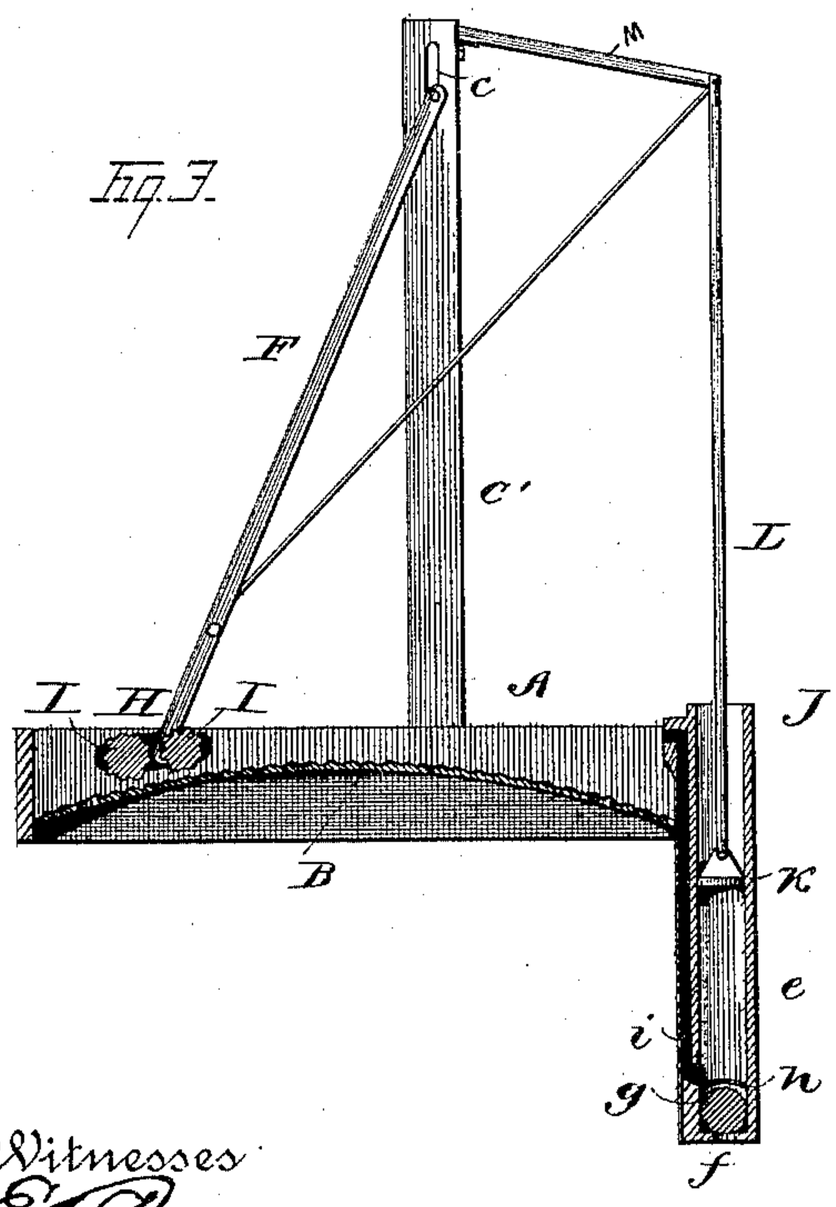


Fig. 3.



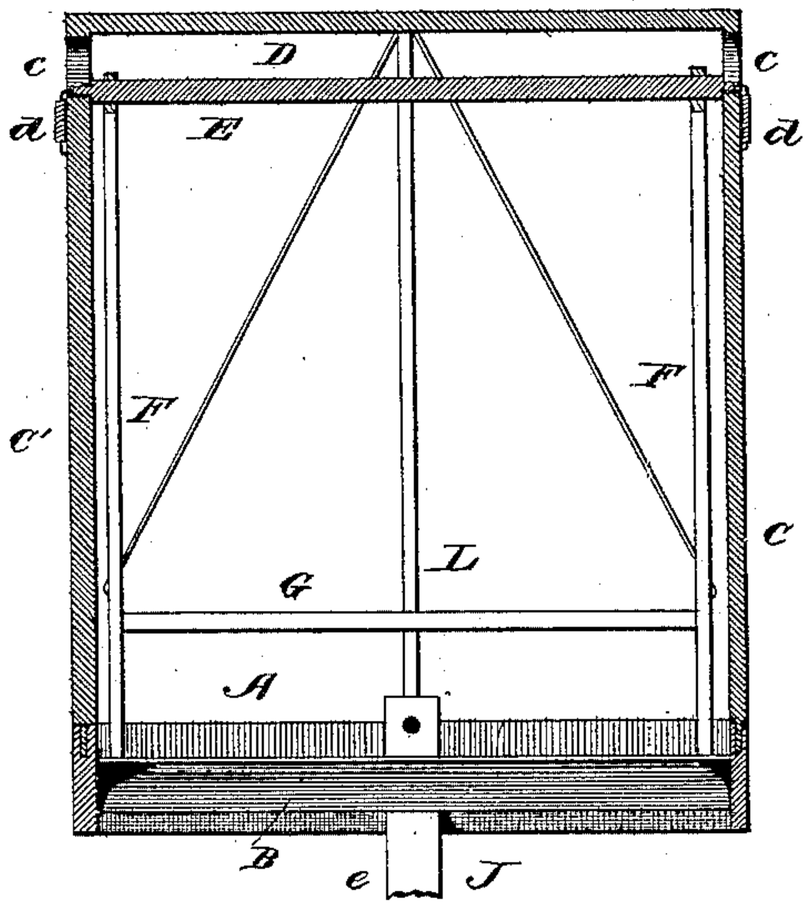


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS MAITLAND, OF WILLIAMSPORT, PENNSYLVANIA.

CLOTHES-POUNDER.

SPECIFICATION forming part of Letters Patent No. 408,311, dated August 6, 1889.

Application filed April 27, 1889. Serial No. 308,811. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MAITLAND, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to various new and useful improvements in washing-machines, as will be more fully hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved washing-machine, showing the same arranged with the pump thereon; Fig. 2, a side elevation of the same; Fig. 3, a longitudinal sectional view of the same, and Fig. 4 a cross-sectional view.

In all the views the corresponding parts of the machine are designated by identical letters of reference.

The body A is made, preferably, rectangular in shape and of proper dimensions to enable it to sit firmly and evenly over the ordinary wash or "set" tubs now in universal use. The bottom B of this body is formed with a slight convex curve, for reasons hereinafter explained, and is made with a corrugated or serrated surface, as shown. This bottom is provided with suitable holes or openings, through which the water may flow back to the wash-tub. Extending directly upward from the center of the sides *a a* are the posts or stanchions C C′, connected at their extreme upper ends by means of a suitable strip D, thereby forming a very light, strong, and rigid frame-work. Mounted in suitable slots *c c*, one in each of said side posts C C′, is a shaft or swing-bar E, capable of a semi-rotatable movement in said slots. A long vertical rocker-arm F is rigidly secured to this shaft or swing-bar E near each end thereof, and these two rocker-arms F F are connected together near their lower extremities by means of a cross-bar G. This cross-bar G also serves as a very convenient handle, by which the said rocker-arms F F may be moved back and forth by the operator. At the lower end of the said rocker-arms F are mounted one or more corrugated rollers, as was before briefly mentioned. In the drawings I have shown an arrangement of two of such corrugated rollers, and this number and this particular arrangement I regard as preferable, and it will now be described. To the lower extremity of each rocker-arm F is pivoted a short horizontal bar H, and connecting the corresponding ends of such bars are the rollers I I, made with a corrugated, serrated, or fluted surface in any suitable manner and of any suitable material, such as wood, rubber, &c. By the arrangement just described of placing these rollers in position it will be apparent that the said rollers will be capable of a certain amount of pivotal movement with relation to the rocker-arms F. In order that said rollers may be always kept normally in contact with the before-mentioned corrugated bottom, I make use of two coil-springs *d d*, one attached to each extreme end of the swing-bar E, and tending to exert a constant downward pressure on such swing-bar.

At one end of the body A is rigidly mounted a pump J, constructed as follows: The barrel *e* is made, preferably, cylindrical, as shown, and of any suitable material. At the extreme lower end thereof is an opening *f*, and engaging therewith is a ball-valve *g*, made, preferably, of some non-floatable material, such as metal. The upward movement of this ball-valve is limited by means of an ordinary cage *h*, so that the ball will not be drawn entirely up through the pump-barrel by the upward motion of the piston. Instead of this ball-valve, any other convenient and usual form of valve may be substituted. A suitable water-passage *i* extends from a point near the lower end of the pump-barrel directly through the end wall of the body A and opens into the interior of said body somewhat above the location of the corrugated bottom. The piston K, which works within the barrel *e*, is of the "solid" variety and is pivoted to the extreme lower end of the piston-rod L. This piston-rod L is in turn attached to the end of the horizontal throw-arm M, and this latter arm is hinged to the center of the connecting-piece D, as clearly

shown in the drawings. Connection between the upper end of the piston-rod L and the throw-arm M is by means of a long pivoting-pin. The ends of this pivoting-pin continue obliquely downward, so as to form braces, and these braces are secured one to each of the rocker-arms F F.

In such a machine as I have just described the operation is as follows: The machine is placed directly over the wash-tub, with the lower portion of the pump-barrel immersed in the water. Whatever clothes are to be cleaned are now placed on the corrugated bottom B with a suitable piece of soap or saponaceous substance, and the corrugated, serrated, or fluted rollers are moved back and forth over them by the operator, the cross-bar G being used as an operating-handle. The backward and forward movement of the rocker-arms F will tend to move the braces up and down, and these motions will be communicated to the piston-rod L, which will be moved similarly. As the piston K ascends it will be evident that a certain amount of water will be drawn up with it. As it descends this water will be forced up through the passage *i* and will flow upon and thoroughly saturate the clothes upon the corrugated bottom, after which it will flow out through the openings in said bottom and reenter the tub. The backward and forward scrubbing movement of the corrugated roller or rollers against the clothes, together with the intermittent flow of water thereon, tends to make a very efficient machine and one in which the clothes will be very quickly and thoroughly cleaned.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

In a washing-machine, the combination of a body having a corrugated bottom, a frame mounted above said body, a pair of rocker-arms carrying rollers and pivotally mounted in said frame, a throw-arm M, hinged to said frame, a piston-rod L, pivoted to said throw-arm and actuating a pump J, and connecting-rods connecting said throw-arm with said rocker-arms.

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

THOMAS MAITLAND.

Witnesses:
J. B. DENWORTH,
JNO. M. LAUX.