

T. E. MATTHEWS.
Washing-Machine.

No. 217,700.

Patented July 22, 1879.

Fig. 1.

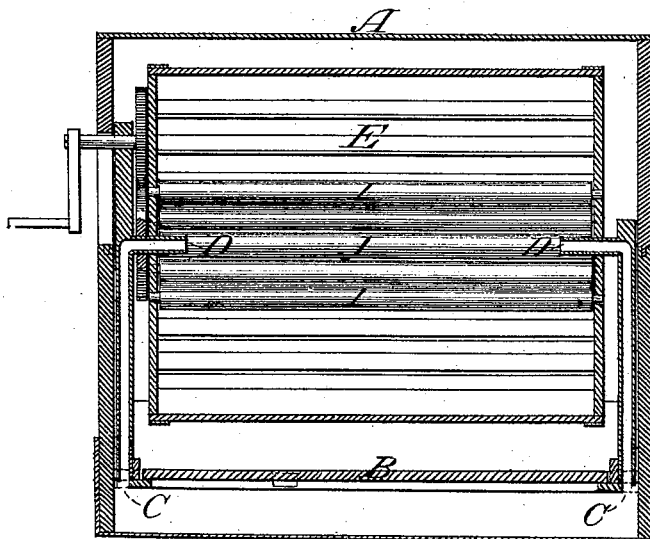


Fig. 3.

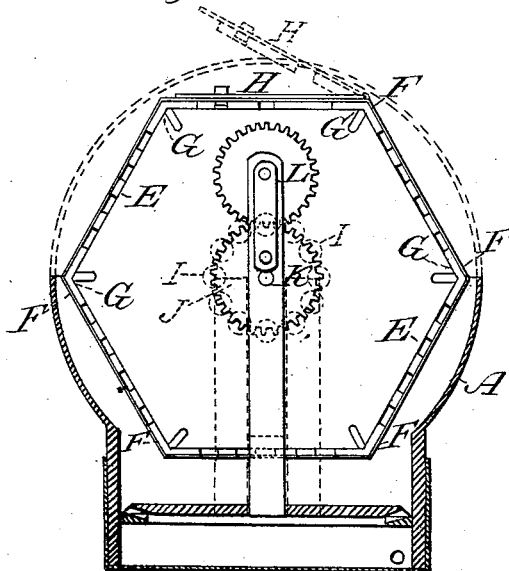
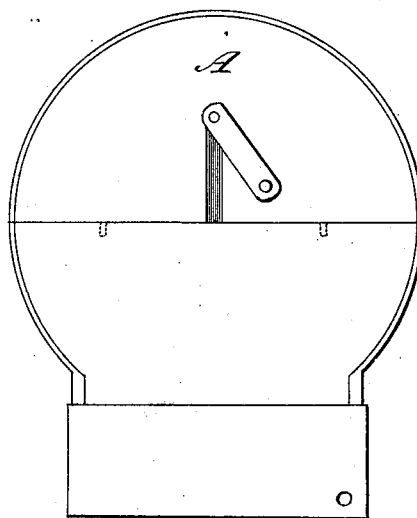


Fig. 2.



Attest:

M. C. Forbes.

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Inventor:

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UNITED STATES PATENT OFFICE

THOMAS E. MATTHEWS, OF WINCHESTER, TENNESSEE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **217,700**, dated July 22, 1879; application filed May 1, 1879.

To all whom it may concern:

Be it known that I, THOMAS E. MATTHEWS, of the town of Winchester, county of Franklin, and State of Tennessee, have made certain new and useful Improvements in Machines for Washing and Cleansing Clothes; 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, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a longitudinal vertical section; Fig. 2, an end view of the machine, on which is applied the crank. Fig. 3 is an end view of the revolving cylinder.

Similar letters of reference denote corresponding parts in all the figures.

This invention relates to certain improvements in machines for washing and cleansing clothes, whereby steam is made to act a very important part and is utilized in the most effective manner possible; and it consists of a rotating cylinder, in combination with a boiling apparatus and steam-pipes, all constructed and arranged to operate in the manner which I shall now proceed more fully to describe.

Referring to the drawings hereto annexed, A is the arrangement for boiling water, which is to be boiled by resting on a stove or furnace, and is made of either metal, wood, or both, of any size or shape. Above the metal bottom a short distance is a rim or bearing, on which rests a second or false bottom, B, and held so by any suitable means. At each end of the boiler A there is a pipe or steam-conductor, C C, which communicates with the space between the false and metal bottoms. These conductors C C are not fastened rigidly to the box or boiler A, but are firmly held in position by sliding down from the top into a groove, thus enabling them to be easily removed. At a suitable distance from the bottom of these conductors C C there are rigidly attached short horizontal pipes D D, with their openings intersecting with the opening of the steam-conductors C C. These pipes D D are of sufficient length and strength to form suitable bearings, on which the rotating cylinder is hung. Thus the conductors C C and pipes D D are acting in two capacities—conducting steam and form-

ing bearings for the cylinder—and are so arranged in the grooves that the cylinder can be readily removed from the box or boiler A.

It will here be observed that the cylinder E is not made round, but is a hexagon in shape, and that at each angle two slats or bars, F, wider than any others, are joined together, forming a kind of bucket, G, which, as the cylinder rotates, will lift water from the bottom, and as it nears the top dash it over the clothes.

The cylinder E is made of any suitable material, and its ends and outside bars or slats are all rigidly fastened together, except a cover, H, which is hinged to one side, and is opened and closed as desired. Near the center of the cylinder E is arranged a series of rolling pins, I I, secured in a circle by the journals of the pins entering the heads or ends of the cylinder E, thus forming a small round cylinder, J, within the larger one, E.

In order to rotate the cylinder E, a cog-wheel, K, is firmly secured to one end of the cylinder E, and through this cog-wheel the pipes and bearings D must pass; and meshing into the cog-wheel K is another one, L, to which a crank is attached and motion is communicated.

In operating the machine, soap and water are first put into the boiler A. The cylinder E and conductors C C are then adjusted and the clothes put within the cylinder E. As the water boils it is forced by expansion up the conductors C C, and through the pipes D D into the small cylinder, J, where it is necessarily divided and forced in all directions by the rolling pins I I. Then, as the cylinder E rotates, the buckets G lift and dash water over the clothes, which, in connection with steam and water from the small cylinder, J, produces a most thorough and complete agitation of steam and water, while the shape of the cylinder E raises the clothes to a higher point than a round cylinder, and throws them onto the small cylinder, J, where they are brought into the closest possible contact with steam and water from the conductors C C, and at the same time the water from the buckets G is being forcibly dashed from above over the clothes, and thus from the two forces is produced a most thorough and complete cleansing operation, while the rolling pins I I prevent the

clothes from winding around the center cylinder.

I am aware that a false bottom is not new. I am also aware that a rotating cylinder is not new, and am aware that a boiler having a false bottom, substantially as described, has been used in combination with a rotating cylinder containing the clothes, and also in combination with steam-conductors on the outside of the cylinder; but it will be seen that mine is essentially different from all these, as I convey the steam and water directly to the center of the cylinder, where it is not obstructed by the outside bars and centrifugal force of the rotating cylinder, but, on the contrary, all these forces act in harmony to force the steam and water through the clothes.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination, with the boiler A, of the hexagonal cylinder E, provided with buckets G, steam-conductors C C, and pipes D D, and small cylinder J, constructed with rolling pins I I, all constructed and operating substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I hereto affix my signature in the presence of two witnesses.

THOMAS E. MATTHEWS. [L. S.]

Witnesses:

M. C. FORBES,
H. S. PALMER.