H. E. SMITH.

WASHING-MACHINE.

No. 183,717. Patented Oct. 24, 1876.

Fig. 1.

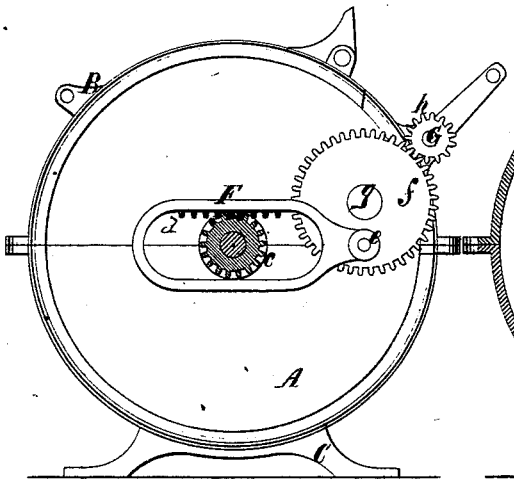


Fig. 2.

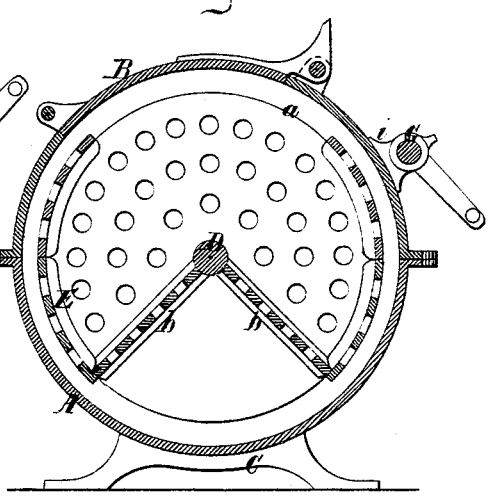
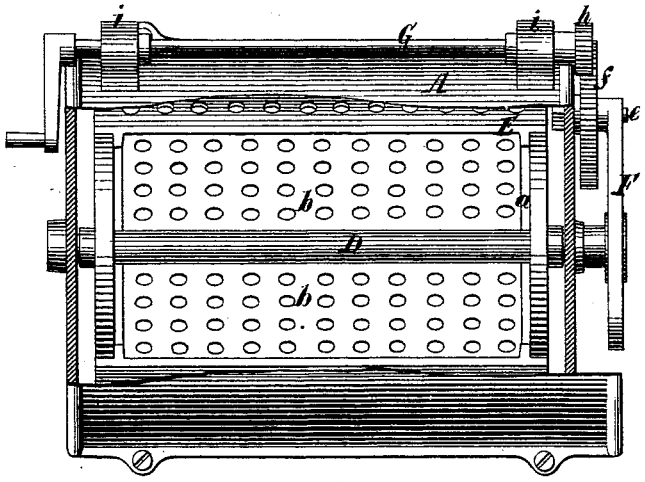


Fig. 3.



Witnesses.

Otto Schufeldt.

Robt. E. Miller.

Inventor.

Hamilton E Smith

per

Van Santvoord & Hauff

Attorneys

UNITED STATES PATENT OFFICE.

HAMILTON E. SMITH, OF NEW YORK, N. Y.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **183,717**, dated October 24, 1876; application filed April 27, 1876.

To all whom it may concern:

Be it known that I, HAMILTON E. SMITH, of the city, county, and State of New York, have invented a new and useful Improvement in Washing-Machines, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents an end view. Fig. 2 is a transverse vertical section. Fig. 3 is a plan or top view, partly in section.

Similar letters indicate corresponding parts.

This invention relates to an improvement in that class of washing-machines which consists of a cylindrical jacket for holding the water or soap-suds, and of a perforated drum, which is intended to receive the clothes to be washed, and to which an oscillating motion is imparted in the suds-jacket—such, for instance, as is described in my Patent No. 175,185, dated March 21, 1876.

My present improvement consists in the arrangement of a radial partition in the perforated clothes-drum, to which an oscillating motion is imparted in the suds-jacket, so that the clothes contained in the perforated drum are alternately dumped from the compartment on one side of the radial partition to that on the other side, and, during this operation, as the clothes are caused to slide over the said radial partition, and, by the combined action of the sliding and dumping, the operation of washing the clothes is materially facilitated, while at the same time all danger of injuring the texture of the clothes is avoided.

In the drawing, the letter A designates a cylindrical jacket, which is, by preference, made of cast-iron in two halves that are connected by bolts and flanges, or in any other desirable manner. A door, B, gives access to the interior of said jacket, which is provided with suitable feet C, on which it rests. The door is so constructed that it can be readily opened and closed.

The heads of the jacket A form the bearings for a shaft, D, on which is mounted the clothes-drum E. This drum is perforated with many holes in its head and in its circumference, so that the suds contained in the jacket have free access to its interior. It is also provided with a large opening, *a*, in its circumference, through which the clothes are introduced. Opposite to this opening is a radial partition, *b*, which, in the example shown by the drawing, is roof-shaped, but which may consist of a single plate with parallel or diverging sides. One end of the shaft D extends through the head of the suds-jacket, and on this end is mounted a pinion, *c*, which meshes into teeth *d* formed on the inside of an oval ring, F, the shank of which is attached to an eccentric wrist-pin, *e*, secured in a cog-wheel, *f*, that turns on a stud, *g*, fastened in the head of the suds-jacket, and engages with a pinion, *h*, mounted on the driving-shaft G. This shaft has its bearings in lugs *i*, cast solid with or otherwise firmly attached to the suds-jacket, and, by turning said shaft, an oscillating motion is imparted to the clothes-drum E.

The clothes to be washed are placed in the compartment on one side of the radial partition *b*, and, as the clothes-drum oscillates, the clothes are caused to slide down over this partition and to drop into the opposite compartment, and so on, until the operation of washing has been completed.

If the radial partition *b* is made roof-shaped, as shown, a comparatively small motion of the drum will cause the clothes to be dumped from one compartment into the other; but if said radial partition consists of a single plate the drum must be turned in either direction about three hundred degrees in order to produce the desired result.

By the combined action of the sliding and dumping motions given to the clothes the operation of washing can be completed in a short time, and, since in my machine all rubbing or pounding of the clothes is avoided, I can wash the finest fabrics without injuring the same.

What I claim as new, and desire to secure by Letters Patent, is—

In a washing-machine composed of a suds-jacket, and of a clothes-drum having an oscillating motion in said suds-jacket, the radial partition *b* in the clothes-drum, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 24th day of April, 1876.

HAMILTON E. SMITH. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.