H. E. Smith & G. F. Speer; Washing Mach.

PATENTED NOV 15 1870

109259

Fig: 1

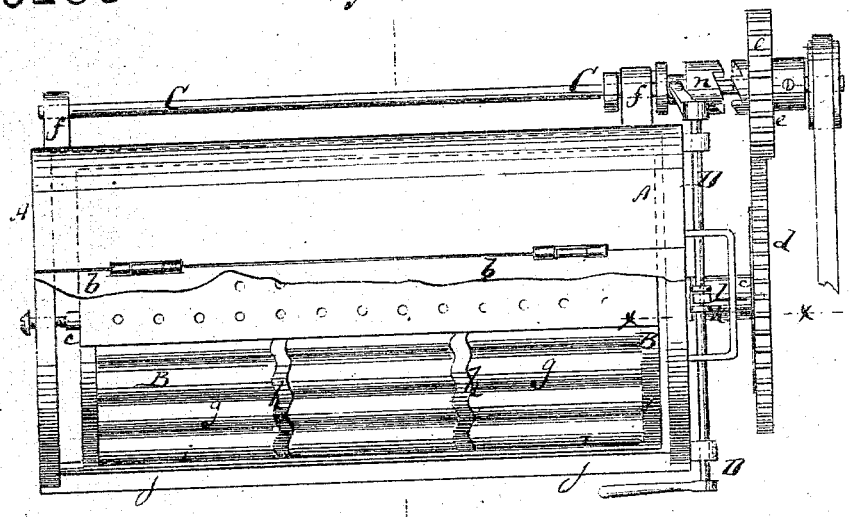


Fig: 2

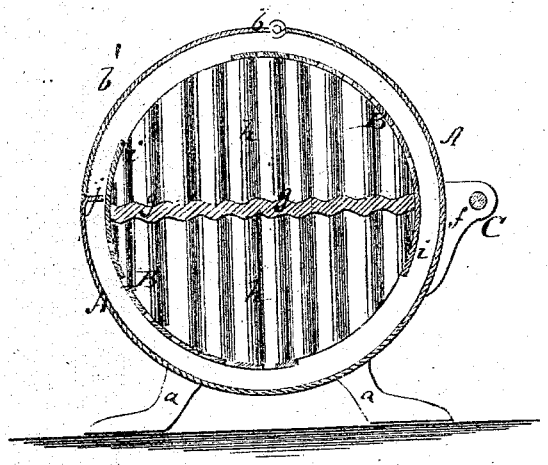
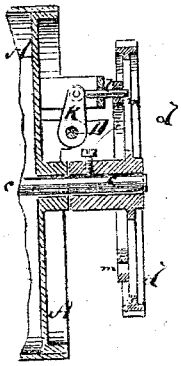


Fig: 3



Witnesses:
Geo. H. Mabee
F. Hockley

Inventor:
H. E. Smith
G. F. Speer
Per Munn & Co
Attorneys.

UNITED STATES PATENT OFFICE

HAMILTON E. SMITH AND GARRET F. SPEER, OF NEW YORK, N. Y., ASSIGNORS TO MARY JANE SMITH, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **109,259**, dated November 15, 1870.

To all whom it may concern:

Be it known that we, HAMILTON E. SMITH and GARRET F. SPEER, of the city of New York, in the county and State of New York, have invented a new and Improved Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 represents a plan or top view, partly in section, of our improved washing-machine. Fig. 2 is a vertical transverse section of the same. Fig. 3 is a detail longitudinal section of the same, taken on the plane of the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new power washing-machine, of that class in which a rotary cylinder is arranged within a cylindrical case.

A in the drawing represents the outer case or shell of our improved washing-machine. It is placed horizontally on feet or standards *a a*, and is provided with a hinged door, *b*, at one side.

Within the shell A is suspended the rotary cylinder B, which is at its ends provided with projecting pins *c c*, that constitute the supporting-axle of the same. The bearings of the axle *c* are in the ends of the shell A.

A toothed wheel, *d*, mounted upon the shaft *c*, meshes into a similar wheel, *e*, on the driving-shaft C, which driving-shaft has its bearings in ears *f*, that project from the shell.

The cylinder B is, by a longitudinal central partition, *g*, divided into two semi-cylindrical compartments, and each of the latter by two (more or less) transverse partitions, *h*, into similar spaces. The partitions *g h* are provided with corrugated or roughened surfaces, and are either perforated or solid. The partition *h* serves to keep the several articles separated, and facilitates the exercise of a perfect control. The cylinder B has a large opening above each side of the partition *g*, which opening may be closed by a door, if desired.

The ledge *i*, projecting from each side of the partition *g*, is not perforated, while the other part of B is perforated to let the water through. The ledge *i* will serve to collect the descending water and cause it to produce a cataract, in which the garments will be properly agitated, but not rolled or crowded together.

The cylinder B fits so closely into the shell A that even if no doors are arranged in it the garments could not fall out of the compartments. An inwardly-projecting rib, *j*, on the shell reaches so close to the cylinder B that it will prevent the water from being forced through the crevices of the door *b*.

In order to bring the openings in the cylinder B in line with the door *b* previous to opening the latter, we have hung a rock-shaft, D, to one end of the shell A. This shaft carries on a crank, K, a projecting pin, *l*, which, when held against the wheel *d* during the rotation of the cylinder, will enter one of two slots, *m*, of said wheel, and thereby arrest the further motion of the cylinder, locking it in the desired position. The same motion of the shaft D serves also to withdraw the clutch *n*, that locks the wheel *e* from the latter, and to thus throw the rotating mechanism out of gear.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of the shell A with the rib *j* and the cylinder B, substantially as and for the purposes herein shown and described.

2. The cylinder B, constructed as described, provided with the partitions *g h*, to form a series of independent compartments, constructed as set forth.

3. The ledge *i*, arranged on each compartment of the cylinder, and made solid, while the remaining side of the cylinder is perforated, as set forth.

4. In combination with the elements of foregoing claims, the rock-shaft D, applied to the shell A, and provided with the pin *l*, for locking the washing-cylinder, and with the clutch *n*, substantially as herein shown and described.

HAMILTON E. SMITH.
GARRET F. SPEER.

Witnesses:
GEO. W. MABEE,
ALEX. F. ROBERTS.