E. SMITH.

WASHING-MACHINE.

No. 187,989. Patented March 6, 1877.

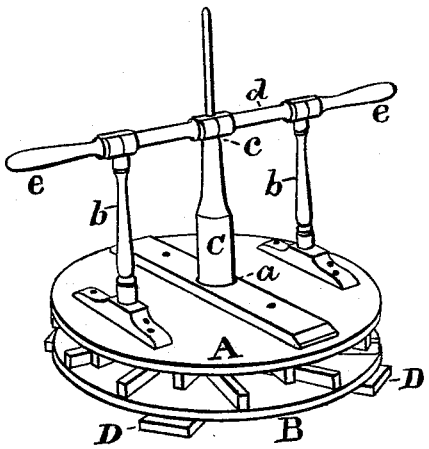
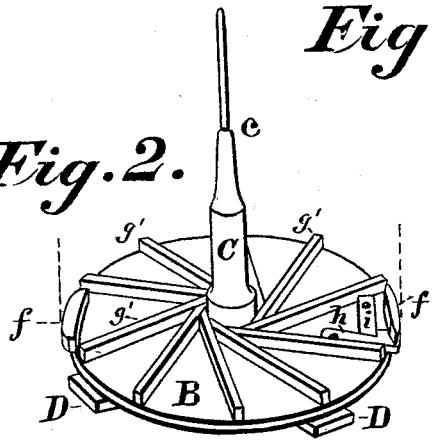


Fig. 1.

Fig. 2.



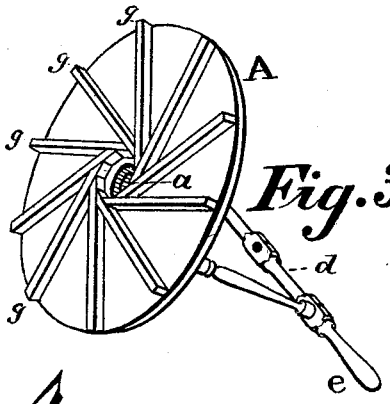


Fig. 3.

Fig. 5.

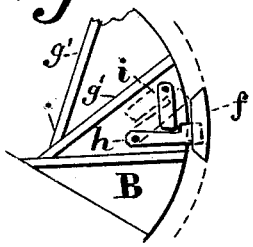
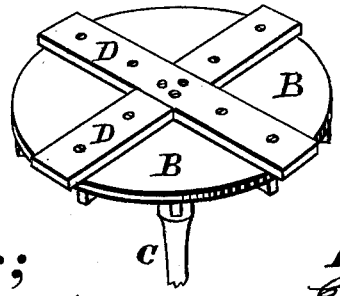


Fig. 4.



Witnesses;

H. A. Daniels,

Granville Lewis.

Inventor;

Edwin Smith

by J. S. Kilbourn

Attorney.

UNITED STATES PATENT OFFICE.

EDWIN SMITH, OF WHITESTOWN, NEW YORK, ASSIGNOR TO CHARLES E. SMITH, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **187,989**, dated March 6, 1877; application filed July 27, 1876.

To all whom it may concern:

Be it known that I, EDWIN SMITH, of Whitestown, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Washing-Machines; 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 which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification, in which said drawing—

Figure 1 is a perspective view of a washing-machine with my improvements. Figs. 2 and 3 represent, in perspective, the two circular cleated disks or plates herein described and their connections. Fig. 4 represents the lower plate inverted. Fig. 5 illustrates the fastening for securing the machine within a tub.

In the construction to which my improvements are applicable, two circular plates or disks are provided and placed one above the other in the wash-tub, a post or fixed spindle projecting upward from the center of the lower plate through an aperture in the upper plate, which is loosely supported in its position by means of a shoulder formed on the spindle, and is operated by means of handles above connecting with it.

In the drawing referred to, A designates the upper and B the lower circular plate, the latter being provided with a fixed spindle, C, projecting upward from the center. The said plate A has an aperture, *a*, in the center, through which the spindle C passes, and has also the posts *b* extending upward, with the horizontal bar *d* fastened to their upper extremities. The said bar *d* has the handles *e*, as shown, and also has an aperture in the center, through which the spindle C passes, a shoulder, *c*, being formed on the spindle, upon which the bar *d* rests, thus loosely supporting the upper plate A.

The lower plate B has firmly fastened to its under side the cross-pieces D, the extremities of which extend somewhat beyond the periphery of the plate B, so that they may be fitted to the interior of the tub, and the machine may thus be adapted to a tub of any ordinary size.

The faces of the plates A and B which are toward each other when the machine is in position are provided with cleats firmly fastened thereto, the upper plate having the cleats *g*, and the lower plate the cleats *g'*. The said cleats, as shown in the drawing, have their inward extremities braced against each other near the center of the plate and extend to its periphery. It will be seen that these cleats *g* and *g'* are not exactly radial, but turn in a diagonal direction outward, those on the plate A turning or inclining in a direction opposite to that of the cleats on the plate B.

The machine is attached to the inner sides of the tub by means of the cleats *f*, fastened to the tub, and the latch or fastening formed of the pieces *h* and *i*, which are pivoted to the lower plate, as shown in Fig. 2. The edge of the lower plate B may be passed under one of the cleats *f*, so that the pivoted piece *h* may be moved under the opposite cleat *f*, and clamped by the pivoted piece *i*, as shown in the drawing.

The cross-pieces D being made rather too long to allow the part B to be placed in a tub, the said pieces D may be shaved off or slightly shortened, according to the size of the tub in which the machine is to be seated.

By these means the machine may be firmly secured within the tub and readily removed therefrom when desired.

In operation, a partially rotary or swaying motion is given to the upper plate A by means of the handles *e* on the horizontal bar *d*.

Having described my invention, I claim—

In a washing-machine, the plate B, with cleats *g'*, and having the fastenings *h i*, in combination with the cleats *f*, as shown and described.

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

EDWIN SMITH.

Witnesses:

W. B. CHANDLER,

C. L. JOHNSON.