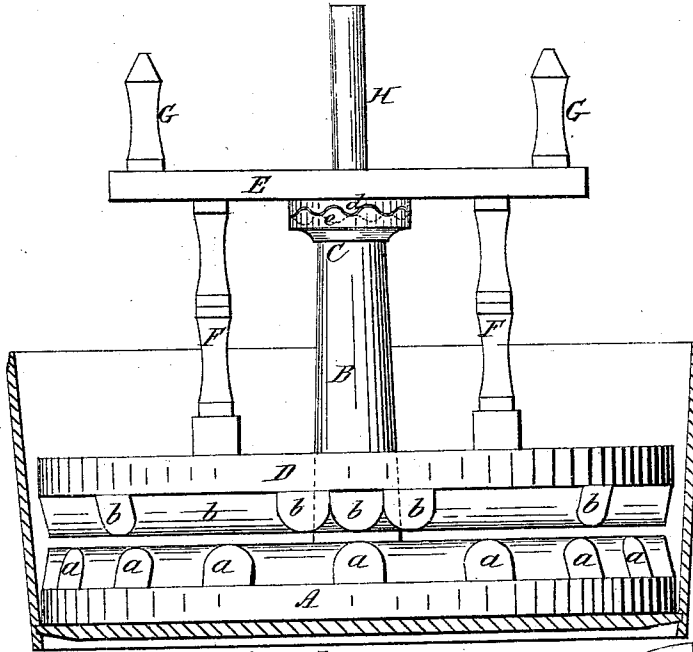


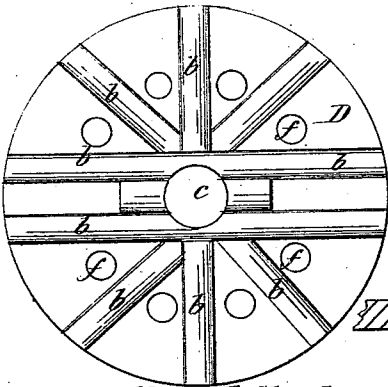
J. Q. WHARTNABY.
Washing-Machines.

No.148,789.

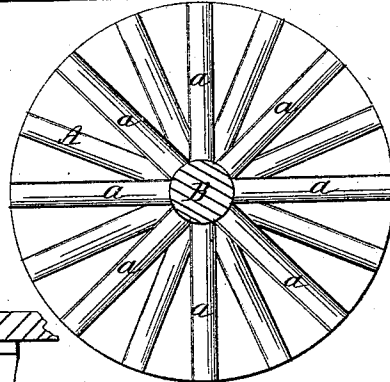
Patented March 17, 1874.



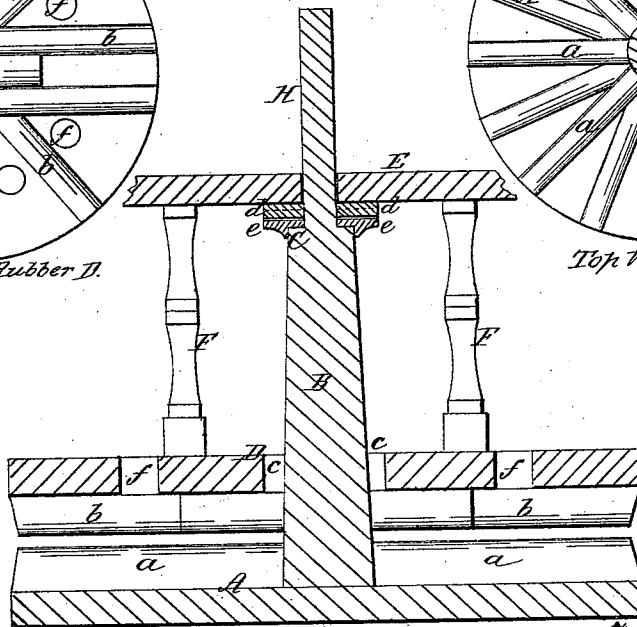
Side Elevation.



Bottom View of Rubber D.



Top View of Board A.



Vertical Section.

Witnesses:

J. Rutherford
T. C. Smith

Inventor:

James Q. Whartnaby,
by Johnson and Johnson
his Attorneys.

UNITED STATES PATENT OFFICE.

JAMES Q. WHARTNABY, OF WILMORE, PENNSYLVANIA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 148,789, dated March 17, 1874; application filed February 19, 1874.

To all whom it may concern:

Be it known that I, JAMES Q. WHARTNABY, of Wilmore, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification:

My invention relates to that class of washing-machines used with ordinary wash-tubs, and in which a fixed bottom board provided with radial ribs is employed in connection with an upper horizontally-oscillating rubber, also provided with radial ribs, to rub the clothes between them in the suds in the tub, with the rubber supported upon a bearing on a central post from the base-board; and my improvement consists in combining, with the operating cross-arm of said oscillating rubber and its supporting-post, a bearing for the post and the operating-arm, constructed with cam-surfaces, for the purpose of giving the rubber a positive vertical pressing or pounding movement upon the clothes as it is operated back and forth horizontally, by which the clothes are both rubbed and pounded at the same time and by the same movement of the rubber, thereby doing the washing better and quicker than if they were rubbed only by and between the two ribbed surfaces, by simply turning the rubber back and forth upon its central post by the handles to produce this compound action of the rubber.

The drawings represent an elevation of the ribbed washing-boards as applied to the tub, and a vertical section of the same, showing my improvement applied thereto.

A bottom board, A, is fixed in the bottom of the tub, and is provided with rounded ribs *a*, arranged radially upon its upper surface; and a post, B, rises from the center thereof, having a horizontal shoulder, C, near its upper end. A rubber, D, with radial ribs *b* on its under side, has a central opening, *e*, which fits over the vertical post B, and is supported thereon, so that the ribs *a* and *b* do not touch, by means of a horizontal cross-arm, E, which rests upon the shoulder C, and is connected to the rubber D by side posts F, so that the rubber can be turned horizontally by means of handles G on the ends of the cross-arm. The upper portion of the post is reduced in diameter to form a guide, H, for the cross-arm E, and, with the opening *c* in the rubber, to hold it centrally in position over the bottom.

In connection with the horizontal movement

of the rubber D upon its bearing, it also has a vertical movement thereon at the same time by means of two small corrugated plates, *d* and *e*—one fixed to the under side of the cross-arm E, and the other upon the shoulder C of the vertical post—forming the bearing upon which the rubber rests and turns; and as the cross-arm E is vibrated, its plate *d* moves over the fixed plate *e*, and their corrugations moving over each other cause the rubber to rise as the swells pass over each other, and to fall by its weight as the swells of one fit into the depressions of the other, and thus give to the rubber a positive pounding movement upon the clothes, and thereby subject them to two actions, which very materially facilitates the operation, besides washing the clothes much cleaner.

The addition of this simple pounding device also makes a durable bearing for the rubber, and in this respect makes no additional expense to the machine, but gives it great advantage over a rubber having only a horizontal rubbing action.

By this pounding movement the rubbing surfaces do not touch, and the clothes are thereby prevented from being cut out, as the sucking and pounding action obviates the necessity of having the ribs rub upon each other.

The rubber has perforations *f*, for the water to pass through as it is operated.

In introducing and removing the clothes, the rubber may be removed from the supporting-post, the opening *c* being large enough for that purpose; or it may be lifted up and turned to one side.

I claim—

1. In a washing-machine, the horizontal oscillating rubber D, having the cam bearing-plates *d* and *e*, for the purpose of giving a positive pounding action by the same movement by which the clothes are rubbed, as described.

2. The combination of the ribbed bottom A, the ribbed rubber D, the central guide-post B, and the cross-arm E with the movable and fixed corrugated or cam bearing-plates *d* and *e*, constructed and operating substantially as herein described.

JAMES Q. WHARTNABY.

Witnesses:

JOSEPH MILLER,
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