

No. 630,398.

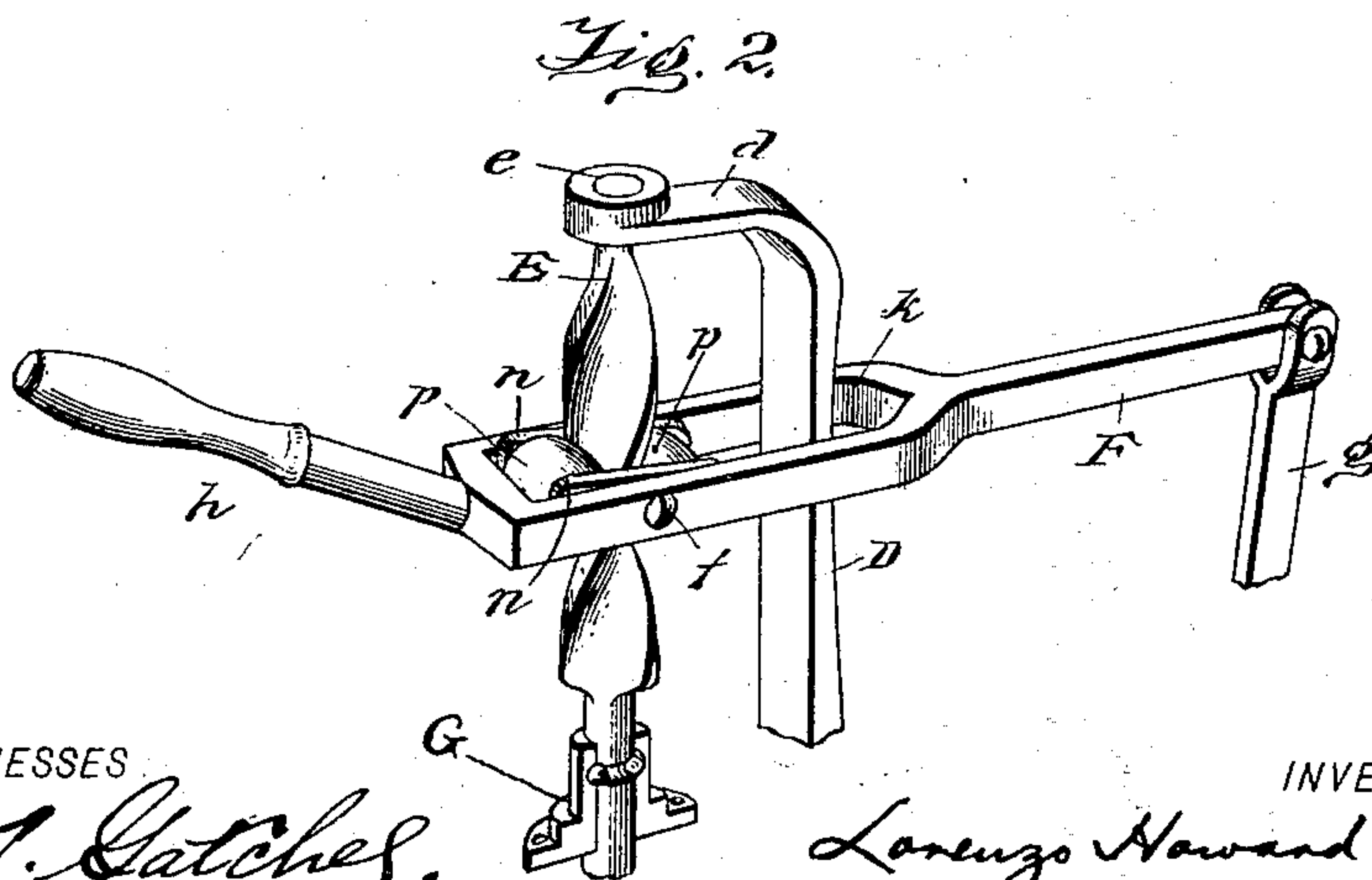
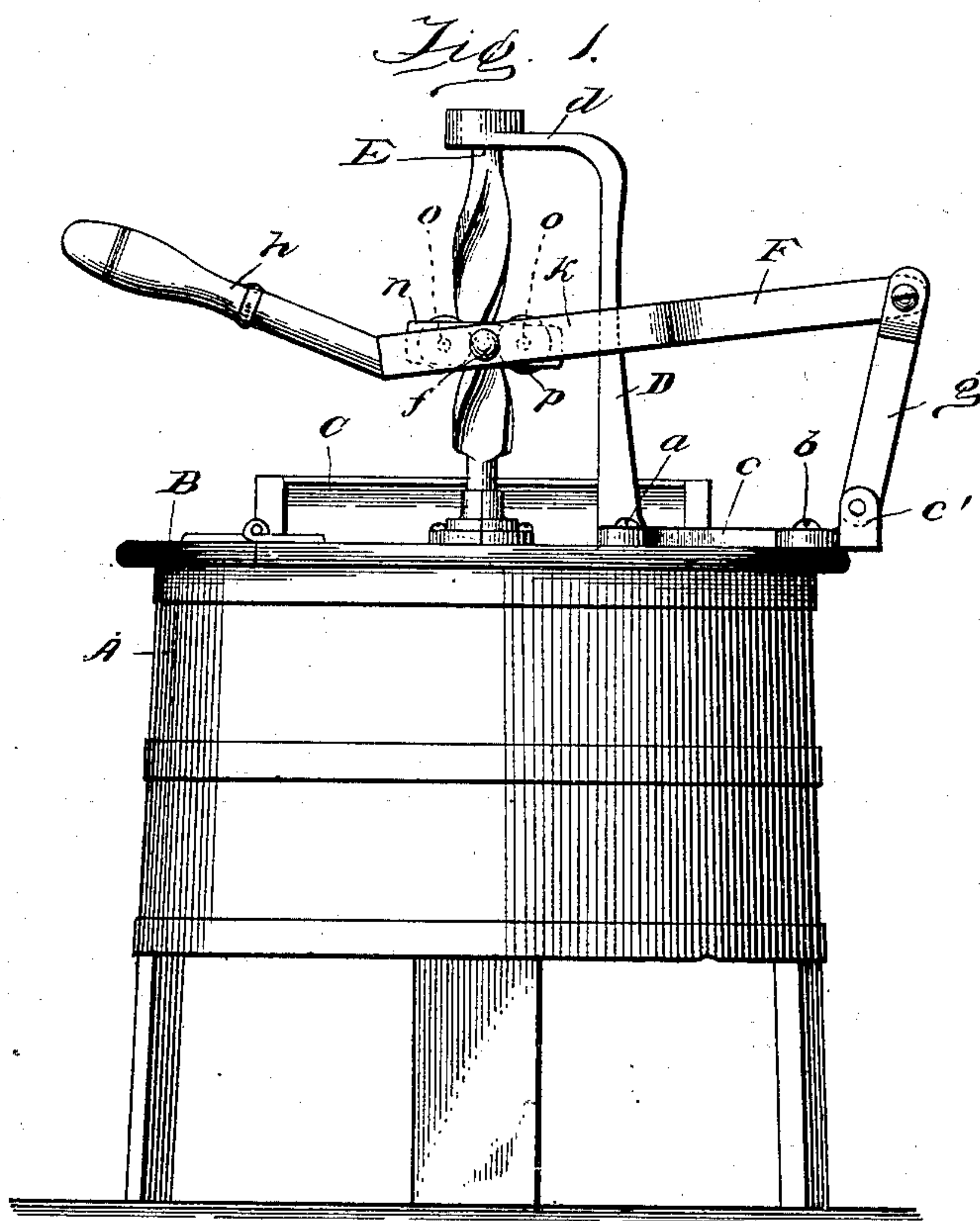
Patented Aug. 8, 1899.

L. H. NUTTING.

OPERATING MECHANISM FOR CHURNS, WASHING MACHINES, &c.

(Application filed Mar. 11, 1897.)

(No Model.)



WITNESSES

WITNESSES:
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LORENZO HOWARD NUTTING, OF DAVENPORT, IOWA.

OPERATING MECHANISM FOR CHURNS, WASHING-MACHINES, &c.

SPECIFICATION forming part of Letters Patent No. 630,398, dated August 8, 1899.

Application filed March 11, 1897. Serial No. 627,012. (No model.)

To all whom it may concern:

Be it known that I, LORENZO HOWARD NUTTING, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in operating mechanism for churns, washing-machines, &c., and has for its objects to secure a machine of this class simple and economical in construction and in which the power is applied to vibrate a block or agitator with the least possible loss of motion or from friction and in which the best results will therefore be obtained with a minimum amount of power or labor. The manner in which I obtain these results and the construction and operation of my improved machine are fully set forth in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my improved washing-machine. Fig. 2 is a detail, partly in section, of the operating-lever and the driving-shaft.

Like reference-numerals indicate like parts in both views.

In the drawings, A represents the washing-machine body, which I have shown in tub form, but which may be of any desired form permitting the use of a flat cover. The body of the machine is provided with a horizontal cover B, hinged at one side, and at another point on said cover is an extension C for use as a soap-shelf. Bolted to the cover B, at *a* and *b*, is a wrought or malleable iron standard D, formed with a foot-piece *c*, through which the bolts pass and secure it to the cover, said foot-piece terminating in lugs *c'*. The upper portion of the standard D terminates in a horizontal arm *d*, in the end of which is an opening *e*, in which is journaled the upper end or stem of an upright spiral driving-shaft E. This shaft E is twisted in spiral or screw form, in which the helical ribs have a gradual or long pitch, to a point near where it passes through the cover B, where it

is given a cylindrical form and has an annular groove. The shaft passes through a collar G, which is flanged on the inside and is provided with an internal annular groove, in which are placed small steel balls. Said collar is bolted to the top B and is secured by any suitable means to the revolving pin-block carried on the stem of the agitator or dasher. As the form of the agitator is no part of my invention, I have not shown it, and any desired style may be used.

Pivoted between the lugs *c' c'* is the lower end of a link *g*, to the upper end of which is pivotally connected the lever F, said pivotal connection forming the fulcrum-point for said lever. About midway between this fulcrum-point and the lever-handle *h* the lever is bifurcated to form a yoke *k*, which surrounds the standard D and the shaft E. Pivoted to the inner sides of this yoke by pins *f* are flat plates *n n*, in which are openings forming bearings for the trunnions *o o* of the rollers *p p*. These rollers are ellipsoid in shape, with diameters gaged to provide constant contact of their surface with the channels between the helical ribs of the shaft E.

It will be seen that the pivotal connection of the plates *n n* to the yoke *k* permits a rocking motion, which is communicated from said plates to the rollers *p p*, and harmful friction or binding between said rollers and the shaft E is thereby prevented.

The operative principles embodied in this invention are so well known that description herein seems unnecessary.

It will be apparent that the construction herein shown and described may be applied to any device in which a vibrating dasher or agitator is used, such as in churns and in dish-washers, and I therefore do not limit myself to its application to washing-machines only.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine having a vibrating dasher, the combination with a suitable support, of a standard, a spiral shaft journaled therein and secured to a dasher, of a pivoted lever, a suitable support for said lever, rocking plates pivoted to said lever and rollers journaled in

said plates, said rollers being adapted to run between the spiral ribs of said shaft, substantially as set forth.

2. In a device for vibrating a dasher, the combination with a suitable support, of a standard having a foot or base, a spiral shaft journaled in said standard and connected with a dasher, ball-bearings for said shaft, a lever pivotally connected with said standard foot or base, rocking plates pivoted in said lever, and ellipsoid rollers journaled in said plates, substantially as set forth.

3. In a device for operating a dasher, the combination of a standard, a spiral shaft jour-

naled in said standard, a pivoted lever, suitable support for said lever, rocking plates pivoted in said lever, and rollers journaled in said plates and adapted to engage the spiral shaft whereby a vibratory motion is imparted to it, substantially in the manner and for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LORENZO HOWARD NUTTING.

Witnesses:

A. O. SMALL,

F. H. PETERSEN.