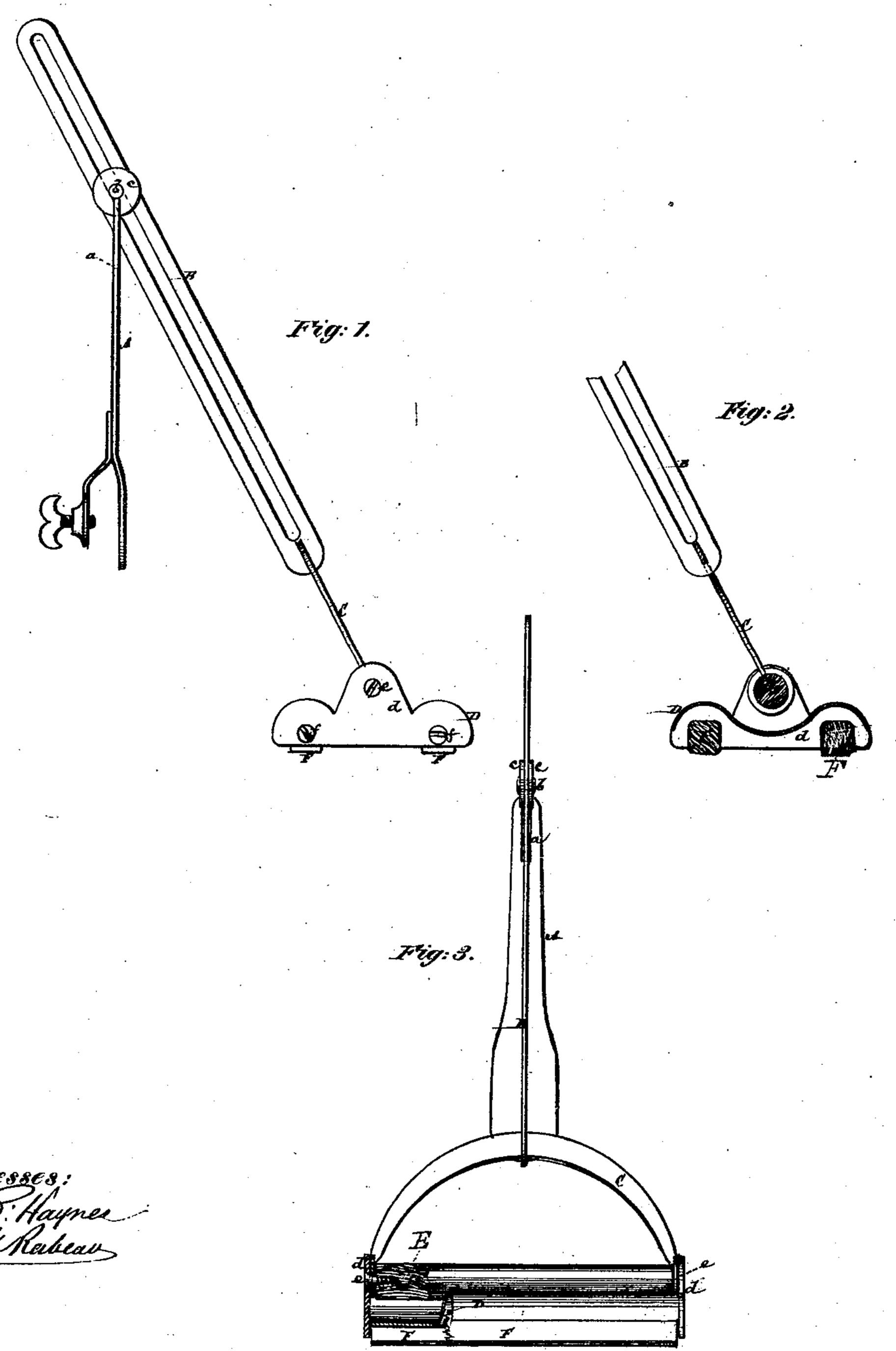
## Tightall, Mashing Machine.

Patented Sept. 13. 1870.



Witnesses:

Rewhen Skip Whalf

## Anited States Patent Office.

## REUBEN LIGHTHALL, OF BROOKLYN, NEW YORK.

Letters Patent No. 107,390, dated September 13, 1870.

## IMPROVED WASHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, Reuben Lighthall, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Washing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a side view of a washing-machine or apparatus constructed in accordance with my improvement;

Figure 2, a sectional view of the same, in part, taken in a plane parallel to its side; and

Figure 3, a partly broken view thereof, at right angles to figs. 1 and 2.

Similar letters of reference indicate corresponding

My improvement relates to washing-machines, or apparatus designed to be clamped to the side of a tub, and having roller rubbers\_carried by a box-part or frame, which is in pivoted connection with a slotted device, made capable of rocking and sliding upon the holder, to allow of the rubbers being worked up and down, and to and fro, for operation on the clothes, in connection with a wash-board, or otherwise, by means of a handle arranged to extend across the rubber box or frame.

The invention consists in a simplified and improved construction of such apparatus, substantially as hereinafter described.

In the accompanying drawing—

A represents a single bar-holder, designed to be clamped by a set-screw below to the side of the tub, and slotted, as at a, for play of a single and slotted rubber-carrying bar, B, through it, and swing or rocking play of the latter on a pivot or tie-pin, b, arranged to connect cheek-guides c c to the bar B, formed on the upper slotted end of the holder.

The slotted bar B is connected at its lower end with a yoke or saddle, C, of a width and size corresponding to the rubber box or frame D, which is in pivoted connection with the yoke.

This single-bar construction of the holder A and slotted piece or bar B is not only much simpler and cheaper than a frame or double-bar construction of such parts; but, by reason of the lightness of the moving bar, reduces labor in working the machine, and the single bar B does not present the same obstruction as a frame, while, by the construction shown, it is equally as well guided, and, in connection with the yoke C, gives a perfectly steady hold of the rubber-box or frame D.

This rubber-box or frame D, I cast all in one piece, instead of making it in parts, as heretofore, to form a socketed connection of the operating-bar or handle E, which, in this case, is simply slipped to its place between the ends of the yoke C, so that, on the latter being slid in between the sides or checks d d of the rubber-box D, screws e e, passed through the checks d d, and ends of the yoke C, into the handle E, serve to form the necessary connection of the box D, the yoke C, and the handle E, with all necessary provision for play or swing of the parts on the screws e e as pivots. This forms a cheap, simple, and efficient construction and connection of the parts.

The frame or box D may be of waved or corrugated character, and has arranged within it, turning on end pivots or screws f, the roller-rubbers F F, that are of square form in their transverse section, as I find that rubbers of such shape, in changing from an angular to a flat contact with the clothes, have a better pounding and rubbing action.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination of the single-bar holder A, the single and slotted bar B, arranged to slide and swing on a cross-pin, b, within a slot, a, and between cheeks c c, formed on the holder A, and the yoke C, with the rubber frame D, substantially as shown and described.

REUBEN LIGHTHALL.

Witnesses:
FRED. HAYNES,
M. J. SHANLY.