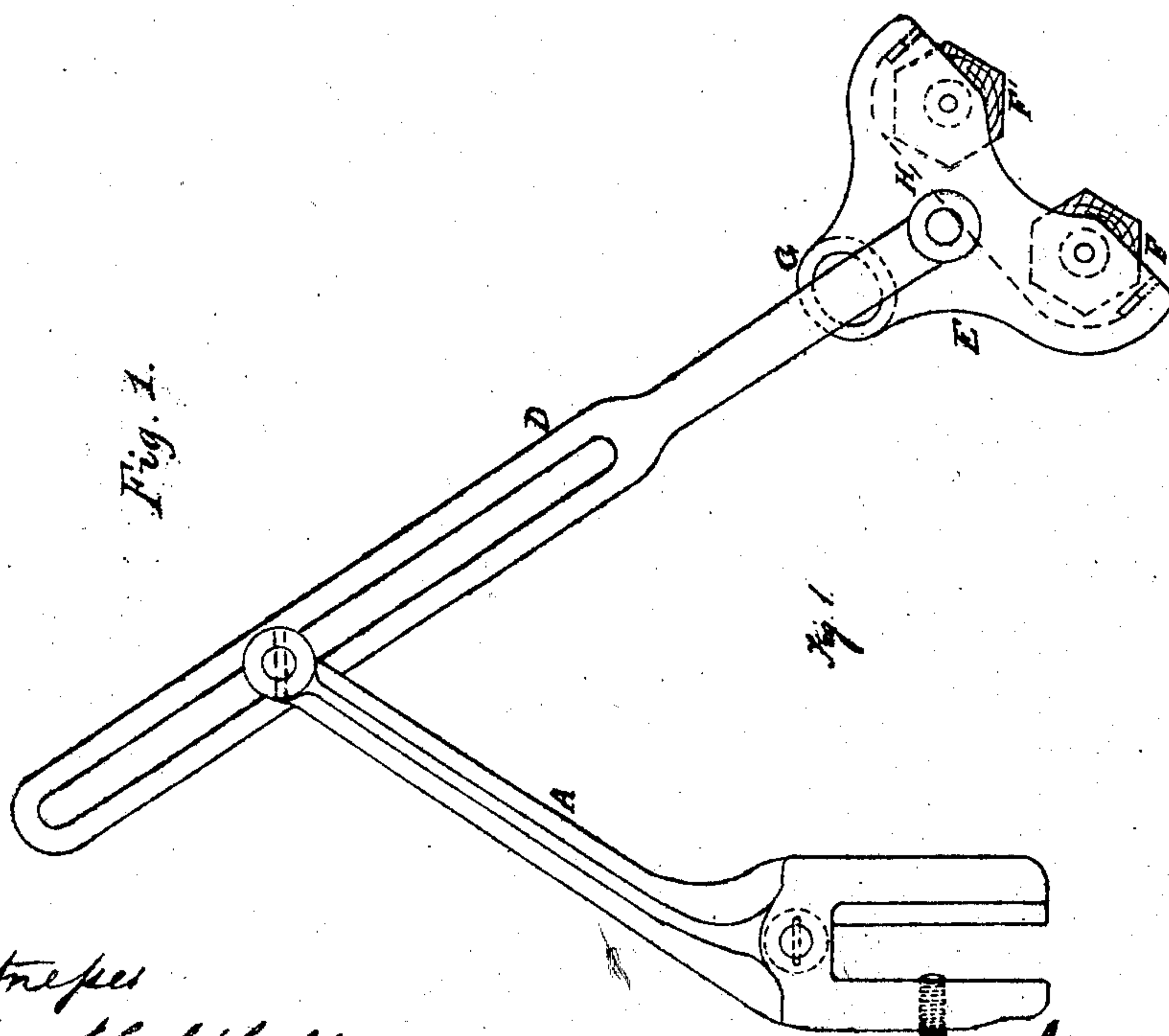
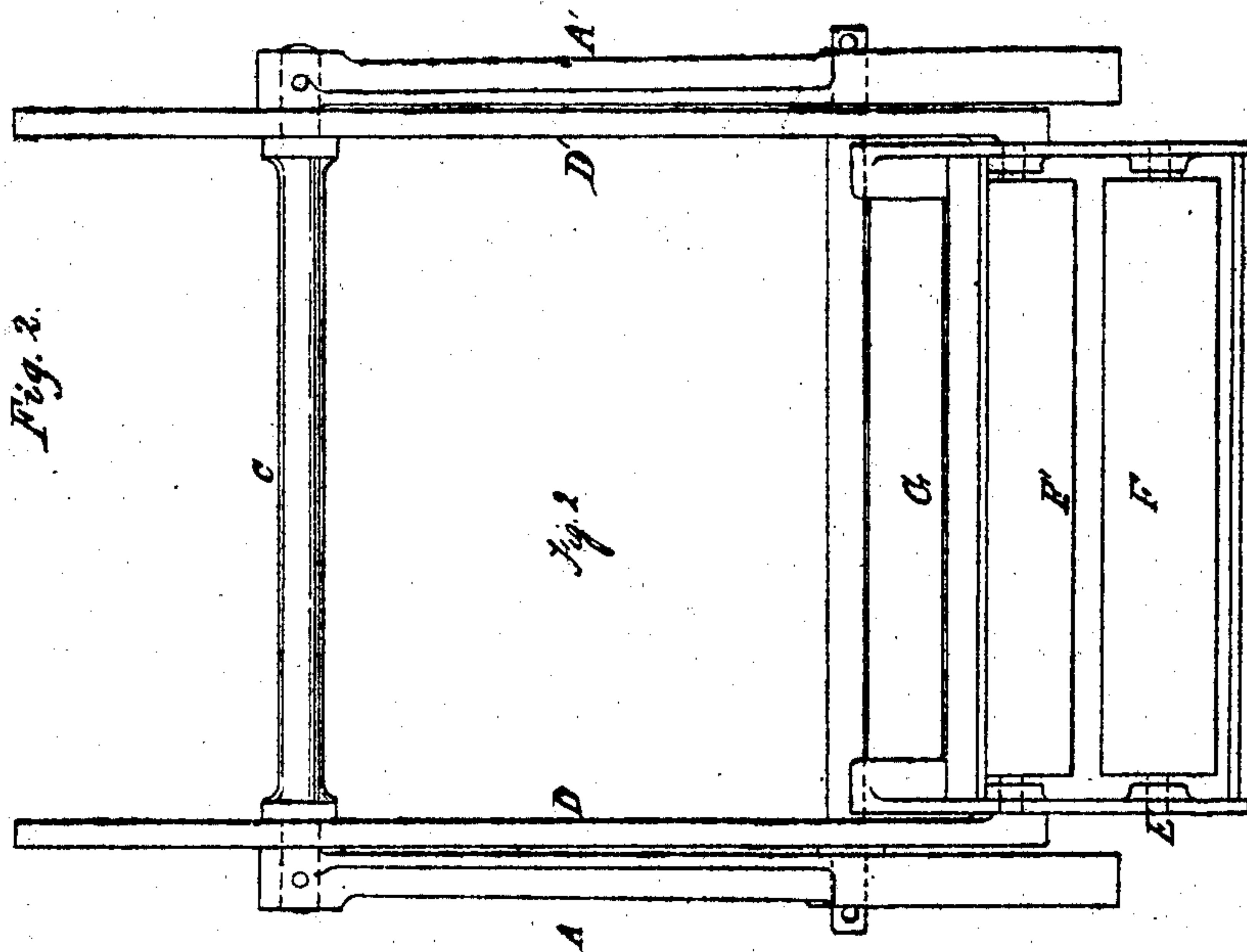


R. Lighthall.
Washing-Machine:

Nº 71891.

Patented Dec. 10, 1867.



Witnesses
John Lighthall
Robert B. Ingram

Inventor
R. Reuben Lighthall
per Francis S. Low
Attorney

United States Patent Office.

REUBEN LIGHTHALL, OF BROOKLYN, NEW YORK.

Letters Patent No. 71,891, dated December 10, 1867.

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 the city of Brooklyn, in the county of Kings, 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 and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation, and

Figure 2 is an end or front view.

The purpose and intent of my invention are to make rollers for rubbing the articles to be washed, of such form as to be used either in combination with a wash-board of ordinary form, or with a wash-board having a plane surface, that the said rollers may be so attached to the wash-tub containing such wash-board in such manner as to allow the said rollers to be readily moved and put out of the way when it is desired either to put in or take out the clothes from the wash-tub, or when it is desired to operate upon the clothes by hand for such purposes as cannot be effected by the action of the rollers.

A A' are two standards, which are attached by the set-screws B to the top of an ordinary wash-tub on the side opposite to the position of the person operating the apparatus. These standards are secured together at their top ends by the shaft C, to keep them securely in position. D D' are two levers or arms, to which are secured, by a pivoted joint, the frame E, containing the rollers F F'. The upper ends of these levers or arms are slotted to such extent as to allow them, and the rollers connected with them, not only to move up and down on the shaft C sufficiently for the thickness of any clothes that may be interposed between the rollers and the wash-board used in the wash-tub, but also so that the rollers may be raised from the wash-tub and placed on the exterior thereof, so that the clothes to be washed may be readily placed in the tub. The clothes that are washed may be taken out of the tub, or, if required, that the clothes may be cleaned and washed by hand beyond what could be done by the rollers. E is the frame containing the rollers F F'. It is connected to the levers or arms D D' as described, and has upon its upper surface the handle G, by which it is manipulated. The rollers F F' are made octagonal, or any other many-sided shape, in their cross-section, so that they can be used with good effect, either with a corrugated or plain wash-board. The benefit of this form of roller is that it produces a cleansing action on the clothes to be washed that cannot be produced by a plain cylindrical roller. They are covered by the hood or cover H, for the purpose of preventing the waste from them being thrown or "splashed" on to the person operating them, when they are moved with ordinary velocity. The change of the frame, with its attached rollers, from the inside of the tub to the exterior thereof, affords an opportunity to fill up the tub, take out from it the clothes, and otherwise operate it better than by any other arrangement.

What I claim as my invention, and desire to secure by Letters Patent, is—

The detachable holder A, with the set-screw B, in combination with the slotted lever D, and the rollers F F', and the cam H, as and for the purpose set forth.

REUBEN LIGHTHALL.

Witnesses:

FRANCIS S. LOW,
C. H. CHURBRO.