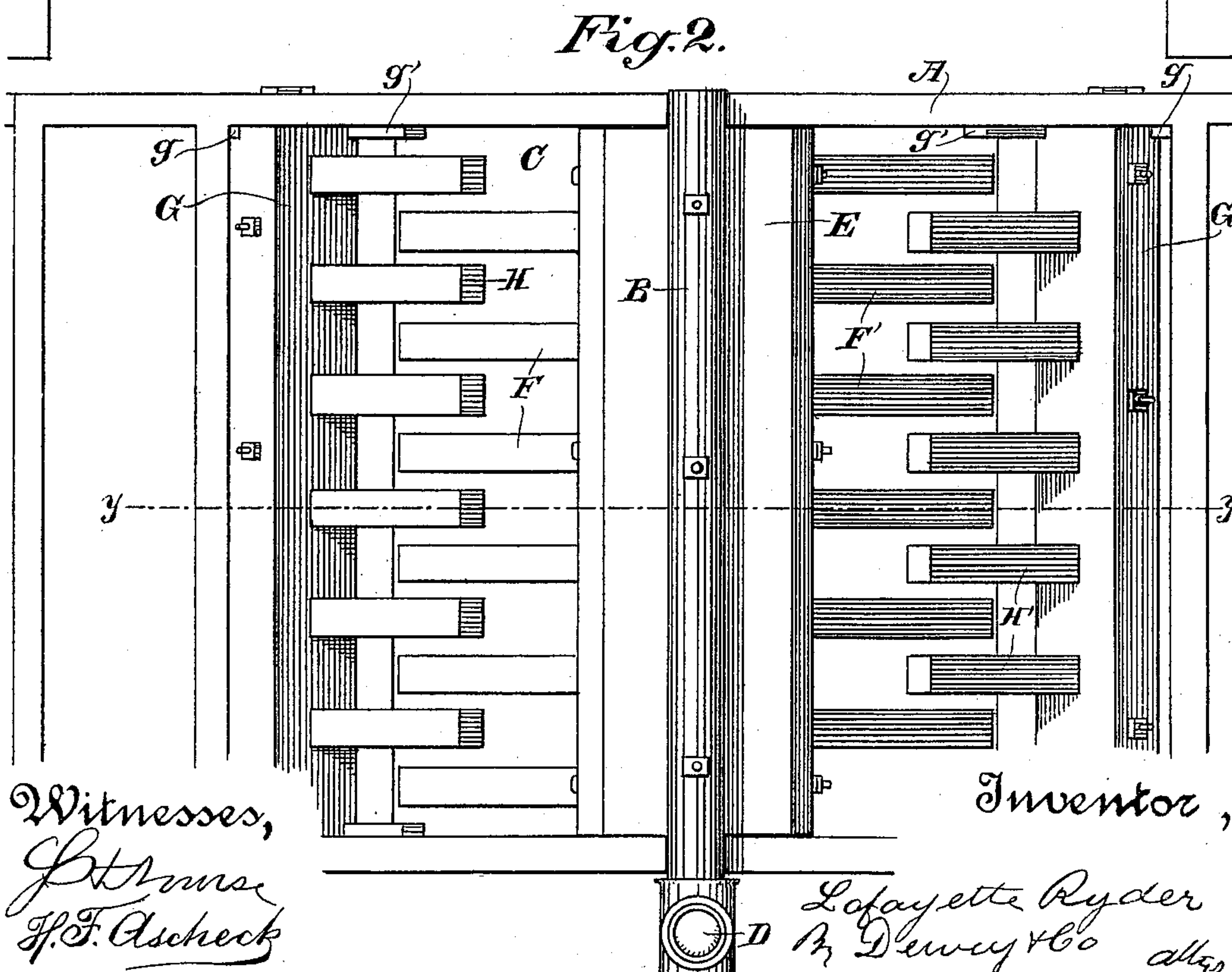
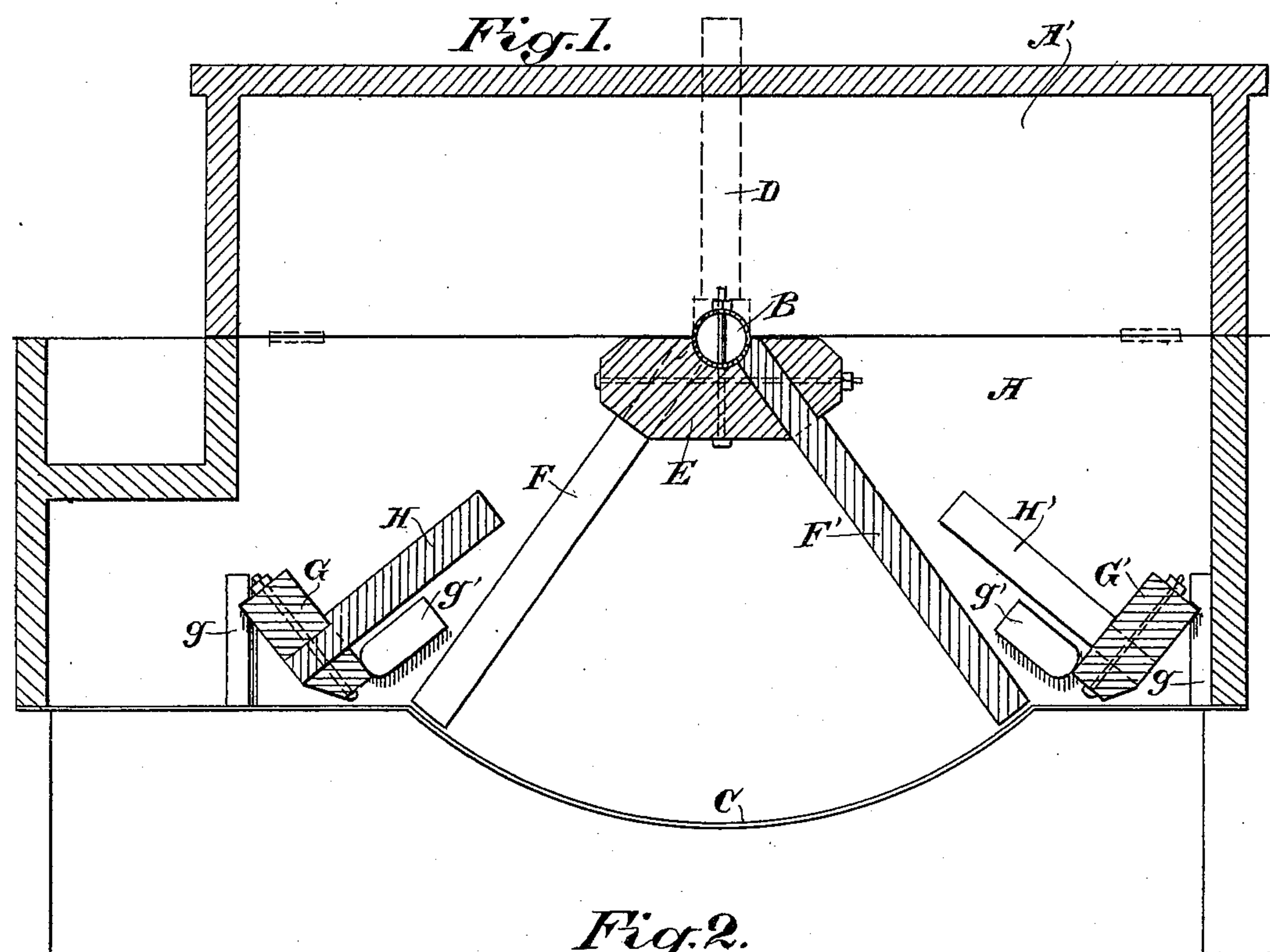


(No Model.)

L. RYDER.
WASHING MACHINE.

No. 587,510.

Patented Aug. 3, 1897.



Witnesses,
J. H. Brown
J. F. Aschbeck

Inventor,

Lafayette Ryder
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UNITED STATES PATENT OFFICE.

LAFAYETTE RYDER, OF WOODLAND, CALIFORNIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 587,510, dated August 3, 1897.

Application filed February 19, 1897. Serial No. 624,138. (No model.)

To all whom it may concern:

Be it known that I, LAFAYETTE RYDER, a citizen of the United States, residing at Woodland, county of Yolo, State of California, have
5 invented an Improvement in Washing-Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in
10 machines for washing clothes and like purposes.

It consists in certain parts and constructions and combinations of parts which I shall hereinafter describe and claim.

15 Figure 1 is a sectional elevation of my apparatus. Fig. 2 is a plan view.

A is a box of any suitable dimensions for the purpose, having a shaft B journaled across it and a segmental bottom C, the curvature
20 of which is from the center of the shaft. This shaft extends out through the side of the box and beyond a journal, so as to allow of an operating-handle D being fixed to it.

I have preferably made the shaft of tubular metal and have fixed a T upon one end of it for the attachment of the handle. This allows the box A to be provided with a cover A', which can be opened or closed at will. I have
30 also shown the box extended at one end with an offset beyond the main portion to receive the clothes-wringer.

Upon the shaft B and interior to the tub is fixed a hub or block E, and this block is mortised to receive the radial arms F and F', which
35 project out from it at an angle from each other, shown in the present case something less than a right angle.

Within opposite ends of the tub are fixed transverse bars or blocks G and G', which are
40 removably held in place by notched supports g and pieces g', fixed to the sides of the tub and engaged by the opposite sides of said blocks, as shown. The bars G G' are mortised and receive the pressure-bars H H', projecting from these blocks toward the center
45 and in alternate longitudinal planes, as shown—that is, the series of bars extending across one end of the tub have the spaces between them in line with the bars at the opposite end. These pressure-bars are so set that
50 the arms F adjacent to the bars H will pass between them, and the arms F' on the oppo-

site side will pass between the bars H' on that side:

The relative positions of the pressure-bars
55 H H' are such that when the arms F have passed between the bars H the arms F', being set out of line with the arms F, will come in contact with the bars H, and will thus squeeze anything which is introduced into the space
60 between the arms F and F'. In the same manner when the shaft is swung in the other direction the arms F' will pass between the bars H' and the arms F will come in contact with the bars H', so that any clothes or other arti-
65 cles placed between the arms F F' will be moved backward and forward over the concaved bottom C and alternately squeezed against the bars H and H' by the action of the arms F' and F as they are swung from one side
70 to the other. This agitation alternately subjects the clothes to a pressure which squeezes the water out of them, then carries them back through the bottom of the tub, allowing them to be loosened up and again absorb more
75 water, to be again pressed and the water squeezed out against the bars H upon the opposite side.

The shaft, with the hub and arms, can be removed at any time to allow the clothes to be
80 put into the interior space or removed therefrom by simply removing the cover A' and lifting these parts out of the box, and the pressure-bars are also easily removable to leave the entire interior of the tub unob-
85 structed.

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

1. In a washing-machine, the combination
90 of a stationary tub having the central portion of its bottom concave or segmental, a shaft journaled across the tub, having a hub secured to it, two sets of arms fixed to said hub and diverging from one end outwardly so as to
95 form an inclosed space between them, said arms of one set adapted to stand out of line with those of the other set, the removable blocks G, G' and means comprising the notched supports g and pieces g' projecting
100 from the sides of the tub for securing said blocks in place, pressure-bars secured to said blocks and standing essentially radial from the shaft and arranged so that the bars at one

side are out of line with those at the opposite side, said bars and arms being so disposed that the arms of one set will pass between the adjacent bars when moved in that direction
5 and the other set of arms will move in line and contact with said bars, and a removable cover for said tub.

2. In a washing-machine, a stationary tub having a concave segmental bottom, trans-
10 verse bars with means for removably holding them at opposite ends of the tub, and a series of bars projecting from them radially toward the center and top of the tub, said bars on one side standing in alternate planes with
15 those upon the other side, a central tubular shaft journaled upon the top of the tub having a T, to receive a handle whereby the shaft

may be oscillated, a hub fixed to the shaft within the tub having two lines of diverging arms projecting downwardly therefrom, each
20 set of arms adapted to pass between the fixed arms adjacent to it and to contact with those upon the opposite side when oscillated in the other direction whereby articles placed be-
25 tween the diverging arms will be alternately moved from side to side and pressed between the arms and the opposing bars.

In witness whereof I have hereunto set my hand.

LAFAYETTE RYDER.

Witnesses:

J. BOGGS,

J. K. SMITH.