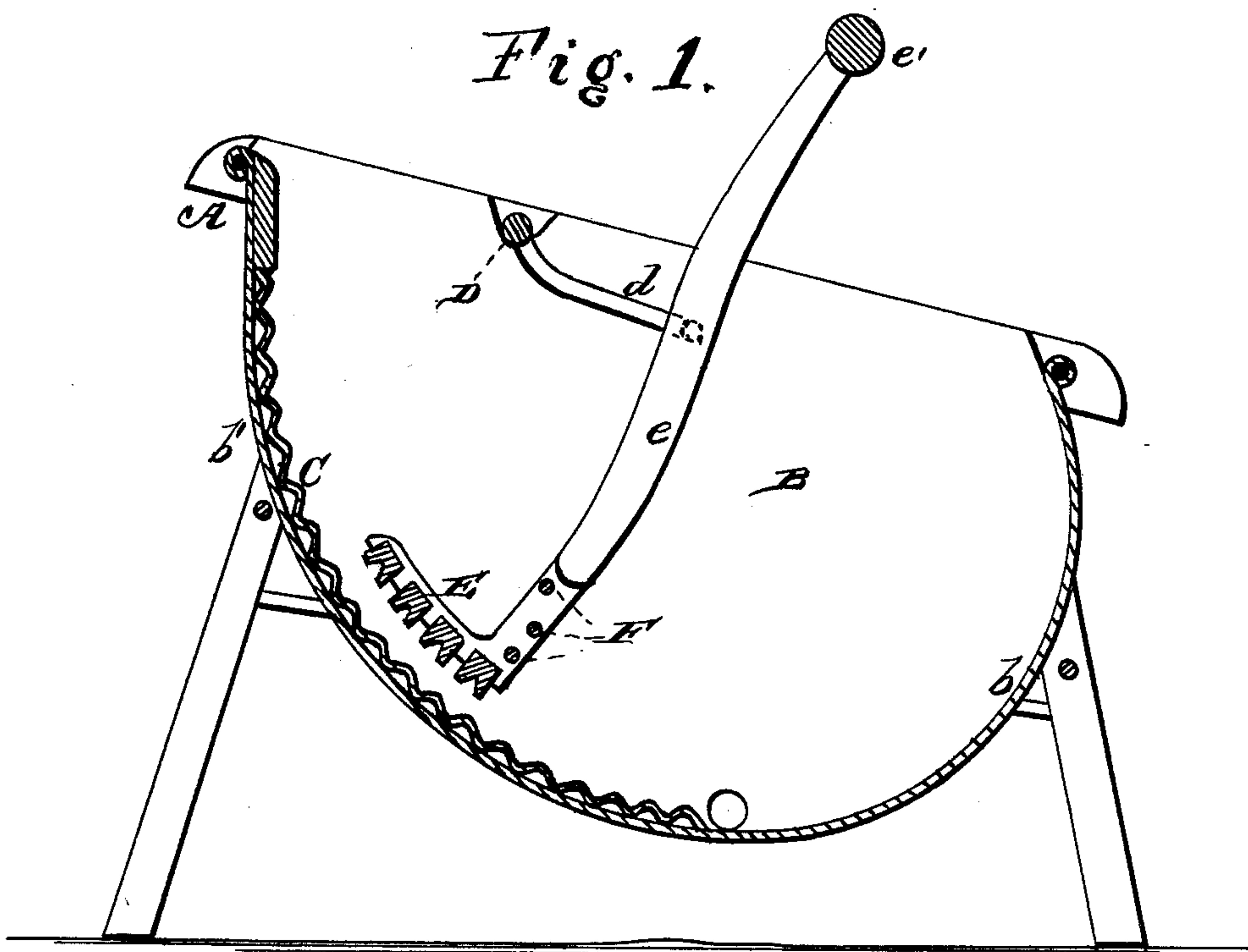


M. SWAN.
Washing-Machine.

No. 220,444.

Patented Oct. 7, 1879.



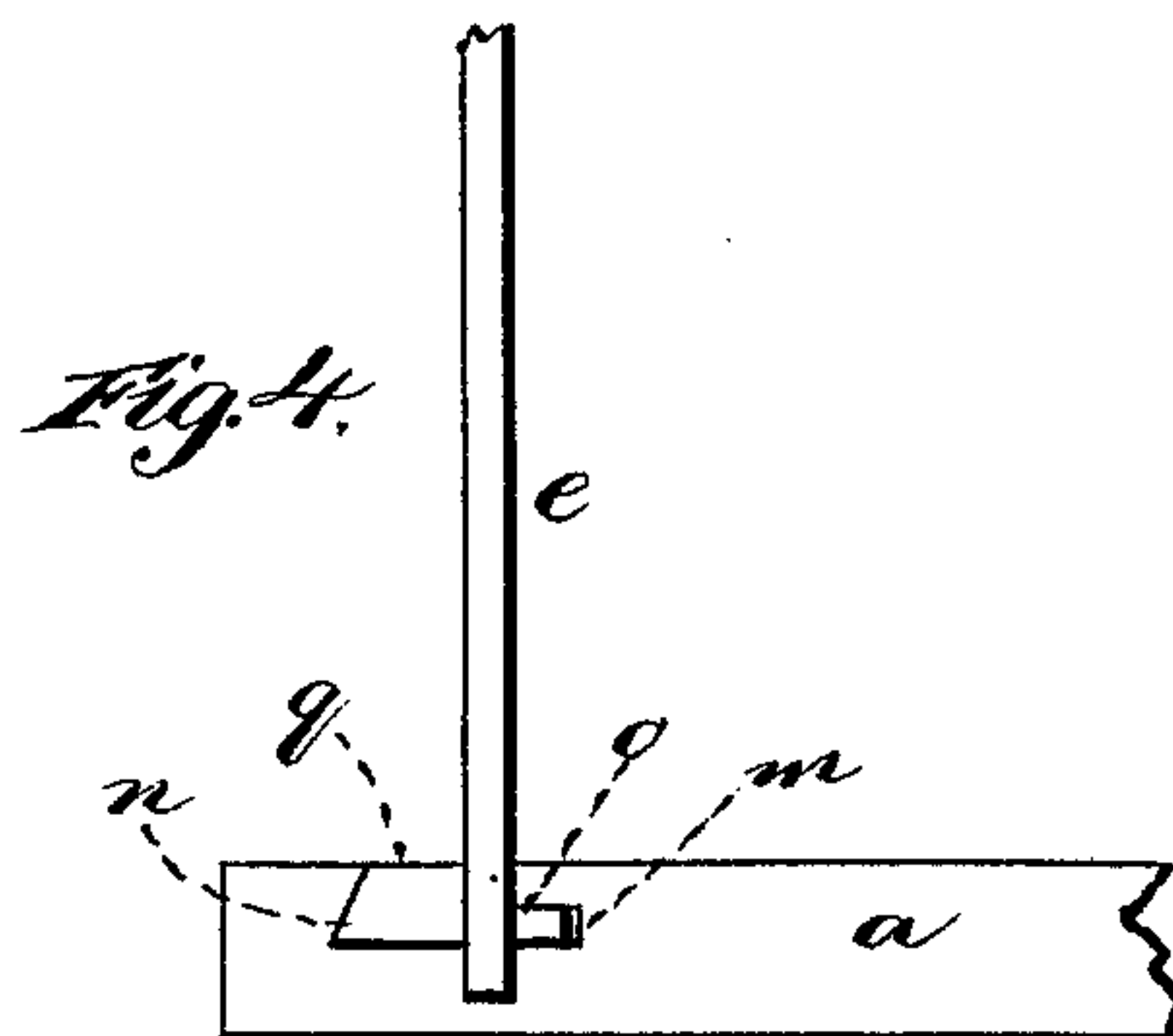
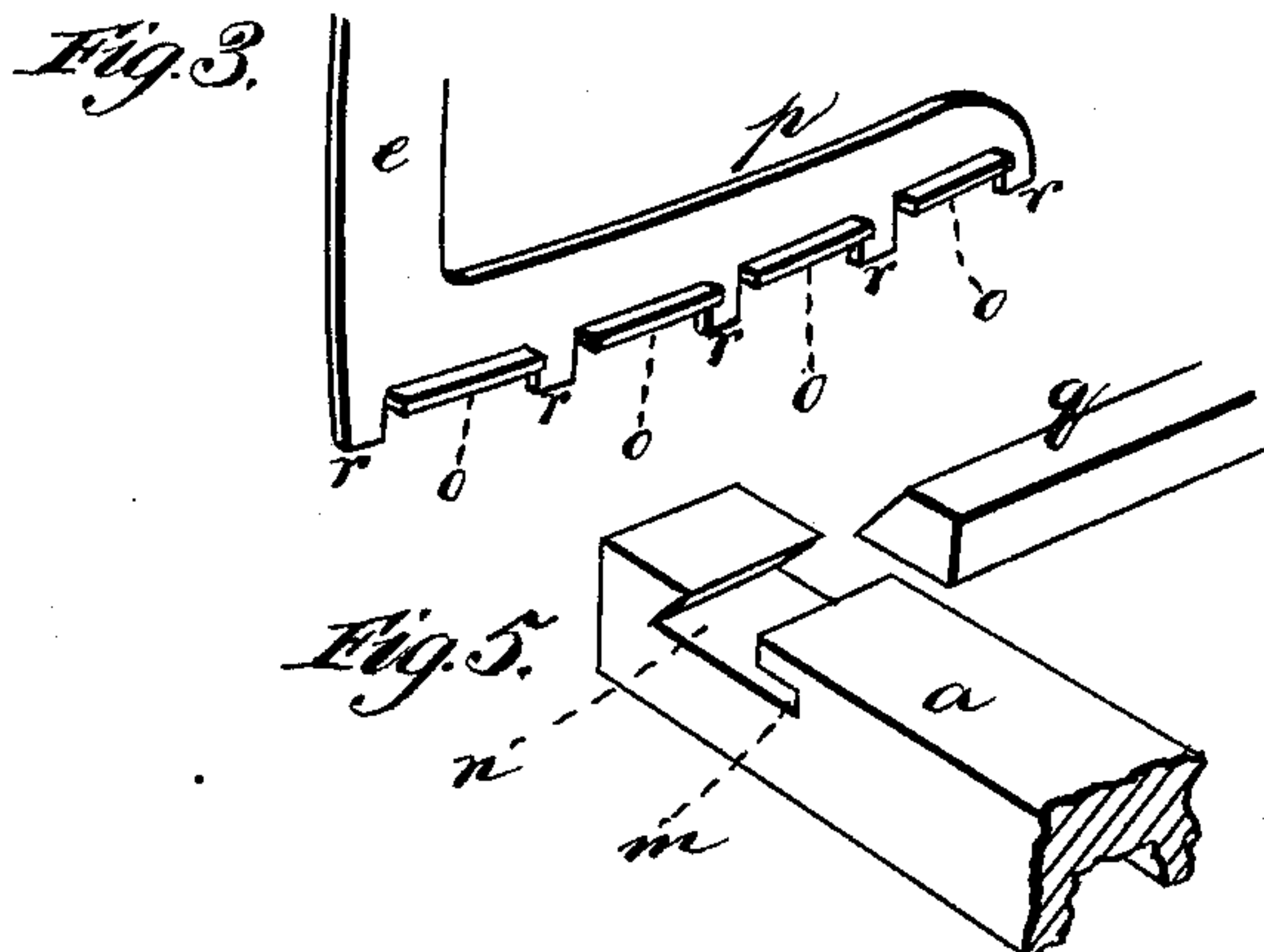
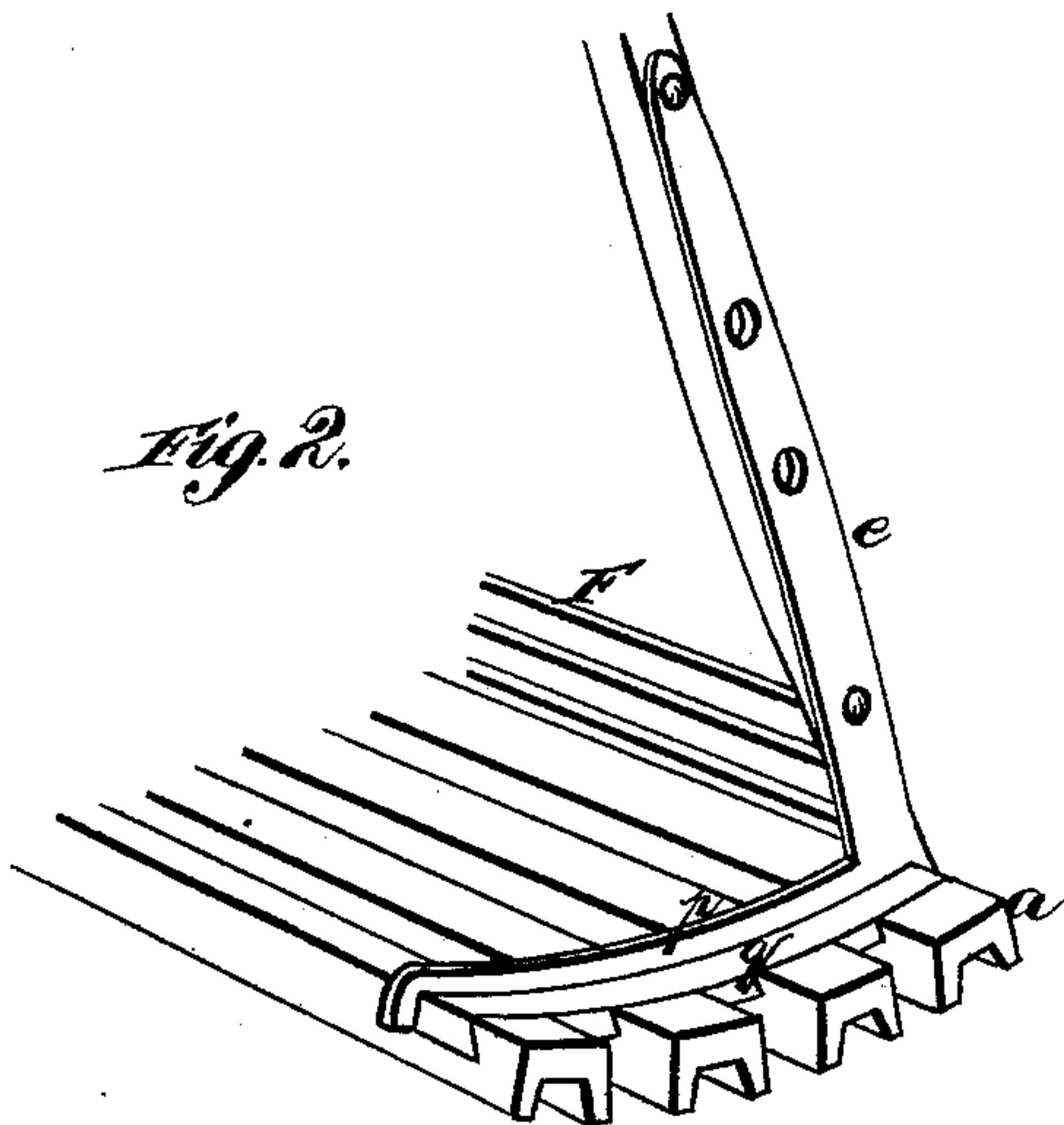
Witnesses:
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INVENTOR,
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UNITED STATES PATENT OFFICE.

MOSES SWAN, OF HOOSICK, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **220,444**, dated October 7, 1879; application filed May 24, 1879.

To all whom it may concern:

Be it known that I, MOSES SWAN, of Hoosick, in the county of Rensselaer 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, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 is a vertical sectional view of a machine embodying the improvements in my invention. Fig. 2 is a sectional detail view of the rubber. Fig. 3 is a detail view, showing the flanged and studded arm of the rubber-frame, to which the slats are secured. Fig. 4 is a sectional elevation of the rubber and frame; and Fig. 5 is a perspective detail view of one of the slats and the key by which the arm is secured thereto.

This invention relates to washing-machines, and consists in the improvements in the construction of the same, hereinafter fully described, and particularly pointed out in the claims.

A is a frame, suitably constructed for supporting the body of the washer B. This vessel B is half-heart shape on its vertical longitudinal section.

The shorter curve *b* serves to retain the suds in the vessel. The wash-board C is located upon the longer curve *b'*. D is a shaft provided with the arms *d*, to which the frame-pieces *e* of the rubber E are pivoted. The handle *e'* is attached to the pieces *e*, and E is the rubber or washer, which operates on the clothes to be washed when on the wash-board.

F is a rack, upon which the portion of the piece being washed may be placed while the remainder is being treated by the rubber.

The rubber is composed of slats *a*, grooved in their under faces, recessed near each end at *m*, and dovetailed at *n*, to receive the flanges *o* on the arms *p* of the frame *e*, and the key *q*, for locking said slats *a* to the said arms *p*, thus doing entirely away with screws or nails in the construction of the rubber, and avoiding accidental tearing of the clothes.

Studs *r* depend from the arms *p*, and are

employed to separate the slats *a*, so that spaces will be left between them.

The object of the spaces is to enable the rubber to hold the clothes against the washboard at any desired point, and this effect is accomplished by reason of the fact that portions of the clothes undergoing the process of being washed are forced by the pressure upon them to enter the spaces between the slats, and are thus held at any desired point between the rubber and washboard.

When it is desired to shift the piece of clothing, it is only necessary to raise the rubber therefrom, and place it at a lower point of the piece, and operate as before. The piece in this way can be washed section by section, and passed over the forward edge of the rubber and upon its upper face. The rack, composed of the rods or bars F of wire, prevents the clothes from falling over the rear edge of the rubber, and, further, the bars offer no obstruction to the water, as is the case where perforated boards are used in a similar position.

The slats *a* are placed upon the arms *p* between the studs *r*, the flanges *o* entering the recesses *m*, and the key *q* is then driven in and holds them firmly in place.

This rubber can be used equally as well as the ordinary pounder-machine, and combines both in one.

What I claim is—

1. In a washing-machine, the frame *e*, having the arms *p*, provided with flanges *o* and studs *r*, in combination with the slats *a*, recessed at *m* and dovetailed at *n*, and the keys *q*, as and for the purposes set forth.

2. In a washing-machine, the oscillating rubber, composed of the frame *e*, having arms *p*, and the slats *a* keyed thereto, in combination with the rack or basket F of wire at the rear side or edge thereof, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MOSES SWAN.

Witnesses:

ORLANDO BENNETT,
JERRY LEONARD.