

No. 629,625.

Patented July 25, 1899.

W. SWEET.
WASHING MACHINE.

(Application filed Oct. 19, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

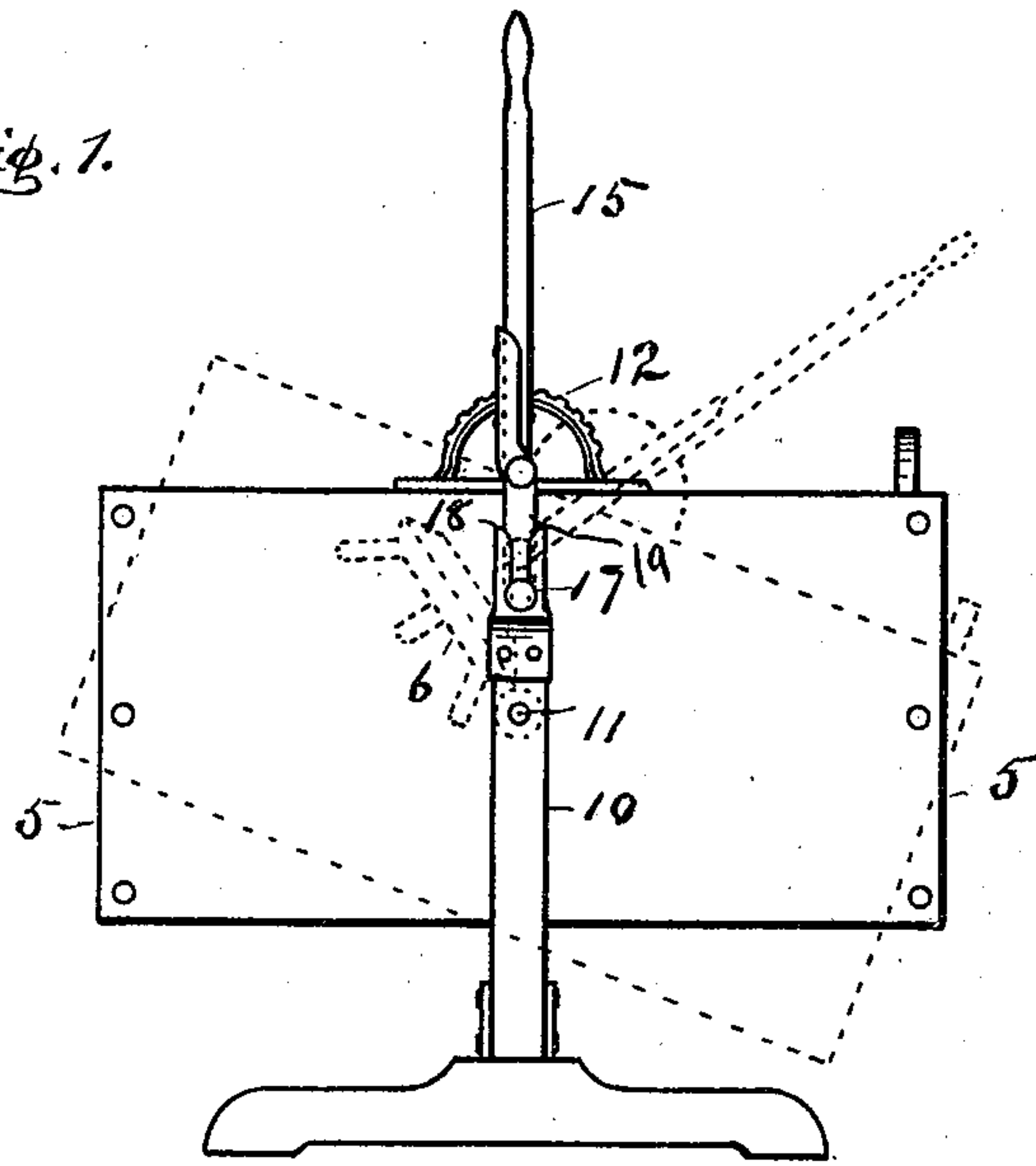


Fig. 2.

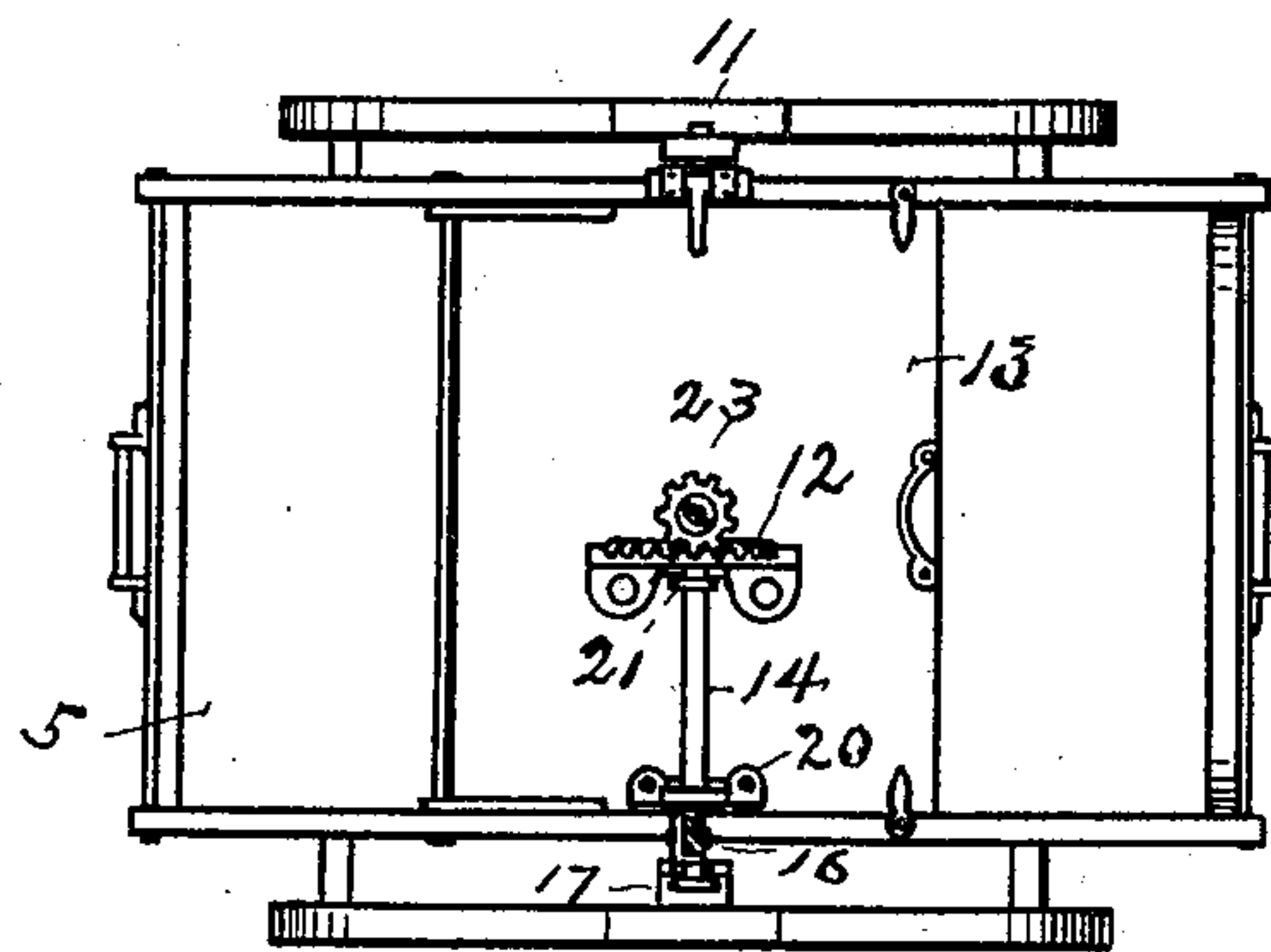
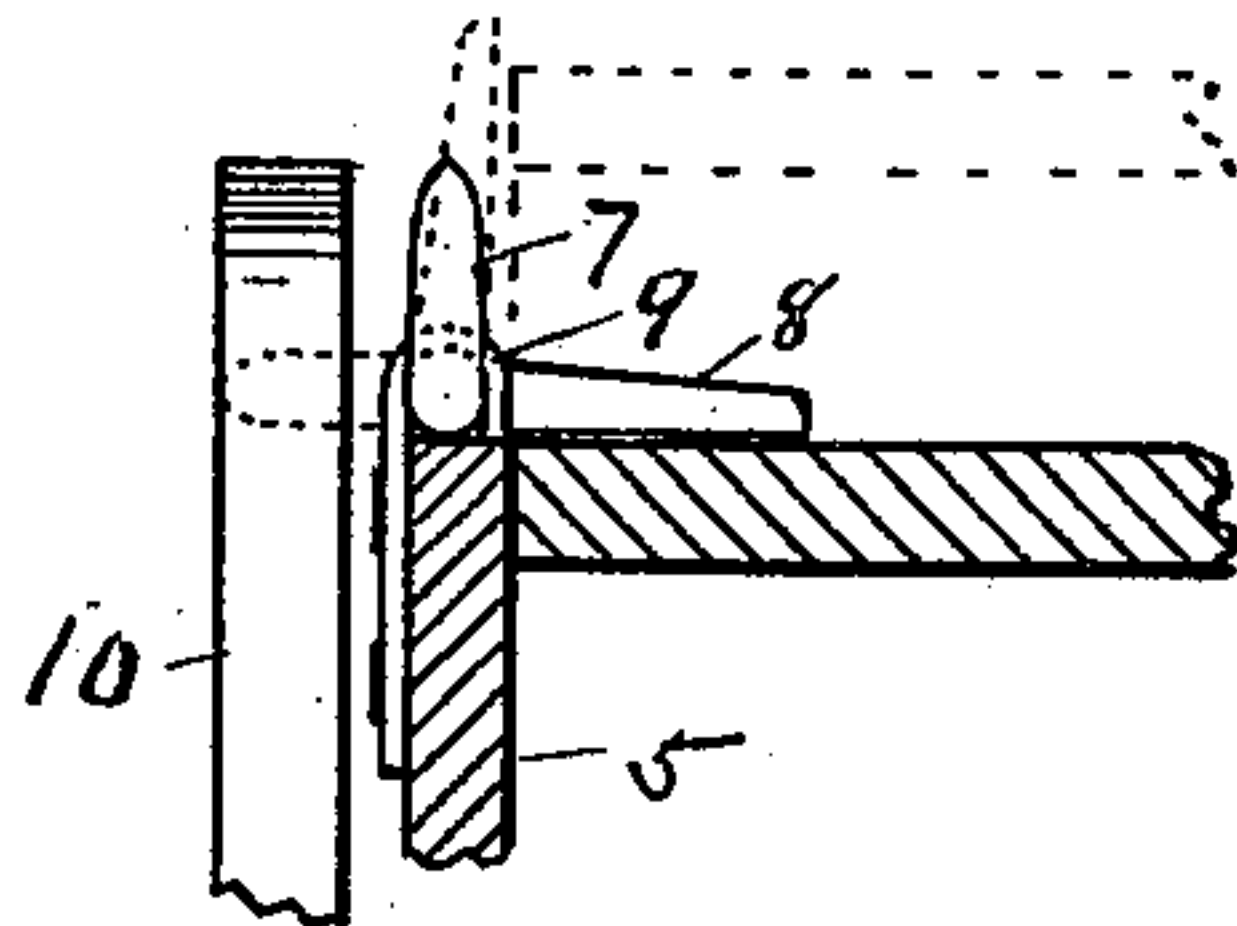


Fig. 3.



WITNESSES:

Warren Sweet INVENTOR

W. J. Burns
John J. Disser.

BY

H. C. Hartman ATTORNEY.

No. 629,625.

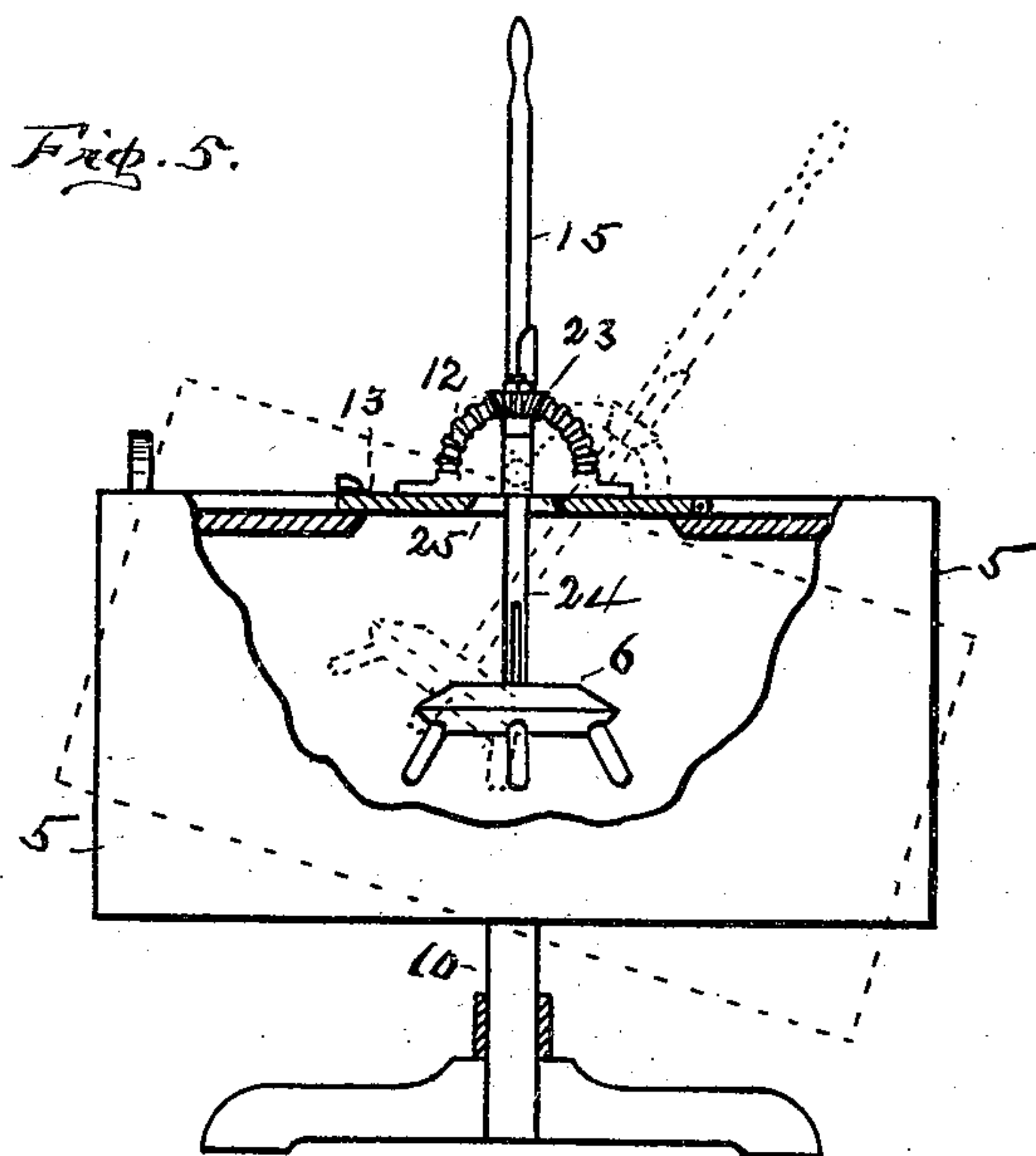
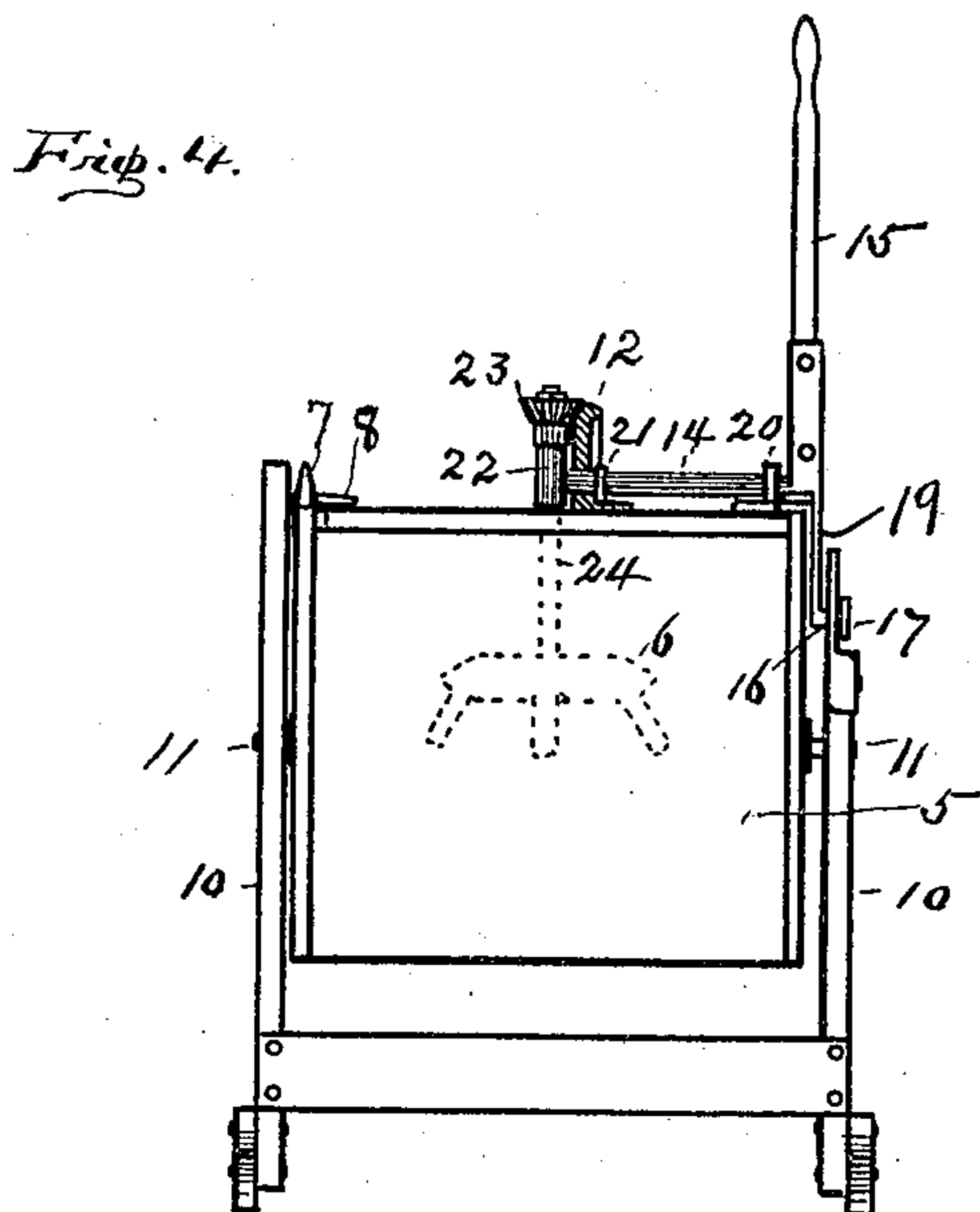
Patented July 25, 1899.

W. SWEET.
WASHING MACHINE.

(Application filed Oct. 19, 1898.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

W. J. Burns

John J. Dissert.

Warren Sweet

INVENTOR

BY

H. C. Hartman, his ATTORNEY.

UNITED STATES PATENT OFFICE.

WARREN SWEET, OF FORT WAYNE, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 629,625, dated July 25, 1899.

Application filed October 19, 1898. Serial No. 694,045. (No model.)

To all whom it may concern:

Be it known that I, WARREN SWEET, a citizen of the United States, residing in Fort Wayne, in the county of Allen and State of Indiana, have invented new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

My invention relates to that class of washing-machines in which a suds-box is oscillated and mechanism is used to impart motion to a rotary rubber inside thereof; and the object is to provide an improved machine of the class named which shall be more effectual, cheaper of construction, and easier of manipulation; and the invention consists in the construction and novel combination and arrangement of parts hereinafter described, pointed out in the appended claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a top view of the machine. Fig. 3 is a detail showing the construction of the automatic locking device. Fig. 4 is an end view, and Fig. 5 is a side view with part of box removed.

Similar numerals of reference refer to similar parts throughout the several views.

The suds-box 5 is preferably rectangular in form and is hung between standards 10 on trunnions 11, upon which it is oscillated. The operating mechanism is combined with means to simultaneously rotate a rubber or pin-wheel within the suds-box 5 and to move the rubber or pin-wheel in opposite directions to the movements of the suds-box. A segment-gear 12, preferably a half-circle, is firmly secured to the lid 13 in a vertical position, as shown. A horizontal rod or shaft 14 is also secured to the lid by two bearings, one, 21, formed in the center of the segment-gear 12 and the other a boxing or collar 20, placed near the edge of the lid, so that the shaft 14 shall be held revolubly at right angles to the movement of the suds-box. One end of the

shaft 14 extends outside of the suds-box, where it is securely attached to an arm 19 at right angles thereto. This arm 19 extends downward and is provided at its end with a stud 16, which passes into a vertical slot 18 in one of the standards 10, whereby the end of said arm is confined to a vertical movement. By this construction the oscillation of the suds-box causes the oscillation of the arm 19, whereby the shaft 14 is also oscillated, swinging the pin-wheel 6 backward and forward in opposite directions to the movements of the suds-box, and the bevel-pinion 23 is made to travel over the segment-gear 12, reciprocally rotating the vertical shaft 24. The preferable means for oscillating the suds-box is a handle or operating-lever 15, attached securely to the arm 19, the stud 16 being the movable fulcrum thereof, whereby the mechanism is operated with the force of a lever. The other end of the shaft 14 extends beyond the bearing 21 and is attached at right angles to a sleeve 22 and preferably is integral therewith. A vertical shaft 24 passes through this sleeve 22, in which it is held revolubly. One end of the shaft 24 is provided with a beveled gear 23, which by the construction and arrangement of the parts is held in engagement with the segment-gear 12. A rubber or other clothes-agitator, preferably a pin-wheel 6, is attached to the other end of the vertical shaft 24 inside of the suds-box. The lid 13 is provided with a slot 25, through which the vertical shaft 24 passes and by which space is provided for its movements.

The locking device consists of two arms 7 and 8, attached to each other at right angles, preferably integrally, and pivoted to a stud 9 on the upper side and edge of the suds-box 5 and so adjusted that one arm 8 rests on the lid 13 of the suds-box 5, whereby when the lid is raised the arm 8 is raised with it, and the other arm 7 is then in engagement with the standard 10, thereby locking the suds-box in place automatically whenever the lid is raised.

The operation is as follows: As the lever 15 is operated forward and backward the suds-box is thereby moved with it, the fulcrum end of the lever rising and falling in the slot 18, being lowest when the lever is in an

upright position, at the same time the shaft 14, being attached securely to the lever, has a rotary reciprocal motion, which oscillates the sleeve 22 and the vertical shaft 24, mounted therein, causing the beveled gear 23 to travel over the teeth of the beveled segment-gear 12, whereby a reciprocal rotary motion is imparted to the shaft 24, and thereby to the rubber or pin-wheel 6 within the suds-box, and the pin-wheel is also carried reciprocally toward the ends of the suds-box.

It will be noticed that the travel of the pin-wheel or rubber toward the end of the suds-box is always in an opposite direction to the travel of the suds-box and that its rotation by the beveled pinion is reversed by the movements of the lever, whereby there is a great agitation produced and all parts of the clothes are subjected to all the various currents created by the oscillation of the box, the travel of the rubber or pin-wheel, and the reciprocal rotary motion of the pin-wheel, as described.

The operation of the locking device is obvious from the description.

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

1. In a washing-machine of the class named, the combination with a suds-box of a segment beveled gear: a horizontal shaft provided with a collar or sleeve 22, at right angles thereto: a vertical shaft held revolubly in said sleeve: a beveled gear on said vertical shaft meshing with said segment-gear: rubbing mechanism attached to the lower end of said vertical shaft: bearings adapted to hold said horizontal shaft revolubly at right angles to the oscillation of the suds-box: a lever attached rigidly to the end of said horizontal shaft, its

fulcrum end held by mechanism permitting only a vertical motion thereof.

2. In a washing-machine of the class named the combination of a suds-box a horizontal shaft mounted on the lid revolubly at right angles to the line of oscillation of the suds-box and provided at one end with a sleeve or collar attached at right angles thereto: a vertical shaft mounted revolubly in said sleeve, provided with a beveled gear at one end with rubbing mechanism at the other: a segment beveled gear secured to said lid meshing with said beveled gear: and means to oscillate the horizontal shaft and the suds-box simultaneously.

3. In a washing-machine of the class named, the combination of the suds-box with a vertical shaft provided at one end with a beveled gear and at the other with rubbing mechanism, the latter within the suds-box: and mechanism adapted to simultaneously operate the beveled gear, the suds-box and also move the rubbing mechanism backward and forward in opposite directions to the travel of the suds-box.

4. In a washing-machine of the class named, an automatic locking device consisting of two arms rigidly attached to each other at right angles and pivotally attached or hinged, at their junction, to the suds-box and adapted to lock the suds-box in fixed position by the opening of the lid.

In witness whereof I have hereunto set my name, at Fort Wayne, Indiana, this 4th day of October, A. D. 1898.

WARREN SWEET.

Witnesses:

JOHN J. DISSER,
M. T. STOKES.