

908,057.

W. D. WHITNEY.  
WASHING MACHINE.  
APPLICATION FILED OCT. 14, 1907.

Patented Dec. 29, 1908.  
3 SHEETS—SHEET 1.

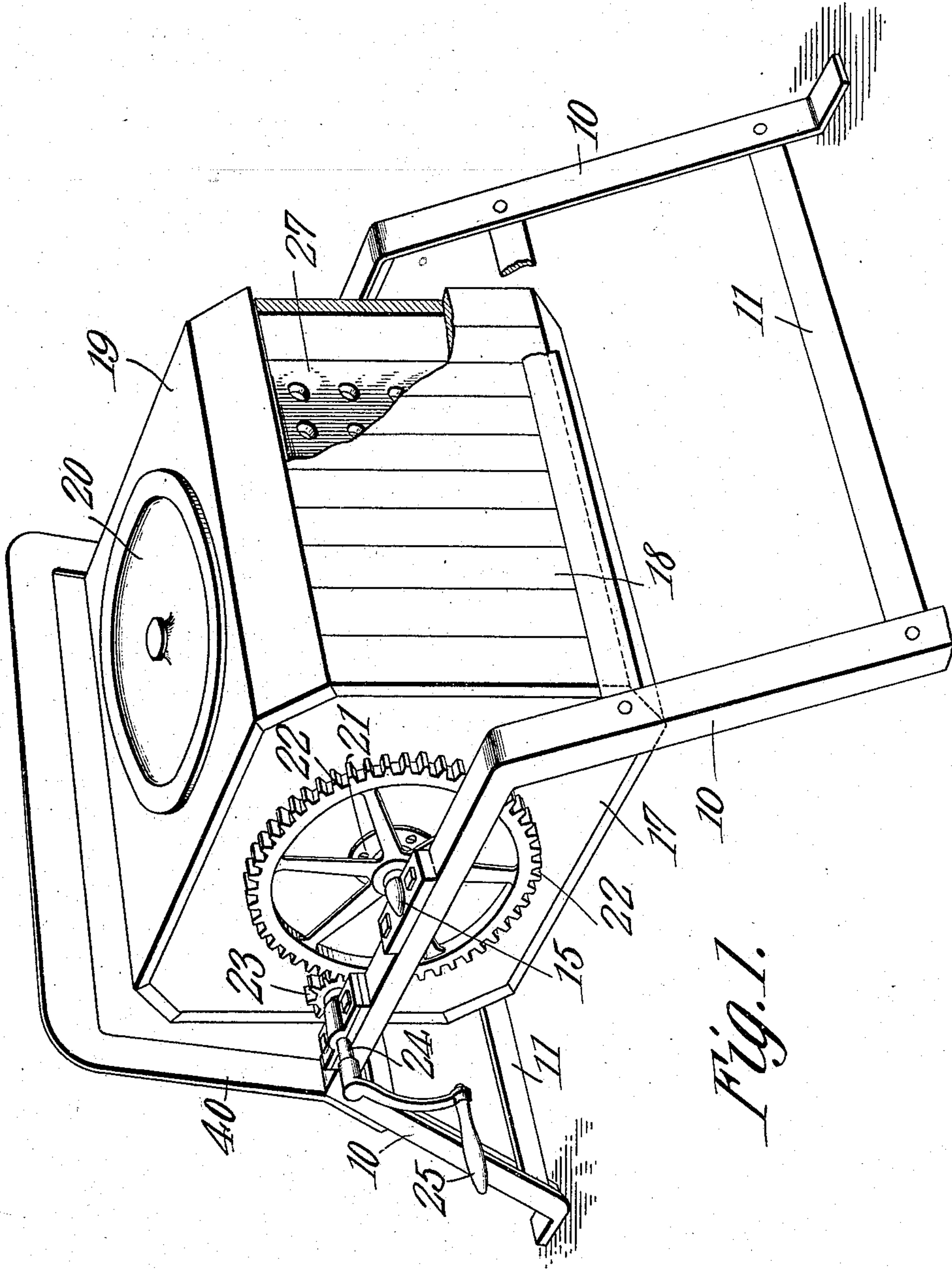


Fig. 1.

Witnesses

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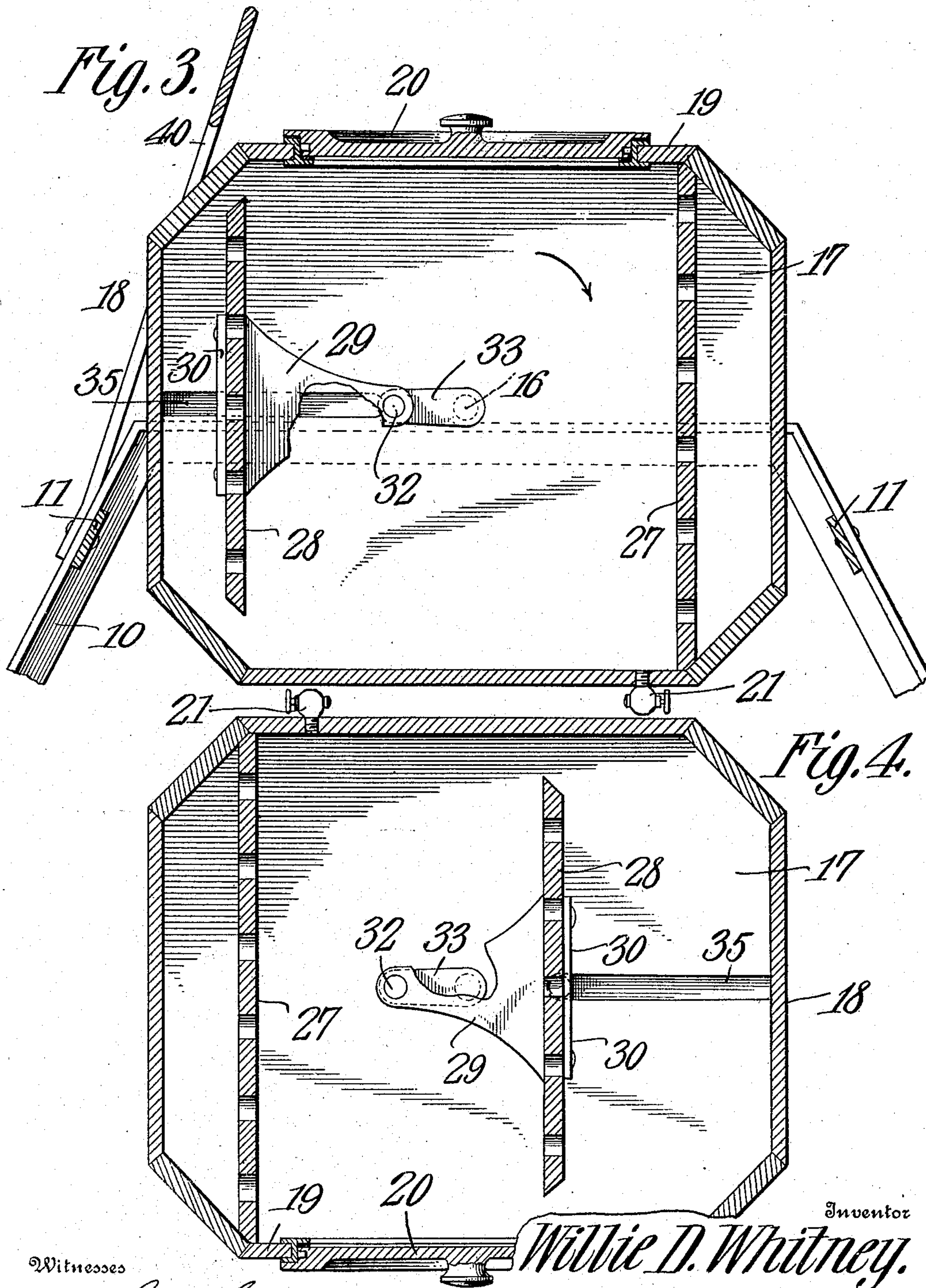
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# UNITED STATES PATENT OFFICE.

WILLIE D. WHITNEY, OF HOLLEY, NEW YORK.

## WASHING-MACHINE.

No. 908,057.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed October 14, 1907. Serial No. 397,398.

*To all whom it may concern:*

Be it known that I, WILLIE D. WHITNEY, a citizen of the United States, residing at Holley, in the county of Orleans and State of New York, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to washing machines, and has for its principal object to provide a novel form of machine of that general class in which the clothes are alternately squeezed and released for the purpose of forcing the suds therethrough.

A further object of the invention is to provide a machine of this type in which the clothes are disposed in a container or casing which may be continuously revolved, and in which the action of the squeezing and releasing devices is in a direction transverse to the axis of rotation.

A still further object of the invention is to provide a machine of this type in which a squeezing or compression member is mounted within the casing on pivots eccentric to the axis of rotation, said squeezing or compression member being, furthermore, connected to the container in such manner as to be carried around as the latter revolves and at the same time reciprocated for the purpose of alternately compressing and releasing the clothes.

A still further object of the invention is to provide a device of this type in which the squeezing or compression member is slightly oscillated during its reciprocatory movement for the purpose of facilitating the release of the clothes.

A still further object of the invention is to provide in a machine of this class for the support of a wringer in such position that the water expelled by the action of the wringer will run directly back into the clothes container, thus avoiding the flowing of water to the floor, or the employment of a separate drip pan.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, herein- after fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing

from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a perspective view of a washing machine constructed in accordance with the invention, parts being broken away in order to more clearly illustrate the construction. Fig. 2 is a sectional plan view of the same. Fig. 3 is a transverse sectional view of the clothes container and a portion of the frame, the container being shown with the top uppermost, and in readiness to receive or discharge the clothes. Fig. 4 is a view similar to Fig. 3, showing the clothes container inverted after moving through an arc of one hundred and eighty degrees.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The working parts of the machine are supported on a suitable frame which may be formed of wood or metal, and, in the present instance, includes a pair of side brackets 10, connected by cross bars 11.

The frame is provided with clamp plates 15 for the reception of the ends of a pair of stationary shafts or studs 16, disposed in axial alinement and passing through the end walls 17 of the clothes container 18.

The clothes container 18 is shown in the present instance as of approximately rectangular form and preferably is made of wood. The top 19 is provided with an opening which may be closed by a removable cap or cover 20 of sufficient size to permit the ready insertion and removal of the clothes, and at the bottom is a discharge tap 21 through which the suds may be drawn off after the completion of the washing operation. The opposite ends 17 of the container are provided with metallic collars 21 bolted or otherwise secured in place and having openings for the passage of the short shafts 16, in order to prevent undue wear on the walls of the openings formed through the end plates 17. One of these collars 21 is secured to or formed integral with a gear wheel 22 which meshes with a pinion 23 carried by a shaft 24 that is journaled in a suitable bearing on the frame, and this shaft 24 is provided with a suitable operating means, which, in the present instance, takes the form of a handle crank 25, although a pulley or similar member may be substituted therefor when the machine is to be driven by power.



Arranged within the container and disposed parallel with one of the side walls thereof is a perforated partition 27, which coacts with a movable squeezing plate 28 that is, also, provided with perforations. At the opposite ends of the squeezing plate are arms 29, preferably formed of metal and provided at their rear ends with flanges 30 that fit over the outer ends of the squeezing member 28 and are secured thereto by rivets or similar fastenings. The inner ends of these arms are pivoted to crank pins 32 carried by stationary cranks 33 that are rigidly secured to the short shafts 16. The rear ends of the arms are, furthermore, provided with pins or anti-friction rollers 34 that are arranged to traverse grooves 35 formed in the inner face of the end walls 17, and extending on lines radiating from the axes of the shafts 16.

When the parts are in the position shown in Fig. 3, the squeezing plate 28 is at the full limit of its outward movement and the clothes to be washed may be readily placed in position between the partition 27 and said plate. After the clothes and suds have been inserted, the cover 20 is fastened in place and the clothes container is revolved. During the first portion of the revolution in the direction indicated by the arrow in Fig. 3, the pins or rollers 34 will be carried upward by the walls of the grooves 35, while the crank pins 32 remain stationary. This movement will naturally turn the plate 28, with the pins 34 as centers, so that the plate will be presented at a slight angle to the partition 27 as it gradually moves toward said partition, and by the time the movement has reached an arc of 90° the angle will be pronounced. From this time onward to the full 180° of movement, the angle will grow gradually less, until at the completion of a full half revolution, the squeezing plate 28 will be parallel with the partition 27 and will be at the inward limit of its squeezing movement, as shown in Fig. 4. After passing this point, the downward movement of the grooves carrying with them the pins 34, will again tend to turn the squeezing plate with the pins 28 as centers, until the plate assumes an angle to the partition, the widest part of the angle being at the bottom of the tub, so that as the clothes are gradually released they are, also, permitted to fall toward the bottom of the tub.

The frame 10 is provided with a support 40 for a ringer and it will be noted that this support is in the form of an inverted U-shaped bar that is inclined in such manner that its horizontal member shall extend over the container and when a wringer is clamped to this horizontal member, the liquid expressed from the clothes may run back through the opening in the top of the container, thus avoiding wetting the floor or the use of an auxiliary drip pan.

# I claim:—

1. In a washing machine, a clothes container arranged to turn about a pivot, and a clothes squeezer disposed within the container and eccentrically attached to said pivot to positively reciprocate in a plane transverse the axis of said pivot.
2. In a washing machine, a pivot, a clothes container movable about said pivot, and a clothes squeezer arranged within and carried by said container and eccentrically attached to said pivot for movement in a direction transverse to the axis of the pivot.
3. In a washing machine, a clothes container movable about an axis, a clothes squeezing member arranged within and movable with the container, and means for reciprocating said member in a plane transverse to such axis, and at the same time causing such member to assume varying angular positions with respect to the sides of the container.
4. In a washing machine, a revolvably mounted clothes container, a clothes squeezing member arranged within and revolvable with the container, and means for reciprocating the squeezer in a plane transverse to the axis of rotation and for rocking said squeezer to cause the latter to assume varying angular positions during the rotative movement.
5. In a washing machine, a clothes container movable about an axis, a stationary crank extending within the container, a clothes squeezing member within and slidably connected to said container, and means connecting said member to said crank.
6. In a washing machine, a clothes container movable about an axis and having an internal guide, a stationary crank pin within the container, a clothes squeezing member mounted for movement in the guide, and means connecting said member to said crank pin.
7. In a washing machine, a clothes container movable about an axis, the end walls of said container being provided with grooves radiating from said axis, a stationary crank pin, a clothes squeezing member, a projection extending therefrom and entering the groove, and a connection between said member and said crank pin.
8. In a washing machine, a clothes container movable about an axis and having radial grooves in its end portions, a squeezing member having projections entering said grooves, a stationary crank extending within the container, a pin on said crank, and an arm extending from the crank pin and said squeezing member.
9. In a washing machine, a clothes container movable about an axis, a perforated partition secured therein, a movable squeezing member also disposed within the container and rotating therewith, and means



for moving said member toward and from the partition and for causing the member to assume varying angles with relation to such partition.

5 10. In a washing machine, a clothes container movable about an axis, a perforated partition secured therein, a movable clothes squeezing member disposed within the container, a stationary crank pin held eccentric  
10 to said axis, and an arm connecting the crank pin to the squeezing member, whereby the latter is reciprocated during the movement of the container about its axis.

15 11. In a washing machine, a clothes container movable about an axis, a perforated partition fixedly secured therein, a movable clothes squeezing member arranged within the container, the end walls of the container being provided with grooves, stationary  
20 crank pins adjacent the end walls of the container, arms extending from the crank pins and provided with flanges that are secured to said member, and projections extending from said arms and entering said grooves.

25 12. In a washing machine, an approximately rectangular clothes container, stationary shafts extending through the end walls thereof, stationary cranks carried by the shafts, the end walls of said container  
30 being provided with grooves radiating from the axis of movement, a pair of arms extending from the crank pins and provided with flanged ends, projections extending from said flanged ends and entering the grooves, and  
35 a perforated clothes squeezing member rigidly secured to said flanges.

13. In a washing machine, a frame, a pair of shafts rigidly secured thereto, an approximately rectangular clothes container, the end walls of which are provided with open- 40 ings for the passage of said shafts, a removable cover for the container, a perforated partition fixedly secured within the container and spaced from one of the side walls thereof, rigid cranks secured to the shafts, 45 pins on said cranks, the inner faces of the end walls of the container being provided with grooves radiating from the axes of the shafts, a movable squeezing member provided with perforations, a pair of arms carried by the 50 squeezing member and connected to the crank pins, and projections extending from said arms and entering said grooves.

14. In a washing machine, a revoluble clothes container, a reciprocating and rock- 55 ing squeezer held therein the rocking movement being on an axis parallel to the axis of the container.

15. In a washing machine, a revoluble clothes container, a squeezing member dis- 60 posed within said container, a means for simultaneously rotating the container reciprocating and rocking said squeezing member in a plane at right angles to the axis of the container. 65

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIE D. WHITNEY.

Witnesses:

J. ROSS COLHOUN,  
JNO. E. PARKER.