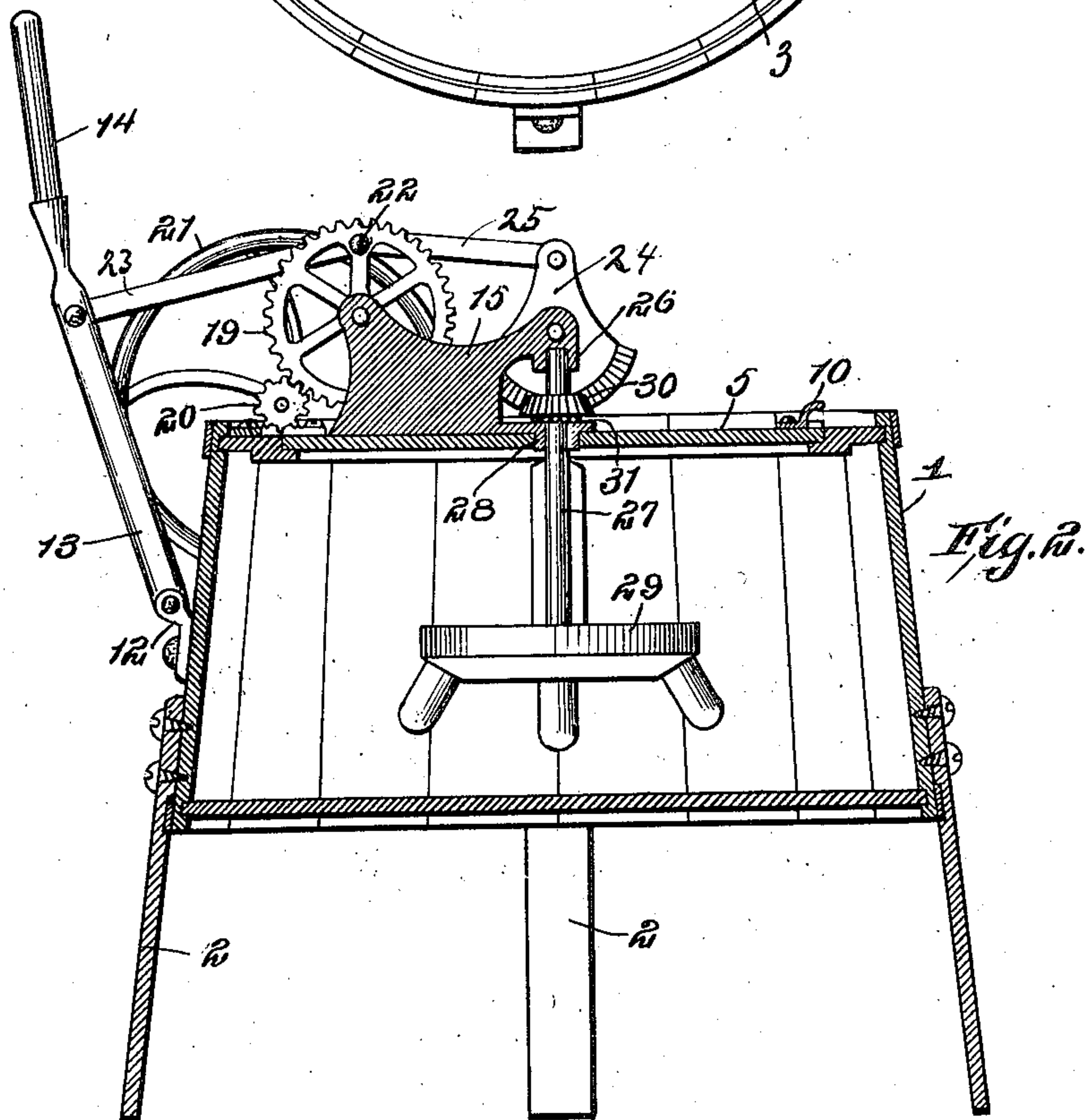
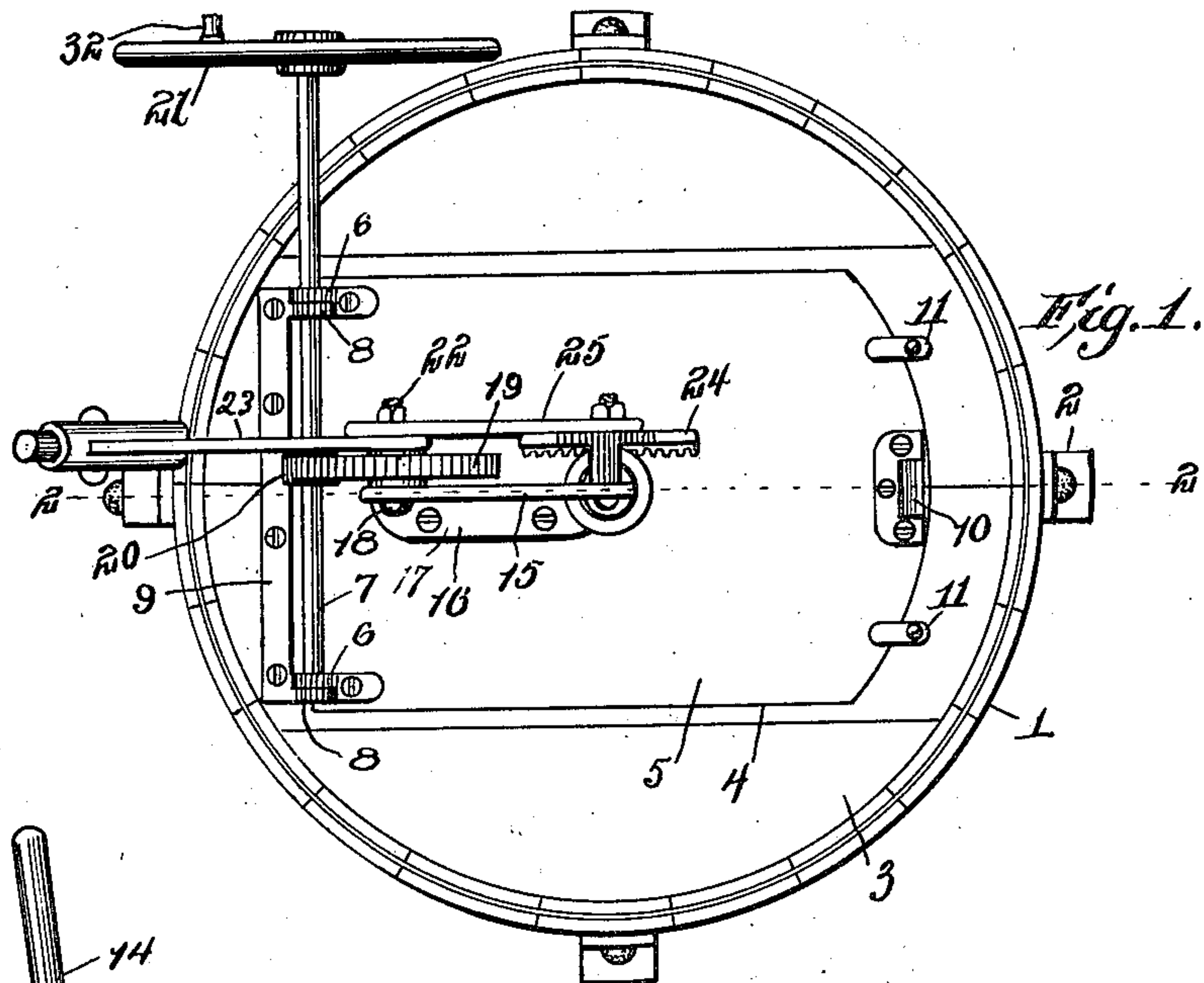


No. 861,022.

PATENTED JULY 23, 1907.

J. W. DUNMIRE.  
WASHING MACHINE.  
APPLICATION FILED AUG. 18, 1906.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JAMES W. DUNMIRE, OF NEWTON, IOWA.

## WASHING-MACHINE.

No. 861,022.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed August 18, 1906. Serial No. 331,126.

*To all whom it may concern:*

Be it known that I, JAMES W. DUNMIRE, a citizen of the United States, residing at Newton, in the county of Jasper and State of Iowa, have invented new and useful  
5 Improvements in Washing-Machines, of which the following is a specification.

This invention relates to that class of washing machines in which a rubbing member, commonly known as a dolly is mounted for oscillation within a tub or receptacle, the same being adapted to engage the clothes placed in the receptacle for the purpose of agitating and rubbing the same.

The invention has for its objects to simplify and improve the mechanism whereby the rubbing member is actuated; and to so hinge the lid upon the receptacle that it may be opened and shut without disturbing the position of the fly-wheel which forms a part of the operating mechanism and without lifting the weight of said fly-wheel.

20 With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings: Figure 1 is a top plan view of a washing machine constructed in accordance with the principles of the invention. Fig. 2 is a vertical sectional view taken on the plane indicated by the line 2—2 in Fig. 1.

Corresponding parts in both the figures are denoted by like characters of reference.

40 The box or tub 1 which constitutes the receptacle of the improved washing machine is supported upon legs 2, 2; the top 3 of said receptacle has an aperture 4 for which a lid or cover 5 is provided. Said lid is provided at two of its corners, near one edge, with hinge lugs 6, 6 engaging a shaft 7 which is supported for rotation in bearings 8 formed at the ends of a reinforcing strip 9 which is secured upon the top of the receptacle adjacent to one edge of the aperture 4. The lid or cover 5 which is thus capable of swinging upon the shaft 7, is provided near its free edge with a handle 10 which may be conveniently grasped for the purpose of opening the lid; for the purpose of securing the latter in a closed

position, fastening means such as turn buttons 11 are provided.

Upon one side of the tub or receptacle 1 is bolted or otherwise secured a lug 12 upon which is pivoted a lever 13 having a handle 14 at its upper end. Upon the lid or cover 5 is bolted or otherwise secured an upright bearing plate 15 which has been shown as provided at its lower edge with a flange 16 for the passage of the securing bolts or members 17. The bearing plate 15 has a stub 18 upon which is journaled a spur-wheel 19 meshing with a pinion 20 upon the shaft 7; the latter is extended beyond one side of the tub or receptacle, and it carries a fly-wheel 21. The spur-wheel 19 has a wrist-pin 22 which is connected with the lever 13 by means of a link or connecting rod 23. Pivotaly mounted upon the bearing plate 15 is a sector shaped rack 24 which is connected by the link 25 with the wrist-pin 22 upon the spur-wheel 19. The bearing plate 15 is provided with a downwardly opening socket 26 affording a bearing for the upper end of the vertically disposed operating shaft 27 which latter has an additional bearing in a collar 28 that is formed integrally with the bearing plate 15 and which extends through the lid 5 upon which the bearing plate is secured. The shaft 27 which thus extends within the receptacle of the machine, carries at its lower end the rubbing member or dolly 29. A bevel gear 30 which is firmly secured upon the shaft 27 is in constant mesh with the sector shaped rack 24; the under side of the bevel gear 30 and the upper side of the collar 28 cooperate to form a ball-race in which antifriction balls 31 are placed for the purpose of facilitating the operation of the machine.

It will be readily seen from the foregoing description taken in connection with the drawings hereto annexed that by rocking the lever 13, the spur-wheel 19 will be rotated and will in turn communicate a rapid rotary motion to the shaft 7 carrying the fly-wheel 21 whereby the operation of the machine is greatly facilitated. The spur-wheel 19 also serves through the intermediate link or connecting rod 25 to rock or oscillate the rack segment 24 whereby an oscillatory motion is imparted to the shaft 27 carrying the rubbing member 29. The lever 13 and the link or connecting rod 23 may be dispensed with or disconnected, if preferred, and the machine might be operated by means of a crank or handle, as 32 attached to the fly-wheel.

By the improved construction herein described it will be seen that the lid of the machine may be raised at any time, affording access to the interior of the receptacle, without disarranging any of the working parts, and without the necessity of lifting the weight of the fly-wheel the latter being mounted upon the shaft

which constitutes the pintle of the hinge whereby the lid is mounted upon the receptacle.

The general construction is simple and inexpensive, and the improved washing machine is thoroughly efficient in operation.

Having thus described the invention what is claimed is:

1. In a washing machine a receptacle having an aperture in the top thereof, a reinforcing strip adjacent to one edge of the aperture, a fly-wheel carrying shaft journaled in bearings upon the reinforcing strip, a lid having hinge lugs engaging the fly-wheel carrying shaft and operating mechanism including a bearing plate secured upon the lid, a spur-wheel supported for rotation upon the bearing plate, and a pinion upon the fly-wheel carrying shaft meshing with the spur-wheel.
2. In a washing machine a receptacle having an aper-

ture in the top thereof, a fly-wheel carrying shaft supported for rotation adjacent to said aperture, a lid having hinge lugs engaging the shaft, a bearing plate secured upon the lid, a spur-wheel journaled upon the bearing plate, a pinion upon the fly-wheel carrying shaft meshing with the spur-wheel, an operating lever supported upon one side of the receptacle, a link connecting said lever with the wrist pin upon the spur-wheel, a shaft extending through the lid and supported for oscillation, said shaft having a rubbing member at its lower end, and means for transmitting an oscillatory motion to said shaft from the spur-wheel.

In testimony whereof, I affix my signature in presence of two witnesses.

JAMES W. DUNMIRE.

Witnesses:

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