

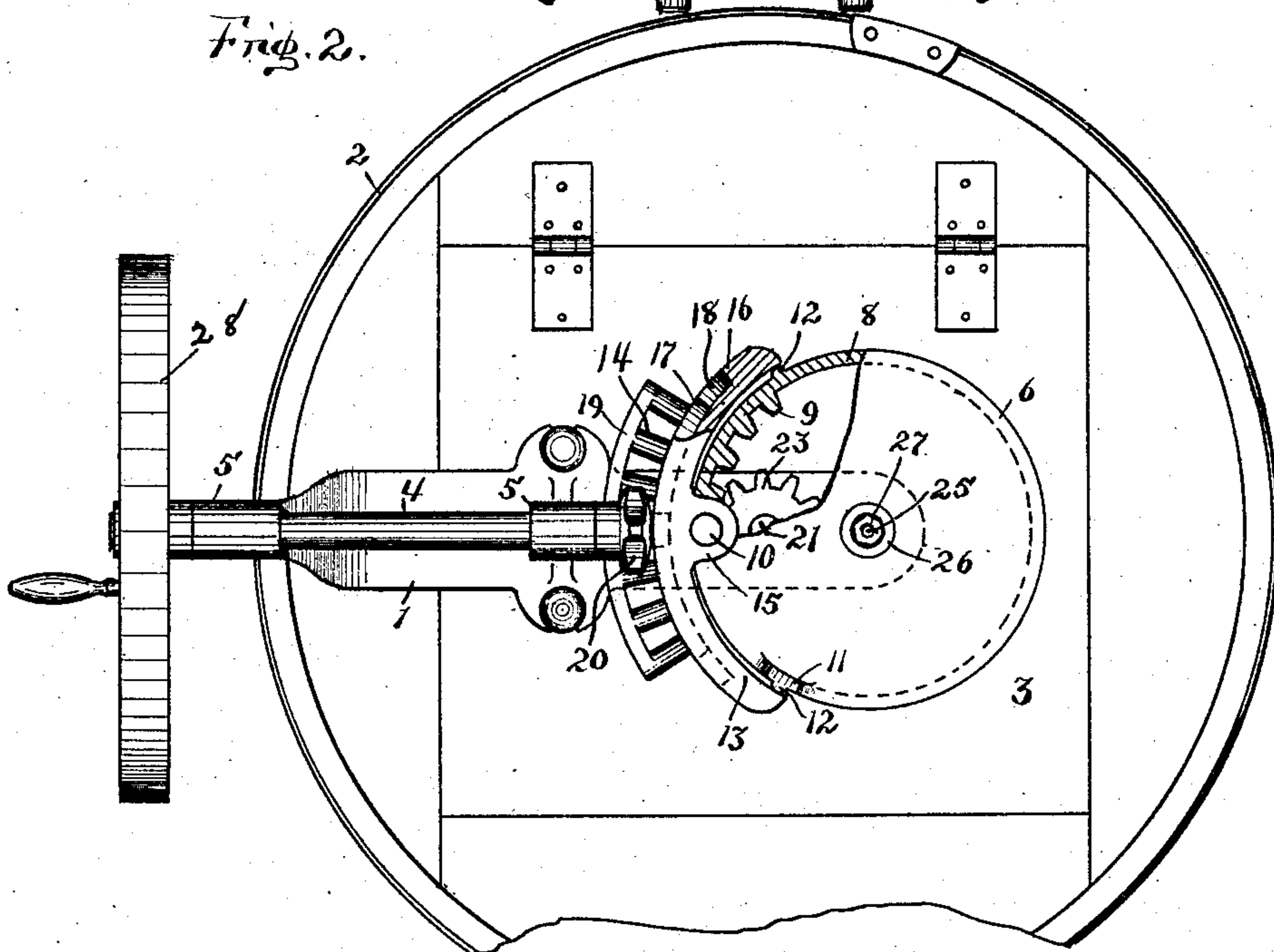
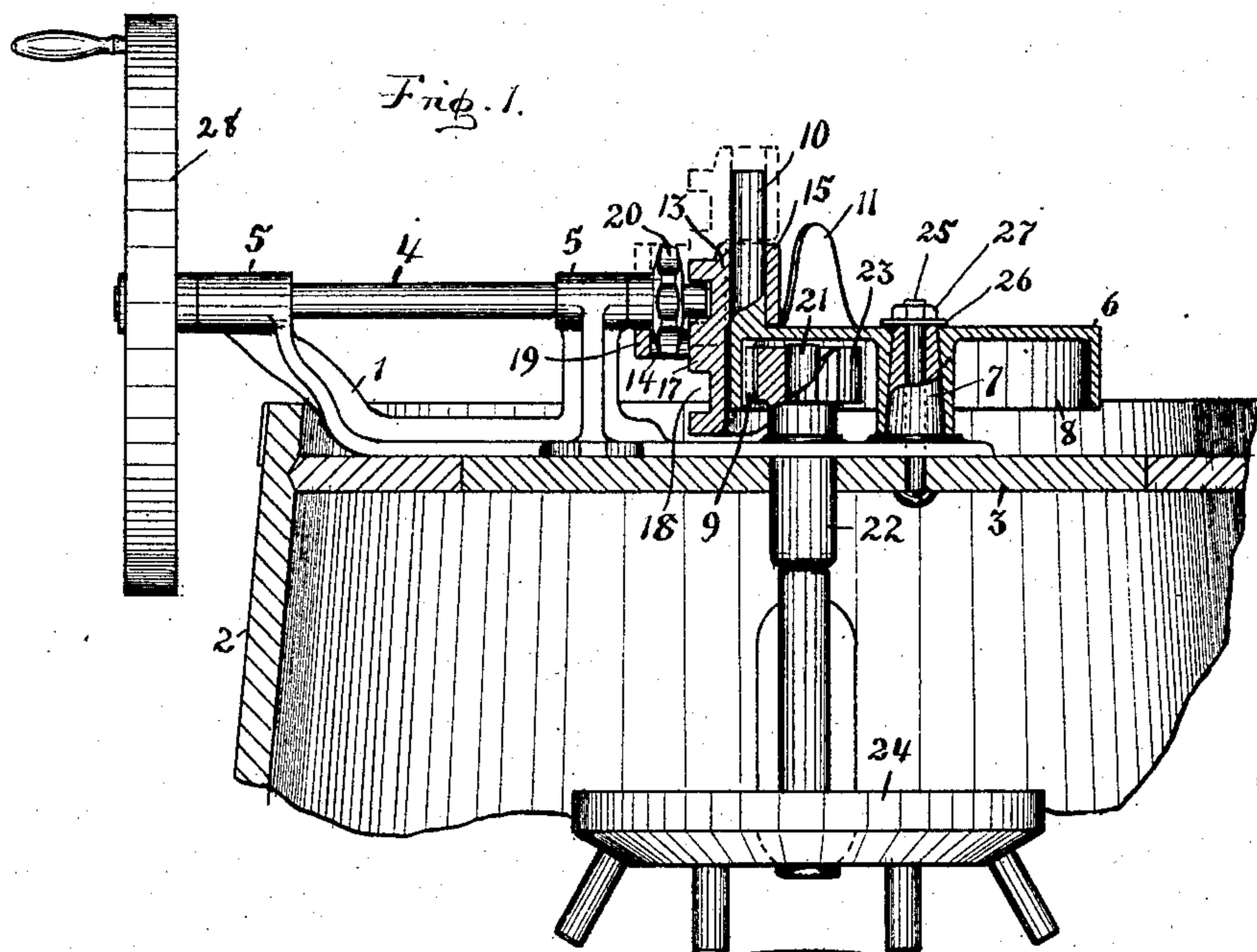
No. 788,227.

PATENTED APR. 25, 1905.

W. SWEET.  
MECHANICAL MOVEMENT FOR WASHING MACHINES.

APPLICATION FILED SEPT. 19, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

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C. J. Loe

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INVENTOR.

BY J. G. Burns

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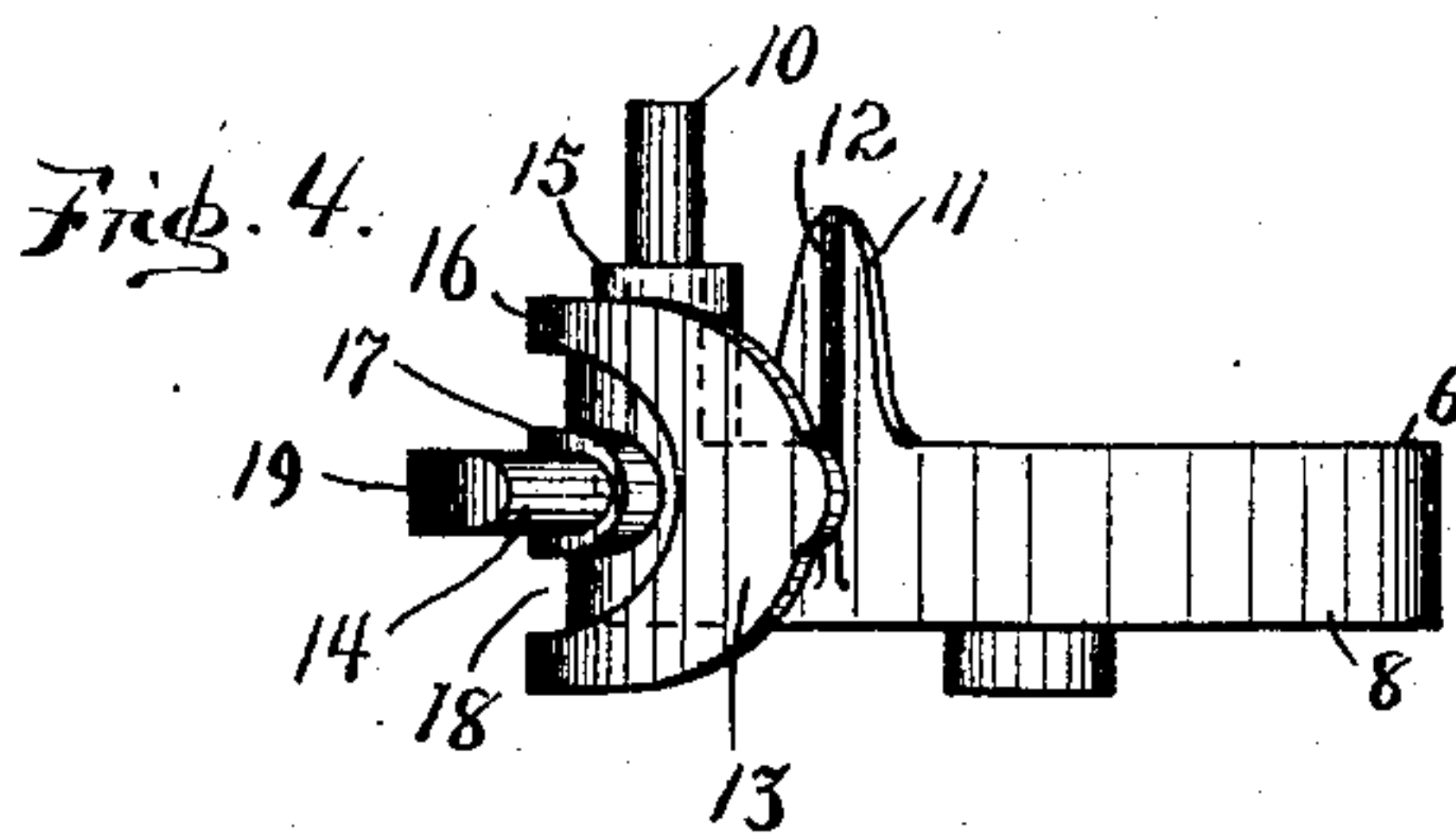
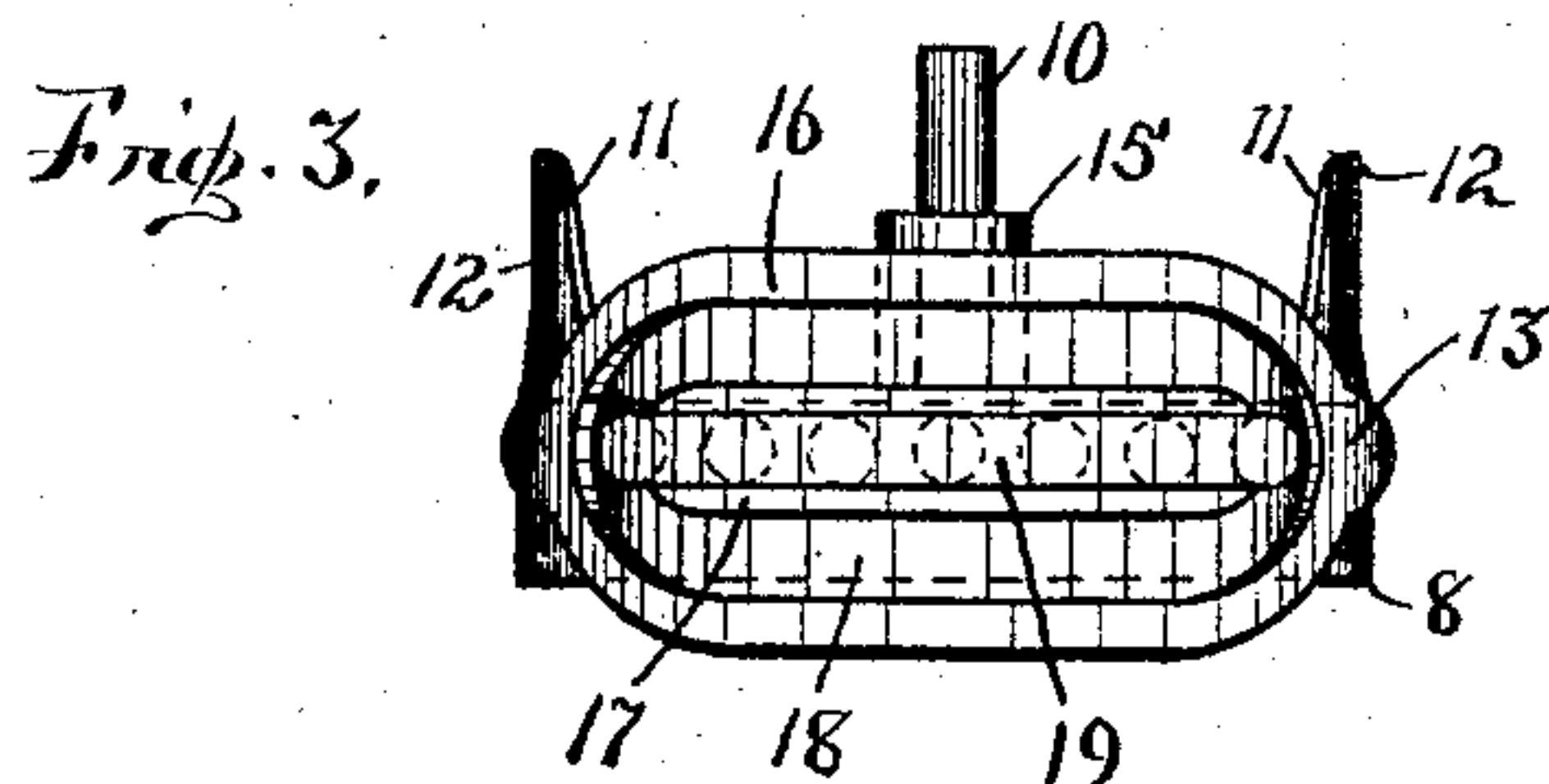
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*G. J. Loe*

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# UNITED STATES PATENT OFFICE.

WARREN SWEET, OF FORT WAYNE, INDIANA, ASSIGNOR TO THE HORTON MANUFACTURING COMPANY, A CORPORATION OF INDIANA.

## MECHANICAL MOVEMENT FOR WASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 788,227, dated April 25, 1905.

Application filed September 19, 1904. Serial No. 224,979.

*To all whom it may concern:*

Be it known that I, WARREN SWEET, a citizen of the United States of America, and a resident of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Mechanical Movements for Washing-Machines, of which the following is a specification.

This invention relates to improvements in mechanical movements, such as are used for operating washing-machines, and the object thereof is to provide gearing for converting continuous rotary motion into oscillating motion, and which will be capable of operation in either direction. I accomplish this object by the construction illustrated in the accompanying drawings, in which—

Figure 1 is an elevation showing the mechanism of the invention partly in vertical central section. Fig. 2 is a plan of the same, partly cut away. Fig. 3 is a front elevation of the shifting rack mounted upon an intermediate member. Fig. 4 is an elevation of the shifting rack and intermediate member viewed from a point at right angles to that of Fig. 3.

Similar numerals of reference indicate corresponding parts throughout the several views.

Referring now to the same, 1 is a supporting-casting which is arranged upon the suds vessel 2 and is fixed upon the lid 3 thereof.

4 is a drive-shaft mounted in bearings 5, which are a part of the casting 1.

6 is an intermediate driving member mounted upon a stud 7 and having upon its flange 8 an internal rack 9. From the top of said intermediate member 6, immediately adjacent the periphery thereof, extend vertically a guide-post 10 and two ears 11, the latter being arranged, respectively, upon either side of the former and each having upon its outer face a vertically-disposed bead or rest 12. A shifting rack composed of a curved plate 13, having in connection therewith a series of pins 14, which are radially disposed, is mounted upon the guide-post 10 by means of a lug 15, which extends from the rear or concave side of said plate, and said shifting rack is adapted to move vertically thereon. The

said plate 13 rests, near its respective ends, upon said beads 12, and thereby is held from turning upon said guide-post 10. Upon the convex side of said plate 13 are an oblong guard 16 and an elongated lug 17, the latter being arranged coincident with the inner ends of said pins 14, and the former completely surrounds said elongated lug, leaving an intervening space 18, which extends with uniform breadth between said guard and lug 17 suitably to receive the end of the drive-shaft 4. A pinion 20 is mounted upon said drive-shaft near its inner end and is adapted to engage with said shifting rack, and thereby actuate said intermediate member. The said pinion operates alternately over and under said row of pins, and the end of the drive-shaft, because it extends into the space 18 and engages the guard 16, prevents disengagement of said pinion from said row of pins as the latter are shifted above or beneath said pinion. It will be readily understood that when said pinion is rotated continuously in either direction the said shifting rack will be caused to move to and fro in a circular path the center of which is the axial center of the intermediate member 6. The said shifting rack is moved vertically upon the guide-post 10 to accommodate said row of pins to the upper or lower side of the driving-pinion 20.

An agitator-shaft 21 is mounted vertically in a suitable sleeve-bearing 22, which is a part of the casting 1 and which extends downward through the lid 3 of the vessel 2. A pinion 23 is fixed upon the upper end of the shaft 21 and meshes with the rack 9, by which the former is actuated. 24 is an agitator arranged in connection with the lower part of the shaft 21.

A bolt extends upward through the lid 3 and stud 4, and a washer 26 is mounted upon said bolt and rests upon the top of said stud, and its outer edge extends sufficiently to prevent vertical movement of the member 6. The said washer is held firmly in place by the nut 27, which is driven upon the upper end of said bolt, and said bolt serves also as a means for the attachment of the casting 1 to said lid.



In the operation of this invention the drive-shaft 4 is rotated in either direction by any suitable means, such as a wheel 28, and thereby the driving-pinion 20 is likewise rotated.

5 The shifting rack is caused to move to and fro in a horizontal circular path and shift vertically as the row of pins pass from the upper to the lower side of the pinion 12, and vice versa, and thus the intermediate member  
10 6 will be caused to oscillate upon the stud 7. The motion of the agitator 24 will be according as the pinion 23 is actuated by the intermediate member 6.

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

1. In mechanism of the class described, a supporting-casting; a drive-shaft mounted in suitable bearings in said casting; a driving-  
20 pinion mounted upon said shaft; a driving member suitably mounted to be oscillated and carrying a vertical guide-post near the periphery thereof; and a shifting rack mounted upon said guide-post and adapted to be shifted  
25 ed vertically thereon, and to be actuated by said pinion.

2. In mechanism of the class described, a supporting-casting; a drive-shaft mounted in

suitable bearings on said casting; a driving-pinion mounted upon said shaft; an oscillating intermediate member suitably mounted upon said casting, and having a vertical guide-post near its periphery, and carrying also an internal rack; a shaft having means in connection with said oscillating member to be actuated thereby; and a shifting rack mounted in connection with said intermediate member, and being adapted to be shifted vertically upon said guide-post and to be actuated by said pinion.

3. In mechanism of the class described, a supporting-casting; a drive-shaft carried by said casting; an oscillating member having thereon a guide-post, and also vertically-disposed beads; a shifting rack mounted in connection with said oscillating member, and adapted to move vertically upon said guide-post and rest upon said beads; and means in connection with said drive-shaft and shifting rack to actuate the latter.

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

WARREN SWEET.

Witnesses:

W. G. BURNS,  
HERMAN LAMPKE.