(No Model.) 2 Sheets—Sheet 1.

J. SCHROEDER.

MEANS FOR OPERATING WASHING MACHINES.

No. 498,031. Patented May 23, 1893.

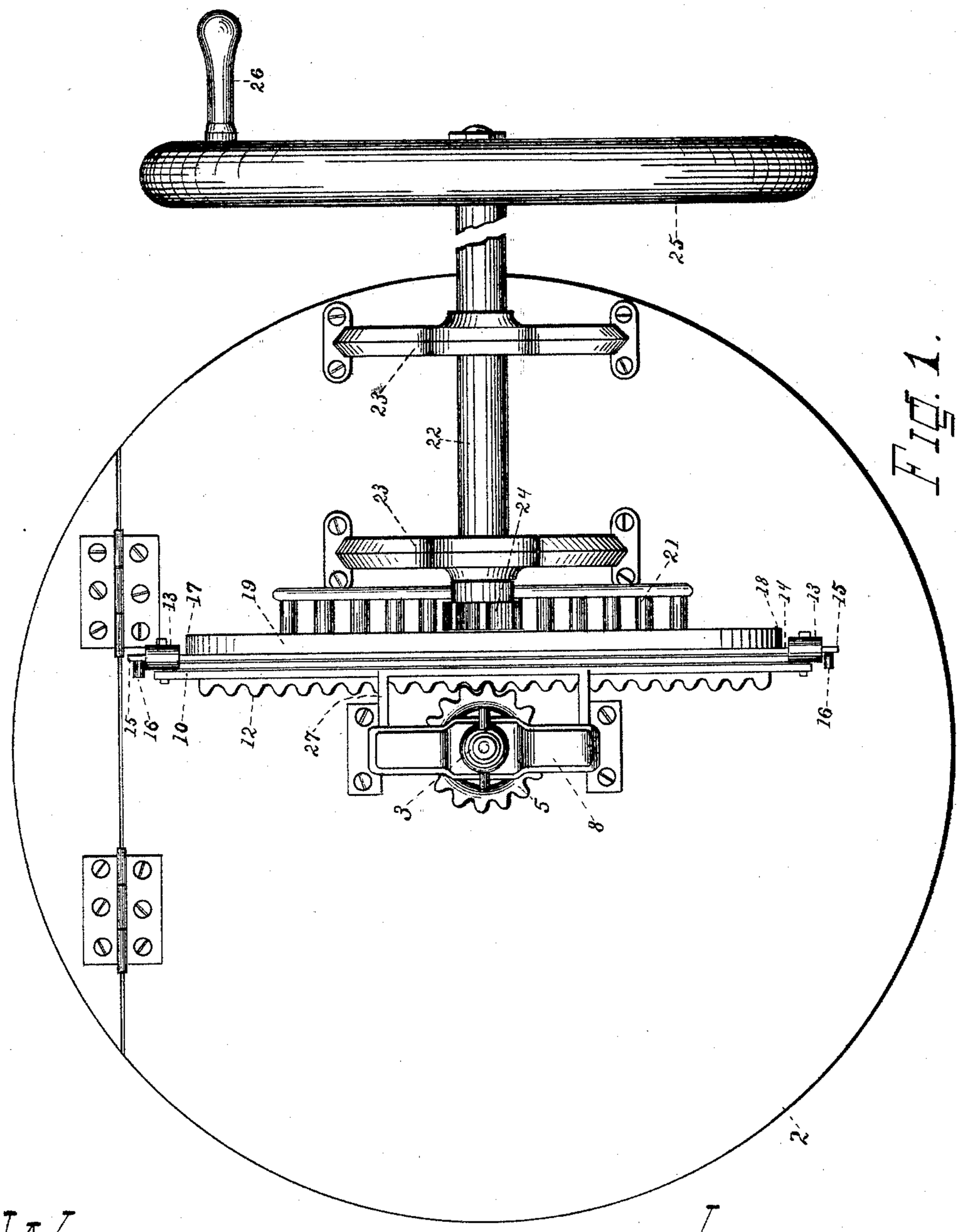

FIG. 1.

WITNESSES:
T. A. Murphy.
L. G. Susemihl.

INVENTOR:
John Schroeder
per Wm. F. White
Attorney.

(No Model.) 2 Sheets—Sheet 2.

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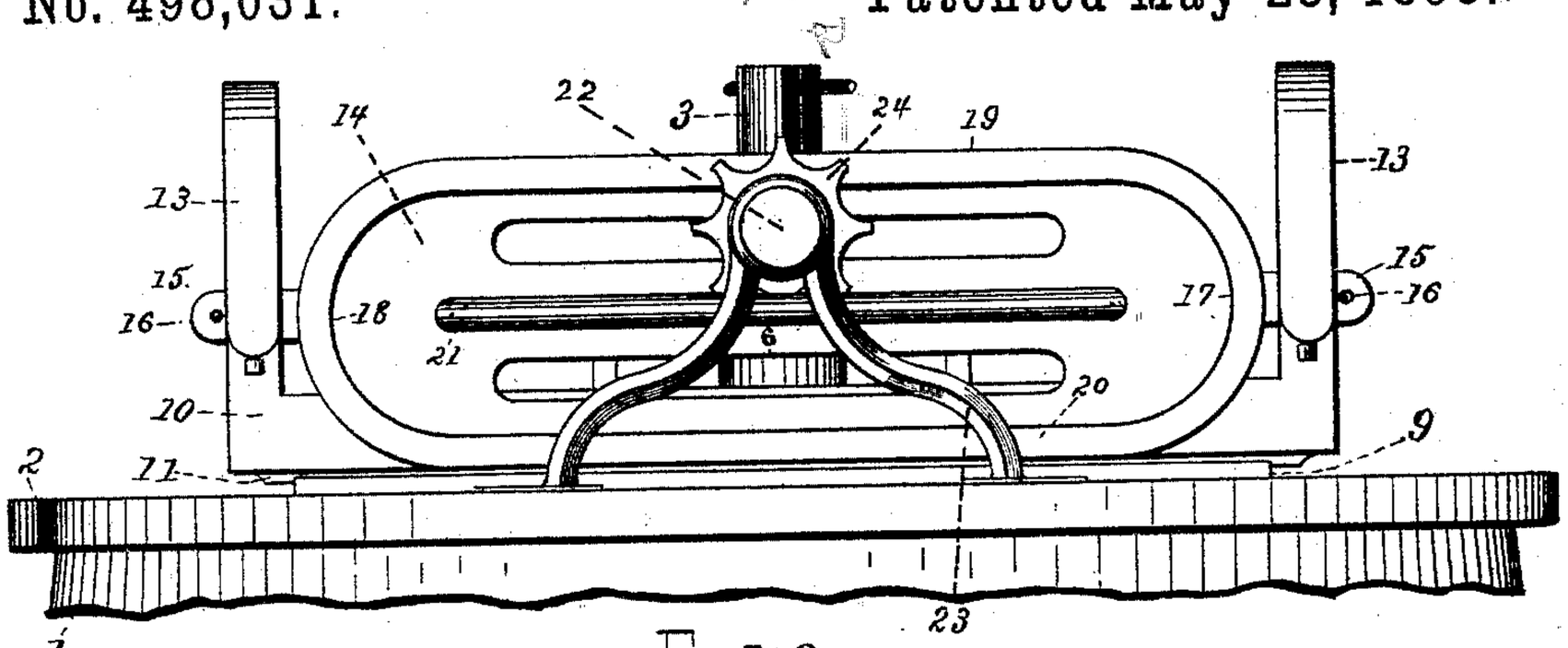

Fig. 2.

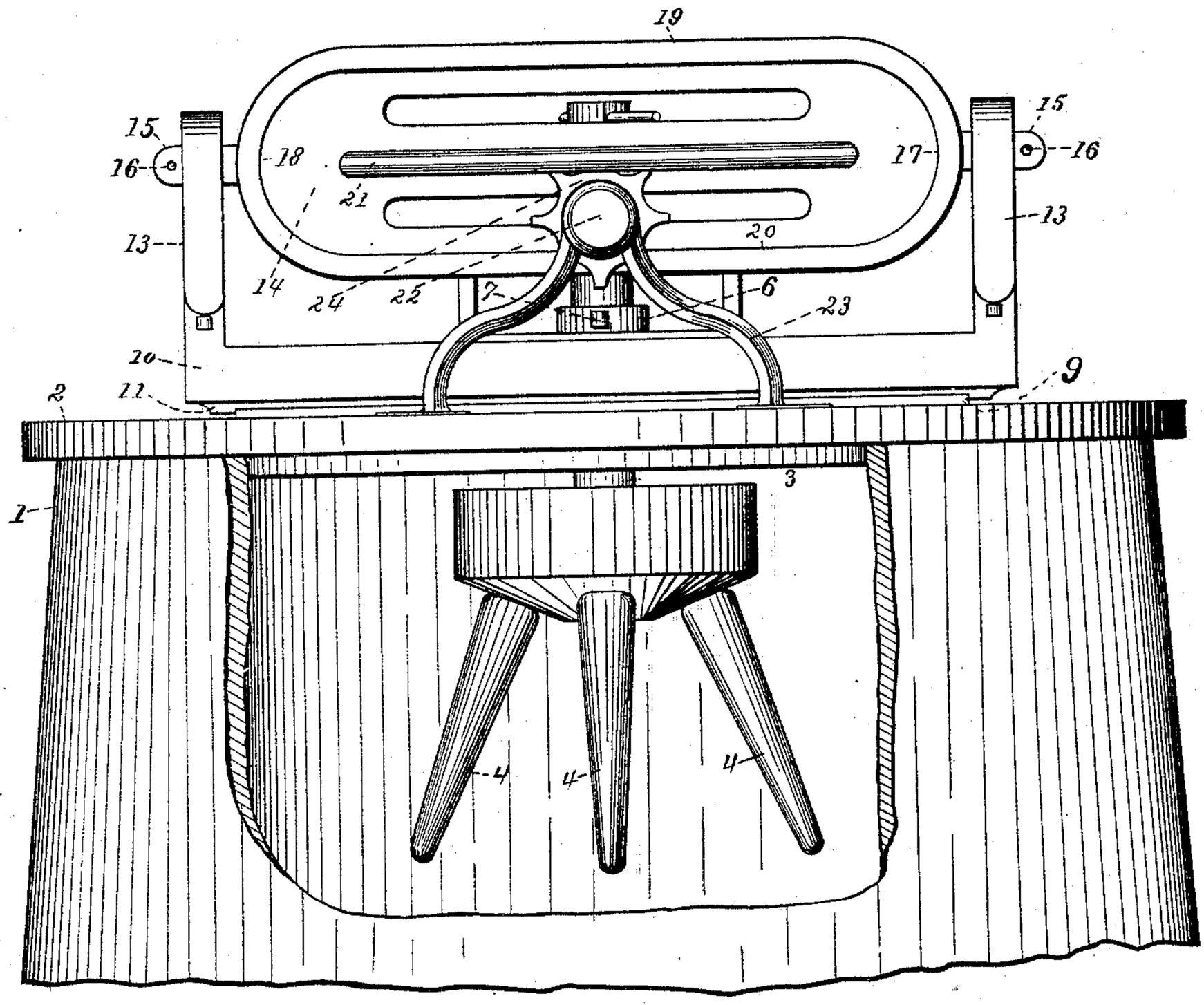

Fig. 3.

WITNESSES:
T. A. Murphy.
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INVENTOR:
John Schroeder
per Wm. F. White
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UNITED STATES PATENT OFFICE.

JOHN SCHROEDER, OF AMITY, ASSIGNOR OF ONE-HALF TO CHARLES H. REUPKE AND WILLIAM GETTY, OF DAVENPORT, IOWA.

MEANS FOR OPERATING WASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 498,031, dated May 23, 1893.

Application filed June 20, 1892. Serial No. 437,416. (No model.)

To all whom it may concern:

Be it known that I, JOHN SCHROEDER, a citizen of the United States, residing at Amity, in the county of Scott and State of Iowa, have invented a new and useful Means for Operating Washing-Machines, of which the following is a specification.

My invention relates to washing machines having vertical stirrers or pegs to operate upon the clothes within the wash-tub; and my invention consists in novel mechanism for rotating said stirrers or pegs alternately in opposite directions, while the power shaft is rotated in any one direction. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a plan or top view of my washing machine, and Figs. 2 and 3 side views of the same with the crank and balance wheel removed.

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

1 represents a wash tub, 2, its hinged cover or lid; 3, the vertical shaft; 4, the stirrers or pegs attached to the lower part of said vertical shaft; 5, the gear or toothed wheel upon the upper portion of said vertical shaft; 6, the collar integral with said wheel, having a suitable perforation therein to accommodate the set screw 7 for the purpose of securing said wheel rigidly upon said vertical shaft. Said vertical shaft passes through a suitable perforation in said cover or lid, properly bushed or lined to form a proper bearing for the same, and the upper end of such vertical shaft, above the lid or cover, is supported in a suitable perforation in the curved frame 8, which latter, is properly attached to the exterior surface of said lid or cover. These parts of a washing machine which I have above described, are old and I do not claim the same, but my invention consists in novel mechanism for rotating said stirrers or pegs, as aforesaid, through contact of the same with said gear or toothed wheel 5 upon said vertical shaft. I provide a flat plate 9, which is suitably attached to the exterior surface of said lid or cover, said plate being provided with a longitudinal groove extending the entire length of the same, which groove is in the upper surface of said plate. The bar 10 has upon its under surface a longitudinal tongue 11, extending the length thereof, adapted to enter said groove and support said bar upon said plate, and also to permit said bar to move or slide thereon longitudinally. The bar 10 is also provided upon its side adjacent to said gear or toothed wheel with a rack 12, which preferably is integral with said bar and constructed so as to operate or rotate the gear wheel on the vertical shaft, as said bar moves or slides longitudinally upon said plate. Each end of the bar 10 has attached a vertical strap or elongated loop, 13. The bar 14 has attached at each end an extension or guide 15. Such extension or guide 15 passes through a strap or elongated loop 13, thus forming a slide way and guide for permitting the bar 14 to be raised and lowered vertically. The extension or guide 15 protrudes beyond the strap or elongated loop 13, and is provided with a pin 16, which pin forces the bar 10 to move or slide upon the plate 9, in unison with the movement of said bar 14, which movement of the latter will hereinafter be fully explained.

The exterior surface of a side of bar 14 is provided with a flange, which is in form as follows: At the ends of said bar such flange is formed in half circles facing each other as illustrated in the drawings at 17 and 18, and the ends of such half circled flanges are joined or connected by the horizontal and parallel flanges shown at 19 and 20. Upon the aforesaid surface of said bar is attached a horizontal projecting rack 21, which is located midway between the horizontal and circular portions of said flange upon said bar, and the spaces between the bars of said rack consist of perforations as shown in Fig. 1.

The horizontal power shaft 22, is properly mounted in the shaft supporting frames 23, which latter are attached properly to the said lid or cover and near the inner end of said power shaft is secured thereon a pinion 24, which is constructed and adapted to operate with and move said rack 21, and the inner end of said power shaft is constructed and adapted to rotate against the inner side of said flange upon said bar 14, while the outer end of said power shaft is provided with the balance wheel 25, provided with the handle 26, whereby said power shaft may be rotated.

If desired, a horizontal projecting frame 27 may be attached to or made integral with the curved frame 8, constructed and adapted to bear upon the upper surface of the bar 10, to prevent its tongue 11 from being disengaged with the groove in plate 9.

It will be observed that when the power shaft is rotated in any one direction, the pinion 24 operating upon the rack 21, and the inner end of the power shaft rotating against said flange, causes the bar 14 to move longitudinally and the pin 16, also causes the bar 10 to move in the same direction, and the rack 12 rotates the gear or toothed wheel 5, causing similar rotation to the vertical shaft 3, and its stirrers or pegs, 4. It will also be observed that when an end of the rack 21 has reached the pinion 24, the half circled part of said flange on bar 14, being rotated against by the inner end of the power shaft, guides or carries said bar 14 with the assistance of said pinion 24 and rack 21, upward or downward as the case may be, so that said pinion 24 is caused to operate upon and against the opposite side of said rack 21, and this changes or reverses the direction of rotation, which is imparted to said vertical shaft 3, while the extensions or guides 15, moving in the straps or elongated loops 13, retain said bar 14 in a continuous operative position.

From the description given, persons skilled in the art, will understand the construction and mode of operation of my device.

What I claim as new, and desire to secure by Letters Patent, is—

A vertical revolving shaft, and a gear or toothed wheel attached near its upper end, in combination with a grooved plate, a tongued bar provided with a rack and vertical straps or elongated loops, a bar provided with extensions or guides, a flange and a horizontal rack attached to the latter bar, a power shaft, a pinion attached thereto, the inner end of such power shaft being adapted to rotate against the inner side of said flange, for the purposes stated and substantially as described.

JOHN SCHROEDER.

Witnesses:
T. A. MURPHY,
L. G. SUSEMIHL.