

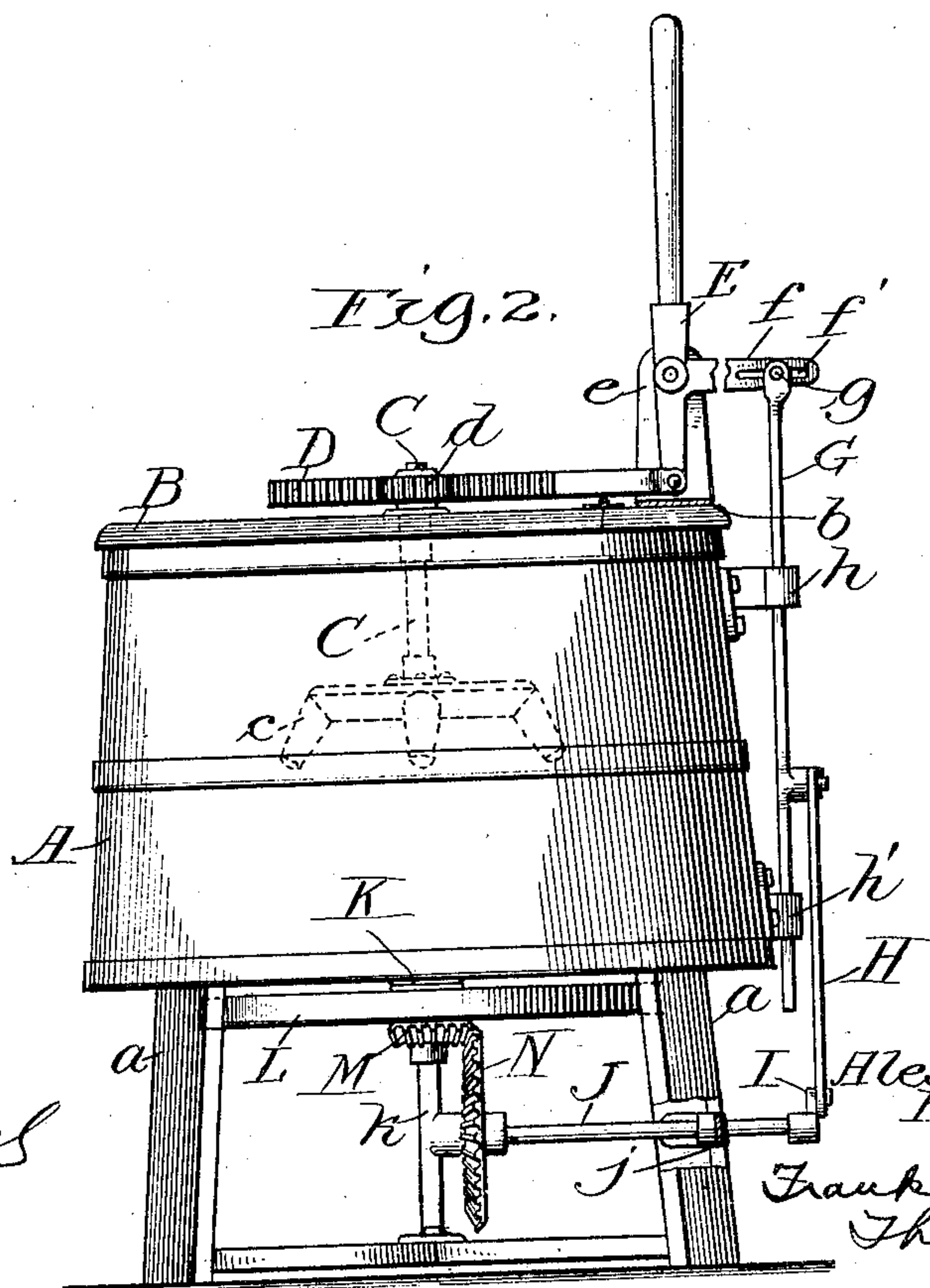
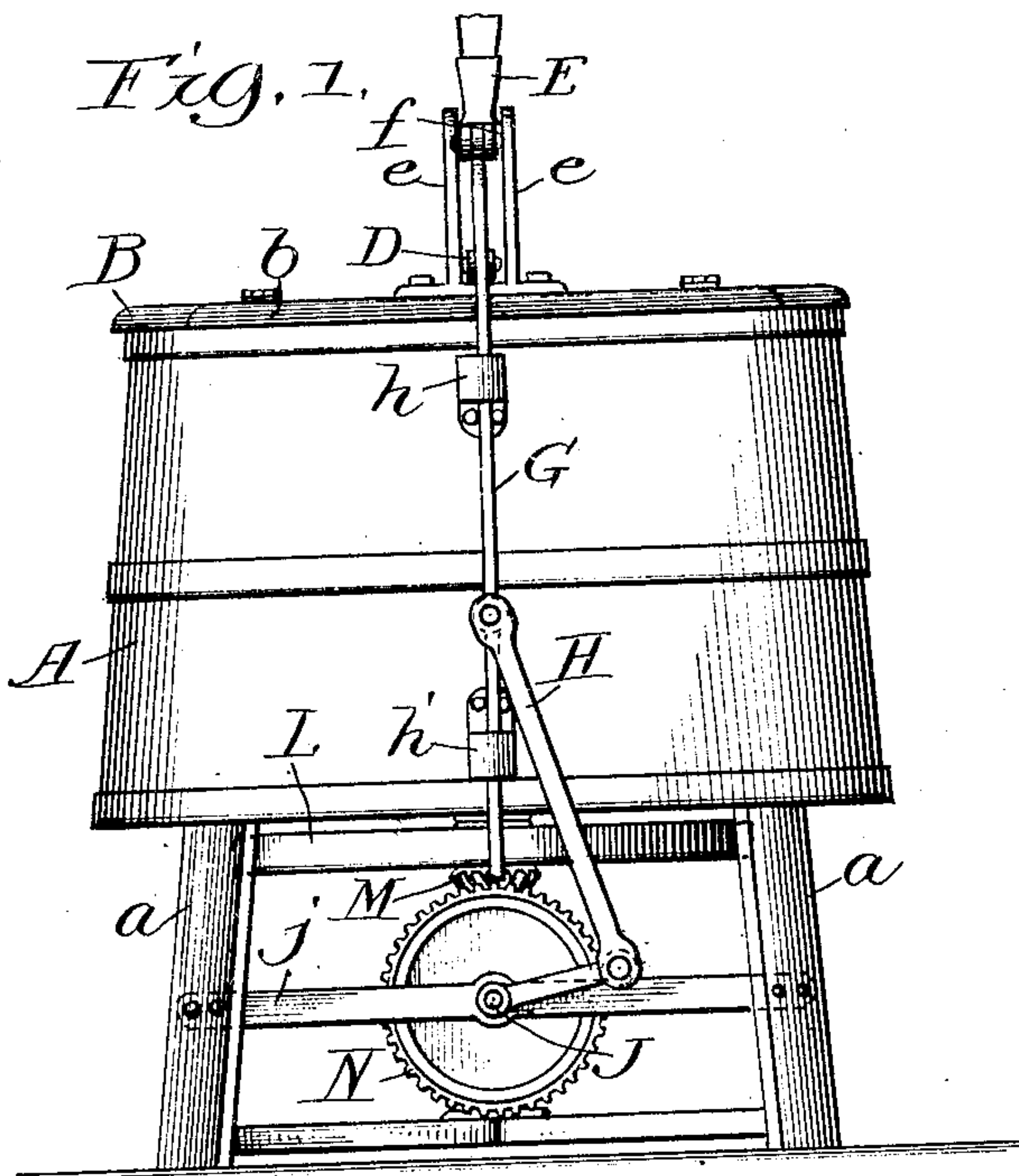
No. 896,960.

PATENTED AUG. 25, 1908.

A. F. VICTOR.

GEARING FOR WASHING MACHINES.

APPLICATION FILED APR. 6, 1907.



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UNITED STATES PATENT OFFICE.

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GEARING FOR WASHING-MACHINES.

No. 896,960.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed April 6, 1907.. Serial No. 366,684.

To all whom it may concern:

Be it known that I, ALEXANDER FERDINAND VICTOR, a subject of the King of Sweden, and a resident of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Gearing for Washing-Machines, of which the following is a clear, full, and exact description.

My invention relates to gearing for that class of washing machines having a rotary reciprocal stirrer-shaft and its object is to provide actuating mechanism for said stirrer-shaft that utilizes the momentum of a fly-wheel both to assist the manual effort necessary to operate the machine, and to reverse the motion of the stirrer-shaft at the end of each throw. This I accomplish by the means hereinafter fully described and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a side elevation of a washing machine having my improvements applied thereto. Fig. 2 is a similar view looking at the same from a different angle.

In the drawings A represents a tub which is supported by legs *a*, and has its top closed by a suitable lid B, that is hinged to a segmental strip *b* permanently secured to the upper edge of the tub. At a point corresponding to about the center of the top of the tub, lid B is provided with suitable bearings for a vertical stirrer-shaft C, which depends down into the tub and is provided with a stirrer-head *c* on its lower end.

Immediately above its bearings the stirrer-shaft has a pinion *d* secured thereto, which is engaged by a horizontally disposed reciprocal rack D. Rack D extends at right angles to the hinged edge of the lid B to near the circumferential edge of the top of the tub, where its outer end is pivotally connected to the adjacent end of the shorter lower branch of a vertically disposed lever E, fulcrumed to suitable standards *e*, *e*, secured to and arising from strip *b*, substantially as shown. The upper end of lever E is, preferably, constructed of a metal socket and a handle removably inserted therein, and its fulcrumal boss is provided with an outwardly projecting arm *f* which is shown to be slightly longer than the lower branch of said lever, and to have its outer portion bifurcated with the

bifurcations provided with longitudinally elongated slots *f'* therein.

Pivoted between the bifurcations of arm *f* by a transverse pin *g* the ends of which enter and engage the slots *f'*, is a vertically reciprocal bar G. The movement of bar G is controlled by the guide-bearings *h* and *h'*, secured to and projecting from the side of the tub as shown, and between these guide-bearings is provided with a boss to which the upper end of a pitman H is pivoted. The lower end of pitman H is pivotally connected to the wrist-pin of a crank I secured to the adjacent end of horizontal shaft J, which latter is journaled in suitable bearings in the center of length of a tie-bar *j* connecting two of the legs of the tub, and in a suitable boss in a standard *k*.

The base of the standard *k* is suitably secured to the intersection of the cross-braces connecting the legs of the tub together and its upper extremity is set in a suitable socket in a plate K secured to the center of the underside of the tub. The upper portion of standard *k* is reduced and made cylindrical to provide a journal for the horizontal fly-wheel L loosely mounted thereon, and the central boss of the latter has a beveled pinion M made integral therewith, which is engaged by the beveled gear N mounted on the shaft J, substantially as shown.

To operate the machine lever E is moved back and forth to impart the rotary reciprocal movement to the stirrer-shaft through the medium of rack D. In so doing bar G is moved up and down, and by means of pitman H and crank I revolves shaft J, which latter, through the large gear N causes the fly-wheel to revolve several times to its one. The momentum of the fly-wheel not only aids the operator in reciprocating the stirrer-shaft, but when the latter reaches the limit of its movement in either direction materially assists in reversing the movement thereof, and thus lessens the physical efforts of the operator at the point during the operation of the machine where the resistance is the greatest.

What I claim as new is:—

1. Mechanism for driving a washing machine comprising a vertically disposed rotary reciprocal shaft, a horizontally disposed rack indirectly operating the same, a vertically disposed lever pivotally connected to the

outer end thereof for reciprocating the same, a vertically reciprocal bar, a fly-wheel, and means actuated by said bar for revolving said fly-wheel.

5 2. Mechanism for driving a washing machine comprising a vertically disposed rotary reciprocal shaft, a vertically reciprocal bar, means for actuating both said shaft and bar, a fly-wheel, and means actuated by said bar
10 for revolving said fly-wheel.

3. Mechanism for driving a washing machine comprising a vertically disposed rotary reciprocal shaft, a vertically reciprocal bar, means for actuating both said shaft and bar,
15 a horizontally disposed fly-wheel below said shaft, and means actuated by said bar for revolving said fly-wheel.

4. Mechanism for driving a washing machine comprising a vertically disposed rotary
20 reciprocal shaft, a reciprocal device operating said shaft, a vertically reciprocal bar, a lever connected to said operating device and actuating said bar, a fly-wheel, and means actuated by said bar for revolving said fly-wheel.

25 5. Mechanism for driving a washing machine comprising a vertically disposed rotary reciprocal shaft, a reciprocal device operating said shaft, a vertically reciprocal bar, a lever connected to said operating device and
30 actuating said bar, a horizontally disposed fly-wheel below said shaft, and means actuated by said bar for revolving said fly-wheel.

6. Mechanism for driving a washing machine comprising a rotary reciprocal shaft,
35 a reciprocal device operating said shaft, a vertically disposed lever connected to said operating device and having an arm extending at an angle from the fulcrumal boss thereof, a vertically disposed bar the upper end of

which articulates with said arm, a fly-wheel 40 and means actuated by said bar for revolving said fly-wheel.

7. Mechanism for driving a washing machine comprising a rotary reciprocal shaft, a reciprocal device operating said shaft, a 45 vertically disposed lever connected to said operating device and having an arm extending at an angle from the fulcrumal boss thereof, a vertically disposed bar the upper end of which articulates with said arm, a 50 horizontal shaft having a crank on its outer end, a pitman connecting said bar and crank, a horizontally disposed fly-wheel journaled in alinement with the axis of said shaft, and beveled gears imparting the motion of said 55 horizontal shaft to said fly-wheel.

8. Mechanism for driving a washing machine comprising a rotary reciprocal shaft, a horizontally reciprocal rack indirectly operating the same, a vertically disposed lever 60 for actuating said rack having an arm extending at an angle from the fulcrumal boss thereof, a vertically disposed bar the upper end of which articulates with said arm, a 65 horizontal shaft having a crank on its outer end, a pitman connecting said bar and crank, a horizontally disposed fly-wheel journaled in alinement with the axis of said shaft, and beveled gears imparting the motion of said horizontal shaft to said fly-wheel. 70

In testimony whereof I have hereunto set my hand and seal this 18 day of March, A. D., 1907.

ALEXANDER FERDINAND VICTOR. [L. s.]

Witnesses:

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