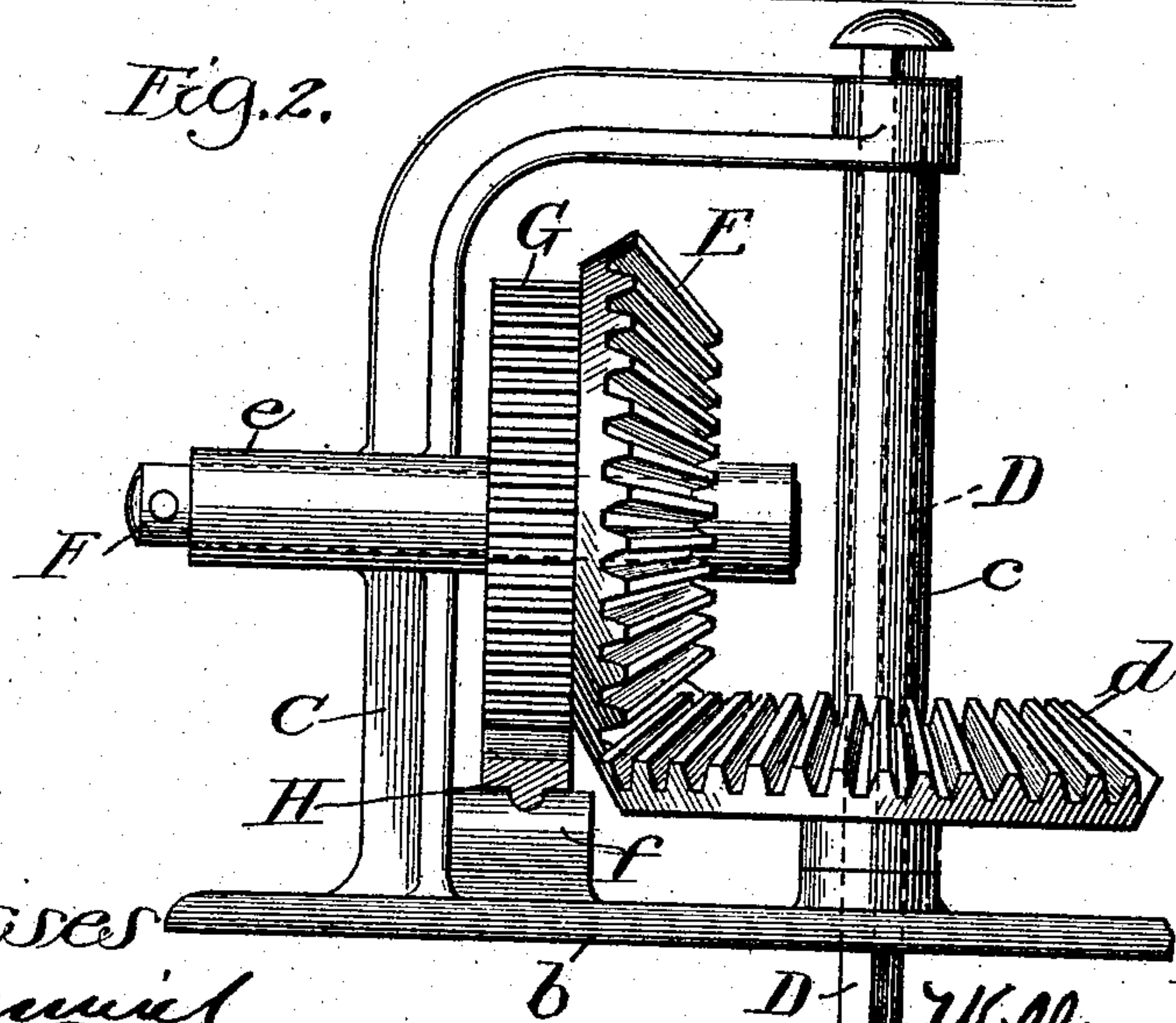
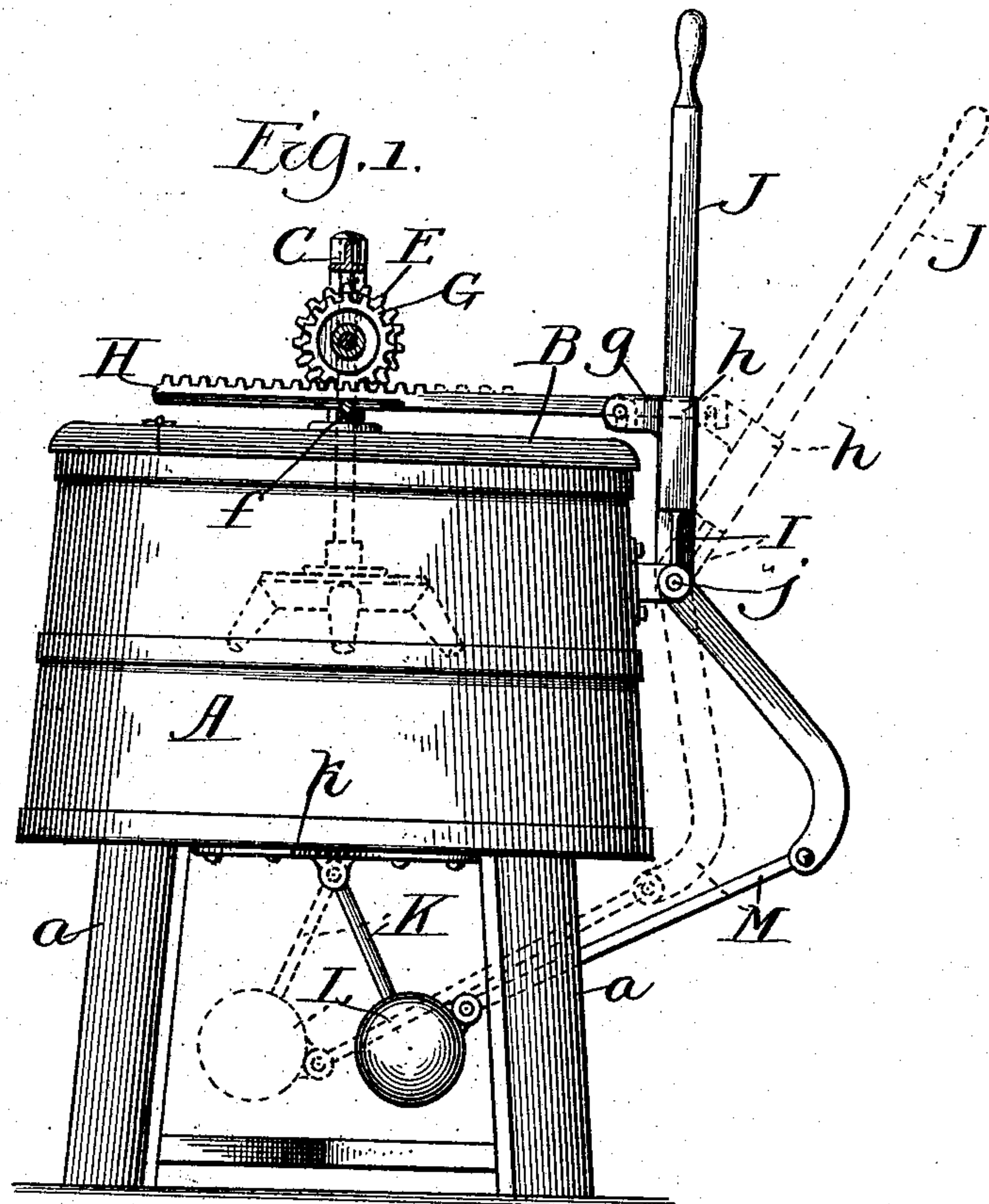


W. H. VOSS.
 MECHANICAL MOVEMENT FOR OPERATING WASHING MACHINES.
 APPLICATION FILED MAR. 14, 1908.

905,253.

Patented Dec. 1, 1908.



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UNITED STATES PATENT OFFICE.

WILLIAM H. VOSS, OF DAVENPORT, IOWA.

MECHANICAL MOVEMENT FOR OPERATING WASHING-MACHINES.

No. 905,253.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed March 14, 1908. Serial No. 421,246.

To all whom it may concern:

Be it known that I, WILLIAM H. VOSS, a citizen of the United States, and a resident of Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Mechanical Movements for Operating Washing-Machines, of which the following is a full, clear, and exact description.

My invention relates to a mechanical movement for operating washing machines, and particularly to that class having a rotary reciprocal shaft, the manual power for actuating which is supplied by a reciprocating lever.

The object of my invention is to provide means for assisting and lessening the physical effort required of the operator, after the machine is once in operation. This I accomplish by comparatively simple and inexpensive additions to said mechanism, substantially as hereinafter fully described and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a side elevation of my invention with the rotary reciprocal shaft cut away. Fig. 2 is an elevation of a portion of said rotary reciprocal shaft and intermeshing gearing actuating the same, looking at it in a direction at right angles to the view-point of Fig. 1, and drawn to a larger scale.

In the drawings, the support for the elements of the mechanical movement to which my invention applies, consists of a suitable tub A, which is supported by legs *a*, and has its top covered by a hinged lid B. Journaled in bearings made in the base-plate *b* of a suitable frame C secured to the center of said lid, is a rotary reciprocal shaft D, whose upper end extends to and is journaled in bearings in the extremity of the overhanging goose-neck portion of said frame C. This shaft is, preferably, square, and the portion extending through one bearing to and through the other is surrounded by a sleeve *c*, which latter, just above the lower bearings, has a bevel gear *d* secured thereto, that is engaged and driven by a suitable bevel gear E fast on the adjacent end of a horizontally disposed shaft F, journaled in bearings *e* made in the vertical portion of frame C.

Between bevel-gear E and bearings *e* shaft F has a spur-wheel G secured thereto, although, if desired, this spur-wheel might be made integral with the side of gear E, oppo-

site that from which the teeth thereof project. Spur-wheel G is engaged by a straight rack H, which latter is held in engagement with the teeth of the lower segment of said spur-wheel by means of a lug *f* projecting up from the base-plate *b* next the base of the vertical portion of the frame C. The rack-bar of said rack extends in a horizontal direction to the circumferential edge of the lid B, where it is connected to a lug *g* projecting from the upper end of the socket *h* of a vertically disposed lever I. This lever is fulcrumed mediate its ends between lugs projecting from a plate *j* screwed or otherwise secured to the side of the tub, at a point, preferably, near the upper edge of the same. The upper part of this lever consists of a handle, the lower end of the shaft of which is removably secured in said socket *h*, and the portion of said lever below its fulcrum extends at an angle to the upper portion in a direction away from the tub, and has its lower end curved toward the tub, substantially as shown.

A suitable plate *k* is screwed or otherwise secured to the bottom of the tub, which has lugs projecting downwardly therefrom, preferably, in alinement with the rotary reciprocal shaft D, and a pendulum K is pivoted to these lugs, which has a weight L secured to its pending end, which weight is, preferably, spherical. This weight is connected to the lower end of the lever I by means of a connecting-rod M, which latter is of such length that when the lever is in the position shown in Fig. 1 of the drawing, the pendulum will be practically at the limit of its movement toward the side of the tub to which said lever is fulcrumed, and when said lever is in the position shown in dotted lines in said Fig. 1 the pendulum will be practically at the limit of its movement in the opposite direction.

By moving the lever I back and forth the weight L will oscillate from side to side, and the momentum thereof, particularly while describing the downward portion of the arc described by its oscillation, will materially assist the operator in overcoming the inertia of the mechanism after it has reached the limit of its movement in either direction and the return movement is commenced.

What I claim as new is:—

1. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever

- fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever, and means connecting the same and the lower end of the lever.
2. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever under the support of the fulcrum of the same, and means connecting the same and the lower end of the lever.
3. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever below and in alinement with said shaft, and means connecting the same and the lower end of the lever.
4. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever under the support of the fulcrum of the same, below and in alinement with said shaft, and means connecting the same and the lower end of the lever.
5. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever, and a connecting rod for connecting the same and the lower end of the lever.
6. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever under the support of the fulcrum of the same, and a connecting-

rod for connecting the same and the lower end of the lever.

7. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever below and in alinement with said shaft, and a connecting-rod for connecting the same and the lower end of the lever.

8. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever under the support of the fulcrum of the same below and in alinement with said shaft, and a connecting-rod for connecting the same and the lower end of the lever.

9. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends and having the part below its fulcrum bent at an angle to the part above the same, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever, and means connecting the same and the lower end of the lever.

10. A mechanical movement for operating washing machines comprising a rotary reciprocal shaft, a vertically disposed lever fulcrumed mediate its ends and having the part below its fulcrum bent at an angle to the part above the same, mechanism for transmitting the motion of said lever to said shaft, a pendulous weight suspended independently of said lever, and a connecting-rod for connecting the same and the lower end of the lever.

In testimony whereof I have hereunto set my hand and seal this 9th day of March, A. D., 1908.

WILLIAM H. VOSS. [L. s.]

Witnesses:

WILLIAM E. PULS,
ARTHUR CLIFFORD.