F. KOSTLAN.

WASHING MACHINE DRIVE GEARING.

APPLICATION FILED JULY 13, 1909.

955,413.

Patented Apr. 19, 1910.

Fig. 2.

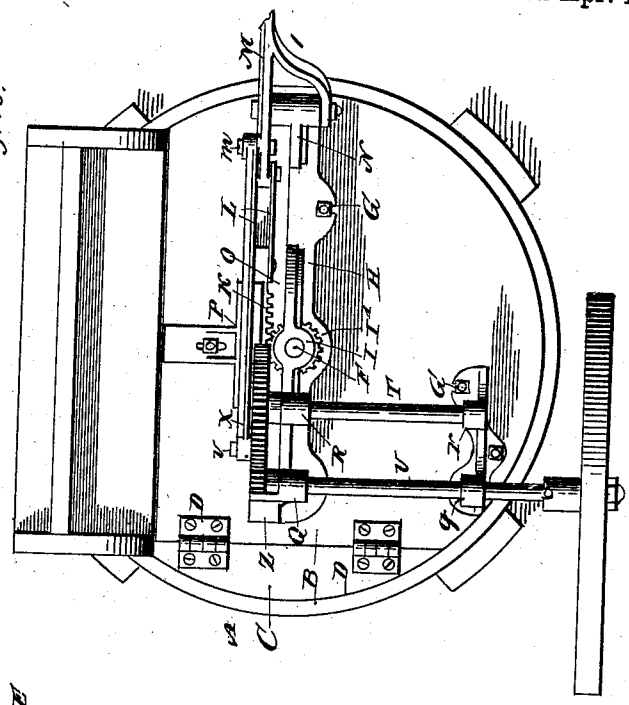


Fig. 3.

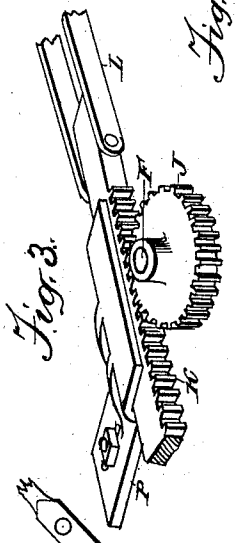
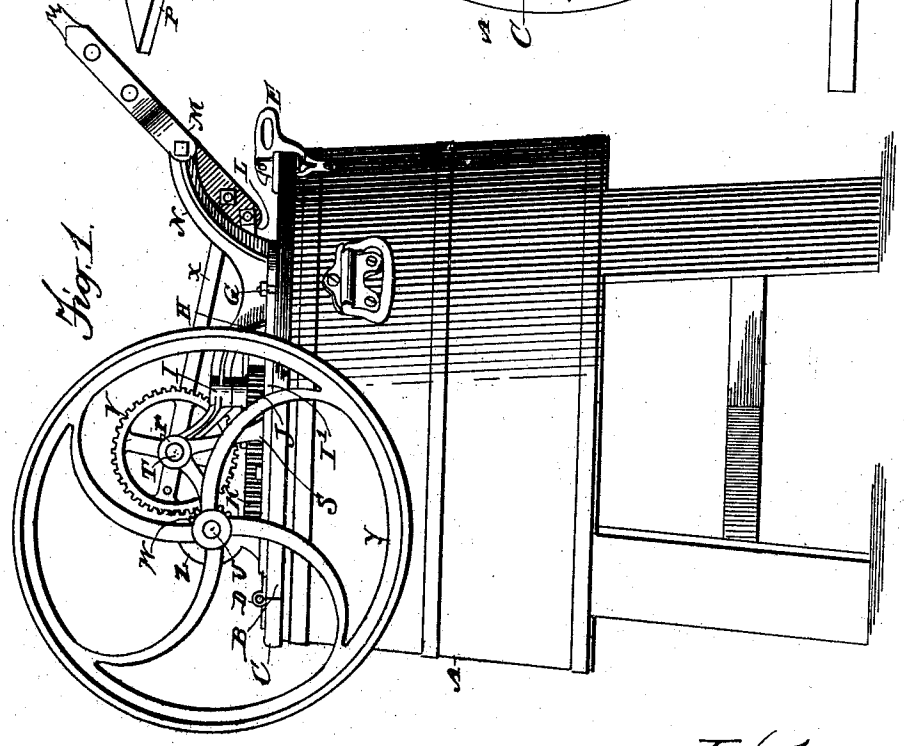


Fig. 1.



Witnesses:

L. A. St. John.

Ira Andre.

Inventor

Frank Kostlan

By J. M. St. John.

Atty.

UNITED STATES PATENT OFFICE.

FRANK KOSTLAN, OF TRAER, IOWA.

WASHING-MACHINE DRIVE-GEARING.

955,413. Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed July 13, 1909. Serial No. 507,447.

To all whom it may concern:

Be it known that I, FRANK KOSTLAN, a citizen of the United States, residing at Traer, in the county of Tama and State of Iowa, having invented certain new and useful Improvements in Washing-Machine Drive-Gearing, of which the following is a specification.

This invention relates to washing machines, and more particularly to the mechanism for imparting a reciprocating rotary motion to the dasher, the object of the invention being to provide a simple, efficient and easy running drive-gearing for such machines, adapted for both hand and power operation.

In the accompanying drawing, forming a part of this specification, Figure 1 is a side view of a washing machine embodying my improvements. Fig. 2 is a plan view of the same. Fig. 3 is a detail, showing the gear connection of the hand-lever with the dasher.

In the drawing, A designates a washing machine tub, of a familiar type, provided with a cover B and C hinged at D. The part C permanently attached to the tub, and the hinged portion may be temporarily fastened thereto by a latch E. These parts do not differ materially from those in general use, nor does the dasher (not shown), which is supposed to be attached to the spindle F at the center of the cover. The essential features of this invention are comprised in the mechanism attached to the top of the cover for transmitting reciprocating rotary motion to the dasher, and this will now be described.

Suitably attached to the cover, as by bolts G is a casting H provided with bearings I and I^1 for the vertical spindle of the dasher above referred to. Between these bearings is a pinion J secured to the spindle. In mesh with this pinion is a rack K coupled by links L L with a hand-lever M pivoted to a goose-neck extension N of the main casting. The bottom flange O of the casting forms a bottom support for the rack, and the remainder of its guide is formed by an angle-plate P bolted to the cover, as shown.

The casting is provided with two horizontal bearings Q and R, and an outlying casting S bolted to the cover has corresponding bearings *q* and *r*, to take shafts T and U, respectively. To the shaft T is attached to a gear wheel V, meshing with a pinion W secured to the other shaft. The gear has a wrist-pin *v* carrying a connecting rod X, the opposite end of which engages a similar wrist-pin *m* on the hand-lever. The outer end of the shaft U extends a little beyond the outer line of the tub, and to it is secured a fly-wheel Y, which may also serve as a belt-wheel, when it is desired to operate the machine by motor or other mechanical power. In connection with the hand-lever the rapidly revolving fly-wheel by its momentum imparts a regular and easy motion to the spindle.

The construction is such as to give a double bearing to the dasher spindle and to each of the other shafts, and thus insure true alinement and easy running, with no tendency to cramp or wabble. It also places the largest proportion of the weight near the hinge line of the lid, thus making it easy to open the tub. When open the gear-case Z rests on the cover part C, and serves as a stop for the cover in this position.

Having thus described my invention, I claim:

1. The described driving gear for a washing machine, comprising a dasher spindle, a crank-gear shaft and a fly-wheel shaft, a casting adapted to be attached to the washing machine cover, and having double bearings for said dasher spindle, and bearings for said other two shafts, an outlying casting having corresponding bearings for said two last mentioned shafts, a cranked gear attached to one of said last-mentioned shafts and a fly-wheel and pinion attached to the other, a pinion on the dasher spindle between its bearings, an adjacent rack meshing with the spindle pinion, a hand-lever pivoted to a goose-neck extension of the main casting, and links connecting said lever with both the rack and the cranked gear.

2. A driving gearing for washing machines, comprising a pair of bearing castings, each provided with bearings for a gear-shaft and a fly-wheel shaft, and one of them with a pair of bearings for the dasher spindle and an extension to support a hand-

lever, shafts and a spindle mounted in said bearings, a fly-wheel and pinion on one shaft, a cranked gear on the other horizontal shaft, a pinion on the spindle, a pivoted hand-lever, a rack engaging the spindle pinion, an angled cap-plate for the rack, and links connecting the rack and the cranked gear with the hand-lever, a flange of the main casting forming a support and guide for the under side of the rack.

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

FRANK KOSTLAN.

Witnesses:

J. M. St. John,

L. A. St. John.