

J. H. KOOSER.
Washing-Machines.

No. 141,567.

Patented August 5, 1873.

Fig 1.

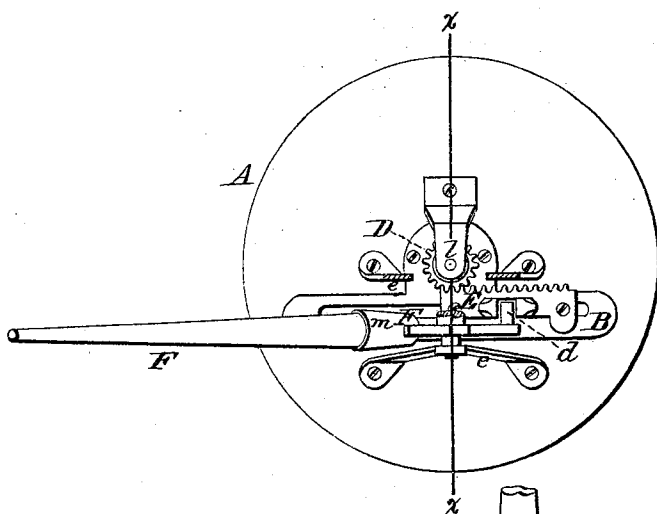


Fig 2.

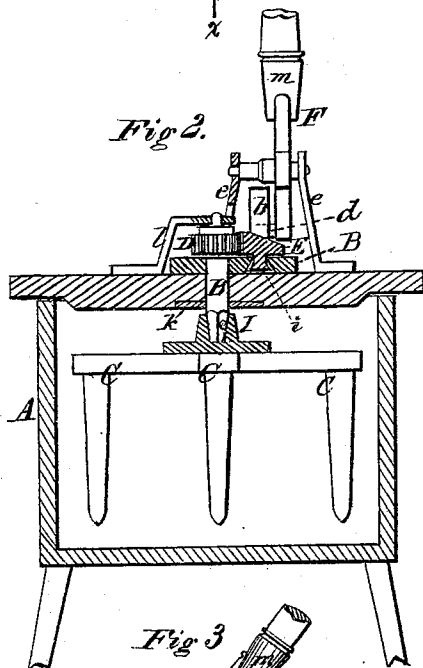
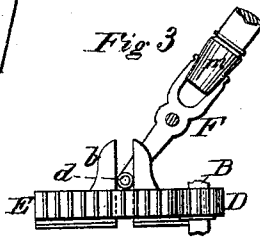


Fig 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN H. KOOSER, OF PEKIN, ILLINOIS.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **141,567**, dated August 5, 1873; application filed March 8, 1873.

To all whom it may concern:

Be it known that I, JOHN H. KOOSER, of Pekin, in the county of Tazewell and State of Illinois, have invented certain Improvements in Washing-Machines, of which the following is a specification:

My invention relates to that class of machines in which a vertical revolving shaft having arms on its lower end is used to dash the clothes about in a box or body. The invention consists in operating a reciprocating rack-bar, which drives the pinion of the vertical shaft, by a hand-lever having its lower end arranged to work in a slotted stud on the bar.

Figure 1 is a top plan view of my machine; Fig. 2, a transverse vertical section of the same on the line *x x*; and Fig. 3, a side elevation of the pinion, rack-bar, and hand-lever.

In constructing the machine, I build a body, A, of any suitable size and form, and mount in the top thereof a vertical shaft, B, provided on its lower end with a series of arms, C, and on its upper end, outside of the body, with a pinion, D. By the side of the pinion D, and so as to gear therein, I secure a horizontal sliding rack-bar, E, so that when moved back and forth it will turn the pinion, and thereby the shaft B and arms C, first in one direction and then in the other. The rack-bar is provided with a vertically-slotted stud, *b*, and is moved to and fro by a hand-lever, F, which is pivoted in standards *e*, and provided at its lower end with a lateral stud or wrist, *d*, which works in the slotted stud *b* of the rack-bar, as shown in Figs. 1 and 3. When the lever is moved back and forth its lower end slides the rack-bar to and fro, and the latter, in turn, acting upon the pinion D, causes it, with the shaft B and arms C, to turn alternately to the right and left. The rack-bar is held and guided by studs *i* on its under side, which slide in a slot-

ted plate, B, secured to the top of the body, as shown in Figs. 1 and 2. The plate is also formed with an ear or lug, through which the shaft passes, to form a bearing or support for the shaft. The shaft is also supported by a plate, *k*, secured to the under side of the top or cover, and by an arm, *l*, which is secured to the body and curved upward to receive the upper end of the shaft, as shown in Fig. 2. The lower portion of the hand-lever is cast in one piece, with the journals or trunnions upon it, and with a socket, *m*, to receive the wooden portion or handle, which can be at any time attached and placed within the body out of the way. In order to reduce the friction the wrist or stud of the hand-lever which works in the slotted stud of the rack-bar is provided with a roller, as shown in Fig. 3. The arms are secured to the lower end of the shaft by a metal socket, I, which is screwed fast to the arms and keyed fast upon the end of the shaft, as shown in Fig. 2. The end of the shaft is made square and tapered down, and the socket made of a form to correspond, so that when the key or pin which unites them is inserted and driven home it hugs them tightly together so as to prevent them from playing or rattling.

Having thus described my invention, what I claim is—

In a washing-machine, the combination of the shaft B provided with the arms C and pinion D, the rack-bar E provided with the slotted stud *b*, and the hand-lever, having its lower end arranged to work in the slotted stud, as shown.

JOHN H. KOOSER.

Witnesses:

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M. CLIMSON.