

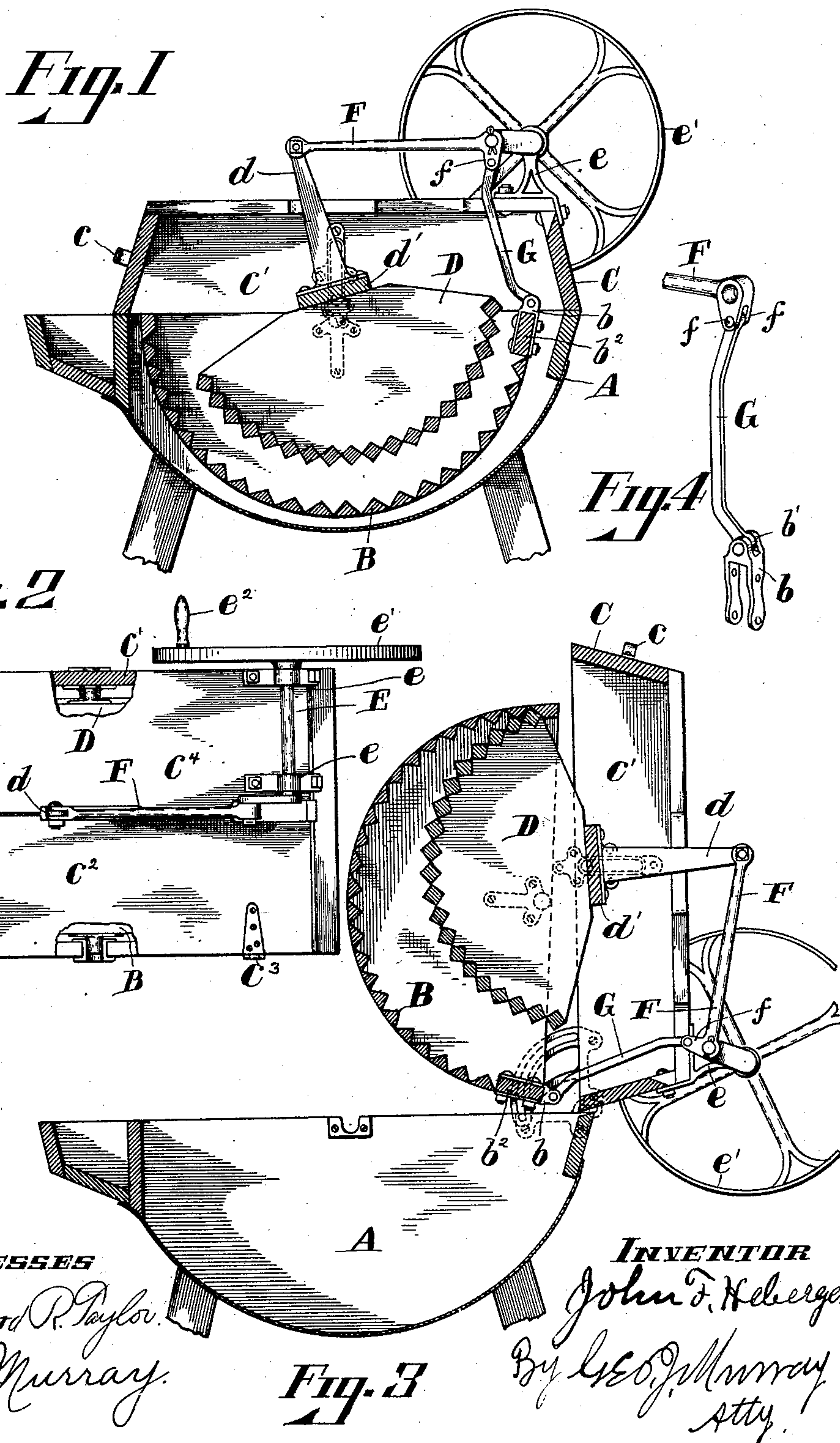
No. 606,782.

Patented July 5, 1898.

J. F. HEBERGER.
WASHING MACHINE.

(Application filed Sept. 9, 1897.)

(No Model.)



UNITED STATES PATENT OFFICE.

JOHN F. HEBERGER, OF CINCINNATI, OHIO.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 606,782, dated July 5, 1898.

Application filed September 9, 1897. Serial No. 651,038. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. HEBERGER, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to that class of washing-machines in which two oscillating rubbers are arranged to move one within the other and in opposite directions, leaving a closed space between them for the clothes, whereby in action the clothes are subjected to the necessary rubbing to thoroughly cleanse them.

The objects of the invention are to simplify the construction of the operating mechanism, make it more compact, smooth in action, and avoid all possibility of the joints becoming loose and rattling, provide means of easy access to the interior of the case without throwing up the cover and mechanism supported by it, and to provide means by which the concave rubber may be swung up into the raised lid for cleansing the tub or suds-box.

With these objects in view my invention consists in the means illustrated in the accompanying drawings, hereinafter fully described in connection therewith, and particularly referred to and pointed out in the claims.

Referring to the drawings, Figure 1 is a vertical longitudinal sectional view of my improved machine, the parts being in the operative position. Fig. 2 is a plan view of the same with parts of the lid and hinged cover broken away upon each side to expose the bearings and journals of the rubbers. Fig. 3 is a central vertical longitudinal sectional view of the machine with the lid thrown up and the rubbers thrown out of the tub or suds-box for the purpose of cleansing the same. Fig. 4 is a detail perspective view, upon an enlarged scale, of the pitman connecting the crank-shaft and lever for operating the convex rubber and the connecting-rod coupling the pitman and concave rubber.

Referring to the parts, which are indicated by similar reference-letters wherever they occur throughout the various views, A represents the tub or suds-box; B, the concave rubber, journaled in open or half boxes in the

upper edges of the tub sides; C, the lid or cover, hinged at one end of the machine and provided at the opposite end with a handle *c*, by which the cover is thrown up or lowered. 55

D is the upper convex rubber, journaled in slotted bearings in the sides *c'* of the cover C and having an operating-lever *d*, which is secured upon a cross-piece *d'* on the top of the rubber D and which projects through the cap or top of the lid C. 60

The parts above indicated are of well-known construction and need not therefore be specifically described; excepting that one half of the top of the cover C is a door *c²*, hinged to the side *c'* by the hinges *c³*. The purpose of this arrangement is to throw one half of the cover open for the purpose of adjusting the clothes in the space between the rubbers B and D should they become bunched or supplying the tub with fresh suds, as required. In order to permit the cover *c²* to be opened, the bearings for the operating crank-shaft are both secured upon the opposite side *c⁴* of the cover. 75

The crank-shaft E is journaled in brackets *e*, which are secured upon one side *c⁴* of the cover, the brackets having downwardly-projecting flanges, which bear against the end of the cover and are secured thereto by bolts passing through the flanges, as clearly shown. The crank-shaft outside of the box is provided with a balance-wheel *e'*, which wheel is provided with a handle *e²*, by which the crank-shaft is operated. The opposite end of the shaft is provided with a crank and wrist-pin, which is coupled to the lever *d* of the rubber D by the pitman F, which has downwardly-projecting lugs *f* to receive the upper end of the connecting-rod G, the opposite end being coupled to upwardly-projecting lugs *b'* on the box or lug-plate *b*, which passes upon opposite sides of the cross-bar *b²*, connecting the sides of the concave vibrating rubber B, the lugs of the box *b* being perforated to receive bolts which pass through them and through the cross-bar *b²*. The pitman G is connected to the lug-plates *f* and *b* by pins or bolts, which are riveted upon the opposite side of the boxes to permanently connect them together and prevent any rattling in use. 100

It will be seen that when the tub is sup-

plied with suds and the clothes placed between the rubbers B and D and motion imparted to the shaft E the rubbers, vibrating in opposite directions, give a smooth rubbing action to the clothes, and the rubber D, resting simply by its weight on the clothes and adapted to slide vertically in its bearings in the side of the cover, will give sufficient pressure to thoroughly cleanse the clothes without tearing or injuring them. When it is desired to remove the clothes, the cover is first thrown up, carrying with it the rubber D, when the clothes can be readily removed, and when it is desired to thoroughly cleanse the tub the concave rubber B may be swung up to the position shown in Fig. 3, and its notched edge passing over one of the projections of the rubber D will hold it in the elevated position while the tub is thoroughly cleansed.

I have shown the cover and tub coupled together by the hinge shown in the Hofmann patent, No. 569,379; but it is obvious that any form of hinge may be employed without varying the principle of my invention, and it is also obvious that my operating mechanism may be applied to machines with the old form of cover.

What I claim is—

1. In a washing-machine the combination of the tub having bearings secured in its sides at the top edge thereof, a cover hinged to the tub at one end, the concave rubber pivotally mounted in the bearings in said tub, the convex rubber pivotally mounted in elongated bearings in the sides of the cover, a lever projecting from the convex rubber through the top of the cover, a crank-shaft mounted in bearings secured upon the hinged end of the cover, a pitman connecting the crank-shaft and upper end of the lever projecting from the convex rubber, and a rod permanently connected to the said pitman and to the top edge of the concave rubber, whereby the rubbers are reciprocated in opposite directions when the machine is in use and both rubbers adapted to be swung up out of the tub without disconnecting any of the parts for the pur-

pose of cleansing the machine, substantially as shown and described.

2. In a washing-machine the combination of the tub having open bearings in the upper edges of its sides, the cover hinged to one end of said tub and having a half-top hinged to one edge of the cover and adapted to be thrown open for convenient access to the machine without lifting the cover, elongated pivotal bearings secured to the inside faces of the cover, the concave rubber pivoted in the bearings in the top of the sides, the convex rubber pivoted in the elongated bearings in the sides of the cover and having a lever projecting up from it through the top of the cover, the crank-shaft mounted in brackets secured to the fixed half of the top of the cover, the pitman connecting the wrist-pin of the crank-shaft and upper end of the convex-rubber lever and having downwardly-projecting lugs, the connecting-rod permanently secured between said lugs at one end and between lugs upwardly projecting from the bar secured to one end of the concave rubber, whereby access may be had to the machine without lifting the cover for the purpose of adjusting the clothes between the rubbers or supplying the tub with suds, and the convex and concave rubbers are adapted to be swung up and supported by the cover when elevated for the purpose of cleansing the tub, substantially as shown and described.

3. In a washing-machine of the character described the hinged cover having one half of its top rigid and the other half hinged to the side wall of the cover, bracket-bearings secured upon the rigid half of the top, a crank-shaft journaled in said bearings and having a wrist-pin projecting over the joint of the cover to receive the pitman and connecting-rod for actuating the rubbers, the rubbers and the pitman and connecting-rod for actuating them substantially as shown and described.

JOHN F. HEBERGER.

Witnesses:

GEO. J. MURRAY,
EMMA LYFORD.