E. RAMTHUN & C. J. GUTEKUNST.

WASHING MACHINE.

APPLICATION FILED JULY 21, 1909.

942,664. Patented Dec. 7, 1909.

Fig. 1.

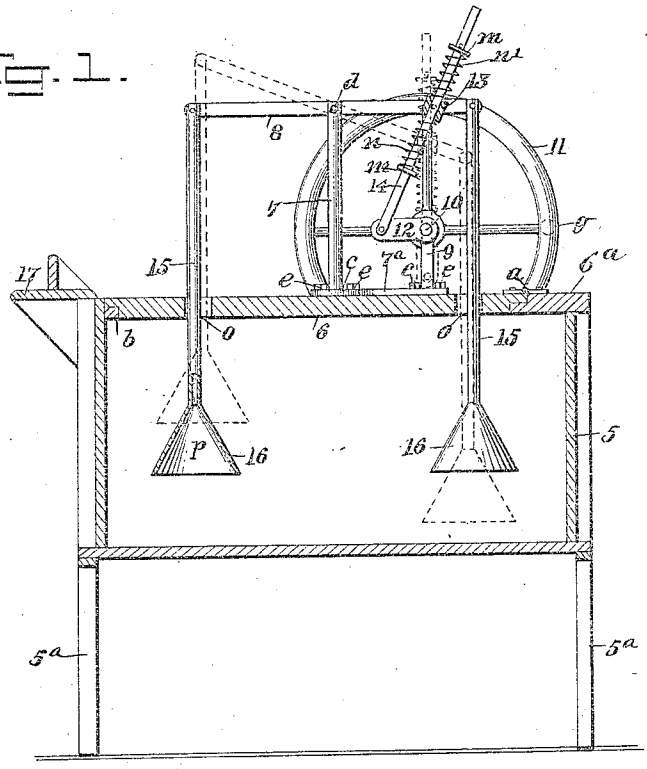


Fig. 2.

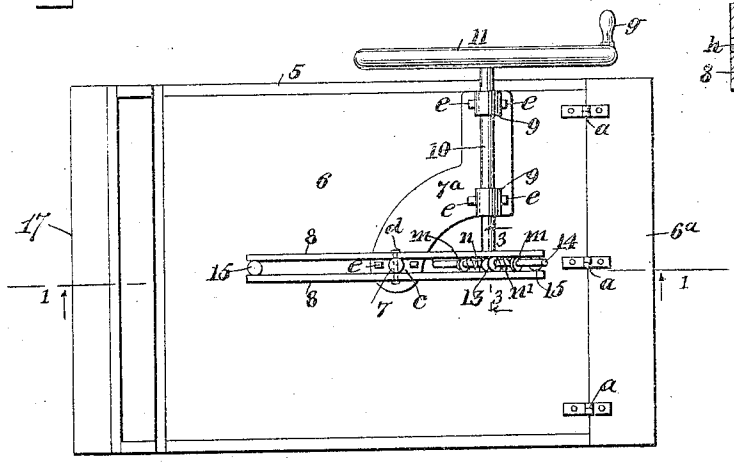
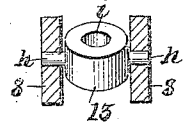


Fig. 3.



WITNESSES

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ERNEST RAMTHUN, OF KEWASKUM, AND CHARLES J. GUTEKUNST, OF CAMPBELLSPORT, WISCONSIN.

WASHING-MACHINE.

942,664. Specification of Letters Patent. Patented Dec. 7, 1909.

Application filed July 21, 1909. Serial No. 508,837.

To all whom it may concern:

Be it known that we, ERNEST RAMTHUN and CHARLES J. GUTEKUNST, both citizens of the United States, and residents, respectively, of Kewaskum, in the county of Washington, and Campbellsport, in the county of Fond du Lac, both in the State of Wisconsin, have invented new and useful Improvements in Washing-Machines, of which the following is a full, clear, and exact description.

This invention relates to washing machines of the pounder type, in which suds, water and air are driven by the percussion of a hollow pounder head, through fabric that is to be cleansed.

The purpose of our invention is to provide novel details of construction for a washing machine of the type indicated, which are simple, practical and inexpensive, that may be operated by hand or other power, and which will rapidly and perfectly cleanse garments or other fabric that is operated upon by the machine.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a partly sectional view of the improved machine, substantially on the line 1—1 in Fig. 2. Fig. 2 is a plan view of the same, and Fig. 3 is an enlarged partly sectional view of a novel detail, substantially on the line 3—3 in Fig. 2.

A preferably rectangular receptacle 5, constitutes the suds box for the washing machine, the dimensions of which are such as best adapt it for effective service, and as indicated in Fig. 1 there are legs 5^a provided for proper support of the suds box above a stable support such as a floor or the like.

At one end of the suds box 5, there is a cover strip 6^a, secured transversely thereon, which permanently closes a portion of the open top of the box; and a lid 6, of suitable dimensions is hinged at one end on an edge of said cover strip, as indicated at *a*, in the drawings, the opposite transverse edge of the lid seating upon a ledge *b*, that is secured on an adjacent end wall of the suds box, thus providing a closure for the upper side of the same when said lid is in closed adjustment.

A post 7, is positioned on the lid 6, near its center as shown at *c*, and at the upper end of said post two rocking bars 8, 8, are oppositely lapped at their centers, and thereon pivoted as indicated at *d*. The post 7, is supported in connection with the lid 6, by a base plate 7^a, that is secured on the latter by bolts *e*, and on said base plate two pedestal boxes 9, 9, are erected of an equal height and transversely bored oppositely in the same horizontal plane. The boxes 9, are located a suitable distance from the post 7, and in their alined bores a driving shaft 10, is journaled. One end of the driving shaft 10, projects at one side of the suds box 5, and upon said end a balance wheel 11, is secured, from which projects a crank handle *g*. Upon the other end of the driving shaft which is disposed near the transverse center of the lid 6, a crank arm 12, is secured.

Between the spaced rocking bars 8, 8, above the driving shaft 10, a guide box 13, is rockably supported, by two opposite trunnion pins *h*, *h*, as is clearly shown in Fig. 3.

A connecting rod 14, is pivoted by one end upon the outer end of the crank arm 12, and thence extends upwardly through the bore *i*, of the guide box 13. At suitable points, preferably equidistant from the guide box 13, two similar abutments or collars *m* are secured on the connecting rod 14.

Upon the connecting rod 14, between one side of the guide box 13 and one of the collars *m*, a coiled spring *n* is mounted, and between the other collar *m* and the opposite side of the guide box, a similar spring *n'* is placed, the springs *n*, *n'*, pressing with equal but moderate force upon the guide box and collars *m*.

Two oblong openings *o*, *o*, are formed in the lid 6, at points directly below respective ends of the rocking bars 8, when said bars are horizontal, these openings loosely receiving two similar plunger rods 15, that are pivoted at their upper ends, respectively, between the spaced ends of the pair of rocking bars 8, from which they hang pendent.

Upon the lower ends of the plunger rods 15, two similar pounder cups 16, 16, are secured, these cups being preferably coniform and constructed of plate metal, where-

by they have cavities p, of considerable area, as shown at the left in Fig. 1.

Upon the end of the suds box 5, toward which the lid 6 folds, a bracket shelf 17, is secured, whereon a clothes wringer may be secured.

In operation, suds water and the fabric that is to be renovated, are together placed in the suds box, and the lid 6, which together with the described mechanism had been rocked on the hinges a, so as to remove said lid from over the top of the suds box, are returned to normal position as shown in Fig. 1. The operator now turns the balance wheel 11, by means of the crank handle g, which will correspondingly rotate the driving shaft 10 and crank arm 12, which will cause the connecting rod 14 to reciprocate in the guide box 13. The reciprocation of the connecting rod 14, will alternately compress the springs n, n', which will in turn rock the bars 8, 8, and reciprocate the rods 15. The alternate reciprocation of the pounder cups 16, in opposite directions, will cause said cups to alternately press forcibly upon the fabric in the suds box, 5, and force the suds water through such portions of the fibrous material as are beneath and near to the pounder cups.

It will be noted that the employment of the coiled springs n, n', for the transmission of reciprocatory motion from the crank arm 12 to the plunger rods 15, is of advantage, in that the impact of the pounder cups 16 on the fabric, is sufficiently yielding to prevent abrupt shocks being produced, and adapts the machine to operate smoothly, and at the same time in an effective manner for the renovation of all kinds of fibrous material.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent:

1. The combination with a suds box and a lid thereon, of a post on the lid, a rocking bar pivoted on the post between its ends, plunger rods pendent from the ends of the rocking bar and passing down through the lid, pounder cups on the lower ends of the plunger rods, a reciprocable rod having a sliding and cushioned connection with the rocking bar, and means for reciprocating the said rod to rock the bar so as to alternately depress the pounder cups.

2. The combination with a suds box, and a lid hinged by one end thereon, of a post upright on the lid, two similar rocking bars centrally and oppositely pivoted on the upper portion of the post, a driving shaft rotatably mounted on the lid, a crank arm on one end of the shaft, a connecting rod pivoted by one end on the outer end of the crank arm and loosely supported between the rocking bars, springs adapted for cushioning the transmission of motion from the connecting rod to the rocking bars, plunger rods on the ends of the rocking bars passing down loosely through the lid, and pounder cups on the lower ends of the plunger rods.

3. The combination with a suds box, and a lid hinged at one end on the open upper end of said suds box, of an upright post centrally erected on the lid, a base plate on the lid, which supports said post, pedestal boxes on the base plate, a driving shaft journaled in said boxes, a balance wheel on one end of said shaft, a crank arm on the other end of said shaft, duplicate rocking bars pivoted oppositely at their centers on the upper end of the post, plunger rods pivoted at their upper ends between ends of the rocking bars, said rods extending loosely down through the lid, pounder cups on the lower ends of the plunger rods, a connecting rod pivoted by one end on the outer end of the crank arm, a guide box pivoted between the rocking bars above the crank shaft, collars on the connecting rod, and cushion springs on said connecting rod pressing between the guide box and said collars.

4. The combination with a suds box, of a post mounted thereon, a rocking bar pivoted on the post between its ends, plunger rods pendent from the ends of the rocking bar and passing into the box, the plunger rods having pounders at their lower ends, a driving shaft, a connecting rod connected with the driving shaft and reciprocated therefrom, the said connecting rod having a loose connection with the rocking bar, and springs for transmitting motion from the connecting rod to the rocking bar.

5. The combination with a suds box, and a lid thereon, of a post on the lid, a rocking bar pivoted on the post between its ends, plunger rods pendent from the ends of the rocking bar and passing through the lid, pounder cups at the lower ends of the plunger rods, a guide box pivoted to the rocking bar, a connecting rod extending through the bore of the guide box, a driving shaft connected with the connecting rod to reciprocate the same in the guide box, and cushion springs on the connecting rod and bearing on opposite sides of the guide box.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ERNEST RAMTHUN.
CHARLES J. GUTEKUNST.

Witnesses:
ALBERT RAMEL,
HERMAN RAMEL.