No. 866,047. PATENTED SEPT. 17, 1907.

M. MORGAN.

WASHING MACHINE.

APPLICATION FILED OCT. 28, 1905.

3 SHEETS—SHEET 1.

Fig 1

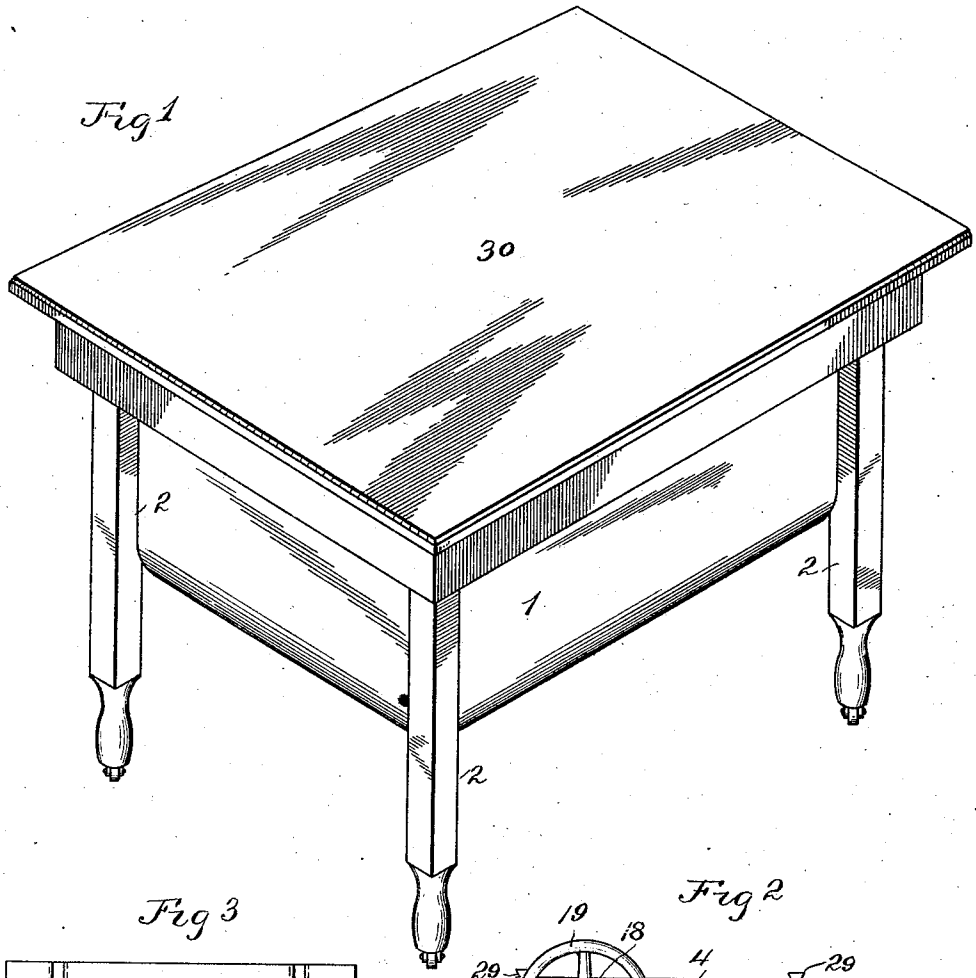


Fig 3

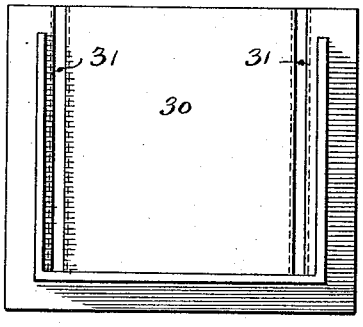
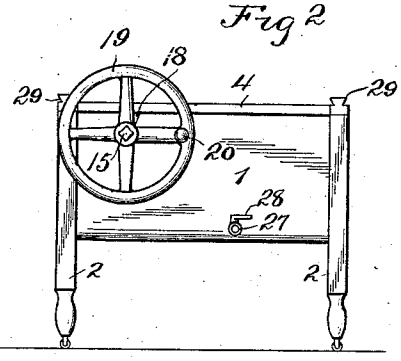


Fig 2



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3 SHEETS—SHEET 2.

Fig 4

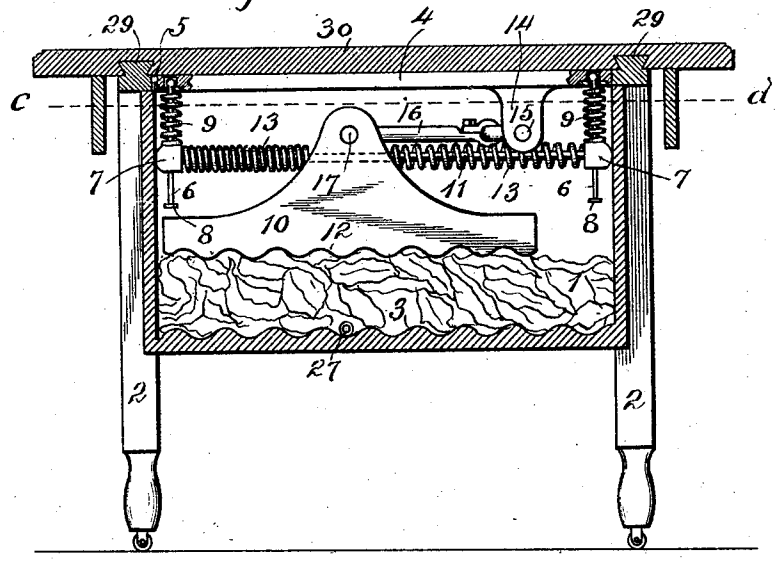
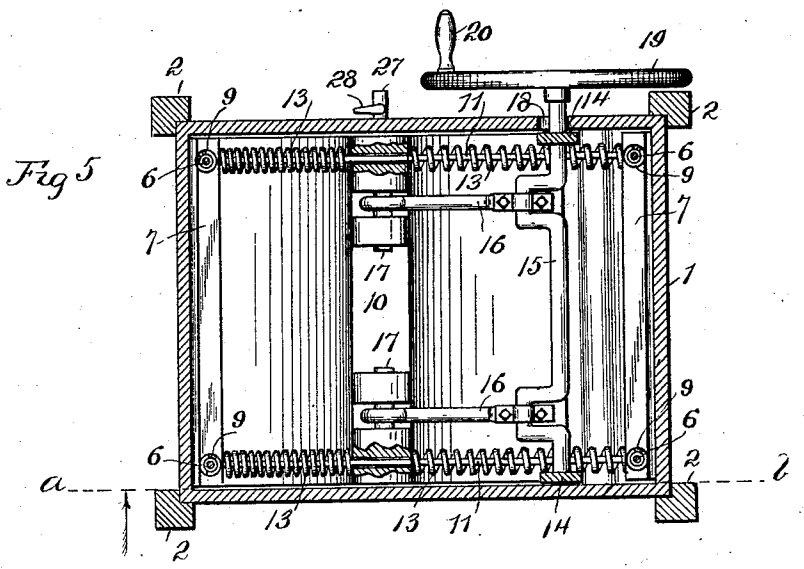


Fig 5



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3 SHEETS—SHEET 3.

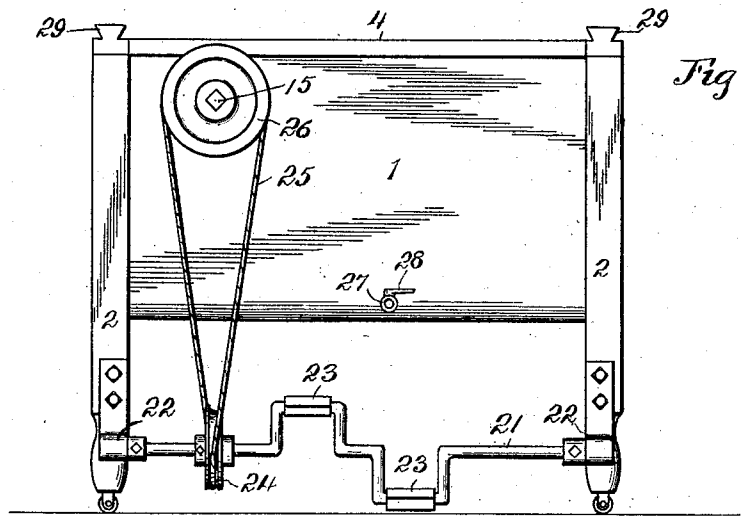

Fig 6

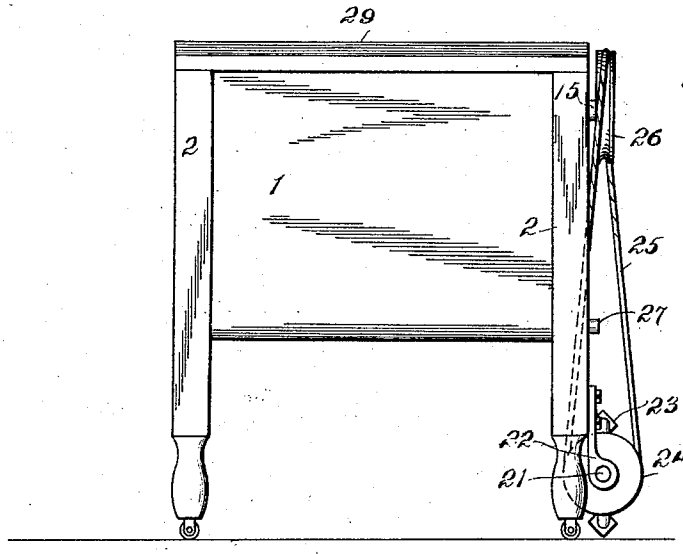

Fig 7

Witnesses

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UNITED STATES PATENT OFFICE.

MARTHA MORGAN, OF HIAWATHA, KANSAS.

WASHING-MACHINE.

No. 866,047. Specification of Letters Patent. Patented Sept. 17, 1907.

Application filed October 28, 1905. Serial No. 284,770.

To all whom it may concern:

Be it known that I, MARTHA MORGAN, a citizen of the United States, residing at Hiawatha, in the county of Brown and State of Kansas, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to improvements in washing machines.

My invention provides a machine for washing clothes and provided with a removable cover to adapt the machine for use as a table.

My invention provides further, a washing machine having an open top clothes receptacle, a lid hinged to the receptacle and movable to and from a position for closing the open top thereof, clothes rubbing mechanism movably mounted in said receptacle and provided with a depending support carrying the clothes rubbing device, said support being mounted upon the under side of said lid and being movable laterally so as to permit the free swinging of the lid to and from the closed position.

Other novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings which illustrate my invention—Figure 1 is a perspective view of the machine showing the slidable cover mounted in the closed position, the crank wheel removed and the machine arranged to be used as a kitchen table. Fig. 2 is a side elevation view of the machine having the slidable cover removed. Fig. 3 is an under view of the slidable cover. Fig. 4 is a vertical sectional view taken on the dotted line *a*—*b* of Fig. 5, the crank wheel being removed. Fig. 5 is a horizontal sectional view taken on a plane corresponding to the dotted line *c*—*d* of Fig. 4, the crank wheel being shown mounted on the driving shaft. Fig. 6 is a side elevation view of the washing machine provided with a pedal mechanism for rotating the driving shaft, the slidable cover being removed. Fig. 7 is an end elevation view of what is shown in Fig. 6.

Similar characters of reference denote similar parts.

The frame work of the machine comprises a rectangular receptacle 1 having an open top and provided at its four corners respectively with vertical supporting legs 2. The upper side of the bottom of the receptacle is transversely corrugated, as indicated by 3, in Fig. 4.

4 denotes a horizontal lid, hinged at one edge, indicated by 5, to one side and upper end of the receptacle 1. The lid 4, when in the closed position, rests upon the upper edges of the two sides of the receptacle adjacent the side to which it is hinged. In the receptacle 1 are mounted four vertical rods 6, the upper ends of which are pivotally supported in suitable bearings provided in the under side of the lid 4. The said vertical rods 6 are disposed respectively adjacent the four corners of the lid 4. Two horizontal parallel bars 7, are vertically slidably mounted, one each upon two of the rods 6. Said rods 6 are provided, each at its lower end with a head 8, which heads limit the downward movement of the bars 7. Upon the rods 6 are mounted respectively four coil springs 9 the upper ends of which bear upon the under side of the lid 4 and the lower ends of which bear respectively upon the upper sides of the bars 7. The said springs 9 serve as a resilient means for resisting the upward movement of the bars 7.

In the receptacle 1 is a clothes rubbing device 10, horizontally reciprocative upon two parallel horizontal rods 11, the ends of which are secured respectively to the bars 7. The under side of said rubbing device 10 is provided with corrugations 12 disposed parallel with the corrugations 3. Resilient means are provided for resisting horizontal movement of the rubbing device 10 and comprises four coil springs 13 mounted two upon each rod 11 and disposed two upon each side of the rubbing device 10. The inner ends of the springs 13 bear against the rubbing device 10, the outer ends bearing respectively upon the bars 7, adjacent thereto. Upon the under side of the lid 4 are provided two projections 14 having transverse openings respectively, in which is mounted a horizontal rotary crank shaft 15, to which are pivotally connected one or more pitmen 16 which are respectively pivoted also to two horizontal pins 17 mounted in alinement with each other in the upper end of the rubbing device 10. The crank shaft 15 is disposed above and at right angles to the rods 11 one end of said crank shaft extending through a notch 18 provided in the upper edge of one of the sides of the receptacle 1. When the shaft 15 is rotated, it will reciprocate the rubbing device 10 upon the rods 11, the springs upon opposite sides of the rubbing device being alternately compressed upon each reciprocation of the rubbing device.

Rotation to the shaft 15 may be imparted in any desired manner. In Figs. 2 and 5 is shown a crank wheel 19, secured upon the outer end of the shaft 15 and provided adjacent its periphery with an outwardly extending handle 20, which serves as a crank by which the wheel 19 may be turned. In Figs. 6 and 7 I have shown a mechanism by which the shaft 15 may be rotated by foot power. The foot power mechanism comprises a horizontal shaft 21, the ends of which are rotatively mounted in two bearings 22, secured respectively upon the outer sides of two legs 2. The shaft 21 is provided with two pedal cranks 23, disposed diametrically opposite each other. Upon the shaft 21 is secured a peripherally grooved wheel 24, connected by a belt 25, with a peripherally grooved wheel 26, secured to the outer end of the shaft 15. The shaft 21 is rotated by placing the feet upon the pedal cranks 23 and moving the feet in the ordinary manner. The receptacle 1 is provided in one side adjacent the bottom with a discharge pipe 27 through which the washing liquid may be withdrawn from the receptacle.

The said pipe 27 outside the receptacle is provided with a shut-off cock 28. The upper end of the receptacle 1 is provided with two dovetail shaped guides 29, disposed parallel with each other and parallel with the bars 7 respectively. A slidable horizontal removable cover 30, is provided on its under side with two grooves 31, fitted to the guides 29. Said grooves extend from one edge of the cover to near the opposite edge of the cover.

When it is desired to operate the machine as a washing machine, the cover 30 is withdrawn from engagement with the guides 29. The lid 4 is then swung upward to the open position, after which the clothes to be washed and the water or other washing fluid which may be employed, are placed within the receptacle 1. The lid 4 is then swung to the closed position, in which position the corrugated lower side of the rubbing device 10 will press the clothes upon the corrugated bottom 3. The springs 9 will hold the rubbing device against the clothes with a resilient pressure. Rotation is then imparted to the shaft 15 in either of the two ways hereinbefore described. The rotation of the crank shaft 15 will reciprocate the rubbing device 10, as already described, which reciprocation will subject the clothes to a rubbing manipulation, corresponding in effect to that produced by rubbing the clothes by hand upon an ordinary wash-board. After the washing has been performed the clothes and washing fluid are removed and the cover 30 slipped upon the guides 29 to a position covering the lid 4. If desired, the wheel 19 may be removed from the shaft 15 and the apparatus employed as an ordinary kitchen table.

Various modifications of my invention within the scope of the appended claims may be made without departing from its spirit.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:—

1. In a washing machine, the combination with the clothes receptacle having an open top and a corrugated bottom, of a lid hinged to the receptacle and covering, when in the closed position, the open top of the receptacle, four vertical rods pivotally secured at their upper ends to said lid, two horizontal bars vertically slidable one on each pair of vertical rods, resilient means for resisting the movement upward of said horizontal bars, two horizontal rods mounted parallel with each other in said receptacle and supported at their ends respectively by said horizontal bars, a rubbing device slidably mounted on said horizontal rods and having a corrugated bottom, a horizontal crank shaft rotatively supported upon the under side of said lid and extending at one end through the side of the receptacle, the upper edge of the said side of the receptacle being notched to receive said shaft, means for rotating said shaft, and a pitman pivotally connected to said shaft and to said rubbing device.

2. In a washing machine, the combination with the open top receptacle for the clothes, the receptacle having a corrugated bottom, of a lid hinged to the receptacle and movable to a horizontal position closing the open top thereof, a corrugated rubbing device in said receptacle, a vertically movable support for said rubbing device upon which the rubbing device is movable horizontally to and fro, resilient means for resisting upward movement of said support, resilient means carried by said support for resisting horizontal movement in either direction of the rubbing device, a shaft rotatively mounted on said lid, and means for imparting horizontal reciprocation on said support to said rubbing device when the shaft is rotated.

3. In a washing machine, the combination with the open top clothes receptacle having a corrugated bottom, of a lid hinged to the said receptacle and when in the closed position covering the open top of the receptacle, two horizontal parallel bars in said receptacle, supporting means for said bars depending from the under side of said lid and upon which said bars are movable vertically respectively, resilient means for resisting upward movement of said bars, two horizontal parallel rods supported at their ends respectively by said bars and upon which the rubbing device is reciprocatively mounted, four coil springs mounted two on each of said rods and disposed two at each side of said rubbing device, said springs bearing each at one end upon said rubbing device and at the other end upon the adjacent horizontal bar, a rotary shaft mounted on said lid, means for rotating said shaft, and means for reciprocating said rubbing device when the shaft is rotated.

4. In a washing machine, the combination with the open top clothes receptacle having a corrugated bottom, of a lid hinged to said receptacle and movable to and from a position covering said open top, a corrugated rubbing device in said receptacle, a vertically and laterally movable support carried on the under side of said lid and on which the rubbing device is reciprocative horizontally, resilient means for resisting upward movement of said support, resilient means for resisting horizontal movement in either direction of the rubbing device, a shaft rotatively mounted on said lid, means for rotating said shaft, and means for reciprocating said rubbing device when the shaft is rotated.

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

MARTHA MORGAN.

Witnesses:
A. F. BECHTEL,
GEO. M. DAVIS.