(No Model.) 2 Sheets—Sheet 1.

W. F. MOORE.

WASHING MACHINE.

No. 388,706. Patented Aug. 28, 1888.

Fig. 1

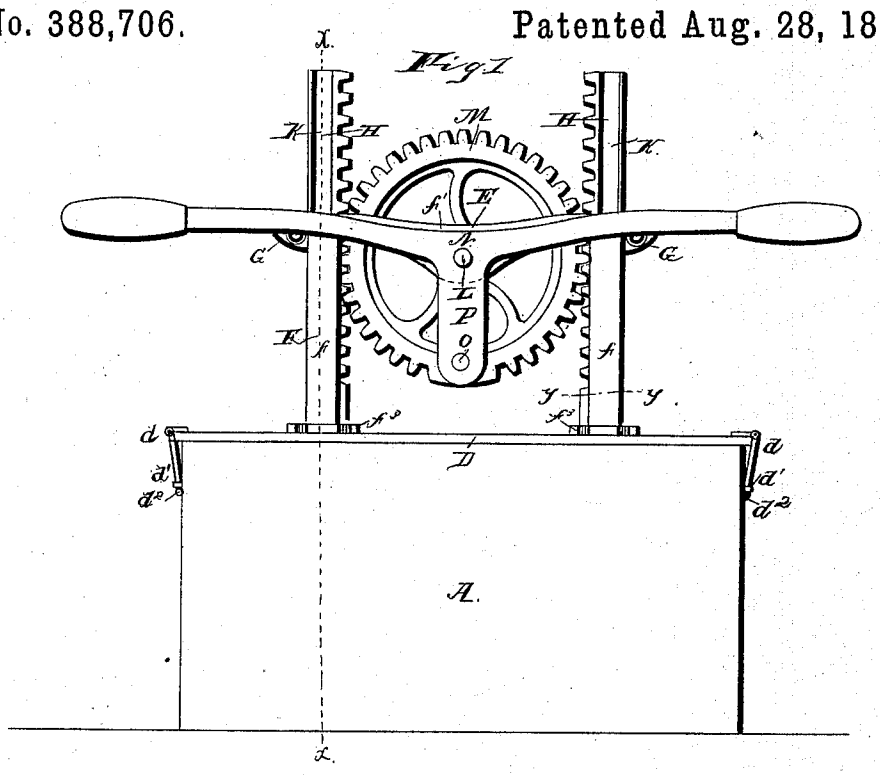
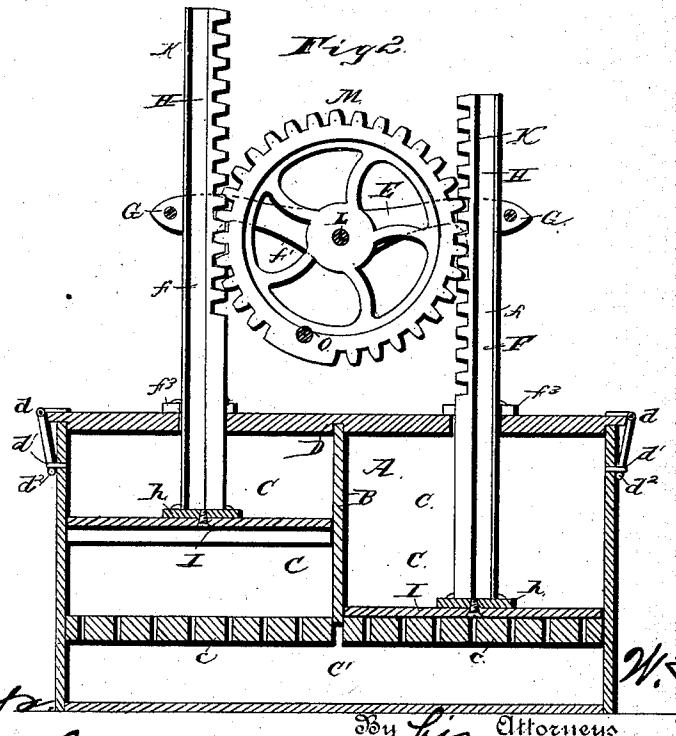


Fig. 2.



Witnesses,

C. E. Doyle.

Inventor.

W. F. Moore,

By his Attorneys

C. A. Snow & Co.

N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

W. F. MOORE.

WASHING MACHINE.

No. 388,706. Patented Aug. 28, 1888.

Fig. 3.

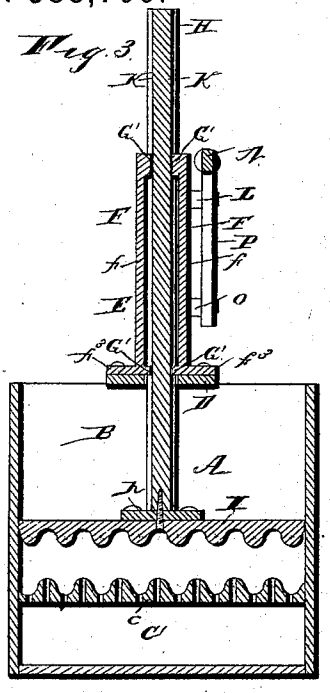


Fig. 5.

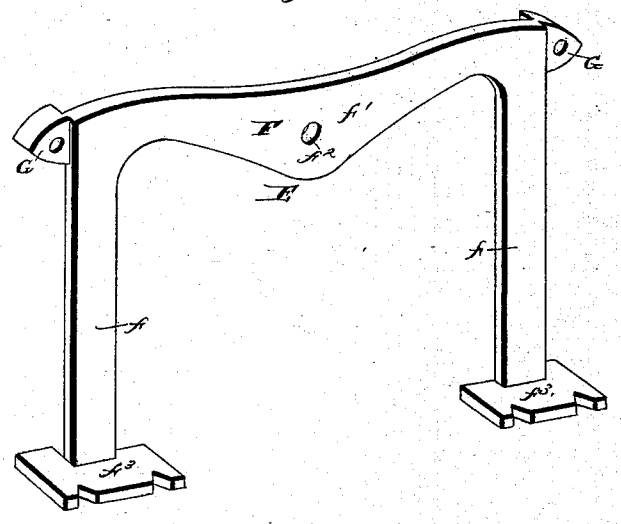


Fig. 4.

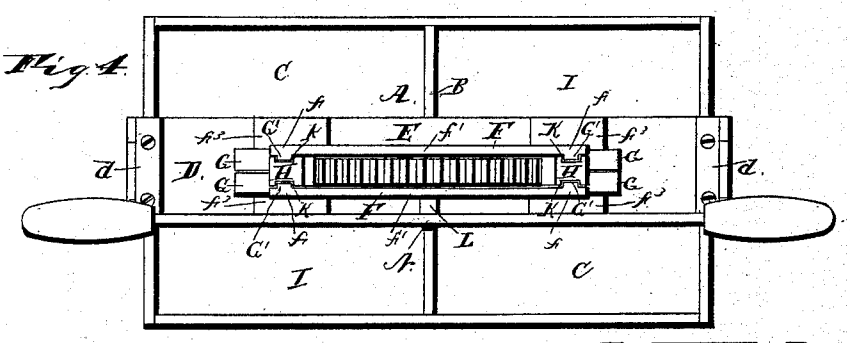


Fig. 6.

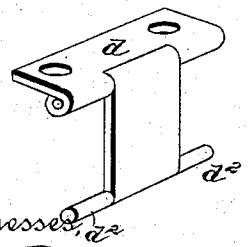
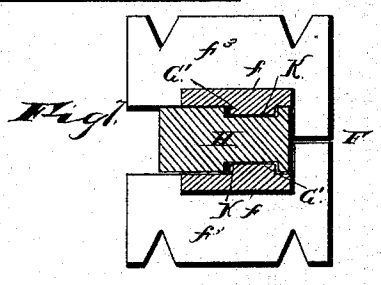


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILBUR FISK MOORE, OF FRANKLIN, KENTUCKY.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 388,706, dated August 28, 1888.

Application filed September 24, 1887. Serial No. 250,593. (No model.)

To all whom it may concern:

Be it known that I, WILBUR FISK MOORE, a citizen of the United States, residing at Franklin, in the county of Simpson and State of Kentucky, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to improvements in washing-machines; and it consists in a certain novel construction and arrangement of parts, fully set forth hereinafter, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a front view of the machine. Fig. 2 is a similar view showing the operating-handle and the front of the supporting-casting removed. Fig. 3 is a transverse vertical section on the line *x x* of Fig. 1. Fig. 4 is a plan view. Fig. 5 is a detail view of the front casting, forming a portion of the support. Fig. 6 is a detail view to show the latch for holding the top bar firmly on the boiler or suds-box. Fig. 7 is a section on line *y y* of Fig. 1.

Referring by letter to the drawings, A designates the suds-box or boiler, comprising an oblong box divided by the partition B into the compartments C C. The compartments are each provided with false or second bottoms *c c* a short distance above the main bottom of the suds-box, and the partition B does not extend below the said false bottoms, but allows a communication between the spaces under the false bottoms. The bottoms *c c* are corrugated longitudinally and provided with perforations through which the water may pass when the washer is in use.

It will be seen that the compartments communicate with each other through the space or passage C′ under the said compartments.

D designates the top bar, arranged across the center of the suds-box longitudinally and provided at the ends with hinged latches *d d*, adapted to pass down at the ends of the box A and engage under small studs *d′ d′*, the lower end of the latch being provided with lateral arms d^2 d^2 for this purpose. The under side of the top bar is notched to receive the upper edges of the ends of the suds-box and the partition.

E designates the support for the operating mechanism of the washer, and it comprises the castings F F, which consist each of the vertical arms *f f* and the horizontal arm *f′*, having a bearing, f^2, in the center, to align with the similar bearing in the opposite casting. The lower ends of the arms *f* are provided with plates f^3, preferably formed integral therewith, which plates are provided on the outer edges with notches adapted to receive the screws to secure the said plates to the top bar.

The castings are provided at the upper outer corners with ears G G, having perforations therein to align with the corresponding perforations in the ears on the opposite casting, and bolts are passed through the said aligned perforations. The castings are further provided on the inner sides of the vertical arms *f* with ribs G′ G′, for a purpose hereinafter mentioned.

Between the vertical arms of the castings, and operating in openings in the top bar, are arranged the vertical dasher-shafts H H, having the plates *h h*, secured or formed on the lower ends and provided with notches in the edges, the construction being similar to that of the plates f^3. (Shown in Figs. 5 and 7.)

I I represent the dashers, secured on the lower ends of the shafts H H by screws engaged in the notches in the plates *h h*, and the said dashers are corrugated similarly to the false bottoms of the compartments C, so that when the dashers are lowered the corrugations therein will accurately fit the corrugations in the said bottoms. The dashers are of a size to fit in the compartments snugly, so that when they are moved vertically therein they will act as pistons. The front and rear sides of the shafts H H are provided with longitudinal grooves K K, adapted to receive and slide on the ribs or projections G′ in the inner sides of the castings, and the inner sides of the said shafts at the upper ends are provided with gear-teeth.

L designates a horizontal shaft journaled in the bearings f^2 in the horizontal arms of the castings, and M represents a large gear-wheel secured on the said shaft and adapted to mesh with the gear-teeth on the dasher-shafts, so that when the wheel is rotated it will operate the dasher-shafts, causing one to ascend and the other to descend. The shaft L is extended forwardly from its bearing in the casting, and on the end thereof is secured the center of the

operating-lever N, provided at each end with a handle of the ordinary construction.

O designates a forwardly-extending arm or bar, secured to the wheel M at the lower part, and P represents an arm depending from the under side of the lever N, which is secured at the lower end to the extremity of the bar O.

The operation of the washing-machine is as follows: A suitable quantity of water is placed in the suds-box and the clothes to be washed are placed in on the corrugated bottoms. The top bar, D, is now secured in place on the suds-box and the dashers placed in their respective compartments. Having thus arranged the parts of the device, the ends of the lever N are operated vertically, one end ascending while the other is descending, and, owing to the arrangement of parts hereinbefore explained, the dashers will be operated vertically, one ascending while the other is descending, and vice versa. As one dasher descends, it forces the water in its compartment through the clothes therein, through the perforated bottom, along the passage C′, under the compartments C, and up through the perforated bottom of the other compartment. After having forced all the water out of the cloths in the compartment, it presses the clothes firmly between the corrugated surfaces of the bottom and the dasher and thus wrings them dry, at the same time rubbing them slightly. When the handle is operated in the opposite direction, the passage of the water is reversed, it being forced back into the compartment from which it had been driven, thus passing through the clothes which had previously been pressed and rubbed. The clothes in the other compartment now receive the pressing and rubbing after the water in the compartment has been pressed out. This continual forcing of the water back and forth through the clothes by direct pressure causes the clothes to be very rapidly cleansed; but when the said action is taken in connection with the squeezing, pressing, and rubbing of the corrugated dashers the action is very thorough and rapid.

Having thus described my invention, what I claim is—

1. In a washing-machine, the combination of the suds-box A, having the compartments C C, top bar secured on the upper side of the suds-box, castings F F, secured to the upper side of the bar and comprising the vertical arms *f f* and the horizontal arms *f′*, provided at the centers with aligned bearings f^2, vertical sliding dasher shafts H H, operating between the vertical arms of the adjacent castings F, and having the dashers I I on the lower ends to operate in the compartments C, the shaft journaled in the aligned bearings f^2, and the gear-wheel M, secured on the said shaft and adapted to mesh with gear-teeth on the inner sides of the said dasher-shafts, whereby when the said wheel is rotated one of the shafts will ascend and the other will descend simultaneously, substantially as and for the purpose specified.

2. In a washing-machine, the combination, with the suds-box A, having the compartments C C, of the top bar, D, arranged across the said box, the parallel castings F F, secured to the upper side of the said bar, and having a horizontal arm, *f′*, provided with a bearing, f^2, the vertical dasher-shafts H H, guided by the said castings and having gear-teeth on the inner sides, and the dashers I I on the lower ends to operate in the compartments C, shaft L, journaled in the bearings f^2 and extending forward beyond the same, the gear-wheel M, secured to the said shaft between the castings and meshing at opposite sides with the gear-teeth on the dasher-shafts, the lever N, secured on the front end of the shaft L, and having the depending arm P at the center, and the forwardly-extending bar O, secured to the wheel at the lower part and adapted to have the lower end of the arm P secured thereto, all constructed and arranged substantially as and for the purpose specified.

3. In a washing-machine, the combination, with the suds-box A, having the compartments C C, of the top bar, D, the castings F F, comprising the vertical arms *f f*, provided at the lower ends with the plates f^3, adapted to be secured to the top bar, and the horizontal arm *f′*, provided at the center with the aligned bearings f^2, the vertical arms *f* being also provided on the inner sides with the ribs or projections G′, the vertical dasher-shafts H H, provided in the front and rear sides with grooves K K to receive the ribs or projections G′, and also having the gear-teeth on the inner sides and the plates *h h* on the lower ends, the dashers I I, secured to the plates *h h* and adapted to operate in the compartments C C, shaft L, journaled in the bearings f^3, gear-wheel M, secured to the said shaft and meshing with the gear-teeth on the dasher-shafts, and the lever N, secured to the shaft L and having a depending arm, P, connected at the lower end to the gear-wheel, all constructed and arranged substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILBUR FISK MOORE.

Witnesses:
J. C. HUNT,
J. K. CALDWELL.