(No Model.)

F. FOSTER.

WASHING MACHINE.

No. 471,541. Patented Mar. 29, 1892.

Fig. 1.

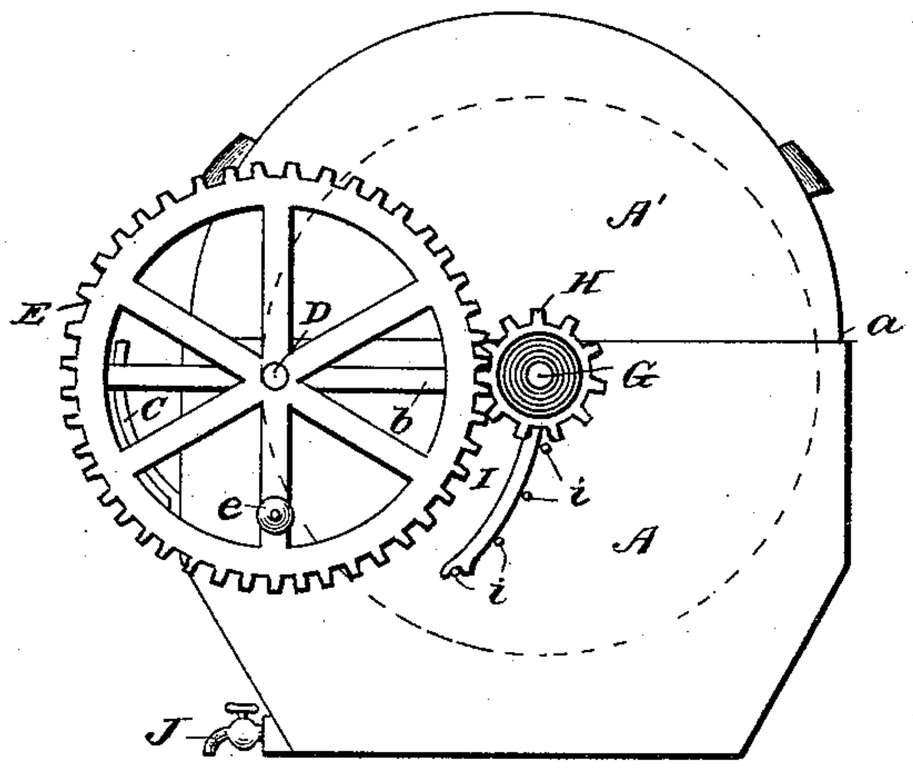


Fig. 2.

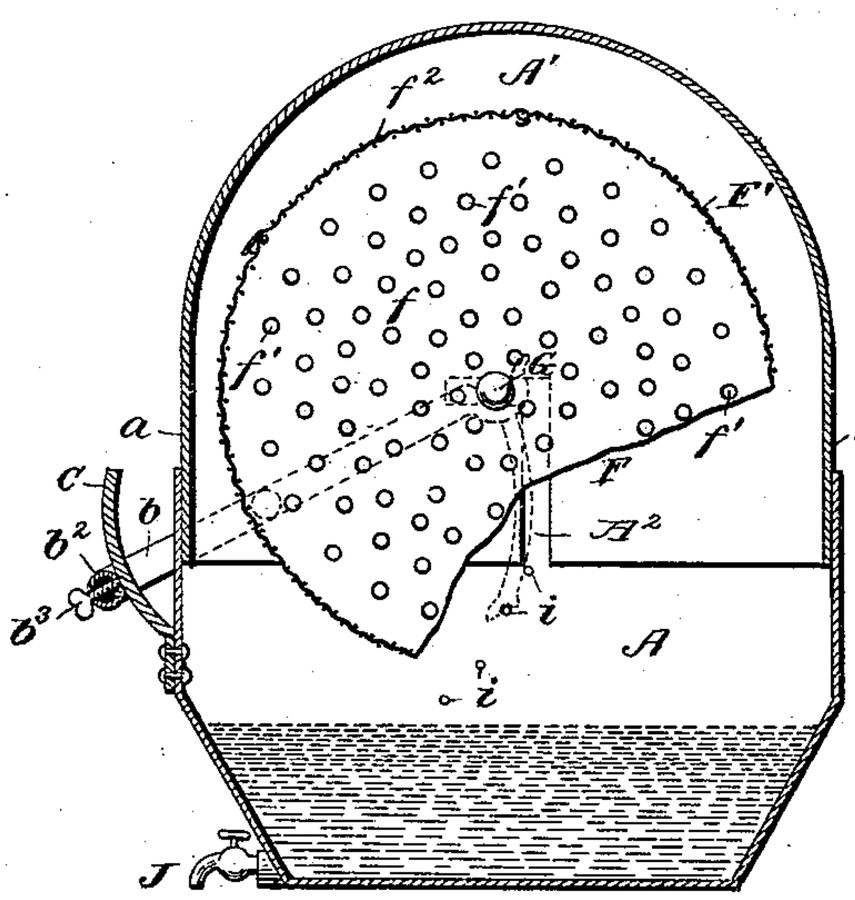


Fig. 4

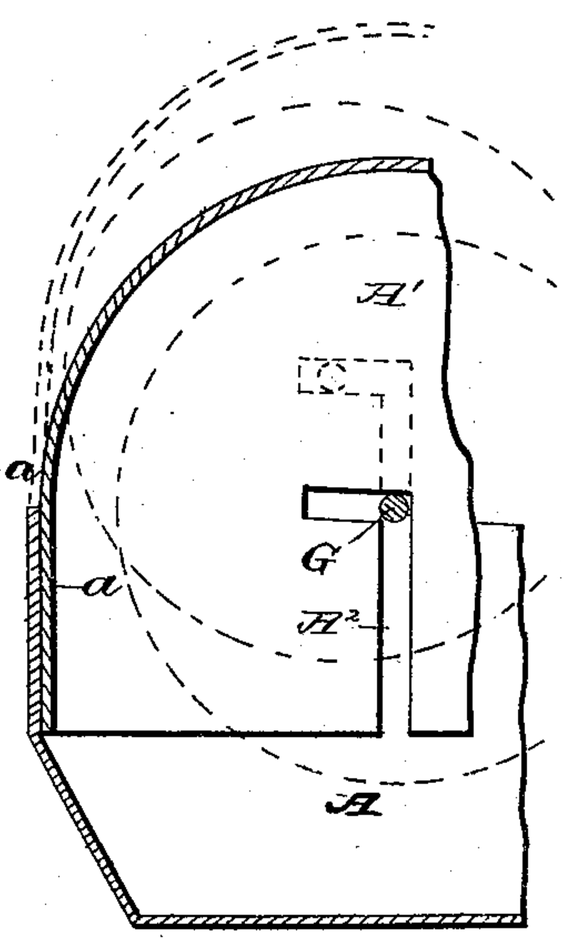
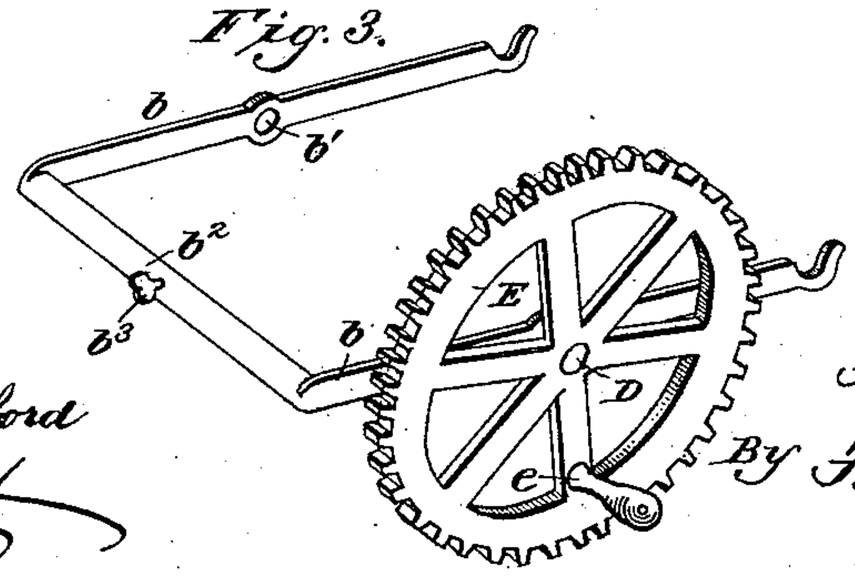


Fig. 3.



Witnesses

Edwin C. Bradford

F. P. Fuller

Inventor

Festus Foster

By F. P. Cornwall

Attorney

UNITED STATES PATENT OFFICE.

FESTUS FOSTER, OF MOUNT HOPE, KANSAS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 471,541, dated March 29, 1892.

Application filed January 31, 1891. Serial No. 379,782. (No model.)

To all whom it may concern:

Be it known that I, FESTUS FOSTER, a citizen of the United States, residing at Mount Hope, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a new and useful improvement in washing-machines; and it consists in the construction, combination, and arrangement of parts, as will hereinafter be described, and afterward pointed out in the claims.

The first object of my invention consists in constructing a washing-machine in which the clothes to be washed are placed in a revoluble cylinder, and after being cleansed the water is expelled from the clothes by centrifugal force, motion being imparted to the cylinder by the same means with which the clothes were washed without handling the same or changing the position of the driving mechanism, in which construction are embodied structural simplicity, cheapness, and comparatively easy operation of the several parts.

Other minor details of construction and novel features of my invention are disclosed in the drawings hereunto annexed and described in the specification.

These objects I obtain by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corsponding parts wherever they occur.

Figure 1 is a side elevation of my improved machine. Fig. 2 is a vertical longitudinal section showing the cylinder in a raised position, and Fig. 3 is a perspective of the drive-wheel and U-shaped bail or adjusting-arm. Fig. 4 is a detail view showing the inverted-L-shaped slot, the cover in its lowered position, and in dotted lines the raised position of the cover and the shaft with relation to the horizontal portion of the slot.

In the drawings, A represents the base or tank, the ends of which are vertical at their upper portions and converge, as shown, at their lower portion to afford a resting place for the cover.

A′ indicates the cover, formed, preferably, with vertical portions *a*, adapted to slide in the base and rest on the upper inclined face of the converging ends, the upper portion of said cover being curved to permit the elevation of the cylinder, as hereinafter described.

A^2 indicates inverted-L-shaped slots in the sides of the cover, said slots passing over the stub-shafts of the cylinder, permitting the same to slide in the base, the horizontal portion of the slots allowing the cylinder to raise and carry with it the cover, the stub-shafts of the cylinder sliding along the horizontal portion of the slots.

Pivotally secured to the sides of the base on stud-shafts projecting therefrom and to one side of the center thereof is a supporting-bail B, consisting of two arms *b*, having openings *b′* therein for the passage of the pivot-pins, said arms being recessed at their outer ends to afford a bearing for the stub-shafts on the cylinder-heads.

b^2 indicates a cross-bar or handle connecting the outer ends of the arms *b*, and has passing therethrough at or about its center an adjusting-screw b^3, adapted to impinge against a curved plate C, secured to the base, the outline of the curvature being described from a point in the center of the pivot-pins. One of the pivot-pins or projecting stud-shafts D is extended out beyond the arms and has mounted thereon a drive-wheel E, having a handle *e* with which the same may be rotated.

F represents the cylinder, having a suitable door f^2 therein, said cylinder being formed of two heads *f f*, having perforations *f′* extending nearly to the outer edge thereof, and a body portion F′, formed of foraminous or reticulated material, substantially as shown.

Extending from the center of the heads of the cylinder are two stub-shafts G, one of which has a pinion H mounted thereon adapted to mesh with the drive-wheel D when the stub-shafts G of the cylinder rest in the recesses in the ends of the arms of the pivoted bail B.

I indicates gravitating swinging arms mounted on the stub-shafts of the cylinder, said arms adapted to engage with and be supported by pins *i* in the sides of the base, the object of which will be hereinafter described.

J indicates a spigot, preferably placed at the bottom of the tank to draw the water therefrom.

The operation may be described as follows: The clothes to be washed are placed in the cylinder F, the door closed, and the cylinder let down so as to be partly immersed in the water. Heat is then applied to the water in any suitable manner and the wheel E turned slowly, which, being in engagement with the pinion H, imparts motion to the same, which turns the stub-shafts and revolves the cylinder. After the clothes have been sufficiently agitated the suds and dirty water are drawn off through the spigot J in the bottom of the tank. After the withdrawal of the dirty water clean water is poured in and the clothes rinsed. This operation of rinsing may be repeated as often as desired, taking but little time to rinse the clothes in several waters. When the clothes have been sufficiently cleansed, the cylinder is raised above the level of the water by means of pressure being applied to the handle b' of the bail, said bail being held in its adjusted position by the depending arms I and the set-screw b^2 in the handle impinging against the curved plate C. After the adjustment of the cylinder the handle e is turned more rapidly, causing the cylinder to revolve at a rapid rate of speed, and on account of this increased motion the clothes are compressed against the reticulated material and the water expelled therefrom by centrifugal force. The rapid revolution of the cylinder and the centrifugal force brought into play causes a current of air to be continually passing in at the perforations in the heads of the cylinder, thus greatly accelerating the drying process. It is obvious that the water can be withdrawn without raising the cylinder. Increased motion being imparted to the same in its lowered position will expel the superfluous water in the clothes.

I am aware that many minor changes in the construction and arrangements of the parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. In a washing-machine, the combination, with the base formed with lower converging ends, of a vertically-adjustable cylinder within the base and a cover adapted to rest on the converging ends when in its lowered position, said cover being provided with slots to slide over the stub-bearings of the cylinder, substantially as and for the purposes described.

2. In a washing-machine, the combination, with the base, cover, and cylinder, of a bail pivotally secured to said base and having depressions in the ends of its arms for the reception of the shafts of the cylinder, a curved plate secured on the base in juxtaposition to the handle of the bail, and means for rigidly adjusting the handle by means of the handle and curved plate, substantially as and for the purposes described.

3. In a washing-machine, the combination, with the base, pivoted bail, and cylinder, of a cover provided with inverted-L-shaped slots adapted to fit over the shafts of the cylinder, whereby when the cylinder is adjusted the cover will ride by the medium of the horizontal portion of the slot upon the shaft of the cylinder and rise in a vertical line, substantially as and for the purposes described.

4. In a washing-machine, the combination, with the base, cover, and cylinder, of a pivoted bail having means of adjustment on its handle, and gravitating depending arms on the shafts of the cylinder adapted to engage the pins in the base, whereby the weight of the cylinder is equally distributed on the bail, substantially as and for the purposes described.

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

FESTUS FOSTER.

Witnesses:

A. FINLEY,

W. O. MURRELL.