No. 619,178. Patented Feb. 7, 1899.

H. HUBBARD.

WASHING MACHINE.

(Application filed Mar. 8, 1898.)

(No Model.)

Fig. 1

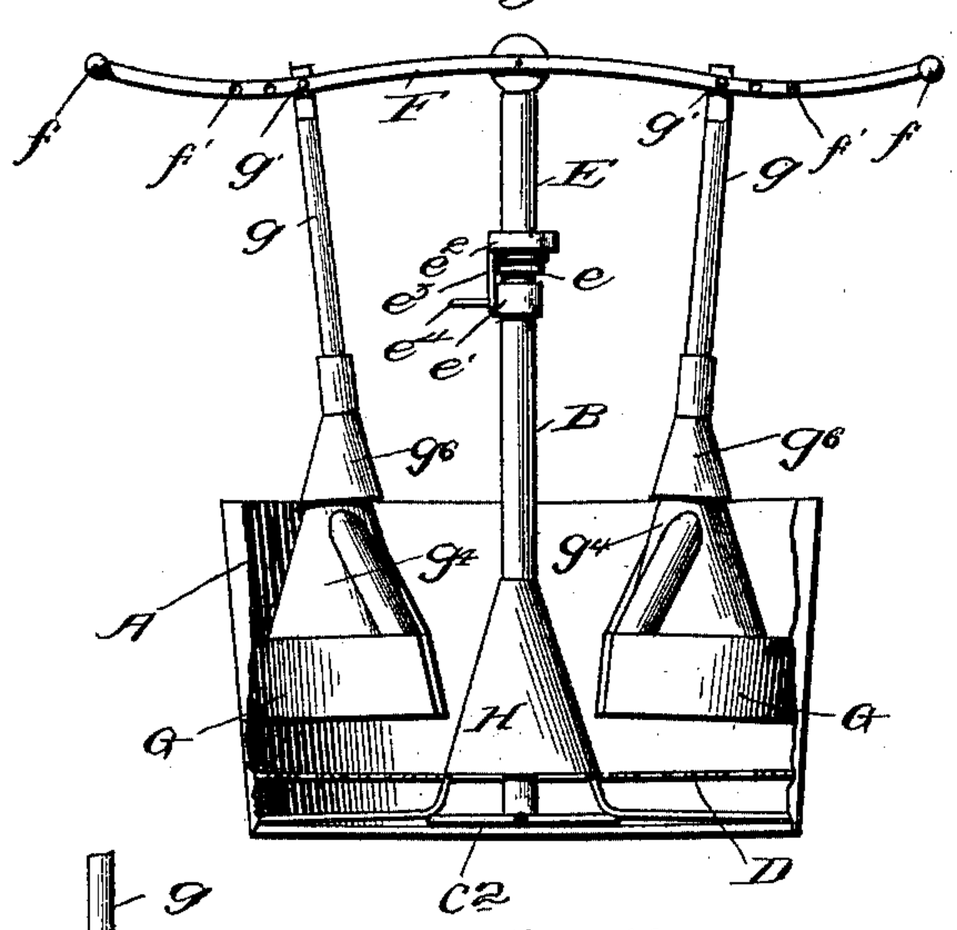


Fig. 2.

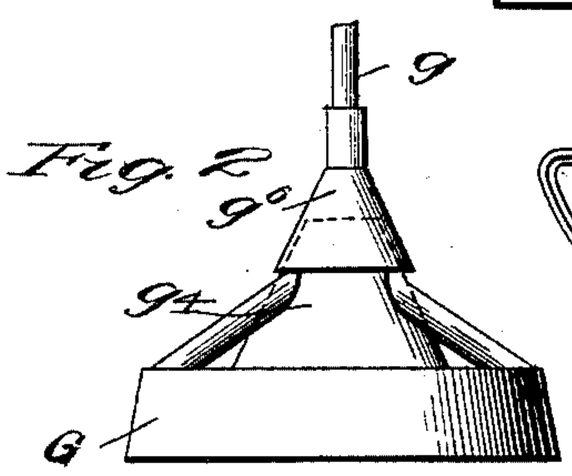


Fig. 3.

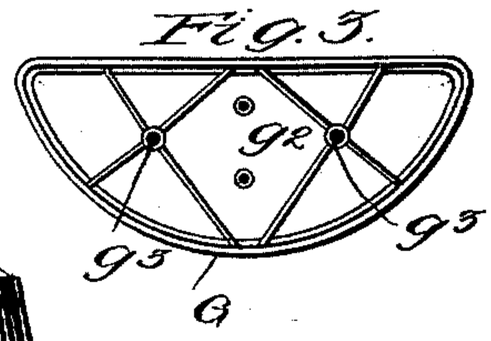


Fig. 4.

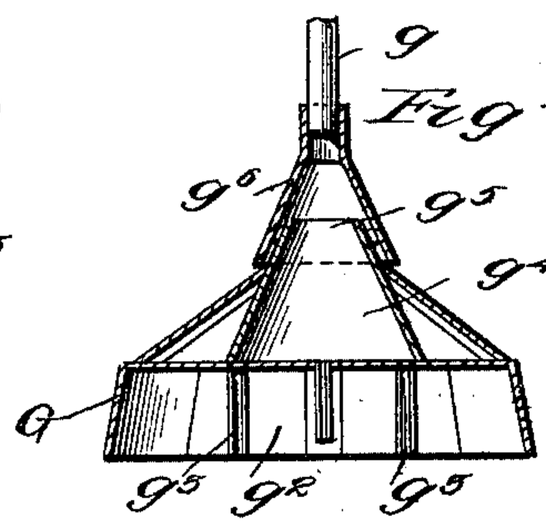


Fig. 5

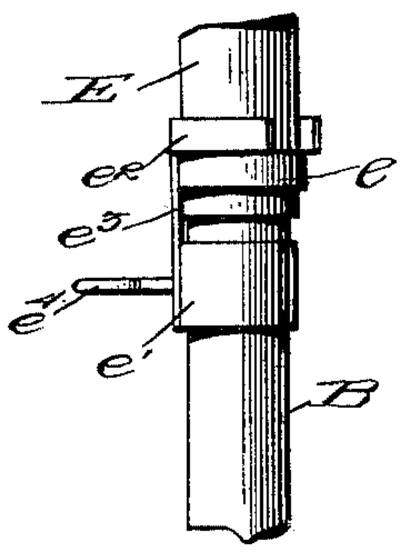


Fig. 6.

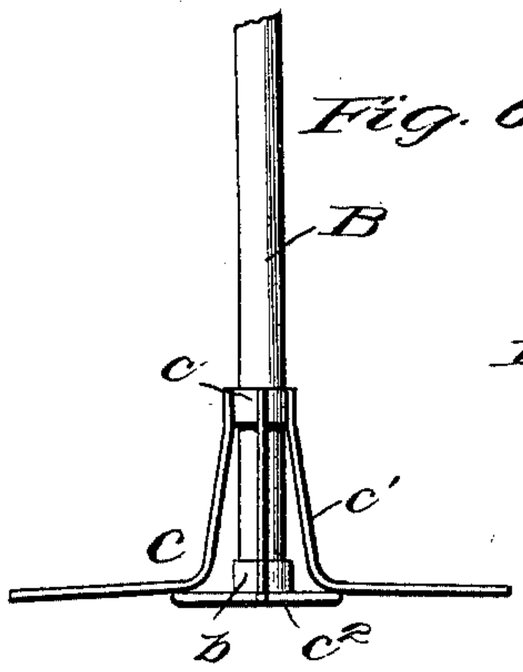
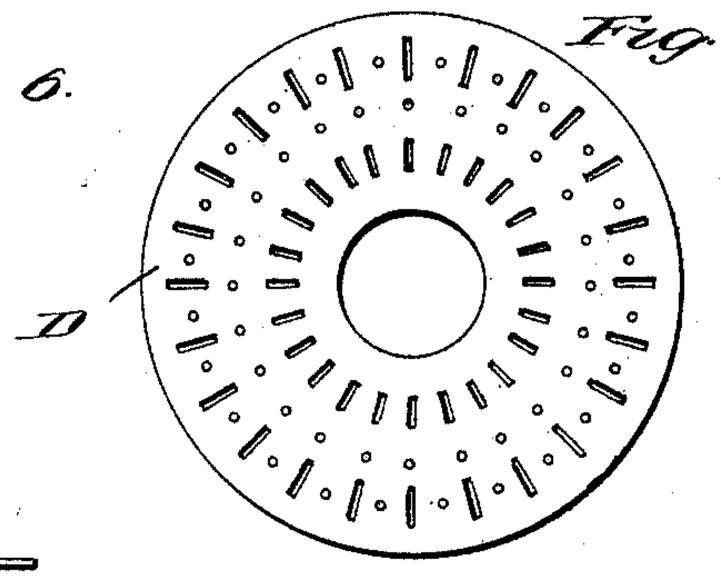


Fig. 7.



Witnesses:
Geo. C. Byrne
N. A. Kelly.

Inventor
Hilton Hubbard
By Dodge & Co.
Attorneys

UNITED STATES PATENT OFFICE.

HILTON HUBBARD, OF MARYVILLE, MISSOURI.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 619,178, dated February 7, 1899.

Application filed March 8, 1898. Serial No. 673,019. (No model.)

To all whom it may concern:

Be it known that I, HILTON HUBBARD, a citizen of the United States, residing at Maryville, in the county of Nodaway and State of Missouri, have invented certain new and useful Improvements in Washing-Machines; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to washing-machines.

The object of the invention is to provide a washing-machine of the general class known as "pounders" which will be simple and cheap in construction and by which the dirt may be removed from clothes in a rapid and easy manner without involving injury to the fabrics.

The invention consists of the various novel details of construction, which are hereinafter fully set forth, and are pointed out in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my washer, a portion of the tub and of the bottom plate of the washer being broken away to show the construction of the parts. Fig. 2 is a detail view of one of the pounders employed. Fig. 3 is an inverted plan view of one of the pounders. Fig. 4 is a sectional view of one of the pounders. Fig. 5 is a detail view showing the means for attaching the handles to the supporting-staff. Fig. 6 is a detail view showing the means for retaining the staff in position in a tub, and Fig. 7 is a plan view of the false bottom forming a part of my invention.

In the drawings, A represents a tub, which may be of any suitable form, preferably round, and may be of wood or metal or other suitable material.

B represents a staff or rod, which may be of metal or wood and which is designed to be arranged in the center of the tub. In order to retain the staff securely in place, I provide a socket *b*, which in the case of a wooden tub is screwed to the bottom thereof, or in case of a metal one is soldered or otherwise suitably secured. In order to brace the staff, I provide a frame C, having at its upper end a ring *c*, closely surrounding the staff and provided with arms *c'*, extending downward from the ring *c* to the bottom of the tub and thence outward parallel to the bottom, forming a brace. The extreme ends of the arms *c* may be suitably attached to the bottom of the tub, if desired. At the point where the arms are bent the several arms are connected by solder or otherwise to a suitable ring c^2 to give rigidity to the frame.

D represents a false bottom, which is of wood or of metal galvanized in order not to be injured by water or to stain the clothes placed upon it, and it is arranged a short distance above the bottom of the tub. The entire surface of the false bottom D is perforated at short distances, allowing the passage of water forced through the clothes and also allowing dirt to pass below the false bottom, and thus be separated from and kept away from the clothes placed thereon. The false bottom is provided with a central opening for the passage therethrough of the central staff and of the supporting-arms.

A cover H is placed at the lower end of the staff B and has an opening in the upper end for the passage of the staff. The staff or cover is conical in general contour, its base being of a size to cover the opening in the center of the false bottom, and its interior capacity is sufficient to receive the supporting-arms *c'*. The cap has a smooth outer surface and so offers no impediment to the introduction or removal of clothes to be washed.

Arranged upon the staff A, at the upper end thereof, is a tube E, having thereon, near its lower end, a ring *e*. The opening in the tube E is of sufficient size to allow the upper end of the staff to enter it. In order to attach the tube to the staff in a manner to allow the tube freely to revolve and at the same time to hold it at any desired height, I provide the connection consisting of the collars *e'* e^2, connected by a plate e^3. The collar *e'* surrounds the staff B and the collar e^2 surrounds the tube E above the collar *e*. A set-screw e^4 projects through the collar *e'* and bears upon the staff B. By this means it will be seen that the tube E may readily be adjusted up and down on the staff B, and also that the

tube and parts connected thereto may rotate it independently of the staff B.

Pivotally attached to the upper portion of the tube E is a beam F, provided at its outer ends with handles *f* for grasping. The beam is preferably composed of two parallel rods suitably connected, and between these rods are received the upper ends of the stems *g* of the pounders. The stems have openings *g'* in their upper ends, and the beam on each side of its center is provided with a series of openings *f'*. The stems are attached to the beam by passing pins through the rods composing the beam and through the stem *g*. The distance at which the stems are arranged from the center of the tube may be regulated by utilizing any one of the series of openings in the beam. The upper ends of the pounders are provided with sockets, into which the lower ends of the stems are driven.

The pounders G are provided on the under faces with a series of compartments g^2, and suitably disposed in the central compartment and in the dividing-walls between the central compartment and adjacent ones are tubes g^3, extending upward and terminating in a chamber g^4, having an open end g^5. The open end of the chamber g^4 is covered by a cap or hood g^6, having a closed upper end arranged a short distance above the open end and extending down a short distance over the outer shell of the chamber. The lower end of the cap or hood is somewhat larger than the chamber, thus leaving a space between the two for the escape of air from the chamber. The exteriors of the pounders are rounded in order not to injure clothes with which they come in contact.

In the operation of the device clothes are placed upon the false bottom and a suitable quantity of water poured over the same. The pounders are then placed in position over the clothes and given an up-and-down movement through the beam F. As the pounders are forced downward the water contained in the clothes is forced through the same by means of air contained in the chambers in the lower portions of the pounders, thus forcing air and water through the clothes to be washed and resulting in carrying down with the water between the false bottom and the bottom of the tub the dirt contained in the clothes. In order to prevent raising of water in the upward movement of the pounders, the tubes *g* are provided. As the pounders rise air is drawn down through the hood g^6 and the chamber g^4 through the pipes g^3, thus providing sufficient air to prevent the formation of any partial vacuum which would result in raising water and the clothes from the false bottom.

The beam and the pounders carried thereby may be turned at will upon the shaft in order to bring the pounders in contact with the clothes to be operated upon in any part of the tub.

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

1. In a washing-machine the combination with a tub, of a false bottom having a central opening therein, a socket attached to the bottom of the tub, a staff having its end resting in the socket, a frame consisting of a ring surrounding the staff and arms extending downward and outward from the ring for retaining the staff in place, a beam attached pivotally to the upper end of the staff, and pounders attached to the beam on opposite sides of the staff, substantially as described.

2. In a washing-machine the combination with a tub of a false bottom having a central opening therein, a socket attached to the bottom of the tub, a staff having its end resting in the socket, a frame having arms extending downward and outward from the staff, a cover surrounding the lower portion of the staff and covering the opening in the false bottom, a beam attached pivotally to the upper end of the staff, and pounders attached to the beam on opposite sides of the staff, substantially as described.

3. The combination in a washing-machine of a false, perforated bottom, a staff extending downward through the perforated bottom, a tube adapted to receive the upward end of the staff and provided with a ring near its lower end and means for connecting the staff and the tube consisting of two collars suitably connected, one collar being adapted to receive the tube above the ring and the other the staff, and a set-screw passing through the collar surrounding the staff, a beam attached to the tube and pounders attached to the beam, substantially as described.

4. The combination in a washing-machine of a central staff, a beam pivotally attached thereto, pounders connected to the beam, the pounders being provided in their lower faces with indentations or chambers, pipes extending from the chambers to an open-ended chamber above the same, and a cap for the open-ended chamber having a closed upper end and extending down over the chamber, there being a space between the cap and the exterior of the chamber, substantially as described.

5. In a washing-machine a pounder provided in its lower face with indentations or chambers, pipes extending from the chambers to an open-ended chamber above, and a cap having a closed upper end arranged a short distance above the open end of the upper chamber and extending down outside the chamber, the size of the lower portion of the cap being greater than that of the chamber, substantially as described.

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

HILTON HUBBARD.

Witnesses:
W. F. MOYER,
WILLIAM H. HAWKINS.