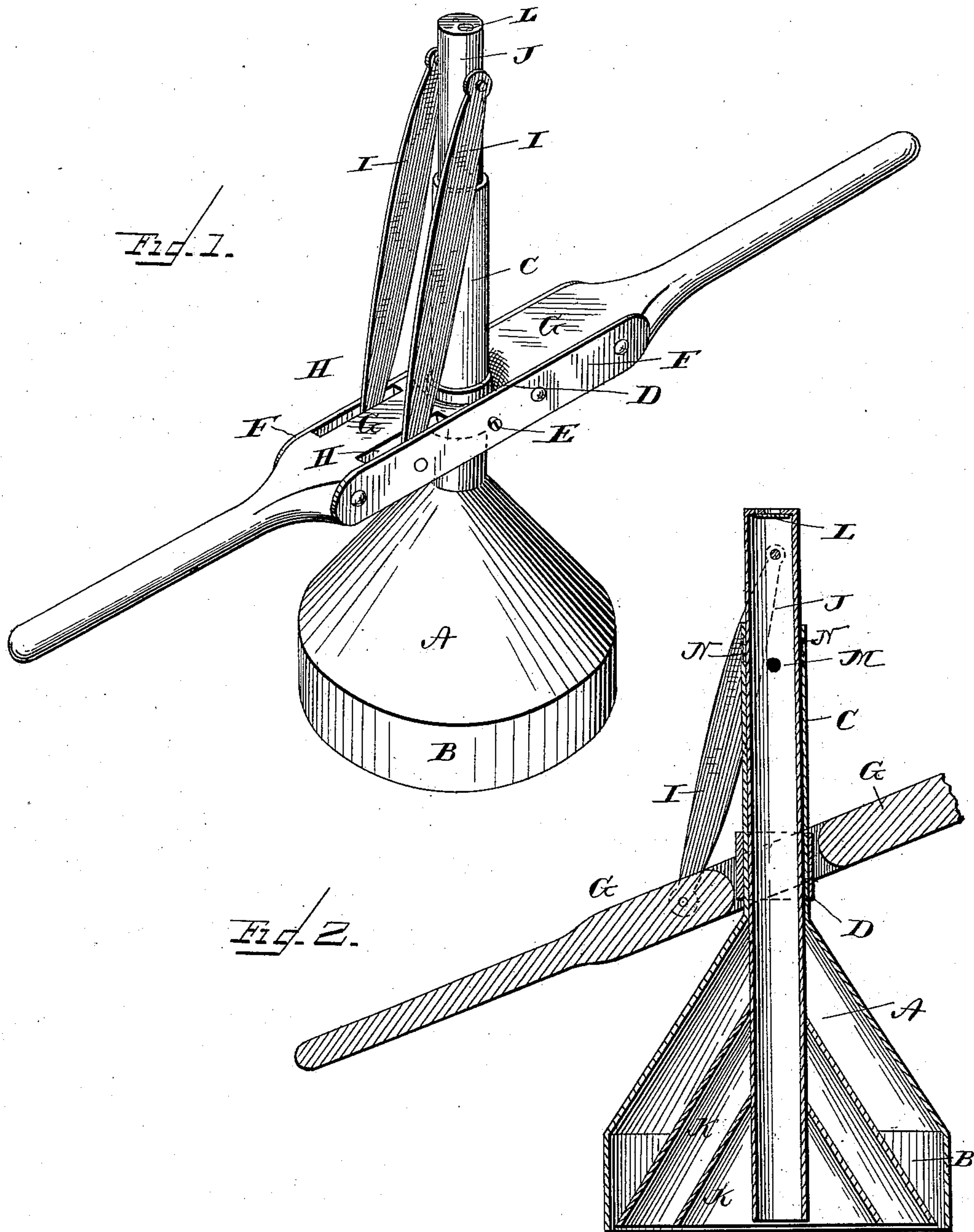


(No Model.)

J. M. SHOAF.
WASHING MACHINE.

No. 359,472.

Patented Mar. 15, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES M. SHOAF, OF WEST ELIZABETH, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO JOHN A. SNEE, OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 359,472, dated March 15, 1887.

Application filed December 27, 1886. Serial No. 222,841. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. SHOAF, a citizen of the United States, and a resident of West Elizabeth, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved washing-machine, and Fig. 2 is a vertical section of the same.

This invention relates to that class of washing-machines in which the clothes are placed in a receptacle and cleansed by forcing air and water through them at the same time that they are being operated upon by the lower edge or rim of the pounder; and it consists in the improved construction and combination of parts, as will be hereinafter more fully set forth.

Referring to the accompanying drawings, in which the same letters of reference indicate corresponding parts in both of the figures, A represents a conical shell, to the lower edge of which a downwardly-projecting rim, B, is secured. A hollow tube, C, is secured to the apex of the shell, having a collar, D, near its lower end, said collar being provided with oppositely-projecting studs or pins E. Two metallic plates, F F, are pivoted upon these pins, and two handles, G G, are rigidly secured between the outer ends of said plates, the inner ends of said handles being far enough from the collar D to permit of the free operation of the handles and plates upon the pins at the sides of the collar. One of these handles is provided with a recess, H, upon each side, the plates F closing the outer sides of each of said recesses. Two links, I I, are pivotally secured in said recesses by means of a screw or bolt passing through the plates F into or through the handle G. The upper ends of these links are pivotally secured upon the opposite sides of a hollow tube, J, which fits within

the hollow tube C, and is provided at its lower end with a series of cone-shaped flanges or pounders, K K, the lower end of the tube and the bottoms of said flanges being on a plane, or nearly so. The upper end of this tube is provided with an inwardly-opening valve, L, or it may have the upper end closed and have a hole, M, in its side above the top of the tube C when the tube J is in its raised position, but below the top when it is being forced downward. In this construction it will be necessary to have a packing, N, around the interior of the top of the tube C, the packing being shown in dotted lines in Fig. 2, although I prefer to make it with a valve in the top of the tube.

In operating my machine it is placed upon the clothes with sufficient soap and water to cleanse them, and the inner tube and flanges upon the lower end moved up and down within the shell A and rim B. As the tube is raised air will be admitted through the valve at the top, which fills the space between the flanges upon the lower end of the tube and the interior of the shell and rim. As soon as the tube starts upon its downward movement the valve at the top closes, and the air within the outer casing and between the flanges is forced out through the clothes. As the lower end of the tube is on a plane with the bottom of the flanges, it is closed as soon it reaches the water, thus preventing the passage of the air into the tube, where it would be compressed instead of being forced out underneath the bottom of the flanges through the clothes. The machine can be operated in either of two ways, as it can be kept in a vertical position and the inner tube moved up and down by moving the ends of the handles up and down, or the handles can be kept in a horizontal position and the machine rocked back and forth, which will cause the tube to move up and down within the outer tube. By this latter method the opposite edges of the rim B are alternately forced upon and lifted off the clothes at the same time that the reciprocation of the inner tube is forcing air and water through them, thus very materially assisting in cleansing the clothes. By reason of the great leverage se-

cured in the construction it is very easily operated, and especially when it is rocked back and forth; and as it is so very light it can be readily moved from one place to another upon the clothes, and by holding it at different angles upon them all parts of the clothes are subjected to the operation of the machine, thus assuring rapid and efficient work.

Having thus described my invention, I claim—

1. In a washing-machine, the combination of a conical shell having a downwardly-projecting rim secured to its lower edge and a tube secured at its apex, a lever pivotally secured to said tube, an inner tube having flanges upon its lower end, and means, substantially as described, for admitting air into the upper portion of said tube, and links for connecting the inner tube with said handles.

2. In a washing-machine, the combination of an outer shell having a tube secured to its upper end, a collar upon said tube having pins upon its opposite sides, two plates pivotally secured upon said pins, two handles between the ends of said plates, means, substantially as described, for admitting air into the upper portion of said inner tube, and links for connecting said inner tube with said handles.

3. In a washing-machine, the combination of an outer shell having a tube secured at its apex, a collar upon said tube having oppositely-projecting pins, two plates secured upon said pins, two handles secured between the ends of said plates, one of said handles being provided upon each side with a recess, an inner tube having means, substantially as described, for admitting air into the upper portion, and two links pivotally secured within said recesses in said handle at one end and pivotally secured upon opposite sides of said inner tube at the other.

4. In a washing-machine, the combination of an outer shell having a tube at its apex, an inner tube having an inwardly-opening valve at its upper end and conical flanges upon its lower end, the lower end of said tube and the bottoms of said flanges being upon the same plane, and means, substantially as described, for reciprocating said inner tube.

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

JAMES M. SHOAF.

Witnesses:

AUGUST PETERSON,
ARTHUR P. MILLER.