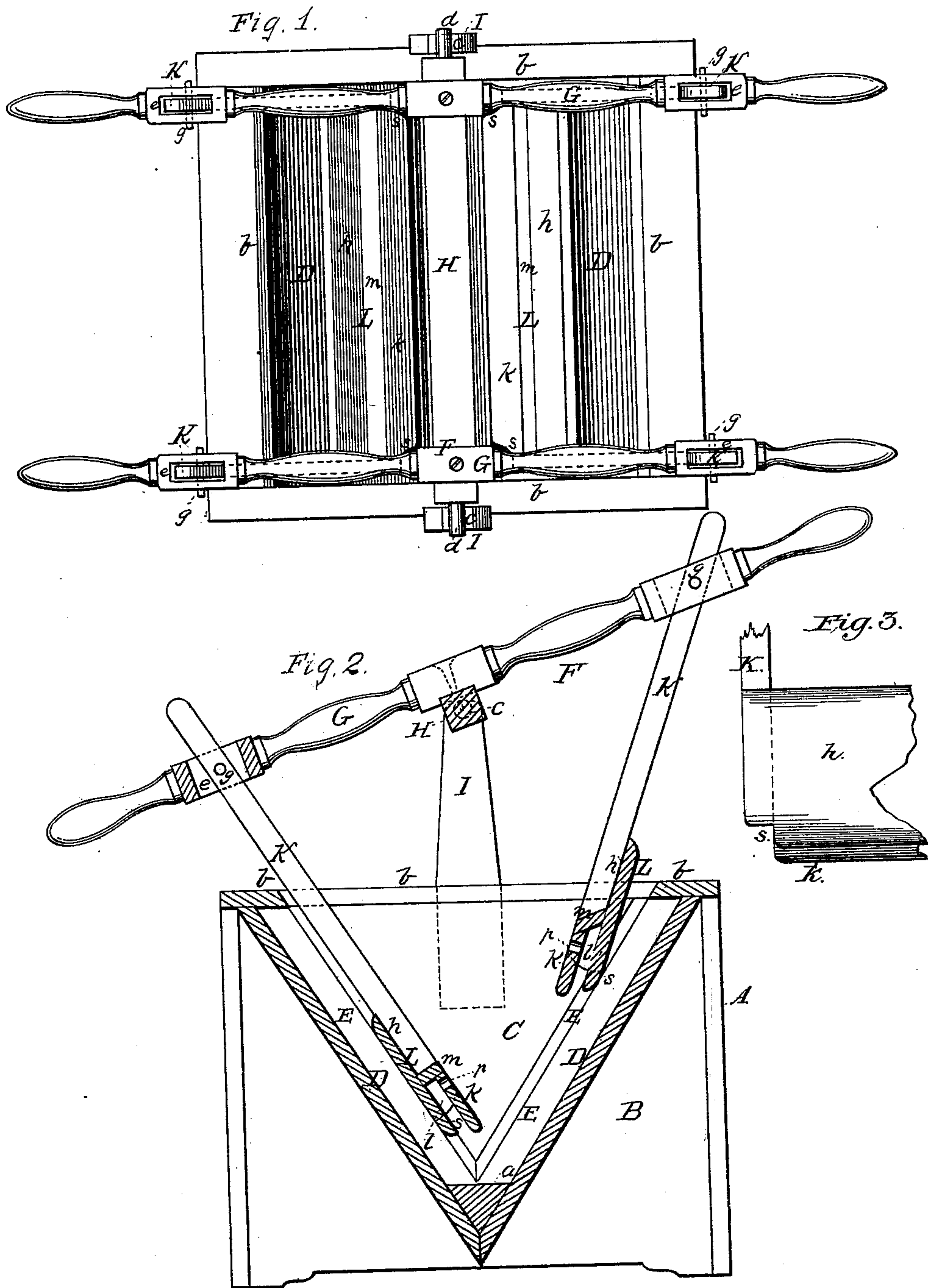


(Model.)

M. B. ATKINSON.
Washing Machine.

No. 234,107.

Patented Nov. 2, 1880.



WITNESSES:

Villette Anderson,
Philip. Cellasi.

INVENTOR:

Mahm B. Atkinson,
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his ATTORNEY.

UNITED STATES PATENT OFFICE.

MAHLON B. ATKINSON, OF GEORGETOWN, ASSIGNOR OF ONE-HALF TO
DANIEL SMITH, OF WASHINGTON, DISTRICT OF COLUMBIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 234,107, dated November 2, 1880.

Application filed August 21, 1880. (Model.)

To all whom it may concern:

Be it known that I, MAHLON B. ATKINSON, of Georgetown, in the county of Washington and District of Columbia, have invented a new and valuable Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of this invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a detail view.

This invention has relation to washing-machines; and it consists in the construction and novel arrangement of the V-shaped tub, its inclined rabbeted corner tracks or guides, and the removable vibratory double plunger, consisting of handle-levers arranged parallel with each other, connected by a central fulcrum-bar, and carrying the pivoted ends of two transverse pendent plungers, each having a longitudinal recess or pocket in its bottom and perforations through the inner wall thereof, said plungers being notched at the sides to engage with the inner edges of the rabbeted guideways of the tub, whereby a large space is left between the plungers and the ends of the tub, all as hereinafter shown and described.

In the accompanying drawings, the letter B designates the tub, having supports A, side walls, C, and inclined end walls, D, shelving toward each other in V form, so as to meet angularly at their lower ends, the angular space being filled with a stout lining-strip, a, which is firmly secured in place, and forms an abutment for the clothes when pressed downward. In the angles or corners between these inclined ends D and the side walls, C, are secured the rabbeted corner tracks or guideways E, which are angularly joined at their lower ends, as shown in the drawings. Around the upper edges of the tub-walls splash-boards b are secured, these extending inward a short distance, so as to form a water-stop around the opening and prevent splashing when the plungers are in operation. From the central portions of the side walls extend upward the fulcrum-supports

I, having notched bearings c in their upper ends. In this manner is formed a plain angular tub having corner bearings and journal-supports, which is entirely without metallic gearing or plates, and which can be readily cleansed and kept in order.

F indicates the double plunger, consisting of parallel handle-levers G, centrally connected by the fulcrum-shaft H, having the journal ends d, which are seated in the bearings c of the supports I. Each handle-lever is slotted at e near each end, to receive the ends of the arms K of the transverse plungers L, said arms being pivoted in the handle-slots by means of pins g. Each plunger L consists of a back or main board, h, to which the arms K are secured by their rear edges, and a short front or pocket board, k, which is fastened to the front edges of the arms in such a manner that a longitudinal space or recess, l, will be left between the boards h and k, which is covered by means of a strip, m, and forms a pocket extending the length of the plunger, said pocket being open along its lower portion and having perforations p through the inner boards, k, through which the water can pass when the plungers are forced down in the clothes in the tub. At the lower corner of each plunger the boards are notched, as indicated at s, to form bearings to engage the rabbeted corner slides of the tub, along which the plungers move up and down obliquely toward the angular center when the lever-handles are operated.

In order to prevent injury to the fabrics being washed the edges of the boards h and k are rounded.

As each plunger descends the opposite plunger rises, the former acting by pressure and the latter by suction on the goods, which are in the angular portion of the tub, being kept there by the shelving of its end walls. As each plunger descends the water rises in recess l and passes through the openings p. When the plunger rises suction forces the clothes against the outside of these openings or perforations p and closes the same. This causes a partial vacuum in recess l, and the clothes are pressed against the plunger and dragged up with it. By this construction a small quan-

tity of clothes can be washed as well as a large quantity; for if recess *l* were open at the top, in order for the plunger to pull up the clothes, they must be on top, and even then only those
5 on top would be thus moved, those below remaining. This alternate action also creates currents through the perforations of the pockets, which act on the clothes at each stroke.

The direct pressure of the lower edges of the
10 plungers in alternation affords a squeezing action to the goods, so that they are subjected to the necessary motion for cleansing purposes. The backs of the plungers are rubbing-surfaces, which act on the goods lying against
15 the inclined ends of the tub. During the movements of the plungers they are kept from contact with the inclined walls of the tub by the corner ways, *E*, and as they are never near enough to each other to come in contact the
20 goods cannot be injured. By leaving this space between the back of the plungers and

the ends of the tub, as the plungers descend the water freely passes up and offers little resistance, and the clothes are rubbed between the back of the plungers and the ends *D*. If
25 this space were small, the clothes would be caught between, strained, and torn.

What I claim, and desire to secure by Letters Patent, is—

In a washing-machine, the plungers *K L*,
30 levers *G*, rock-shaft *H*, and supports *I*, in combination with the *V*-shaped trough *C D*, provided with rabbeted tracks *E*, whereby a space is left between the plungers and the inclined
35 ends *D*, as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

M. B. ATKINSON.

Witnesses:

CHARLES W. HANDY,
F. H. G. BUDD.