

(No Model.)

M. NATIONS.
WASHING MACHINE.

No. 370,079.

Patented Sept. 20, 1887.

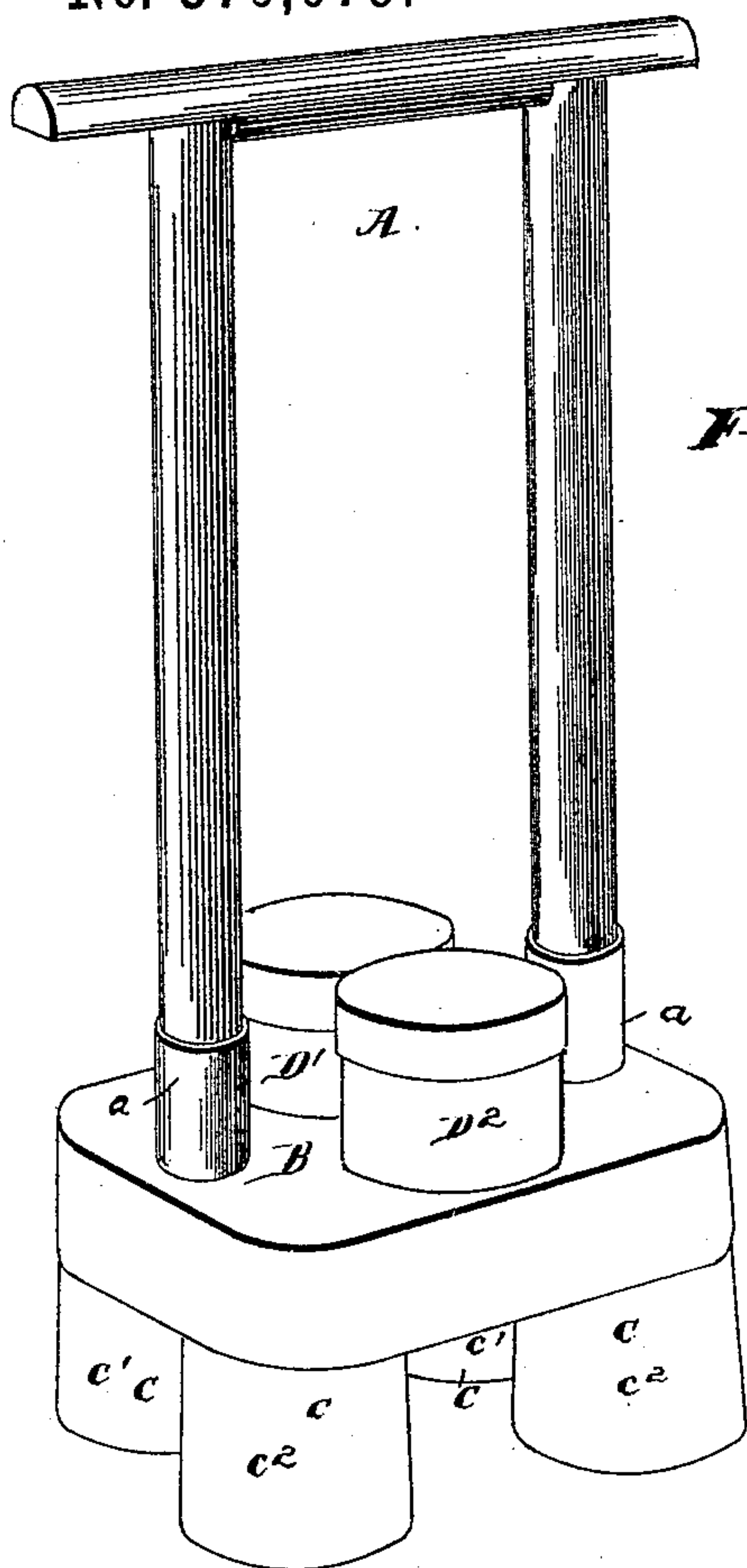


Fig. 1.

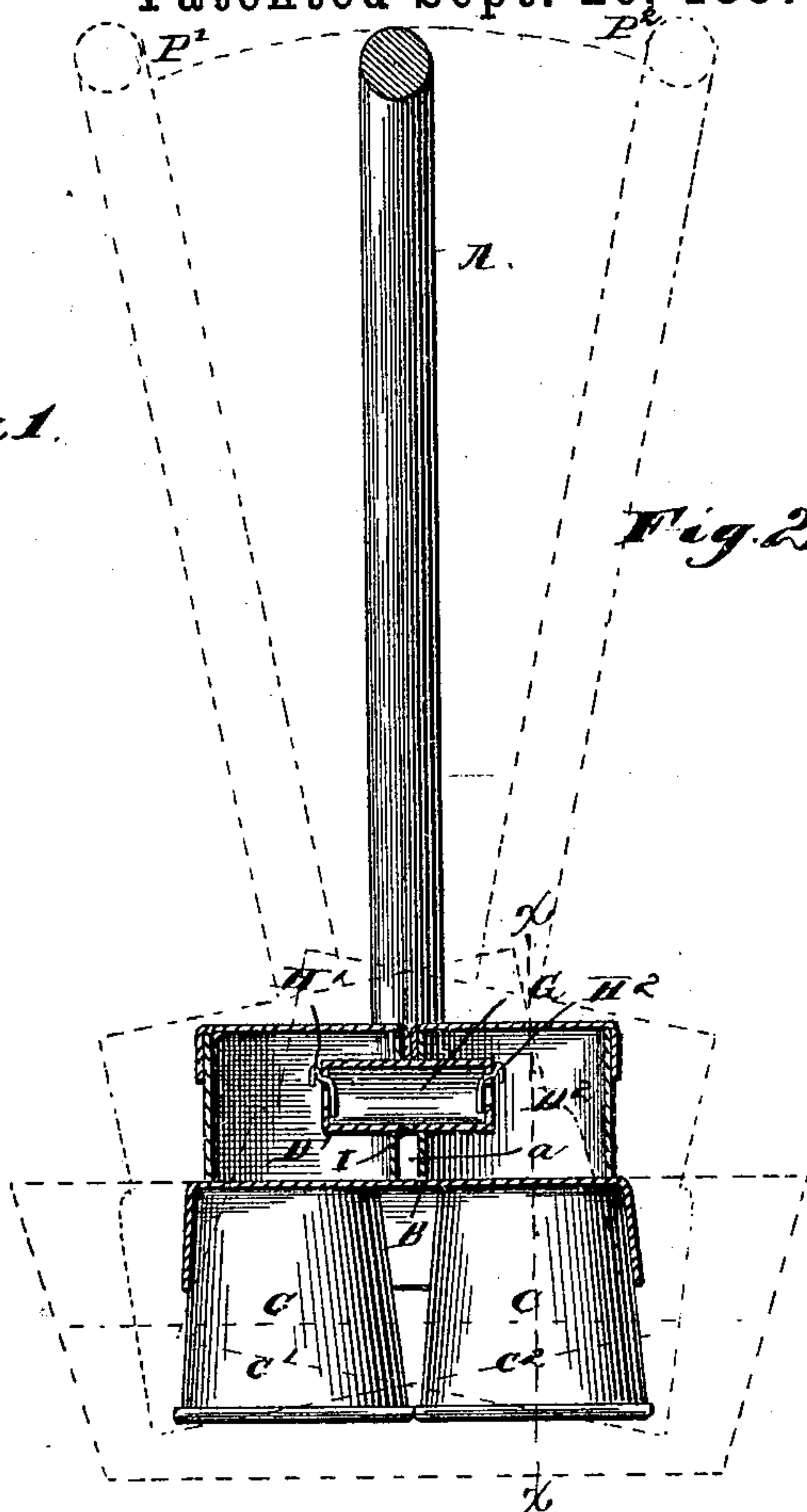


Fig. 2.

Fig. 3.

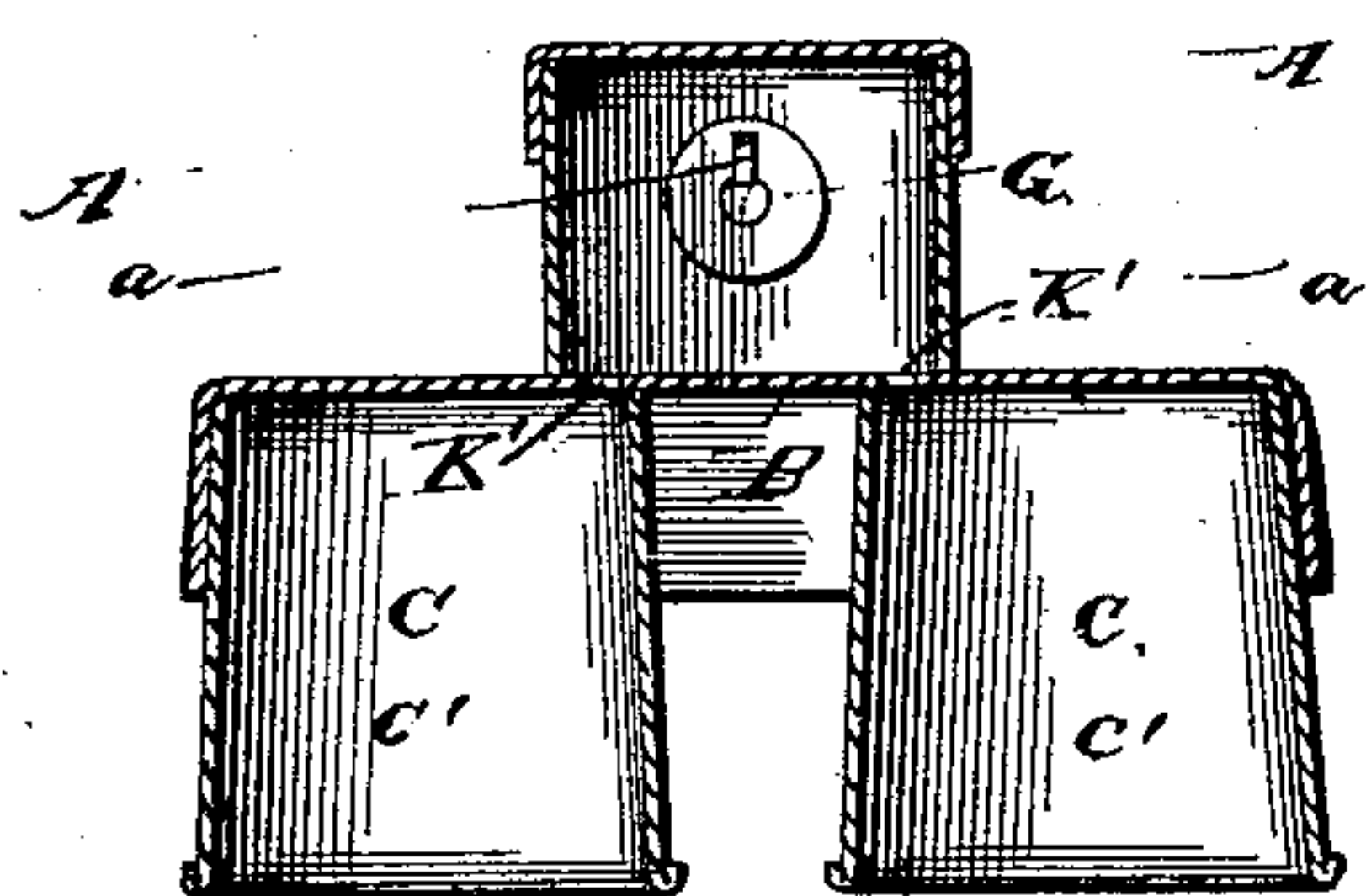
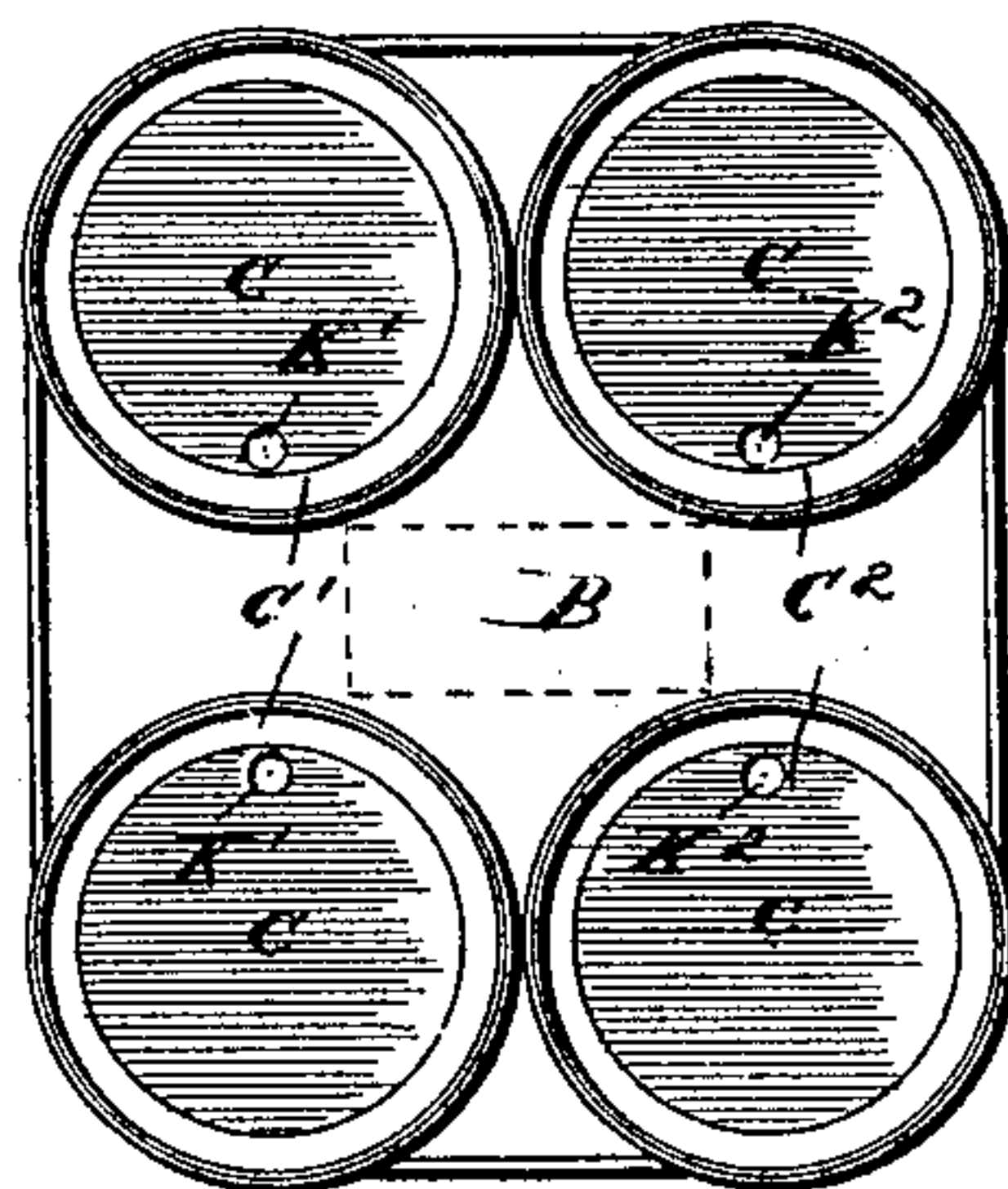


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

MAURICE NATIONS, OF CAMP POINT, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 370,079, dated September 20, 1887.

Application filed March 26, 1887. Serial No. 232,545. (No model.)

To all whom it may concern:

Be it known that I, MAURICE NATIONS, a citizen of the United States, residing at Camp Point, in the county of Adams and State of Illinois, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to improvements in that class of washing-machines in which the water, saturated with soap or other cleansing material, is drawn forcibly through the fabrics to be cleansed; and the novelty thereof consists in the peculiar construction and arrangement of parts to produce, when the washer is properly operated, a most powerful suction.

In order that the construction and operation of my improved washer may be clearly understood and the advantages thereof fully appreciated, I illustrate the same in the accompanying drawings, in which—

Figure 1 is a perspective view thereof. Fig. 2 is a longitudinal section through the upper cups, showing in dotted lines the extremes of motion of the handle. Fig. 3 is a section on the line *x x* of Fig. 2. Fig. 4 is a bottom plan view of the device.

Referring by letter to the drawings, A designates the handle of the washer, stepped at the lower end in sockets *a a* on the upper side of the base-plate B, and C C are cups secured on the under side of the said plate, with the lower ends thereof open. These cups C are preferably four in number, disposed in the form of a square, with the cups C' on one side and the cups C² on the other side, so that by means of the handle A the washer may be tipped over in one direction on the edges of the cups C' and then in the opposite direction on the outer edges of the cups C².

D' D² represent cups placed on the upper side of the base-plate and provided with airtight covers, the cup D' being situated on the side of the plate to which are secured the cups C' and the cup D² being secured to the opposite side.

G is a short tube or pipe passing at opposite ends through openings in the sides of the cups D' D², and provided at the ends with the valves H' H², respectively, adapted to open inwardly when pressure is applied from without.

I is an opening in the lower side of the pipe

G, between the cups D' D², for a purpose to be explained.

K' are small openings or short pipes adapted to establish a direct communication between the cups C' and the cup D' through the plate B, and K² are similar passages between the cups C² and the cup D², as will be readily understood.

The cups D' D² are preferably made sufficiently wide to slightly overlap the ends of the lower cups, C' C' and C² C², respectively, and the passages K' K² are made by simply forming openings in the base-plate, as seen in the drawings.

The operation of my invention is as follows: An ordinary tub or other receptacle is filled with water saturated with soap or similar cleanser, and the washer is immersed therein on top of the clothes to be cleaned, and operated by moving the upper end of the handle A from side to side, as shown by the dotted lines in Fig. 2, care being taken that the lower ends of the cups C do not at any time rise above the surface of the water. The cups C being full, or nearly so, of water, and the handles vertical, the action is as follows: The upper end of the handle is swung toward the end of the dotted arc marked P² in Fig. 2, and the valve H' being held closed by the pressure from without, there is a partial vacuum created in the cups D' C' C', causing the soap-saturated water to be drawn forcibly through the fabrics in the tub to fill the same. When the handle has reached the extreme of motion and begins to return, the valve H' is opened by the pressure of the water in the said cups to allow said water to escape through the opening I in the pipe G, and when the handle, having passed the vertical, approaches the end of the arc marked P' the operation already described with relation to the cups C' D' takes place in the cups C² D². Thus, as the handle is swung from one end of the arc to the other, a continued suction is maintained, properly and rapidly cleaning the fabrics in the tub.

The manner of operating the washer is very simple, and it is made very light and easy to handle, and the construction being extremely simple it may be cheaply manufactured, thus combining all of the requisites of a good washing-machine.

I am aware that previous to this time wash-

ing-machines have been made in which the feature of forcibly drawing the water through the clothes is used, and I therefore do not claim this, broadly.

5 I am also aware that heretofore cups having open lower ends have been used in connection with washing-machines; but in none is the arrangement and operation the same as in my washer. In one case—United States Patent
10 No. 130,168—the inventor uses the cups or cells; but he forms them all communicating with a central space with openings or vents on the outside, and in operating the machine he raises the entire body out of the water at each
15 stroke; also, in this case the object is to force air through the fabrics to be cleaned, while in my invention water is designed to be forcibly drawn therethrough. Further, the operation of the machine described in the case cited
20 is much more difficult than in the machine herein shown and described, in that the former must be lifted bodily out of the water in the tub at each stroke, while the latter is simply rolled or rocked from side to side with no
25 weight whatever to lift. Also, in United States Patent No. 340,418 the patentee adapts the device to draw water through the clothes; but to accomplish this he uses cylinders having piston-heads working therein and a frame on
30 which to support the lever to operate the piston-rods to move the said heads, thus making use of a series of mechanical means which are very liable to be put out of order and rendered inoperative in consequence of the rough usage
35 which such articles usually receive from those

operating them, while my device is extremely simple, the only mechanical movement therein being the valves, and as these are carefully concealed they are protected from injury. Further, my washer is equally as effective as
40 the device described in the case just cited, and the operation thereof is accomplished with much less exertion than is necessary with the said device.

Having thus described my invention, I
45 claim—

1. The combination, in a washing-machine, of the lower cups, C' and C², the upper cups, D' and D², communicating, respectively, with the said lower cups, and the tube or pipe G be-
50 tween the said upper cups, having the valves H' H² at the opposite ends thereof, substantially as and for the purpose set forth.

2. The combination, in a washing-machine, of the handle A, base-plate B, lower cups, C' 55 C², having open lower ends, upper air-tight cups, D' D², having openings K' K² between the upper and lower cups, tube G between the cups D' D², and valves H' H² at opposite ends thereof, opening inwardly, the pipe G provid-
60 ed with perforations I between the cups D' D², substantially as and for the purpose set forth.

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

MAURICE NATIONS.

Witnesses:

McEDGER PULLUM,
GUY WILLIAMS.