

(No Model.)

G. E. WOOD.
WASHING MACHINE.

No. 375,858.

Patented Jan. 3, 1888.

Fig. 1.

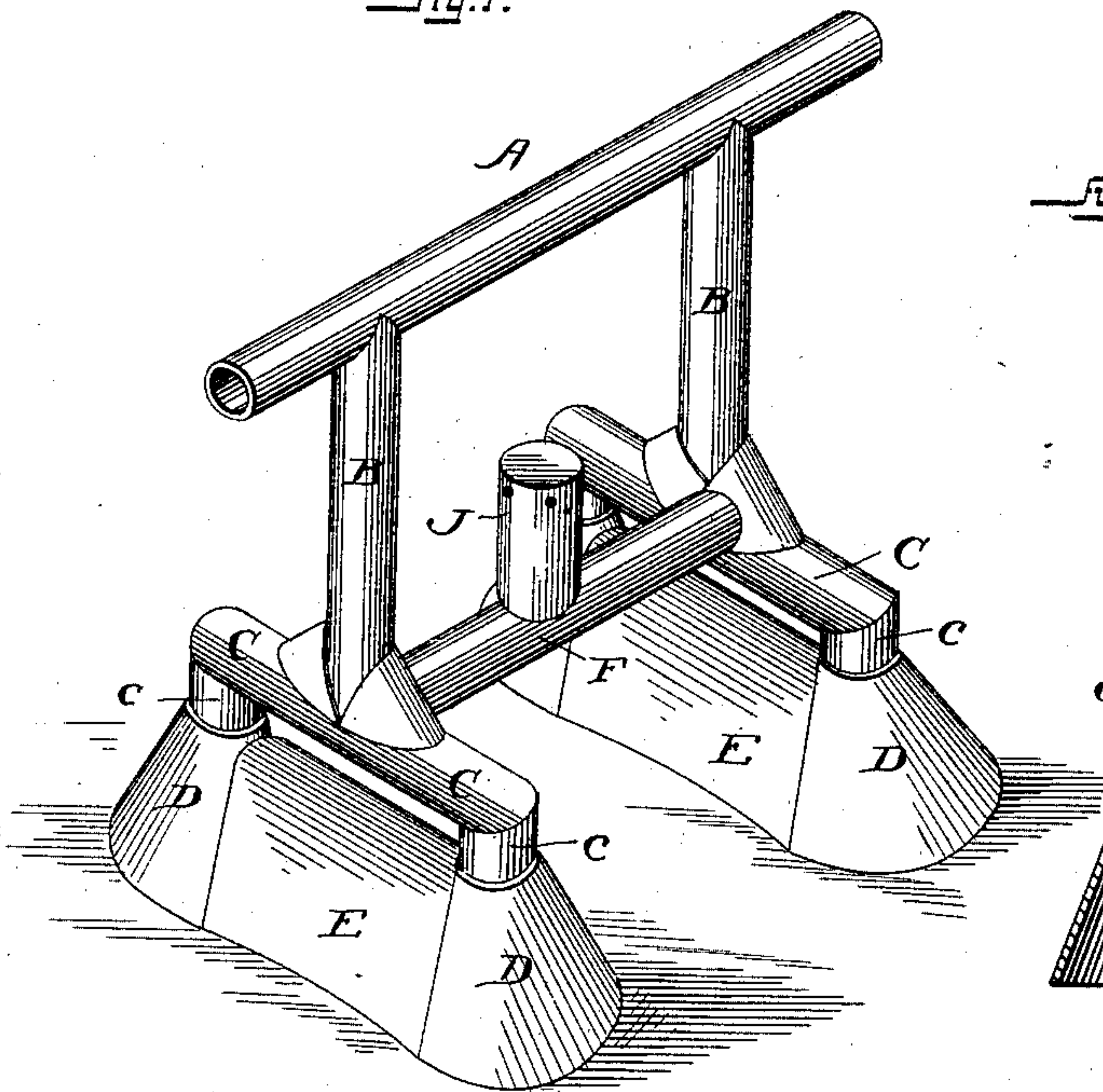


Fig. 3.

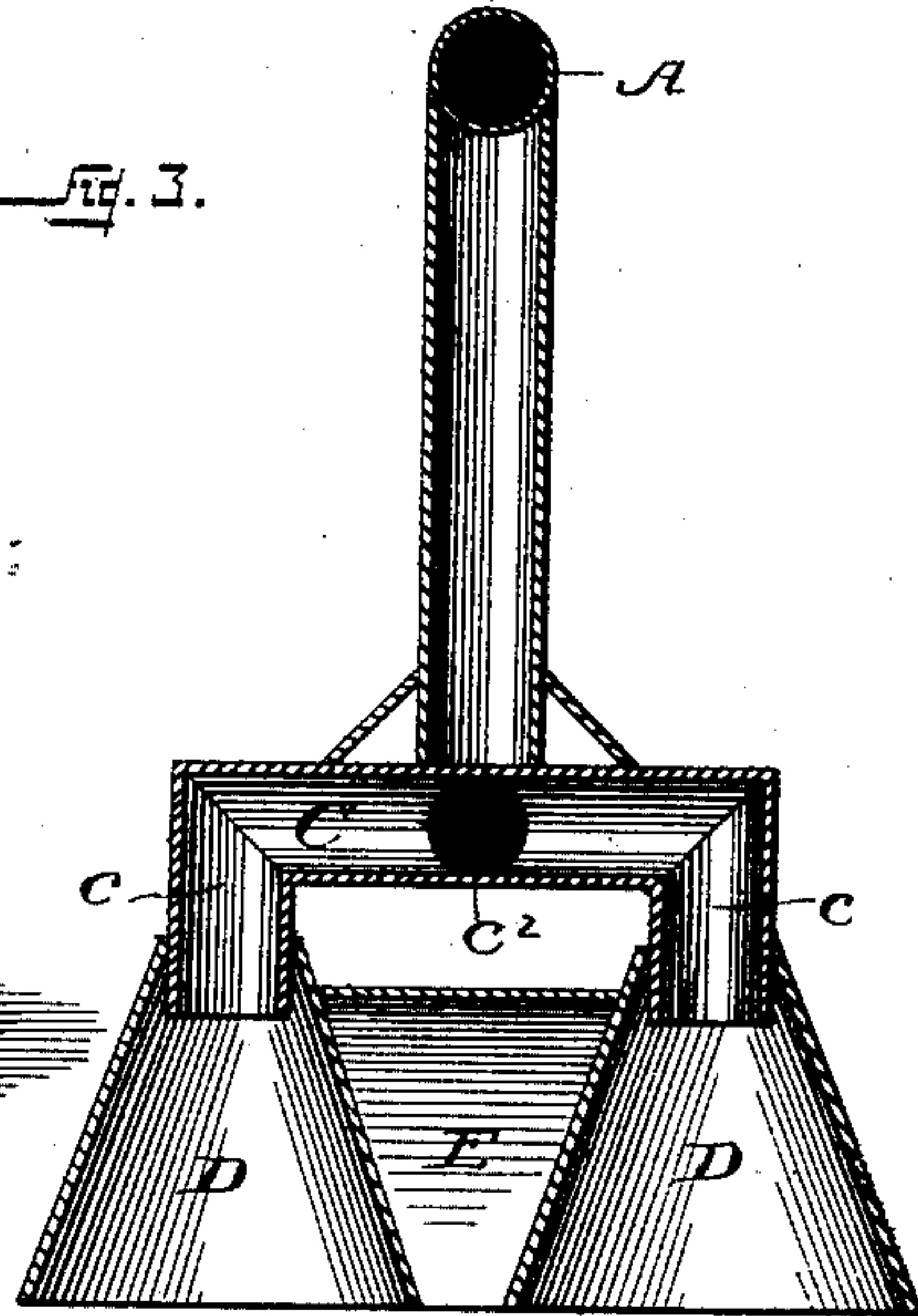


Fig. 2.

Fig. 4.

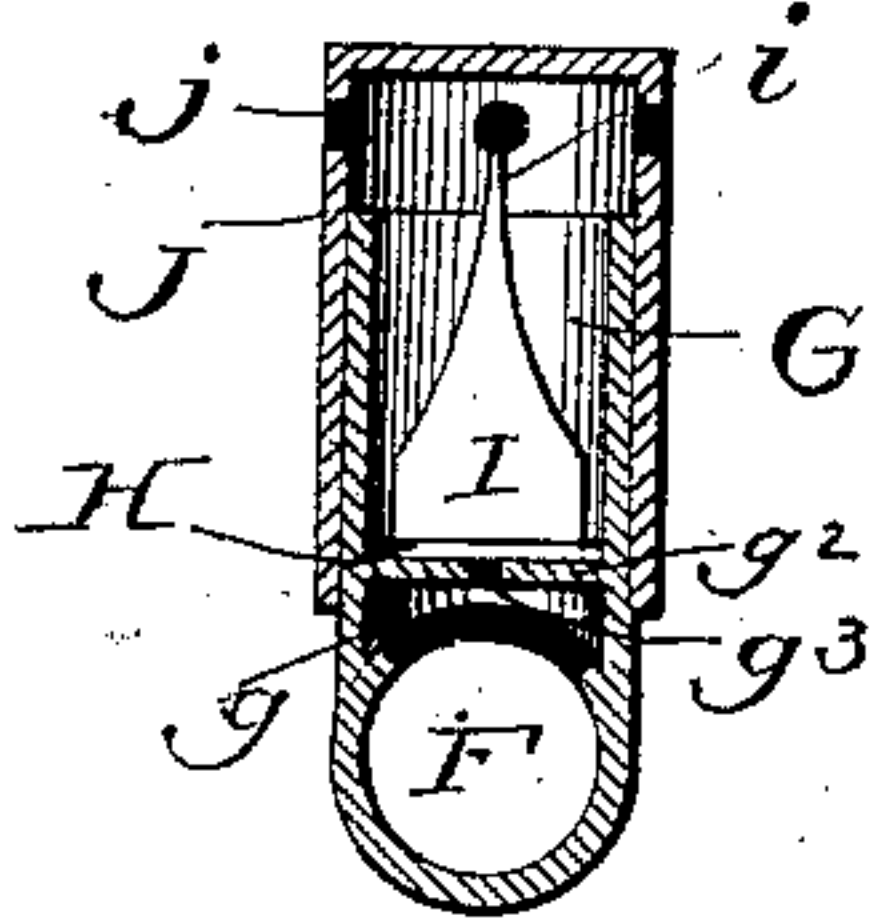


Fig. 5.

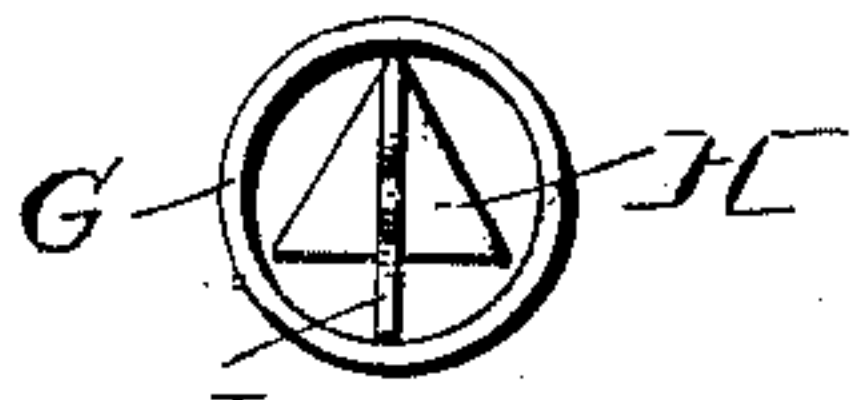
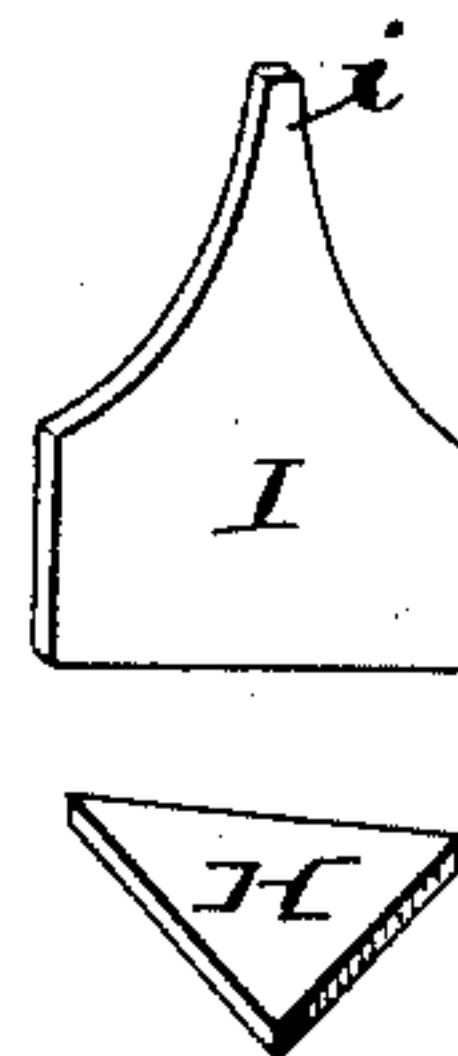


Fig. 6.



Witnesses:

M. E. Little,

Wm. J. Little,

Inventor:

Geo. E. Wood,

by

J. R. Little Atty

UNITED STATES PATENT OFFICE.

GEORGE E. WOOD, OF DEL NORTE, COLORADO, ASSIGNOR OF ONE-HALF TO
FRANK I. PRUDEN, OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 375,858, dated January 3, 1888.

Application filed March 10, 1887. Serial No. 230,434. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. WOOD, a citizen of the United States, residing at Del Norte, in the county of Rio Grande and State of Colorado, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to washing-machines; and its object is to provide a simple and improved hand washing-machine possessing advantages in point of inexpensiveness, durability, and efficiency, and by the use of which the labor and wear upon the clothing and the time required for cleansing the same will be reduced to a minimum.

In the drawings, Figure 1 is a perspective view of a washing-machine embodying my invention. Fig. 2 is a longitudinal vertical sectional view thereof. Fig. 3 is a transverse vertical sectional view. Fig. 4 is a detail sectional view taken through the valve-box. Fig. 5 is a detail top or plan view of the valve mechanism, the cap being removed. Fig. 6 is a detail perspective view illustrating the valve and slide.

Corresponding parts in the figures are denoted by the same letters of reference.

Referring to the drawings, A designates a bar forming the handle, at each end of which are provided downwardly-extending rods B B, secured to the lower ends of which are transverse tubes C C. A tube C is thus provided at each end of the washing-machine, and from each end of the said tubes C project downwardly-extending auxiliary tubes c, carrying at their lower ends conical shells D. Suitable bracing-strips, E, approximately V shape in cross-section, are provided to connect and brace the pair of conical shells at each end of the washing-machine.

F designates a longitudinal tube, which extends from one transverse tube C to the other and braces the same. The ends of this longitudinal tube open into the tubes C, and for this purpose the latter are provided with openings or orifices c² to receive the corresponding ends of the tube F.

Centrally upon the connecting-tube F is provided a vertically-disposed valve-box, G, preferably of cylindrical form, and having its lower

end opening into the tube F through an opening, g, in said tube, said opening being smaller in diameter than the interior diameter of said valve-box. By this construction the water and suds, which pass upward into the tube F when the pounder is rocked, are prevented from entering the valve-box G and choking the air-valve therein. This valve-box is provided with a bottom, g², located somewhat above the opening g in the tube F and forming the valve-seat, and said bottom is provided with a central orifice or opening, g³, for the passage of the air. The valve is formed of a plate, H, preferably triangular in shape, which rests normally upon the bottom g². This plate is acted upon by a vertically-disposed sliding plate, I, set in the cylindrical valve-box, and provided with an extended top end, i, which end is tapered nearly to a point.

J designates a cylindrical cap-piece fitting over the corresponding valve-box and serving to retain the sliding plate and valve from displacement. At its top the cap is provided with a circumferential series of openings, j, for the passage of air.

In operation the wash-tub is filled about one-half or two-thirds full of clothes, (or a smaller number of articles may be washed, if desired,) and the suds are then poured over the clothes. To cleanse the latter, the machine herein described is placed upon the clothes, and a rocking motion is produced by moving the handle A and causing the conical shells to rock up and down alternately, thus producing an air-pressure which forces the suds or water through the fabric and cleanses the same with but a small expenditure of labor and a minimum wear upon the clothes. During the operation of the device the air passes freely from the conical shells through the tubes c C and into the connecting-tube F, and as the device is rocked the shells are raised alternately, and the air being shut off by the valve causes the water to be forced through the clothing by the air-pressure, a vacuum being formed at the base of the conical shells. By the operation of the valve mechanism to shut the air off at the proper time all the air-pressure is utilized.

In washing-machines of this class as hereto-

fore constructed escape openings have been provided in the transverse tubes C, or in short branch pipes projecting therefrom, there being no connection between the transverse pipes 5 at each end of the machine. By this construction a large percentage of the air-pressure is lost by the escape of the air at the openings in the transverse tube. Pounder washing machines have also been heretofore constructed with a tube connecting a shell at each 10 end of the machine and formed with branches disposed near each end and having valved plugs.

To obviate the objections above noted and 15 to effect and utilize the complete air-suction are the purposes of my invention, embodying a longitudinal connecting-tube opening into the transverse tubes at the end of the machine and provided with a centrally-located 20 valve, which is alternately opened and closed as the machine is rocked during the operation of washing.

I claim as my invention—

The combination, in a washing-machine, with the transverse end tubes, C, having their 25 ends opening into and carrying the conical shells D, of a longitudinal tube, F, connecting the transverse end tubes and having its ends opening into the same, said longitudinal tube being provided on its upper side with a hole, 30 g , near its center, a cylindrical valve-box, G, larger in interior diameter than said hole g , and disposed over said hole g , concentrically therewith, a bottom, g^2 , located in said valve-box somewhat above the tube F, whereby a 35 chamber is formed between said tube and bottom for the purpose set forth, said bottom being provided with a hole forming a valve-seat, and a downwardly-closing slide valve in said 40 valve-box above the bottom thereof.

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

GEORGE E. WOOD.

Witnesses:

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R. B. PRUDEN.