

(No Model.)

W. S. LANEY.
WASHING MACHINE.

No. 548,712.

Patented Oct. 29, 1895.

Fig. 1.

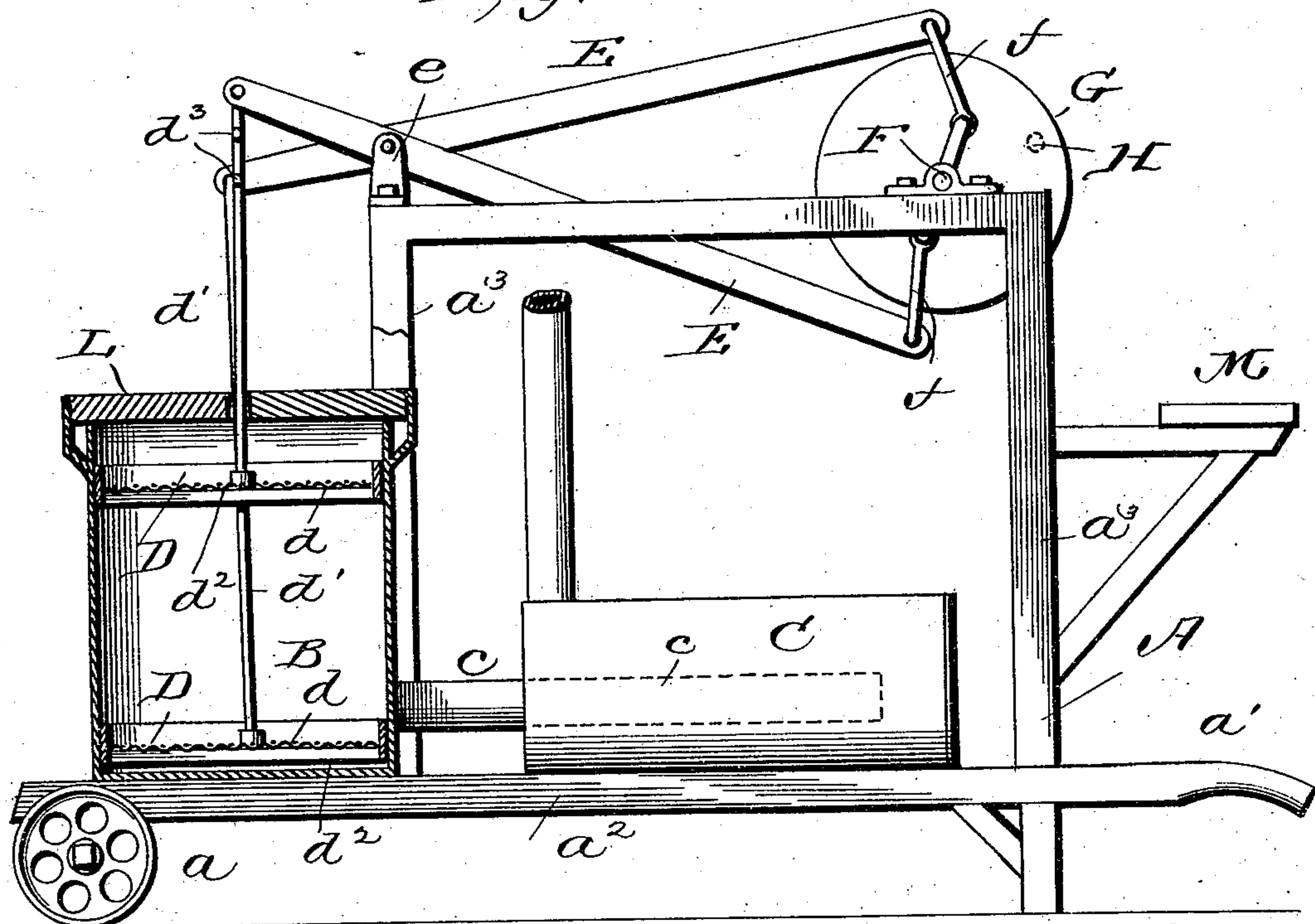


Fig. 2.

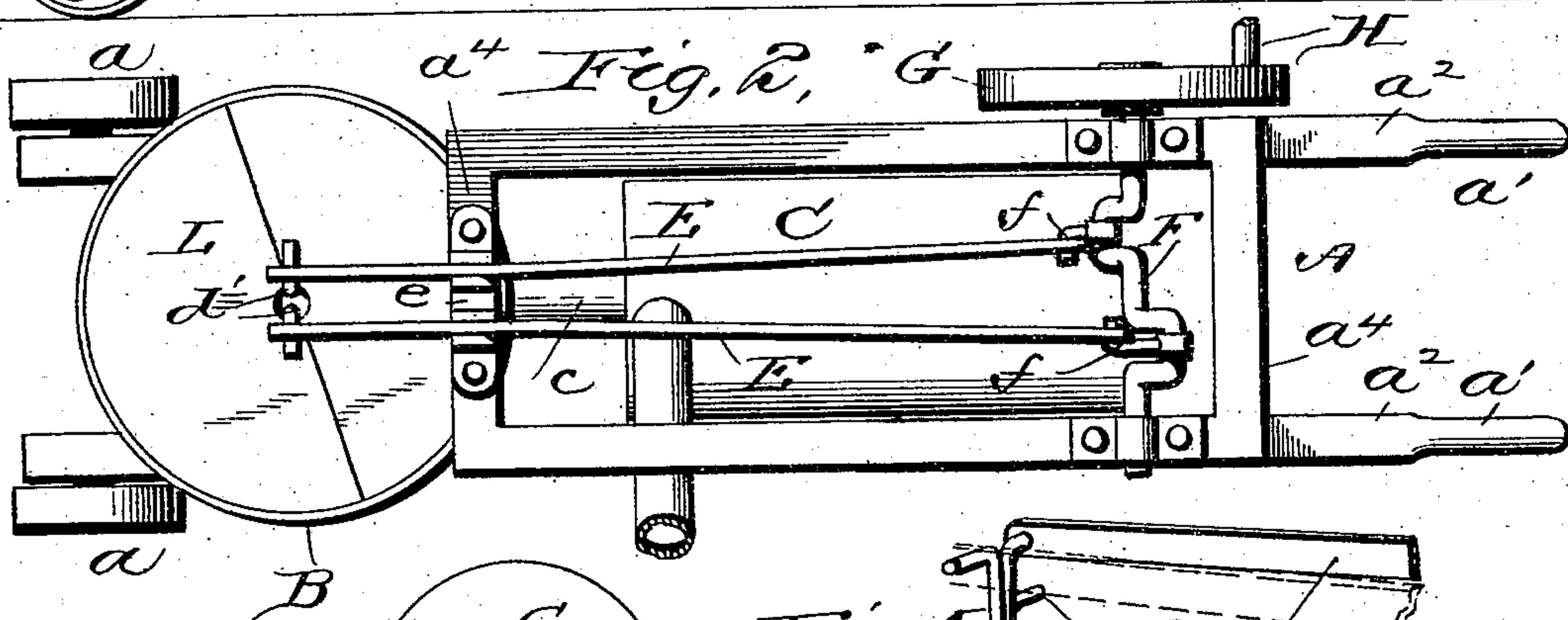


Fig. 3.

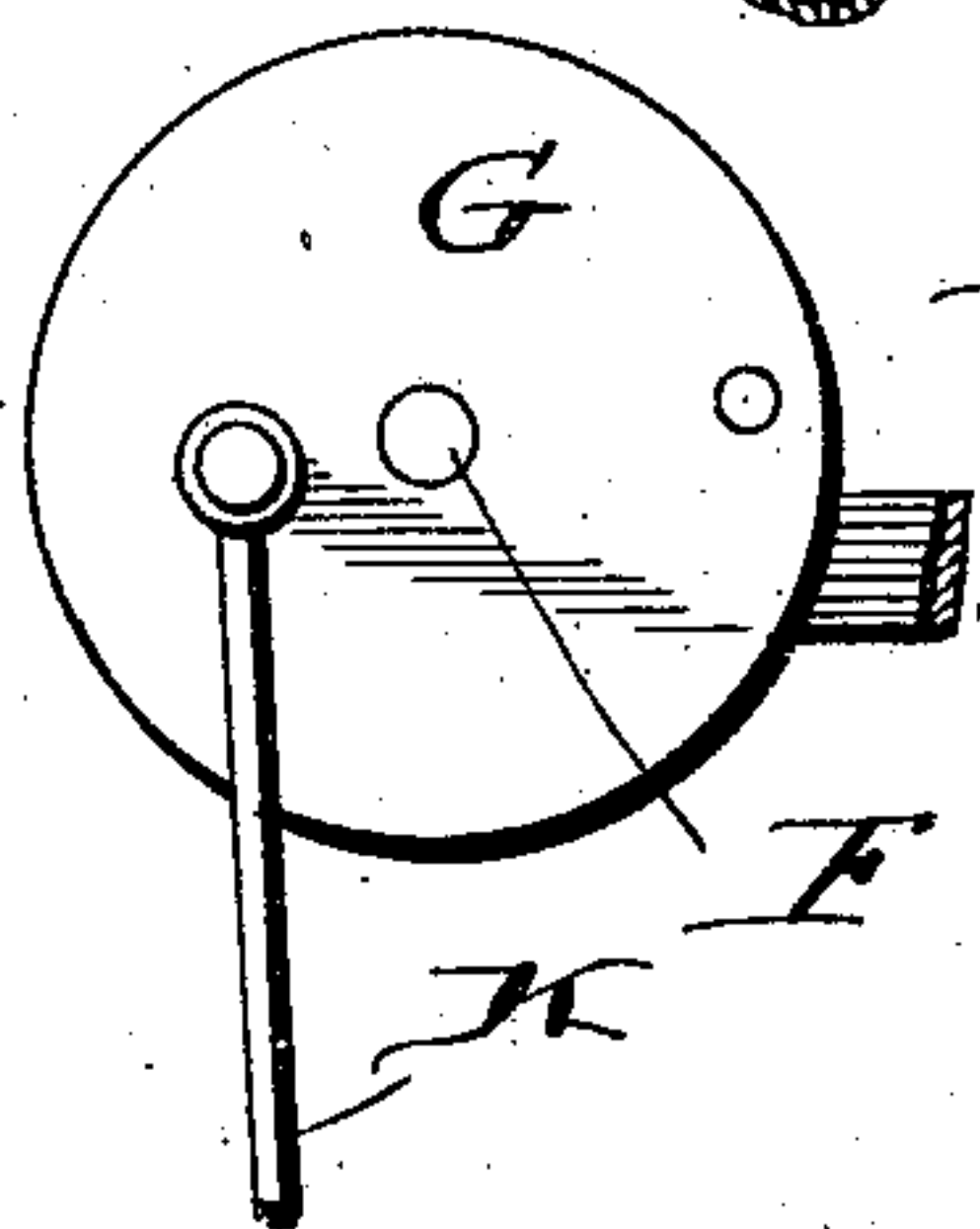
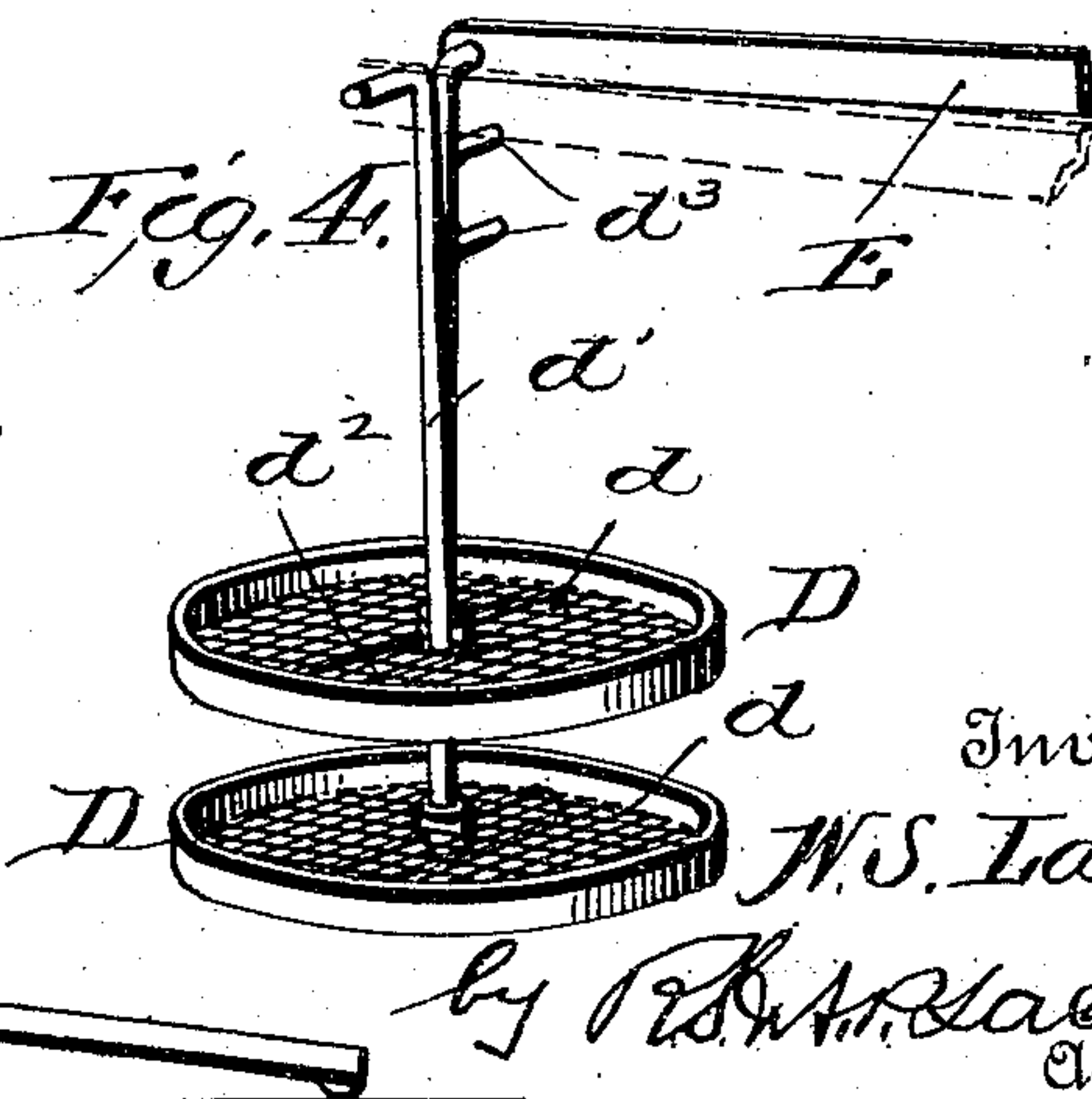


Fig. 4.



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UNITED STATES PATENT OFFICE.

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WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 548,712, dated October 29, 1895.

Application filed October 26, 1894. Serial No. 527,048. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. LANEY, a citizen of the United States, residing at Lithopolis, in the county of Fairfield, State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and I do hereby 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.

This invention is an improved washing-machine, and belongs to that class thereof in which the clothes are subjected to a pounding and squeezing operation.

The object of this invention is to provide a machine of this class which can be operated by either hand or foot power and one in which the clothes will be given a thorough agitation and squeezing, thus cleansing the same in a very short time.

Another object of the invention is to provide convenient means for supplying the clothes-box with hot water and steam.

With these objects in view my invention consists, broadly, in providing two plungers within a cylinder or suds-box and reciprocating said plungers in opposite directions, the clothes being held between them, so that said clothes are intermittently agitated and squeezed or pounded, whereby the water is forced rapidly through the same.

My invention consists also in connecting a boiler or water-heater with the cylinder or suds-box; and my invention consists also in the peculiar mechanism for operating the plungers or pounders, whereby foot or hand power may be employed.

My invention consists also in certain other details and combinations hereinafter fully described, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side view of my improved machine, showing the hand-power and showing the cylinder in section. Fig. 2 is a top plan view. Fig. 3 is a detail view showing the foot-power. Fig. 4 is a detail view of the plungers and their connection with the operating-lever.

In constructing a machine in accordance with my invention I employ a supporting-

frame A, upon which the suds-box or cylinder and all the operating mechanism are mounted. The boiler or water-heater is also mounted upon this frame. Caster-rollers *a a* are employed at one end of the frame and handles *a'* at the other, by means of which the complete machine can be readily moved from place to place, as desired. This frame A is constructed of the lower horizontal beams *a² a²*, the upright standards *a³ a³*, attached to the beams, the upper horizontal beams *a⁴*, connecting the standards, and the cross-pieces *a⁵*, connecting the standards and beams, as shown, thus making an open vertical frame with a forward lower extension.

The suds-box or cylinder B is secured upon the forwardly-extending portions of the lower beams, and upon the said beams, within the vertical framework, is arranged a water boiler or heater C, which may be of any suitable construction and has its steam or hot-water pipe *c* extending into the suds-box or cylinder B. Within the suds box or cylinder I operate two plungers or pounders D D, and move the same up and down in opposite directions, so that at one time they approach each other and at another recede from each other. The clothes are held between the said pounders, so that they are alternately squeezed and expanded, thereby forcing the water through the said clothes. These plungers or pounders are constructed alike and snugly fit the suds-box or cylinder and work easily therein.

The plunger or pounder consists of a circular rim D, a foraminous body *d*, (either wiregauze or perforated sheet metal,) and the rod *d'*, attached to said body and extending upward outside the cylinder or box. A central brace-piece *d²* is preferably employed for the sake of strength, and the rod *d'* is attached to this. The rod of the lower plunger passes through the body of the upper one, as most clearly shown in Figs. 3 and 4. Operating-levers E E are connected with the upper ends of the rods *d'*, said levers being pivoted in brackets *e*, secured to the top of the frame A, and at their rear ends these levers are connected with a double-crank shaft F by means of links *f f*, said shaft being journaled upon the upper horizontal beams of the frame A.

A balance-wheel G is mounted upon one end

of the shaft F and carries a handle H. This is used when the machine is operated by hand; but when the foot-power is used I employ a treadle I and pitman K, which I connect to
5 the balance-wheel, as shown in Fig. 3.

The crank-shaft F is so formed that when one of the levers E is raised the other is lowered, and in this manner the plungers or pounders are made to approach and recede,
10 as before described.

The rod d' of the upper plunger is provided with a series of pins d^3 , so that the plungers can be adjusted at various heights above the lower one to accommodate a larger
15 or smaller quantity of clothes.

The suds-box or cylinder is provided with a sectional top or cover L, and a seat M may be attached to the rear end of the main frame for the convenience of the operator.

20 In operation a sufficient quantity of water is placed in the suds-box and boiler. The lower plunger is then placed in the cylinder or suds-box and connected with its lever. The clothes to be washed are then placed upon the
25 lower plunger or pounder and the upper plunger or pounder arranged in place above said clothes and connected with its lever. The top is then put on and the plungers operated by either hand or foot power. During each
30 revolution of the crank-shaft the plungers are brought together and then separated. As

these plungers approach each other the clothes are squeezed between them and all the water forced therefrom; and when said plungers recede the clothes expand and reabsorb the
35 water. By this continued operation of extraction and absorption the clothes will be quickly and thoroughly cleansed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is— 40

1. In a washing machine, the combination of the upper and lower pounders, each consisting of a metallic rim, a metallic brace portion, and wire gauze body, the suds box in
45 which said pounders snugly fit, the rods, connected with said pounders at the diagonal brace portion, and means for reciprocating said pounders in opposite directions, substantially as shown and described. 50

2. In a washing machine, a pounder, comprising the metallic rim, the wire gauze body, the diagonal brace piece, and the rod for actuating said pounder, substantially as shown and described. 55

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

WILLIAM S. LANEY.

Witnesses:

JOSEPH E. STUMP,
JOHN BAILEY.