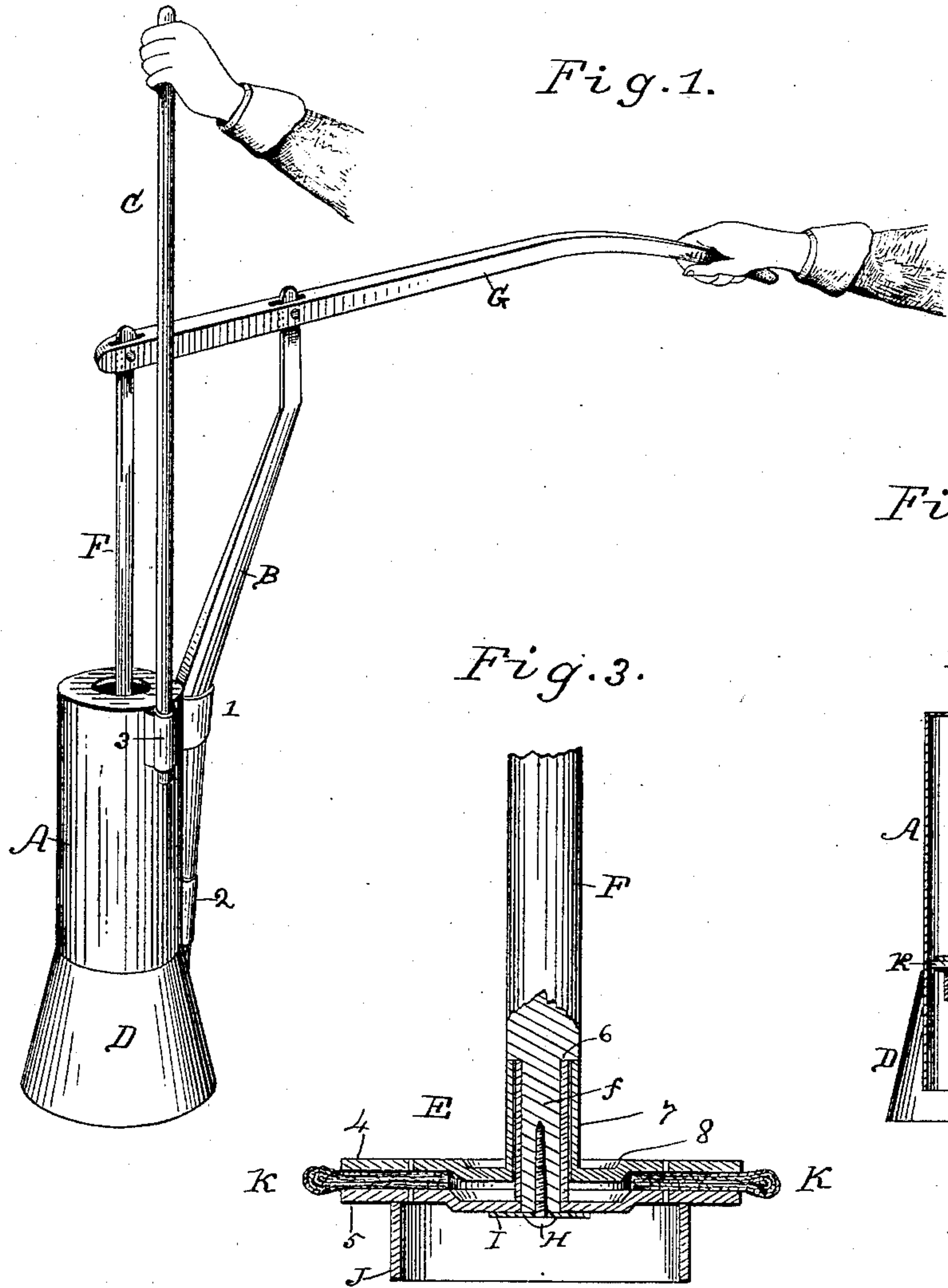


(No Model.)

W. B. REAVES.
WASHING MACHINE.

No. 348,776.

Patented Sept. 7, 1886.



WITNESSES:
Thos. Houghton.
P. B. Turpin.

INVENTOR:
Wm. B. Reaves
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM BRADLEY REAVES, OF FRIAR'S POINT, MISSISSIPPI, ASSIGNOR OF
ONE-HALF TO J. W. CROWLEY, OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 348,776, dated September 7, 1886.

Application filed February 24, 1886. Serial No. 193,077. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BRADLEY REAVES, of Friar's Point, in the county of Coahoma and State of Mississippi, have invented a new and useful Improvement in Washing-Machines, of which the following is a description.

This invention is an improved washing-machine; and it consists in certain novel constructions and combinations of parts, whereby the clothing will be cleansed without any mechanical friction thereof, all of which will be described.

In the drawings, Figure 1 is a perspective view of my machine. Fig. 2 is a partial longitudinal section thereof. Fig. 3 is a detail section, enlarged, of the plunger and a portion of its rod.

The cylinder A may be formed of tin, zinc, or other suitable material. It is provided with thimbles 1 and 2 for the lower end of the lever-supporting standard B, which may be removably secured therein, and it also has a thimble, 3, to facilitate the attachment of handle-rod C, by which the cylinder may be placed and held in and removed from the water in the operation of washing.

Fixed to the cylinder near its lower end is a skirt, D, which flares outwardly toward its lower end. This skirt encircles and extends below the lower end of the cylinder, and serves to increase the surface of clothing acted on at each operation of the plunger, presently described. This skirt also enlarges the base of and prevents the machine from being too heavy, and by extending beyond the lower end of the cylinder enables the compressed air to operate between it and such cylinder, and thus act upon all the clothing embraced by the flaring skirt.

The plunger or piston E operates in cylinder A, and is provided with a rod, F, by which the plunger may be reciprocated. This rod is by preference connected with the lever G, pivoted to the standard B. The plunger is formed with upper and lower sections, 4 and 5. At its lower end the rod F is formed with a tenon, *f*, providing shoulder 6. The upper section, 4, is formed with a central saucer-shaped portion and a flat rim-flange. From

the center or crown of central portion is projected a tubular portion, 7, which surrounds at one end an opening in section 4, and abuts at its opposite end against shoulder 6. Section 5 is also formed with a central saucer-shaped portion, having a tubular portion, 8, which fits up in tube 7 around tenon *f*. The sections 4 and 5, with the packing presently described, are secured to the rod by a screw, H, passed through a washer, I, and into the end of the plunger-rod. To prevent this screw H from coming in contact with the clothing being washed, and also to prevent the plunger from being forced out of the lower end of the cylinder, I provide the lower section of the plunger with a depending tubular extension, J, which encircles the securing-screw and projects below the same. By depending below the plunger this extension J, as will be seen, by contact with the clothing, prevents said plunger from being forced entirely out of the lower end of the cylinder in the operation of the machine.

The packing K is secured between the plunger-sections 4 and 5, and may be made of rubber, heavy cotton goods, or other suitable material. It is preferred to form the packing of a number of thicknesses of cotton cut bias and longer than the circumference of the plunger-sections and drawn to the right size by a draw-string, so that when the packing wears out the string may be loosened and the goods pulled out from between the two sections.

In operation it will be seen that the cylinder with the plunger raised is placed down in the water and rested on the clothing to be washed. The plunger is then depressed, forcing the hot suds through said clothing by atmospheric pressure, causing the dirt to disengage from the goods and enter into solution with the water, avoiding all rubbing and the consequent wear and tear on the clothing. After the plunger is depressed the apparatus is raised from the water in order to permit the cylinder to again fill with air, the plunger being raised, when the operation before described is repeated.

Having thus described my invention, what I claim as new is—

In a washing-machine, the combination, with

the cylinder and the skirt surrounding and projecting below the lower end thereof, of the plunger-rod and the plunger provided with upper and lower sections, and having a securing-screw whereby to connect it with the plunger-rod, the lower section of said plunger being provided with a depending tubular extension surrounding the fastening-screw and serving to protect the clothing from the contact of said screw, and preventing the plunger from being forced out of the lower end of the cylinder, substantially as set forth.

WILLIAM BRADLEY REAVES.

Witnesses:

C. B. CLARKE,

JULIUS ALLEN.