No. 667,473. Patented Feb. 5, 1901.

J. G. WILLIAMSON.

CLOTHES POUNDER.

(Application filed Mar. 30, 1900.)

(No Model.)

Fig. 1.

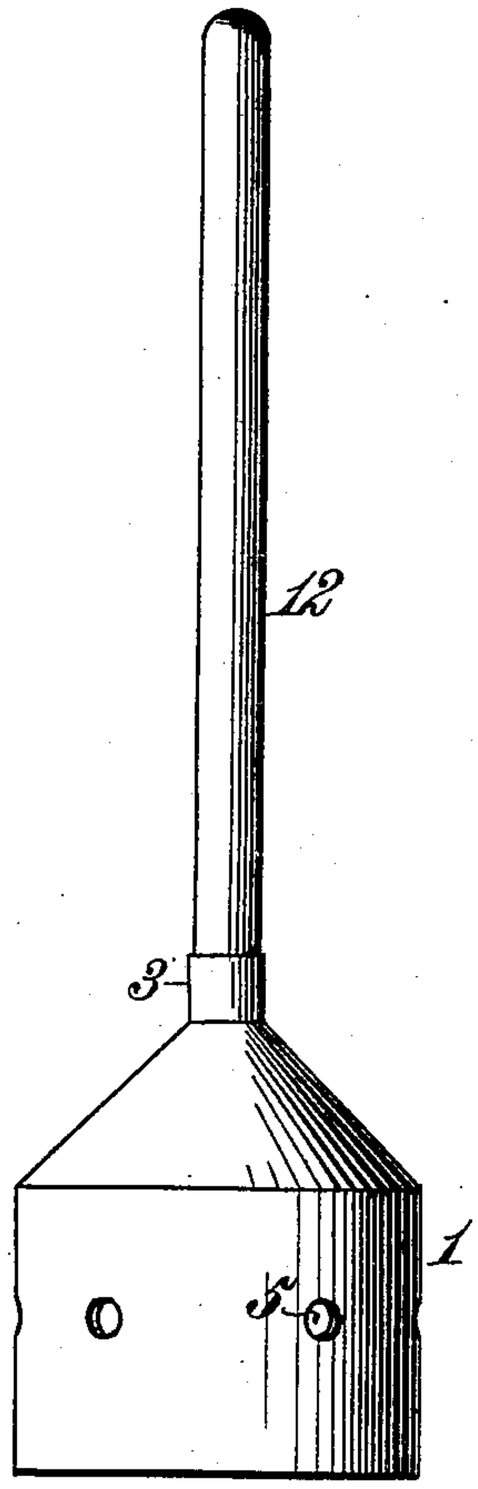


Fig. 2.

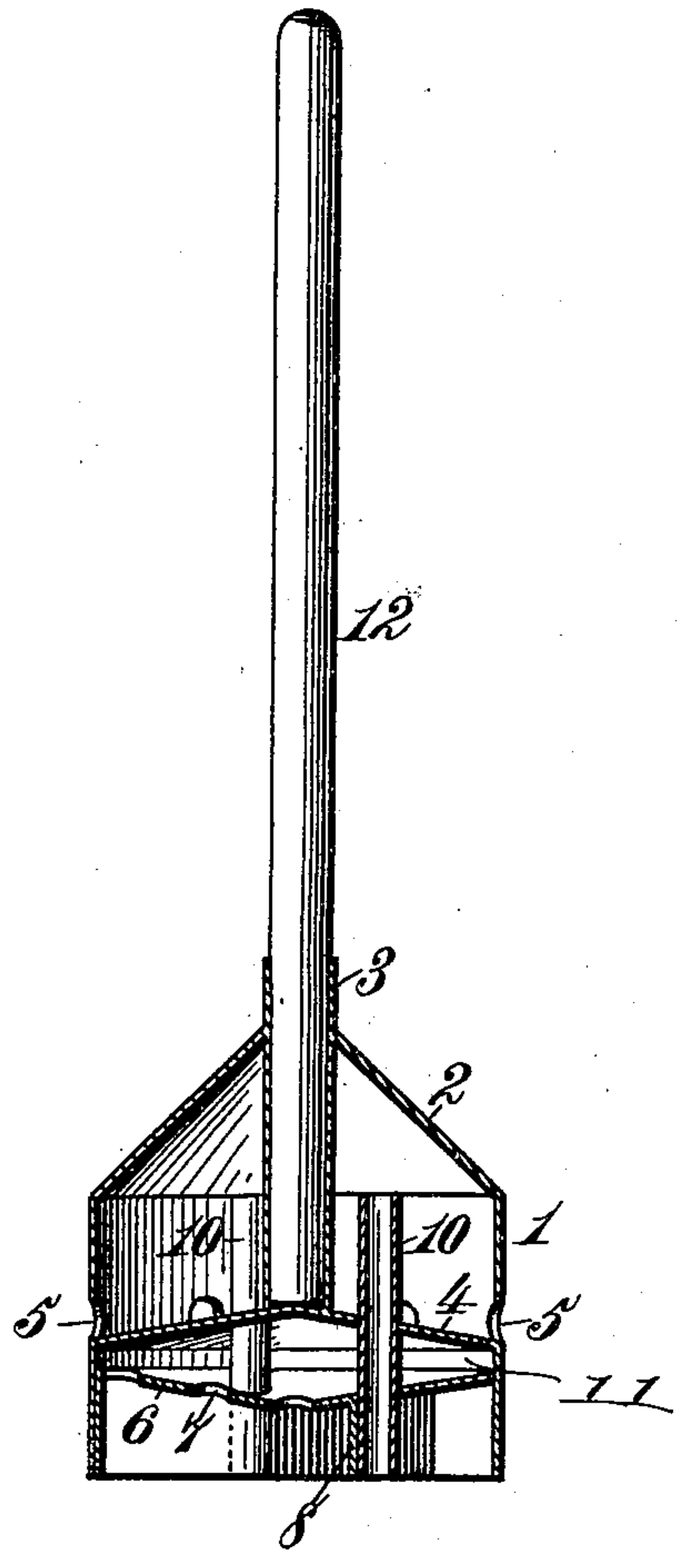
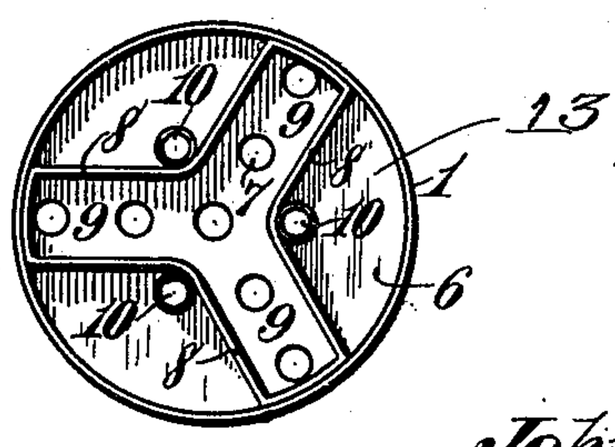


Fig. 3.



Witnesses.
Robt Ewett.
H. B. Keelon

Inventor.
John G. Williamson.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

JOHN G. WILLIAMSON, OF HAVERSTRAW, NEW YORK.

CLOTHES-POUNDER.

SPECIFICATION forming part of Letters Patent No. 667,473, dated February 5, 1901.

Application filed March 30, 1900. Serial No. 10,816. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. WILLIAMSON, a citizen of the United States, residing at Haverstraw, in the county of Rockland and State of New York, have invented new and useful Improvements in Clothes-Pounders, of which the following is a specification.

This invention relates to clothes-pounders for washing clothes, and has for one object to provide a device of the character referred to that operates to produce a circulation of the water and suds through the pounder and clothes.

It has for its further object to provide novel means for preventing the suction of the air and water as the pounder is raised, thus rendering the raising of the pounder easy; and finally it has for its object to improve and simplify the construction and render more efficient the operation of this class of devices generally.

To these ends my invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, wherein—

Figure 1 is a view in side elevation of my improved clothes-pounder. Fig. 2 is a vertical central sectional view of the same, and Fig. 3 is a bottom plan view thereof.

Referring to the drawings, the body of the pounder may be of any approved or preferred shape for the purposes in hand, but in the present instance is shown as consisting of a hollow cylindrical shell 1, terminating at its upper end in a conical top 2. Fixed in the shell 1 intermediate its upper and lower ends is a diaphragm 4, preferably concavo-convex in shape, its convex side being disposed uppermost. Formed in the wall of the shell immediately above the outer edge of the diaphragm 4 is a series of perforations 5. Fixed in the shell 1 a slight distance below the diaphragm 4 is a diaphragm 6, also concavo-convex and with its concave side arranged uppermost. The diaphragm 6 is provided with a plurality of perforations 7, arranged and operating in the manner hereinafter explained.

Beneath the lower diaphragm 6 are arranged rigid vertical partitions 8, each partition being bent at an obtuse angle, as most clearly shown in Fig. 3 of the drawings, and fixed at its outer ends to the shell 1 and at its upper edges to the lower diaphragm 6. The lower edges of the partitions 8 are preferably flush with and lie in substantially the same horizontal plane with the lower edge of the shell 1. The partitions 8 are so arranged that they extend from a point near the center of the shell to the walls of the latter, the corresponding members of each two of the partitions being disposed parallel to one another, as shown, thus forming radial passages or inclosed spaces 9. The perforations 7 in the lower diaphragm are formed in that part of the latter which is inclosed between the partitions, thus establishing communication between the said radial passages and the chamber 11 inclosed between the two diaphragms 4 and 6. Each of the partitions, in connection with the inclosing shell 1, forms a chamber or compartment 13, and in the inner angle of each of said chambers or compartments is arranged a vertical pipe 10, its lower end terminating approximately at the lower edge of the adjacent partition and said pipe extending up through both of the diaphragms 4 and 6 and terminating at a point above the diaphragm 4. Extending down centrally through the top 2 of the shell is a sleeve 3, the lower end of which is preferably secured by any suitable means to the diaphragm 4, and in said sleeve is adapted to be fitted a handle 12.

The operation of my improved clothes-pounder is as follows: The clothes to be washed, together with a sufficient quantity of hot suds, are placed in the tub or other suitable vessel. The operator then grasps the handle 12 and alternately presses the pounder down upon the clothing and partially lifts it above the water. As the pounder is pressed down upon the clothing the hot suds are forced through the clothes and at the same time portions of the clothing are forced up into the chambers or compartments 13, thus tending to compress the air in the latter. A portion of the air so compressed will escape from beneath the lower edge of the shell and a portion will pass up through the pipes 10 into the upper portion of the shell above the dia-

phragm 4, and as the perforations 5 are beneath the surface of the water will be retained in the upper portion of the shell. As the air is forced up through the pipes 10 it carries before it the hot suds which previously had entered said pipes on the downward thrust of the plunger and delivers the same into the upper portion of the shell above the diaphragm 4. The air in the same manner will be forced up through the perforations 7 into the chamber 11, between the diaphragms 4 and 6, and with it more or less of the suds. When the pounder is raised, there is a tendency to create a vacuum in the chambers 13 and in the passages 9, which vacuum would have a tendency to render it difficult to lift the pounder out of the suds and water; but the more or less compressed air retained in the upper portion of the shell and in the chamber 11 helps to lift the pounder until the perforations 5 are out of the water. Thereupon the compressed air escapes from the upper portion of the shell through the perforations 5. As the pounder is lifted the moment the perforations 5 emerge above the surface of the suds contained in the tub the suds that had previously ascended through the pipes 10 escape from the upper part of the shell through the perforations 5. In this manner a constant circulation of the suds is maintained through the pounder and through the clothing. By making the lower edges of the partitions 8 substantially flush with the lower edge of the shell 1 said partitions also aid in pressing down the clothing in the suds. I have shown the lower diaphragm 6 as being concave or dish-shaped. This is merely for the purpose of causing the suds to thoroughly drain from the chamber 11 when the pounder is removed from the tub, and it will be obvious that said diaphragms might be made flat without altering the operation of the device.

Having described my invention, what I claim is—

1. A clothes-pounder comprising a hollow shell closed at its top, and provided intermediate its top and bottom with a diaphragm, said shell being provided with a plurality of perforations immediately above the edge of the diaphragm, and a plurality of vertical pipes extending through said diaphragm, said pipes being open at their opposite ends and extending above and below the diaphragm, and a handle fitted to the pounder, substantially as described.

2. A clothes-pounder comprising a hollow shell closed at its top and provided intermediate its top and bottom with a diaphragm, said shell being provided with a plurality of perforations immediately above the edge of the diaphragm, a perforated diaphragm arranged slightly below the first-named diaphragm, a plurality of vertical partitions each bent at an angle and attached at their outer ends to the shell and at their upper edges to the lower diaphragm thus forming a plurality of compartments or chambers, a vertical pipe arranged in each of said compartments or chambers and extending up through and above the diaphragm, and a handle fitted to the pounder, substantially as described.

3. A clothes-pounder comprising a hollow shell closed at its top and provided intermediate its top and bottom with a diaphragm, a perforated diaphragm arranged slightly below the first-named diaphragm, said diaphragms being each concavo-convex in shape and having their concave sides disposed adjacent to or toward one another, a plurality of vertical partitions each bent at an angle and attached at their outer ends and upper edges respectively to the shell and to the perforated diaphragm, the perforations in the lower diaphragm being formed between the partitions, and said partitions together with the shell forming a plurality of chambers or compartments, vertical pipes arranged in said chambers or compartments extending up through both said diaphragms, said shell being provided with a plurality of perforations immediately above the edge of the upper diaphragm, and a handle fitted in the upper end of the pounder, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN G. WILLIAMSON.

Witnesses:

CLARENCE WILLIAMSON,

FRED. S. WEIANT.