F. A. SUMNER.
Clothes-Pounder.

No. 199,942. Patented Feb. 5, 1878.

Fig. 1.

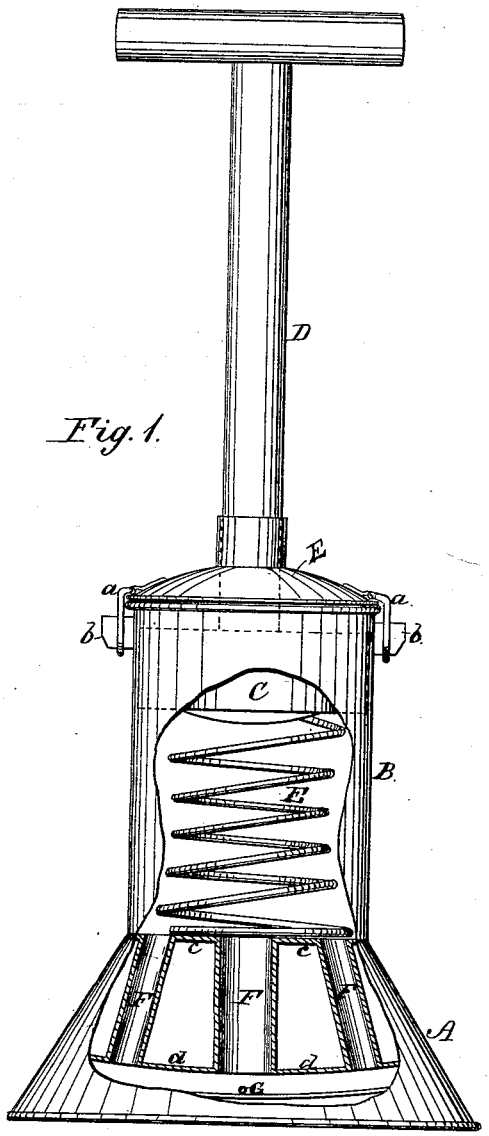
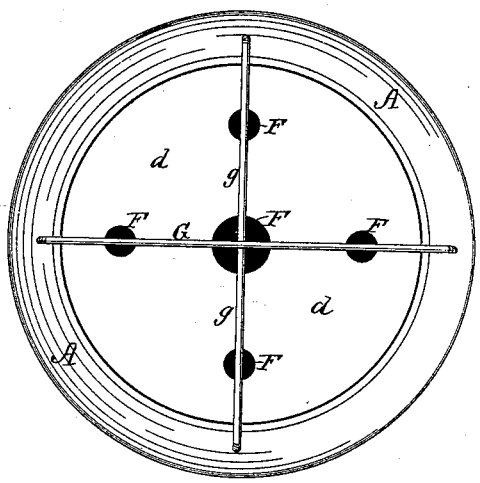


Fig. 2.



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UNITED STATES PATENT OFFICE.

FRANKLIN A. SUMNER, OF OLD FORT, NORTH CAROLINA.

IMPROVEMENT IN CLOTHES-POUNDERS.

Specification forming part of Letters Patent No. **199,942**, dated February 5, 1878; application filed September 13, 1877.

To all whom it may concern:

Be it known that I, FRANKLIN A. SUMNER, of Old Fort, in the county of McDowell and State of North Carolina, have invented a new and Improved Clothes-Washer; and I do hereby declare that the following is a full, clear, and exact description of the same.

Clothes-washers of the class commonly known as "pounders" have been provided with an air-cavity in the lower end, to secure the advantage resulting from the compression of air therein as the pounder descends upon the clothes and the subsequent ejection of a portion of the same by reaction, just after contact of the pounder with the clothes, the expelled air in such case permeating the latter, and displacing the water more or less at various points beneath the pounder.

The invention consists in the construction and arrangement of parts, as hereinafter described and claimed, whereby a compact, cheap, and very efficient pounder and washer is produced.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved clothes-washer, the side being broken out to show the interior construction. Fig. 2 is a bottom-plan view.

The base A of the clothes-washer has the form of an inverted truncated funnel, and the piston-cylinder B is permanently attached to the upper end thereof, so that the two are practically integral. The piston C is provided with a handle, D, and works vertically in the cylinder, being aided in its upward movement by the resiliency of the spiral spring E, upon which it rests. The spring being placed in the same chamber into and from which the water is alternately drawn and expelled, the utmost economy of space is attained, while the action of the piston is facilitated. The piston is suitably packed to prevent escape of air past it, and is guided in part by the inner wall of the cylinder, and in part by the circular flange or collar of the cover E, which is detachably secured to the cylinder by links *a* and ears *b*, as shown.

The spring rests upon a horizontal diaphragm, *c*, fixed at the lower end of the cylinder, and a second diaphragm, *d*, is located near the bottom of the funnel A, the two being connected by small tubes, as shown. The wires G prevent the clothes packing around or obstructing the mouths of tubes F.

The operation is as follows: In place of being used like the ordinary atmospheric pounders—namely, as a beater—this device is placed upon the clothes, and the piston C forced quickly down by pressing on the handle D. This movement compresses the air, which fills the cavity of the funnel, the tubes, and cylinder B, (below the piston,) and forces a portion of the same into and through the clothes, thereby causing the displacement from the meshes of the latter of a portion of the water in which they are immersed. So soon as the piston has been thus forced down the pressure is released, and the elasticity of the spring E raises the piston to its original position, (shown in Fig. 1;) but the vacuum due to the previous expulsion of the air causes the water to follow the piston and fill the funnel, cavity, and tubes, and also the cylinder in part. Upon the next descent of the piston, therefore, this water is forcibly ejected, along with a portion of the air confined in the cylinder above the water, and the result is that the rapid passage through the clothes of the several streams of water and currents of air, or mingled water and air, effects the cleansing of that portion of the clothes under the funnel very quickly.

The device is moved from one place to another upon the clothes, as required, until the whole quantity has been thoroughly cleansed.

This washer combines the most desirable elements—to wit, compactness, simplicity, and economy of construction—and the greatest capacity of easy and efficient operation.

What I claim is—

In an air and water clothes-pounder, the flaring base A, having the tubes F connecting the diaphragms *c* and *d*, the piston C, and the spiral spring E placed in the cylindrical piston-chamber B, between the piston and diaphragm *c*, all said parts being combined as specified.

The above specification of my invention signed by me this 20th day of August, 1877.

F. A. SUMNER.

Witnesses:

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