

W. H. WILLIAMS.  
Clothes-Pounders.

No. 153,694.

Patented Aug. 4, 1874.

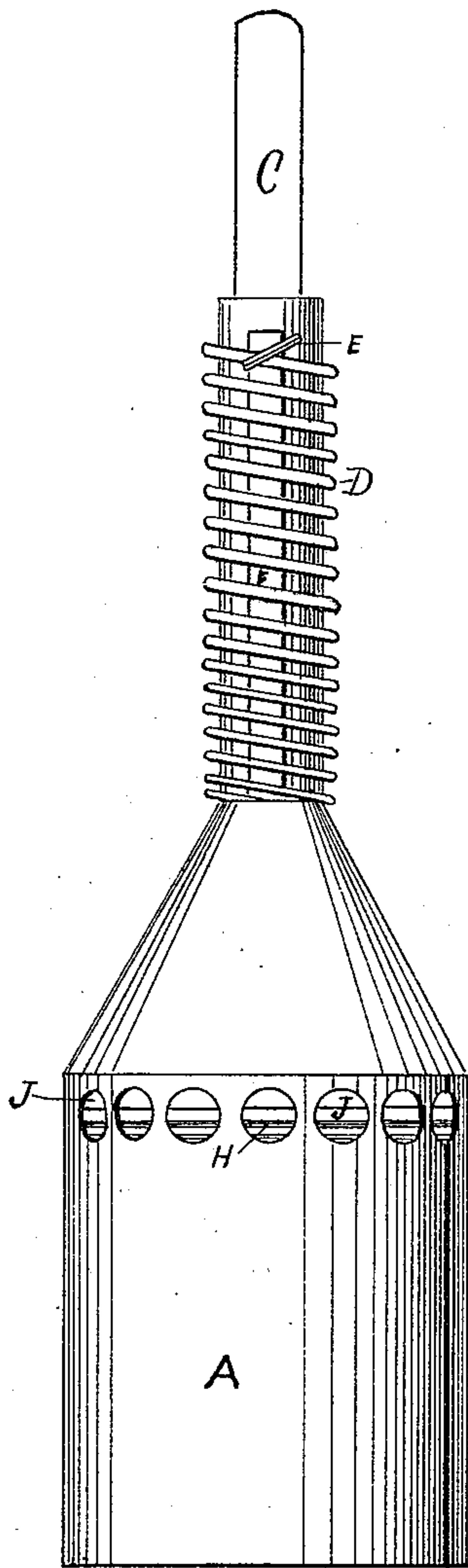


FIG. 1

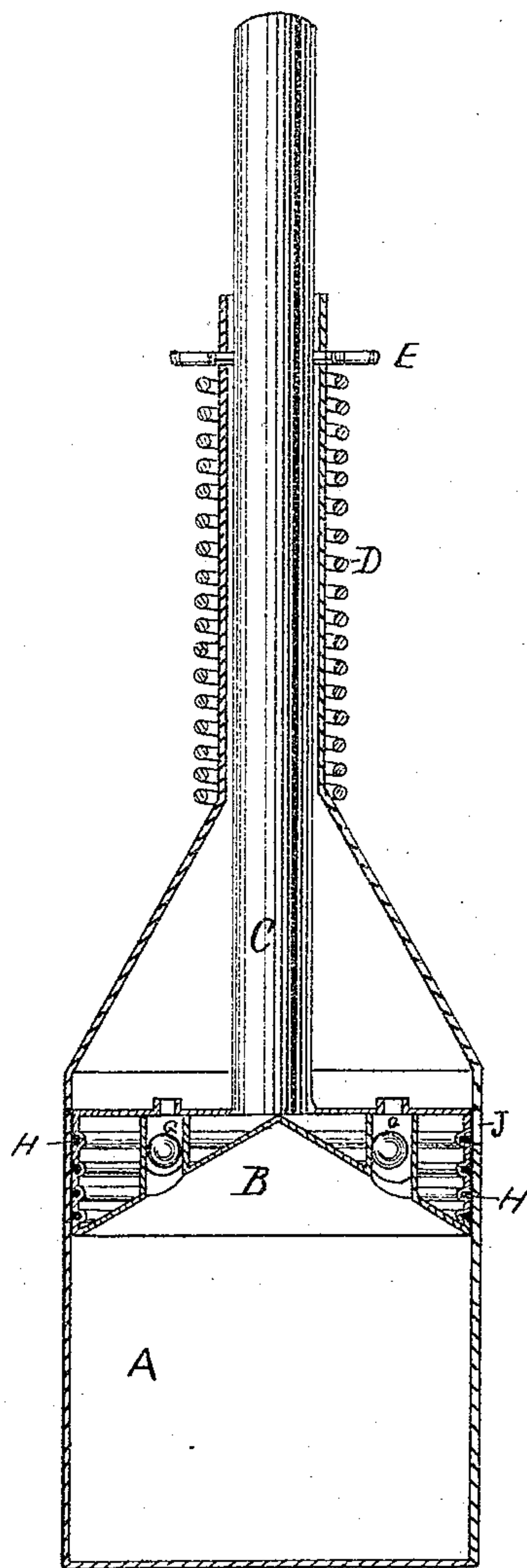


FIG. 2

WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN CLOTHES-POUNDERS.

Specification forming part of Letters Patent No. **153,694**, dated August 4, 1874; application filed May 15, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM H. WILLIAMS, of Brandon, in the county of Rutland, State of Vermont, have invented a certain new and useful Improvement in Clothes-Pounders, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a vertical longitudinal section, of my improved plunger.

Like letters indicate corresponding parts in the different figures of the drawing.

My invention relates to that class of plungers or pounders which are provided with pistons; and consists in a novel arrangement and construction of the parts, as hereinafter more fully set forth and claimed, by which a cheaper and more effective implement of this character is produced than is now in common use.

In the drawing, A is the body or cylinder; C, the piston-rod; B, the piston-head; D, the spring; E, the cross-pin or stop; J, air-holes; H, packing-rings; and G, ball-valves. The body A is cylindrical in shape, being open at the bottom, and extended upward to form a sheath or support for the rod C, the sheath being slotted vertically at F for the stop E, as shown in Fig. 1. The spring D rests upon the body A, and is coiled around the sheath below the stop E, which is secured in the rod C. The piston-head B is concave on its under side, and is provided with a series of grooves, H, which fill with water and serve to pack the piston. The ball-valves G G have wire seats, which serve to keep the balls in the short vertical tubes in which they are disposed, and at the same time permit the air to pass around them when the piston is drawn up. The diameter of the tubes at the top is less than the balls, so that when the rod C is pushed down the tubes are closed by the balls, after the manner of ordinary ball-valves.

From the foregoing the nature and operation of my invention will be readily understood by all conversant with such matters.

In the plungers heretofore constructed, so far as I am aware, there has been a defect in having the lower surface of the piston-head flat, and the piston not properly packed, causing the plunger to have a tendency to cant as the blow is struck. The support for the piston-rod has also been complicated and costly. My invention is designed to obviate these difficulties; and to this end I make the lower surface of the piston-head concaved, as shown at B in Fig. 2, and furnish it with a series of annular grooves, H, which pack it very perfectly, the grooves filling with water when the piston is in use, and the concavity in the piston-head acting to center the piston in a manner which will be readily apparent.

The operation of my improved plunger is as follows: The tub of clothes being properly filled with water, the rod C is grasped in both hands, and a smart blow or punch is given to the clothes in the tub, the plunger being held in a perpendicular position. As the lower part of the body A strikes the clothing, the spring C will be compressed by the stop E as the stop slides down the groove F, air rushing through the holes J J, the valves G G being at the same time closed, thus exerting a yielding but gradually increasing pressure upon the clothing as the piston passes down, concentrating the air in the lower part of the body A, and forcing it through the clothing. As the piston is raised, the valves drop or open, allowing a part of the air in the upper part of the body A to pass through them, the rest passing out of the holes J. The plunger is now ready for another stroke, which may be repeated, as before.

Having thus described my invention, what I claim is—

In a washing-machine plunger, a piston having a corrugated and conical internal surface, and valves G G, in combination with a cylinder, A, having a conical head and prolonged slotted sleeve D, as described.

WILLIAM H. WILLIAMS.

Witnesses:

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ALONZO S. COOK.