

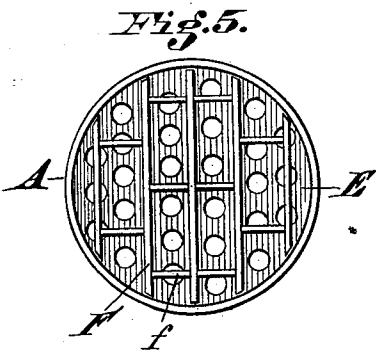
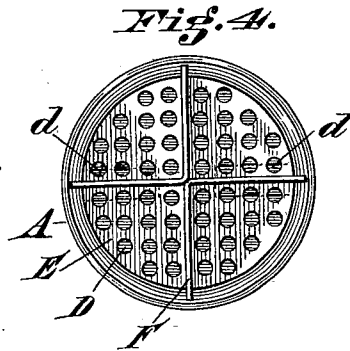
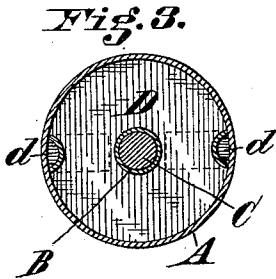
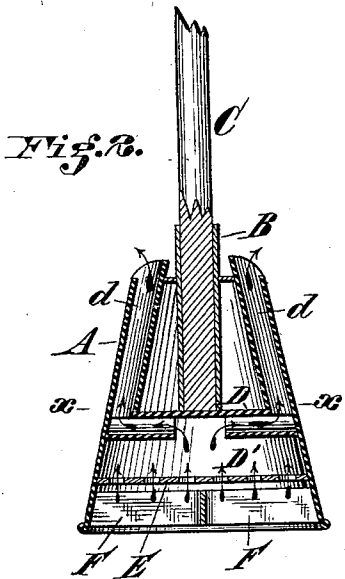
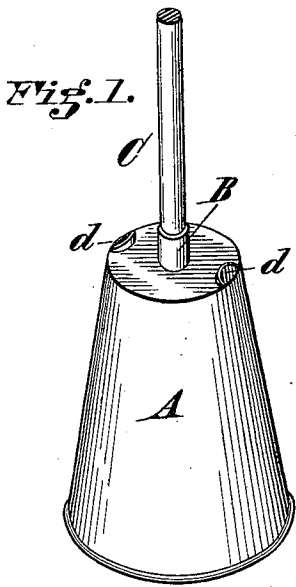
(No Model.)

W. H. NOLL.

## ATMOSPHERIC CLOTHES POUNDER.

No. 282,759.

Patented Aug. 7, 1883.



Attest  
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*Inventor*  
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*his Attorneys re.*

# UNITED STATES PATENT OFFICE.

WILLIAM H. NOLL, OF MILTON, INDIANA.

## ATMOSPHERIC CLOTHES-POUNDER.

SPECIFICATION forming part of Letters Patent No. 282,759, dated August 7, 1883.

Application filed May 1, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. NOLL, a citizen of the United States, and a resident of Milton, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Atmospheric Clothes-Pounders, of which the following is a specification.

My invention relates to an improvement in atmospheric clothes washers or pounders.

It has for its object the provision of a truncated conical body or shell having in its lower part a horizontal diaphragm connecting by a tube or tubes with the air above the surface of the water, in combination with a perforated horizontal diaphragm arranged below the said air-tube diaphragm, this construction in the operation of the device on clothes causing a high vacuum in the shell on raising it, into which the air rushes through the said tube or tubes and is forced downward through the clothes on the downward stroke of the device.

Another object of my invention is to provide, in connection with the shell having the air-tube, partition, and perforated diaphragm, a grated or ribbed bottom for preventing the choking of the perforated partition by too intimate contact with the clothes, and at the same time form braces for strengthening the lower part of said shell.

In the accompanying drawings, Figure 1 is a perspective view of a clothes-pounder embodying my invention. Fig. 2 is a central sectional elevation of my machine. Fig. 3 is a transverse sectional plan view on line *xx*, Fig. 2. Fig. 4 is a bottom plan of the machine. Fig. 5 is a bottom plan of the machine, showing a modified form of grated or partitioned bottom.

A represents the shell or body of my machine. It is preferably in the form of a truncated cone, as shown in Figs. 1 and 2, and is provided with a central socket, B, for the reception of the manipulating-handle C.

D is a horizontal diaphragm arranged within the shell A intermediate its top and bottom and forming a lower air-chamber, D', which is connected to the air above the surface of the water, into which the machine is immersed by tubes or passages *d d*. Tubes *d* are shown on the inside of the shell, having horizontal portions or branches arranged beneath the diaphragm D, and vertical portions arranged

along the sides of the shell and projecting slightly above its top face. The horizontal branches of tubes *d* are provided to break the force of the water passing upward through the machine, and thereby prevent a too rapid discharge at the top, which would otherwise spray and splash outside the tub. It is obvious the vertical tubes could be constructed on the outside of the shell and connected with the inside thereof by perforations made in the shell opposite the horizontal tubes, and the operation not in the least altered or affected.

E is a horizontal perforated partition or diaphragm arranged within the air-chamber D' beneath diaphragm D. This perforated diaphragm serves to limit the amount of air passing through the shell to the clothes, so as to facilitate the operation of the machine. In practice it has been found that too much air rushing into the vacuum, occasioned by lifting the machine in the water, would render its operation difficult and laborious. This is overcome in the use of the perforated diaphragm, as herein set forth.

It is obvious that one or more tubes, *d*, could be used of such relative proportions that too great a volume of air would not be admitted into and through the shell to make the operation of the machine difficult.

F are radial arms or partitions arranged vertically and secured in the bottom of the air-chamber D'. These partitions serve to press upon the clothes and keep them from coming against the perforated diaphragm E, that would otherwise close up its openings, and thereby prevent the passage of water or air through the apertures.

In Fig. 5 I have shown a modified form of constructing the partitions F. Instead of being radial, as shown in Fig. 4, they are parallel transverse partitions, having connecting cross-bars *f*, for preventing the clothes wedging in between them. The bottom of the shell A is materially strengthened by the use of partitions F.

The arrows in Fig. 2 indicate the direction of the water through the machine in its downward movement. In the upward movement or lifting of the machine the air passes through in a reverse direction.

I claim—

1. In an atmospheric washer or pounder, the

shell A, divided by horizontal diaphragm D and perforated horizontal diaphragm E into air-chambers D', in combination with the vertical air-tubes d, having horizontal extensions  
5 under diaphragm D, substantially as described.

2. In an atmospheric clothes washer or pounder, the shell A, divided by horizontal diaphragm D and perforated horizontal diaphragm E into air-chambers D', in combination  
10 with the vertical air-tubes d, having hori-

zontal extensions under diaphragm D and transverse partitions F under diaphragm D, substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM H. NOLL.

Witnesses:

JNO. E. JONES,

A. GLUCHOWSKY.