

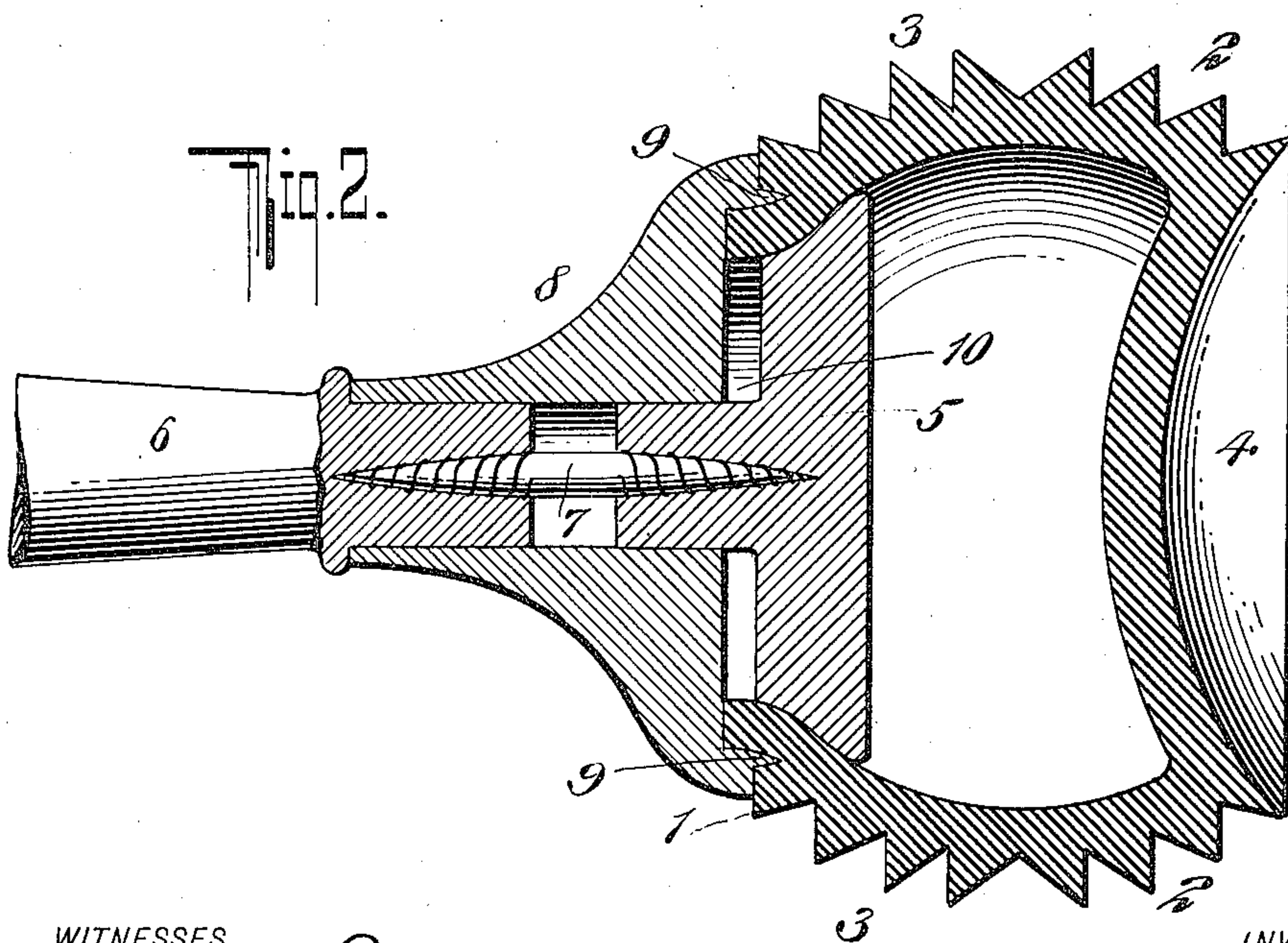
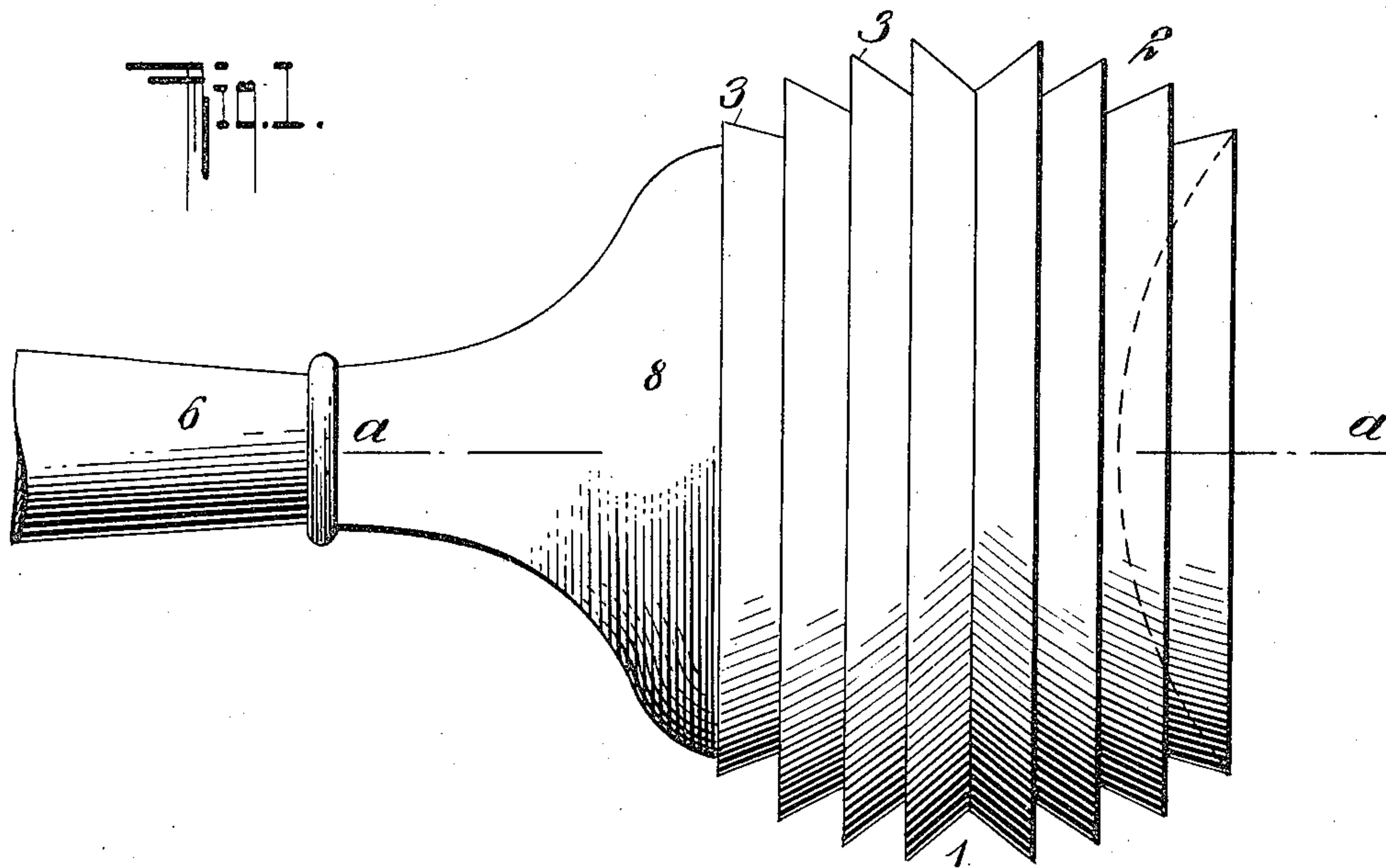
L. O. HOWELL.

COMBINED PNEUMATIC CLEANER AND FORCE CUP.

APPLICATION FILED MAY 17, 1907. RENEWED APR. 6, 1910.

975,527.

Patented Nov. 15, 1910.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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COMBINED PNEUMATIC CLEANER AND FORCE-CUP.

975,527.

Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed May 17, 1907, Serial No. 374,169. Renewed April 6, 1910. Serial No. 553,867.

*To all whom it may concern:*

Be it known that I, LEWIS O. HOWELL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Combined Pneumatic Cleaners and Force-Cups, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates especially to devices employed for cleaning the bowls of water closets, bath tubs, sinks wash basins, and the like, and for forcing obstructions from the waste pipes thereof, and has for its object the provision of a combined pneumatic cleaner and force cup, simple in construction, and effective in operation.

To attain the desired end, my invention consists in certain novel and useful combinations or arrangements of parts, and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawing, Figure 1 is a side elevation of a combined pneumatic cleaner and force cup embodying my invention. Fig. 2 is an axial, sectional view thereof at line *a-a* of Fig. 1.

Similar numerals of reference, wherever they occur, indicate corresponding parts in both figures.

The body 1 of the device is hollow, and made of compressible material, preferably rubber. The wall of this body is made sufficiently thick to give it some rigidity. The exterior of the wall of the body is provided with two sets or series of circumferential corrugations, those of one set, 2, facing in one direction, and the other set, 3, facing in the opposite direction. From this construction of the corrugations, and their relative arrangement, the device, in use, is capable of reaching and thoroughly cleansing beneath the flushing rim of a closet bowl, as well as the bottom and sides, or beneath the rim of a wash bowl, and, moreover, the device is self-cleansing, as the corrugations, in a series, rub against each other, when the device is being used.

The outer face of the body 1 is made concave, as at 4, particularly illustrated in Fig. 2 of the drawing. 5 is a washer held to a manipulating handle 6 by a double-pointed screw 7. The edge of the body 1 is secured in place between the washer 5 and the handle 6 by means of a washer 8 having an annular rib 9 arranged to enter the material of the body 1, the inner edge of the body extending into a recess 10 of the washer 8, thus effectually preventing any pulling away of the body from the handle when the parts are in place. The washer 8 is shown as made separate from the handle, but it may be made integral therewith, if desired, without departing from the spirit of my invention.

In use, the corrugations 2 and 3 are employed for cleansing the surface of a closet bowl, wash bowl, bath tub, etc., and when it is desired to force any obstruction from the waste pipe, the concave portion 4 of the implement is placed over the outlet, and downward pressure applied to the body 1 in axial line with the handle, forcing such obstruction down the waste pipe.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is:

1. As a new article of manufacture, a combined pneumatic cleaner and force cup in which is comprised a hollow body open at its upper side only, and having its exterior provided with circumferential corrugations or ridges, substantially as shown and described.

2. A combined pneumatic cleaner and force cup, in which is comprised a hollow and compressible body provided with exterior corrugations arranged in two sets or series, one set facing in one direction, and the other set facing in the opposite direction, and having a concavity in its outer face, in combination with a manipulating handle, substantially as shown and described.

3. A combined pneumatic cleaner and force cup, in which is comprised a hollow and compressible body provided with corrugations, and having a concavity in its

outer face, in combination with a manipulating handle, substantially as shown and described.

4. A combined cleaning implement and  
5 force cup of the class recited, comprising a hollow compressible body apertured at one side and concave at the other, and having corrugations located between said sides, in

combination with a manipulating handle, substantially as shown and described. 10

In testimony whereof I hereto affix my signature in presence of two witnesses.

LEWIS O. HOWELL.

Witnesses:

SOL BECK,

FRANK J. LYNCH.