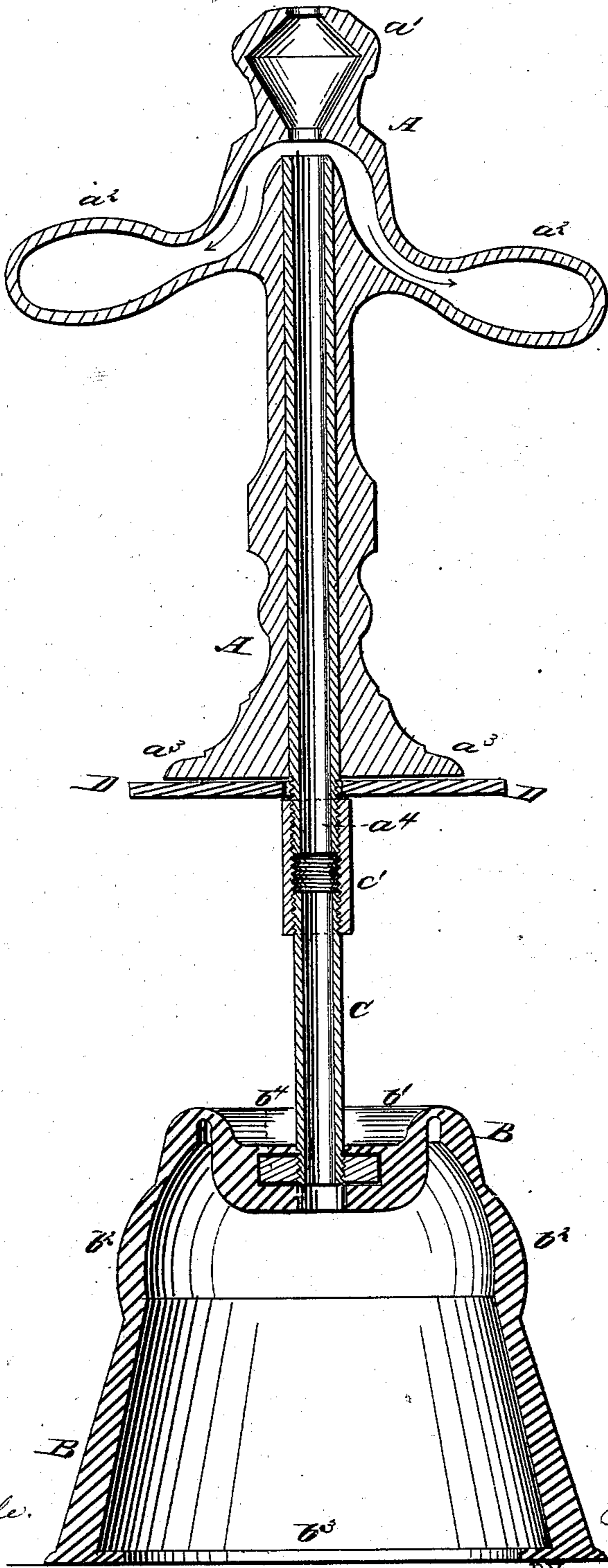


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~~ATTORNEYS.~~

# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN DEVICES FOR CLEARING OBSTRUCTIONS FROM PIPES.

Specification forming part of Letters Patent No. **219,428**, dated September 9, 1879; application filed August 2, 1879.

*To all whom it may concern:*

Be it known that I, TASWILL B. ARMSTEAD, of the city, county, and State of New York, have invented a new and useful Improvement in Devices for Clearing Obstructions from Pipes, of which the following is a specification.

The figure is a longitudinal section of my improved device.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved implement for clearing the waste-pipes of sinks, water-closets, wash-bowls, bath-tubs, and other pipes liable to become obstructed, and which shall be simple in construction and convenient and effective in use.

The invention consists in the perforated handle, made with a hollow knob upon its upper end, and with hollow arms upon the opposite sides of its said upper end, to form air-chambers; in the rubber cup, made with a concaved top, a ring, bead, or swell around its top, an inwardly-projecting flange around its lower edge, and a metallic nut cast in its top; and in the combination of the rubber guard-plate with the flanged lower end of the handle, and with the upper end of the connecting-pipe, as hereinafter fully described.

A represents the handle, which is perforated longitudinally, and upon its upper end is formed a hollow knob,  $a^1$ , to fit into the palm of the hand, so that the upper end of the perforation may be more readily closed and uncovered. Upon the opposite sides of the upper part of the handle A, just below the knob  $a^1$ , and in such a position that they may be readily grasped by the fingers, are formed arms  $a^2$ , which are made hollow, so that they may serve also as air-chambers. Upon the lower end of the handle A is formed a flange,  $a^3$ , to fit upon the top of the rubber cup B when the handle A is attached directly to the said cup B. The handle A is cast upon a pipe,  $a^4$ , the lower end of which projects below the flange  $a^3$  and has a screw-thread cut upon it; or the handle A is made with a hollow screw,  $a^4$ , projecting from its lower end.

The rubber cup B is made bell-shaped, and

has its top  $b^1$  concaved to form a starting-point, so that the upper part may surely roll down into the lower part, and may never be pressed over to one side. For the same purpose the upper part of the cup B has a ring, bead, or swell,  $b^2$ , formed around it, as shown in the figure.

The lower part or body of the cup B is made thicker, as shown in the figure, so that the said part may always retain its position and form, and can never be pressed over sidewise when being used, and so that when being used over an orifice, as the mouth of the waste-pipe of a hand-bowl, bath-tub, or other pipe, the lower edge of the said cup may always rest squarely and air and water tight upon the surface upon which it is placed. For the same purpose the lower edge of the cup B is made with an inwardly-projecting flange,  $b^3$ , around it, as shown in the figure.

In the top of the cup B is cast a metal nut,  $b^4$ , to receive the hollow screw  $a^4$  of the handle A when the said handle is attached directly to the said cup, and to receive the screw formed upon the lower end of the pipe C when a pipe, C is interposed between the said cup and handle. The pipe C, when used, may be made of any desired, convenient, or necessary length, as the place where the implement is to be used may require.

The upper end of the pipe C may have a screw-thread cut upon its inner surface to screw upon the hollow screw  $a^4$  of the handle A; or it may be provided with a coupling,  $c'$ , for connecting it with the said hollow screw  $a^4$ . The latter arrangement is shown in the drawing.

D is a rubber disk, placed upon the hollow screw  $a^4$ , for the double purpose of making the joint between the handle A and pipe C air and water tight, and to serve as a cushion or guard to prevent the hand-bowl, the bath-tub, or other vessel in or upon which the implement is used from being broken or injured by the flange  $a^3$  coming in contact with it.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The perforated handle A, made with a

hollow knob,  $a^1$ , upon its upper end, and with hollow arms  $a^2$  upon the opposite sides of its said upper end, to form air-chambers, substantially as herein shown and described.

2. The rubber cup B, made with a concaved top,  $b^1$ , a ring, bead, or swell,  $b^2$ , around its top, an inwardly-projecting flange,  $b^3$ , around its lower edge, and with a metal nut,  $b^4$ , cast in its top, substantially as herein shown and described.

3. The combination of the rubber guard-plate D with the flanged lower end of the handle A, and with the upper end of the connecting-pipe C, substantially as herein shown and described.

TASWILL B. ARMSTEAD.

Witnesses:

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