(No Model.)

J. H. AUSTIN.

FORCING CYLINDER FOR CLEANING TRAPS.

No. 382,129. Patented May 1, 1888.

Fig. 1.

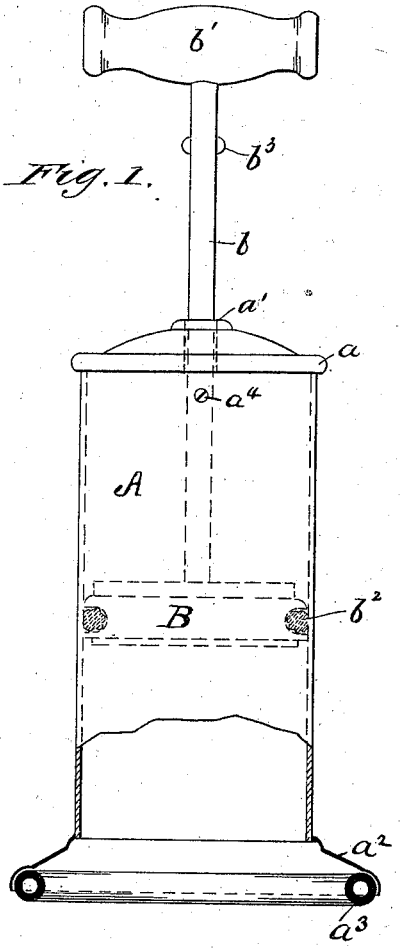
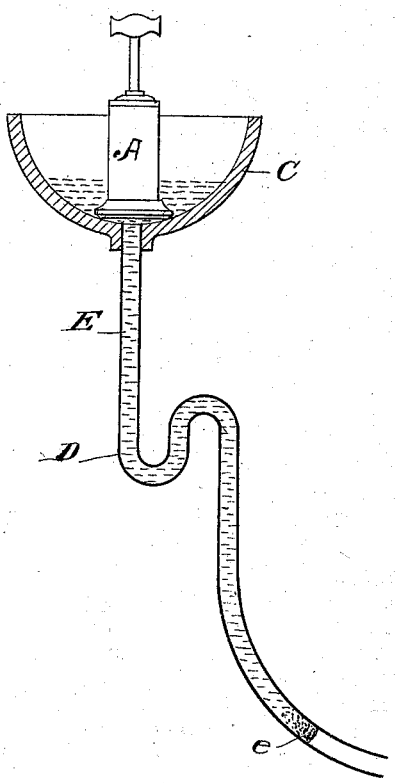


Fig. 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN HENRY AUSTIN, OF NEW YORK, N. Y.

FORCING-CYLINDER FOR CLEANING TRAPS.

SPECIFICATION forming part of Letters Patent No. 382,129, dated May 1, 1888.

Application filed April 26, 1887. Serial No. 236,147. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY AUSTIN, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Forcing-Cylinders for Cleaning Traps, of which the following is a specification.

My invention relates especially to devices employed as forcing-cylinders for cleaning traps, pipes, &c., and has for its object the provision of a device portable and simple in construction, cheap in manufacture, easy to operate, and which will be efficient in practical use. To attain the desired end my invention consists in the construction and arrangement of parts hereinafter fully set forth.

In the drawings, Figure 1 represents a vertical section of my forcing-cylinder, and Fig. 2 a view of my device in operation.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

Referring to the drawings, A represents the body of my forcing-cylinder, preferably constructed out of tubular brass and provided at its lower end with a flange, a^2, under and at the outer end of which is secured a round rubber ring, a^3, as is clearly shown in the drawings. The upper portion of the tube A is provided with a turned wooden head or top, *a*, the parts being rigidly held together by means of the brass screws a^4.

A solid brass plunger or piston, B, is adapted to work within the tube A, and has its edges provided with a groove of concave form, so as to be adapted to admit of suitable packing being inserted in the same. For such packing I prefer to use a solid rope packing, b^2, as, on account of its adaptability to expand or contract, according as it is in a moistened or dry condition, it always forms an air and water tight packing when in use.

The plunger-rod *b*, which passes through the aperture or hole *a'* of the wooden head or top *a*, which aperture I ordinarily line with brass, is slightly smaller than the aperture *a'*, and is provided with two screws, b^3, to limit its downward motion, and terminates in the wooden handle *b'*, of ordinary construction, as shown.

The operation of parts is as follows: In using the device the vessel, bowl, tub, &c., at the top of the trap or pipe to be operated upon is provided with a small quantity of water, and my forcing-cylinder is placed over the discharge-orifice, the handle being depressed, as shown in Fig. 2. Upon raising the handle *b'* the whole column of water, E, in the pipe D between the stoppage *e* and the forcing-cylinder A will be lifted up, the air in the cylinder above the plunger B in the meantime escaping through the enlarged hole or tube *a'*, and upon depressing the handle *b'* the column of water will be forced downward again through the pipe D, and upon repeating the operation once or twice it will be found that the sediment, &c., forming the stoppage *e* has become loosened and dislodged and will flow downward through the escape-pipe together with the column of water, E, when the latter is released by the removal of the forcing-cylinder A, thus leaving the trap or pipe clear.

It will be observed that by means of my forcing-cylinder a stoppage at any distance from the basin C can be operated upon as readily as one near at hand.

As it is evident that many slight changes in the construction and relative arrangement of parts might be resorted to without departing from the spirit and scope of my invention, I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described, but that I reserve the right to make such changes, and that

What I claim as new, and desire to secure by Letters Patent, is—

1. A forcing-cylinder for cleaning traps, pipes, and the like, comprising a cylinder open at its lower end and a piston in said cylinder, substantially as set forth.

2. A forcing-cylinder for cleaning traps, pipes, and the like, comprising a metallic cylinder open at its lower end and a water-tight piston in said cylinder, substantially as set forth.

3. A forcing-cylinder for cleaning traps, pipes, and the like, comprising a rigid cylinder open at one end and provided with a packing-ring around its open end, in combination with a piston working in said cylinder, substantially as set forth.

4. A forcing-cylinder for cleaning traps, pipes, and the like, comprising a rigid cylinder open at its lower end and having a closed top with a central guide-aperture, and a packing-ring around the open end of the cylinder, in combination with a piston working in said cylinder, a packing-ring carried by the piston between it and the cylinder, and an operating-rod fixed to the piston and extending upward through the aperture in the top of the cylinder, substantially as set forth.

5. A forcing-cylinder for cleaning traps, pipes, and the like, comprising a cylinder open at its lower end, an outwardly-flaring flange at the open mouth of the cylinder, and a packing-ring within said flange, in combination with a forcing-piston working in said cylinder, substantially as set forth.

In testimony of the foregoing specification I do hereby sign the same, in the city of New York, county and State of New York, this 9th day of April, A. D. 1887.

JOHN HENRY AUSTIN.

Witnesses:

WM. R. AUSTIN,

STEPHEN MERRITT GRAHAM.