(No Model.)

G. W. ALDRICH.

FORCE PUMP.

No. 534,240. Patented Feb. 12, 1895.

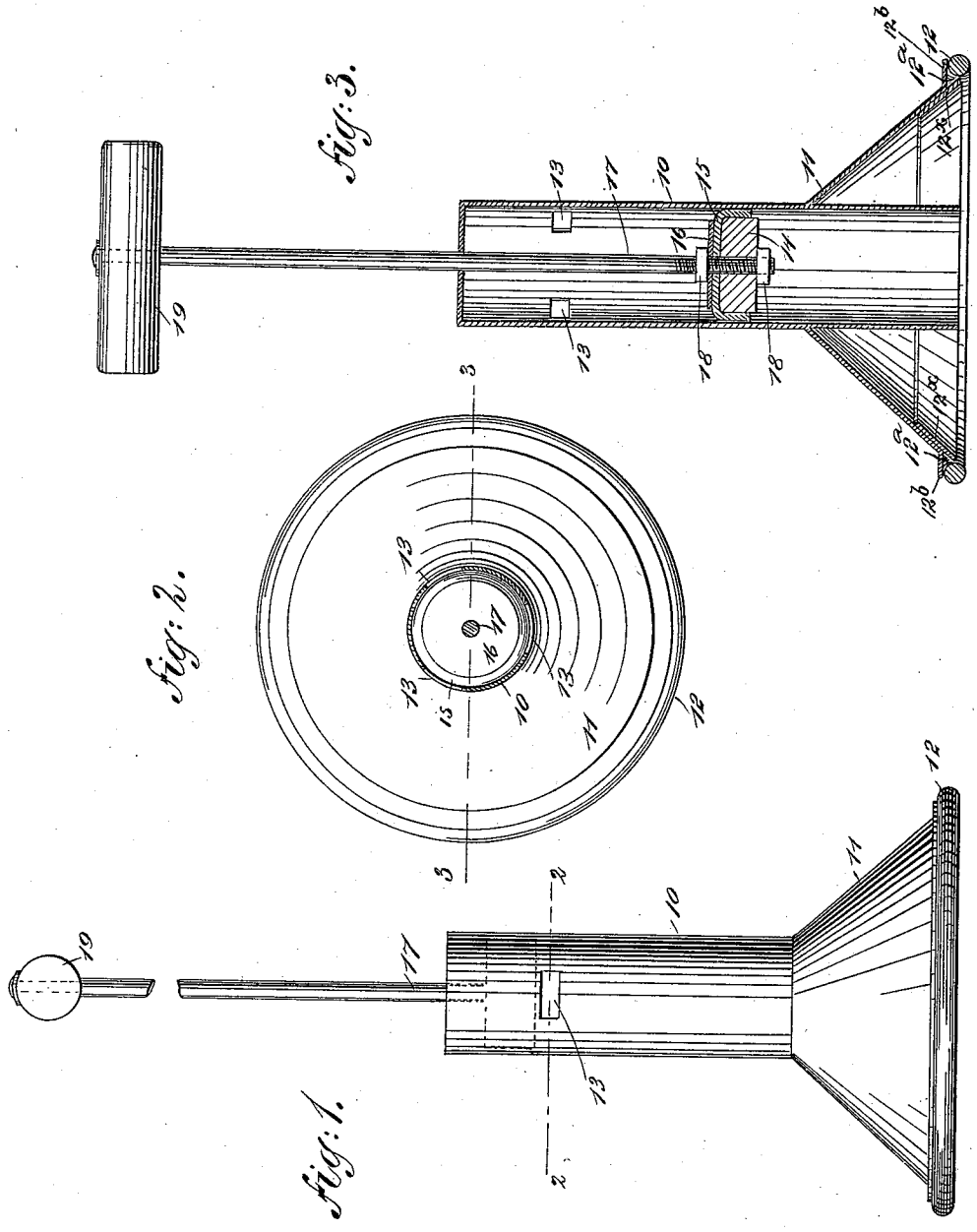

Fig. 3.

Fig. 2.

Fig. 1.

WITNESSES:
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UNITED STATES PATENT OFFICE.

GEORGE W. ALDRICH, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO WILLIAM GREEN, OF SAME PLACE.

FORCE-PUMP.

SPECIFICATION forming part of Letters Patent No. 534,240, dated February 12, 1895.

Application filed November 20, 1894. Serial No. 529,410. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. ALDRICH, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Force-Pump, of which the following is a full, clear, and exact description.

My invention relates to improvements in force pumps; and the object of my invention is to produce a pump which is not intended to lift water but is adapted to force water through a sink or spout so as to remove any obstruction therein.

Another object of my invention is to produce a pump of this character, which may be instantly applied to any ordinary spout or pipe such as the waste pipe of a sink, bath-tub, wash basin, or other article, which, when applied, may be conveniently operated, and which is adapted to force the water through the said pipe with sufficient pressure to remove any ordinary obstruction.

To these ends my invention consists of a force pump, the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken side elevation of the pump embodying my invention. Fig. 2 is a sectional plan on the line 2—2 of Fig. 1; and Fig. 3 is a vertical section on the line 3—3 of Fig. 2.

The pump is provided with a barrel 10 which is closed at the top and at the bottom is adapted to fit over an ordinary sink or drain pipe, although if the said drain pipe is larger than the barrel the latter may be inserted in the drain pipe and the pump used with equal effect. The barrel 10 extends centrally through and is secured to a hollow cone 11, around the lower edge of which is a packing 12 of rubber, or other suitable material, which fits in a socket 12^a around the edge of the cone. The socket 12^a is V-shaped in cross section and is formed between a horizontal flange 12^b formed on the lower part of the cone 11, and the edge of a coned ring $12^\times$ secured inside the cone 11 with its lower edge depending below the flange 12^b thereof. The barrel 10 has ports 13 in its sides, these being placed preferably near the top, and when the piston 14 in the barrel is raised to the upper part thereof, the ports will be below the piston so that the barrel may fill with water or air, as the case may be.

The piston 14 is provided with a suitable packing 15 to enable the piston to run snugly in the barrel, and the packing is held in place by a plate 16 and by nuts 18 which are arranged above and below the piston and fasten it to the piston rod 17 which projects upward through the pump valve and terminates in a handle 19. It will of course be understood, however, that any suitable fastening may be used, and that it may be connected with the piston rod in any convenient manner.

When the pump is to be used to remove an obstruction from a waste pipe, it is placed with the barrel in connection with the pipe and with the cone surrounding it, thus making an air tight joint. The receptacle with which the drain pipe is connected is preferably filled with water high enough to permit the water to flow through the ports 13. The piston 14 is raised above the ports and then pushed violently downward, thus forcing the water in front of it, and it will be seen that a very heavy pressure can be conveniently applied to the handle 19 and to the piston so that the water is forced through the choked pipe, under heavy pressure, and the obstruction is moved along. This operation may be repeated until the obstruction is entirely removed and the pipe cleaned.

It will be seen that air may be forced through the pump and pipe by means of the piston with a similar but somewhat less effect.

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

In a pump, the combination of a barrel having one end open and provided with a port at the other end, a piston arranged in the barrel and adapted to be raised above the port at the upper end of the barrel, a cone secured to the open end of the barrel, a coned ring secured to said cone with its edge spaced apart from the edge thereof whereby an annular socket is formed and a packing ring located in said socket, substantially as set forth.

GEORGE W. ALDRICH.

Witnesses:
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