

No. 697,835.

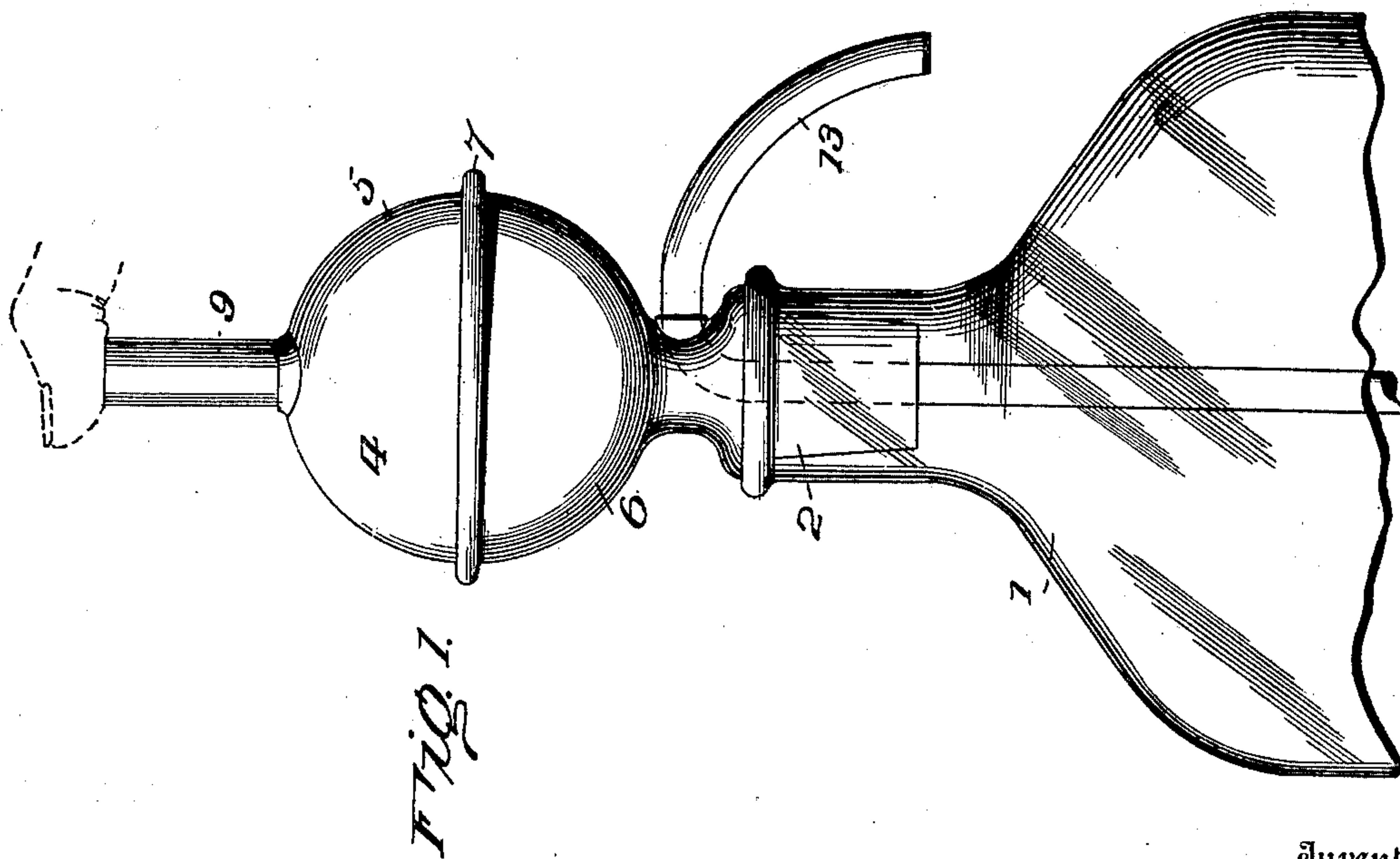
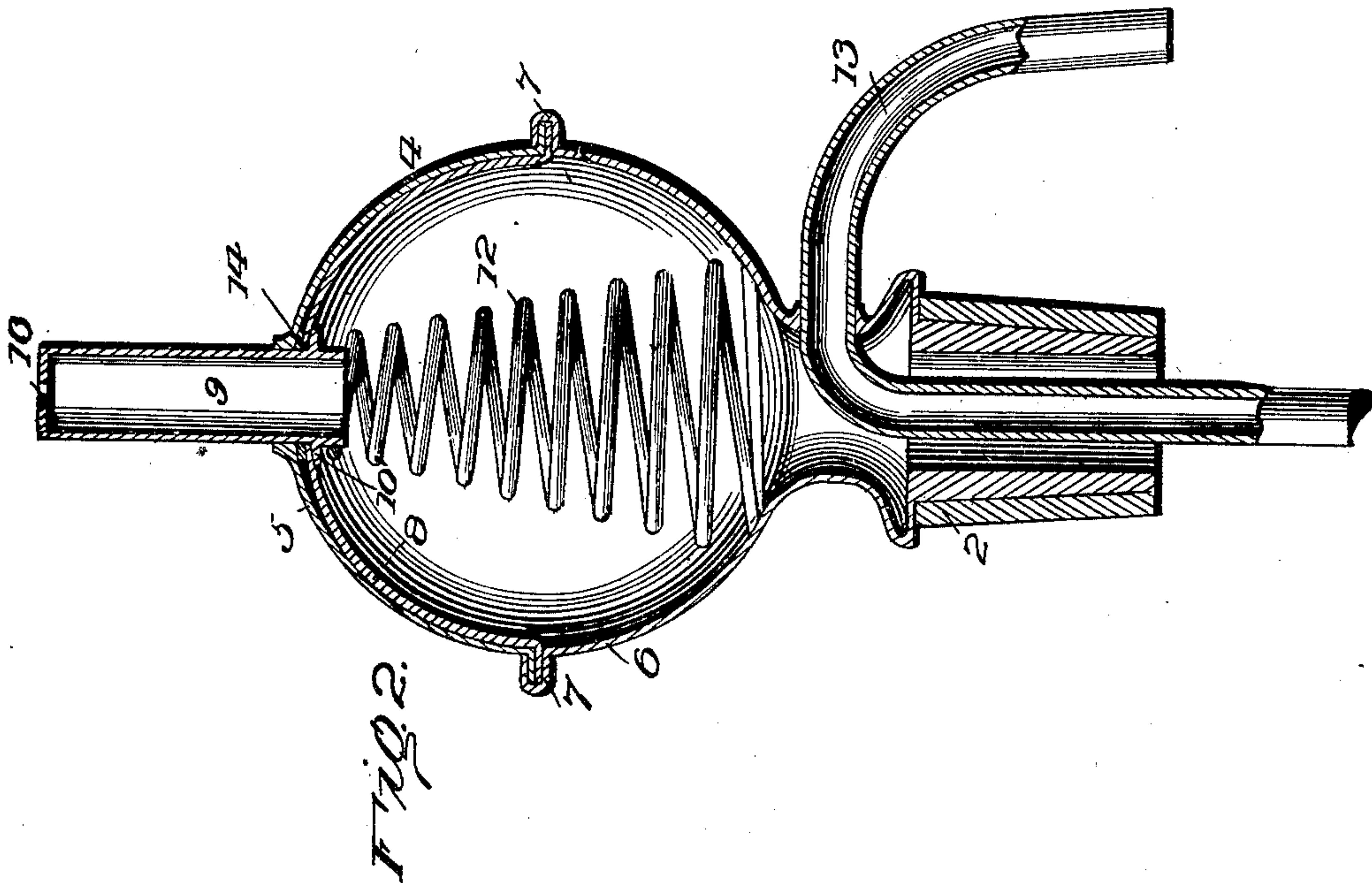
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G. GIORGETTI, T. J. FUYAT & D. FEDERIGO.

SIPHON PUMP.

(Application filed Nov. 12, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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SIPHON-PUMP.

SPECIFICATION forming part of Letters Patent No. 697,835, dated April 15, 1902.

Application filed November 12, 1901. Serial No. 82,011. (No model.)

To all whom it may concern:

Be it known that we, GIOVANNI GIORGETTI, a subject of the King of Italy, residing at Boston, in county of Middlesex, TOUSSAINT J. FUYAT, a citizen of the United States, residing at Hudson, in the county of Essex, and DEI FEDERIGO, a subject of the King of Italy, residing at Boston, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Siphon-Pumps; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to siphon-pumps, and has for its object a simple, economical, and effective pump proper to force air above the volume of liquid contained in the bottle.

A further object of the invention is to provide in a siphon-pump a casing adapted to be held in the hand having therein a flexible valve having a piston which is perforated to receive a supply of air every time the pump is operated.

Many other objects will be hereinafter referred to, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of our improvement, showing the application of the invention to a bottle. Fig. 2 is a central section of the same.

Referring to the drawings, the numeral 1 represents a bottle, in the upper end of which is a hollow plug 2, passing through which is a tube 13. Extending upwardly from the plug is a handpiece or sphere 4, formed of upper and lower sections 5 and 6, each section being provided with a flange 7. Interposed between the flanges 7 and extending up into the upper section 5 is a semicylindrical flexible valve 8, the ends of which are positively held in position by being clamped between the flanges 7. The valve 8 is provided with a central perforation, and fitting therein is a hollow piston 9, open at its lower end and having a perforation 10 at the top and is held fast to the valve by two col-

lars 10'. The piston is guided in its movement by the perforation 14 in the upper section 5. A spring 12 is interposed between the flexible valve 8 and the bottom of the lower section of the sphere 4 to normally elevate the valve and hold it up against the top of the section 5.

To assemble the parts, the spring 12 is placed in the section 6, the valve is seated on the flange 7, and the upper section 5 of the sphere is seated on the valve and the flange 7 of the lower section, and the latter is turned down on the flange of the upper section, which securely fastens the parts together. By this construction all separate securing devices are dispensed with. Hence the loss of or the wearing out of rivets, screws, and the like incident to rusting, &c., which frequently happens in devices of this character, is dispensed with.

The operation of our invention is as follows: The operator grasps the handpiece or sphere, which is of such size as to be readily grasped by the palm of the hand, the thumb being placed over the perforation 10 at the upper end of the piston 9, and by slight pressure downward the air contained between the top of the piston and the top of the volume of the water displaces the latter and forces it through the exit-pipe 13. After the supply of liquid has been drawn the thumb is removed from the piston and the air rushes in through the opening 10 for the next operation, and simultaneously the spring returns the valve to its normal position.

Such a construction enables the invention to be applied to any bottle without the necessity of changing or making special details of construction to coöperate with the improvement. Moreover, a fresh supply of air is admitted at every operation, the supply being predetermined and limited by the operator at all times, enabling him to have the volume of liquid being expelled entirely under control.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A siphon-pump comprising a suitable hollow plug, a fluid-exit pipe passing through said plug, said pipe being of smaller diame-

ter than the inner diameter of the plug, which forms a passage, a handpiece of spherical formation above the plug, said handpiece being formed in sections, a flexible valve in the
5 handpiece, a perforated plug projecting through the spherical handpiece and connected to the valve, and a spring under the valve, substantially as described.

2. A siphon-pump comprising a suitable
10 hollow plug, a tube extending through the plug, a handpiece or sphere extending from the plug and made in two sections, a flexible valve interposed between the meeting ends of the sections and clamped thereby, a spring
15 to normally seat the valve, and a hollow piston fitting the valve and guided through the handpiece, substantially as described.

3. A siphon-pump comprising a plug, an

exit-tube, a hollow handpiece extending from the plug, said handpiece being formed in sections, each section having a flange, a flexible valve in the handpiece which is fastened between the flanges of the sections, a perforated projection secured to the valve and extending from the handpiece, and a spring to normally force the projection outwardly, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:

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