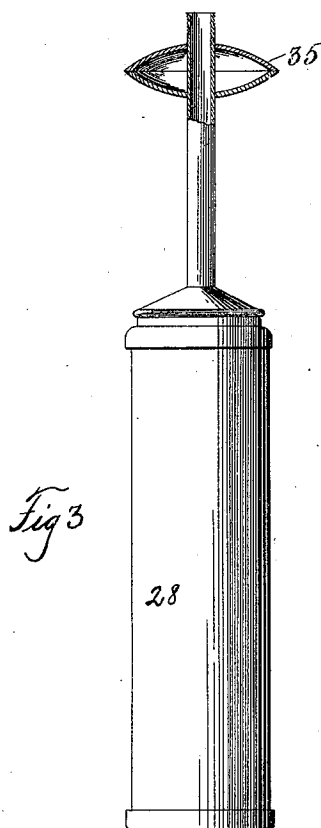
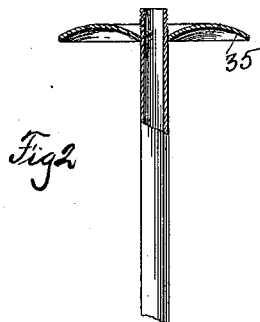
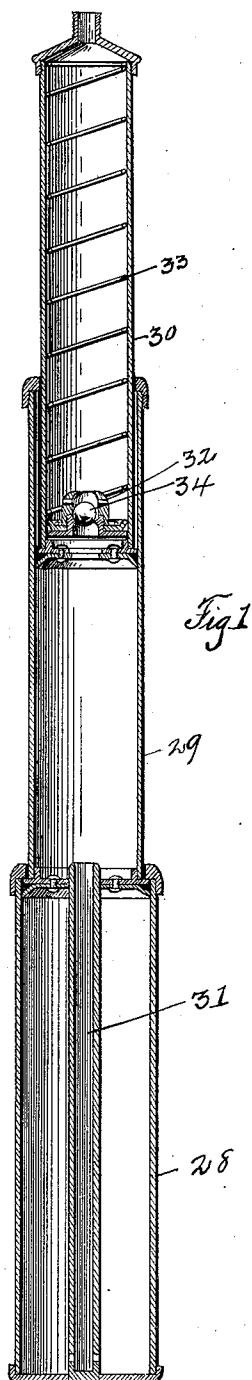


(No Model.)

R. V. WEST & H. HOLGATE.
AIR PUMP.

No. 566,953.

Patented Sept. 1, 1896.



Witnesses:-
S. Williamson
J. B. Hallock

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UNITED STATES PATENT OFFICE.

RICHARD VALJEAN WEST AND HARRY HOLGATE, OF PHILADELPHIA,
PENNSYLVANIA.

AIR-PUMP.

SPECIFICATION forming part of Letters Patent No. 566,953, dated September 1, 1896.

Application filed July 11, 1895. Serial No. 555,609. (No model.)

To all whom it may concern:

Be it known that we, RICHARD VALJEAN WEST and HARRY HOLGATE, citizens of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Air-Pumps, of which the following is a specification.

Our invention relates to a new and useful improvement in air-pumps, but more especially to pumps for use in inflating pneumatic bicycle-tires, and has for its object to provide such a device whose air-delivering capacity will be considerably greater than those now in use without materially increasing its size.

With these ends in view our invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, we will describe its construction and operation in detail, referring by number to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a vertical sectional view. Fig. 2 is a detail view of the rod and handhold, and Fig. 3 is a modified form of a handhold applied to the pump shown in Fig. 1.

In the drawings three tubes 28, 29, and 30 are adapted to telescope one within the other, the tubes 29 and 30 being provided with suitable caps and washers at their lower ends, and the outside tube 28 is provided with a hollow rod 31, which passes through the cap and washer of the tube 29. Within the tube 30 is arranged a plunger 32, normally held against the bottom of said tube by the coil-spring 33 and provided with a suitable valve 34, so that the operation of this embodiment of our improvement will be as follows: When the tubes are telescoped, the air contained in the tube 29 will be first dis-

placed, passing partly into the tubes 28 and 30 until the end of the hollow rod 31 comes in contact with the lower side of the plunger 32 and forces said plunger upward against the action of the spring 33, thus displacing all of the air in the tubes and forcing it into the tire to which the pump is attached, the valve 34 preventing a retrograde movement of the air on the return stroke of the pump.

In Figs. 2 and 3 we have shown two forms of handhold 35, which on account of being in concavo-convex shape are strong and present a smooth and even surface against which the fingers may act.

Having thus fully described our invention, what we claim as new and useful is—

1. In combination, a series of tubes telescopically connected, a cap inclosing the end of the lower tube and carrying a small central tube with holes near the bottom thereof, caps and washers arranged in the lower ends of the upper tubes, the cap, in the central section having a central aperture to receive the tube and the cap of the top section, being provided with a spring-pressed plunger carrying a suitable valve, as and for the purpose described.

2. In combination, tubes telescopically connected, a small central tube in the lower tube with air-ports near the lower end thereof, a cap or washer arranged in the lower end of the upper tube said cap having a central aperture to receive the central tube, a plunger connected with the tube and a valve arranged in the plunger, as and for the purpose described.

In testimony whereof we have hereunto affixed our signatures in the presence of two subscribing witnesses.

RICHARD VALJEAN WEST.
HARRY HOLGATE.

Witnesses:

F. MATTNER,
SAMUEL L. TAYLOR.