

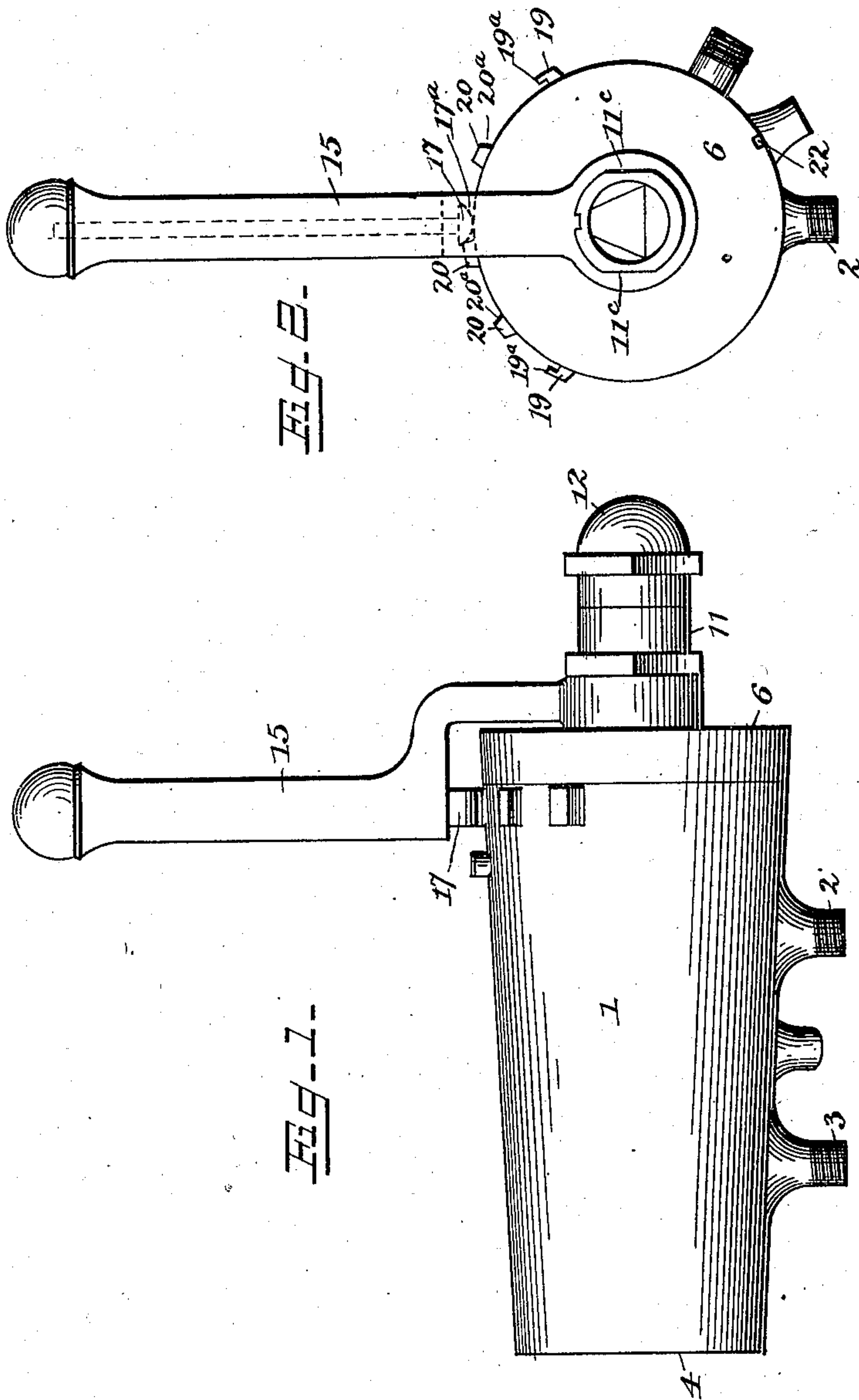
No. 723,768.

PATENTED MAR. 24, 1903.

P. WHITING.
CYLINDER VALVE.
APPLICATION FILED SEPT. 17, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
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Frank G. Radelfinger.

Inventor:
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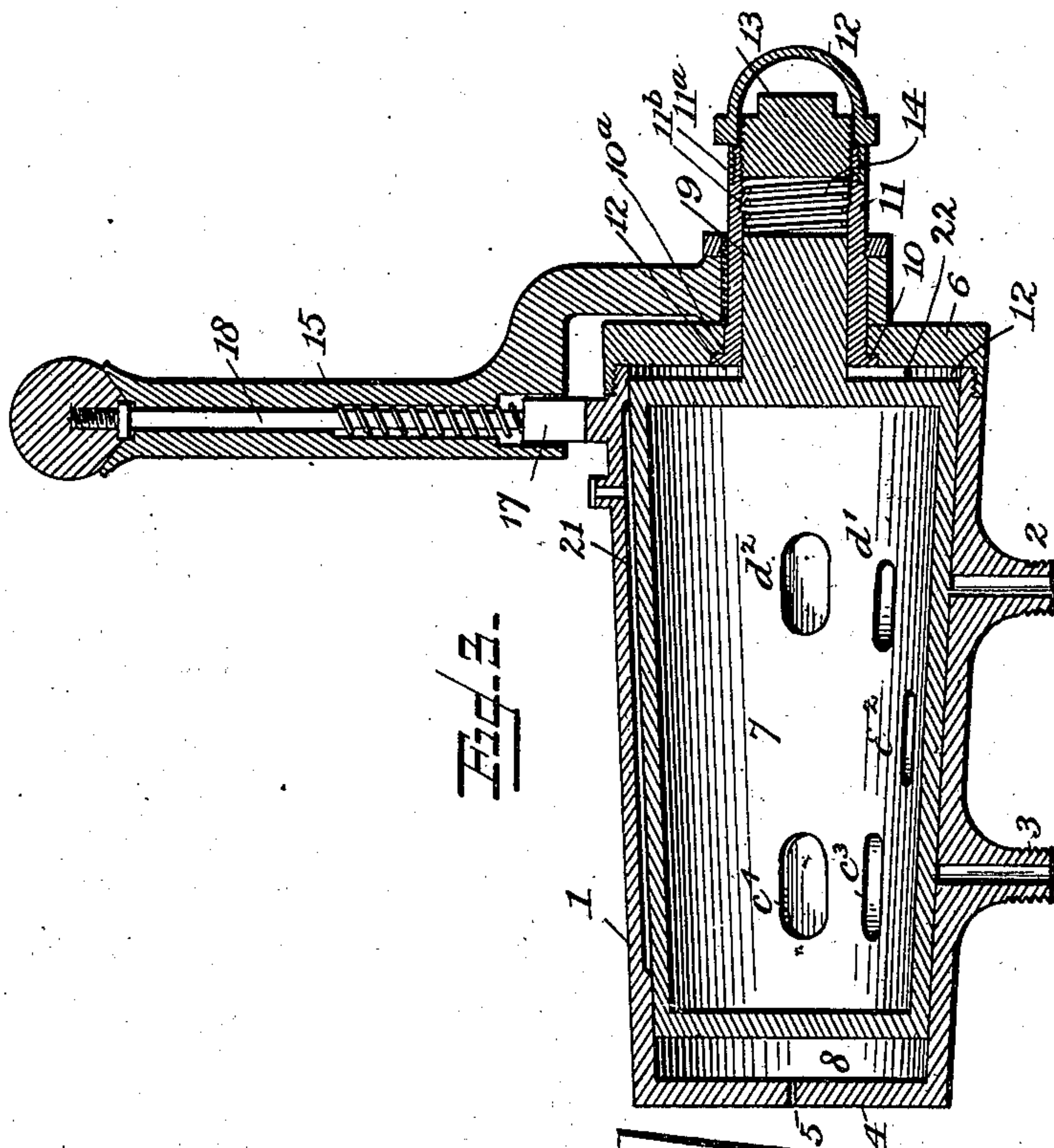


Fig. 3.

Fig. 4.

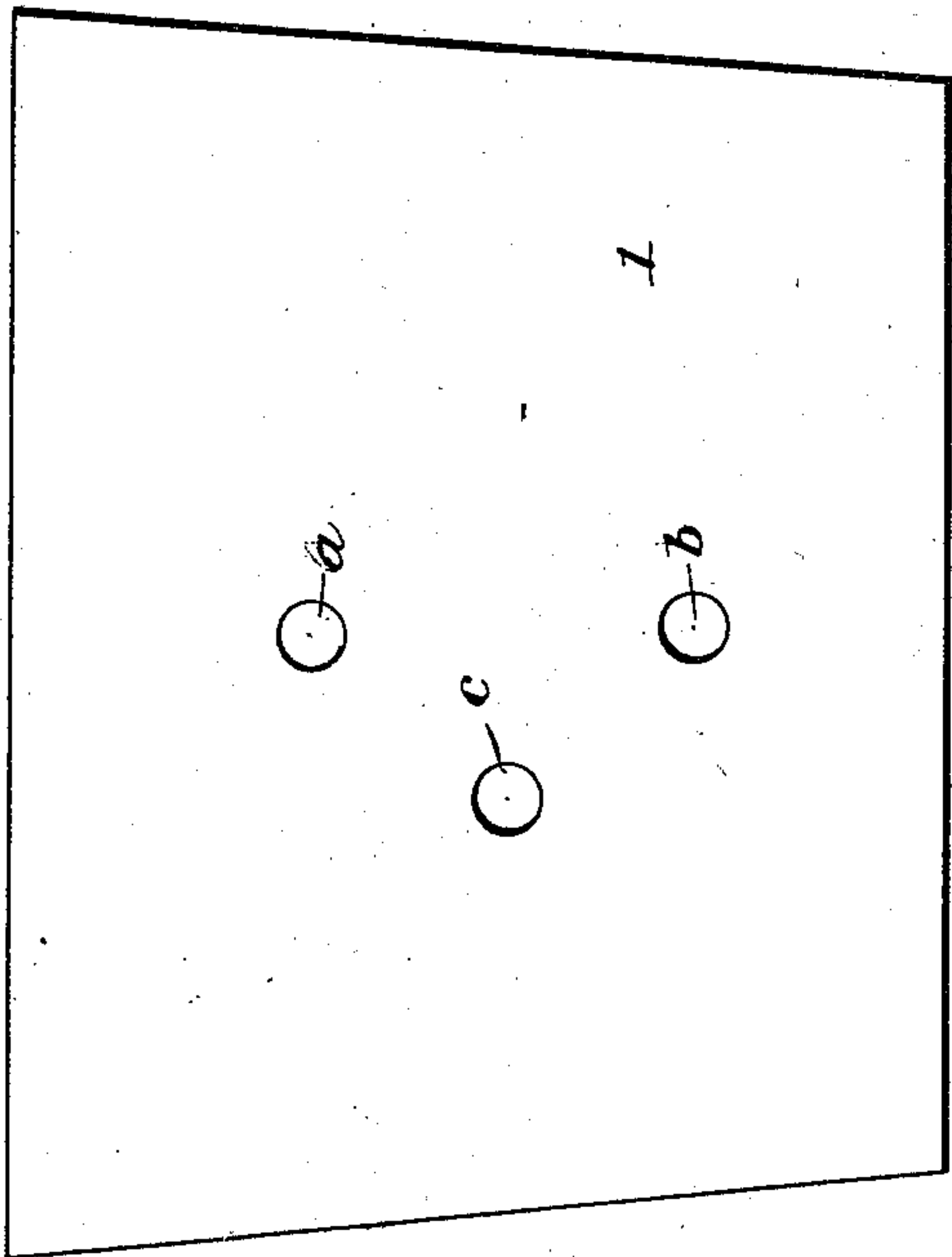
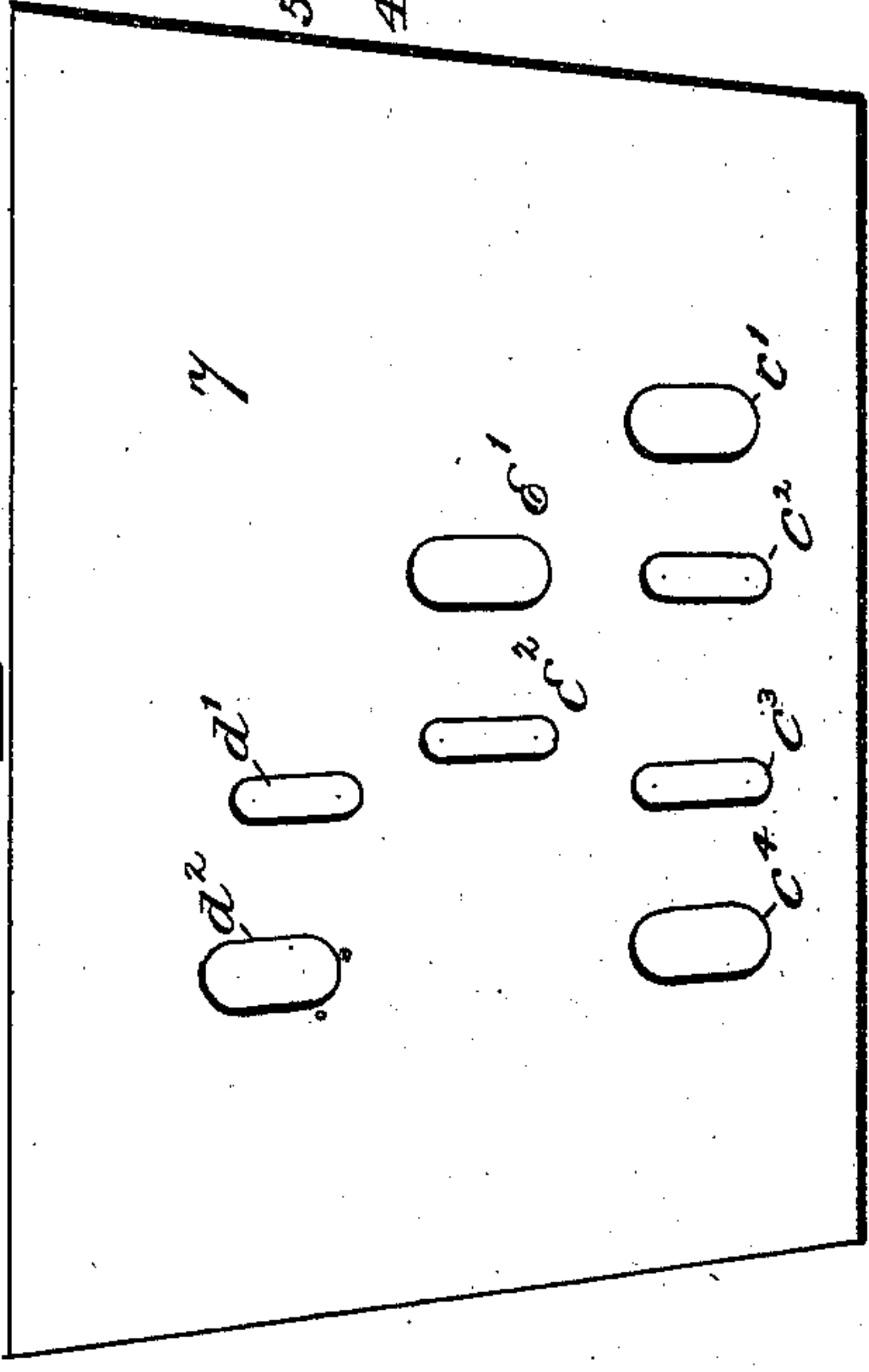


Fig. 5.



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UNITED STATES PATENT OFFICE.

PAUL WHITING, OF EAST LAS VEGAS, TERRITORY OF NEW MEXICO.

CYLINDER-VALVE.

SPECIFICATION forming part of Letters Patent No. 723,768, dated March 24, 1903.

Application filed September 17, 1902. Serial No. 123,762. (No model.)

To all whom it may concern:

Be it known that I, PAUL WHITING, a citizen of the United States, residing at East Las Vegas, in the county of San Miguel and Territory of New Mexico, have invented new and useful Improvements in Cylinder-Valves, of which the following is a specification.

My invention relates to valves for air-brake systems, and is an improvement on my cylinder-valve covered by Letters Patent No. 679,247, dated July 23, 1901.

The simple and novel construction employed by me in carrying out my invention is fully described and claimed in this specification and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is a side elevation of my valve. Fig. 2 is an end elevation of the same. Fig. 3 is a longitudinal section of the same. Fig. 4 is a development of the casing. Fig. 5 is a development of the valve.

Like characters of reference designate like parts in the different views of the drawings.

The numeral 1 designates the outer casing of my valve, which casing is frusto-conical and is provided with three ports *a*, *b*, and *c*. The ports *a* and *b* are in alinement with each other and have threaded connections 2 and 3, respectively, for pipes; but the port *c* has no connection, as it is an exhaust-port. The small end 4 of the casing is closed, except for an air-opening 5 therein, and the large end is closed by a head 6, which fits threads formed on the outer side of the casing 1.

Mounted to rotate in the casing 1 is a hollow conical valve 7, fitting snugly the casing 1, with a space 8 at the small end to permit wear. Formed integral with the larger end of the valve 7 is a stem 9, which extends through an aperture 10 in the head 6 and fits snugly a sleeve 11, having a flange 12 thereon, which engages an enlarged inner portion 10^a of the aperture 10 and projects beyond the head 6. Threads 11^a are formed on the outside of the sleeve 11 to accommodate a nut 12, which fits over the head of a nut 13, which fits internal threads 11^b in the sleeve 11 and bears on the outer end of a spring 14, which bears at its inner end on the outer end of the stem 9. By this combination of valve 7, stem

9, sleeve 11, spring 14, and nuts 12 and 13 the valve 7 is yieldingly held in its seat.

A handle 15 is fitted over the sleeve 11, which is made slab-sided at 11^c and is held on said sleeve by a nut. A spring-actuated latch 17, carried by a rod 18, is mounted in the handle in position to engage lugs 19 and 20, formed on the casing 1. The lugs 19 are constructed with latches 19^a thereon, designed to engage and limit the movement of the latch 17, and the lugs 20 are beveled off at 20^a, so that the latch 17, which is rounded off on the under side at 17^a, can be forced to ride over them. The lugs 19 and 20 are set to correspond to elongated ports formed in the valve 7 and designated *c'*, *c*², *c*³, *c*⁴, *d'*, *d*², *e'*, and *e*².

An oil-groove 21 is formed in the top of the casing 1 and a drain-groove 22 in the bottom of the casing.

When in use, my valve is operated by the handle 15 and the latch 17 forced to ride over the beveled lugs 20 to move it from one position to another, as set forth in my patent already referred to. The latch 17 cannot be forced on the lugs 19, for the catches 19^a prevent this.

I do not wish to be limited as to details of construction, as these may be modified in many particulars without departing from the spirit of my invention.

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

1. In a valve, the combination, of a frusto-conical casing having ports therein, a frusto-conical valve fitting said casing and having ports therein located to be brought into register with the said ports in said casing, a stem on said valve, a head fitted into said casing and having an aperture therein to accommodate said stem, a sleeve fitting over said stem and engaging said head, a spring bearing on said stem, and a nut fitted in said sleeve and bearing on said spring, substantially as described.

2. In a valve, the combination, of a frusto-conical casing, a frusto-conical valve fitting said casing and having a stem thereon, a head fitting said casing and having an aperture therein which fits over said stem, a sleeve fit-

ting over said stem and having a flange there-
on which engages the inner side of said head,
a spring bearing on said stem, and a nut fit-
ting in said sleeve and holding said spring in
5 place, substantially as described.

3. In a valve, the combination, of a frusto-
conical casing, a valve fitting said casing and
bearing an angular stem, a head fitted in said
casing and having an aperture therein to ac-
10 commodate said stem, a sleeve revolubly
mounted in said aperture and fitted on said
stem, means bearing on said stem to hold said

valve in its seat, a handle carried by said
sleeve to operate said valve, lugs on said cas-
ing and a latch carried by said handle to en- 15
gage said lugs, substantially as described.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

PAUL WHITING.

Witnesses:

WILLIAM T. MARSHALL,
W. B. BUNKER.