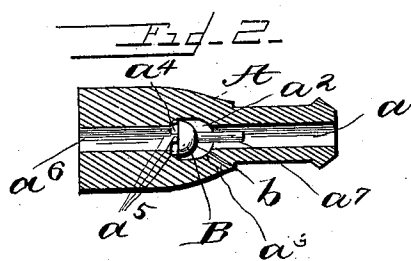
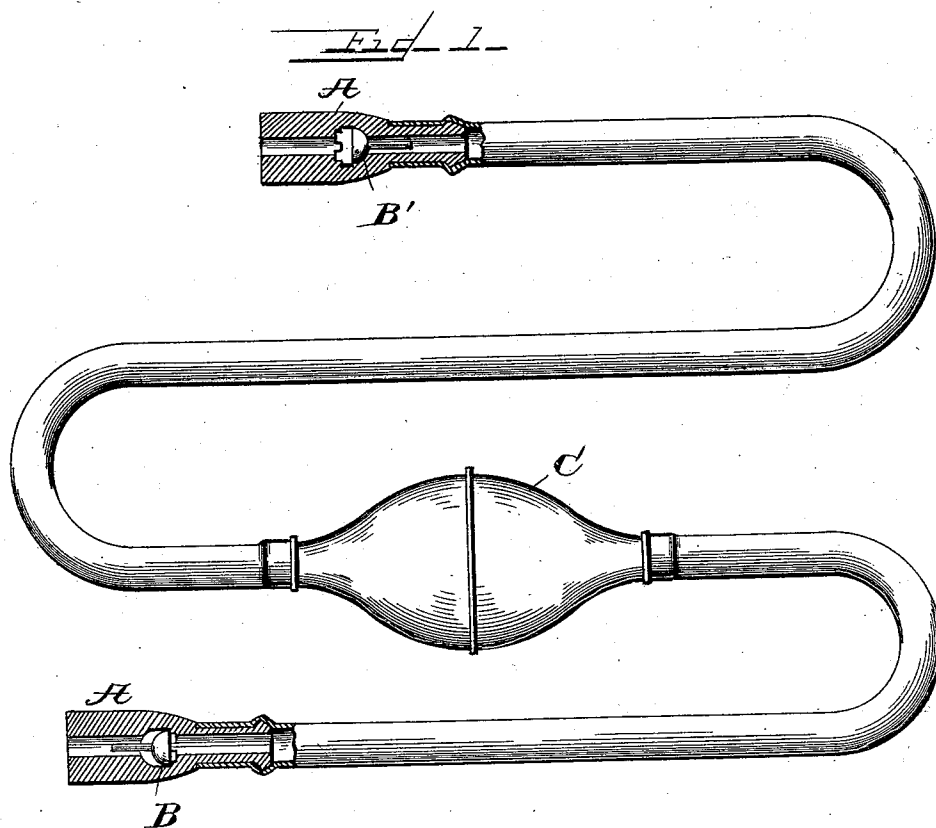


(No Model.)

V. C. VANT WOUD.
SYRINGE.

No. 466,587.

Patented Jan. 5, 1892.



Witnesses

G. A. Taubenschmidt,
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UNITED STATES PATENT OFFICE.

VICTOR C. VANT WOOD, OF BROOKLYN, NEW YORK.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 466,587, dated January 5, 1892.

Application filed August 31, 1891. Serial No. 404,312. (No model.)

To all whom it may concern:

Be it known that I, VICTOR C. VANT WOOD, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Valves for Syringes, &c.; and I do hereby 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.

My invention relates to automatic valves for syringes, sprayers, and other articles; and it consists of certain novel features of construction, fully disclosed in the accompanying drawings and described in the specification following, and being more particularly pointed out in the claims.

In the drawings, Figure 1 represents a syringe with sectional views of my improved valve attached thereto. Fig. 2 is a sectional view of my improved valve.

Similar letters of reference indicate identical parts throughout.

The object of my invention is to simplify the construction now in use and to lessen the cost of manufacture, and to this end I construct the valve-chamber and the passages leading thereto so that the walls of the same shall have sufficient elasticity to yield to permit the insertion of the valve to its proper place and then return to their normal position, and in certain constructions and combination of parts, all of which are fully disclosed in the following description and claims.

As shown in the drawings, the valve seat and casing A is cast integrally from rubber or other yielding substance, and has a longitudinal opening a passing through it, the said opening being enlarged intermediate its extremities to form a valve-chamber a^2 for the valve B. The valve-chamber a^2 is rounded at one end to form a seat a^3 for the similarly shaped face b of the valve B, and is provided at its opposite end with an annular shoulder a^4 , having projections a^5 , with spaces between them for the escape of a fluid.

The valve B is constructed, preferably, of the form shown in the drawings, having a flat and an oval inclined face and being provided with a guiding-stem a^7 .

Upon the completion of the valve seat and

casing the valve B is forced to its place in the valve-chamber a^2 through the longitudinal opening a , the flat face being opposite the projection a^5 when in place.

The operation of the valve, as shown in Fig. 1, is obvious. The bulb C being compressed, the valve B is forced to its seat and the valve B' is forced upon the projection a^5 , thus forcing the fluid out between the projection a^5 through the exit a^6 . Upon releasing the bulb C the opposite result follows, the valve B' being forced to its seat and closed, the valve B being opened.

I do not wish to be limited to my exact construction, as many details may be altered without departing from the spirit of my invention, so long as the walls of the valve-chamber and the passages leading thereto are given such a degree of elasticity as to permit the insertion of the valve by the yielding of said walls. It is also evident that the valve may be provided with the projection a^5 instead of the annular shoulder a^4 , and the oval face of the valve may be made cone-shaped, and many other modifications may be made which will be followed by satisfactory results.

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

1. The herein-described valve-casing, formed integrally and having a valve-chamber within the same and inlet and outlet passages or openings to said chamber, the walls of said passages and chamber having sufficient elasticity to permit the valve to be forced through said passages into said chamber through the yielding of the walls, substantially as described.

2. The combination of an integral valve-casing provided with a longitudinal opening and having a valve-chamber within the same, said casing and said chamber being provided with interior elastic walls, a valve having an inclined and a flat face, and projections interposed between said flat face and a wall of the chamber, said projections being made integral therewith, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

VICTOR C. VANT WOOD.

Witnesses:

CHARLES KAHL,
CHARLES W. INNES.