

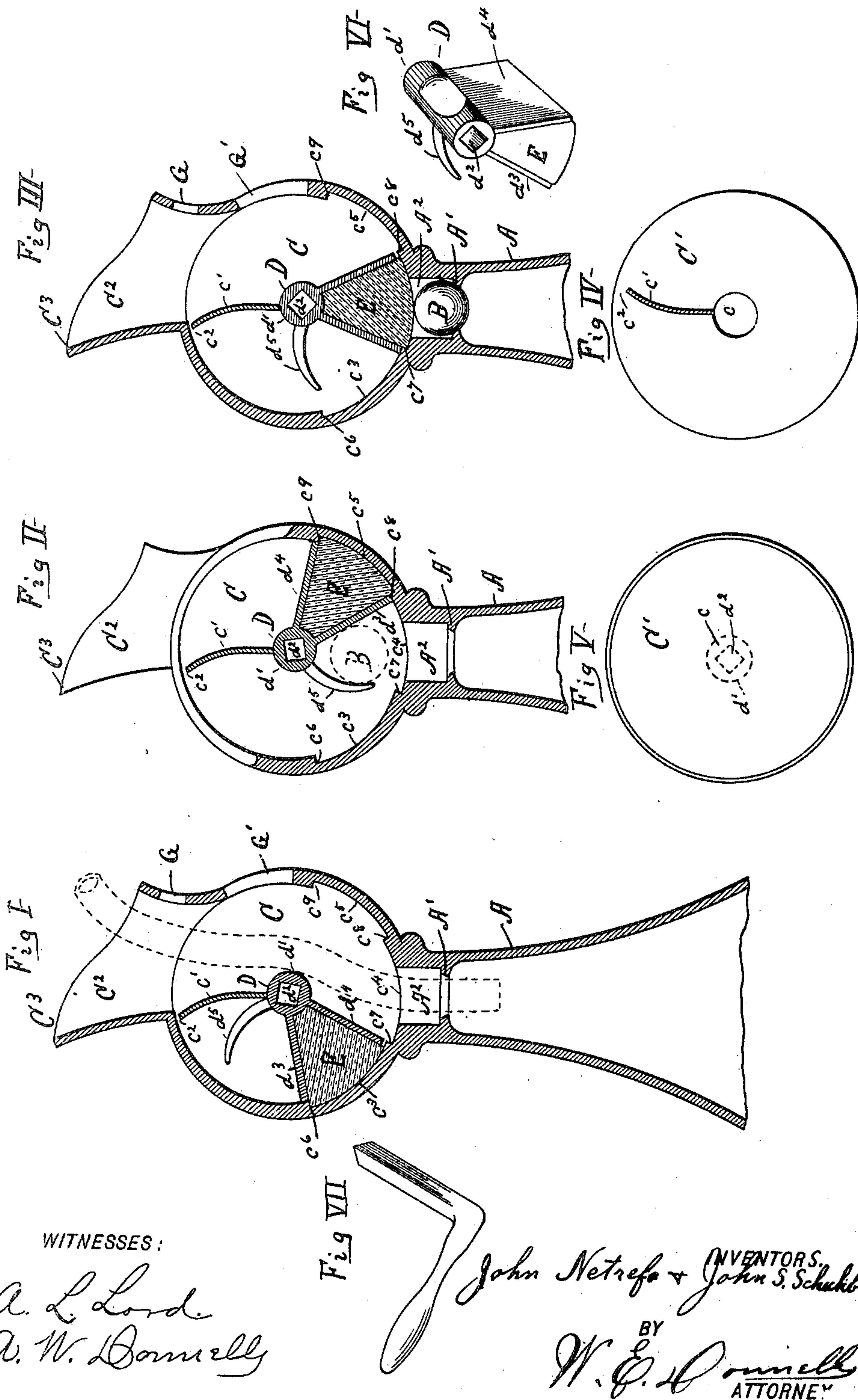
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Patented Feb. 12, 1901.

J. NETREFA & J. S. SCHUHBIESSER.  
NON-REFILLABLE BOTTLE.

(No Model.)

(Application filed Jan. 8, 1900.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN NETREFA AND JOHN S. SCHUHBIESSER, OF CLEVELAND, OHIO.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 668,115, dated February 12, 1901.

Application filed January 8, 1900. Serial No. 802. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN NETREFA and JOHN S. SCHUHBIESSER, of Cleveland, Cuyahoga county, and State of Ohio, have invented certain new and useful Improvements in Non-Refillable Bottles; and we 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 pertains to make and use the same.

Our invention relates to non-refillable bottles or that type of containers which permit the escape of liquid from but prevent the refilling of the same.

The object of our invention is to so construct the upper portion of the bottle that after the bottle has once been filled it can be locked in closed position, and thus hermetically sealed, and when opened for the purpose of allowing the liquid to escape a valve comes into play which closes the bottle when the same is in upright position, but allows the liquid to escape when the bottle is tilted or inverted.

Our invention consists in the peculiar construction and mechanism employed to attain the above set forth object, as will hereinafter fully appear and be especially set forth in the claims.

Heretofore bottles or containers of this type have been constructed or provided with various devices which, if effective, were too expensive or complicated or, if cheap, were not effective. By our construction, however, we obtain a bottle which is easily and cheaply constructed and which effectually prevents refilling.

In the drawings, Figure I is a sectional view illustrating the upper portion of a bottle or container, showing the position of the parts as they are before the initial filling of the same and showing the preferred method of filling the same. Fig. II illustrates in a sectional view the parts in the position as they appear for emptying the containers and showing the ball-valve in dotted lines and in the position it assumes when the container is tilted or inverted. Fig. III is a sectional view illustrating the position of the parts when the container is filled and sealed for shipping. Figs. IV, V, and VI illustrate details of the construction, and Fig. VII is a view illustrat-

ing a tool or key which may be used to manipulate the device.

A represents the upper portion or neck of a container, which is formed with a valve-seat A' for receiving and seating a globular or ball valve B. The seat A' forms the bottom of a valve-chamber A<sup>2</sup>, which receives and guides the valve B to the seat. The valve B acts as the temporary stopper for the container when the same is in condition to be emptied of its contents (see Fig. II) and also acts, in conjunction with other parts of the device, as the sealing-cork after the container is filled.

C represents a chamber which is formed at the top of the container and located above the neck thereof. The chamber C is formed circular and box-shaped, and in forming the same one side is left open and subsequently closed by means of a circular lid or cover C', (see Figs. IV and V,) which is provided with a central opening c and a deflector c', which projects laterally therefrom to a distance equal to the depth of the chamber C and extends radially to a point near the periphery, so as to leave a space c<sup>2</sup> between its end and the inner periphery of the chamber C. The chamber C at its lower part is provided with a series of steps c<sup>3</sup>, c<sup>4</sup>, and c<sup>5</sup>, respectively, which are bounded at their ends with shoulders c<sup>6</sup>, c<sup>7</sup>, c<sup>8</sup>, c<sup>9</sup>, respectively, which in turn extend from side to side of said chamber C and act as stops for a movable sealing device to be hereinafter set forth. The upper end of the chamber C is provided with a mouth C<sup>2</sup>, having a lip C<sup>3</sup>.

D represents a pivoted sealing device. The sealing device D is pivoted centrally, as at d, within the chamber C in any suitable manner, so that it can be moved in said chamber from one position to another in one direction. Our preferred construction of sealing device D is illustrated in Fig. VI, wherein it is shown as formed of any suitable metal and provided with a central barrel d', which forms the pivotal portion of the device. One end of the barrel d' is provided with an orifice d<sup>2</sup> of irregular shape for the reception of a key such as is illustrated in Fig. VII, whereby the device may be manipulated or moved to either of the positions shown in Figs. I, II, or III, as may be necessary to close or open the bottle or con-



tainer. The end  $d^2$  extends into the opening  $c$  of the lid or cover  $C'$ .

$d^3 d^4$  represent two leaves depending from the barrel  $d'$  and disposed at an acute angle to each other. The leaves  $d^3 d^4$  inclose and secure a rubber piece  $E$ . The rubber  $E$  is formed so as to fit between the leaves  $d^3 d^4$  and extend slightly at the sides of the same. At the lower free end the rubber  $E$  is curved so as to conform to the shape of the steps  $c^3, c^4$ , and  $c^5$  and fit tightly thereon and extends out, so as to engage the shoulders  $c^6, c^7, c^8$ , and  $c^9$  and allow the free ends of the leaves  $d^3 d^4$  to clear the same. (See Figs. I, II, III, and VI.)

Extending out from one side of the barrel  $d'$  is an arm  $d^5$ , which is curved downward and acts as a check to the ball-valve  $B$  when the bottle or container is being emptied (see Fig. II) and prevents the said valve from escaping through the mouth of the bottle.  $G G'$  represent two orifices which are formed in one side of the chamber  $C$  opposite the lip  $C^3$ . The object in providing the orifices  $G G'$  will hereinafter appear.

The manner of operating our device is as follows: The position of the parts being as illustrated in Fig. I, the container or bottle is filled by means of siphonage through a rubber tube (see Fig. I in dotted lines) or in any other suitable manner. After the container is filled the pivoted sealing device  $D$  is moved by suitable means, such as the key illustrated in Fig. VII, to the position illustrated in Fig. III, where the rubber  $E$  rests upon and tightly compresses the valve  $B$ , while at the same time the rubber  $E$  seals the upper portion of the neck  $A$ . The sealing device  $D$  is prevented from being returned to its original position (illustrated in Fig. I) by shoulder  $c^7$ . (See Fig. III.) No further sealing or corking is necessary. The container is now ready for sale or shipment. When it is desired to open the container, all that is necessary is to again move the sealing device to the position illustrated in Fig. II. This allows the ball-valve  $B$  freedom to move to the position illustrated by dotted lines in Fig. II, thus allowing the liquid to flow from the container past through the open space  $c^2$  of the same. The curved arm  $d^5$  prevents the ball-valve  $B$  from escaping and allows it to return to the position illustrated by solid lines, Fig. III, thus clos-

ing the container and preventing evaporation or preventing dirt from entering the container.

It will be seen that the sealing device  $E$  as it is moved to any one of the positions illustrated by Figs. II or III is retained in such positions as against any return by the shoulders  $c^7$  or  $c^8$  and cannot be moved in either direction after the same has been advanced to the position shown in Fig. II, and inasmuch as the sealing device  $E$  and the deflector  $c'$  form walls for the space  $H$  the liquid cannot be poured into the container through the mouth of the same after the parts have been moved to the position shown in Fig. II. If any attempt is made to refill the container, the liquid will be deflected and pass through the openings  $G$  and  $G'$  and will not enter the lower part of the chamber  $C$ .

The cover or lid  $C'$  may be secured to the chamber  $C$  in any suitable manner, as may also the chamber  $C$  to the upper end of the neck  $A$ .

Certain modifications may be made in constructing our device without departing from our invention.

What we claim is—

1. A non-refillable bottle or container comprising a valve located and seated in the neck of the same, and a pivoted locking device located above said valve and provided with an elastic face adapted to engage the valve and lock the same in position, substantially as set forth.

2. A non-refillable bottle or container comprising a valve located in the neck of the bottle a cylindrical box-shaped chamber located above said valve and communicating with the interior of the bottle or container, said chamber containing a pivoted locking device for securing the valve to its seat and means for retaining said locking device against being returned to a former position substantially as set forth.

Signed by us at Cleveland, Ohio, this 13th day of November, 1899.

JOHN NETREFA.

JOHN S. SCHUHBIESSER.

Witnesses:

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