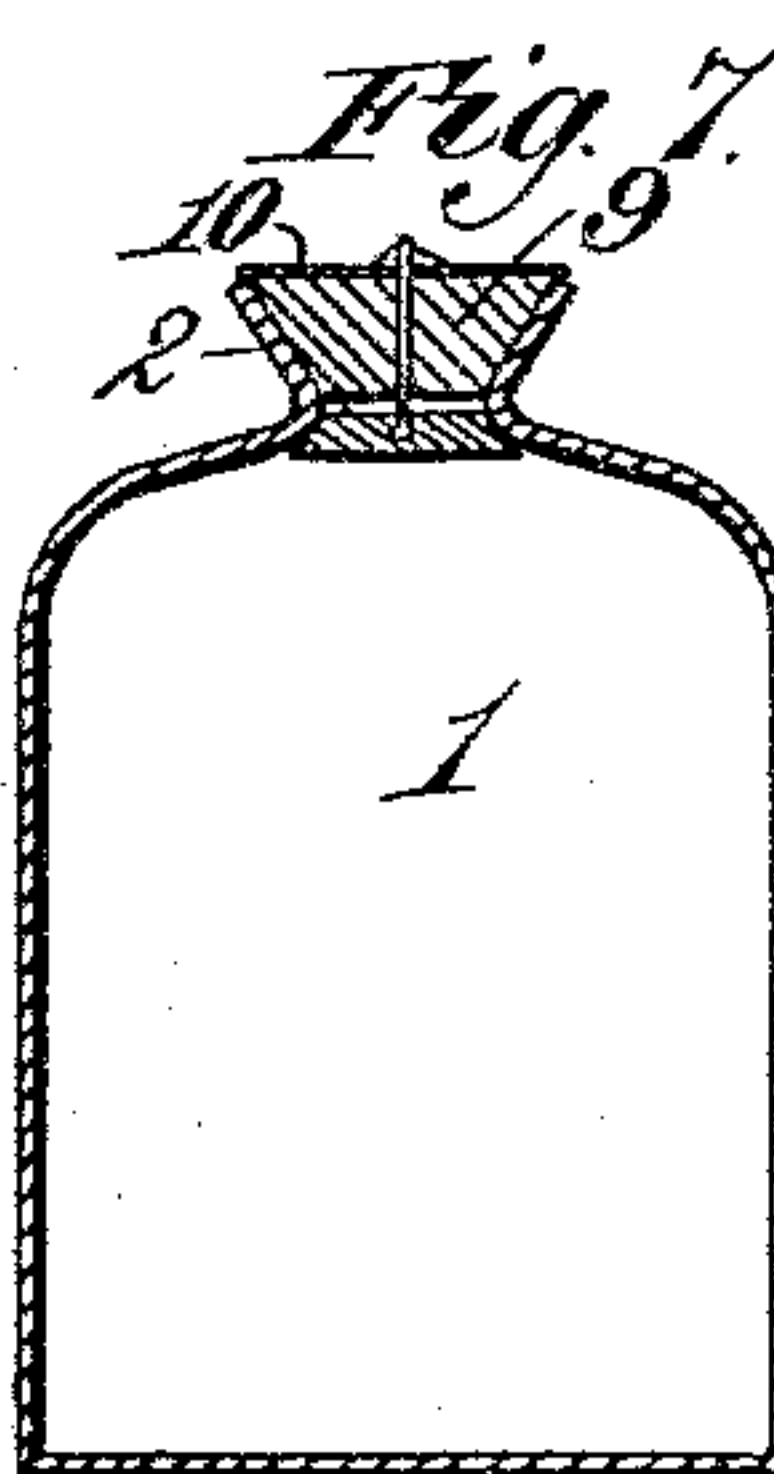
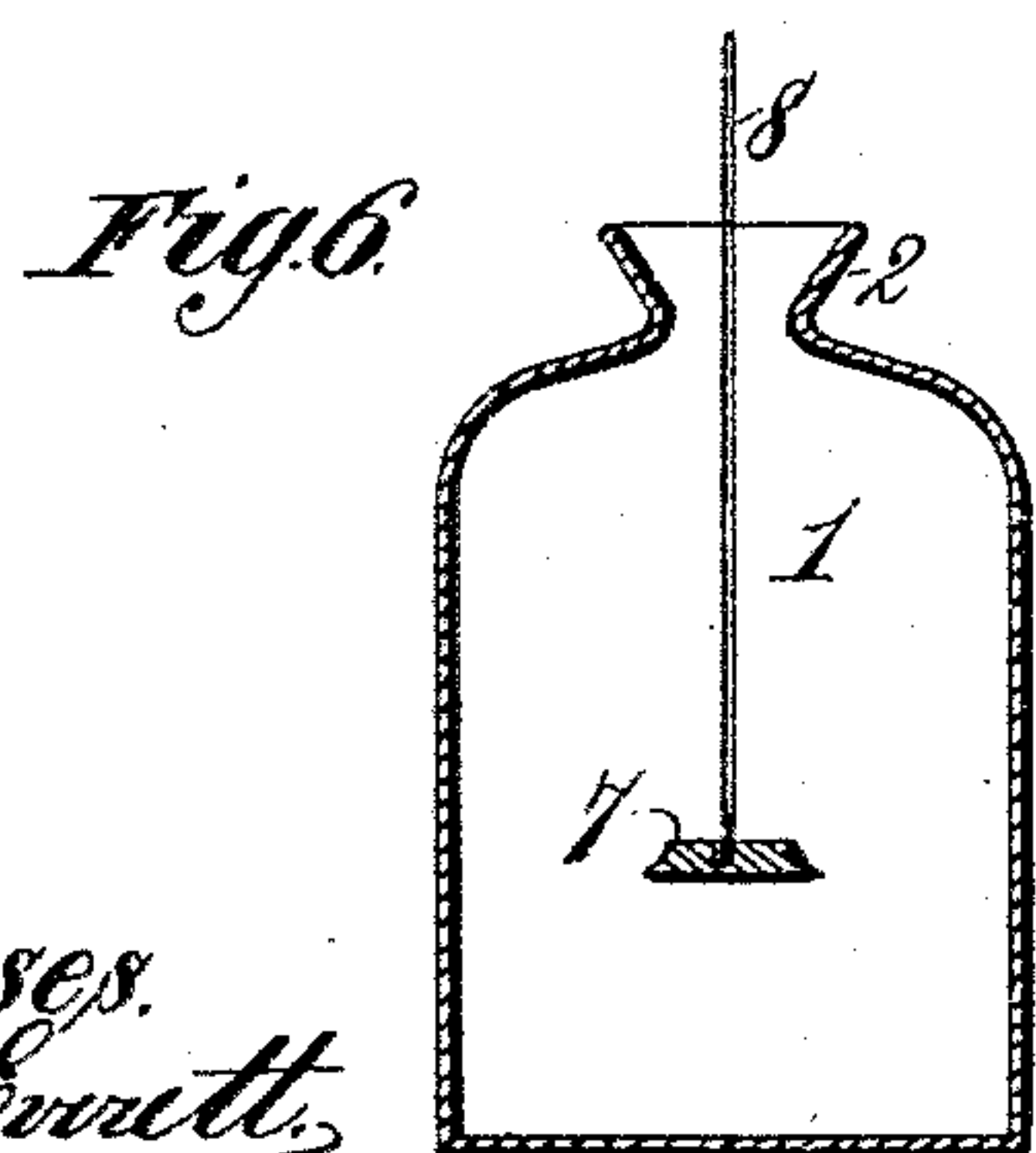
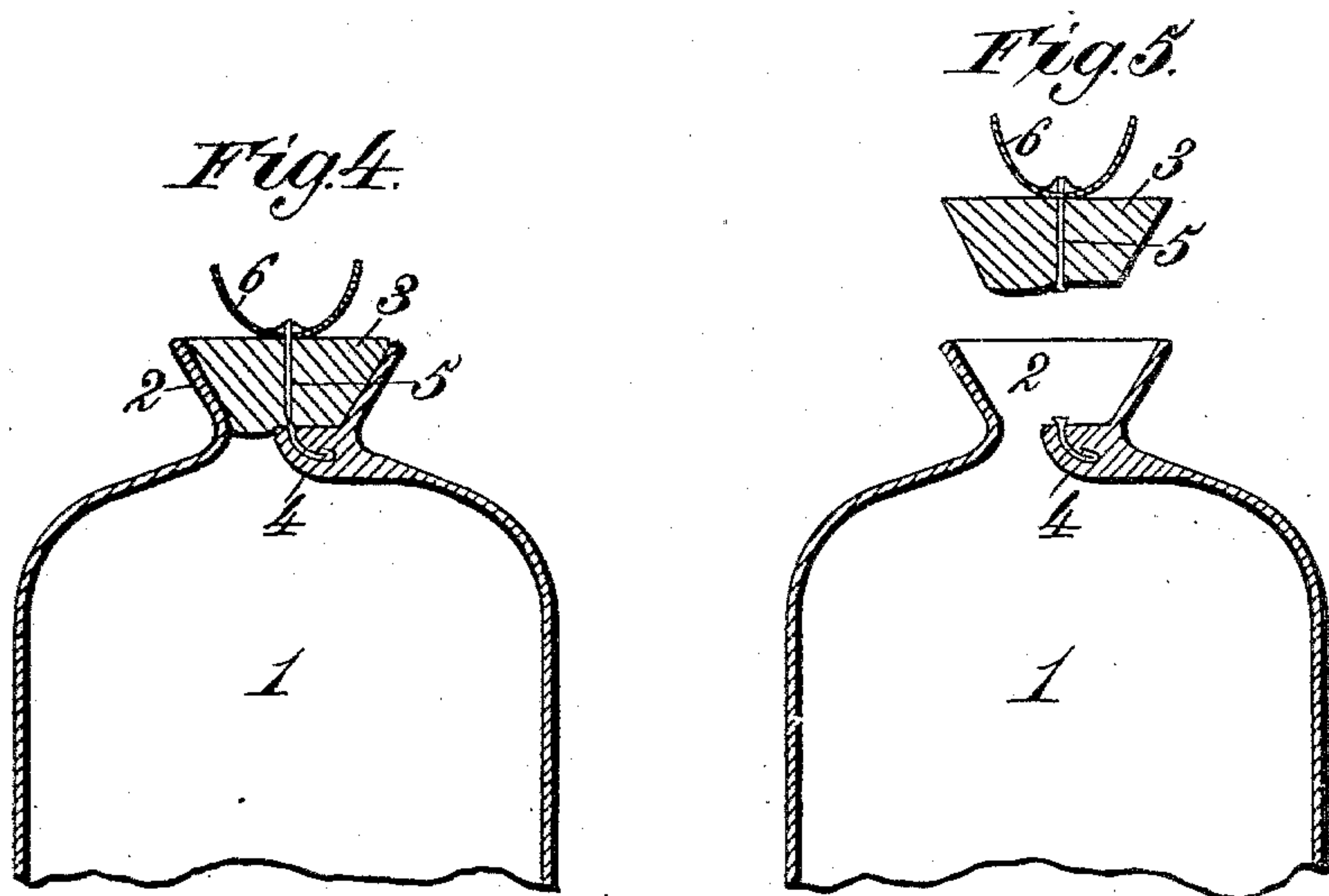
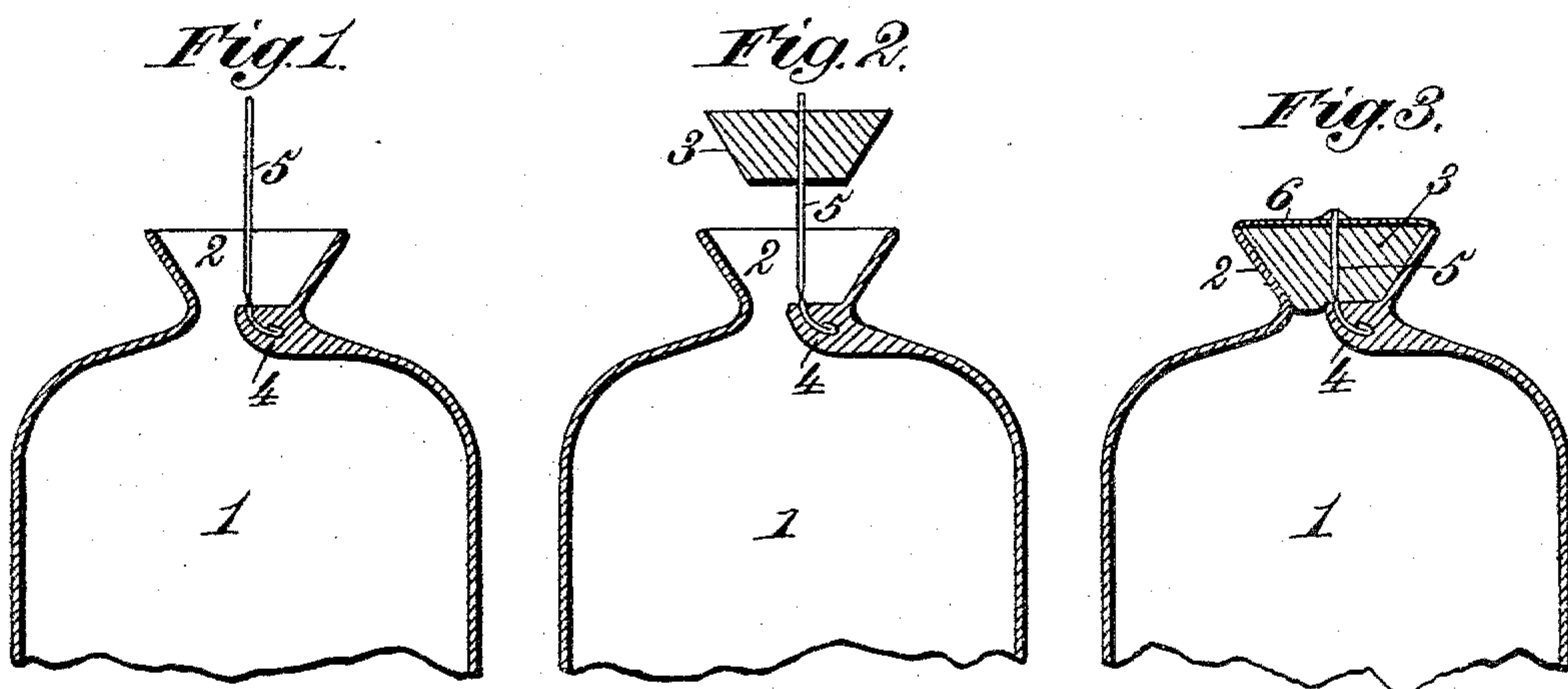


(No Model.)

J. P. WHITE.
BOTTLE STOPPER.

No. 565;194.

Patented Aug. 4, 1896.



Witnesses.
Phet Everett.
Thos. A. Green

Inventor.
Joseph P. White.
By *James L. Norris.*
Atty

UNITED STATES PATENT OFFICE.

JOSEPH P. WHITE, OF SAVANNAH, GEORGIA, ASSIGNOR OF ONE-HALF TO
ALFRED S. NICHOLS, OF SAME PLACE.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 565,194, dated August 4, 1896.

Application filed January 3, 1896. Serial No. 574,271. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. WHITE, a citizen of the United States, residing at Savannah, in the county of Chatham and State of Georgia, have invented new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

This invention has for its object to provide a new and improved bottle-stopper which is simple in construction, economical of manufacture, easily operated, and designed to indicate or show if the bottle has been refilled after the original contents have been removed, thus rendering it impossible to refill the bottle with an inferior liquid or substance and successfully represent it as the substance contained in the original package, since the construction is such that the parts of the stopper cannot be practicably restored to their original condition after the bottle is once opened.

To accomplish this object, the present invention consists, essentially, in the combination of a bottle having a funnel-shaped mouth and an internal arm or shoulder, a cork or stopper fitting the funnel-shaped mouth, a wire secured to the arm or shoulder and adapted to be passed centrally through the cork or stopper, and means for securing the wire to the upper end of the cork or stopper in such manner that when the connection between the wire and the arm or shoulder is ruptured by rotating the wire the cork or stopper can be removed and the parts cannot again be practicably connected in operative position, so that an inspection of the bottle shows whether or not it has been opened since it was first filled and corked.

The invention also consists in the combination of a bottle having a funnel-shaped mouth, a conical cork or stopper fitting the funnel-shaped mouth, an arm or shoulder arranged within the bottle and having an attached wire adapted to be passed centrally through the cork or stopper, and a metallic disk or plate resting upon the upper end of the cork or stopper and through which the wire extends, said wire being engaged with said disk or plate in such manner that when the wire is rotated and broken from the arm or shoulder the cork or stopper can be removed and the several parts cannot again be

practicably connected with a cork inserted into the bottle-mouth, so that an inspection of the bottle shows whether or not it has been opened since it was first filled and corked. 55

The invention also consists in certain other features of construction and combination or arrangement of parts, hereinafter described and claimed, reference being made to the accompanying drawings, in which— 60

Figure 1 is a vertical central sectional view of my improved bottle, showing the wire in position to be inserted centrally through the cork or stopper. Fig. 2 is a similar view showing the wire extended through the center of the cork or stopper. Fig. 3 is similar view showing the cork or stopper in the funnel-shaped mouth of the bottle and the wire of the indicator-seal engaged with the metallic disk or plate on the upper end of the stopper as the parts will appear when the bottle is completely corked. Fig. 4 is a similar view showing the opposite side portions of the metallic disk turned upwardly to provide finger-pieces. Fig. 5 is a similar view showing the cork extracted or withdrawn and the wire separated from the arm or shoulder, and Figs. 6 and 7 are similar views showing a modification of my invention. 65 70 75

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein— 80

The numeral 1 indicates a glass bottle having a funnel-shaped mouth 2, adapted to receive a conical cork or stopper 3. The top portion or wall of the bottle surrounding the contracted end of the bottle-mouth is formed integral with a lateral and inwardly-projecting fixed arm or shoulder 4, which approximately fills one-half of the usual opening where the base of the bottle-mouth communicates with the interior of the bottle-body. The arm or shoulder 4 is provided with a wire 5, which is preferably secured in the glass composing the arm or shoulder when the bottle is manufactured. The wire 5 is of such length that it can be passed centrally through the conical or tapering cork or stopper 3, as in Fig. 2, after which the latter is tightly seated in the funnel-shaped mouth of the bottle, with the upper end of the wire 5 85 90 95 100

extending upward from the cork or stopper. A metallic disk or plate 6 is then strung upon the wire 5 and moved downwardly until it rests upon the upper end of the cork or stopper 3, and then the wire 5 is engaged in a positive manner with this metallic disk or plate 6 and the projecting part of the wire is cut off, leaving all the parts in the position shown in Fig. 3, wherein the bottle is represented as completely corked ready for the market. The engagement of the wire 5 with the metallic disk or plate 6 is preferably effected through the medium of a drop of solder placed upon the center of the disk or plate 6 in contact with the wire before or after the latter is cut off to the required length. By this means a very simple solder-joint connection between the wire and the disk or plate is obtained, and this solder-joint can be very economically produced.

When the bottle is to be uncorked or unstoppered, it is only necessary to introduce a knife or some other instrument under the metallic disk or plate 6 at one side thereof and raise this side and then introduce the knife or other instrument under the opposite side of the disk or plate and raise such side. This places the disk in the form shown in Fig. 4, so that it can be grasped by the fingers and rotated, thereby breaking or severing the connection between the inner end of the wire and the arm or shoulder 4, when the cork can be easily removed, as in Fig. 5, through the medium of the finger-pieces provided by turning up the metallic disk or plate in the manner above described. This is very advantageous in that it renders it unnecessary to use a corkscrew for removing the cork or stopper, and the metal disk or plate, in fact, constitutes a means whereby the cork or stopper can be easily withdrawn from the funnel-shaped mouth of the bottle after the point of connection between the inner end of the wire and the arm or shoulder has been fractured, as above stated.

To facilitate the separation of the wire and the indicator-seal in the manner above explained, I flatten or weaken the wire at the point where it is engaged with the fixed arm or shoulder in the bottle, so that when the wire is twisted or turned it breaks at the point where it joins the arm or shoulder.

If the bottle is corked by passing the wire 5 through the center of the cork or stopper 3 and soldering it to the center of the metallic disk or plate 6 and the bottle is subsequently uncorked or opened, the connection between the wire and arm or shoulder is fractured, and it is impossible to subsequently apply a cork and secure it as originally. Therefore an inspection of the bottle will show whether or not the bottle has been opened since it was originally filled and corked.

The funnel-shaped bottle-mouth may be placed on the top portion of the bottle in any desired position, and the cork or stopper can be held by the wire, irrespective of the exact

position in which the funnel-shaped bottle-mouth may be arranged. The inner or lower end of the cork or stopper is designed to rest upon the smooth top surface of the arm or shoulder when the bottle is corked, as shown in Fig. 3, whereby the contents of the bottle are prevented from coming in contact with the wire which extends through the cork or stopper and is attached to the arm or shoulder.

In the construction illustrated in Figs. 1 to 5, inclusive, the arm or shoulder is a fixed object, and is formed integral with the bottle. As shown in the modification, Figs. 6 and 7, I propose to make the arm or shoulder separate from the bottle, so that it becomes a movable arm or object, as at 7. This arm or object is of such dimensions that it cannot be withdrawn through the contracted part of the bottle-mouth, and the wire 8 is attached to the arm or object in such manner that by rotating or twisting the wire it is separated from the arm or object in substantially the same manner as described with reference to Figs. 1 to 5, inclusive. The wire in the modified construction is designed to pass through the cork 9 and to be secured to the metallic disk or plate 10, as hereinbefore explained, so that by turning up opposite side portions of the disk or plate finger-pieces are provided which can be grasped by the fingers for twisting or turning the wire, and thereby fracturing the point of connection between such wire and the arm or object 7. This arm or object may be made of glass, or any other material suitable for the purpose, and when the point of connection between the wire and the arm or object is broken or fractured the arm or object will fall into the bottle and remain there. Obviously it is impracticable to subsequently connect the parts in the operative position shown in Fig. 7, and therefore an inspection of the bottle and of the arm or object 7 will show whether or not the bottle has been opened since it was originally filled and corked.

The construction illustrated in Figs. 1 to 5, inclusive, is the most advantageous, and is regarded by me as more useful than the construction shown in the modification, because the bottle can be more economically manufactured and the parts more easily and quickly applied to cork the bottle than with the parts made according to the modification.

Having thus described my invention, what I claim is—

1. The combination of a bottle having a funnel-shaped mouth, and an internal arm or shoulder, a cork or stopper fitting the funnel-shaped mouth, a wire secured to the arm or shoulder and passing centrally through the cork or stopper, and means for securing the wire to the upper end of the cork or stopper, so that by twisting or rotating the wire the connection between it and the arm or shoulder is broken, substantially as described,

2. The combination of a bottle having a funnel-shaped mouth and formed integral

with an internal arm or shoulder, a wire secured in the arm or shoulder, a cork or stopper fitting the funnel-shaped mouth and through the center of which said wire passes, and a metallic disk or plate resting upon the upper end of the cork or stopper, engaged with the said wire and adapted to be bent outward or upward to form a finger-piece for the purpose of rotating the wire and severing its connection with the arm or shoulder, substantially as described.

3. The combination of a bottle having a mouth, a cork or stopper adapted to fit the mouth, an arm or shoulder arranged within the bottle, a wire secured to the arm or shoulder and passing through the cork or stopper, and a flexible, metallic disk or plate arranged on the upper end of the cork and stopper, secured to the wire and adapted to be bent upward or outward to form a finger-piece for the purpose of twisting or turning the wire and severing its connection with the arm or shoulder, substantially as described.

4. The combination of a bottle having a mouth and formed integral with an internal fixed arm or shoulder in juxtaposition to the base of the mouth, a cork or stopper adapted to fit said mouth, a wire attached to the fixed arm or shoulder and passing through the cork or stopper, and means for securing the upper end of the wire to the cork or stopper, substantially as described.

5. The combination of a bottle having a mouth and formed integral with a lateral, inwardly-projecting fixed arm or shoulder, a cork or stopper adapted to fit said mouth, a wire attached to the fixed arm or shoulder and passing through the cork or stopper, and a flexible disk or plate mounted on the cork,

secured to the wire and adapted to be bent upward or outward to form a finger-piece for the purpose of twisting or turning the wire to sever its connection with said fixed arm or shoulder, substantially as described.

6. The combination of a bottle having a funnel-shaped mouth and formed integral with an internal fixed arm or shoulder in juxtaposition to the base of the funnel-shaped mouth, a cork or stopper adapted to fit the mouth, a wire attached to the fixed arm or shoulder and passing through the cork or stopper, and a flexible disk or plate mounted on the cork, secured to the wire, and adapted to be bent upward and outward to form a finger-piece for twisting or turning the wire and severing its connection with the arm or shoulder, substantially as described.

7. The combination of a bottle having a mouth, a cork or stopper adapted to fit said mouth, an arm or shoulder arranged in the bottle, a wire attached to the arm or shoulder and passing through the cork or stopper, a flexible, metallic disk or plate mounted on the cork or stopper and through which the said wire extends, and a solder-joint connecting the upper end of said wire to said disk or plate, said metallic disk or plate adapted to be bent upward or outward to form a finger-piece for severing the connection of the wire with said arm or shoulder, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH P. WHITE.

Witnesses:

THOS. L. HARRIS,
E. W. CUBBEDGE.