No. 632,956. Patented Sept. 12, 1899.

J. BIESEL.

NON-REFILLABLE BOTTLE.

(Application filed Jan. 7, 1899.

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

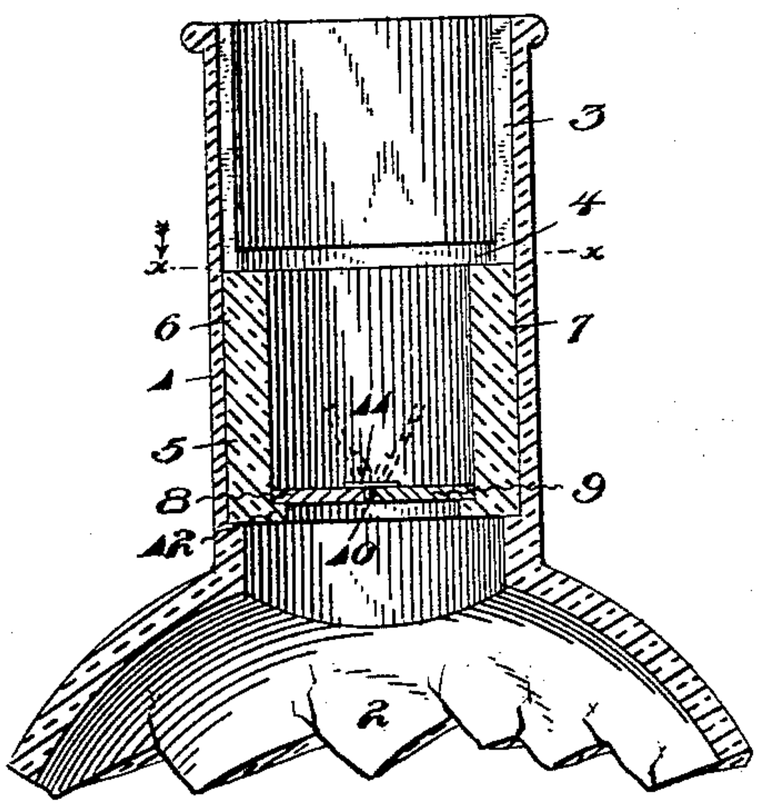


Fig. 2.

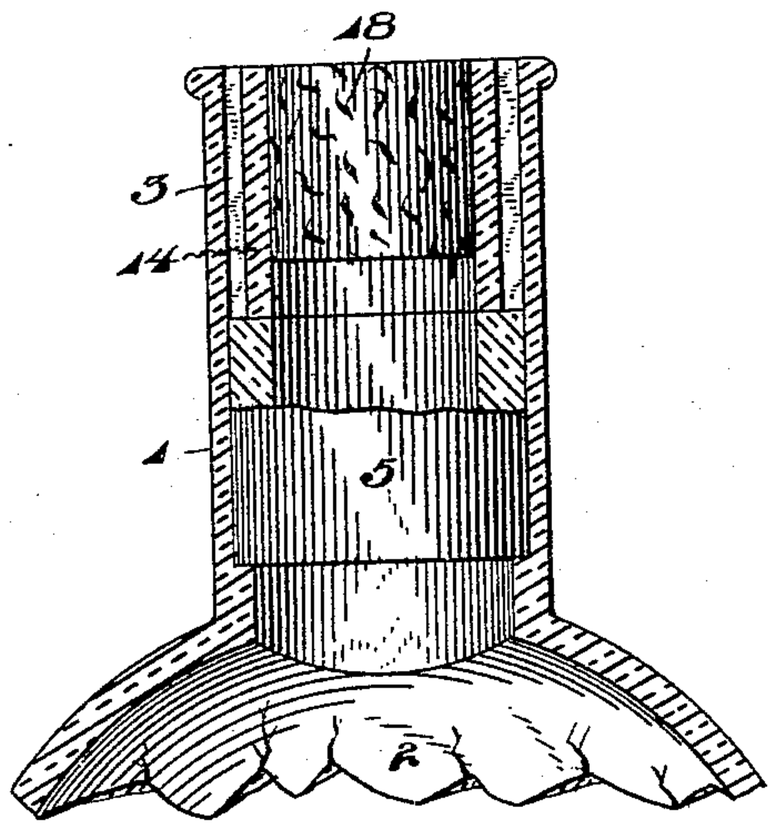


Fig. 3

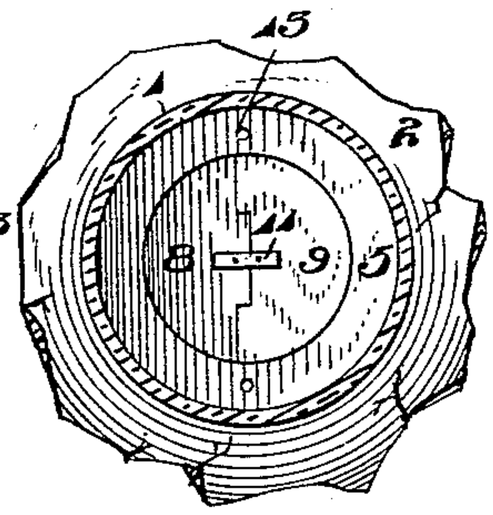


Fig. 4.

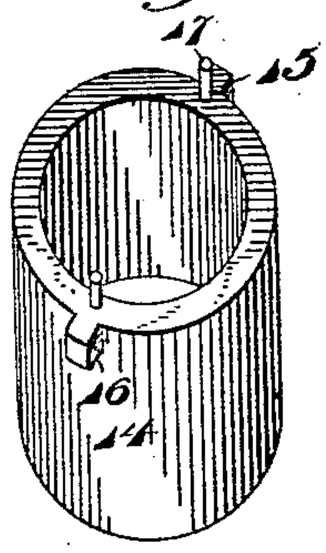


Fig. 5.

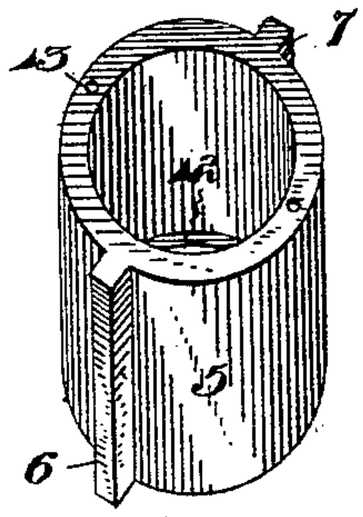


Fig. 6.

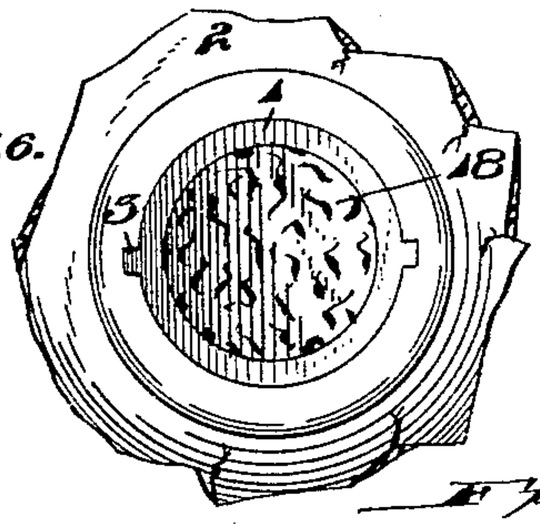


Fig. 7.

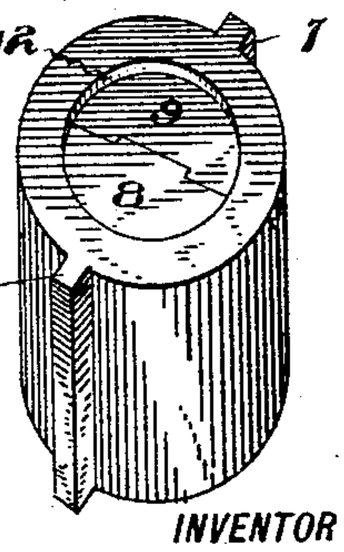
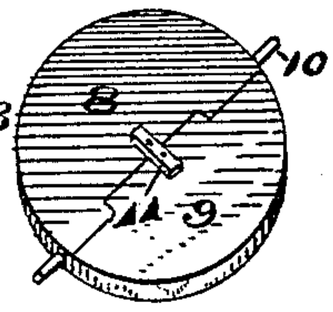


Fig. 8



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No. 632,956. Patented Sept. 12, 1899.

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NON-REFILLABLE BOTTLE.

(Application filed Jan. 7, 1899.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 9.

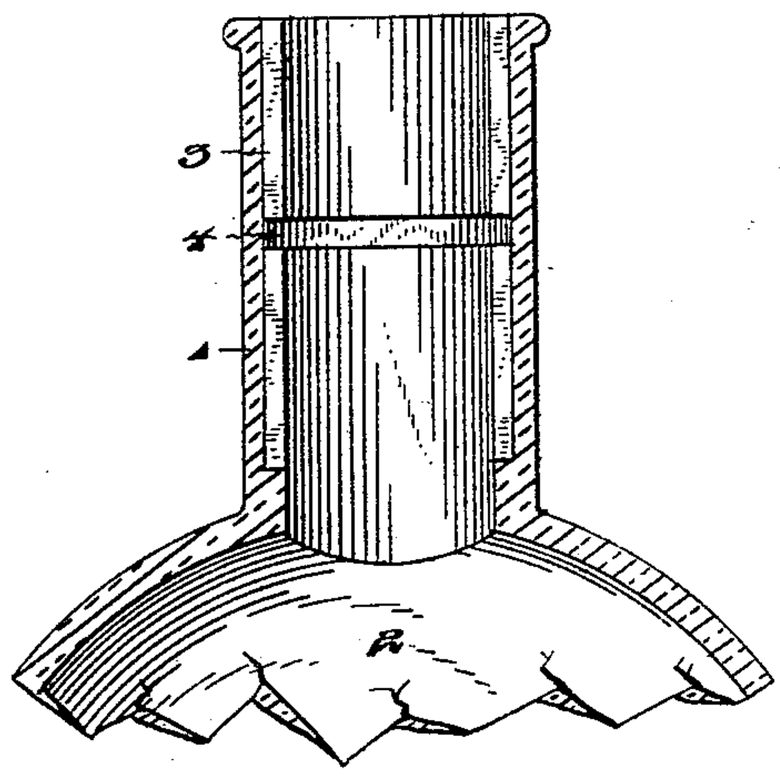

Fig. 10.

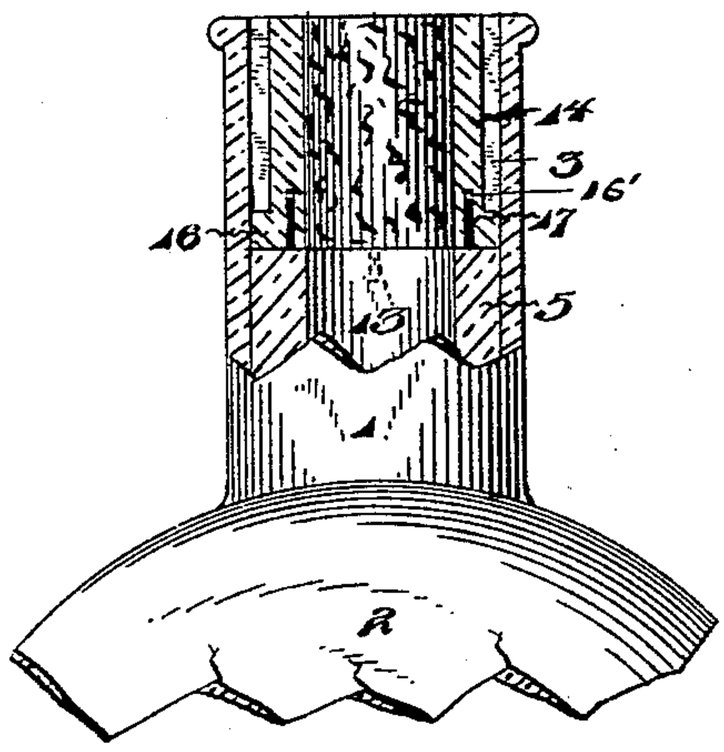

Fig. 11.

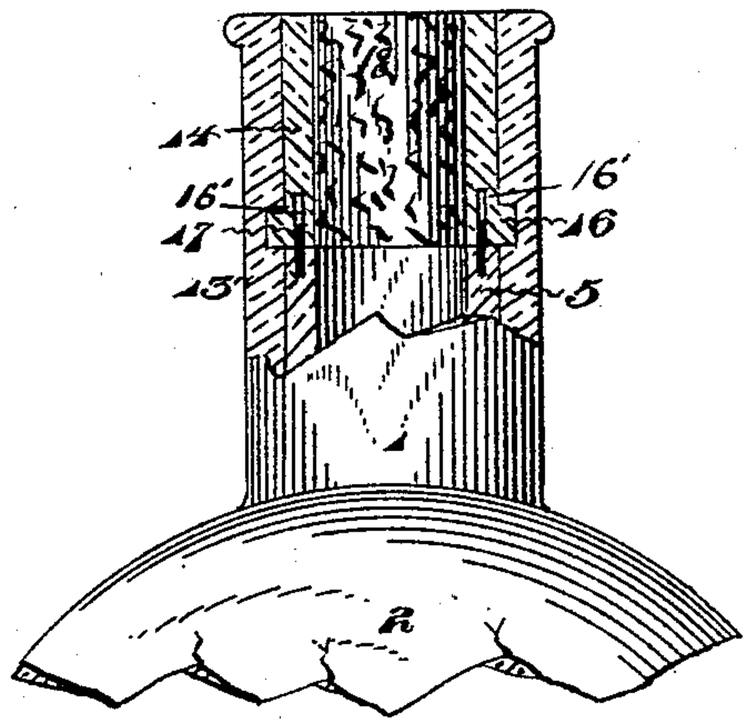

Fig. 12.

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UNITED STATES PATENT OFFICE.

JOHN BIESEL, OF McKEESPORT, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 632,956, dated September 12, 1899.

Application filed January 7, 1899. Serial No. 701,447. (No model.)

To all whom it may concern:

Be it known that I, JOHN BIESEL, a citizen of the United States of America, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in non-refillable bottles.

The object of my invention is to construct a bottle of this class which after the contents therein have been once used cannot be refilled.

Briefly described, my invention consists of an inner stopper having arranged therein a pair of trap-doors which open outwardly and an outer stopper for locking the inner stopper in position.

My invention finally consists in the novel combination and arrangement of parts hereinafter more full described, and particularly pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views thereof, and in which—

Figure 1 is a vertical sectional view of the neck of a bottle, the top thereof being broken away, showing my inner stopper in position, the trap-doors closed in full lines and elevated in dotted lines. Fig. 2 is a vertical sectional view of the neck of a bottle with my improved stoppers arranged therein. Fig. 3 is a cross-sectional view on the line *x x*, Fig. 1. Fig. 4 is a perspective view of the outer stopper. Fig. 5 is a perspective view of the inner stopper. Fig. 6 is a top plan view of a bottle with my improved stoppers in position, the top portion of the bottle being broken away. Fig. 7 is an inverted perspective view of the inner stopper. Fig. 8 is a perspective view of the trap-doors, which are arranged in the inner stopper. Fig. 9 is a vertical sectional view of the neck of a bottle, showing the arrangement of the two vertical and the annular groove. Fig. 10 is a side view of the bottle-neck, partly in section to show the stoppers in position before being locked. Fig. 11 is a similar view showing the position of the pins when the bottles are locked together. Fig. 12 is a perspective view of one of the locking-pins.

Referring to the drawings by reference-numerals, 1 indicates the neck and 2 the body portion of a bottle. The inner face of the neck portion is provided with downwardly-extending grooves 3 and a circular continuous groove 4.

5 indicates the inner stopper, which is of cylindrical shape and hollow, as shown, and is provided on its periphery with a pair of elongated lugs 6 7. The stopper 5 has mounted in its lower end a pair of trap-doors 8 9, which are pivotally mounted on the shaft 10. These trap-doors are opened outwardly by the force of the liquid counteracting the spring 11, mounted on the outer face thereof. This spring is adapted to keep the trap-doors normally in engagement with the annular flange 12, formed on the inner face of the stopper 5 at the lower end thereof. The upper edge of the stopper 5 is formed with a pair of recesses 13 diametrically opposite each other.

14 indicates the outer stopper, which is of cylindrical shape and hollow, as shown. This outer stopper 14 is provided at its lower end with a pair of lugs 15 16, diametrically opposite each other, and also with a pair of apertures 16′ to receive the fastening-pins 17. These fastening-pins are constructed of any suitable metallic material. 18 indicates the ordinary cork stopper used for closing bottles of this character.

The operation of my improved non-refillable bottle is as follows: The two stoppers are placed with their ends together, in which position they are inserted into the bottle-neck, the pins 17 being forced upward within the recesses 16′ in the stopper 14 and the elongated lugs 6 7 and lugs 15 16 engaging in the vertical grooves 3. It will be observed that the apertures or recesses 13 are arranged in the stopper 5 at the quarter-turn to the position of the loosely-mounted locking-pins in the apertures or recesses 16′ of the stopper 14. When the two stoppers have been placed in the bottle-neck in this position, the outer stopper 14 is then given one quarter-turn, which will cause the lugs 15 16 to move out of registering engagement with the vertical

grooves 3 into locking engagement with the annular groove 4 and bring the recesses 13 and 16′ into registering engagement, so that the metal locking-pins 17 will fall into the recesses or apertures 13, as shown in Fig. 11 of the drawings, securely locking the two stoppers together, while the stoppers themselves are locked within the bottle-neck by reason of the lugs 15 16 engaging in annular groove 4. When it is desired to empty the bottle or use a portion of its contents, the inclination of the bottle will cause the pressure of the contents against the trap-doors 8 9 to overcome the tension of the spring 11, so that the liquid may be discharged. When the bottle is returned to the upright position, the pressure of the liquid will be removed from the trap-doors, and the spring 11 will immediately reseat the same and prevent the introduction of any material into the bottle.

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

1. In a bottle of the class described, the combination with the neck having a pair of oppositely-disposed vertical grooves and an annular groove, of an inner hollow stopper having oppositely-disposed lugs on its exterior and provided at its lower end with an inwardly-extending seat, a pair of trap-doors pivotally mounted upon a common shaft, a tension-spring engaging each of said trap-doors to hold the same normally in engagement with said seat, an outer hollow stopper having exterior lugs adapted to engage the annular groove in the bottle-neck, and means connected to the lower end of said outer stopper for engagement with the upper end of the inner stopper to lock the same thereto when the stoppers are in position, substantially as described.

2. In a bottle of the class described, the combination with the neck thereof provided with interior vertical and an exterior annular groove, of a hollow inner stopper having exterior elongated lugs and an interior annular seat, a pair of trap-doors pivotally mounted on a common shaft within said inner stopper, means secured to said doors for holding the same normally in engagement with said annular seat, an outer hollow stopper provided with lugs adapted to engage in the interior annular groove in the bottle-neck, and carrying means for engagement with the inner stopper to lock the same thereto when both the stoppers are in position, substantially as described.

3. In a bottle of the class described, the combination with the neck thereof having a pair of interior vertical grooves and an interior annular groove, of an inner hollow stopper having an interior annular seat at its lower end, a pair of trap-doors pivotally mounted upon a common shaft within said inner stopper, means for holding said trap-doors normally in engagement with said annular seat, an outer hollow stopper, and means secured to said outer stopper for locking same to said inner stopper when both of said stoppers are in position, substantially as described.

4. In a bottle of the class described, the combination with the bottle-neck having oppositely-disposed interior vertical grooves and an interior annular groove, of an inner hollow stopper provided with exterior elongated lugs and an interior annular seat, a pair of trap-doors pivotally mounted upon a common shaft within said inner stopper, a spring engaging each of said doors to hold the same normally in engagement with said annular seat, said stopper being further provided in its upper end with a pair of oppositely-disposed apertures, an outer hollow stopper provided with exterior lugs adapted to engage in the interior annular groove in the bottle-neck, and a pair of oppositely-disposed pins secured in the lower end of the outer stopper and adapted to engage in the apertures in the inner stopper to lock the stoppers together when in position in the bottle-neck, substantially as described.

5. A bottle-neck having oppositely-disposed interior vertical grooves and an interior annular groove, combined with an inner hollow stopper having an interior annular seat at its lower end, a pair of trap-doors pivotally mounted upon a common shaft within said inner stopper, means for holding said doors normally in engagement with said annular seat, an outer hollow stopper, and means secured to the lower end thereof for locking the same to the inner stopper, substantially as described.

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

JOHN BIESEL.

Witnesses:
JOHN NOLAND,
E. W. ARTHUR.