

(No Model.)

G. TURRELL.
NON-REFILLABLE BOTTLE.

No. 594,301.

Patented Nov. 23, 1897.

Fig. 1.

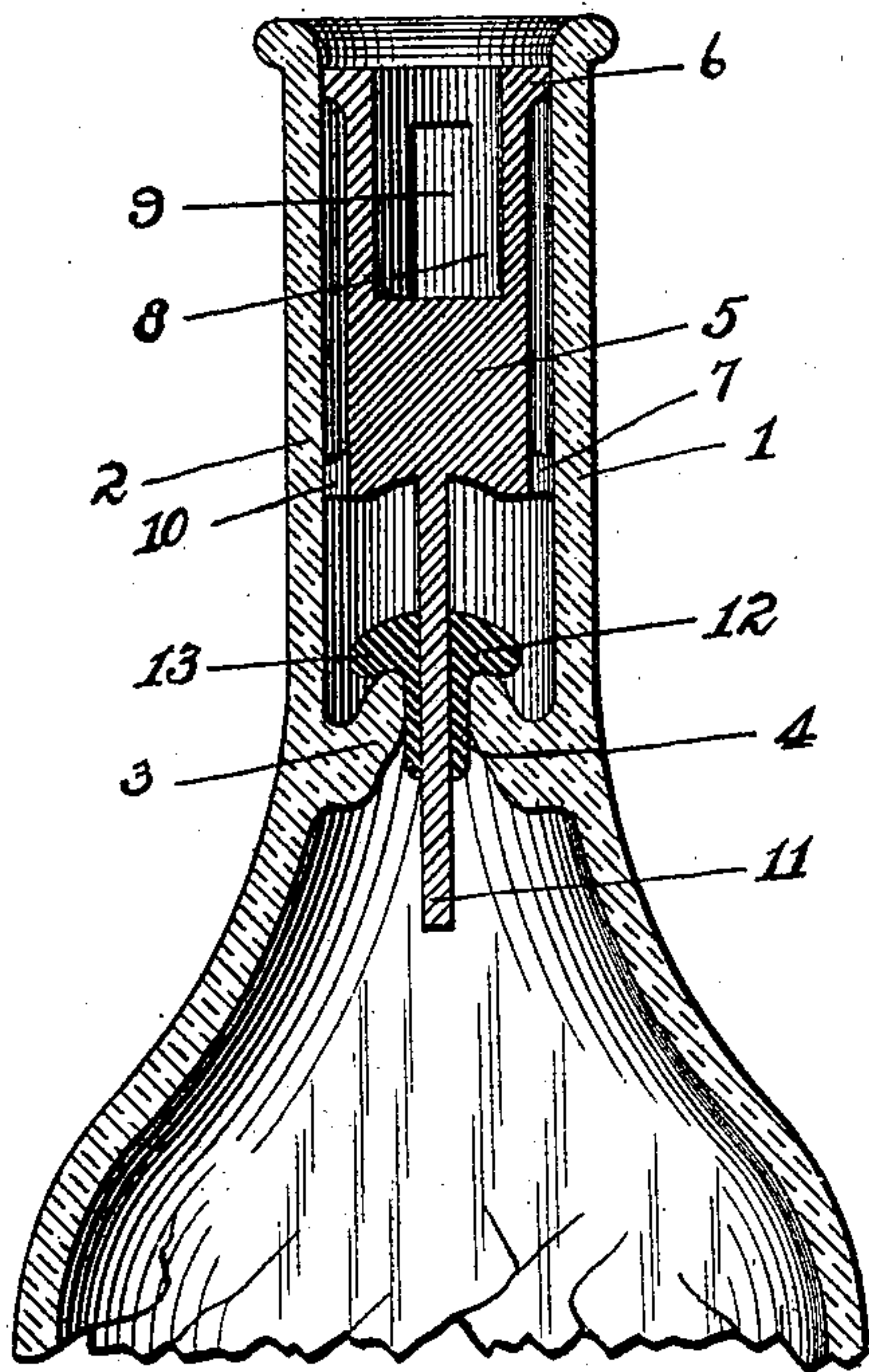


Fig. 2.

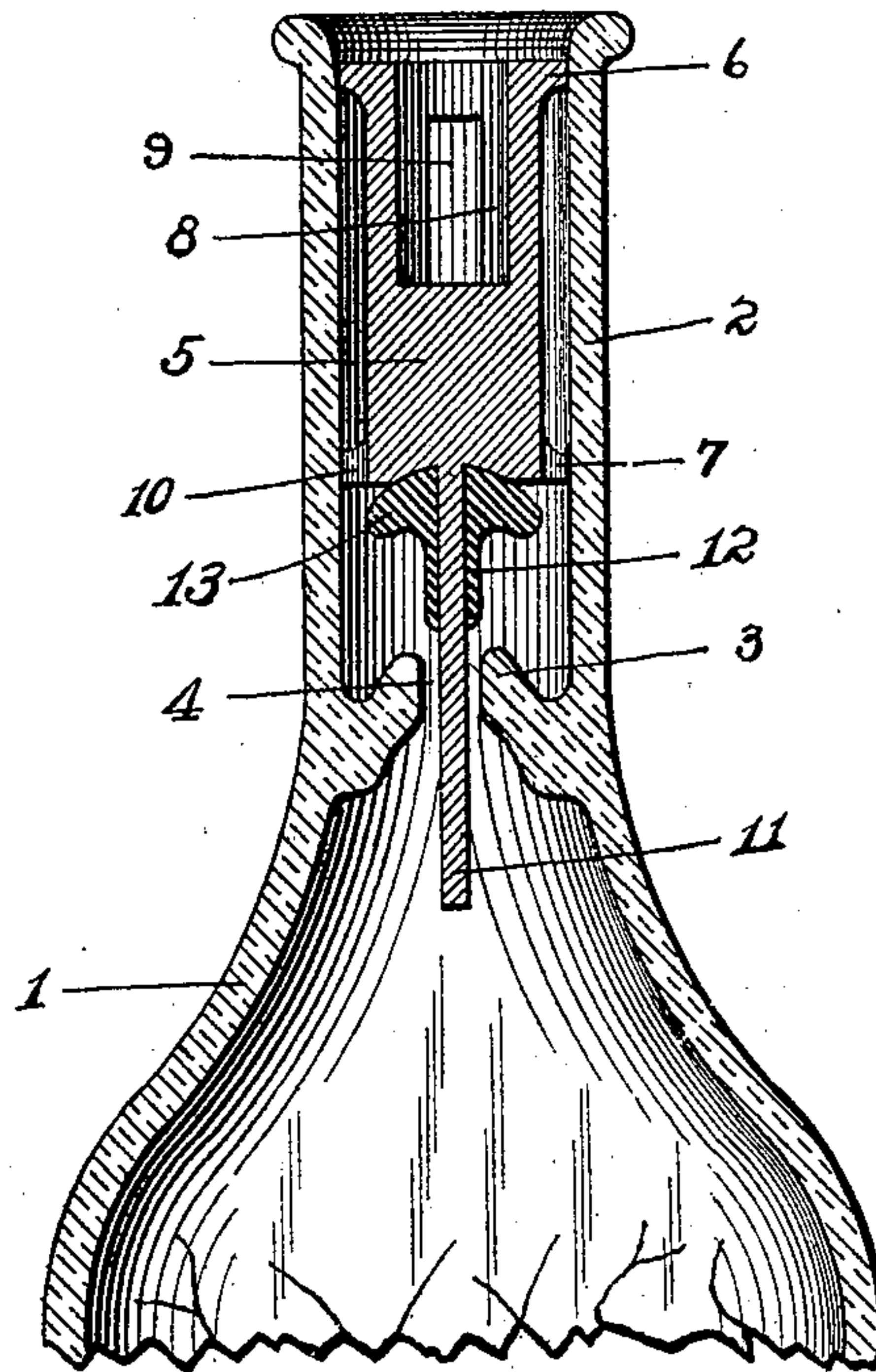


Fig. 3.

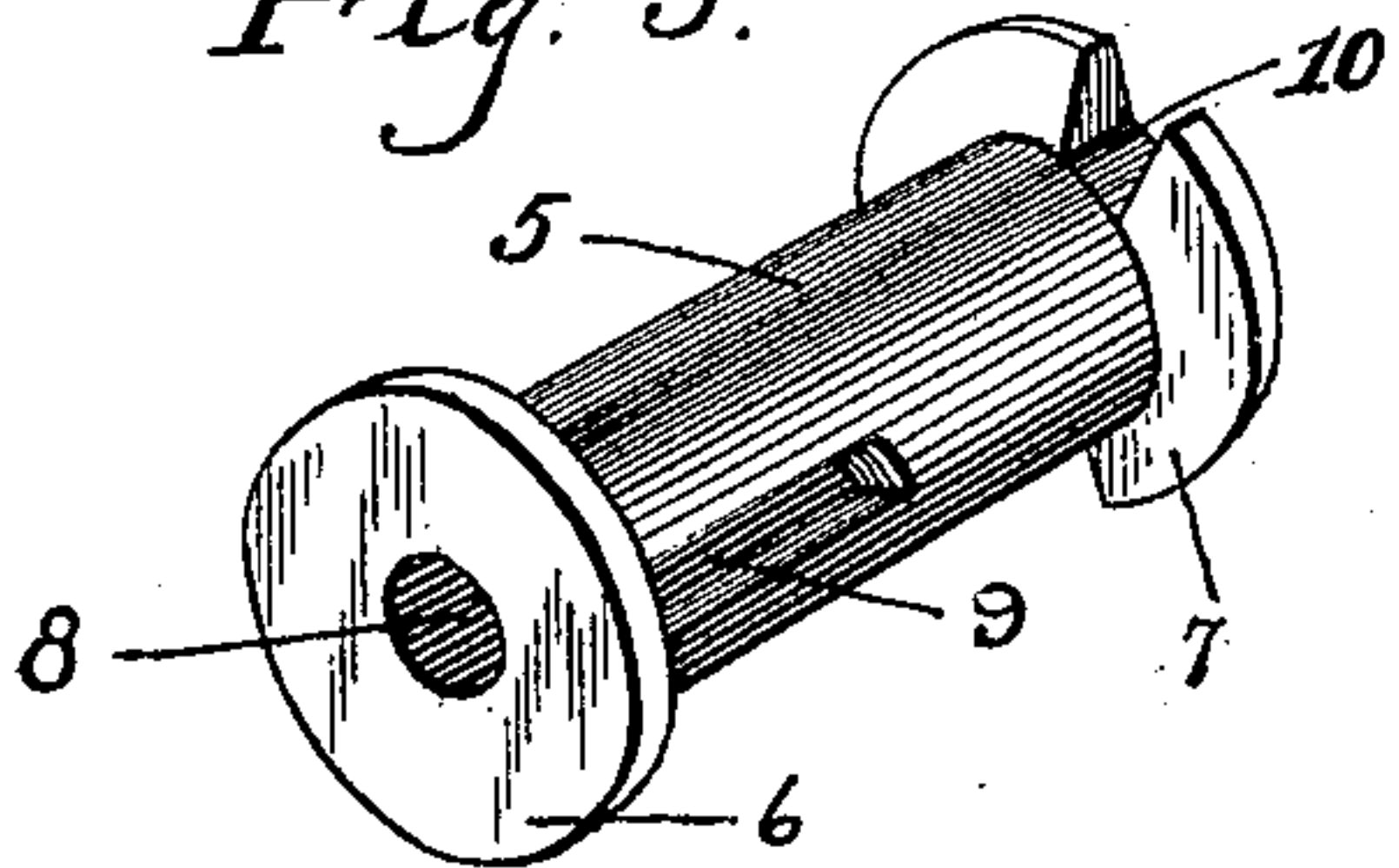


Fig. 4.

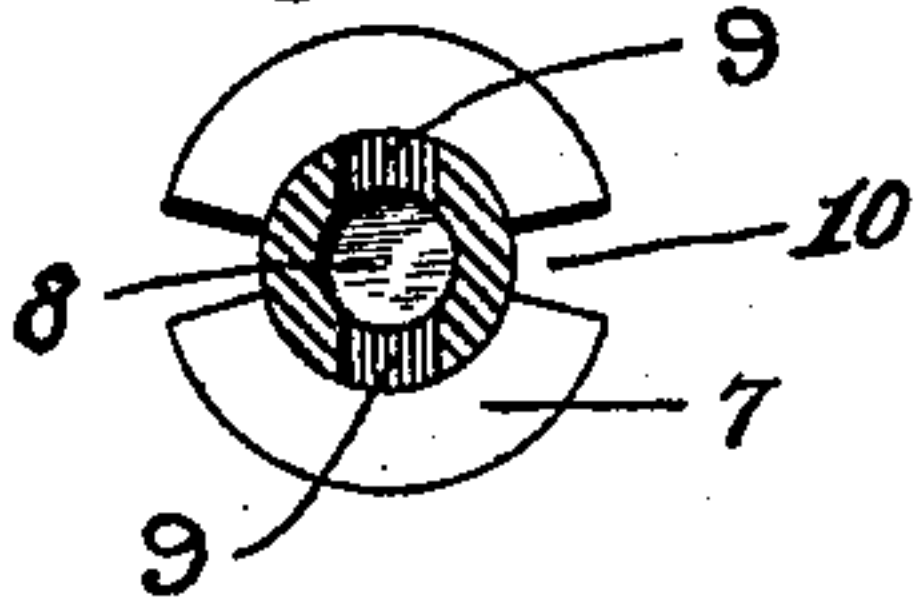
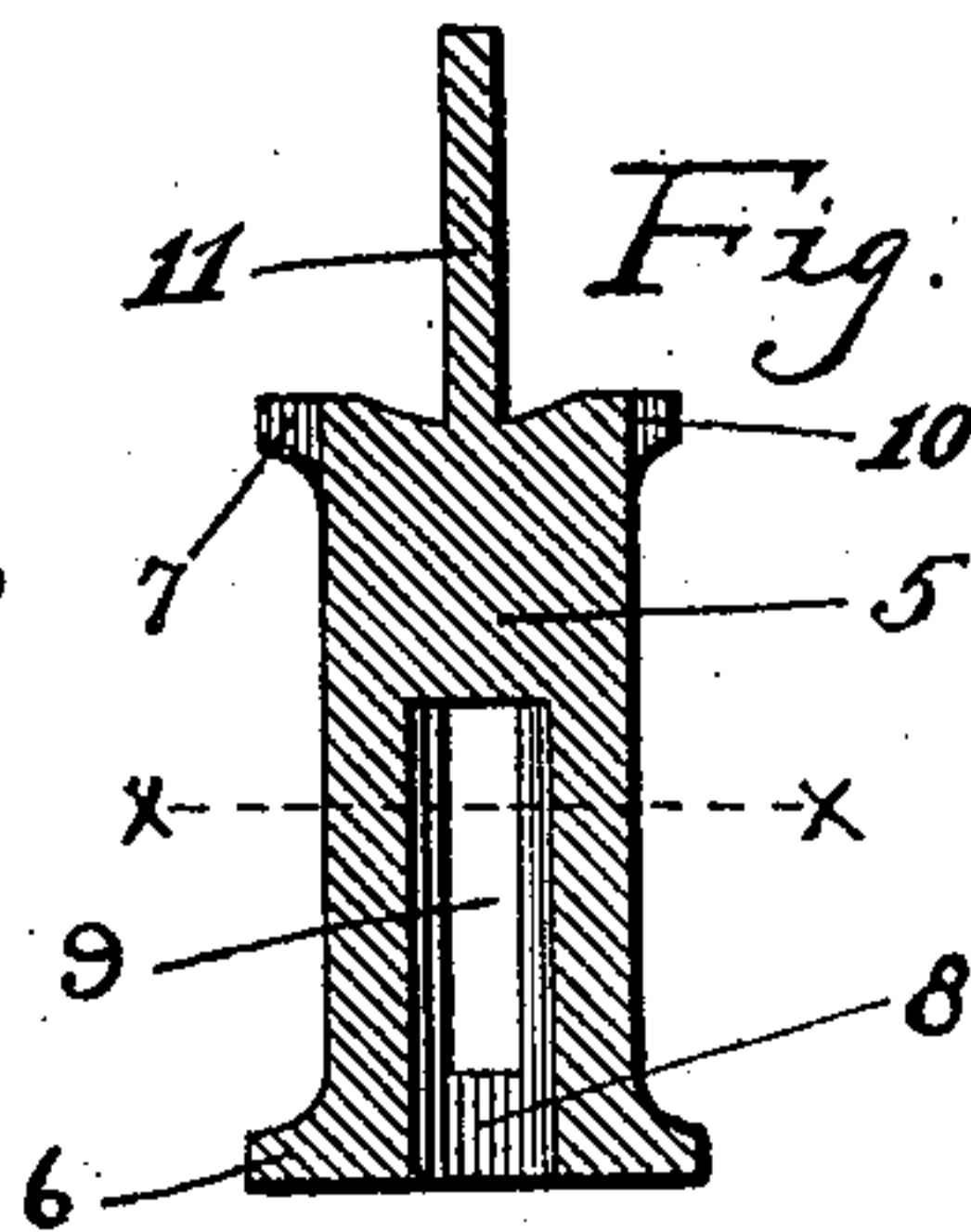


Fig. 5.



WITNESSES

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NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 594,301, dated November 23, 1897.

Application filed September 1, 1896. Serial No. 604,558. (No model.)

To all whom it may concern:

Be it known that I, GEORGE TURRELL, a citizen of the United States, residing at Patterson, in the county of Putnam and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles; 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 improvements in bottles and stoppers therefor, the object of the same being to provide a bottle which cannot be refilled after the contents thereof have once been removed.

The invention consists of a bottle with a long tubular neck thereon with a curved web at its lower end having a central opening therein, constituting a valve-opening, and a stopper substantially spool-shaped in form, having a central opening which is closed at its lower end, provided with slots near its upper end, leading into said central opening, having the lower flange thereof cut away, forming passages for the discharge of the contents of the bottle, a valve-stem secured to the lower end of said stopper, and a slidingly-mounted valve thereon adapted to close the opening in said web.

The invention also consists of other details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming a part of this specification, Figure 1 is a vertical central section through the upper end of a bottle constructed according to my invention, showing my improved stopper therein. Fig. 2 is a similar view of the same, showing the parts in the positions they assume in the act of discharging the contents of the bottle. Fig. 3 is a detail perspective view of the stopper. Fig. 4 is a cross-section of the same on the line *xx* of Fig. 5, looking upwardly in said figure. Fig. 5 is a vertical longitudinal section.

Like reference-numerals indicate like parts in the different views.

The bottle 1 has a tubular neck 2 at its upper end and is also provided with a curved

annular web 3 on the inside of said neck at a point near the lower end thereof. Said web has a central opening 4 therein, as clearly shown. Fitting within the upper end of the neck 2 is a stopper 5, substantially spool-shaped in form, with flanges 6 and 7 at its upper and lower ends, respectively, with a central opening 8, which is closed at its lower end, with slots 9 9 in each side thereof leading into said central opening and with the lower flange 7 notched or cut away at two points, as shown at 10, forming passages for the discharge of the liquid in the bottle. On the lower end of the stopper 5 is secured a valve rod or stem 11, which extends down through the opening 4 in the web 3. Upon this rod 11 is slidingly mounted a valve 12, with a curved annular flange 13 thereon, which is adapted to embrace the upper end of the web 3 and close the opening 4 therein when said valve is in its normal downward position. In applying the stopper 5 to the neck of the bottle the upper flange 6 is cemented to the side of the neck.

My improved bottle is filled in the usual way, and the stopper 5 is then inserted in place, with the valve rod or stem 11 extending through the opening 4 in the web 3. The upper flange 6 of the stopper is then cemented or otherwise sealed to the upper end of the neck 2. The valve 12 falls by gravity to close the opening 4 in the web 3. When it is desired to remove the contents of the bottle, the same is turned with the neck 2 projecting downwardly, as shown in Fig. 2. This action forces the valve 12 by gravity away from the web 3, uncovering the opening 4 therein. The liquid contents of the bottle are then free to pass outward through the opening 4, through the passages formed by the notches or cut-away portions 10 in the flange 7, thence into the space between the main part of the stopper 5 and the inside of the neck 2, thence through the slots or openings 9 into the central opening 8, and out of this into any receptacle for containing it. When the bottle is returned to its normal upright position, the valve 12 falls back by gravity upon the top of the web 3, closing the opening 4 in said web and absolutely preventing the insertion of anything to the inside of the bottle 1.

The invention is extremely simple in construction, effective in operation, and can be cheaply made.

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

The combination with a bottle having a contracted tubular neck and a web on the inside thereof having a central opening in it, of a
10 spool-shaped stopper fitting the upper end of the neck of said bottle, having a central longitudinal opening therein which is closed at its lower end, having slots near the upper end thereof leading into said central opening and
15 having the lower flange thereof notched or cut away, a valve rod or stem on the under

side of said stopper fitting the opening in said web and a valve having an annular flange upon it, slidingly mounted on said valve rod or stem and adapted to close the opening in
20 said web when the bottle is in one position, but which is free to move away from said web when the bottle is tilted for the purpose of pouring out the contents thereof.

In testimony whereof I have signed this
25 specification in the presence of two subscribing witnesses.

GEORGE TURRELL.

Witnesses:

JAMES E. TAYLOR,
C. E. AKIN.