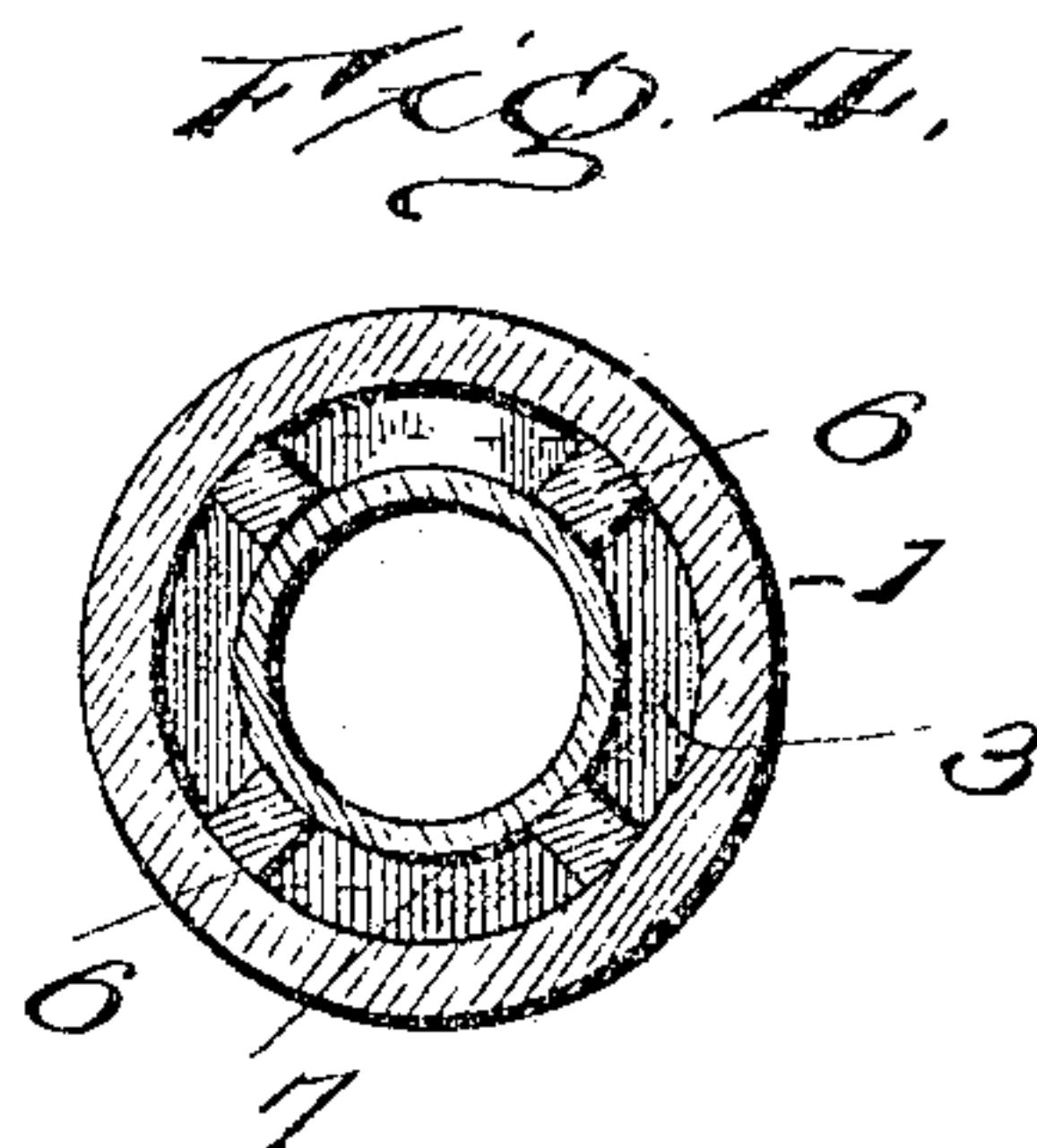
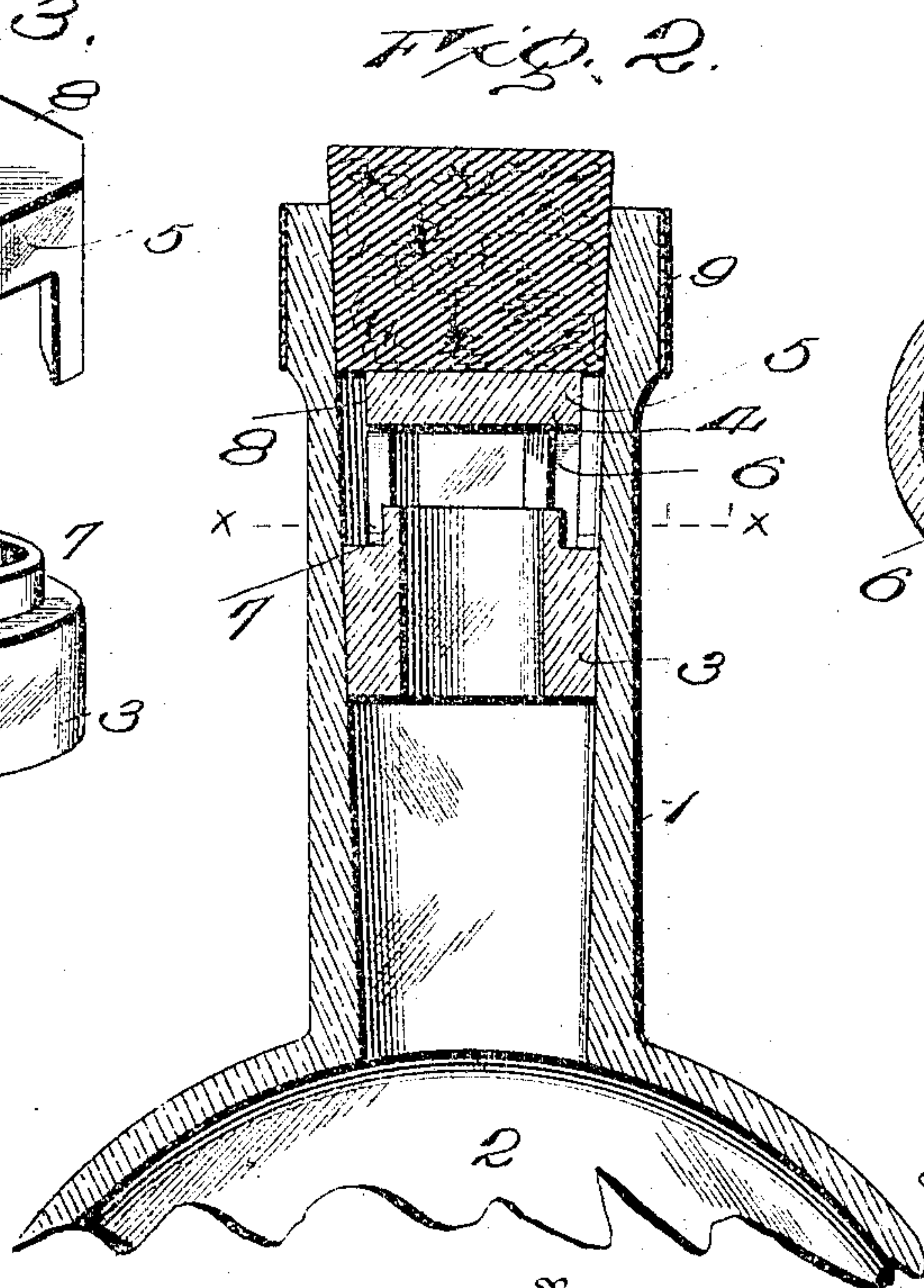
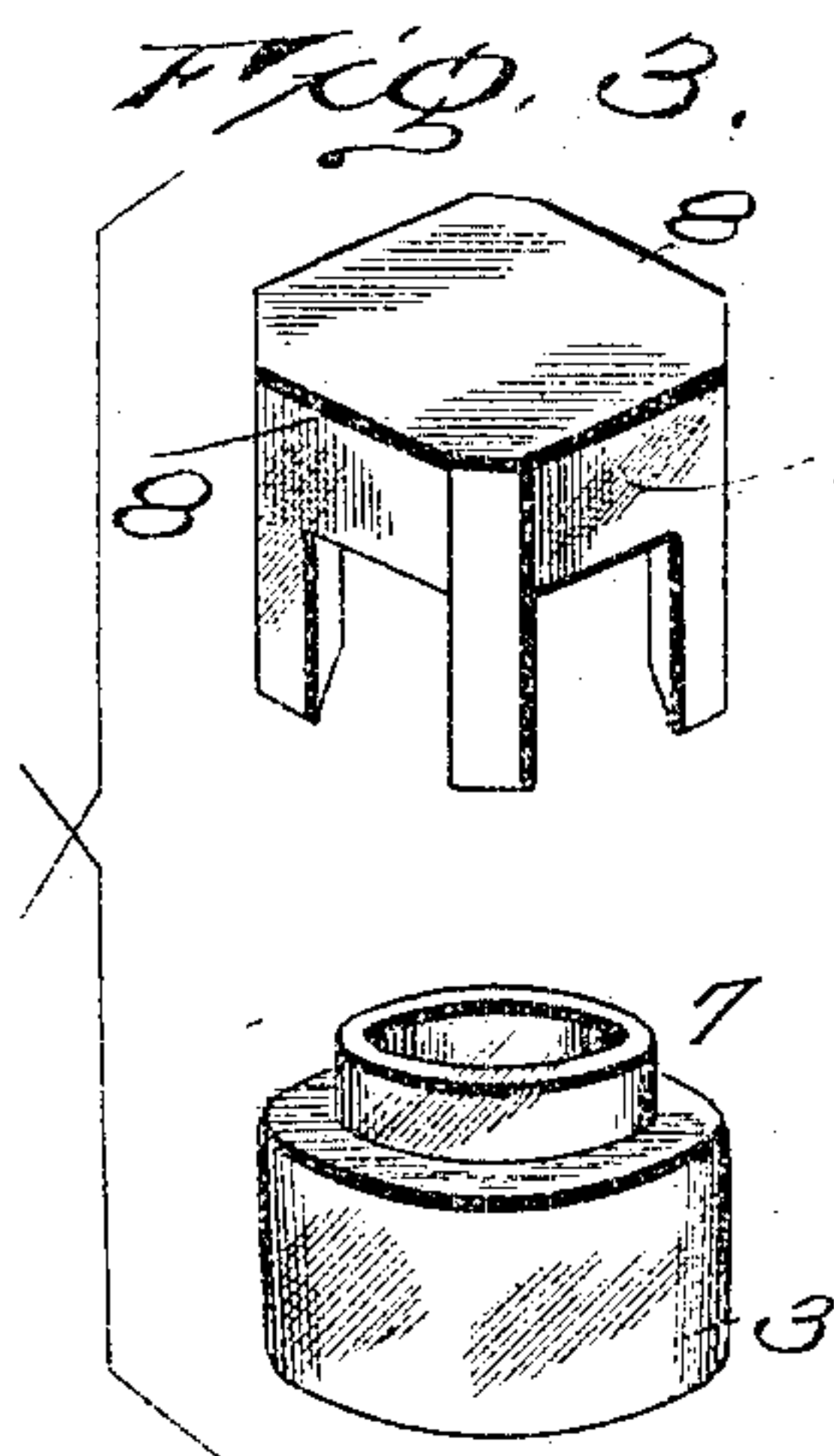
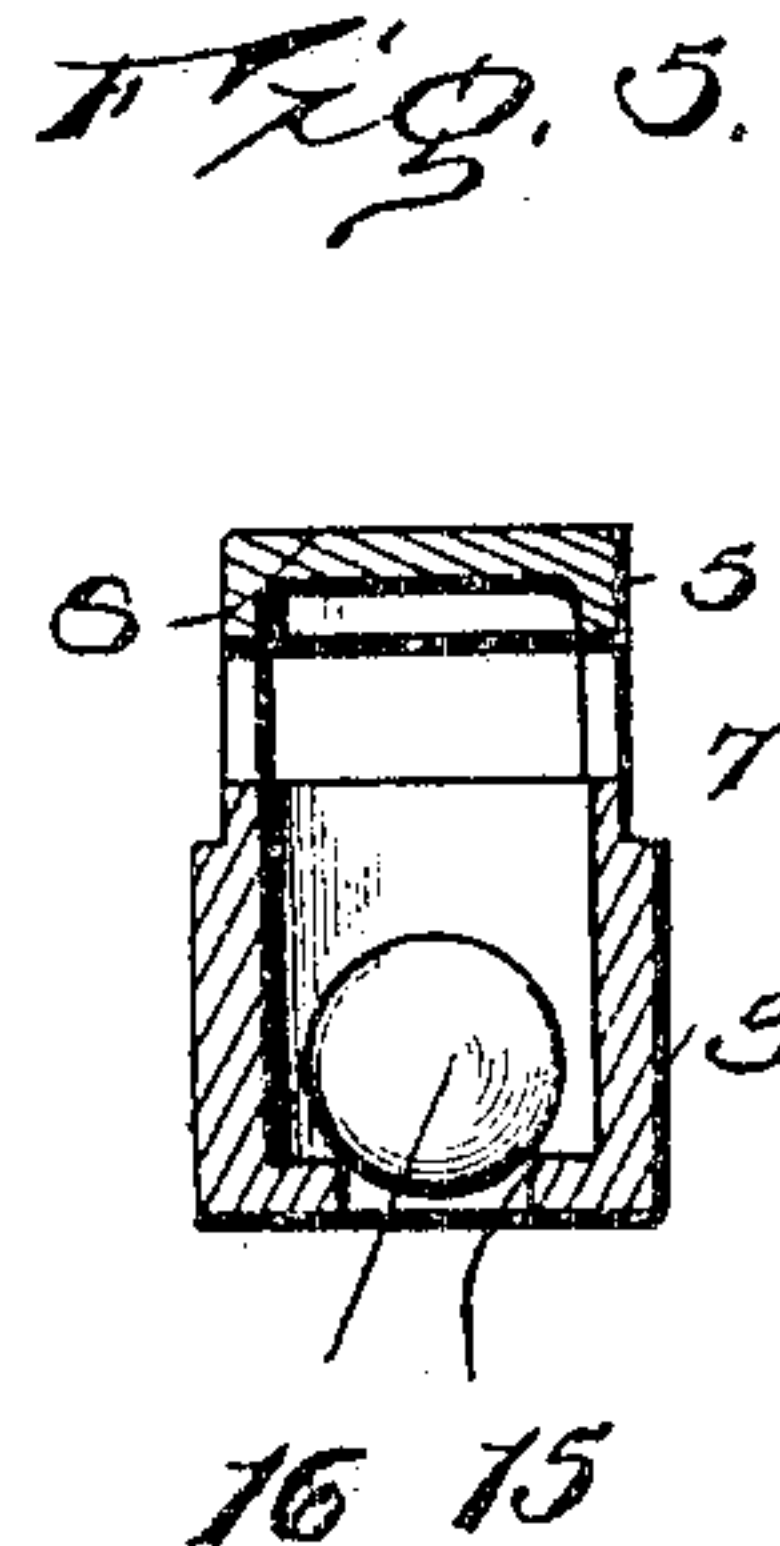


No. 781,595.

PATENTED JAN. 31, 1905.

J. F. DREDGE.
ANTIREFILLING BOTTLE.
APPLICATION FILED MAR. 26, 1904.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH F. DREDGE, OF DETROIT, MICHIGAN.

ANTIREFILLING-BOTTLE.

SPECIFICATION forming part of Letters Patent No. 781,595, dated January 31, 1905.

Application filed March 25, 1904. Serial No. 200,048.

To all whom it may concern:

Be it known that I, JOSEPH F. DREDGE, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Antirefilling-Bottles, of which the following is a specification.

This invention relates to that class of receptacles commonly known as "non-refillable bottles," and aims to provide means whereby a bottle or similar receptacle cannot be again practically filled with contents other than those originally placed therein, thus preventing fraud upon original producers by persons attempting to palm off inferior goods in the same receptacle after such original contents have been removed.

Describing the invention more specifically, the same comprises a peculiar form of stopper partially closing the receptacle and which, though freely permitting outflow of the original contents of the same, coöperates to effectually form a seal whereby introduction of other contents is prevented.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a bottle, showing my invention applied thereto. Fig. 2 is a vertical sectional view through the upper portion of a bottle having my invention applied. Fig. 3 is a detail perspective view of the sections of the stopper which comprises the essential feature of my invention. Fig. 4 is a horizontal sectional view on the line X X of Fig. 2. Fig. 5 illustrates a slightly modified construction.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out my invention the same con-

sists of a simple stopper attachment adapted to be received within the neck 1 of a bottle or like receptacle 2. In the preferred contemplation of the invention the opening through the neck 1 of the bottle gradually narrows toward the point of jointure of the neck with the body of the bottle to facilitate the securance of the stopper attachment therein. The stopper attachment itself is of very similar construction, being made in sections, preferably, to admit of easily molding same in the practical manufacture thereof. The attachment is made of glass or like material and consists of a tubular supporting-section 3 and a stopper-section 4, disposed above the supporting-section 3. The stopper-section 4 consists of a stopper-disk 5 and spacing members or legs 6, integrally formed with the disk and projected from the under side thereof to space the disk from the supporting-section 3. The supporting-section 3 is of tubular form, as before mentioned, and tapers slightly toward one end to conform somewhat to the shape of the opening in the neck of the bottle. The supporting-section 3 of the attaching device is secured within the neck of the bottle by means of cement or the like, and this section has its upper portion reduced, as shown at 7. The stopper-section 4 of the attachment is likewise secured in the neck of the bottle by means of cement or analogous material applied to the outer surface of the members 6 thereof. The lower ends of the members 6 of the section 4 are received between the upper reduced portion 7 of the supporting-section and the bottle-neck when the parts of the attachment are in their normal working positions. It will thus be seen that the stopper-section 4 is supported by the section 3, and this section may also be cemented to the supporting-section 3 in a manner readily seen.

The disk 5, which virtually constitutes a stopper, only partially closes the neck of the bottle, this disk having its sides flattened, as shown at 8, to admit of egress of the contents of the receptacle upon inversion of the same. The flattened portions of the disk 5 form spaces between the said disk and the neck of the bottle through which the contents of the recep-

tacle pass in flowing out of same, and though these spaces are sufficiently large to freely permit the escape of the said contents yet the said spaces are so small that it would be impractical to fill the bottle by attempting to introduce fluid contents through any one of the said spaces.

In actual use the stopper-disk 5 forms an effectual barrier to prevent introduction of fluid or liquid in the usual manner, since an attempt to pour said liquid into the neck of the bottle would create an air-bubble, and entrance of the liquid would be resisted by the atmospheric pressure within the body of the receptacle, owing to the fact that the liquid received above the disk 5 constitutes a liquid seal, preventing escape of the air within the receptacle. To pass liquid through one of the spaces formed between the disk 5 and the wall of the neck of the bottle would be impractical, as above noted, because of the amount of time which would be necessary to consume in so doing.

As an indicator to show that the bottle has been filled by entrance of the contents thereof after the receptacle has been submerged a colored label 9 may be placed upon the neck of the bottle adjacent the inlet thereof. Discoloration of this label due to contact with the liquid would of course expose any attempt of this character, though it is very unlikely that such an attempt would ever be made.

The attachment is very simple, merely consisting of the two parts above described, which may be very cheaply manufactured

and when secured within the neck of the bottle constitute a guard against fraud in a manner fully described hereinbefore. The bottle is of course filled by placing the stopper-disk in position, and the latter when secured in place cannot be removed without breakage of the receptacle.

As shown in Fig. 5, the supporting-section 3 may be provided with a valve-seat 15, and a valve 16 is adapted to operate upon said seat in an obvious manner. The use of the valve, however, is unnecessary in the practical use of the invention.

Having thus described the invention, what is claimed as new is—

The combination with a bottle or like necked receptacle, of an attachment therefor comprising a tubular supporting-section secured in the neck of the bottle and having its upper portion reduced, a stopper-section disposed above the supporting-section and consisting of a disk having its side edges flattened at intervals to form outlet-spaces, and legs projected from the under side of the disk and integral therewith, said legs spacing the disk from the upper portion of the supporting-section and having their lower ends received between the reduced portion of said supporting-section and the neck.

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

JOSEPH F. DREDGE. [L. s.]

Witnesses:

GEORGE W. MONROE,
DAN CYRUS VREELAND.