

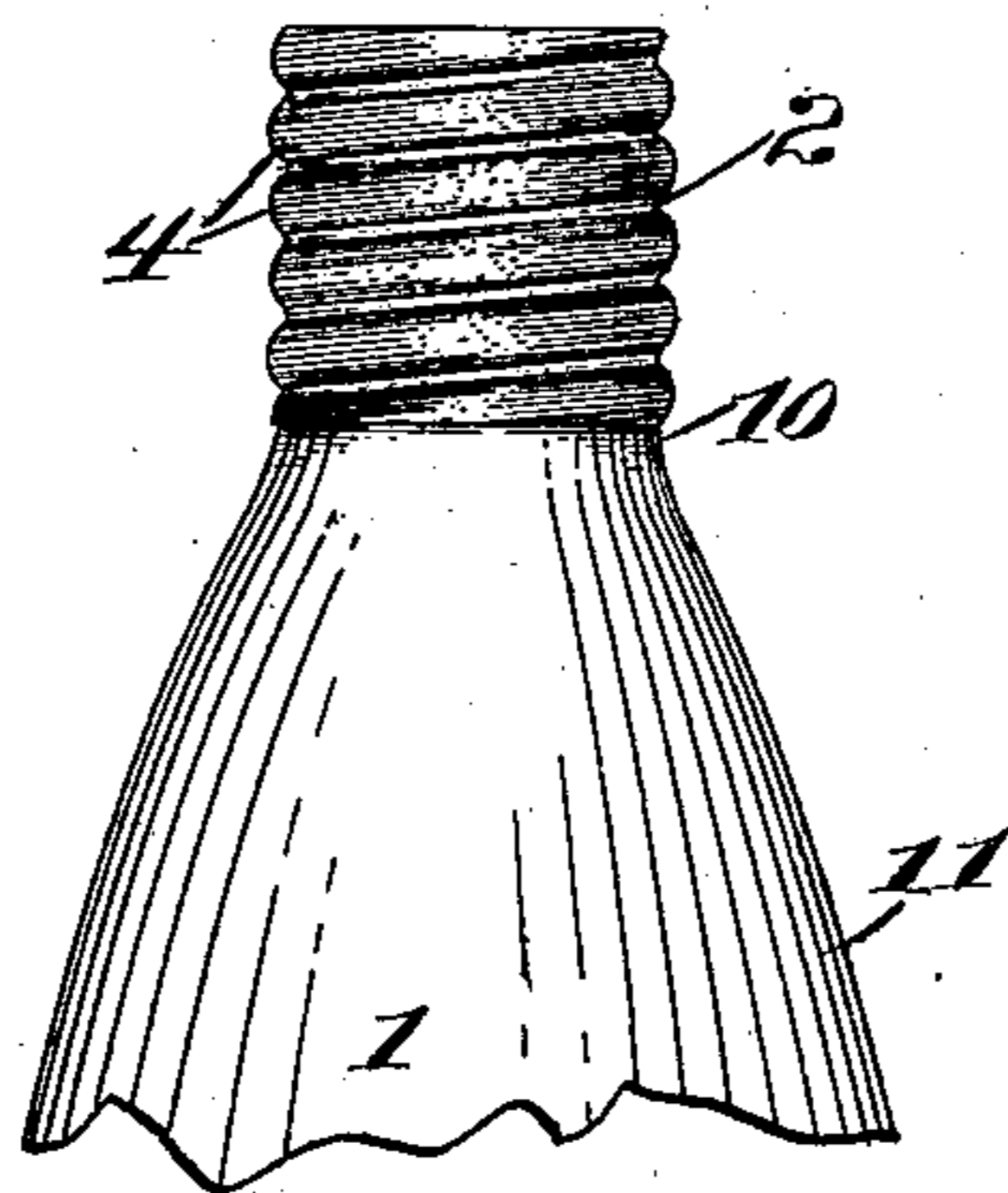
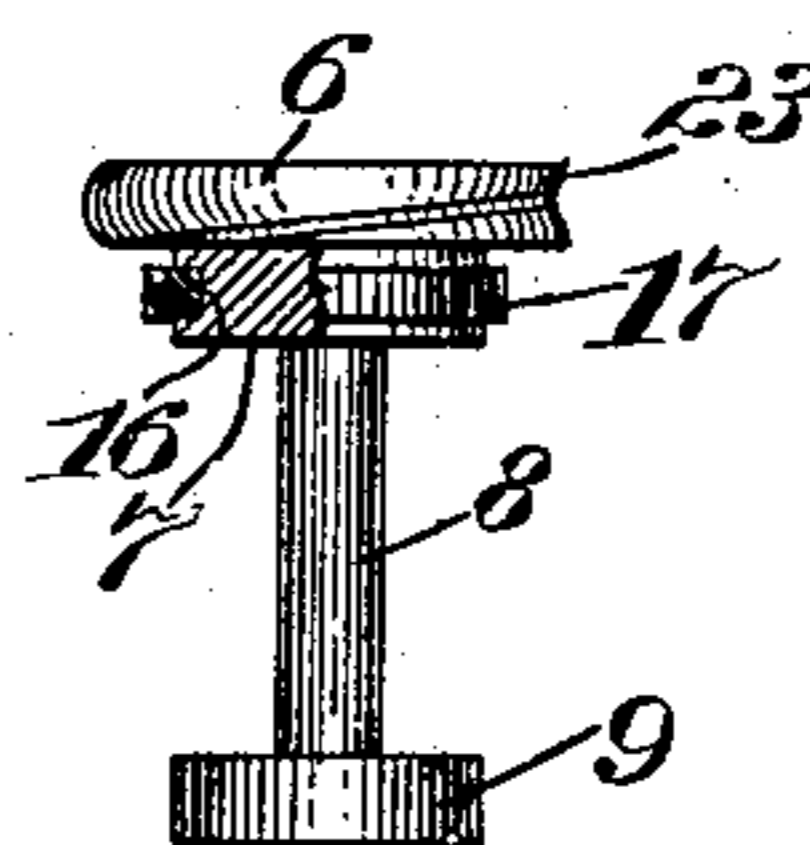
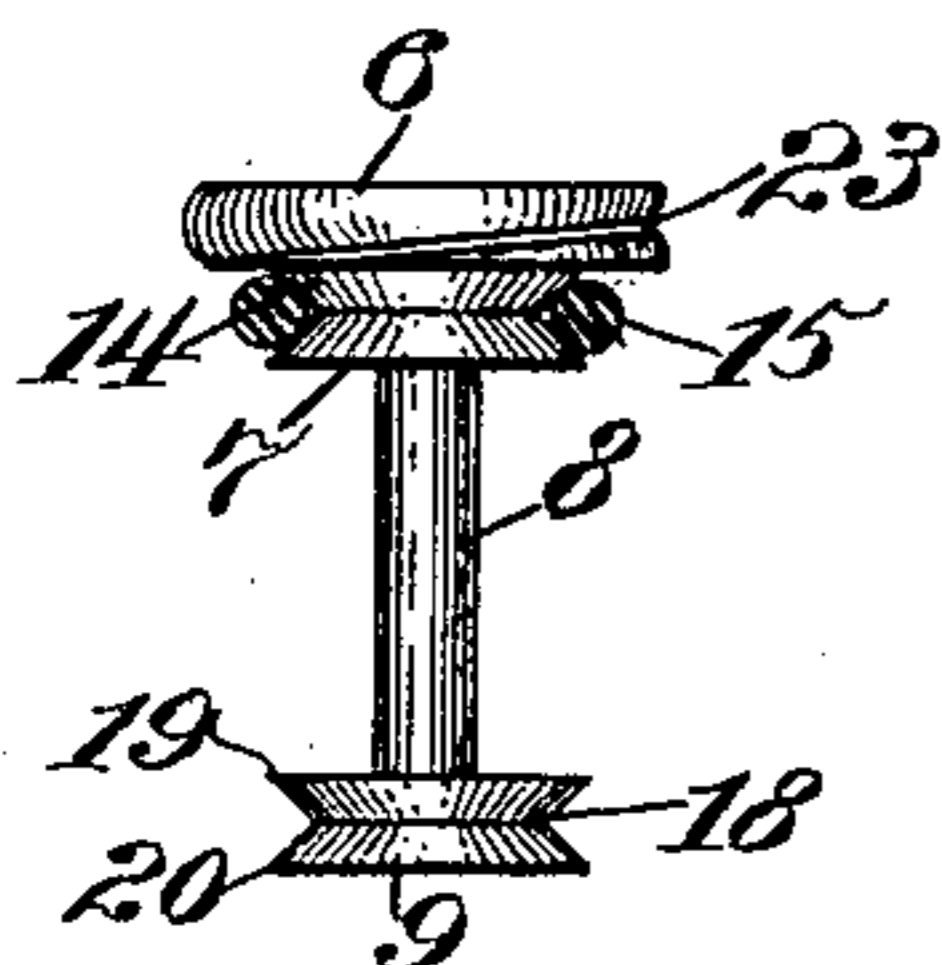
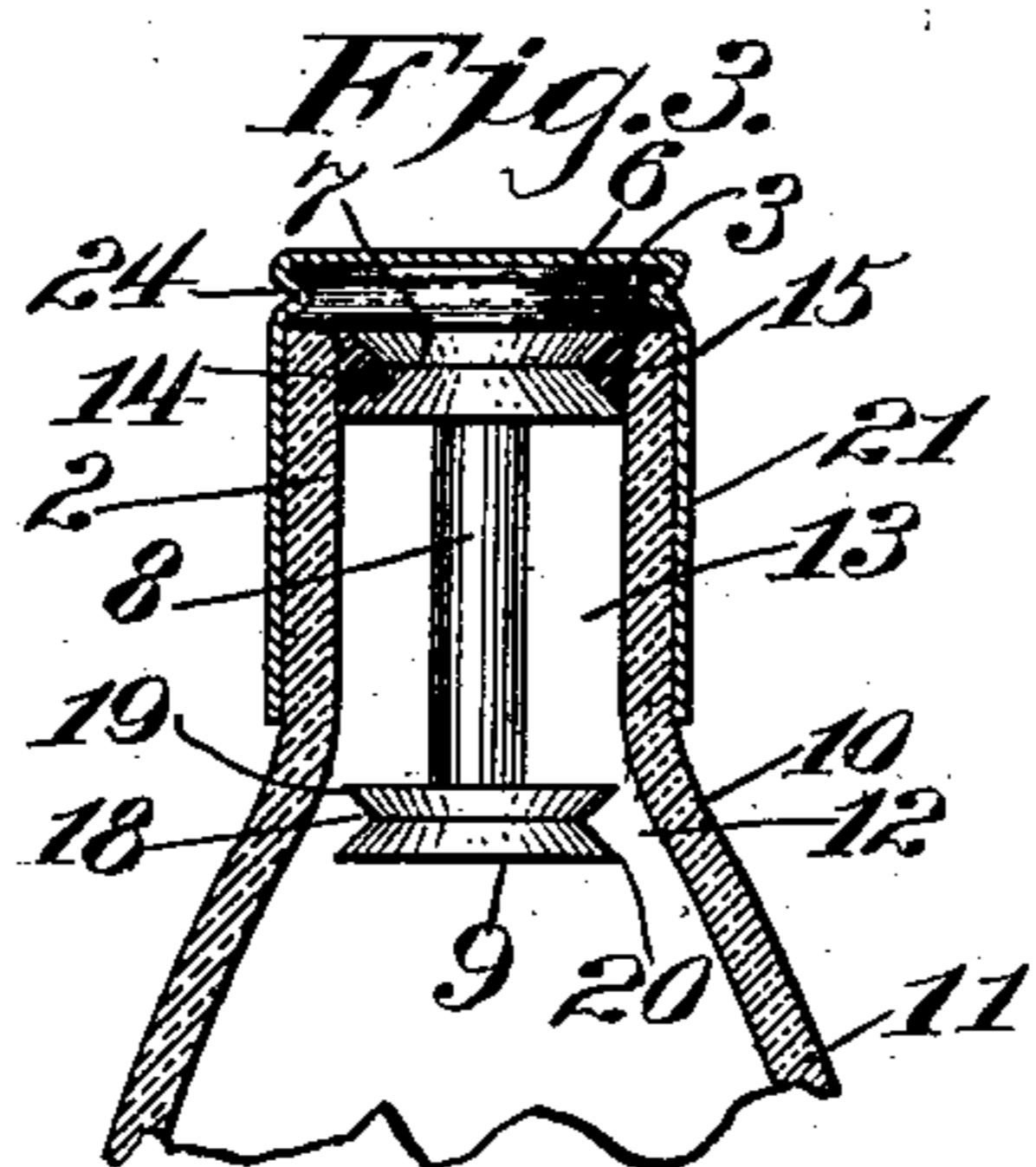
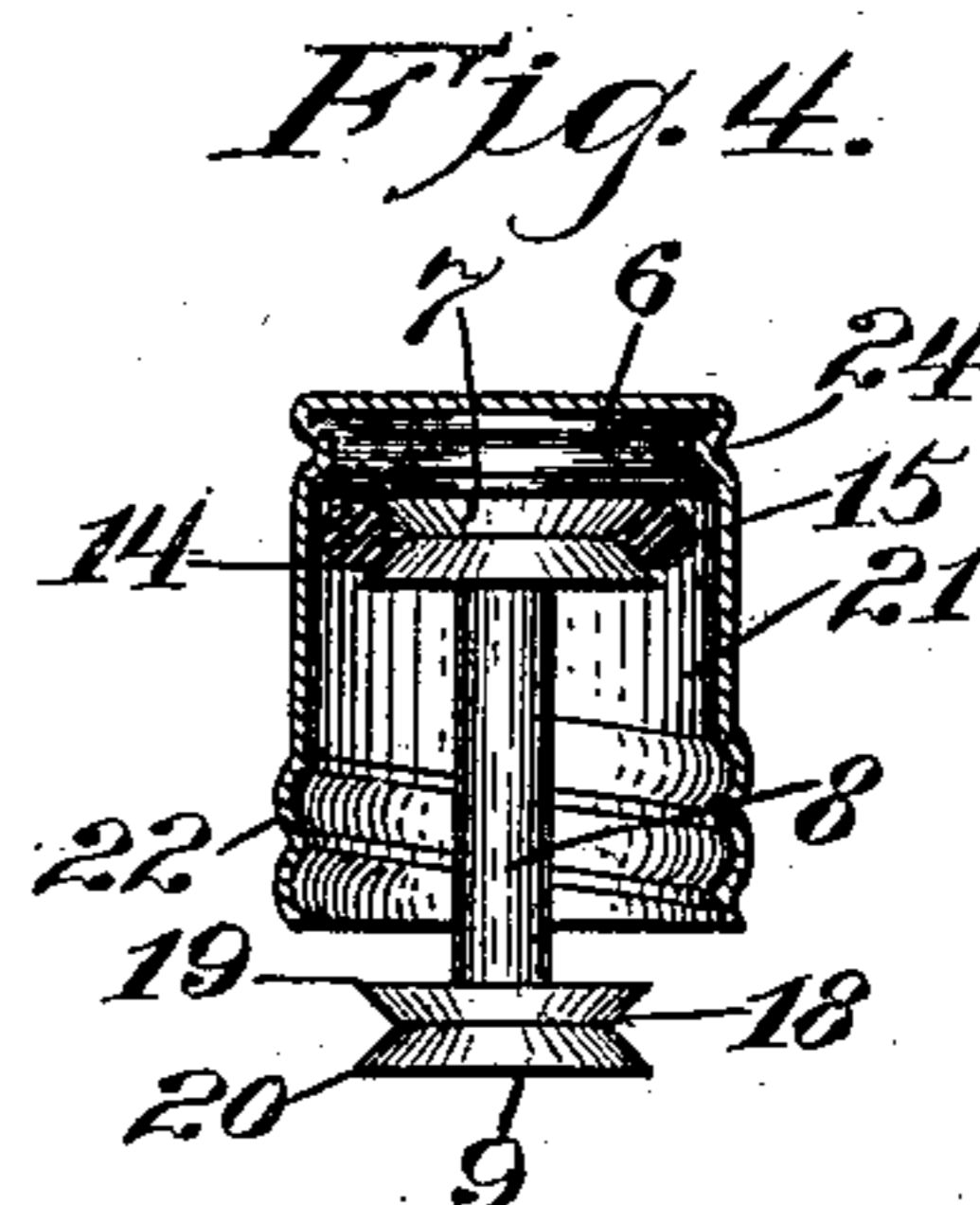
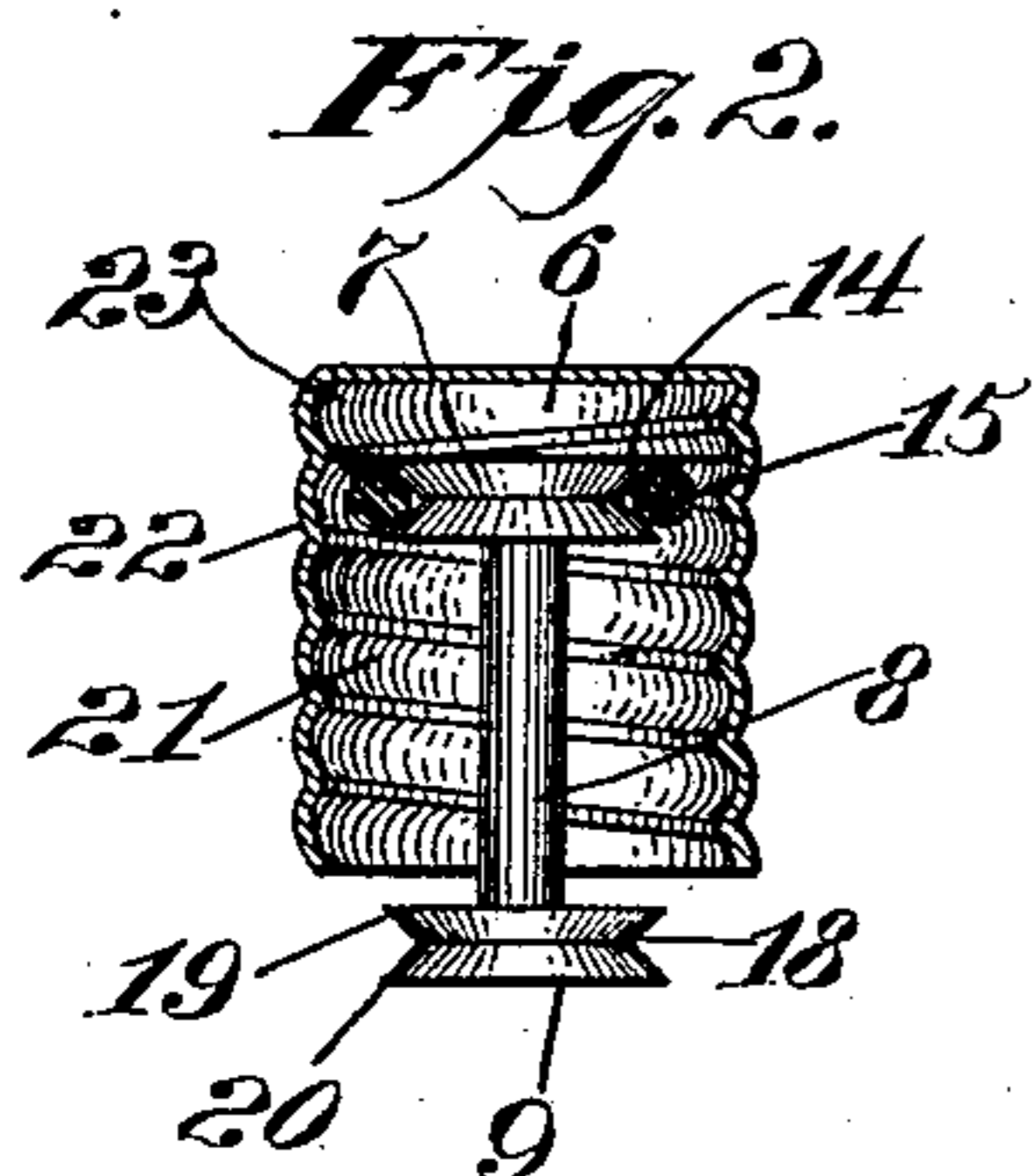
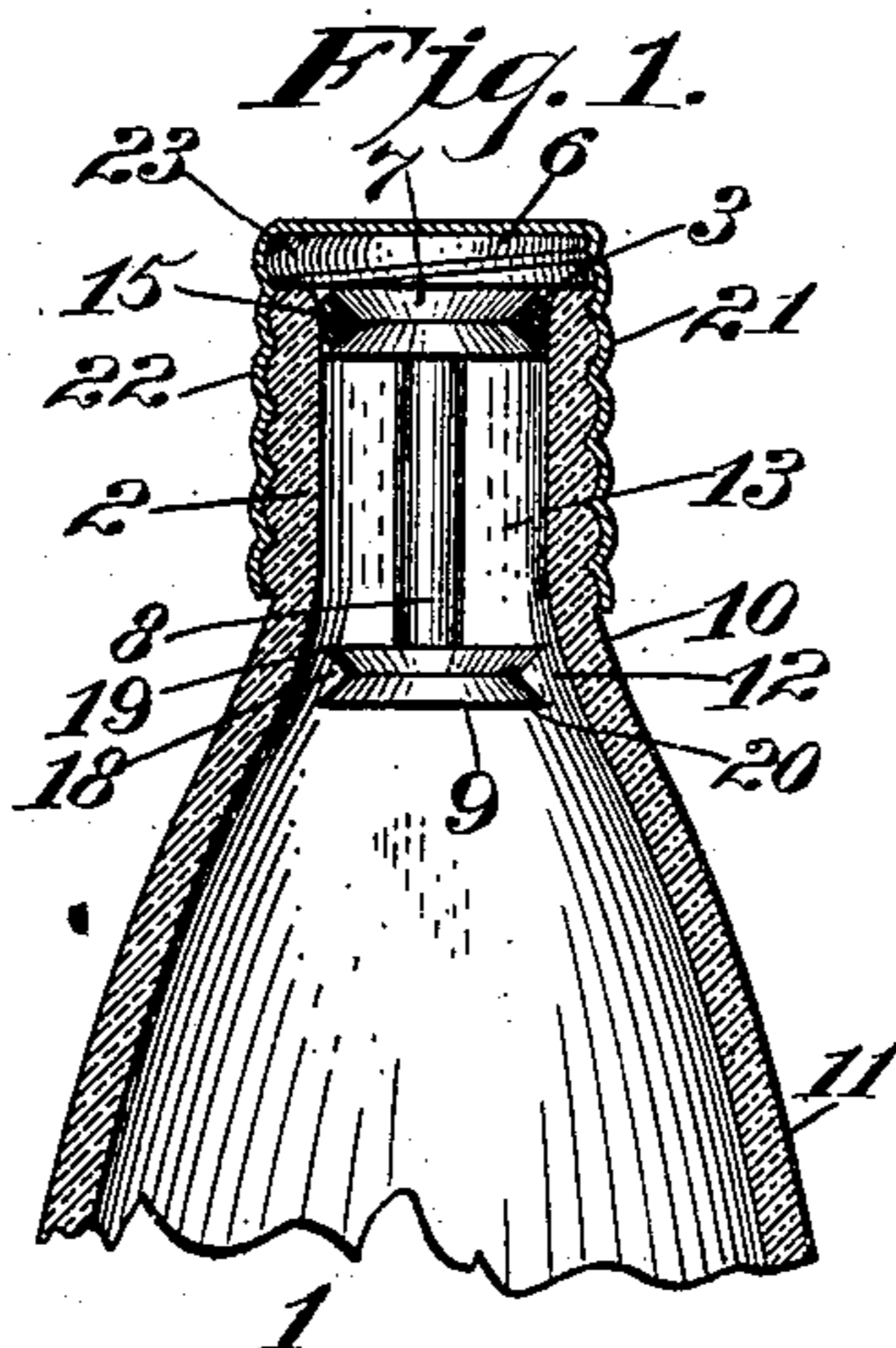
No. 722,802.

PATENTED MAR. 17, 1903.

H. BOUTON.
STOPPER FOR BOTTLES OR SIMILAR VESSELS.

APPLICATION FILED DEC. 6, 1902.

NO MODEL.



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UNITED STATES PATENT OFFICE.

HAROLD BOUTON, OF BOONTON, NEW JERSEY.

STOPPER FOR BOTTLES OR SIMILAR VESSELS.

SPECIFICATION forming part of Letters Patent No. 722,802, dated March 17, 1903.

Application filed December 6, 1902. Serial No. 134,071. (No model.)

To all whom it may concern:

Be it known that I, HAROLD BOUTON, a citizen of the United States, residing in Boonton, in the county of Morris and State of New Jersey, have invented certain new and useful Improvements in Stoppers for Bottles or Similar Vessels, of which the following is a specification.

This invention relates to stoppers for bottles and similar vessels; and it consists, substantially, in the improvements hereinafter particularly described.

With bottles and similar vessels for containing catsup and other condiments or substances considerable inconvenience frequently arises from the use thereof at table due to adherence of quantities of the contents to the sides of the mouth or neck of the bottle each time the latter is tilted in the ordinary way for the purpose of pouring some of its contents upon a plate or food therein, and after repeated use of the bottle it not infrequently happens that the mouth or neck thereof becomes so clogged by gradual accumulations of portions of the contained substance as to prevent escape or passage of such substance therefrom. The disadvantages or inconveniences mentioned are due, in a measure, to the particular character or composition of the condiments or other substances contained in the bottle, the same being usually incapable of easy flow and having a tendency to stick to the sides of the mouth or neck of the bottle, and, on the other hand, such disadvantages or inconveniences often result from improper handling of the bottle in use, rendering it frequently difficult to replace the stopper or closure of the bottle for sealing the contents of the latter against contamination or injurious effects produced by the entrance of air or dirt thereinto.

The present invention has for its principal object to provide means whereby the disadvantages and inconveniences referred to are overcome and also to provide a stopper or closure for bottles and similar vessels which is effective and reliable in use or operation.

A further object is to provide a stopper or closure for bottles and similar vessels which is simple in construction and cheap to manufacture and one also which may be readily applied to the bottle with ease and facility and

without liability to soiling the hands or fingers.

The invention also has other objects in view, substantially as will hereinafter more fully appear when taken in connection with the accompanying drawings, in which—

Figure 1 is a vertical sectional view representing one form or embodiment of my improved stopper or closure as applied or fitted to the mouth or neck of a bottle or similar vessel, and Fig. 2 is a similar view of the same form or embodiment of stopper or closure detached. Fig. 3 is also a similar view to Fig. 1, representing a modification of my invention; and Fig. 4 is a similar view to Fig. 2, showing this modified form or embodiment of the stopper or closure also detached. Fig. 5 is a side elevation of my improved stopper or closure for bottles and similar vessels minus the cap shown in each of the preceding figures. Fig. 6 is a similar view to Fig. 5, representing a modification in the construction and organization of the parts or elements of which the stopper or closure is constituted. Fig. 7 is a side view of a portion of a bottle or similar vessel, such as is shown in Fig. 1.

Before proceeding with a more detailed description it may be stated that my improved stopper or closure for bottles and similar vessels comprises means for completely sealing the mouth or opening in the neck of the bottle, together with means for thoroughly scraping the interior surfaces of said mouth and neck each time the stopper or closure is removed and again applied, the effect of the operation of such removal and application of the said stopper or closure being to remove from such surfaces any and all portions of the contents of the bottle tending to adhere thereto, thus conducing to cleanliness and enabling the contents of the bottle to be readily poured therefrom at any time and in any quantity desired.

My improved stopper or closure is of special construction, whereby a chamber is formed between members thereof and the inner surface of the neck of the bottle, said chamber serving to collect gases arising from the contents of the bottle in such manner that a part of the pressure thereof is utilized in maintaining the stopper or closure in place without the employment of additional means for

this purpose. Preferably, however, I employ in connection with the stopper or closure a cap or like device screwed or otherwise fastened upon the neck of the bottle, similarly as in the case of bottles now in use for containing catsup and other substances.

My improved device is simple in construction and effective in use, and it will be understood, of course, that I am not limited in practice to the precise details of the several embodiments thereof herein shown, since departures therefrom may be made coming within the scope of my invention.

Specific reference being had to the accompanying drawings by the designating characters marked thereon, 1 represents a bottle or similar vessel having a neck 2, formed with the usual mouth or opening 3, said neck, as shown in Figs. 1 and 7, preferably being formed on the exterior thereof with a screw-thread 4, extending practically for its full height or length, although in some instances such screw-thread may only extend for a part of the height or length of said neck, as will be fully apparent.

My improved stopper or closure for bottles and similar vessels comprises in the main a head 6 of diameter substantially equal to the external diameter of the said neck at the said mouth or opening therein, and formed with or attached to said head at the inner side thereof is a disk or member 7, to which is centrally connected or secured one end of a stem 8, having at its other end another disk or member 9, which is of diameter equal to the internal diameter of the neck, the length of said stem and the proportions of said disk or member 9 being preferably such that the upper edge of the latter is just clear of the intersecting portion 10 of the inner surface of the neck and body 11 of the bottle when the stopper or closure is in place, substantially as indicated in Figs. 1 and 3, this construction and organization resulting in the production of an annular passage 12, forming communication between the interior of the body of the bottle and the chamber 13, formed between the adjacent sides of the disks or members 7 and 9 and the inner surface of the said neck. Thus any gases arising within the bottle will in part pass into the said chamber 13, as is apparent, and the pressure thereof exerted upon the upper surface of disk or member 9 will counteract the effect of any pressure which may in like manner be exerted upon the inner surface of disk or member 7, and in this way the stopper or closure is rendered less liable to be unseated from its place upon the bottle, as is also apparent. In order to properly seal the mouth or opening in the neck of the bottle, I preferably form an annular recess 14 in the sides of the disk or member 7 of the stopper, in which recess is placed or fitted a rubber or other gasket 15, forming a packing between said disk or member and the inner surface of said mouth or opening, the said recess, as

shown in Figs. 1 to 5, inclusive, being preferably V-shaped, so as to allow for the tight compression of said gasket when the stopper or closure is properly applied. As shown in Fig. 6, however, the sides of said recess are indicated at 16 as being substantially rectangular in form, the gasket 17 being correspondingly shaped in cross-section and which construction may sometimes be employed, if desired.

The disk or member 9 of my improved bottle stopper or closure constitutes a scraper for the inner surfaces of the said neck and mouth of the bottle, both on the removal and application of said stopper or closure, it being apparent that in those operations the edges of the said disk or member will operate to scrape from such surfaces any adherences of portions of the contents of the bottle, the said neck and mouth being in this way kept thoroughly clean and free of obstructions to the free and easy outpouring of such contents as may be desired at any time in use. I may form the sides of the disk or member 9 straight or vertical, as shown in Fig. 6; but preferably I construct the same with an annular groove 18 therein, thereby to derive sharper scraping edges 19 and 20 thereon, which construction is more effective in some instances. As thus constituted my improved stopper or closure is complete and effective for its purposes; but preferably I employ in connection therewith a suitable metal or other cap 21, and, as shown in Figs. 1 and 2, the said cap is formed with a screw-thread 22 to engage with the thread 4 on the outer surface of the neck of the bottle, said screw-thread 22 also extending for the full height of the cap to furnish a convenient means for insertion and fastening of the head 6 of the stopper or closure within said cap, said head, as shown at Figs. 1, 2, 5, and 6, being also formed around the sides thereof with a thread 23, whereby the head may be screwed firmly in place. Instead of thus securing the stopper or closure within the cap, however, I may simply form the sides of the head with an annular recess 24, as indicated at Figs. 3 and 4, into which recess corresponding portions of the cap are forced in any suitable manner, as by crimping, as shown, it being understood that in this embodiment of my invention the threads on both the cap and neck of the bottle may only extend for a limited portion of the height of each or only for an extent sufficient to insure the fastening of the entire device upon the neck of the bottle. As shown in Fig. 3, I may dispense with threads on the neck and cap of the bottle, in which case the adjacent sides of each of these elements are made substantially straight or even, the stopper or closure in this instance being applied in place without the necessity of any turning action, such as is required to be effected with the other embodiments referred to by which to screw the cap tightly upon the bottle-neck in the ordinary

way. In each of the embodiments in which the cap is included the diameter of the disk or member 7 is such with reference to the internal diameter of the neck of the bottle as that a sufficient space is afforded for the proper tight fitting of the edges of the mouth or opening between the packing or gasket and adjacent portions of the inner surface of said cap.

From the foregoing it will be seen that I have provided an exceedingly simple and effective device for the purpose stated and also that the device is cheap to manufacture, besides being capable of easy manipulation both in attaching and removing the same from the neck of the bottle or other similar vessel in connection with which it is employed. It may be added that when dispensing with the cap I may make the head of my improved stopper or closure of ample depth or proportions to enable the same to be readily grasped or taken hold of by the hand.

Having thus described my invention, I claim—

1. A stopper or closure for bottles and similar vessels, comprising means for closing the mouth of the bottle, and independent means for scraping the inner surface of the mouth and neck thereof both on application and withdrawal of the stopper.

2. A stopper or closure for bottles and similar vessels, comprising means for closing the mouth of the bottle, and means for scraping the inner surface of the mouth and neck thereof both on application and withdrawal of the stopper, the two said means being located a distance from each other and connected, and forming with the inner surface of the neck of the bottle a chamber having communication with the interior of the bottle.

3. A stopper or closure for bottles and similar vessels, comprising means for closing the mouth of the bottle, a stem connected at one end to said means, and having means connected to the other end thereof for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of the stopper.

4. A stopper or closure for bottles and similar vessels, comprising means for closing the mouth of the bottle, means for sealing the bottle, and independent means for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of the stopper.

5. A stopper or closure for bottles and similar vessels, comprising a head for closing the mouth of the bottle, a disk and a packing-ring for sealing the bottle, and means connected to said disk for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of the stopper.

6. A stopper or closure for bottles and similar vessels, comprising means for closing the mouth of the bottle, and a double-edged device for scraping the inner surface of the

mouth and neck thereof both on application and withdrawal of the stopper.

7. A stopper or closure for bottles and similar vessels, comprising a head for closing the mouth of the bottle, a disk and a packing-ring for sealing the bottle, and an independent disk connected to said first-named disk for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of the stopper.

8. A stopper or closure for bottles and similar vessels, comprising a head for closing the mouth of the bottle, a disk and a packing-ring for sealing the bottle, a stem connected at one end centrally of said disk, and an independent disk connected to the other end of the stem and having double edges for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of the stopper.

9. A stopper or closure for bottles and similar vessels, comprising a head for closing the mouth of the bottle, means for sealing the bottle, and independent means for scraping the inner surface of the mouth and neck of the bottle both on application and removal of the stopper, said latter means being constituted of a disk the diameter of which is substantially equal to the inner diameter of said mouth and neck.

10. A stopper or closure for bottles and similar vessels, comprising a cap for the neck of the bottle, a head secured within the cap, and means connected to said head adapted to scrape the inner surface of the mouth and neck of the bottle both on application and removal of said cap.

11. A stopper or closure for bottles and similar vessels, comprising a cap for the neck of the bottle, a head secured within the cap, a stem connected at one end to said head and having means at the other end thereof adapted to scrape the inner surface of the mouth and neck of the bottle both on application and removal of said cap.

12. A stopper or closure for bottles and similar vessels, comprising a cap for the neck of the bottle, a head secured within the cap, means for sealing the bottle, and independent means for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of said cap.

13. A stopper or closure for bottles and similar vessels, comprising a cap for the neck of the bottle, a head secured within the cap, a disk and a packing-ring for sealing the bottle, and independent means connected to said disk for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of said cap.

14. A stopper or closure for bottles and similar vessels, comprising a cap for the neck of the bottle, a head secured within the cap, and means connected to said head for scraping the inner surface of the mouth and neck of the bottle both on application and withdrawal of said cap, said means being consti-

tuted of a disk having an annular recess all around its sides to form double edges.

15. A stopper or closure for bottles and similar vessels, comprising a cap for the neck 5 of the bottle, said cap being threaded at the sides thereof for its full height to fit a corresponding thread on the neck, a head also having a thread and screwed into said cap, and means connected to said head for scraping 10 the inner surface of the mouth and neck of the bottle both on application and removal of said cap.

16. A stopper or closure for bottles and similar vessels, comprising a cap for the neck 15 of the bottle, said cap being threaded for its full height to fit a corresponding thread on

the neck, a head also threaded and screwed into the cap, a disk connected to said head and having an annular recess at the sides thereof, a packing-ring seated in said recess, 20 and a stem connected at one end to said disk and provided at its other end with another disk for scraping the inner surface of the mouth and neck of the bottle both on application and removal of said cap. 25

Signed at Nos. 9 to 15 Murray street, New York, N. Y., this 5th day of December, 1902.

HAROLD BOUTON.

Witnesses:

FRED. J. DOLE,
E. EVERETT ELLIS.