No. 814,953. PATENTED MAR. 13, 1906.

K. A. FRIESEKE.

DISPENSING BOTTLE.

APPLICATION FILED MAY 22, 1905.

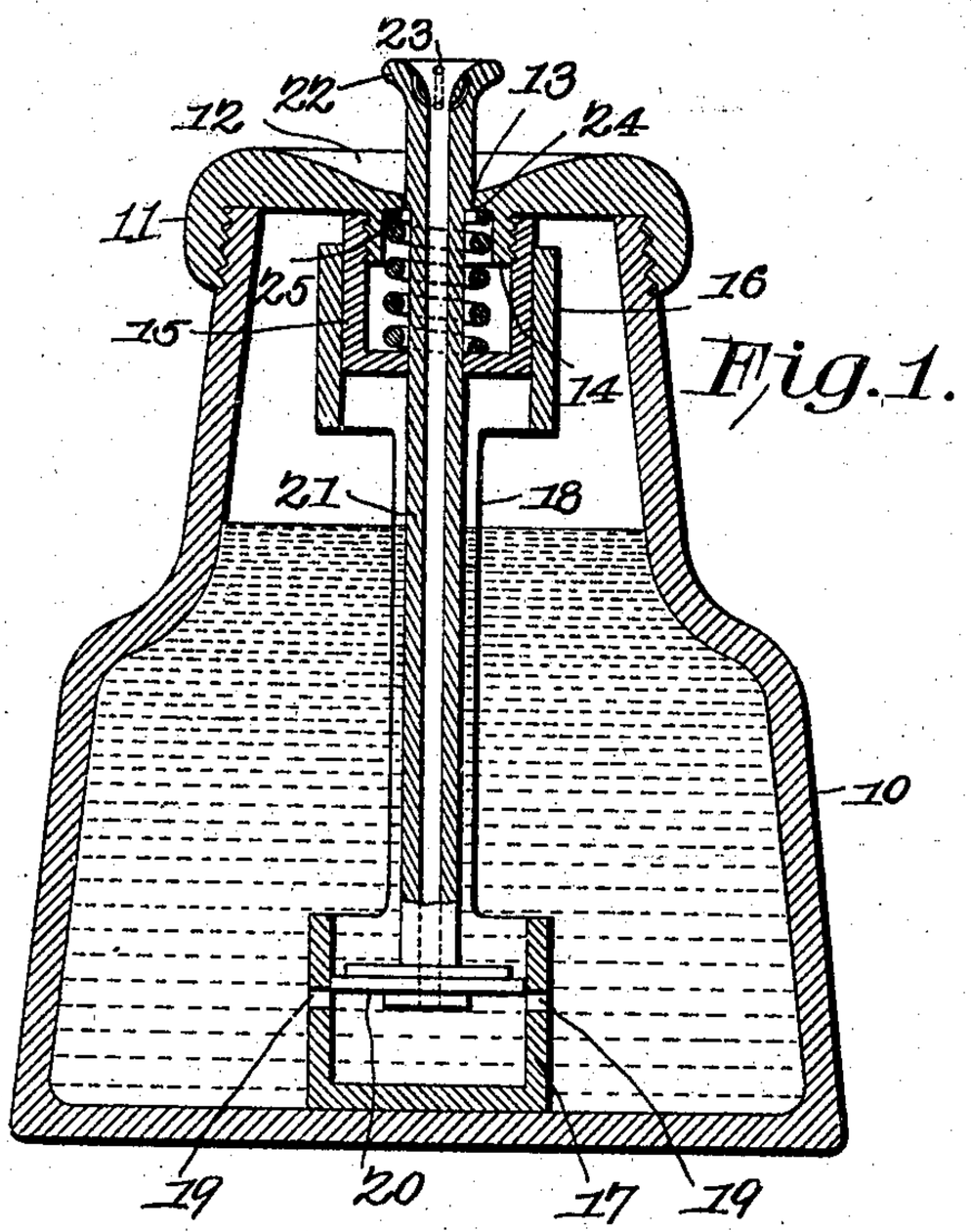


Fig. 1.

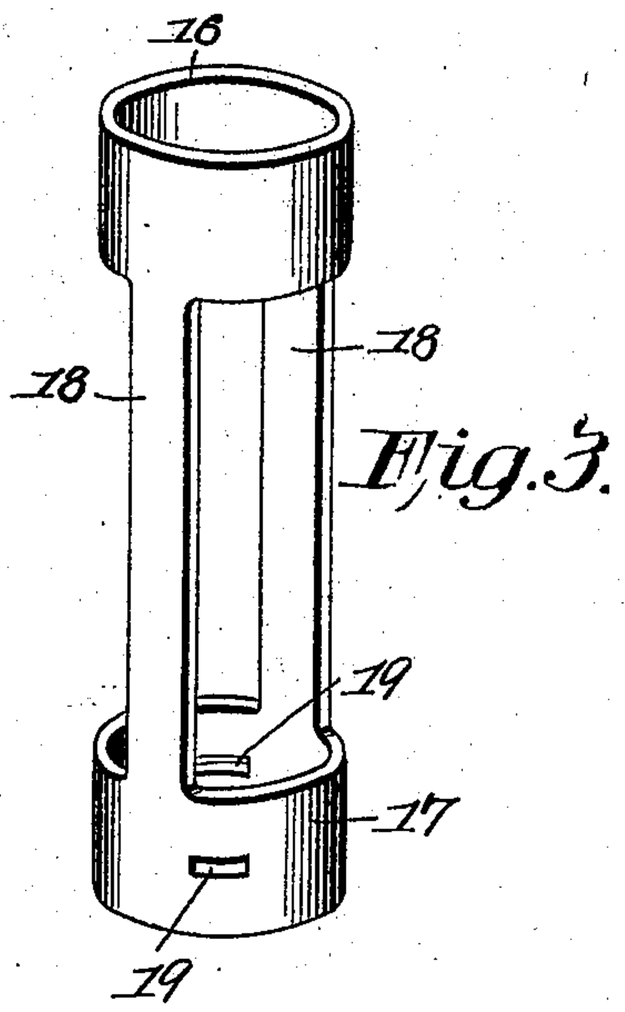


Fig. 3.

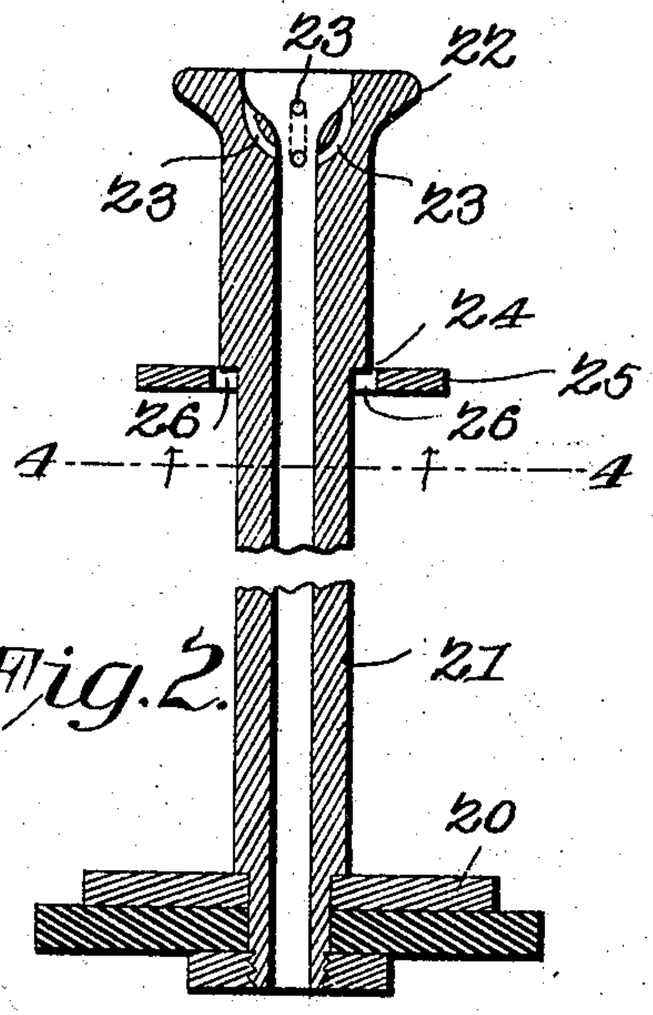
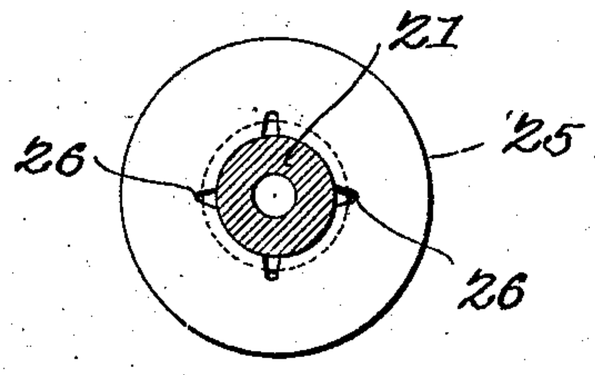


Fig. 2.

Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

KARL ALBERT FRIESEKE, OF ATLANTA, GEORGIA.

DISPENSING-BOTTLE.

No. 814,953. Specification of Letters Patent. Patented March 13, 1906.

Application filed May 22, 1905. Serial No. 261,643.

To all whom it may concern:

Be it known that I, KARL ALBERT FRIESEKE, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Dispensing-Bottle, of which the following is a specification.

This invention relates to bottles for dispensing liquids in small quantities intermittently into a sponge, cotton, or like absorbent or directly from the bottle, and has for its object to improve the construction and increase the efficiency and utility of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

In the drawings thus employed, Figure 1 is a sectional elevation of the improved device. Fig. 2 is an enlarged sectional detail of the plunger and its tubular stem. Fig. 3 is a perspective view of the combined cylinder and supporting member detached. Fig. 4 is a transverse section of the plunger-stem and with the packing-washer disposed thereon.

The improved device comprises a body portion or receptacle 10 for the liquid to be dispensed, of any required size or of any suitable material, and provided with a detachable closure 11, preferably threaded thereon, the upper surface of the closure being concaved, as at 12, and with an aperture 13 at the lowest portion of the concaved surface. Depending from the under side of the closure 11 is an annular threaded stud 14, and engaging this stud is a spring supporting-sleeve 15. Slidably disposed upon the sleeve member 15 is a tubular guide member 16, and bearing upon the bottom of the receptacle 10 is a cup-shaped member 17, the cup-shaped member and guide member connected by spaced bars 18.

The cup, guide-sleeve, and spaced connecting-bars are formed from a single section of tubing, and the cup portion is also provided with spaced apertures 19, through which the "charge" of liquid to be emitted at each action of the device is supplied to the cup, as hereinafter explained.

Operating in the cup 17 is a plunger 20, having a tubular stem 21 extending therefrom through supporting member 15 and the aperture 13 in the closure 11 and terminating in an outwardly-flaring portion or mouth 22. Within the mouth portion of the stem 21 a plurality of small curved ducts 23 are formed and connecting the interior of the tubular stem below the mouth portion with the interior of the latter to provide an increased outlet from the stem, as hereinafter explained. The stem 21 is provided with an intermediate shoulder 24, beneath which a packing-washer 25 bears, the washer also bearing against the under face of the closure member 11. The stem 21 is slightly smaller than the aperture 13 in the closure 11, so that the liquid which may overflow will drain back into the receptacle, and to insure this drainage the washer 25 is provided with small recesses 26, through which the liquid will pass. A spring 27 is disposed between the washer 25 and the supporting member 15 and exerting its force to maintain the plunger yieldably in elevated position and above the inlet-apertures 19.

The improved device herein disclosed is designed more particularly for the use of dentists, physicians, and others for holding liquids which may be required in small quantities for absorption in sponge, cotton, or similar material for use as an antiseptic or the like, and in using the device it is only necessary to press the sponge or cotton upon the flaring mouth 22 of the stem 21 and move the latter downward, which action will cause the plunger 20 to pass below the apertures 19 and cut off the mass of liquid in the receptacle and force the small amount within the cup below the apertures, or so much thereof as may be required, upward through the tubular stem 21 and into the absorbent material held over the same. The flaring mouth 22 of the stem 21 and the curved ducts 23 insure the lateral spraying or diffusion of the liquid and causing it to permeate a relatively large area of the absorbent, and thus materially increase the utility of the device. Any required amount of the liquid less than the full contents of the cup 17 may be discharged by

stopping the downward movement of the stem at any desired point, as will be obvious.

The device is simple in construction, can be inexpensively manufactured, and of any required size and of any required material.

The parts may be of glass and metal or wholly or partially of rubber or similar material, as required.

Having thus described the invention, what is claimed is—

1. In a device of the class described, a receptacle having a detachable closure, a supporting member depending from said closure, a cup disposed within said receptacle and provided with intermediate inlet-apertures, supporting means between said cup and supporting member, a plunger operating in said cup and having a tubular stem extending through said closure, and a spring bearing upon said supporting member and operating to maintain said plunger yieldably at one end of its stroke.

2. In a device of the class described, a receptacle having a detachable closure provided with a threaded annular stud, a threaded supporting member engaging said stud, a cup disposed within said receptacle and provided with intermediate inlet-apertures, supporting means between said cup and supporting member, a plunger operating in said cup and having a tubular stem extending through said closure, and a spring bearing upon said supporting member and operating to maintain said plunger yieldably at one end of its stroke.

3. In a device of the class described, a receptacle having a detachable closure formed with a concave upper surface, a cup disposed within said receptacle and provided with intermediate inlet-apertures, supporting means between said cup and closure, a plunger operating in said cup and provided with a tubular stem extending through the concaved portion of said closure and with an intermediate shoulder, a washer carried by said stem and bearing beneath said shoulder and likewise bearing beneath said closure, and a spring bearing between said supporting member and washer and maintaining said plunger yieldably at one end of its stroke.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

KARL ALBERT FRIESEKE.

Witnesses:
WM. S. THOMSON,
HAROLD HIRSCH.