No. 738,917. PATENTED SEPT. 15, 1903.

A. J. KEMPIEN.

BOTTLE STOPPER.

APPLICATION FILED JAN. 8, 1903.

NO MODEL.

Fig. 8.

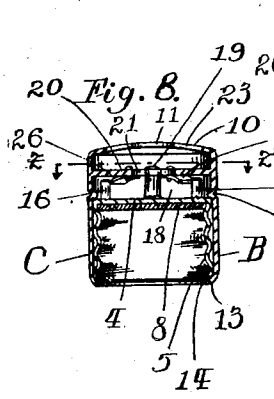


Fig. 9.

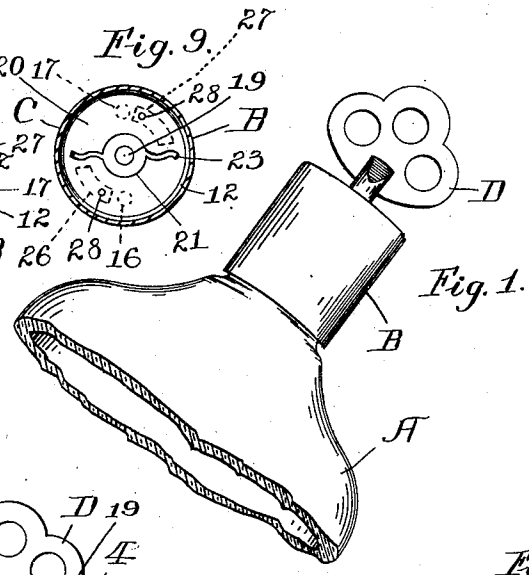


Fig. 1.

Fig. 2.

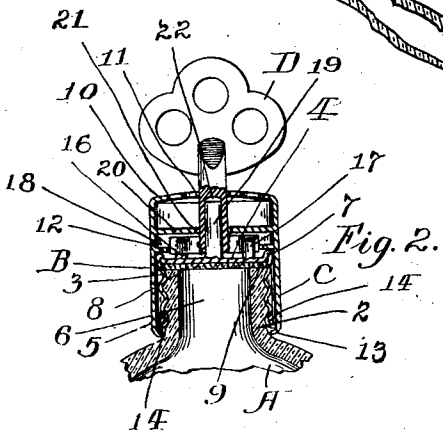


Fig. 3.

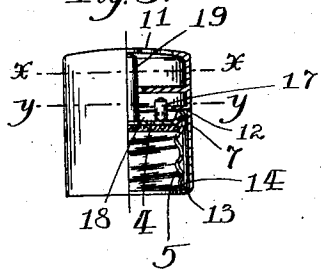


Fig. 4.

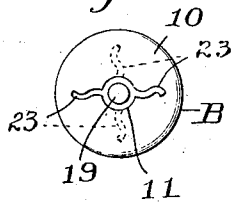


Fig. 5.

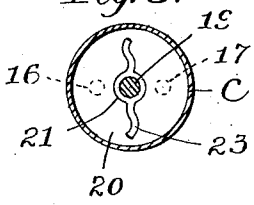


Fig. 6.

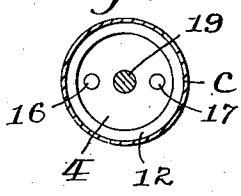
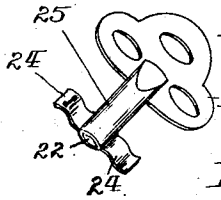


Fig. 7.



Witnesses:

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THE NORRIS PETERS CO. PHOTO-LITHO., WASHINGTON, D. C.

No. 738,917. Patented September 15, 1903.

UNITED STATES PATENT OFFICE.

AUGUST J. KEMPIEN, OF ST. PAUL, MINNESOTA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 738,917, dated September 15, 1903.

Application filed January 8, 1903. Serial No. 138,213. (No model.)

To all whom it may concern:

Be it known that I, AUGUST J. KEMPIEN, a citizen of the United States of America, and a resident of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Stoppers for Bottles and other Receptacles, of which the following is a specification.

My invention relates to improvements in stoppers for bottles and other receptacles, and has for its object to lock the stopper, so that it cannot be removed from the receptacle without the use of a key.

A further object is cheapness of construction and effectiveness in use.

Heretofore much trouble has been caused by stoppers being removed and the contents of the receptacle adulterated or changed. By the use of my invention these objections are overcome.

To these ends my invention consists, primarily, of a threaded inner shell and a turning member protecting said inner shell against removal, except by the use of a key.

In the accompanying drawings, forming part of this specification, Figure 1 is a detail perspective view of a bottle having my improved stopper thereon. Fig. 2 is a detail vertical section of Fig. 1. Fig. 3 is a side elevation, partly in section, of the stopper. Fig. 4 is a plan view of the stopper. Fig. 5 is a section of Fig. 3, taken on the line X X. Fig. 6 is another sectional view of Fig. 3, taken on the line Y Y. Fig. 7 is a perspective view of the key. Fig. 8 is a side elevation in section of an alternate construction of my improved stopper; and Fig. 9 is a section of Fig. 8, taken on the line Z Z.

In the drawings let A represent the receptacle, which for convenience in illustrating my invention is a bottle having the neck 2 of ordinary construction, which is exteriorly threaded at 3 to receive my improved stopper B. This stopper, as shown, consists of a threaded inner shell which is formed by the cap 4 and circular threaded flange 5 for screwing upon the neck of the bottle to close the opening 6. A circular shoulder 7 between the cap and flange forms a bearing against the stop 12. The washer 8, made of cork or other suitable material, may be provided between the cap and end 9 of the neck of the bottle, so as to insure a tight joint between the stopper and the bottle. What I term the "capsule" or "thimble" C incloses the threaded inner shell, so that the stopper may not be removed except by the use of a key, as hereinafter described. This capsule in the form shown in the drawings is cylindrical and closed at 10 on its upper end, except where perforated at 11 to receive the key D. The capsule has turning connection with the stopper between the circular stops 12 and 13, respectively, on the inner wall and outer end of the capsule C. The edge 14 of the flange 5 turns on the shoulder 13 of the capsule and holds the stopper in the capsule. A pair of studs 16 and 17 are mounted on the cap and project into the cavity 18. A pintle 19 is mounted near the center and between the studs on the cap. A partition 20 in the cavity 18 closely adjoins the studs 16 and 17 and is perforated at 21 for receiving the key D. The key D is formed with the socket 22, which is adapted to work on the pintle 19. The perforations 11 and 21, respectively, in the closed end of the capsule and the partition 20 are formed with slots 23, which are curved to correspond with the curved webs 24 on the shaft 25 of the key. The slots in the closed end of the capsule are arranged transverse to the slots in the partition 20. By inserting the key into the capsule through the perforation 11 and slots in the closed end of the capsule and the perforation 21 and slots in the partition 20 the webs 24 are adapted to engage the studs 16 and 17 on the cap of the stopper when the key is turned. By turning the key in one direction the webs 24 engage the studs and screw the stopper onto the neck of the bottle. By reversing the key the webs also engage the studs to rotate said stopper, causing the threads of the stopper to screw off of the threads on the bottle-neck. After the stopper has been attached to the bottle and the key removed the capsule swivels upon the stopper when turned and will not turn the stopper on the bottle.

It is obvious that equivalent parts may be substituted for the elements described in this specification without departing from the principles which I have applied, and I do not wish to confine myself to the specific construction specified. For instance, the specific construc-

tion of the key-engaging mechanism on the stopper may be varied and automatic, as shown in the alternate construction, to perform the same functions and prevent removing the stopper without the use of the proper key.

In the alternate constructions shown in Fig. 8 and Fig. 9 a pair of springs 26 and 27 are attached at 28 to the lower side of the partition 20 and are adapted, respectively, to engage the studs 16 and 17 when the capsule C is turned and screw the stopper on the threaded neck of the bottle. When the capsule is reversed, the springs sweep over the studs and the stopper cannot be removed without the use of a key, as shown in the preferred construction.

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

1. In combination with a receptacle having a threaded neck, a threaded stopper for said neck, a capsule inclosing said stopper, a swivel-joint between said stopper and capsule, key-engaging mechanism on said stopper, and a key for rotating said stopper and causing the threads on the stopper to disengage the threads on the neck of the bottle.

2. In combination with a receptacle having an open neck, a stopper threaded on said neck and provided with key-engaging mechanism for turning said stopper, a capsule swiveled on and inclosing the portion of said stopper outside said neck and perforated to receive a key in engagement with said key mechanism.

3. A device of the class set forth, consisting of a receptacle having a neck, a stopper threaded on said neck, a capsule inclosing the outer surface of said stopper, a swivel-joint between said capsule and stopper, a key, a keyhole in said capsule, and mechanism on said stopper for said key to engage, for the purposes specified.

4. A device of the class set forth, consisting, in combination with a receptacle having a threaded neck, of a stopper therefor, a key, a capsule over said stopper, and a swivel-joint between said stopper and capsule; said capsule being perforated to receive said key and the inclosed surface of said stopper being provided with means for engaging said key.

5. A device of the class set forth, consisting of a stopper, a capsule inclosing the exposed surface of said stopper, means for permitting said capsule to turn freely on said stopper but preventing its removal therefrom, a key, lugs on the stopper which cooperate with the key, and a slot in said capsule for receiving said key in engagement with said stopper.

6. A device of the class set forth, consisting, in combination with a receptacle and a stopper therefor, of a key, a perforated capsule inclosing said stopper and freely disposed thereon, means for preventing the removal of said capsule from the stopper, and means for engaging said stopper with said key.

7. A device of the class set forth, consisting of a stopper having a cap and a threaded flange 5, a key D and capsule C inclosing said cap, a partition 20 in said capsule, perforations 11 and 21, respectively in said capsule and partition, for receiving said key, means for preventing the removal of said capsule from said stopper, and studs 16 and 17 on said cap and below said partition for turning engagement with said key.

8. A device of the class set forth, consisting, in combination with a bottle-neck having screw-threads, of a stopper having a threaded flange, a perforated capsule inclosing said stopper; said capsule being provided with stops on which said stopper is adapted to swivel, engaging elements on said stopper, and a key adapted to penetrate the perforated capsule and engage and rotate the stopper.

9. A device of the class set forth, consisting of a key, a capsule, a stopper in turning engagement with said capsule, mechanism on said stopper for engaging said key, a partition between the closed end of the capsule and said stopper, and perforations in said closed end and partition for receiving said key in engagement with said key-engaging mechanism.

10. A device of the class set forth, consisting of a capsule, a stopper in turning engagement with said capsule, a key, key-engaging mechanism on said stopper, a partition between the closed end of the capsule and said stopper, a pintle on said stopper, and perforations in the closed end of the capsule and the partition for receiving said key on said pintle.

11. In combination with a receptacle having a threaded neck, a threaded stopper for said neck, a key, a capsule inclosing said stopper, a swivel-joint between said stopper and capsule, mechanism in connection with said stopper and capsule for rotating said stopper and causing the threads on the stopper to engage the threads on said neck, and means on said stopper for receiving said key to disengage said stopper from the bottle-neck.

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

AUGUST J. KEMPIEN.

Witnesses:
E. M. BOESEL,
F. G. BRADBURY.

Correction in Letters Patent No. 738,917.

It is hereby certified that Letters Patent No. 738,917, granted September 15, 1903, upon the application of August J. Kempien, of St. Paul, Minnesota, for an improvement in "Bottle-Stoppers," an error appears in the printed specification requiring correction, as follows: In line 7, page 2, the word "constructions" should read *construction;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 27th day of October, A. D., 1903.

[SEAL.]

F. I. ALLEN,
Commissioner of Patents.