(No Model.)

W. NUTT.

STOPPER.

No. 605,125. Patented June 7, 1898.

Fig. 1.

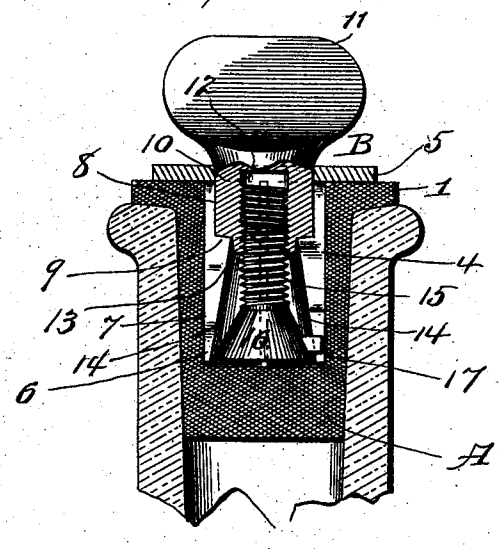
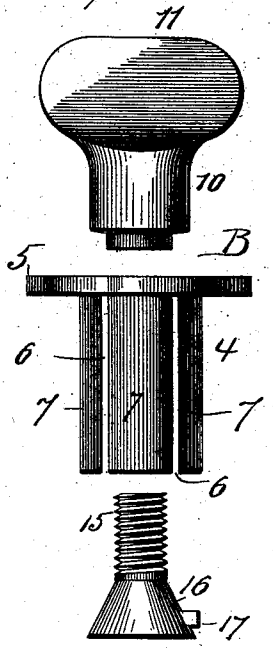


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM NUTT, OF INDIANAPOLIS, INDIANA.

STOPPER.

SPECIFICATION forming part of Letters Patent No. 605,125, dated June 7, 1898.

Application filed January 14, 1898. Serial No. 666,700. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NUTT, a resident of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Stoppers; 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 an improvement in stoppers for bottles, &c., the object of the invention being to produce a stopper which can be readily expanded after it shall have been inserted into the neck of the bottle and which shall be simple in construction, comparatively cheap to manufacture, and which shall be effectual in all respects in the performance of its functions.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view illustrating the application of my invention. Fig. 2 is a detail view.

A represents a soft-rubber stopper having a flange 1 at its upper end to rest on the mouth of the bottle. The rubber stopper is also provided with a socket 2 for the reception of my improved expanding device B. The expanding device B comprises a thimble 4, having a peripheral flange 5 at its upper end to rest on the top of the stopper, and also having a series of longitudinal slits 6 whereby to form spring-jaws 7. The upper portion of the interior of the thimble is made cylindrical to form a socket 8, at the lower end of which an annular shoulder 9 is formed. The cylindrical portion 10 of a thumb-piece 11 is adapted to enter and turn freely within the socket 8, and is limited in its downward movement by engagement with the shoulder 9 at the lower end of said socket 8. The shank 10 of the thumb-piece is made with a screw-threaded socket 12, (for a purpose presently explained,) and at the lower end of said screw-threaded socket a small annular flange 13 is formed and adapted to project into the opening formed by the annular shoulder 9 in the thimble. From the annular shoulder 9 the interior of the thimble is made tapering, as at 14, to the lower end thereof. Into the tapering interior of the thimble a screw 15 is disposed and provided with a head 16, which may, if desired, have a tapering wall, although it is not essential that the head of the screw should be thus made tapering. The screw 15 is adapted to pass through the opening in the thimble marked by the annular shoulder 9 and enter the screw-threaded socket in the shank of the thumb-piece. In order to prevent the screw 15 from turning, it is provided with a small pin or projection 17, adapted to enter and move in one of the slits 6 of the thimble.

From the construction and arrangements of parts above set forth it will be seen that when the thumb-piece is turned the screw will be made to gradually enter the screw-threaded socket in the shank thereof, and as the head of the screw moves up through the interiorly-tapering portion of the thimble the spring-jaws, which compose the latter, will be expanded and thus made to force the rubber of the stopper A outwardly and against the wall of the neck of the bottle.

It is apparent that with my improvements the neck of a bottle can be easily and quickly closed very tightly, so as to prevent the entrance of air into the bottle and prevent the possibility of the contents of the bottle escaping. It will also be seen that when it is desired to remove the stopper it is merely necessary to turn the thumb-piece, when the frictional contact of the rubber stopper with the wall of the neck of the bottle will be immediately relieved and the easy withdrawal of the stopper will thus be permitted.

My improvements are simple in construction and effectual in all respects in the performance of their functions.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein set forth.

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

1. The combination with a flexible stopper having a socket therein, of an expanding device in said socket, said expanding device

comprising a split thimble, a thumb-piece adapted to turn freely therein, and a screw adapted to enter the thimble and a socket in the thumb-piece, said screw having a head to engage the inner wall of the thimble and force the same outwardly or permit it to contract according to the direction in which the thumb-piece is turned, substantially as set forth.

2. The combination with a flexible stopper having a socket therein, of an expanding device for said stopper, said expanding device comprising a slit thimble, having a portion of its interior made tapering, an internally-screw-threaded thumb-piece adapted to enter said thimble, and a screw adapted to enter the tapering interior of the thimble and bear against the wall thereof, said screw being also adapted to enter the screw-threaded interior of the thumb-piece, whereby the turning of the thumb-piece will move the screw and cause the split thimble to be expanded or contracted, substantially as set forth.

3. The combination with a flexible stopper having a socket therein, of an expanding device adapted to enter said socket, said expanding device comprising a thimble having longitudinal slits, an annular shoulder within said thimble, the portion of the thimble below said shoulder being tapering internally, a thumb-piece having a screw-threaded socket and adapted to loosely enter the upper end of the thimble and rest on said internal annular shoulder, a screw adapted to enter said screw-threaded socket in the thumb-piece, a head on said screw disposed within the tapering portion of the thimble and a pin or projection on said head of the screw and adapted to move in one of the longitudinal slots in the thimble whereby to prevent said screw from turning, substantially as set forth.

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

WILLIAM NUTT.

Witnesses:
BURTON B. BERRY,
GEO. W. SORBER.