

(No Model.)

H. BARRETT.
STOPPER FOR BOTTLES.

No. 331,023.

Patented Nov. 24, 1885.

Fig. 1.

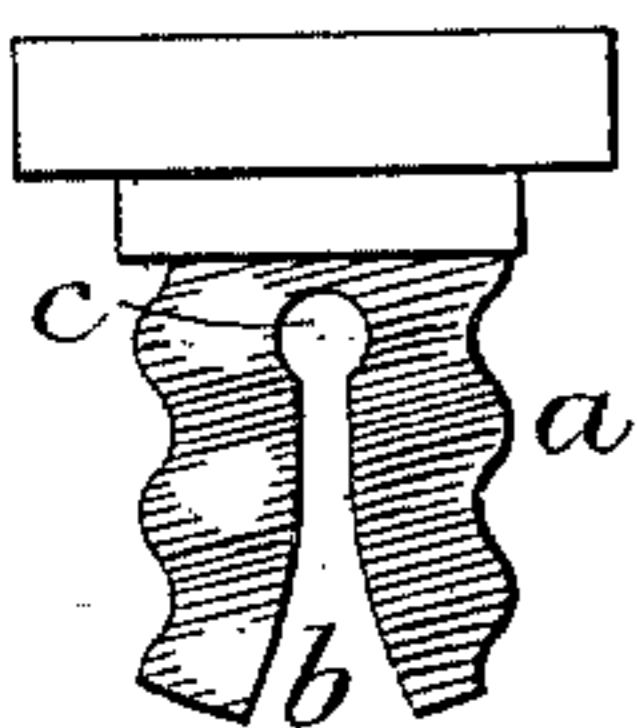


Fig. 3.

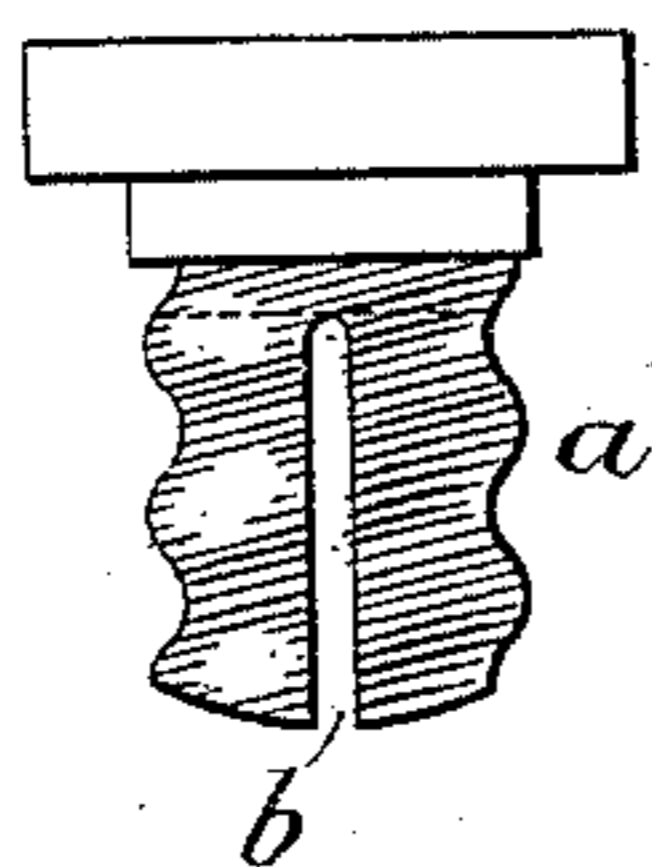


Fig. 5.

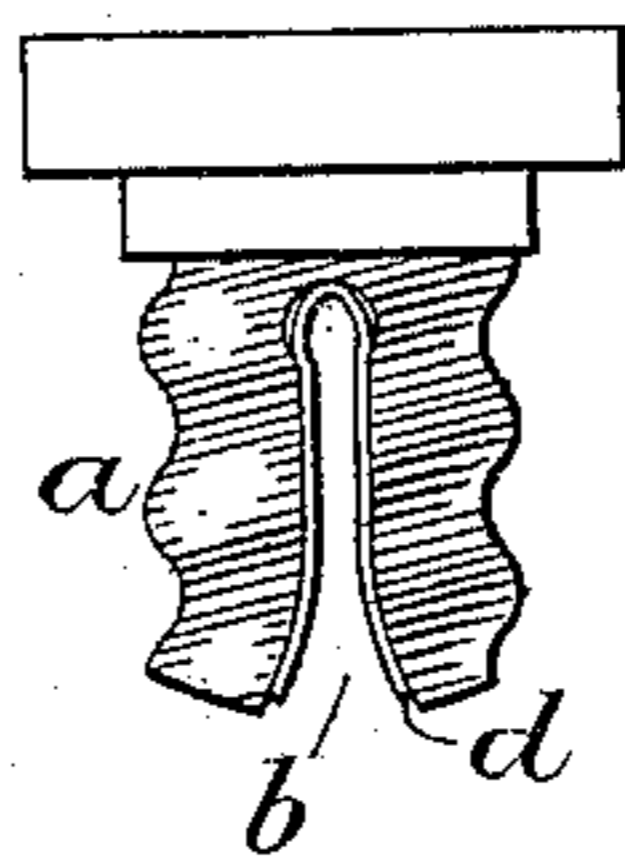


Fig. 2.

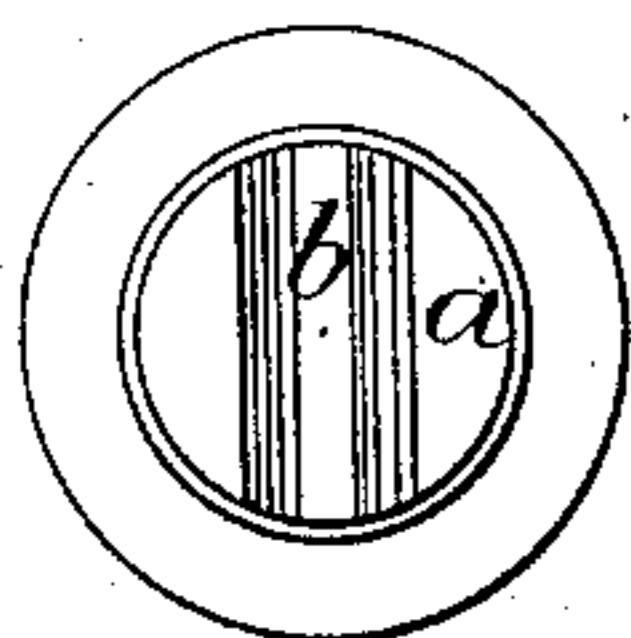


Fig. 4.

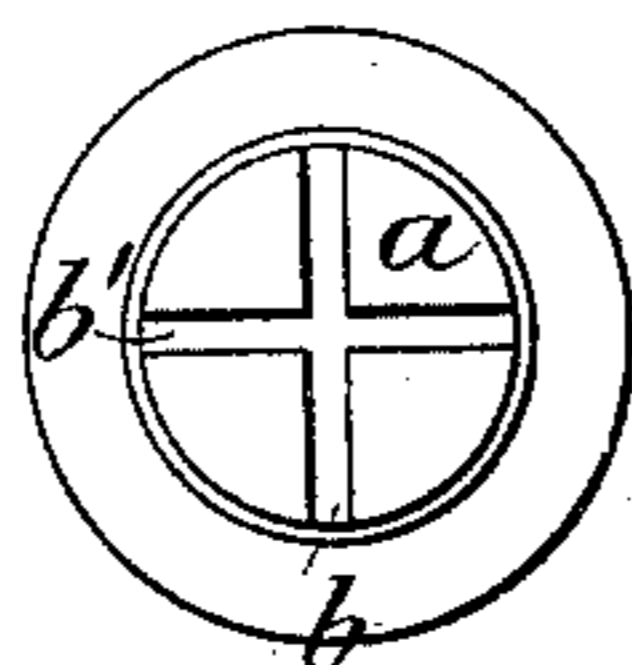


Fig. 6.

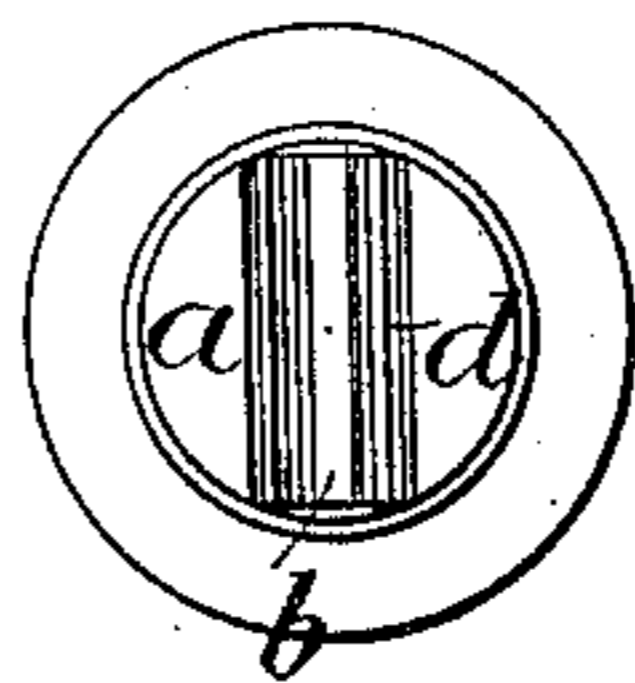


Fig. 7.

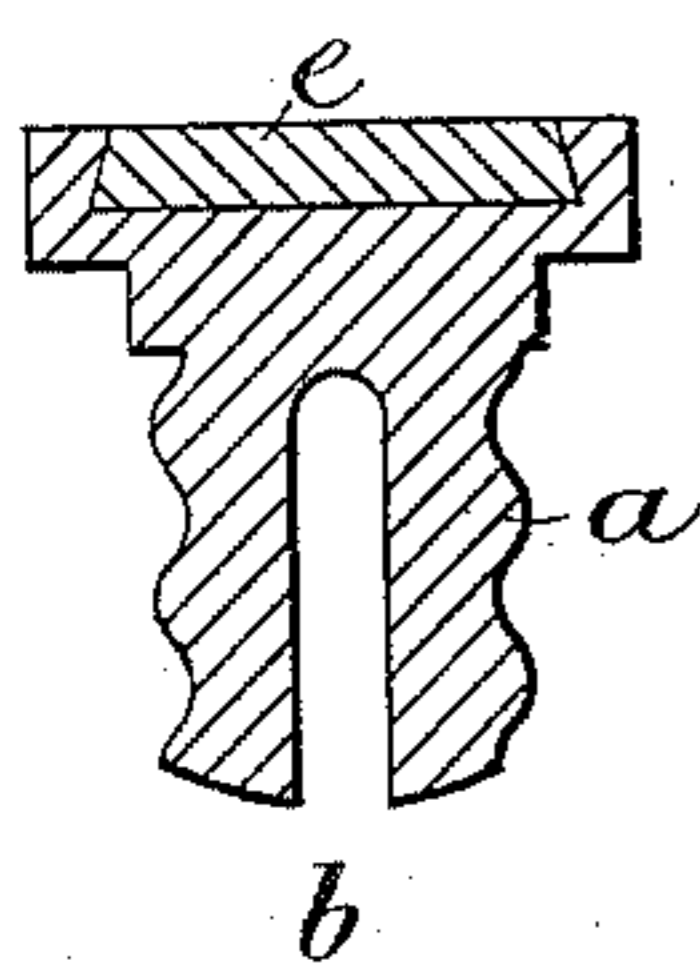


Fig. 8.

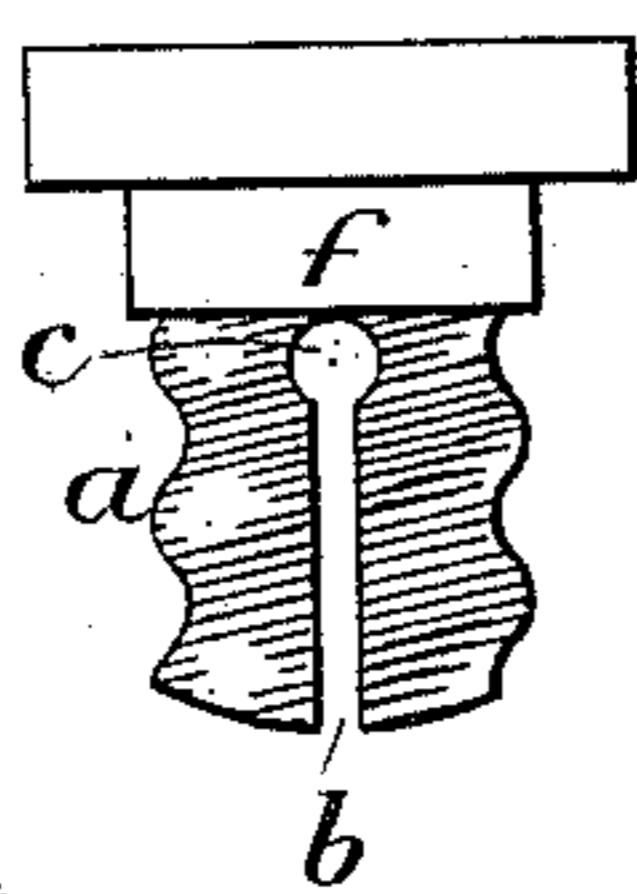
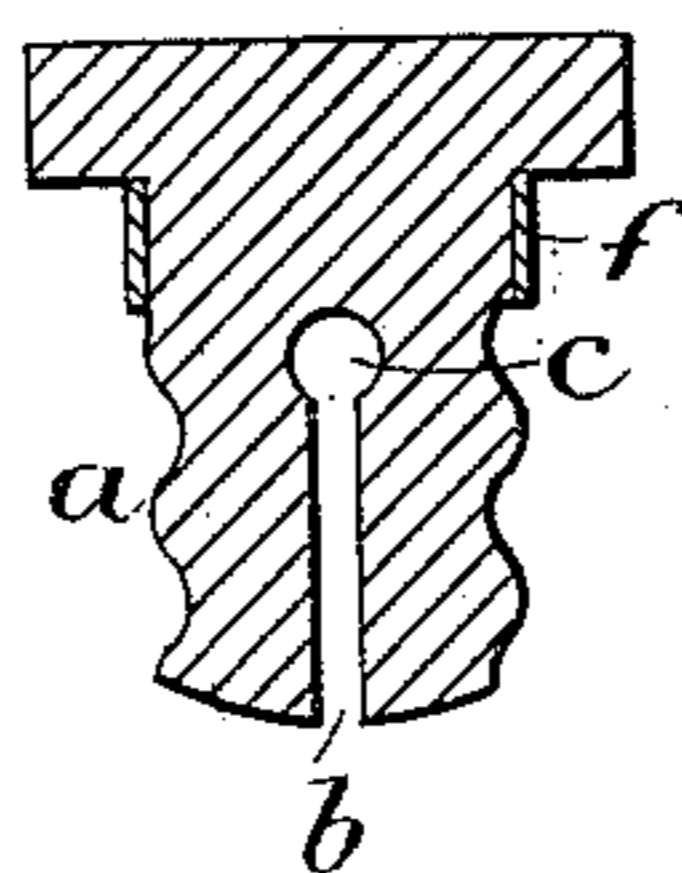


Fig. 9.



Witnesses.

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his atty's

UNITED STATES PATENT OFFICE.

HENRY BARRETT, OF LONDON, ENGLAND.

STOPPER FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 331,023, dated November 24, 1885.

Application filed February 16, 1885. Serial No. 156,066. (No model.)

To all whom it may concern:

Be it known that I, HENRY BARRETT, a subject of the Queen of Great Britain, residing at London, England, have invented new and useful Improvements in Stoppers for Bottles, Jars, and like Vessels, of which the following is a specification.

This invention relates to improvements in the construction of screw-stoppers for bottles, jars, and like vessels, when such stoppers are made of wood.

Hitherto screw-stoppers when made of wood have been practically useless, from the well-known fact that wood expands when brought into contact with liquid or exposed to moisture.

The present improvements consist in so constructing screw-stoppers of wood as to provide against the effects of the stopper becoming expanded while screwed in the bottle-neck. For this purpose I divide the stem of the stopper by one or more cuts or openings extending from the bottom toward the shoulder. The form of the cuts or openings depends on the kinds of wood employed. The cuts or openings may be inclined or straight, and in the latter case the openings may be enlarged at the top. I sometimes introduce a suitable spring or expander between the cuts or openings to press open the stem of the stopper, and to allow it to give way when the stopper is being screwed into the bottle-neck.

Another objection to using wood in the construction of screw-stoppers is, that wood becomes discolored or dirty in use. I provide against this objection by giving the stopper a coating of suitable varnish, and in some cases I coat the stopper with celluloid in solution, and in addition to this I sometimes place a disk of celluloid in the head of the stopper or press a composition into the head, or cement the head so as to close up the grain of the wood for the purpose of rendering it air-tight. When using any kind of composition for this purpose, I am enabled to stamp the same with a name, trade-mark, or otherwise. In some cases I place a ring of metal on the shoulder of the stopper, so as to arrest the expansion of the wood.

In order to enable my invention to be fully understood, I will proceed to describe the same by reference to the accompanying draw-

ings, the various figures of which represent stoppers constructed according to my invention, the usual rubber washer being omitted from the figures for the sake of clearness.

Similar letters in all the figures represent similar parts.

Figure 1 is an elevation, and Fig. 2 a plan of the under side of a stopper made of wood, and having the stem *a* thereof divided by a cut or opening, *b*, extending from the bottom of the stem to near the shoulder of the stopper, the sides of the opening being inclined or curved outward toward the bottom of the stem. The opening *b* is shown enlarged and of a circular shape at the upper end, *c*; but this enlargement may, if required, be dispensed with.

Fig. 3 is an elevation, and Fig. 4 a plan of the under side of a stopper provided with two cuts or openings, *b* and *b'*, formed transversely to each other, the sides of the openings being shown straight and without an enlargement at the top.

Fig. 5 is an elevation, and Fig. 6 a plan of the under side of a stopper similar to the stopper shown in Figs. 1 and 2, and showing a spring, *d*, of suitable material inserted in the cut or opening *b*, to press open the stem *a* of the stopper, and to allow it to give way when the stopper is being screwed into the bottle-neck.

By constructing the stopper in the manner described the stem *a* of the stopper can close inward, so that should the wood expand or swell it shall not burst the bottle-neck, but, owing to the space provided by the cuts or openings *b*, it shall give way by yielding to the resistance of the bottle-neck. Should the wood contract, the stem *a* will open, so as to bear against the bottle-neck.

Fig. 7 shows a section of a wood screw-stopper having a straight cut or opening, *b*, in the stem, and coated with a suitable varnish or with celluloid, for the purpose of obviating the objection of the stoppers becoming discolored or dirty in use. The stopper is shown provided with a disk, *e*, of celluloid, inserted in the head of the stopper, (or a composition may be pressed into the head, or the head may be cemented,) so as to close up the grain of the wood, for the purpose of render-

ing it air-tight, and whereby I am enabled to stamp the head of the stopper with a name, trade-mark, or otherwise.

Fig. 8 is an elevation, and Fig. 9 a section, of a wood screw-stopper having a straight cut or opening, *b*, in the stem, and an enlargement, *c*, at the top of the cut or opening. In these figures the neck or shoulder of the stopper is shown provided with a ring, *f*, of metal, for the purpose of arresting the expansion of the wood, which ring I use in some cases.

Having now described the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A wooden screw-stopper constructed with one or more cuts or openings extending from the bottom of the stem toward the shoulder, as and for the purpose hereinbefore described.
2. A wooden screw-stopper constructed with one or more cuts or openings extending from the bottom of the stem toward the shoulder, as set forth, combined with a suitable spring inserted therein, as and for the purposes set forth.

3. A wooden screw-stopper constructed with one or more cuts or openings therein extending from the bottom of the stem toward the shoulder, as set forth, and coated with varnish or with celluloid in solution, for the purpose set forth.

4. A wooden screw-stopper constructed with one or more cuts or openings extending from the bottom of the stem toward the shoulder, as set forth, and having a celluloid disk or a composition in its head, as and for the purposes set forth.

5. A wooden screw-stopper constructed with one or more cuts or openings therein extending from the bottom of the stem toward the shoulder, as set forth, and having a metal ring applied on its neck or shoulder, as and for the purpose set forth.

H. BARRETT.

Witnesses:

G. F. REDFERN,
B. BRADY.