

PATENT SPECIFICATION

Application Date: Oct. 31, 1923. No. 27,323/23.

213,852

Complete Accepted: April 10, 1924.



COMPLETE SPECIFICATION.

Improvements in or relating to Screw Stopper Devices for Bottles and the like.

We, TOLLEMACHE'S BREWERIES LIMITED, Brewers, a British company, and DOUGLAS ALFRED TOLLEMACHE, a Director of the said company, a subject of the King of Great Britain, both of Upper Brook Street, Ipswich, in the County of Suffolk, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to screw stopper devices for glass bottles, earthenware bottles, and the like, of the kind in which the washer of indiarubber or the like is located around the part of the stem of the stopper immediately below the head and is retained there by its elasticity and when the stopper is screwed home the washer is wedged within the mouth of the bottle or the like. In screw stopper devices of this kind as heretofore known the screw threaded portion of the stopper commences above, at or immediately beneath the lower edge of the washer and the screw thread formation in the mouth of the bottle is formed in the appropriate position for use with such a stopper, that is, the screw thread formation in the neck of the bottle commences at or immediately below the part of the mouth in which the washer on the stopper bears. Such screw stopper devices of the known kind are objectionable because in consequence of the close proximity of the washer to the screw thread formation both on the stopper and in the mouth of the bottle the washer very frequently becomes quickly injured whereby a proper closure is endangered and moreover such a proper closure is occasionally prevented even before the washer becomes injured. The main object of the present invention is to obviate this objection or disadvantage.

According to the said invention the stopper is so formed that there is an unthreaded portion thereof between the lower part of the washer and the commencement of the thread formation, of substantial length or depth in the direction of the axis of the stopper, preferably about equal to or a little more than the length or depth of the usual plain portion covered by the washer, and the thread formation in the mouth of the bottle is correspondingly disposed therein, that is, there is an appropriate unthreaded portion between the part on which the washer will bear and the commencement of the thread formation.

The preferred embodiment of the invention for a bottle for containing beer is illustrated in the accompanying drawing Figure 1 of which is a side view of the screw stopper, Figure 2 a central section through the mouth of the bottle with which the said stopper is to be used and Figure 3 a central section through the stopper and mouth of the bottle when the stopper is in place closing the bottle. In the following description of the said drawings the parts thereof are referred to by the letters marked on the drawings.

The stopper as usual is preferably made of hard rubber or hard rubber composition but is of substantially greater length than usual having at its lower part the screw thread formation *a* terminating or commencing a substantial distance down the length of the stopper from the lower portion of the washer *b* thus leaving the plain part *c* of quite appreciable length or depth along the axis of the stopper. This length or depth is preferably, as shown, a little greater than the length or depth of the part covered by the washer *b*. The thread formation in the mouth of the bottle is properly disposed therein for use with the stopper described, that is, the thread

[Price 1/-]

formation *d* in the mouth of the bottle is much lower than usual as will be appreciated by examining the drawing, leaving a plain part *e* between the thread formation and the part *f* on which the washer *b* bears when the stopper is screwed down. It will be appreciated that by the form of screw stopper device described the screw thread formations in no way interfere with even and proper pressure of the washer on its seat so that the washer cannot be subject to uneven wear or to injury by the interengaging screw thread.

The said invention is not limited to any particular length or depth along the axis of the stopper and bottle mouth of the unthreaded portions, provided that length or depth is sufficient to bring about the advantages explained to a substantial degree.

The invention is particularly applicable to stopper devices for bottles to contain beer or other commodities where it is very important that the risk of an imperfect closure should be very remote but the invention is also applicable to screw stopper devices for bottles and the like to contain any commodities.

The present invention is only concerned with screw stopper devices of the kind hereinbefore referred to and we are aware that in screw stopper devices of a kind in which the washer is disposed to bear on the top of the mouth of the bottle there have been provided unthreaded portions on the stopper and in the mouth of the bottle extending a substantial distance from the washer and from the edge of the mouth of the bottle respectively—see the Patent Specifications Nos. 3285 of 1883, 4467 of 1886 and 16,837 of 1905. In screw stopper devices of this latter kind however injury to the washer would not occur however closely adjacent to it were the inter-engagement of the screw threads but screw stopper devices of this kind are

not usual or favoured for other reasons. The present invention deals only with the usual and most favoured kind of screw stopper device as explained in the opening paragraph of this specification and overcomes a grave disadvantage heretofore existing in that form of device as heretofore known.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A screw stopper device of the kind herein first referred to, in which the stopper is so formed that there is an unthreaded portion thereof between the lower part of the washer and the commencement of the thread formation, of substantial length or depth in the direction of the axis of the stopper and the thread formation in the mouth of the bottle is correspondingly disposed therein, that is, there is an appropriate unthreaded portion between the part on which the washer will bear and the commencement of the thread formation, substantially as and for the purpose described.

2. A bottle stopper for a device according to Claim 1 having an unthreaded portion of substantial length or depth in a direction along the axis of the stopper between the thread formation at the lower part thereof and the lower part of the washer.

3. A screw stopper device according to Claim 1 having its parts formed, proportioned, and arranged, substantially as hereinbefore described with reference to and illustrated in the accompanying drawings.

Dated this 31st day of October, 1923.

HASELTINE, LAKE & Co.,
28, Southampton Buildings, London,
England, and

15, Park Row, New York, N.Y., U.S.A.,
Agents for the Applicants.

Fig. 1.



Fig. 2.

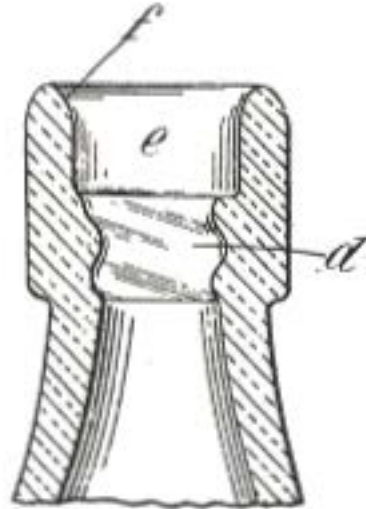
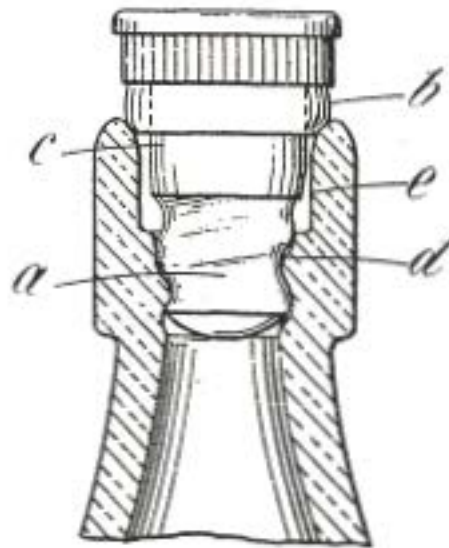


Fig. 3.



[This Drawing is a full-size reproduction of the Original.]