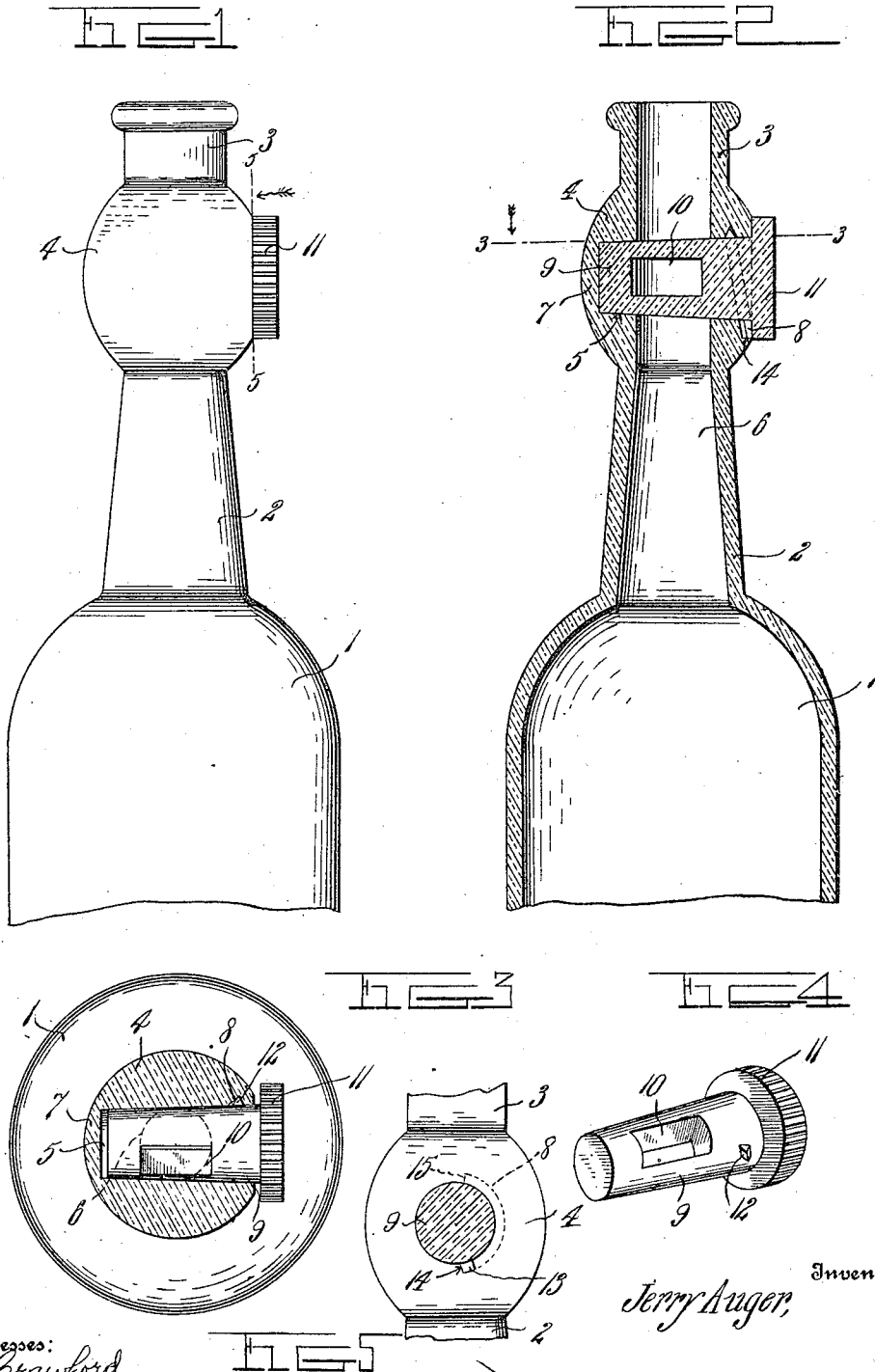


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BOTTLE.

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UNITED STATES PATENT OFFICE.

JERRY AUGER, OF HURLEY, WISCONSIN.

BOTTLE.

949,873.

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To all whom it may concern:

Be it known that I, JERRY AUGER, a subject of the King of England, residing at Hurley, in the county of Iron, State of Wisconsin, have invented certain new and useful Improvements in Bottles; 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.

This invention relates generally to bottles, and more particularly to a novel form of stopper or closure therefor.

The object of the invention is in a ready, inexpensive, and thoroughly practical manner to close the throat of a bottle against escape of liquid, and to secure this result without the necessity of the employment of pressure exerting mechanism for the purpose. Furthermore to render unnecessary the employment of any form of implement to unseal the bottle, whereby a source of annoyance and trouble attending the opening of bottles containing spirituous or malt liquors is obviated.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists, generally stated, in a bottle having its neck provided with a transversely disposed seat, a stopper engaging the seat, and provided with a liquid passage, and means arranged wholly within the neck to hold the stopper in sealed position. As a matter of further and specific improvement, the stopper holding means is arranged to impart endwise movement to the stopper upon the latter being turned to neck sealing position, thus to secure an absolutely liquid tight joint between the stopper and the seat.

More specifically stated, the invention consists in a bottle having its neck provided with a transverse seat the wall of which is provided with a cam-groove, and a stopper having a liquid passage and provided with a seat to engage the groove, the end walls of the groove serving as stops to limit the rotation of the stopper in two directions, whereby, movement of the stopper in one direction to its limit will serve to seal the bottle throat, and movement to its limit in

the other direction will cause the stopper to open the bottle neck.

The invention consists further in the novel details of construction of a bottle and stopper therefor, as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification and in which like characters of reference indicate corresponding parts:—Figure 1 is a view in side elevation of a bottle equipped with the improvements of the present invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a horizontal sectional view, taken on the line 3—3 Fig. 2, and looking in the direction of the arrow thereon. Fig. 4 is a perspective detail view of the stopper. Fig. 5 is a vertical sectional view taken on the line 5—5, Fig. 1, and looking in the direction of the arrow thereon.

Referring to the drawings, 1 designates the body of the bottle, which may be of any preferred shape, 2 the neck and 3 the mouth. The neck is provided, adjacent to the mouth with a spherical or bulbous enlargement 4 in which is formed a transverse seat 5 that intersects the neck passage 6, and is closed at one end by a wall 7 forming an integral portion of the enlargement. The wall of the seat, adjacent to its open end is provided with a cam-groove 8, that is approximately V-shaped in cross section and is disposed obliquely to the long diameter of the neck, forming, in effect, a screw thread. The seat is tapered, and is engaged by a similarly tapered stopper 9 provided with a transverse passage 10 designed to be moved into and out of register with the throat passage 6 thus to open or close the same as occasion may require. The stopper is provided with a knurled head 11, that is preferably of disk like shape, and the inner face of which is designed to bear against the surface of the enlargement on the side through which the stopper is inserted, the surface being flattened in order to allow the head to fit snugly thereagainst.

As stated, there is means provided whereby when the stopper is turned in one direction, endwise movement will be imparted thereto to effect a liquid tight joint between the stop-

per and the seat. This result is secured by providing the stopper, adjacent to the head with an apexiform lug or teat 12 that is designed to engage with the groove 8, the point and sides of the teat being disposed obliquely to the longitudinal axis of the stopper in order properly to coact with the groove, or, in other words, the angular disposition of the teat corresponds to the pitch of the groove. From this arrangement it will be seen that when the stopper is turned in one direction, namely to close the neck passage, it will be moved toward the wall 7, of the enlargement, and will thus be caused tightly to engage the seat and thereby secure the object designed. A reverse movement of the stopper will cause it to move away from the wall 7 and thus lessen the resistance to turning, so that the unsealing of the neck passage may be secured by hand, without the employment of any implement for the purpose. Of course it will be understood that the stopper will be made of glass and will be ground to fit the seat 7 in an accurate manner.

In order to permit the teat 12 to engage with the groove, the latter is provided at its lower end, or that adjacent to the neck, with a lateral slot 13 through which the teat will pass into the groove. The groove will be of such length that its end walls 14 and 15 will operate as stops to limit the turning of the stopper in both directions, so that the operator by the sense of touch will know when the throat passage is sealed, and when open.

By having one end of the seat closed danger of leakage is materially reduced, and by disposing the cam groove within the seat, the teat will be concealed from view, and the appearance of the bottle will thus be enhanced, while at the same time those parts will be protected from injury. By the provision of the lateral slot 13, the stopper may readily be removed, thus to facilitate the cleansing of it and of the bottle, and this will be found of particular advantage where bottles of this character are employed for holding beer and other malt liquors where cleanliness and the absolute absence of any of the stale retained product is essential.

The improvements herein defined while simple in character, will be found thor-

oughly efficient for the purposes designed, and coact in the presentation of a practical and easily manufactured article.

What is claimed:—

1. A bottle having its neck provided with a longitudinally tapered transverse seat closed at one end, a tapered stopper fitting the seat and provided with a liquid passage, means arranged wholly within the neck to impart endwise movement to the stopper upon the latter being turned in one direction to secure a liquid tight seal and when turned in the other direction to cause release of the stopper, said means operating also to hold the stopper in sealed position and a flanged head on said stopper adapted to be drawn into engagement with the neck around said seat when the stopper is turned to sealing position.

2. A bottle having its neck portion provided with a transverse seat closed at one end and formed interiorly with a cam groove, a stopper having a teat to engage the groove and a flanged head on said stopper adapted to be drawn into engagement with the neck around said seat when the stopper is turned to sealing position.

3. A bottle having its neck provided with a transverse seat closed at one end and formed interiorly with a cam groove V-shaped in cross section, a stopper having a liquid passage and provided with an apexiform teat to engage the groove and a flanged head on said stopper adapted to be drawn into engagement with the neck around said seat when the stopper is turned to sealing position.

4. A bottle having its neck provided with a transverse seat closed at one end and formed interiorly with a cam groove disposed obliquely to the longitudinal axis of the seat, a stopper having a liquid passage and provided with an apexiform teat disposed obliquely to the longitudinal axis of the stopper and arranged to engage the groove.

In testimony whereof, I affix my signature, in presence of two witnesses.

JERRY AUGER.

Witnesses:

A. L. RUGGLES,
JOHN LA LOULL.

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