

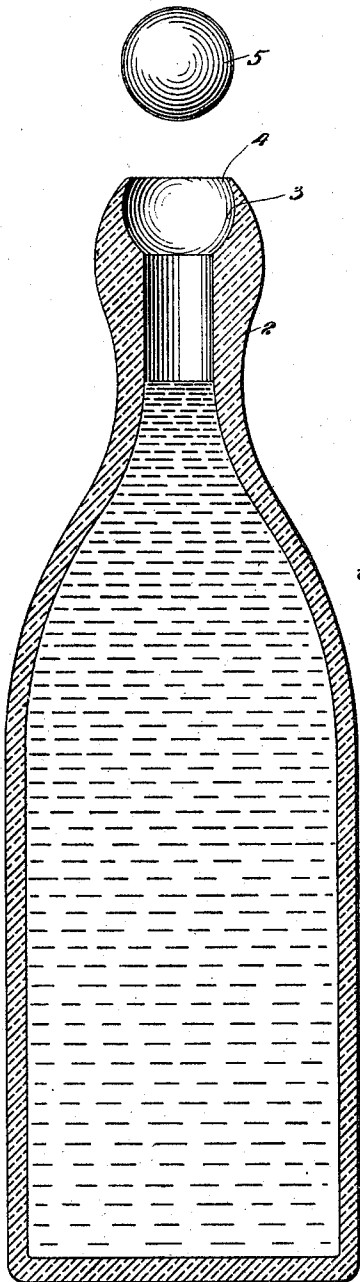
(No Model.)

W. J. HOPE.  
BOTTLE AND STOPPER.

No. 586,038.

Patented July 6, 1897.

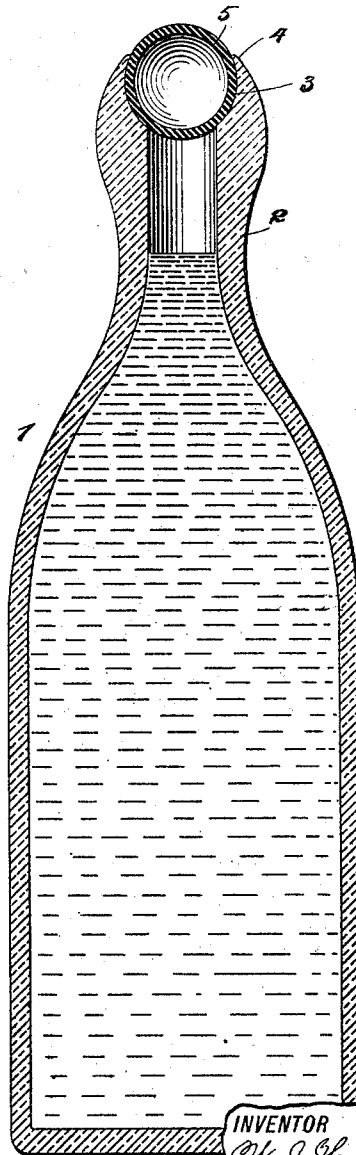
*Fig. 1.*



WITNESSES:

*Edward Thorpe*  
*C. R. Ferguson*

*Fig. 2.*



INVENTOR

*W. J. Hope*

BY

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# UNITED STATES PATENT OFFICE.

WILLIAM J. HOPE, OF CLAYTON, MISSISSIPPI.

## BOTTLE AND STOPPER.

SPECIFICATION forming part of Letters Patent No. 586,038, dated July 6, 1897.

Application filed October 15, 1896. Serial No. 608,915. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. HOPE, of Clayton, in the county of Tunica and State of Mississippi, have invented a new and Improved Bottle and Stopper, of which the following is a full, clear, and exact description.

This invention relates to bottles for containing liquids and the stoppers therefor; and the object of the invention is to provide a simple construction whereby an outwardly-removable stopper may be retained and held rigidly in its seat in the bottle-neck by its own pressure and to resist the gas-pressure in a bottle, thus preventing its blowing out; and a further object is to provide a bottle and stopper that will be of comparatively cheap manufacture.

I will describe a bottle and stopper embodying my invention, and then point the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a vertical section of a bottle embodying my invention and showing the stopper removed therefrom, and Fig. 2 is a vertical section showing the stopper in its closing position.

Referring to the drawings, 1 designates a bottle of any desired form, having a neck portion 2, the mouth of which is substantially bell-shaped, as shown at 3, and the upper end of the mouth is curved inward to form an annular shoulder, as indicated at 4. A stopper 5 is adapted to be seated in the mouth 3. This stopper 5 is spherical in form and consists of a yielding material—such, for instance, as rubber—and this spherical stopper may be made hollow, as indicated in Fig. 2.

In operation, after the liquid shall have been placed in the bottle, the stopper may be inserted in the mouth 3 by pressing the sides of said stopper slightly together and pressing it down gently within the mouth and then allowing it to expand. In removing the stop-

per it should be gently pressed to give it a lateral and upward motion, thus rolling it from its seat.

While this stopper may be easily seated and removed, it is obvious that the gas-pressure within the bottle and against the lower side of the stopper will have a tendency to press the bottom of the stopper upward and thus expand its sides into tight engagement with the arch or shoulder portion 4 of the seat and thus prevent the blowing out of the stopper.

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

1. A bottle, the neck of which is provided with a substantially bell-shaped mouth, the outer end of which is extended inward to form an annular shoulder, and a spherical stopper of yielding material adapted to fit in said mouth with a portion projecting above the bottle-neck, said mouth having a sufficient depth to allow its shoulder portion to engage the stopper above its horizontal center line, substantially as specified.

2. A bottle having a substantially bell-shaped mouth, the outer end of which is extended inward to form an annular shoulder, and a hollow spherical stopper of flexible material adapted to fit in said mouth with a portion projecting above the bottle-neck, the said stopper being adapted to be removed outwardly, substantially as described.

3. A bottle having the opening in its neck at the outer end enlarged, said enlargement having curved walls, and a hollow spherical stopper of yielding material and fitting in the said enlargement with a portion projecting above the bottle-neck, whereby the stopper can be readily applied or removed, and at the same time will effectually resist the gas-pressure in the bottle, substantially as described.

WILLIAM J. HOPE.

Witnesses:

J. W. HENDERSON,  
ED. BRADY.