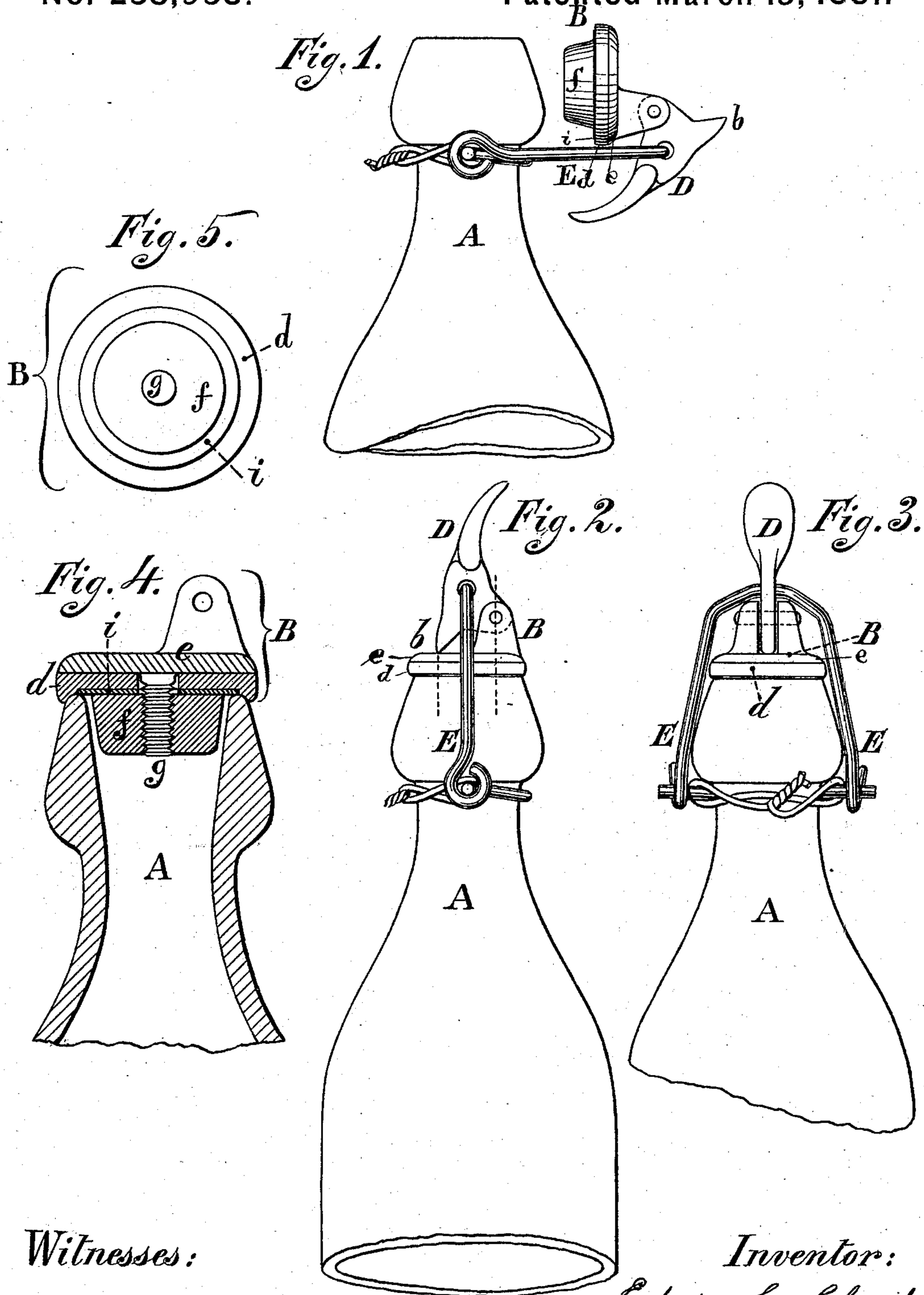


(No Model.)

E. L. LLOYD.  
Bottle Stopper.

No. 238,938.

Patented March 15, 1881.



Witnesses:

Robert H. Hox.  
Henry Howson Jr.

Inventor:

Edwin L. Lloyd.  
by his Attorneys  
Howson and Son



# UNITED STATES PATENT OFFICE.

EDWIN L. LLOYD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ISAAC C. PEARSON, OF SAME PLACE; SAID LLOYD AND PEARSON ASSIGNORS OF ONE-THIRD TO HENRY A. BLAKE, OF WILMINGTON, DELAWARE.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 238,938, dated March 15, 1881.

Application filed June 19, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN L. LLOYD, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Bottle-Stoppers, of which the following is a specification.

The main object of my invention is to so construct a bottle-stopper that access of the contents of the bottle to the rubber packing of the stopper will be effectually prevented. This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is an exterior view of the neck of a bottle provided with my improved stopper, the latter being removed from the mouth of the bottle; Fig. 2, the same with the stopper applied to the mouth; Fig. 3, an end view of Fig. 2; Fig. 4, a vertical section of the bottle mouth and stopper drawn to an enlarged scale, and Fig. 5 an inverted plan view of the stopper.

A is the neck of the bottle, and B the stopper, provided with lugs, to which is hung a lever, D, having an opening for the reception of a yoke, E, the latter being pivoted to projections on a band, which encircles the neck of the bottle below the shoulder formed by the enlargement of the mouth. The yoke E is such that when the lever D is thrown back, as shown in Fig. 1, the stopper is released from the mouth of the bottle, and can be turned over to one side, but when the stopper is applied to the mouth and the lever elevated, as shown in Fig. 2, the stopper is firmly held to the mouth of the bottle, and cannot be removed therefrom without first throwing back the lever.

When the stopper is applied to the mouth of the bottle and the lever D is adjusted to the position shown in Fig. 2 a projection, b, on said lever bears on the top of the stopper, so that pressure is applied to the latter at two points—namely, at the point of contact of the projection b and at the point where the lever is pivoted to the lugs on the stopper—these two points, as shown by dotted lines in Fig. 2, being equidistant, or thereabout, from the yoke E, which forms the point of resistance for the lever, said yoke occupying a central position in respect to the stopper. By this

means an evenly-distributed pressure is imparted to the stopper and the secure closing of the mouth of the bottle is insured.

The stopper has the usual packing d, of india-rubber, which is, in the present instance, secured to the disk e of the stopper by means of a nut, f, adapted to the threaded stem g, which projects from said disk.

In ordinary bottle-stoppers the contents of the bottles have access to this rubber packing, and this defect has hitherto prevented the use of the stoppers in connection with bottles for containing certain effervescing liquids, especially those of an acid nature, owing to the fact that the rubber destroyed the effervescing quality of such liquids. In order to overcome this objection I interpose between the nut f and the rubber packing d a washer, i, of sheet metal, leather, or water-proof and impervious fabric, this washer being of such a size that it bears upon and slightly overlaps the inner edge of the mouth of the bottle, the rubber packing forming a joint with the top and outer edge of said mouth only. By this means I am enabled to avail myself of the advantages of rubber as a packing without incurring the objection due to the contact of said rubber packing with the contents of the bottle, the washer i effectually preventing such contact.

Instead of securing the packing d and washer i to the disk e of the stopper by means of the threaded stem g and nut f, the disk may be formed with an annular recess, to which the packing and washer may be fitted. The threaded stem and nut are preferred, however.

I claim as my invention—

The combination of a bottle, a stopper having a rubber packing-ring, d, and a washer, i, both bearing upon the top of the bottle-mouth in the relations described, and means for compressing the stopper to the mouth of the bottle, as set forth.

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

EDWIN L. LLOYD.

Witnesses:

JAMES F. TOBIN,  
HARRY SMITH.