

No. 786,735.

PATENTED APR. 4, 1905.

C. DORN.  
BOTTLE STOPPER.

APPLICATION FILED JULY 24, 1903. RENEWED SEPT. 13, 1904.

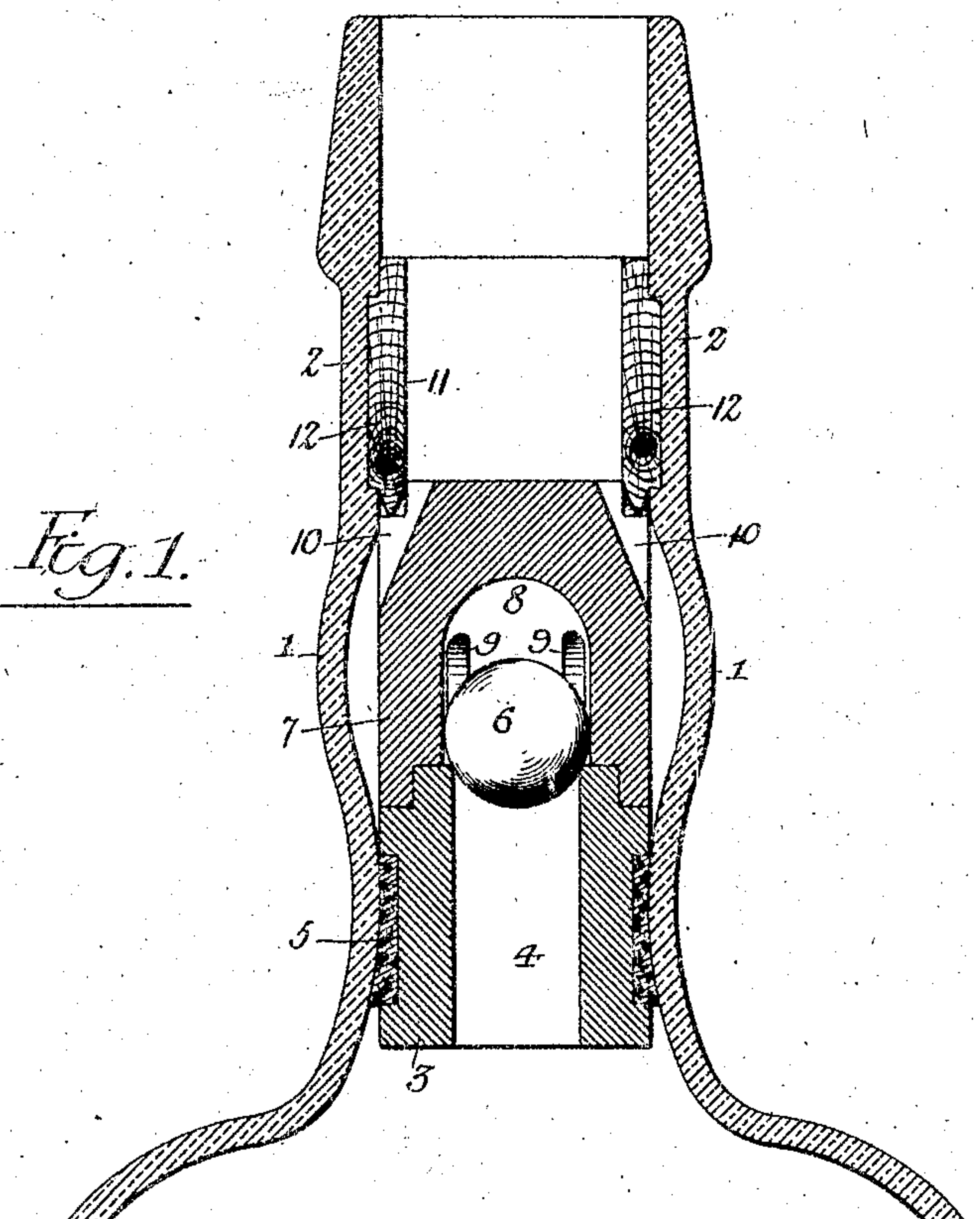
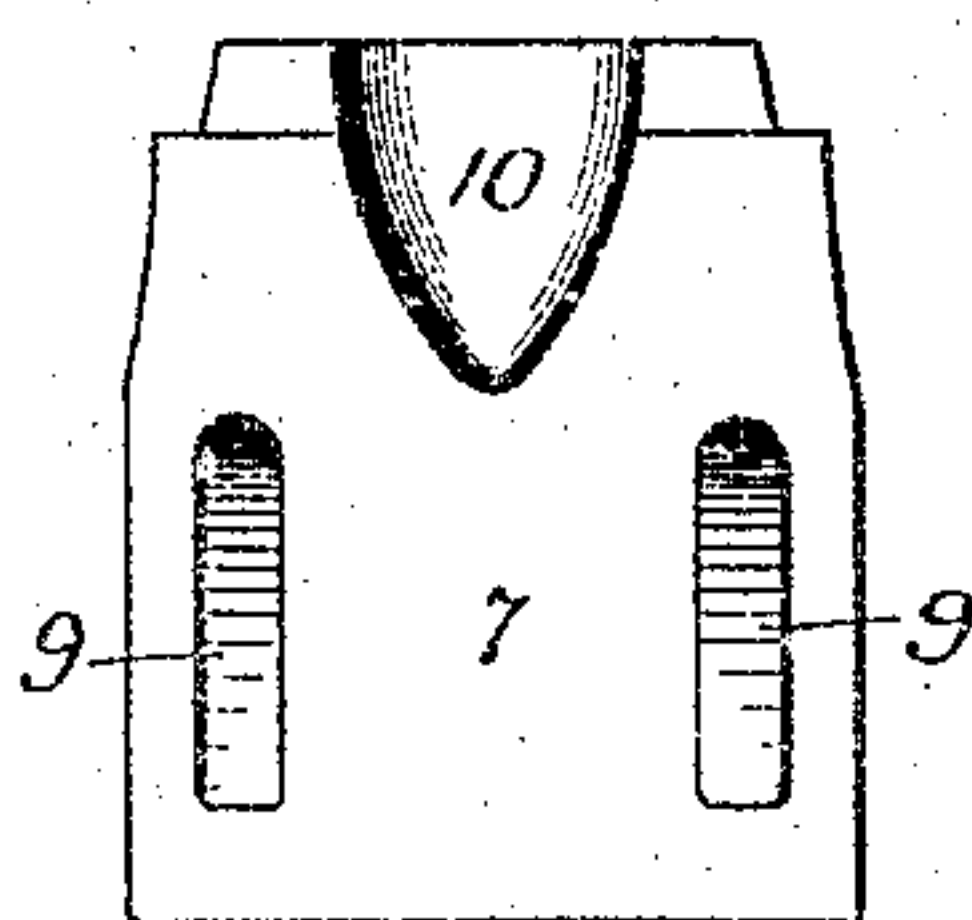


Fig. 2.



Witnesses:-

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# UNITED STATES PATENT OFFICE.

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## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 786,735, dated April 4, 1905.

Application filed July 24, 1903. Renewed September 13, 1904. Serial No. 224,323.

*To all whom it may concern:*

Be it known that I, CHRISTIAN DORN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Bottle-Stoppers, of which the following is a specification.

My invention consists of certain improvements in the bottle-stopper for which I have obtained Letters Patent of the United States numbered 715,765, dated December 16, 1902, the objects of my present invention being to permit of the making of such parts of the stopper as are composed of glass by simple and easy pressing operations and to prevent tampering with the stopper by so constructing a part of the same that it will be injured or destroyed if such tampering is attempted.

In the accompanying drawings, Figure 1 is a sectional view of the upper portion of a bottle with stopper therefor constructed in accordance with my invention, and Fig. 2 is a side view of one of the elements of the stopper.

The neck of the bottle has a swelled portion 1 and a cylindrical portion 2 above the same, and at the base of the neck is seated the lower member 3 of my improved stopper, which consists of a plug having a central opening 4 and an external packing-ring 5, of cork or other material, which will engage with the base of the bottle-neck, form a tight joint therewith, and retain the block 3 in its proper vertical position.

The top of the block 3 forms a seat for the spherical valve 6 and is recessed for the reception of the flanged lower end of the second or intermediate member 7 of the stopper, which consists of a block having a central recess 8 for the reception of the valve 6, lateral slots 9, extending through the block in line with this recess, and notches 10, formed in the upper corner of the block and extending inwardly beyond an annular groove which is formed in the upper portion of said block 7 and receives the lower portion of the upper or third member 11 of the fastening, the latter member consisting of a tube which is adapted to the upper cylindrical portion 2 of the bottle-neck and has an external sealing-ring 12, adapted to an internal groove in said cylindrical portion 2 of the neck.

The diameter of the central opening 8 in the lower portion of the block 7 of the stopper is but slightly greater than the diameter of the valve 6. Hence the latter has no movement other than vertical movement in said opening. Consequently when the bottle is held in an upright position the valve must necessarily seat itself upon the upper end of the block 3 and close the opening 4 in said block. When the bottle is tilted, however, the valve is free to move in the central opening of the block 7 sufficiently to permit flow of liquid through the opening 4 and thence through the slots 9 of the block 7 into the expanded portion 1 of the neck and from the latter, through the notches 10, into the tube 11 and thence out of the mouth of the bottle. By forming the central block 7 with a lower opening and lateral slots and simply notching the upper corners of said block the latter can be readily made from glass by a simple and easily-performed pressing operation.

The slots 9 are offset in respect to the notches 10, as shown in Fig. 2, so that a wire or other implement cannot be passed through the same for engagement with the valve 6.

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

1. The combination in a bottle-stopper, of a valve-seat, a valve, a block superposed on the seat and having notched upper corners and bottom valve-receiving chamber with lateral slots offset in respect to the notches, and means for retaining said block in position upon the valve-seat, substantially as specified.

2. The combination in a bottle-stopper, of a valve-seat, a valve, a block having a valve-chamber of substantially the same diameter as the valve, lateral slots leading from said chamber, and notches in the upper corners of the block offset in respect to said slots and means for retaining said block in its position upon the valve-seat, substantially as specified.

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

CHRISTIAN DORN.

Witnesses:

F. E. BECHTOLD,  
Jos. H. KLEIN.