

E. L. BECK & A. M. AYERS.
 BOTTLE STOPPER.
 APPLICATION FILED JULY 10, 1914.

1,151,997.

Patented Aug. 31, 1915.

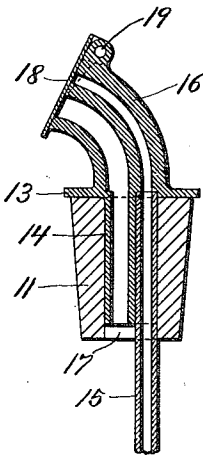
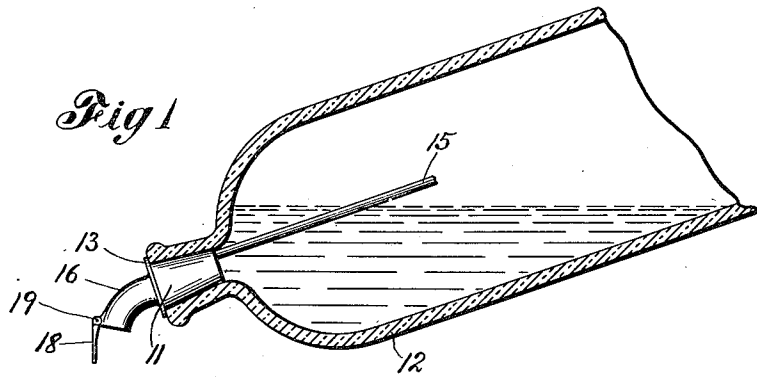


Fig 2

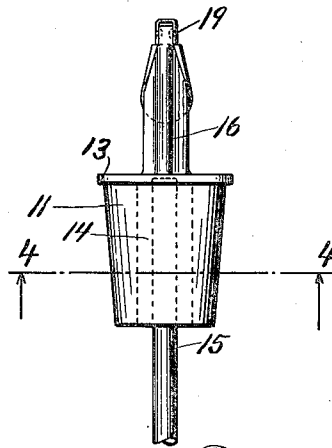


Fig 3

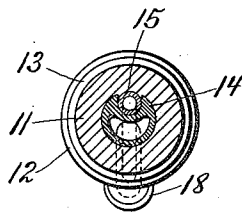


Fig 4

Witnesses:
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UNITED STATES PATENT OFFICE.

ERNEST L. BECK, OF NEW YORK, N. Y., AND ALBERT M. AYERS, OF NUTLEY, NEW JERSEY, ASSIGNORS TO DODGE & DENT MFG. CO., A CORPORATION OF NEW YORK.

BOTTLE-STOPPER.

1,151,997.

Specification of Letters Patent.

Patented Aug. 31, 1915.

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To all whom it may concern:

Be it known that we, ERNEST LEWIS BECK, a subject of the King of Great Britain, residing in the borough of Manhattan, in the city and State of New York, and ALBERT M. AYERS, a citizen of the United States, and a resident of Nutley, in the State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

Our invention relates to bottle stoppers, and has for the object among others, to provide a stopper having a discharge and vent tube, air being admitted to the container to which the stopper is applied to cause the contents of the container to be freely discharged through the discharge tube of the stopper, to provide means to automatically close the open outer ends of the discharge and vent tube when the container is in an upright position and to open the same when the container is tilted to discharge the liquid therefrom, and to provide such a device as shall be simple in construction, and easily and cheaply manufactured.

The invention consists in the novel construction, arrangement and combination of various elements and parts, as shown in the accompanying drawings, and hereinafter more particularly described.

In the said drawings, Figure 1 represents a cross-section of a bottle or similar container provided with our improved form of stopper, the lower portion of the bottle being broken away; Fig. 2 is a longitudinal section of our improved form of stopper; Fig. 3 is a view of the same as seen from a different direction; and Fig. 4 is a transverse section taken on the line 4—4 of Fig. 3; and looking in the direction of the arrows; Figs. 2, 3 and 4, being all on the same enlarged scale.

In carrying our invention into effect in the embodiment thereof which we have selected for illustration in the accompanying drawings, and description in this specification, we provide a cork or the like 11 adapted to fit into the neck of a bottle or similar container, designated in the drawings by 12. The cork 11 is provided with a longitudinal perforation, substantially circular in form and of approximately uniform diameter throughout. We also provide a member of metal or similar material of the form to be described. This member comprises a flat circular portion 13, of the same diameter as the

cork, or slightly larger, as shown. Extending downward from the disk portion 13 we provide a portion 14 of the form shown in cross-section in Fig. 4. This portion comprises the lower part of the discharge tube the bore of which is semicircular or somewhat crescent shaped in cross-section as shown in Fig. 4. The portion 14 is adapted to entirely fill the cylindrical perforation in the cork 11, with the exception of a small area of approximately circular cross-section adapted to receive the vent pipe 15, hereinafter described.

Above the disk portion 13 we provide an upward extension 16 externally approximately circular in cross-section and preferably curved in form, as shown particularly in Fig. 2. This portion 16 contains the upper parts of the discharge and of the vent passages, the same being here shown as approximately of the same shape and relative sizes as their lower portions shown in Fig. 4. As will be observed, the upper portion of the vent passage is integral with the metal member above described. The lower portion thereof consists of a single tube 15 of any suitable length, its upper end being adapted to fit into the opening left between the portion 14 and the cork 11, (see Fig. 4). The lower end of the tube 15 projects vertically downward into the container.

At the top of the portion 16 we provide a suitable cover 18, and in the drawings we have shown this cover hinged to the portion 16 by the pin 19, although it is obvious that any other suitable means may be used if desired.

A bottle stopper constructed as herein shown and described, is adapted for use in connection with bottles containing spirituous liquors or in connection with other forms of bottles from which the contents are discharged at frequent intervals, and obviates the necessity of removing and replacing the stopper each time any of the contents of the bottle is removed.

In use, the bottle is turned over into the position shown in Fig. 1, automatically opening the cover 18, and the outflow of the liquid through the discharge pipe is greatly facilitated by the vent pipe, which allows the air to flow freely into the inside of the container to replace the liquid removed. Inasmuch as the vent pipe 15 is a separate piece, it is obvious that our im-

proved stopper may be used on a bottle or container of any depth, and inasmuch as the metal member described will fit any cork provided with a circular longitudinal perforation of the right size, it will be seen that the stopper can be used on any bottle or container, regardless of the size of the neck, as it is only required to perforate the cork, and insert the metal member and vent tube.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is as follows:

A stopper for bottles and the like comprising a cork provided with a single approximately circular perforation there-through, a tube of approximately circular cross-section and of a smaller diameter passing through said perforation close to one edge thereof and extending downwardly from the lower end thereof, a disk resting upon the top of said cork, a tube integral

with said disk, passing therethrough, and extending upwardly and downwardly therefrom, said tube being lune-shaped in cross-section, and occupying the entire portion of said perforation not occupied by said first named tube and partially inclosing said first named tube in the concave portion thereof, a tube integral with said disk, passing there-through, and extending upwardly therefrom, the lower end of said named tube opening into the upper end of said first named tube, and a hinged cover closing the upper ends of said second named and said last named tubes.

In witness whereof we have hereunto signed our names this 30th day of June 1914, in the presence of two subscribing witnesses.

ERNEST L. BECK.
ALBERT M. AYERS.

Witnesses:

EDMOND CONGAR BROWN,
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