

G. KIRKEGAARD.
BOTTLE STOPPER.
APPLICATION FILED APR. 1, 1908.

899,737.

Patented Sept. 29, 1908.

Fig. 1.

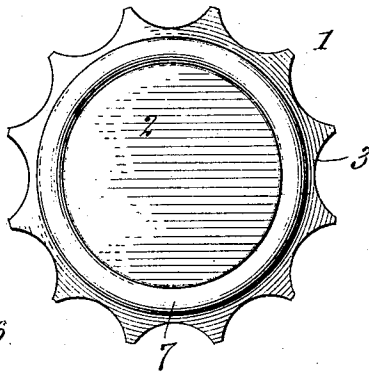


Fig. 5.

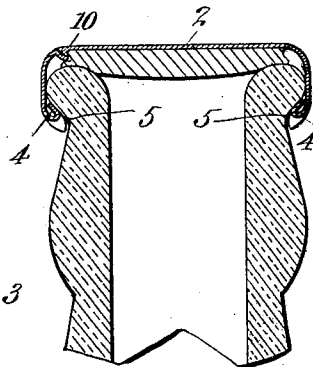


Fig. 2.

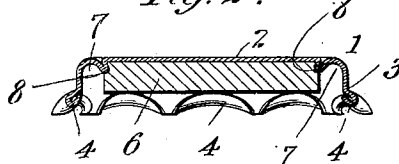


Fig. 4.

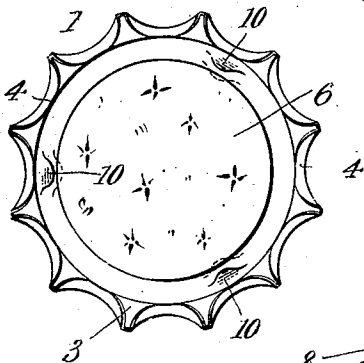
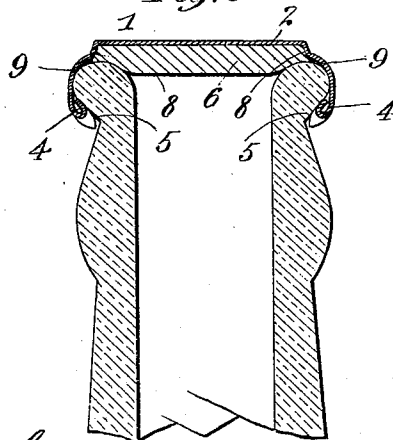


Fig. 3.



Witnesses:

Francis S. Ober
Waldo M. Chapin

Inventor
Georg Kirkegaard
By his Attorneys
Rosenbaum & Stockbridge

UNITED STATES PATENT OFFICE.

GEORG KIRKEGAARD, OF NEW YORK, N. Y., ASSIGNOR TO IMPERIAL STOPPER COMPANY,
A CORPORATION OF MAINE.

BOTTLE-STOPPER.

No. 899,737.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed April 1, 1908. Serial No. 424,516.

To all whom it may concern:

Be it known that I, GEORG KIRKEGAARD, a citizen of the United States, residing at the city of New York, borough of Brooklyn, and State of New York, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a full, clear, and exact description.

This invention relates to bottle and jar stoppers or closures of that class in which a metallic cap containing a packing disk is used, and is adapted to be secured to the neck of the bottle by an engagement between the edge of the cap and an annular shoulder on the bottle. In my Patent No. 890,141, dated June 9, 1908, I have described an improvement in this class of stopper, whereby a comparatively small packing disk is used, which results in considerable economy in the material of which the packing disk is composed.

The present invention provides a specific way of securing the small packing disk referred to within the metal cap.

The invention consists of a metal cap having its top provided with a circular concentric groove forming a circular rim or rib on the inside of the cap, which serves as a seat or holding device for the packing disk. When the disk has been seated in this rim or rib, the latter is driven inward annularly or at a number of points, so as to clamp the edge of the disk and retain it securely in the seat.

The invention is illustrated in the accompanying drawing, in which,

Figure 1 is a plan of the improved stopper. Fig. 2 is a central section of the same; and Fig. 3 is a section of the stopper as applied to the bottle. Figs. 4 and 5 illustrate a modification.

My invention is not limited to any special form of this general type of stopper, but I have shown it in connection with a type of stopper the specific form of which was invented by me. This stopper comprises a metallic cap 1 having a flat surface or top 2 and a somewhat spreading and depending flange 3. This flange is provided with inwardly bent lips 4 to engage the annular shoulder 5 on the exterior of the neck of the bottle.

6 is a packing disk preferably of cork, but it may be of other suitable material. This disk, instead of extending across the internal diameter of the cap, is of substantially less

diameter than the cap, but is essentially of greater diameter than the bore in the neck of the bottle, so that, when the stopper is applied to the bottle, the edge of the disk will rest upon the inner portion or surface of the lip of the bottle. This limited area of contact between the disk and the bottle is sufficient for sealing purposes and affords considerable economy in the manufacture of the stopper, since the diameter of the disk is about a quarter of an inch less than that of the ordinary disk on bottles such as are most commonly used.

These stoppers are manufactured and sold in large quantities to brewers and bottling establishments generally, and are delivered with the packing disk properly assembled within the cap so that the stopper is ready at once to be applied to the bottle. For this purpose, it is desirable to have the disk securely seated within the cap and thus avoid displacement or loss of the disks in handling. To accomplish this, I form in the top surface of the metal cap a concentric groove of considerable depth to form an inwardly projecting circular rib or rim 8. The internal diameter of this rib is such that the disk will fit snugly within it, and, after the disk has been seated, by means of a suitable tool, the rib is bent inward towards the center of the disk either throughout its circumference or at three or more points therein, so as to bite into the edge of the disk and hold it in place. When a stopper of this character is applied to the bottle, the capping machine presses on top of the stopper to compress the edge of the packing disk against the lip of the bottle and it is there secured by another operation of the capping machine, which draws the flange of the cap downward and drives it into locking engagement with the shoulder 5 on the bottle. When this operation is performed with the cap I have described, the outer corner or shoulder 9 of the cap is drawn downward in the manner shown in Fig. 3, thus opening or obliterating the groove 7 in the upper surface of the cap, but still leaving the inner wall of the groove undisturbed to retain the cork. This, however, is not important to the operation or practicability of my improved stopper, since the function of the rib 8 is merely to hold the disk until the time of its application to the bottle; after that the conformation of the cap may be entirely

changed inasmuch as the pressure of the disk against the mouth of the bottle will be sufficient to hold it in place.

5 The function of the internal rib or rim can be obtained by making such a rim or rib in sections or discontinuous, which sections will grip the edge of the disk at various points. To carry this idea a little further, embossings from the upper side of the cap
10 inward, such as shown at 9 in Figs. 4 and 5, which, in effect, will be short sections of the rib, can be used. Fig. 4 shows three such embossings, but, obviously, any suitable number of them can be used. Each emboss-
15 ing will be set inward slightly to grip the edge of the packing disk.

What I claim, is:—

1. A bottle stopper comprising a metallic

cap having an annular concentric groove in its upper surface, forming an internal rib, 20 in combination with a packing disk seated within said rib, substantially as described.

2. A bottle stopper comprising a metallic cap, in combination with a packing disk con- 25 tained therein, said packing disk being of less diameter than the internal diameter of the cap, and the cap being provided with an internal circular rib within which said disk is seated.

In witness whereof, I subscribe my signa- 30 ture, in the presence of two witnesses.

GEORG KIRKEGAARD.

Witnesses:

WM. M. STOCKBRIDGE,
FRANK S. OBER.