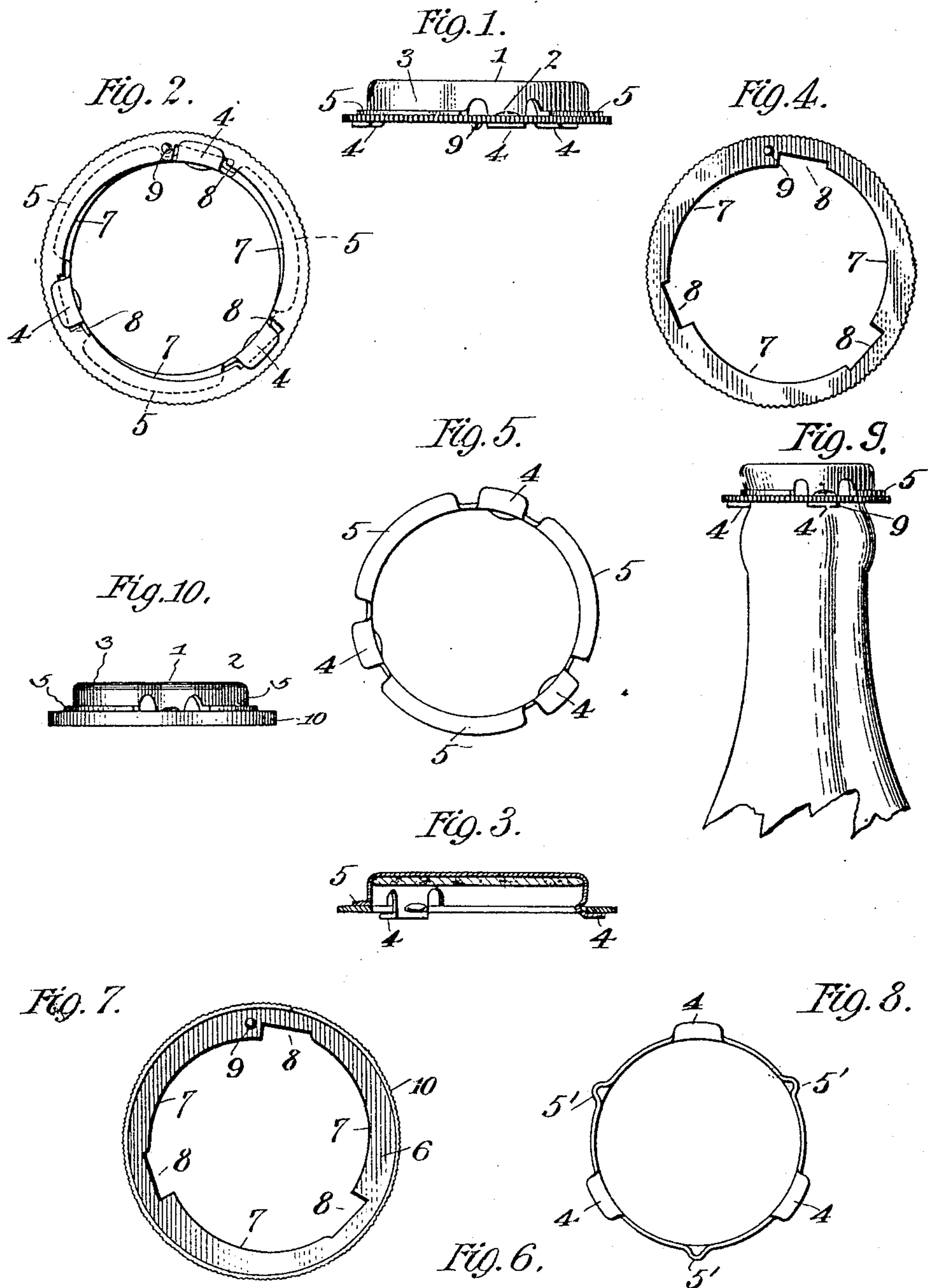


No. 848,174.

PATENTED MAR. 26, 1907.

F. JEBSEN.
BOTTLE STOPPER.
APPLICATION FILED DEC. 9, 1905.



Witnesses
Waldo M. Chapin
William Donnan Jr.

Inventor
Fridtjof Jesen
By Luis Attorneys
Rosenbaum & Strickland

UNITED STATES PATENT OFFICE.

FRIDTJOF JEBSEN, OF BERGEN, NORWAY, ASSIGNOR OF ONE-HALF TO
GEORG KIRKEGAARD, OF BROOKLYN, NEW YORK.

BOTTLE-STOPPER.

No. 848,174.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed December 9, 1905. Serial No. 291,061.

To all whom it may concern:

Be it known that I, FRIDTJOF JEBSEN, a subject of the King of Norway, residing at Bergen, Norway, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a full, clear, and exact description.

My invention relates to a cap or stopper for receptacles, and pertains particularly to that class in which the cap is capable of being removed and replaced upon the receptacle, so as to reseal the same after a portion of the contents have been removed or it is desired to use the vessel for any other purpose. A receptacle-closure adapted to satisfy the foregoing purposes forms the subject of Letters Patent of the United States, No. 796,734, granted to Georg Kirkegaard. In this patent the cap is held upon the bottle by depending fingers, with which a clamping-ring is engaged for pressing the fingers into locking engagement with the bottle.

The principal object of the present invention is to render the Kirkegaard stopper more convenient to manufacture, apply, and operate.

A further object of the invention is to render the Kirkegaard stopper more efficient and more durable.

With these and other objects in view my invention consists in the construction, combination, location, and arrangement of parts, all as will be more fully hereinafter described, as shown in the accompanying drawings, and finally particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side view of a cap or stopper embodying the principles of my invention. Fig. 2 is a bottom view of the same. Fig. 3 is a sectional view. Fig. 4 is a detail view of the form of clamping-ring which I employ. Fig. 5 is a bottom view of the cap with the clamping-ring removed. Fig. 6 is a sectional view showing some slightly-modified features of construction. Fig. 7 is a detail view of the slightly-modified clamping-ring. Fig. 8 is a view similar to Fig. 5, showing the slightly-modified cap with the clamping-ring removed; and Fig. 9 is a side elevation of the neck of a bottle to which my cap may be applied. Fig. 10 is a view similar to Fig. 1, except that a flanged clamping-ring is employed.

A perfectly effective and satisfactory stopper must not only be capable of efficiently sealing the bottle and easily removable by the purchaser, but should be capable of its initial attachment with the least possible amount of trouble or manipulation by the bottling concerns, who largely constitute the purchasers. The cap should also be durable and not liable to break or bend by careless manipulation or ordinary wear. In carrying out the present invention I provide means for securing these desirable features.

Referring now to the drawings and to the various views and reference-signs appearing thereon, in which like parts are designated by the same reference-sign wherever they occur, 1 denotes a cap, preferably formed of sheet metal, with a depending circumferential rim which is notched, so as to form fingers 2 with intermediate separating-walls 3. Each of the fingers 2 conveniently terminates at its lower end in a lateral projection or extremity 4, so that the projections of the various fingers radiate outwardly from a common center coaxial with the center of the cap. In addition to the lateral projections or extremities 4 I provide ribs 5 upon the intermediate walls 3, and the arrangement is such that the different ribs radiate in a single plane which is parallel to but opposite from the plane of the projections or extremities 4. In this way there is provided an intermediate space, in which a clamping-ring may be guided to move. 6 indicates a practical form of clamping-ring generally similar to that of the Kirkegaard patent above mentioned and having the inclined or eccentric surfaces 7 similar thereto, but having terminal notches 8 at the beginning of each cam or eccentric surface 7. Each of the notches 8 is of a form and size to receive the fingers 2, which initially lie closely therein in a manner and for a purpose which will be later more particularly explained. I also provide a stop 9 upon the clamping-ring, conveniently formed integral therewith, by punching up a portion of the metal of which the ring is formed. The relation of this stop 9 is such as to contact with the sides of the projections or extremities 4 of the depending fingers, so as to limit the circumferential movement of the ring. The operation of this form of my invention is as follows: The parts are

originally assembled with the fingers 2 in the notches 8 of the clamping-ring, and when the stopper is initially constructed the fingers have sufficient outward resiliency to closely bear against the bottoms of the notches 8, so that the cap and clamping-ring are held tightly together and the fingers are spread sufficiently apart to easily pass over the top of any bottle to which it is desired to apply this stopper. This condition is a desirable one when the stoppers are originally handled by the bottling firms, since it is insured that they may be engaged on the bottles with the least possible amount of trouble and manipulation. After the ring has been once turned, so as to tighten the fingers, they do not again have sufficient outward resiliency to closely enter the notches 8, so that when the purchaser removes and applies the stopper the cam will turn freely.

In Figs. 6, 7, and 8 I have illustrated a form of my invention in which some of the details are slightly modified. The clamping-ring 6 is here shown with a depending peripheral edge 10, which may be milled upon its exterior surface. The purpose of this construction is to give a larger bearing-surface for the engagement of the fingers in turning the ring. Another feature of difference in this form of construction lies in the ribs 5', which are here made in the form of embossed protuberances rather than a simple turned lip or flange, as in the form of construction previously described. The details of construction may be otherwise modified and still fall within the spirit and scope of the invention, and I do not, therefore, desire to be limited or restricted to the particular features shown.

In Fig. 10 the clamping-ring with depending flange 10 is illustrated in connection with

the cap construction of Figs. 1 and which constitutes my preferred modification.

What I claim is—

1. A stopper comprising a cap with depending fingers and intermediate walls having ribs thereon, and a clamping-ring supported by said fingers and ribs.

2. A stopper comprising a cap having depending fingers with intermediate walls having annular lips or flanges thereon constituting ribs, and a clamping-ring held in proper relation by said ribs and fingers.

3. A stopper comprising a cap having depending outwardly-resilient fingers, and a clamping-ring having eccentric cam-surfaces and additional notches for receiving the fingers.

4. A stopper comprising a cap having depending fingers, and intermediate walls with projections thereon, and a clamping-ring having a depending peripheral flange milled on its exterior surface and held in position by said projections and fingers.

5. A stopper comprising a cap having depending fingers, and a clamping-ring having a depending peripheral flange and supported against vertical movement by said fingers but capable of rotary movement thereon to clamp the cap in place on a bottle.

6. A stopper comprising a cap having depending fingers, a clamping-ring having a horizontal portion provided with circumferential grooves adapted to engage said fingers and with a vertical peripheral flange, substantially as described.

In witness whereof I subscribe my signature in the presence of two witnesses.

FRIDTJOF JEBSEN.

Witnesses:

WALDO M. CHAPIN,
FRANK S. OBER.