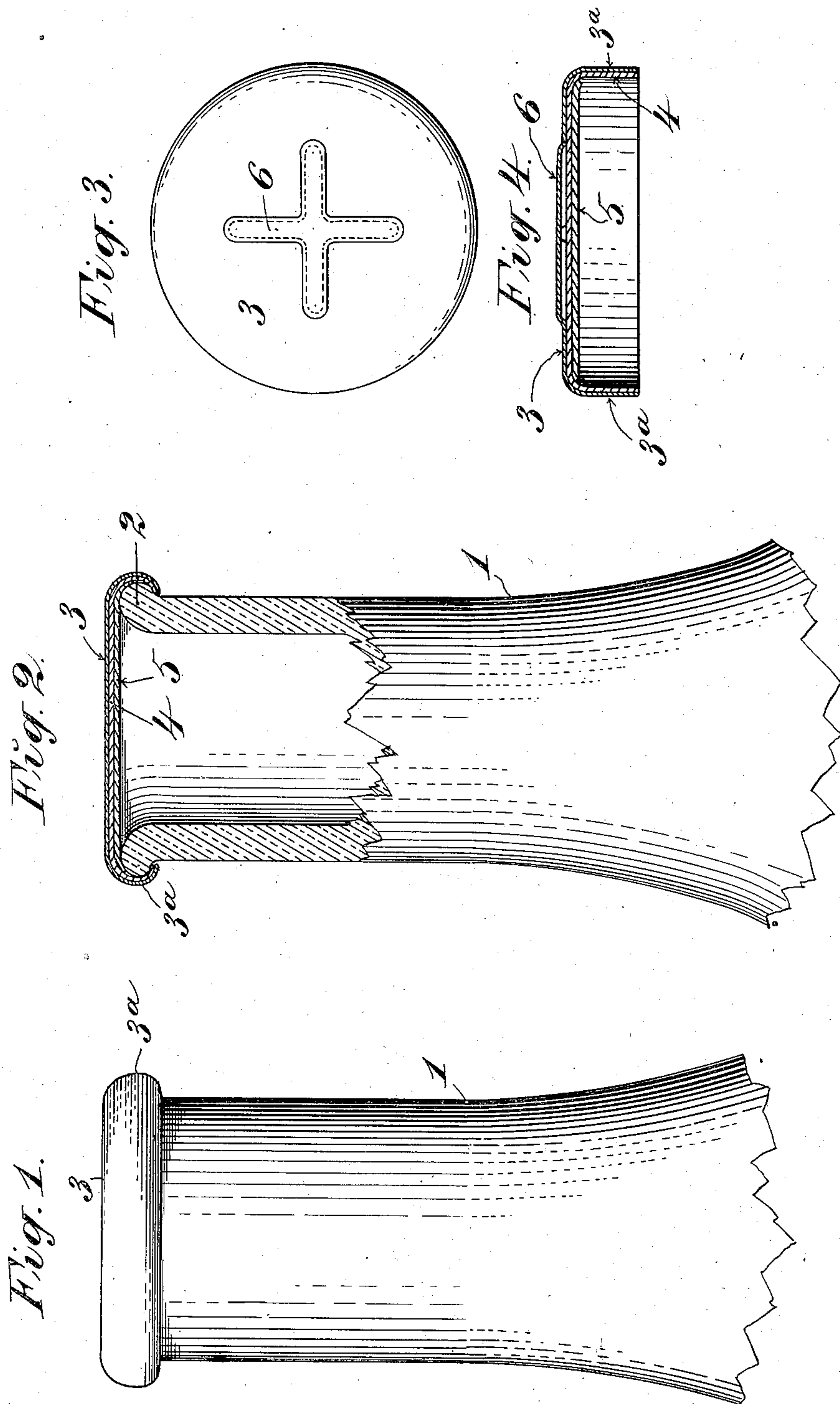


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A. E. BATCHELDER.
BOTTLE CLOSURE.

APPLICATION FILED MAY 21, 1904. RENEWED SEPT. 14, 1906.



Witnesses
J. H. Kliman
Benjamin Holt

Inventor
Adeline E. Batchelder
By her Attorney
Heun, Conner

UNITED STATES PATENT OFFICE.

ADELINE E. BATCHELDER, OF NEW YORK, N. Y.

BOTTLE-CLOSURE.

No. 849,960.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed May 21, 1904. Renewed September 14, 1906. Serial No. 334,595.

To all whom it may concern:

Be it known that I, ADELINE E. BATCHELDER, a citizen of the United States, residing in the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Bottle-Closures, of which the following is a specification.

This invention relates to the class of devices for closing hermetically and so as to resist internal pressure bottles and the like containing effervescent and gaseous fluids—such as beer, for example; and the object of the invention is to provide a closure which shall be very cheap in material, manufacture, and application and which shall be gas-tight and readily broken by the removal of the cap.

The cap is of stiff metal, such as tin-plate, flanged without corrugation, lined with paper to the margin of the flange, and having in it a disk of white wood, and the characteristics of the closure are these: The sealing is effected with the flange exclusively, the disk of white wood is interposed between the cap and the liquid in the bottle, and the sealing-flange of the cap is without crimps or corrugations.

In the accompanying drawings, which serve to illustrate the invention, Figure 1 is a side elevation of the bottle-neck, showing the cap in place thereon; and Fig. 2 is a sectional view of the same. Fig. 3 is a plan view, and Fig. 4 a diametrical sectional view, of the cap, showing it in a slightly-modified form before it is applied to the bottle.

Referring primarily to Figs. 1 and 2, 1 designates the neck of a bottle or similar glass receptacle, and 2 the fillet about its mouth. The cap 3 for closing the bottle may be stamped from any kind of thin sheet metal, and my invention is of such a character that I am enabled to use thin and light tin-plate for the cap. The cap has a smooth or uncorrugated flange 3^a and is lined with paper 4, which extends practically to the margin of the flange. Within the hollow of the cap is a thin disk 5, of wood-veneer, the wood being that known as "white wood," (the *Liriodendron tulipifera* of the botanists.)

The closure is effected by applying the cap to the mouth of the bottle with the disk of white wood resting on the rim and over the mouth and then pressing in the flange

of the cap smoothly and tightly about the fillet on the neck, as seen in Fig. 2. The result of this is to effect the seal solely within the flange and where it embraces the bead or fillet, the soft-paper lining producing a gas-tight packing. The disk of white-wood veneer interposes between the liquid in the bottle and the cap and is the only feature of the closure that is exposed to the liquid. I find white wood to be the best material for this purpose, as it does not impart any taste to the beverages so bottled, will mold itself at the disk margin to conform to the metal when the flange of the cap is closed in about the fillet on the bottle, and will protect the liquid from contact with the metal of the cap.

The cap may be applied by any suitable machine or mechanical device. I have not shown herein such a machine, as it forms no part of my present invention. It will be sufficient to say that in applying the cap it will be first placed in position, then pressed firmly down on the bottle, and while thus held the flange 3^a will be pressed in firmly and tightly about the fillet 2. The margin of the thin wooden disk 5 will be or may be molded by the drawing of the metal cap, as indicated. The metal cap may have radial corrugations or ribs 6, as shown in Figs. 3 and 4, to stiffen it; but this is not essential to the invention.

It will be noted that the sealing in the above construction is effected solely by the flange, which is smooth and without corrugations, whereby it bears evenly on the fillet of the bottle at all points. The wooden disk extends out far enough to always cover the mouth of the bottle, even though it should shrink laterally when the bottle stands upright for a considerable time, and so allows said disk to become dry. This wooden disk serves also in capping the bottle as a species of cushion to prevent injury to the glass by the capping-machine.

Having thus described my invention, I claim—

1. A sheet-metal cap for closing the mouth of a bottle or the like, having in it a packing-disk of white wood (*Liriodendron tulipifera*) to close over the mouth of the bottle and interpose between the metal of the cap and a liquid in the bottle.

2. A flanged sheet-metal cap for closing the mouth of a bottle or the like, having a soft-paper lining extending to the margin of the flange to form a soft gas-tight packing,

and a thin disk of white wood (*Liriodendron tulipifera*) within the lined cap to close over the mouth of the bottle when the cap is in place.

5 3. In a closure, the combination with a bottle or the like having a rounded fillet at and about its mouth, of a metal cap lined with soft packing which fits gas-tight about said fillet and forms the seal thereat, said cap
10 having also a disk of white wood (*Liriodendron tulipifera*) which closes over the mouth of the bottle.

15 4. In a closure, the combination with a bottle having a rounded fillet about its mouth, of a flanged and non-corrugated metal cap, a lining of paper in said cap and extending down to the margin of its flange, and a disk of wood veneer in the cap and covering the mouth of the bottle, the flange of

the cap taking under the fillet on the bottle 20 and the packing in said flange taking under and forming the seal about the said fillet.

5. In a closure, the combination with a bottle having a rounded fillet about its mouth, of a flanged cap of stiff sheet metal 25 lined throughout with soft packing material, the lined flange of said cap taking under the fillet on the bottle, and an interposing disk between said lining and the mouth of the bottle. 30

In witness whereof I have hereunto signed my name, this 16th day of May, 1904, in the presence of two subscribing witnesses.

ADELINE E. BATCHELDER.

Witnesses

HENRY CONNETT,
BENJAMIN HOLT.