

(No Model.)

H. CODD.

INSTRUMENT FOR OPENING INTERNALLY STOPPERED BOTTLES.

No. 251,525.

Patented Dec. 27, 1881.

Fig. 5.

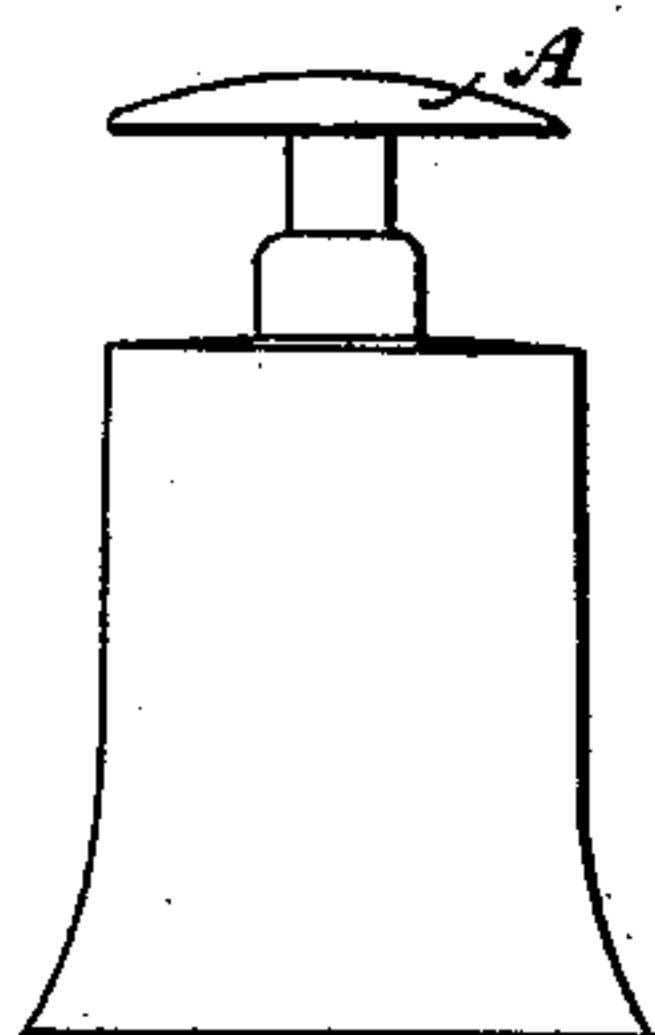


Fig. 6.

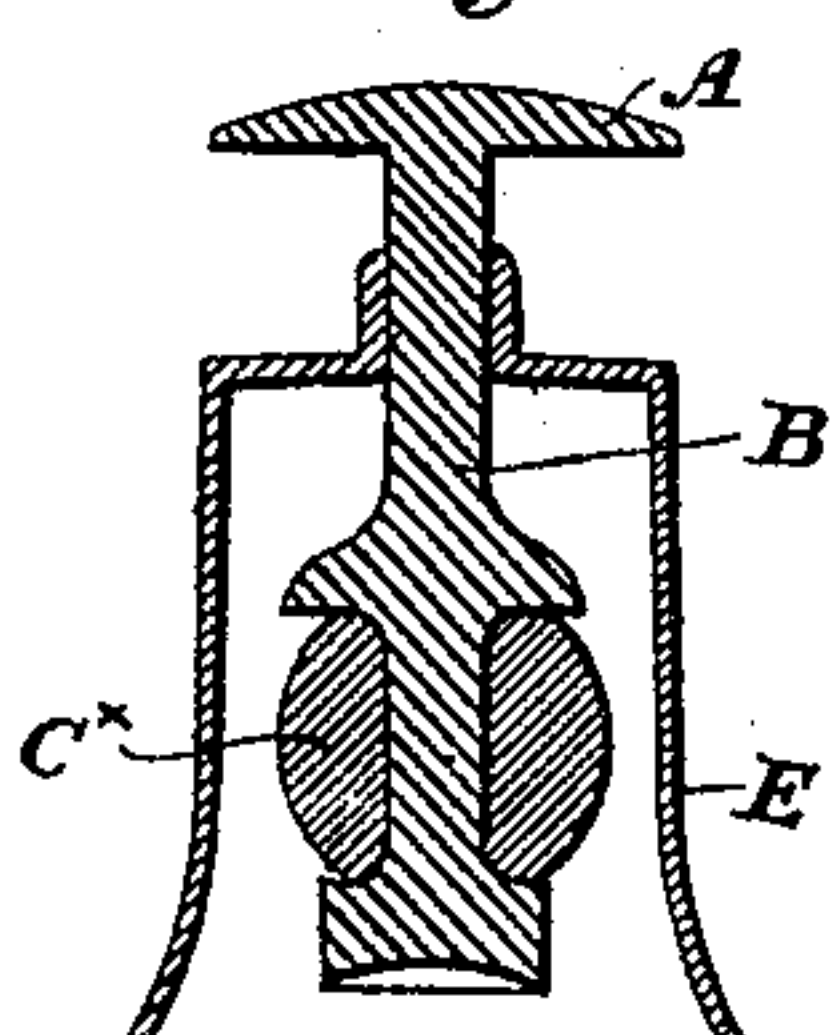


Fig. 2.

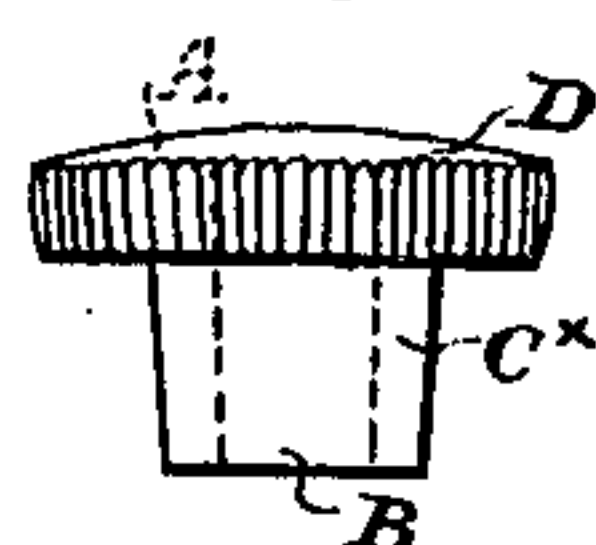


Fig. 3.

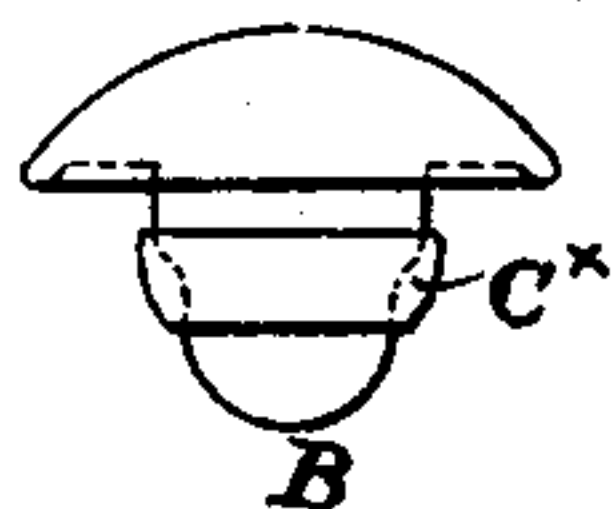


Fig. 1.

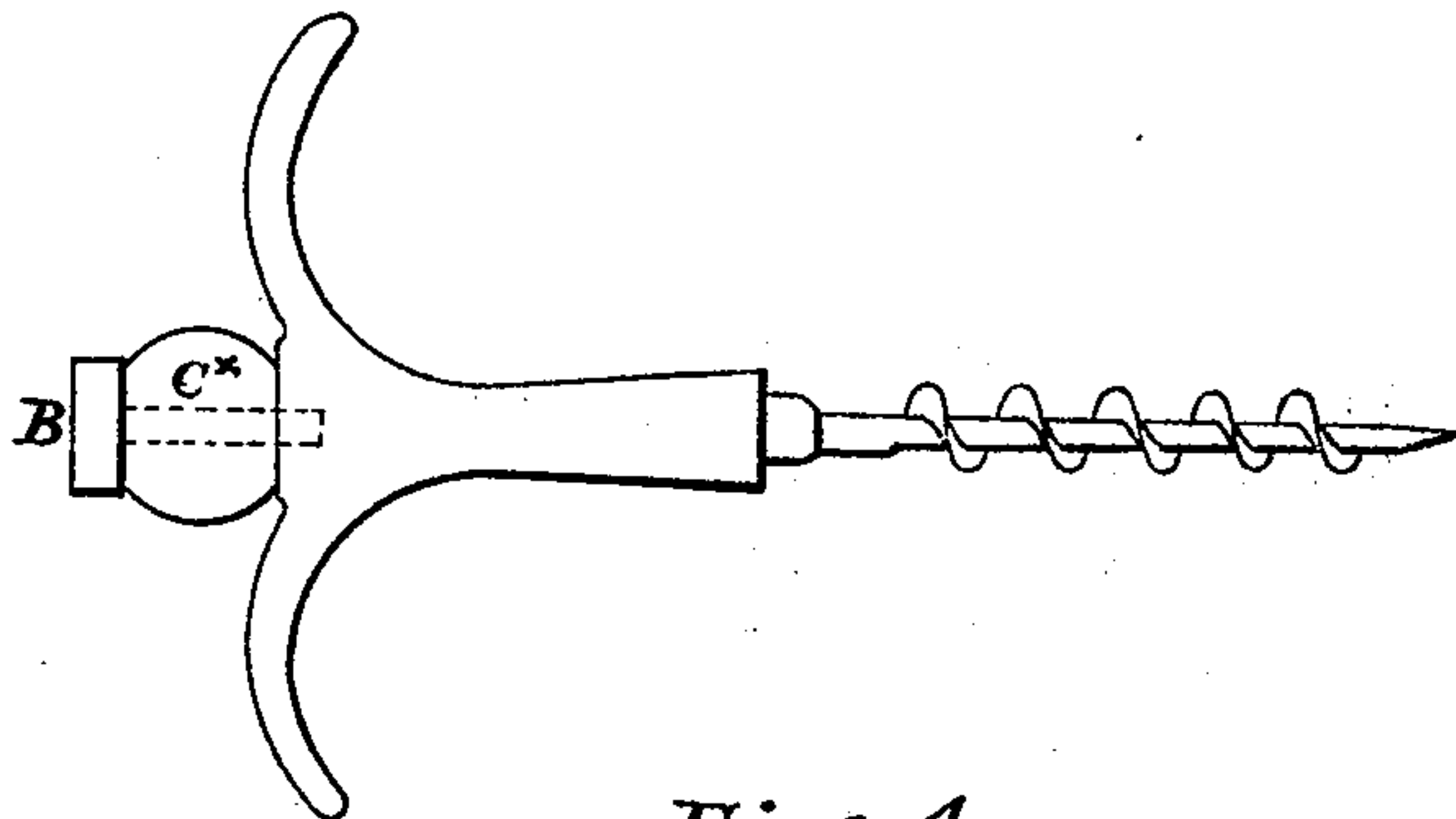
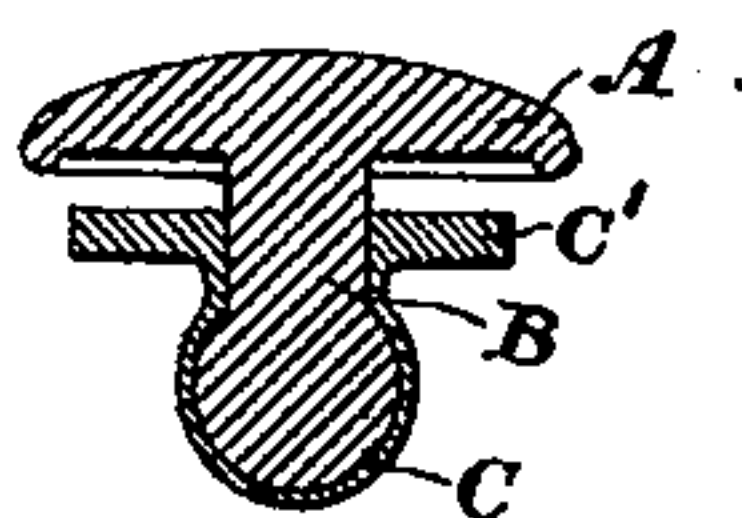
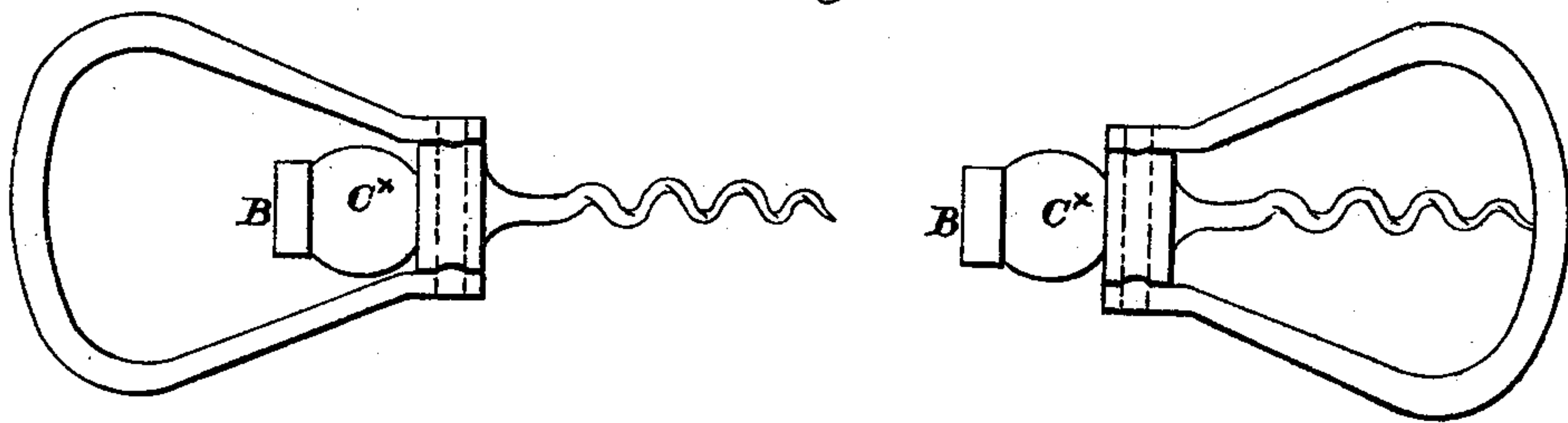


Fig. 4.



Witnesses

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HIRAM CODD, OF LONDON, ENGLAND.

INSTRUMENT FOR OPENING INTERNALLY-STOPPERED BOTTLES.

SPECIFICATION forming part of Letters Patent No. 251,525, dated December 27, 1881.

Application filed November 29, 1881. (No model.) Patented in England March 16, 1881.

To all whom it may concern:

Be it known that I, HIRAM CODD, a subject of the Queen of Great Britain, residing at No. 58 King William Street, in the city of London, England, have invented certain new and useful Improvements in Instruments for Opening Internally-Stoppered Bottles, (for which I have received Letters Patent in England, No. 1,152, dated 16th March, 1881,) of which the following is a specification.

The object of this invention is to provide an instrument by which bottles fitted with internal stoppers and filled with aerated liquids may be opened without permitting the escape of any liquid from the bottle at the time of opening. For this purpose I, as heretofore, form an opening-instrument of a disk or head having a short stem or shank projecting from the center of its under side, and over the end of the shank I place a cap of elastic vulcanized india-rubber. The cap is formed with a thick ring around its rim or edge, which nips the stem near its middle. This ring stands outward from the cap and forms a flange around it. When the end of the shank, with the elastic cap upon it, is passed into the mouth of a bottle, so that its end may be made to bear upon the top of the internal stopper, the thick ring which is around the edge of the cap comes down onto and rests upon the top of the bottle. When the head of the opener is forced downward by pressure of the hand upon it, so as to force the stopper away from its seat, the elastic cap stretches as the shank of the opener passes farther down into the mouth of the bottle, the ring at the top of the cap is thereby drawn downward tightly against the top of the bottle and forms a close joint over it, thereby preventing a sudden escape of gas and consequent carrying away of liquid from the bottle.

In place of forming a joint over the mouth of the bottle in the above manner previous to displacing the internal stopper from its seat, I in some cases make an approximately close joint between the sides of the shank and the mouth of the bottle. For this purpose I surround the shank with a tapering ring or cylinder of elastic material—such as cork. The head and shank of the opener may be of wood, and in this case the top and rim of the head may be covered with a metallic cap, made to

hold to the wooden-head by forming corrugations or indentations in the part of the metallic cap which fits over the rim of the head. A slight hollow or cup is formed, as heretofore, in the extremity of the shank, so that it may the better rest upon the top of the ball or other stopper when pressed downward against it. The shank also might be made to project somewhat beyond the elastic material surrounding it. In this case the elastic material might be in the form of a sphere with the shank passing through it, and of such dimension that the lower part of the sphere should bear against the top of the bottle and be somewhat compressed just as or somewhat before the internal stopper is displaced from its seat by the end of the shank pressing upon it, or the elastic material might be in the form of a tapering cylinder around the upper part of the shank, so that it might enter the mouth of the bottle, and thereby form a joint to close the mouth of the bottle before the end of the shank displaces the internal stopper. Openers formed in these ways, instead of being formed with a disk-head by which they may be pressed downward, may be carried at the end of one of a pair of levers jointed together, while the end of the other lever is formed to take a hold of the neck of the bottle, or the shank might be affixed to the handle of an ordinary corkscrew, or it might be passed through the top of a cap, suitable for being placed over the top of a bottle, and above the top of the cap it might have a disk-head upon it to admit of its being pressed downward.

In the drawings hereunto annexed I have shown opening-instruments formed as above described.

Figure 1 shows a vertical section of an opener formed of a disk or head, A, having a stem, B, projecting from the center of its under side. Over the stem is placed the cap C, of vulcanized india-rubber. This cap is formed with a thick projecting flange or ring, C', around its upper edge. The ring clips the stem, and the lower end of the stem being of somewhat larger diameter than the part of the stem embraced by this ring the cap holds securely onto the stem. There is a space between the ring and the under side of the head A, as shown. When the instrument is used for opening a bottle fitted with an internal globe-stopper or other like

internal stopper, the stem, with the cap upon it, is introduced into the mouth of the bottle until its lower end rests on the top of the stopper. The ring C' will then have come against and be resting on the top of the mouth of the bottle. When the opener is then further pressed downward the globe or other stopper will be pressed downward away from its seat at the mouth of the bottle, the india-rubber cap C then stretching and drawing the ring C' tightly against the bottle's mouth. The escape of gas from the bottle is thereby impeded at the time of displacing the globe or other stopper, and when the stopper has been displaced the gas can be allowed to escape quietly by more or less raising the opener until the rush of gas from the bottle has subsided. In this way bottles fitted with internal stoppers and filled with aerated liquid can be opened without allowing liquid to escape from the bottle.

At Fig. 2 I have shown an opener with which an approximately tight joint is formed between the sides of the stem of the opener and the mouth of the bottle, when the stem is inserted into the mouth of the bottle to force the stopper inward. In this opener the head A and shank B are of wood, and the top and rim of the head are covered with a metallic cap, D, made to hold to the wooden head by indenting the rim of the metallic cap into corrugations, as shown. C^x is a tapering ring, of cork or other elastic material, cemented to the exterior of the shank B.

Fig. 3 shows a similar opener, the head and shank of which are of ebonite or other hard material. The tapering elastic ring C^x around the stem of the stopper is in this case preferably of vulcanized india-rubber.

Figs. 4 show another form of opener. In this opener the stem or shank B passes through the center of a sphere of elastic material, C^x,

preferably vulcanized india-rubber. When the lower end of the stem presses against the top of the stopper the sphere rests against the mouth of the bottle, and when the opener is further pressed downward to dislodge the stopper the elastic sphere C^x is compressed against the mouth of the bottle and effectually closes it. In Figs. 4 this opener is shown carried at the back or head of ordinary corkscrews.

In Figs. 5 and 6 the stem or shank of the opener passes through the top of a metallic cap, E, which can be placed over and made to rest upon the mouth of the bottle to be opened. On the top of the stem is a head, A, by which the stem can be forced downward and caused to displace the stopper.

Having thus described the nature of my invention and the manner of operating the same, I would have it understood that I claim—

1. The combination, with the stem B of an instrument for opening internally-stoppered bottles, of an elastic packing to close, or approximately close, the mouth of the bottle before the stopper is dislodged from its seat by the end of the stem B, substantially as described.

2. The combination of the head A, stem B, and elastic cap C, with its exterior flange, C', substantially as described with reference to Fig. 1.

3. The combination of elastic material C^x, with the stem B of an instrument for opening internally-stoppered bottles, substantially in the manner described with reference to Figs. 2, 3, 4, and 6.

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Witnesses:

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