(Model.)

C. O. HAMMER.

BOTTLE STOPPER.

No. 290,577. Patented Dec. 18, 1883.

Fig. 1.

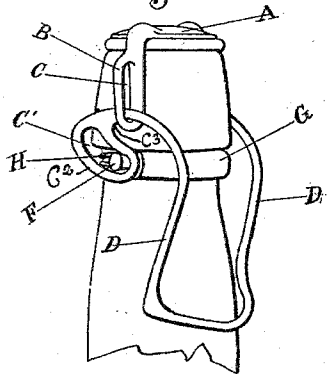
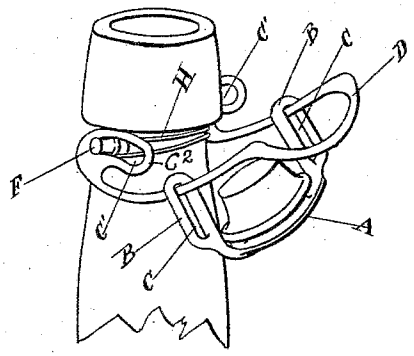


Fig. 3.



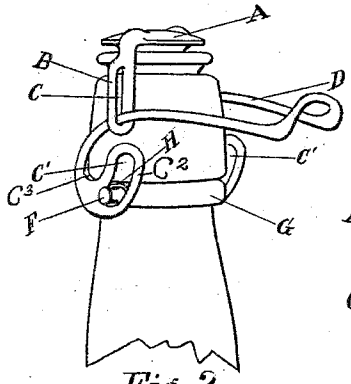


Fig. 2.

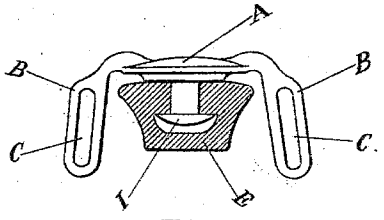
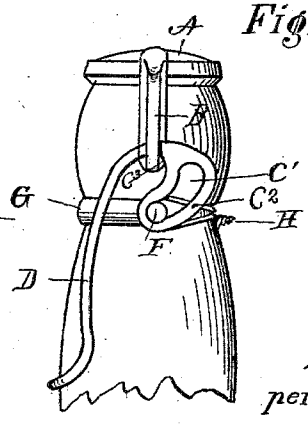


Fig. 4.

Fig 5



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UNITED STATES PATENT OFFICE.

CHARLES OTTO HAMMER, OF PITTSBURG, PENNSYLVANIA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 290,577, dated December 18, 1883.

Application filed October 3, 1883. (Model.)

To all whom it may concern:

Be it known that I, CHARLES OTTO HAMMER, of Pittsburg, in the county of Allegheny, State of Pennsylvania, have invented a new and useful Improvement in Bottle-Stoppers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to bottle-stoppers; and it consists in the parts which will be hereinafter described, and pointed out in the claims.

To enable others skilled in the art with which my invention is most nearly connected to make and use it, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of this application, Figure 1 is an isometrical perspective view of my improvement. Fig. 2 represents the stopple and parts in position when the stopple is just entered into the mouth of the bottle. Fig. 3 represents the position of the parts when the stopple is removed from the mouth of the bottle. Fig. 4 is a side elevation of the cap for carrying the stopple, the latter shown in transverse section. Fig. 5 is a side elevation of a bottle-neck and the parts in their proper position when the stopper is locked.

Reference being had to the accompanying drawings, A represents the cap, having two pendants, B, in each of which is a slot, C. On the under side of the cap A is a button-head pendant, I, over which is placed a metallic stopple, E.

Around the neck of the bottle is secured a semicircular band, G, having trunnions F. Said band is secured in position through the medium of a wire, H, passing around one-half of the neck of the bottle and over and around the trunnions F.

D is a lever, the inner ends of which, in contour, are in the form of a painter's palette, having each a curved link, C^2, in which is formed a curved slot, C', therein, in which slots are placed the trunnions F of the semicircular band G. The arms of the lever D pass through the slots C in the pendants B of the cap A. The curved links C^2 are in the nature of hooks on the arms D. By means of this arrangement a recess, C^3, is formed, in which the linked pendant B is drawn when the stopper is locked, as shown in Fig. 5. When the stopper is locked, the trunnion F lies in the point of the link C^2. The object in slotting the pendants B is to permit the insertion of the hooks C^2 when the parts are first put together. Said slots also admit of a slight displacement of the lever D without disturbing the stopper, and also permit said lever to move freely therein. The curvature of the lever D and the curvature of the curved slots C' are such that in pressing down upon the outer end of the arm of the lever D, so as to bring it against the neck of the bottle, as indicated in Fig. 1, the stopple E will be forced down into the bottle and be securely held therein. The slot C in the pendants B and the slots C' in the ends of the lever D allow sufficient play of the lever D with relation to the trunnions F and pendants B for the ready adjustment of the stopple E in the mouth of the bottle, as shown in Fig. 2, or its entire removal from the mouth of the bottle, as shown in Fig. 3.

The operation of the device is as follows: The stopper E is inserted into the mouth of the bottle by hand, as shown in Fig. 2 of the drawings. The trunnions F will then lie in the inner ends of the slots C' in the lever D. The arms of said lever will then lie loosely in about a horizontal position in the cap-pendant slots C. Then by pressing down on the outer end of said lever the pendants B will be drawn down and the stopple E thereby forced into the neck of the bottle. By pressing down on the lever when in the position shown in Fig. 2, it is partly drawn through the slots C to the position shown in Fig. 1. Such operation reverses the position of the trunnions F in the slots C'. The pendants B and trunnions F lie substantially in a vertical line. Therefore when the lever is forced down, as shown in Fig. 1, it acts as a link in securing the pendants B to the fixed trunnions F. The tendency of the compressed rubber stopper to raise the metal stopper and its pendants is overcome by the arrangement in a straight line of the pendants, the bearing-points of the lever on the pendants, and the bearing-points of the lever against the under side of the trunnions. This arrangement holds the stopper down securely into the neck of the bottle. To unlock the stopper the lever is moved from the position shown in Fig. 5

to that shown in Fig. 2. While it is being so moved from one position to the other, the notch e^3 is moved away from the pendant in one direction and the end of the slot *c* is moved away from the trunnions in the opposite direction without disturbing the rectilinear arrangement above mentioned. Consequently the stopper remains locked in the mouth of the bottle until the portions of the lever which bear against the slots in the pendants are inclined slightly from a horizontal position with the cross-bar of the lever above the horizontal plane, when the elasticity of the compressed stopper causes the pendants to ride up the inclines and release the stopper, the free end of the lever being at the same time thrown upward. The lever may then be raised and thrown into the position shown in Fig. 3; or the stopper may be seized by its pendants and thrown with the lever to the side of the neck of the bottle opposite to that shown in Fig. 3. By throwing it as seen in Fig. 3, the stopper is pendent from the lever. When the lever and the stopper are thrown to the opposite side, the stopper rests upon the lever.

What I claim as of my invention is—

1. In a bottle-stopper, the combination of the curved lever D, having a link on each of its inner ends, trunnions F, fixed to the outer neck of the bottle, and the cap A, provided with pendants B, having openings for the reception of the lever-arms, substantially as described, and for the purposes set forth.

2. The cap A, having pendants B, with slots therein, in combination with a curved lever pivoted to a neck-band on the bottle, substantially as herein described, and for the purpose set forth.

3. In a bottle-stopper, a cap provided with longitudinally-slotted pendants, in combination with a two-armed lever, each of said arms having curved end links and trunnions fixed to the neck of a bottle, substantially as described, and for the purpose set forth.

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