

(No Model.)

A. CARRARA.
BOTTLE STOPPER.

No. 495,663.

Patented Apr. 18, 1893.

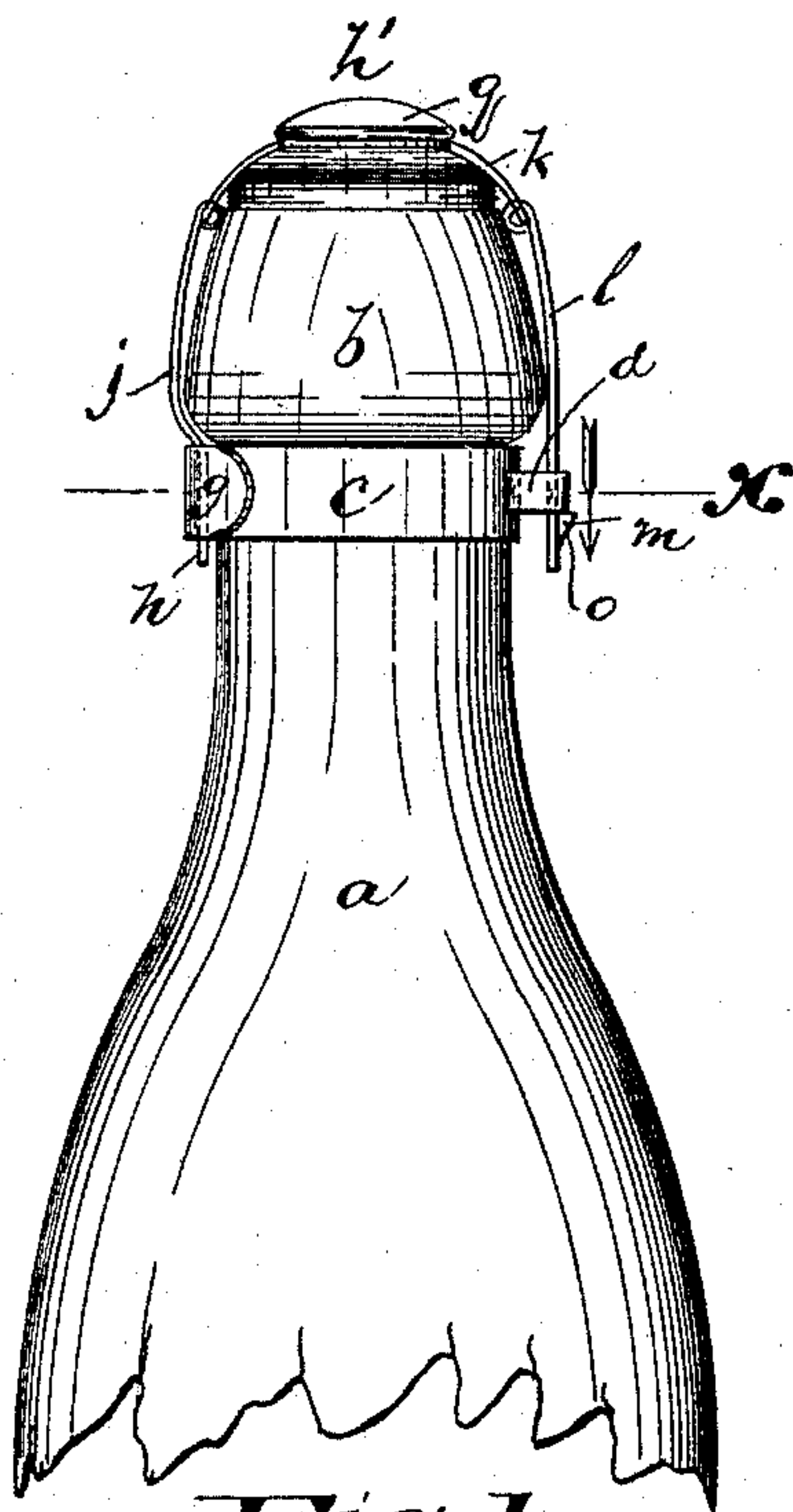


Fig. 1.

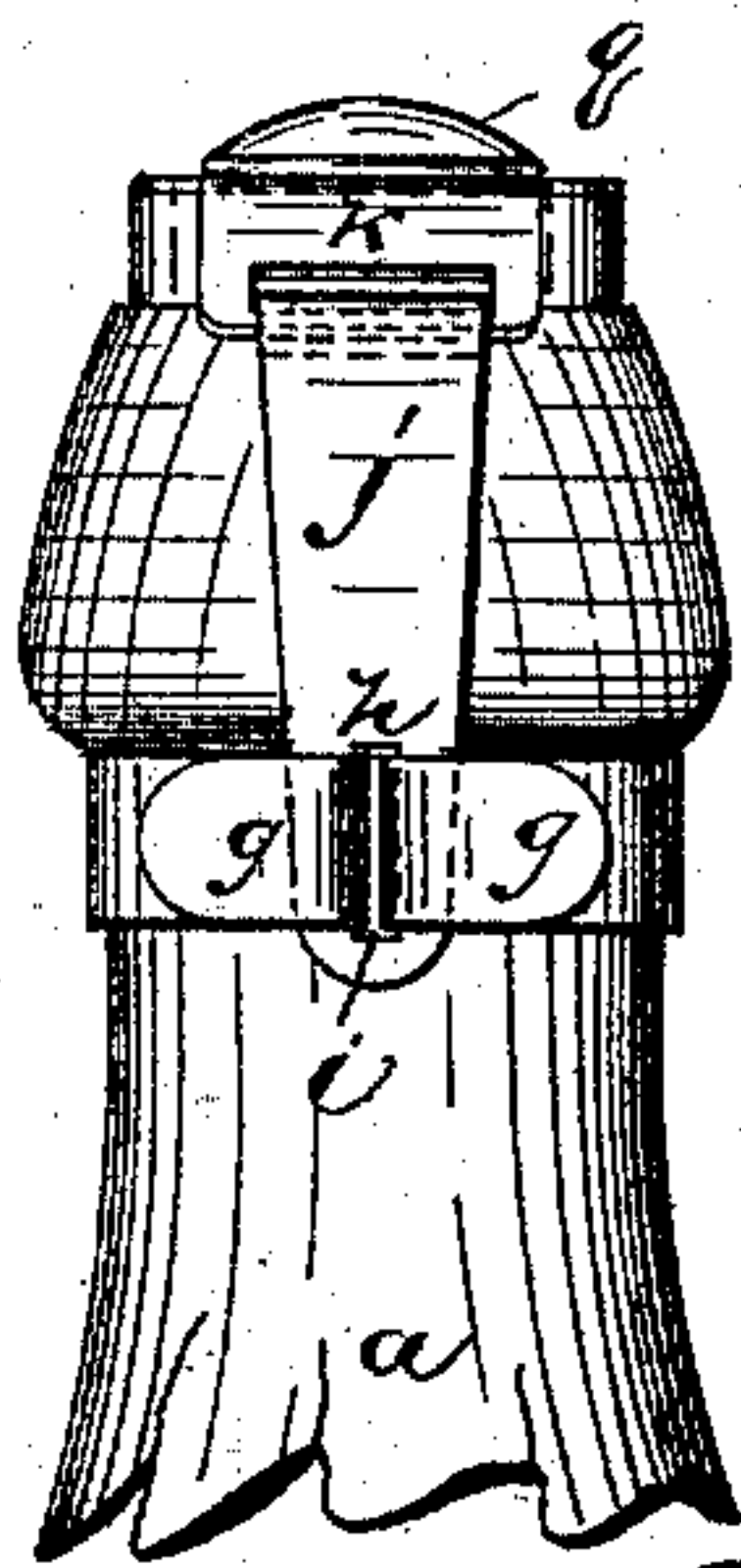


Fig. 3.

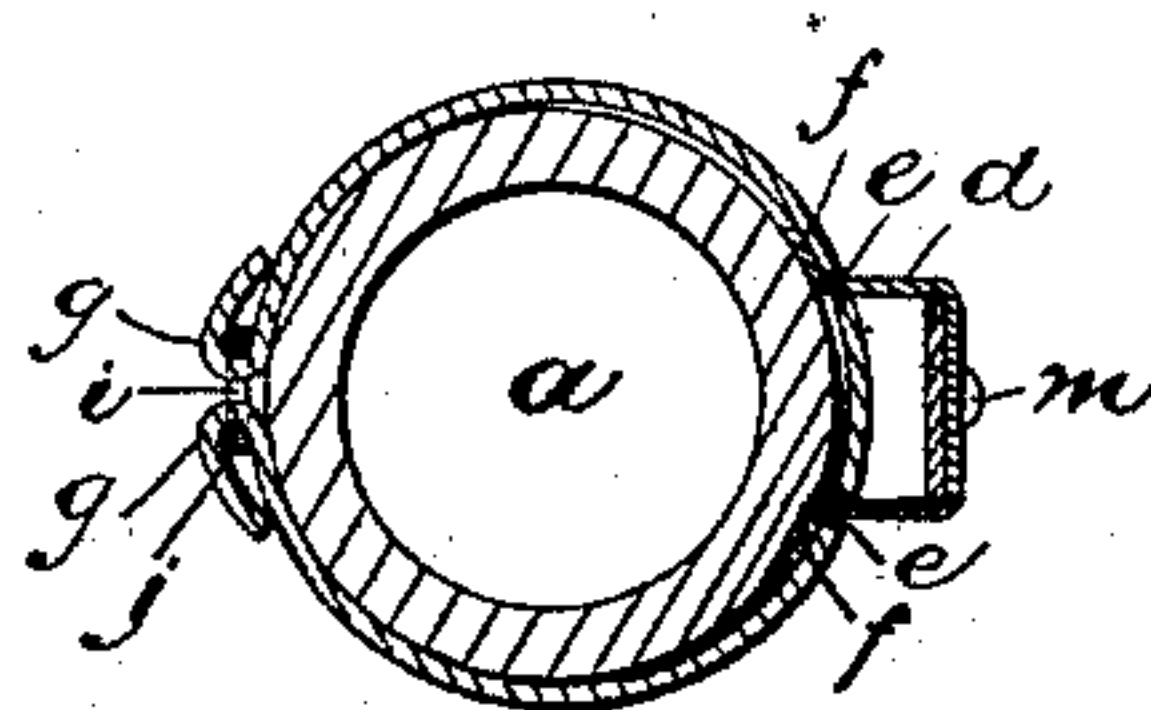


Fig. 2.

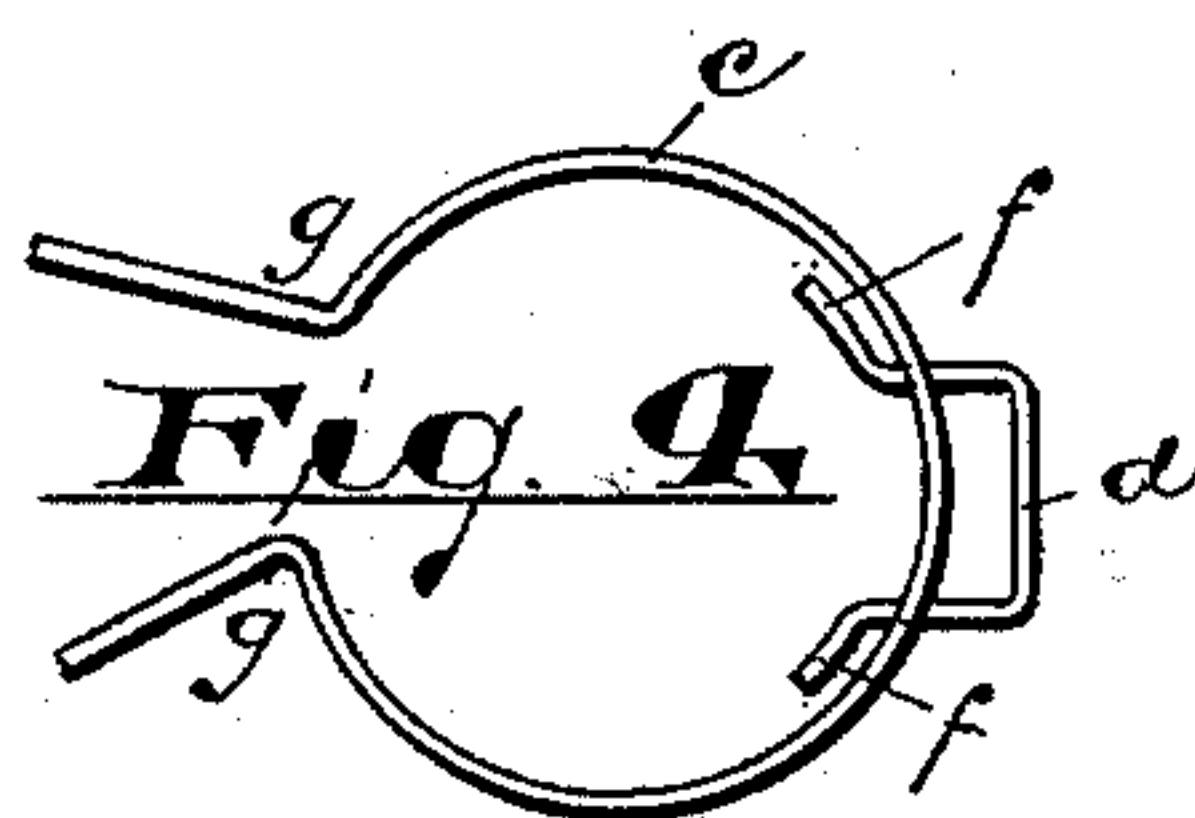


Fig. 4.

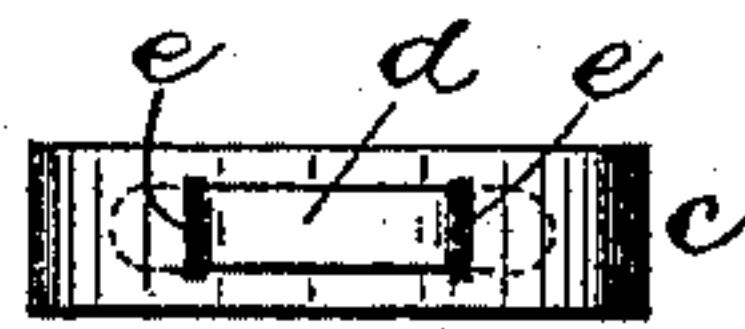


Fig. 6.

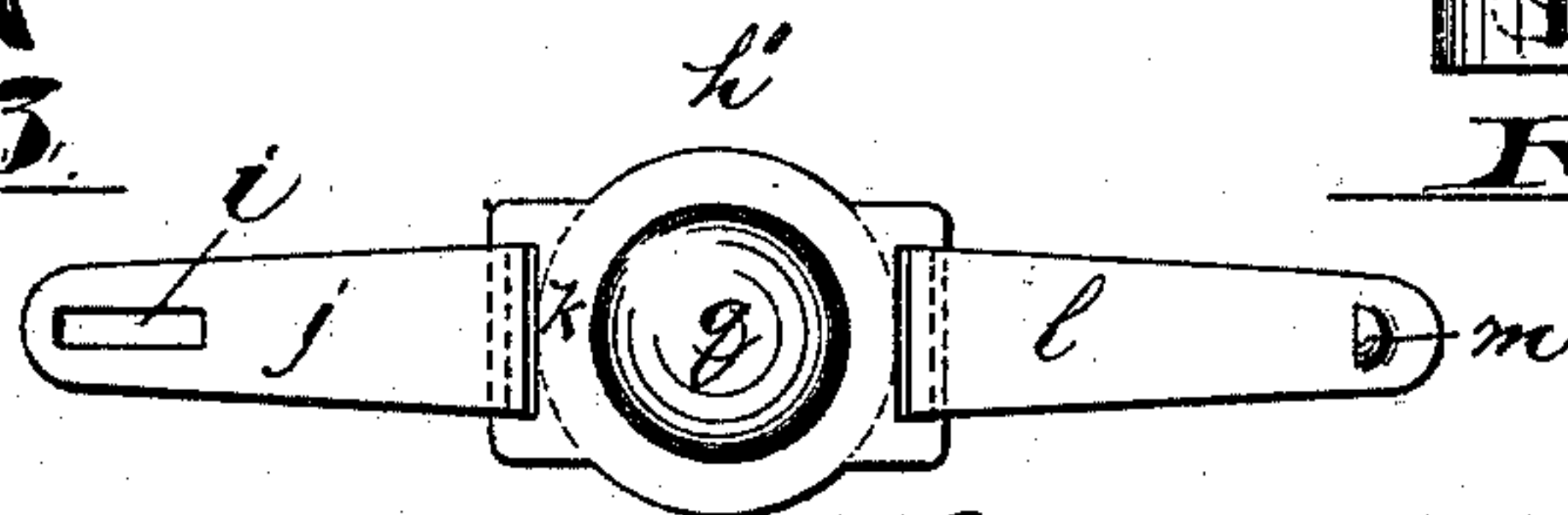


Fig. 5.

Witnesses

Oscar A. Michel
Lillmore Credit

Inventor:

Antonio Carrara

By *Drake & Co.* Attys.

UNITED STATES PATENT OFFICE.

ANTONIO CARRARA, OF NEWARK, NEW JERSEY.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 495,663, dated April 18, 1893.

Application filed April 26, 1892. Serial No. 430,657. (No model.)

To all whom it may concern:

Be it known that I, ANTONIO CARRARA, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to facilitate the operation of opening bottles, to secure a neat and durable arrangement of parts, admit of a ready removal or assembling of parts, and to secure other advantages and results some of which will be referred to in connection with the description of the working parts.

The invention consists in the construction and arrangement of parts, as will be hereinafter described and particularly pointed out in the claim.

Referring to the accompanying drawings in which like letters indicate corresponding parts in each of the several figures, Figure 1 is a side view of the upper part of a bottle and its stopper. Fig. 2 is a section of the same on line *x*. Fig. 3 is a rear elevation; Fig. 4 a detail plan of a collar for the neck of the bottle. Fig. 5 is a detail plan view of a linked stopper, and Fig. 6 is a front view of the collar.

In said drawings, *a* indicates the bottle having the ordinary head or shoulder, *b*, at the mouth thereof. Beneath said shoulder is secured a sheet metal collar, *c*, having a loop or eye, *d*, at the forward side thereof, said loop or eye being formed preferably as shown in Figs. 2, 4 and 6 where *e, e*, indicate slots in the collar, in which the ends *f, f*, of the independent piece are secured by bending them so as to lie between the collar and the neck of the bottle, as indicated in Fig. 2. The ends *g, g*, of the collar are linked or coupled together, preferably, by means of the linked end, *h*, of the chain-like upper portion, *h'*, of the stopper, the said ends, *g*, passing through the slot, *i*, and being bent oppositely to hold the parts together and yet admit of easy detachment should the stopper be disassembled.

The stopper, or the upper part of the stop-

per, consists of linked or chain like sections, *j, k, l*, the section, *k*, being a flat, horizontally disposed plate—when in sealing relation to the bottle—presenting a broad surface, at the center of which is a perforation to receive the shank of the rubber plug, *m*, the broad and flat under surface of the plate serving as a bearing adapted to press the broad sealing end of the plug against the bottle to make an impervious joint. At opposite sides of the centrally perforated plate are narrow tongues which serve to receive the link sections *j, l*. Above the plate the button of the plug, *m*, overlies the plate and holds the said plug in position. By the construction of the section *k*, and plug, a substantial bearing and even bearing on the bottle is secured and the plug, where it enters the mouth of the bottle, may be centrally recessed on the under side without interference of metallic parts, so that when the pressure of gas is exerted on the elastic surface from the inside, the said plug will be caused to hug the walls of the bottle and make a more perfectly impervious joint. Said section *k*, is also slotted, and receives the ends of the sections *j* and *l*, and forms pivotal connections therewith on opposite sides of the mouth of the bottle, the plug or sealing head being disposed between said connections.

The section, *l*, arranged in connection with the section, *k*, on the side thereof opposite the section *j*, is provided with a detent, adapted to engage the co-operating catch, *d*, of the collar *c*. Said catch is preferably a teat forced out from the normal face of the metal with an inclined side, *o*.

To secure the sealing head or plug to the section, *k*, I prefer to centrally perforate the same and form on the plug or head, a button, *q*, a little larger in diameter than the diameter of the perforation, and spring said button into said perforation to hold the parts together, as will be understood. By this arrangement, the rubber is held more firmly in place and yet the plug may be easily detached from the perforated plate by simply drawing the button through the perforation.

In operating the device, the parts being in the positions shown in Fig. 1 by simply pressing the part, *l*, backward to detach the teat from the loop, the pressure of the rubber plug

forces the section *k* upward and opens the bottle, the links *k* and *l* taking a full sweep over the mouth and out of the way of the pouring operations. To close the bottle the sections are simply turned back and the end with the detent *m*, forced into the loop and into engagement the lower side of the latter, the pressure of the link *l* on the shoulder, *b*, serving to throw the parts into holding relation automatically.

Modifications may be made without departing from the spirit or scope of the invention.

Having described the invention, what I claim as new is—

15 The combination with the collar *c*, having extended ends *g*, and catch *d*, of the sections *j*, *k*, and *l*, the section *j*, being slotted and fastened against the neck of the bottle by the

ends *g*, of the collar which are passed through the slot and bent back upon the collar, the catch *d*, being passed through openings in the collar, and its ends pressed thereby against the neck so that it will be bound securely in place to receive the end of the section *l*, which is provided with a detent *m*, to engage the catch and hold the section *k*, upon the plug or stopper, and thus secure it in the mouth of the bottle; substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of April, 1892.

ANTONIO CARRARA.

Witnesses:

CHARLES H. PELL,
OSCAR A. MICHEL.