

Fig 1.

H. CODD.

Improvement in Bottles.

No. 129,652.

Patented July 23, 1872.

Fig: 2.

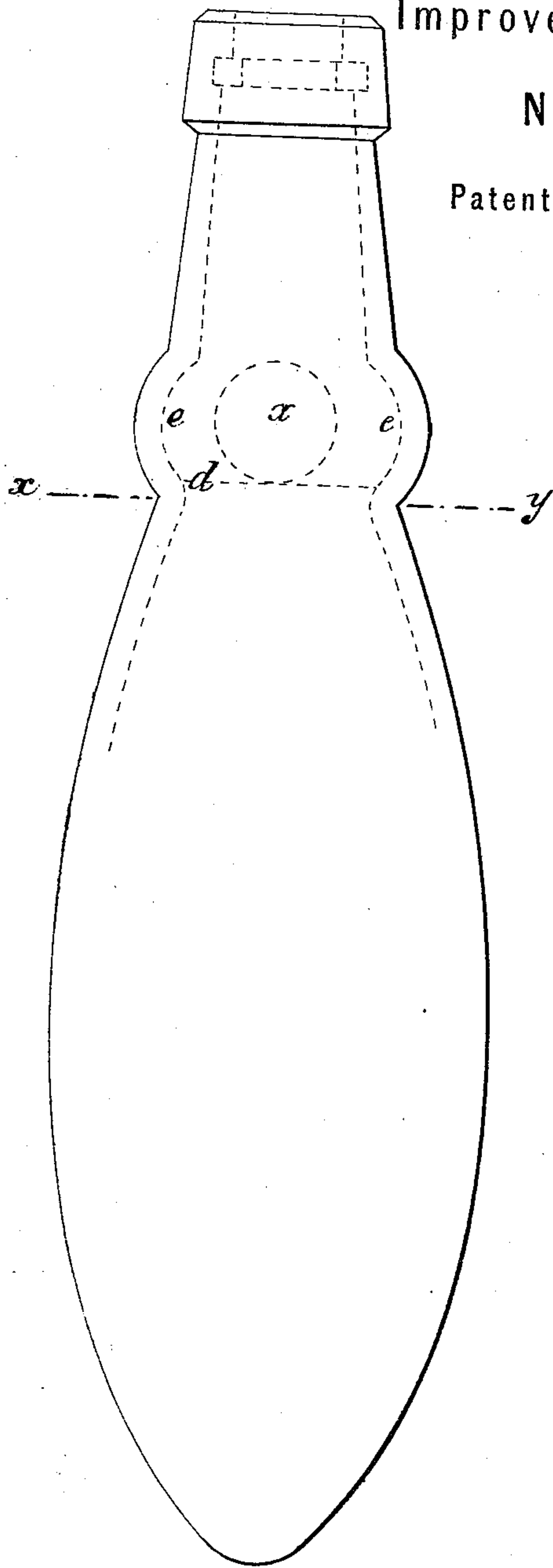
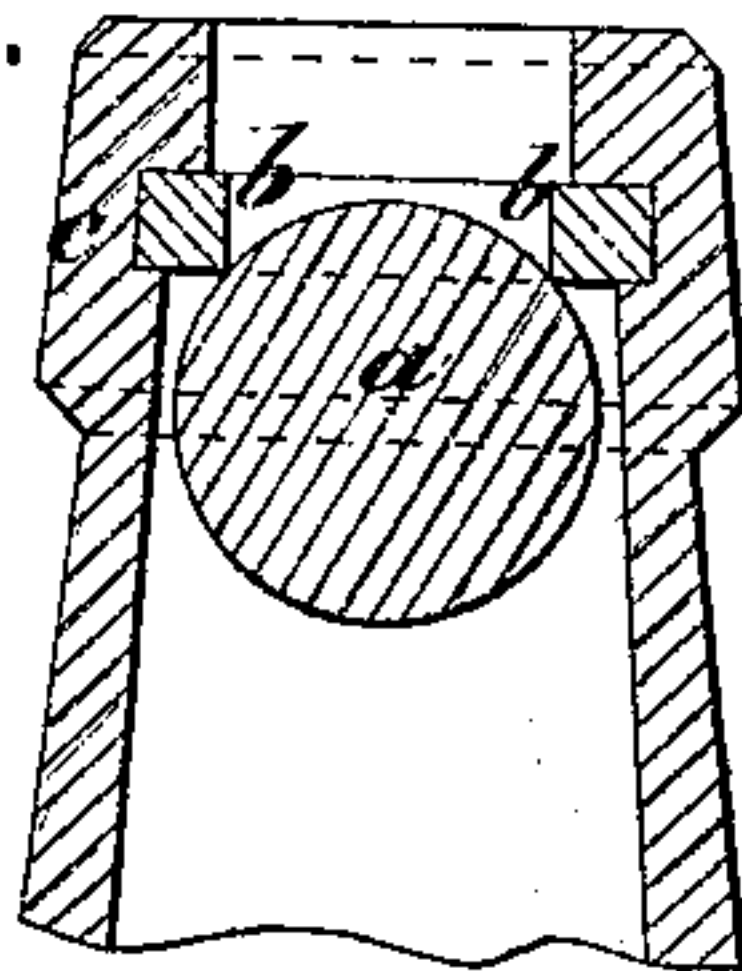


Fig: A.

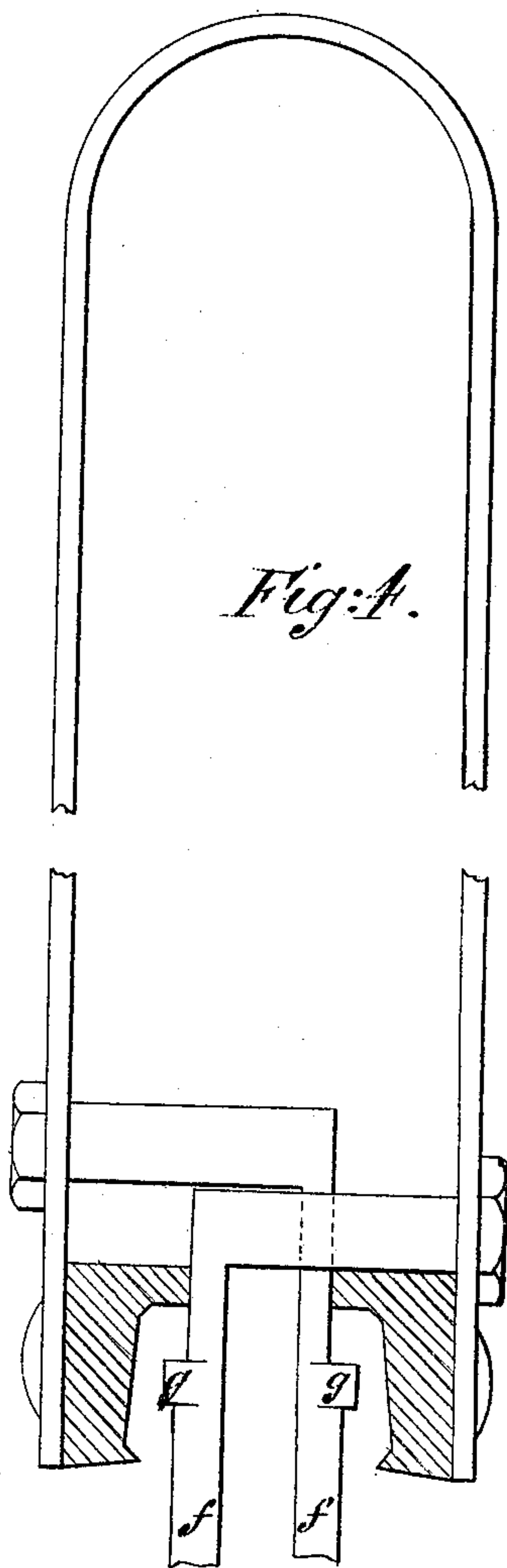
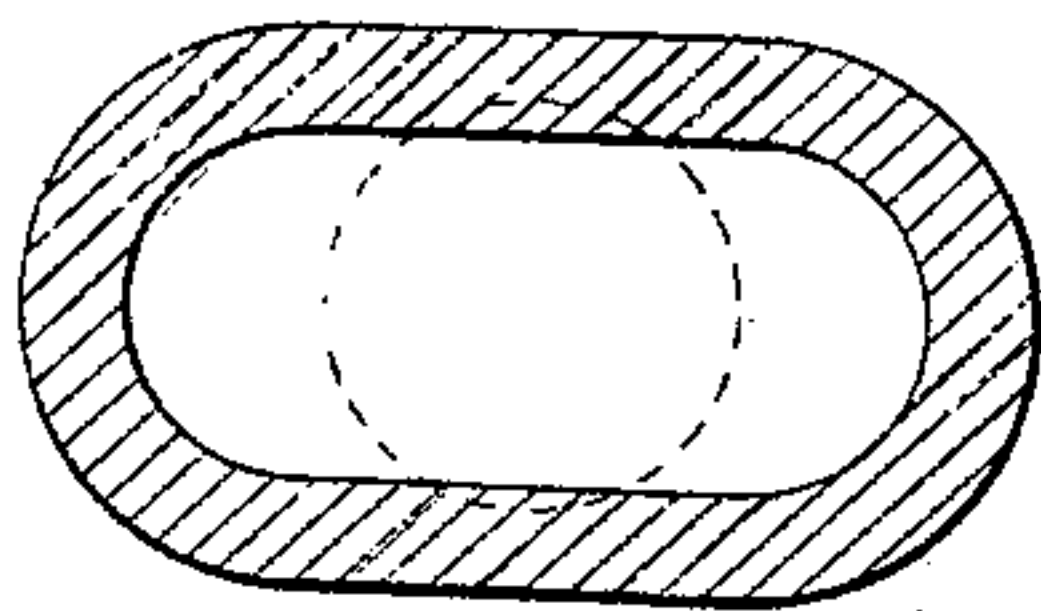


Fig: 3.



Witnesses
Geo. Pitt
J. Carpmael

H. Codd

UNITED STATES PATENT OFFICE.

HIRAM CODD, OF CAMBERWELL, ASSIGNOR OF ONE-HALF OF HIS RIGHT
TO RICHARD BARRETT, OF LONDON, ENGLAND.

IMPROVEMENT IN BOTTLES.

Specification forming part of Letters Patent No. 129,652, dated July 23, 1872.

To all to whom it may concern:

Be it known that I, HIRAM CODD, of No. 17 Queen Row, Grove Lane, Camberwell, in the county of Surrey, England, a subject of the Queen of Great Britain, have invented or discovered new and useful Improvements in Bottles for containing Aerated or Effervescing Liquids; and I, the said HIRAM CODD, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof—that is to say:

According to this invention I construct bottles for containing aerated or effervescing liquids in such manner that the bottle when filled is closed by a glass ball held by the pressure within the bottle against a ring of elastic material placed around the interior of the mouth; and the interior of the mouth above such elastic ring I form of smaller diameter than the ball, so that, however great may be the pressure within the bottle, the stopper cannot be forced through the ring of elastic material. I also contract the lower part of the neck of the bottle, so that when the bottle is opened by pressing back the ball from its seat the ball shall not drop to the bottom of the bottle, but shall be arrested at the lower part of the neck, and also in order that when pouring out the contents of the bottle the ball stopper shall not roll back to its seat and so again close the bottle. I form a recess in the neck below the elastic ring for the ball to rest in while the contents of the bottle are being poured out.

Figure 1 of the drawing shows a side view of a bottle constructed as above described. Fig. 2 is a section of the upper part of the neck and head of the same. Fig. 3 is a transverse section taken through the line *xy*, Fig. 1.

In these figures, *a* is the glass ball; *b*, the ring of vulcanized India rubber, cork, or other elastic material placed in a groove, *c*, around the interior of the mouth; *d d*, the contraction at the lower part of the neck; and *e e*, recesses for the ball to be in while the contents of the bottle are being poured out. It will be seen that the lower part of the neck is contracted from two sides only, so that at this point the bottle is of an oval form in section, as shown at Fig. 3. The passage between the interior of

the bottle and the neck can thus never be closed by the ball-stopper, and therefore no difficulty will be experienced in filling the bottle. The drawing shows the body of the bottle to be shaped like an ordinary soda-water bottle, but it may be of any form desired. In order to construct such a bottle a tool, shown at Fig. 4, is employed. This tool is similar to the ordinary tongs heretofore used for molding the heads of glass bottles in so far as regards the parts required for shaping the head, but, in addition to each arm or limb of the tongs, carrying at its ends half molds for shaping the exterior of the head, as heretofore. They also carry pieces *ff* for shaping its interior. These parts are drawn together when the tongs are opened so that they can readily enter the neck of a bottle and move apart when the tongs are closed, and they then come into position for shaping the interior of the head, as shown in the drawing. The projections *g* on the pieces *f* form a groove around the interior of the head, while at the same time the top of the head above where the groove is formed is contracted so as to bring it to a less internal diameter than the lower part of the head below the groove.

The bottle is formed in the following manner: A bubble of glass is first blown and is roughly reduced to the desired form by rolling and pressing it upon a stone. The roughly-shaped bubble is then inclosed in a mold of the form desired, and the bottle is blown therein in the ordinary manner. When the bottle has been removed from the mold a glass marble previously heated is dropped into the bottle through the neck; the ring or head is then formed at the top of the neck in the ordinary manner by means of the tool above described. After the bottle has been allowed to cool a ring of cork or other elastic material—as for example, of vulcanized India rubber—is inserted into the groove formed around the interior of the head, and the bottle is ready for filling with an effervescing or aerated liquid.

To open a bottle closed in the manner above described it is only necessary to press back the ball away from the elastic ring, when the ball will drop down, and it may either be allowed to fall to the bottom of the bottle; or, if the bottle is formed, in the manner shown

by the drawing, with a contraction at the lower part of the neck, the ball will be arrested by this contraction.

What I claim is—

1. A bottle provided with a ball-holding chamber at the base of its neck to prevent the ball-stopper rolling back to its seat while the contents of the bottle are being poured out, substantially as set forth.

2. The combination, in a bottle, of an annular groove containing elastic packing and an internal ball-stopper, these members being constructed to operate in combination substantially as set forth.

3. The combination, in a bottle, of a ball-holding chamber, an annular groove containing elastic packing, and an internal ball-stopper, these members being constructed to operate in combination substantially as set forth.

H. CODD.

Witnesses:

G. F. WARREN,

JOHN DEAN,

Both of No. 17 Gracechurch St., London.

JOHN HARRISON,

Notary Public, London.