

No. 746,329.

PATENTED DEC. 8, 1903.

J. M. HICKS.

VESSEL NECK AND SEALING CAP FOR SAME.

APPLICATION FILED JULY 3, 1903.

NO MODEL.

Fig. 1.

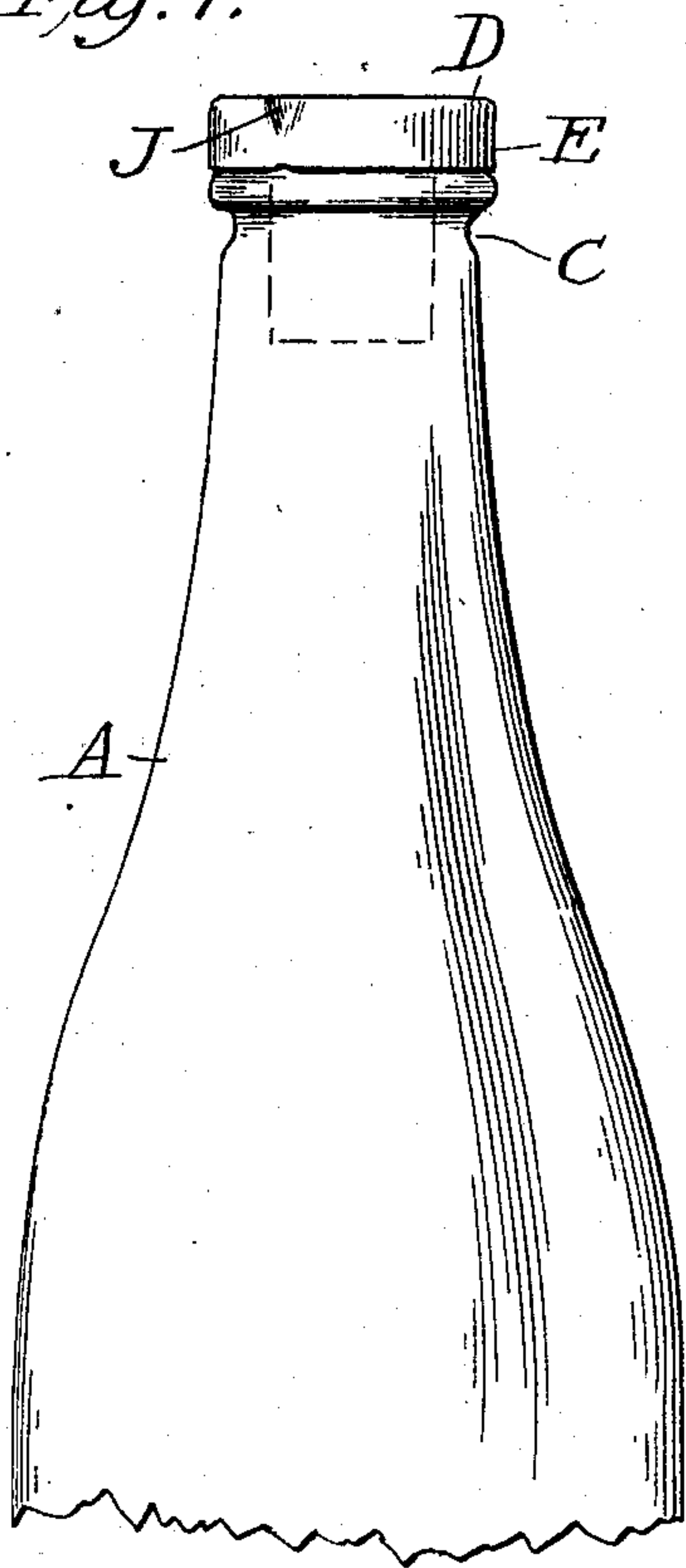


Fig. 2.

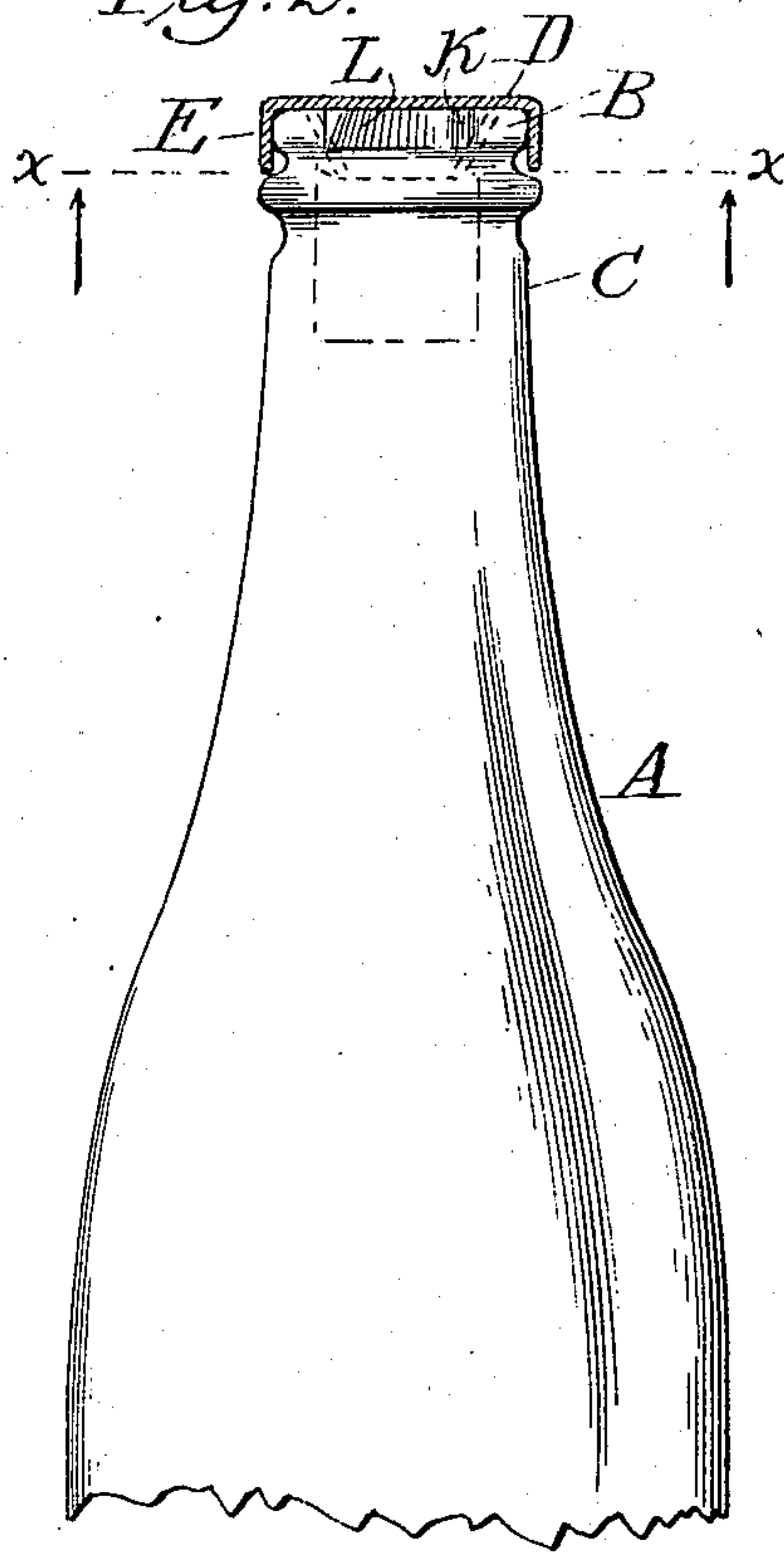


Fig. 3.

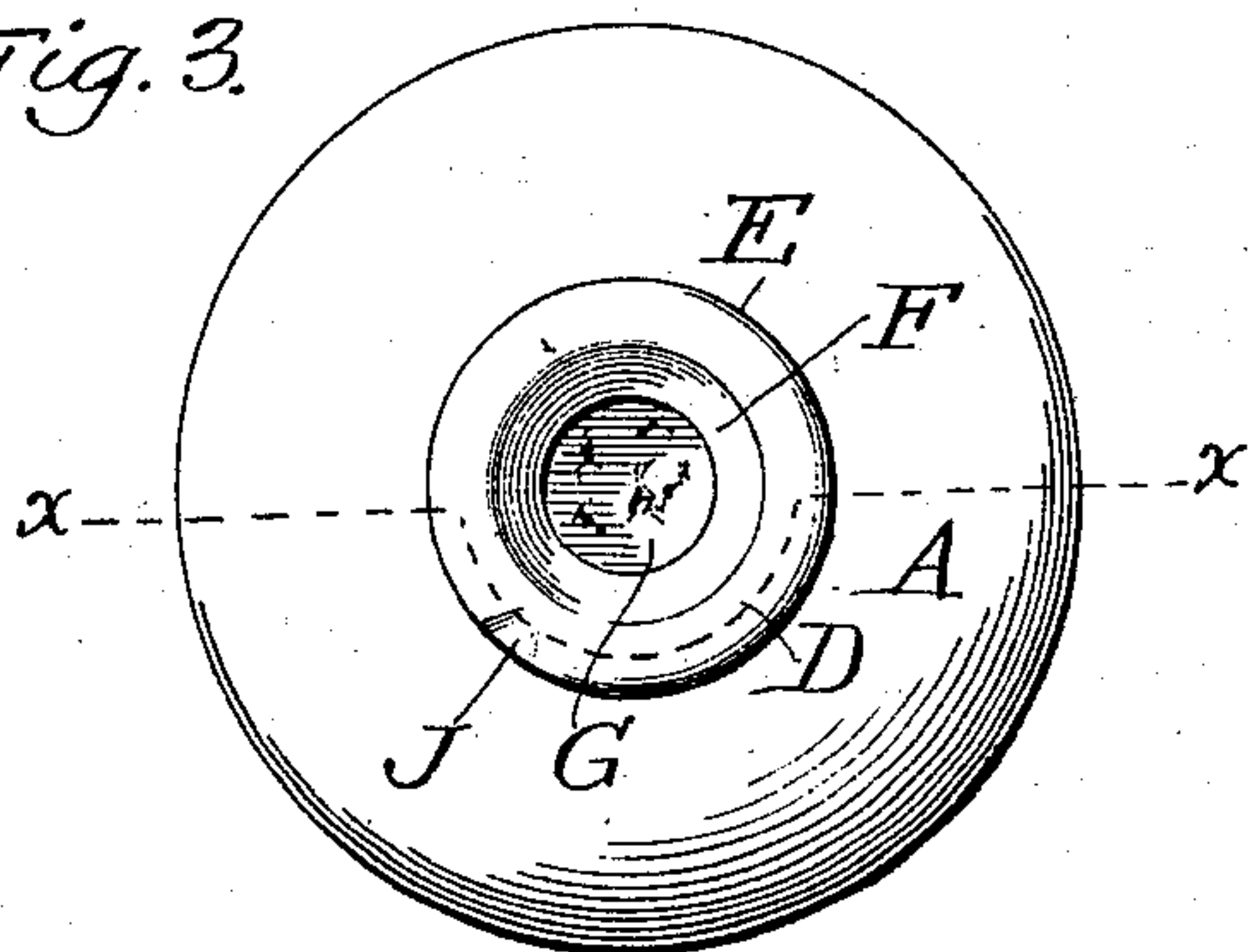


Fig. 4.

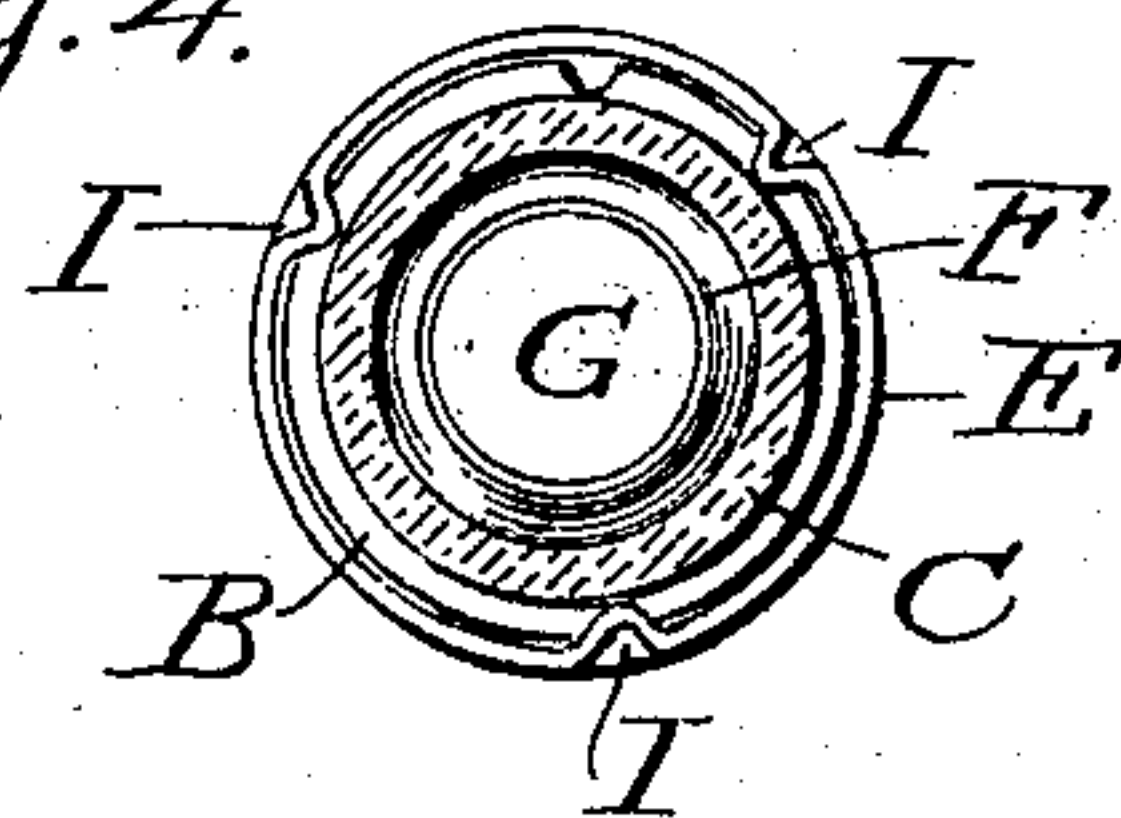
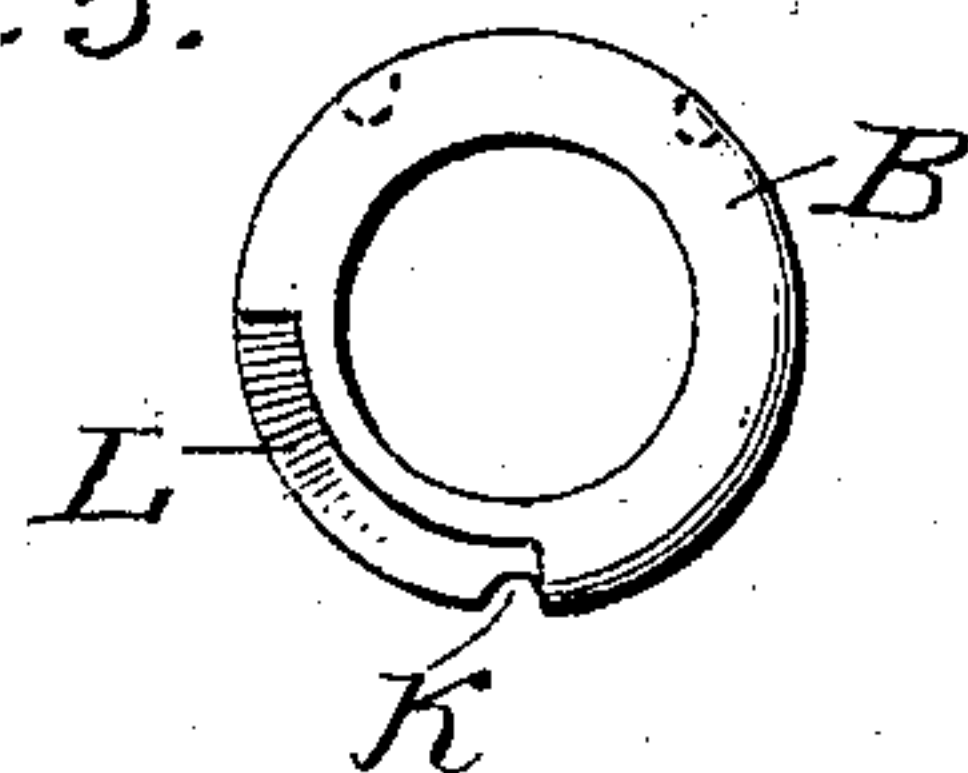


Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES MILNOR HICKS, OF SUMMIT, NEW JERSEY, ASSIGNOR OF ONE-HALF  
TO ABBOT AUGUSTUS LOW, OF HORSESHOE, NEW YORK.

## VESSEL-NECK AND SEALING-CAP FOR SAME.

SPECIFICATION forming part of Letters Patent No. 746,329, dated December 8, 1903.

Application filed July 3, 1903. Serial No. 164,201. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES MILNOR HICKS, a citizen of the United States, residing at Summit, county of Union, State of New Jersey, have invented certain new and useful Improvements in Vessel-Necks and Sealing-Caps for Same, of which the following is a specification.

My invention relates to means for placing  
10 securing-caps on vessels and releasing them when desired and to means for indicating the particular location of the caps circumferentially when on the vessel.

In order that those skilled in the art to  
15 which my invention appertains may understand, construct, and use my invention, I will proceed to describe it, referring to the drawings herewith, in which—

Figure 1 is a longitudinal view of a vessel  
20 provided with my invention and showing particularly the indentation in the top of the cap which is part of the stop mechanism. Fig. 2 is a vertical section of the cap placed over the mouth of a vessel and taken on line  
25 X X of Fig. 3. Also it shows in dotted lines the depression in the top surface of the cap and the opening through which a stopper is forced beneath the depression to seal the vessel by pressure against it from within the  
30 vessel, as shown in my former patent, No. 727,947, May 12, 1903. It also shows in dotted lines the stopper thus inserted and placed. Fig. 3 is a top view of a vessel with cap applied to it and the indent in the top surface  
35 which is part of the stop mechanism. Fig. 4 is a cross-section of the neck of a vessel, taken on line X X, Fig. 2, showing from its under side the cap located on the vessel or in reversed position, also the indents in the flange  
40 of the cap which secure the cap on the vessel by taking under a bead on the outside of the vessel-neck near its top. Also it shows the indent or scarf which is a part of the stop mechanism. Fig. 5 is a top view of the vessel-mouth, showing the bead on the vessel-  
45 neck, one vertical cut-out or recess in the said bead, and the upper edge of the outside of the vessel-mouth cut away on an angle for a short distance, starting from the vertical cut-out or  
50 recess and which forms the other member of the stop mechanism.

A is the body of the vessel.

C is the neck.

B is a circumferential bead.

D is the top of the cap.

E is a circumferential flange trending downward from the top of cap D and which fits the bead B easily.

F is the depressed top of the cap, and G is the opening through it for the passage of a  
60 stopper. (Shown in Fig. 3.)

H is a bead upon the vessel-neck located below the bead at its top, a groove being formed between the top bead and the lower bead. It is a usual consequence which arises  
65 in forming the vessel-neck. It is merely surplus glass which is forced downward by the tool which forms the bead upon the vessel.

I I I are indentations made in the flange E, preferably at three points in its circumfer-  
70 ence.

J is an indentation made in the top surface of the cap D and at the corner where flange E joins it.

K is a vertical cut-out or recess in bead B.

L is a space scarfed off of the upper corner of the bead B for a short distance and forms at each of its ends a shoulder with the material of the bead. It starts at the edge of cut-  
80 out or recess K.

The operation of placing the cap on the vessel is as follows: The cap is placed over the vessel-mouth with the indents I I I in such a position that the indent I, which is close to the indent J, will pass downward  
85 through cut-out K in the bead B, which permits the cap to be closed down upon the top of the vessel-mouth. The other indents I I, triangularly opposite to indents I and J, pass over the outer surface of the bead B, and  
90 when the indents I I I are down to the lower edge of the bead B the cap is turned circumferentially, which brings the indents under the lower edge of the said bead B. The indent J will then rest in the scarfed portion  
95 L and against the side of the cut-out K, so that it cannot be turned in any direction except toward the other end of the scarf L and away from the cut-out K. This brings the indents I I I beneath the shoulder of the bead  
100 B and holds the cap firmly against any force which would tend to lift it vertically off the



vessel. The vessel is then filled with liquid under pressure and the stopper forced into the vessel through the opening G. The internal pressure then forces the stopper outward and upward against the inclined walls F of the depressed upper surface of the cap D and against the inner surface of the vessel-neck and seals the vessel. To remove the cap and open the vessel, the cap is turned in the reverse direction until the detent J comes against the shoulder at the opposite end of scarf L and brings the indent I opposite the cut-out K. The cap is raised sidewise, thus releasing the hold of the indents I I I from under the shoulder of the bead B, and the pressure of the contents of the vessel outward forces the stopper out and the vessel is discharged. Should the pressure in the vessel be insufficient to start the stopper at once, a pointed instrument is used to start it. Should the cap become from any cause hard to turn by hand, an instrument is provided to aid, which is joined with the instrument for starting the stopper and will be the subject of another application.

I have shown but one cut-out in bead B; but I sometimes make three cut-outs to agree with the three indents in the flange of the cap, in which case the cap is placed on the vessel without turning it sidewise; but I prefer to use only one, as shown.

Having now fully described my invention and the manner in which I have embodied it, what I claim as new and as my invention, and desire to secure by Letters Patent, is—

1. In a means for securing sealing-caps on vessels, and limiting circumferential movement, the combination consisting of a vessel having a neck; a bead formed on the exterior of the vessel-neck near its top forming

a shoulder beneath it and provided with a vertical cut-out, substantially as specified and a limited portion of its upper edge cut away to form a recess in the material of the said bead substantially as and for the purposes hereinbefore specified.

2. A cap for a vessel consisting of an upper surface, a circumferential drop-flange provided with a limited number of indents; and an indent in its upper edge adjacent to one of the said indents substantially as specified.

3. In a means for sealing vessels against leakage the combination consisting of a vessel having a neck; a bead upon the exterior of the vessel-neck near its top having a shoulder beneath it; a vertical cut-out in said bead; a limited portion of its upper edge cut away and forming a recess therein; a cap having an upper surface; a drop circumferential flange provided with a limited number of indents therein and an indent in its upper edge adjacent to one of the said indents whereby when the said cap is on the vessel the said indents in the said flange take under the shoulder of the said bead, and the said indent in the upper edge of the cap takes into the cut-out portion of the upper edge of the said bead, and limits the circumferential movement of the cap substantially as specified.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 17th day of June, 1903.

JAMES MILNOR HICKS.

Witnesses:

FREDK. W. FIELDING,  
JOHN A. HICKS.