

(No Model.)

W. PAINTER.
BOTTLE SEAL OR STOPPER.

No. 528,486.

Patented Oct. 30, 1894.

Fig 1.

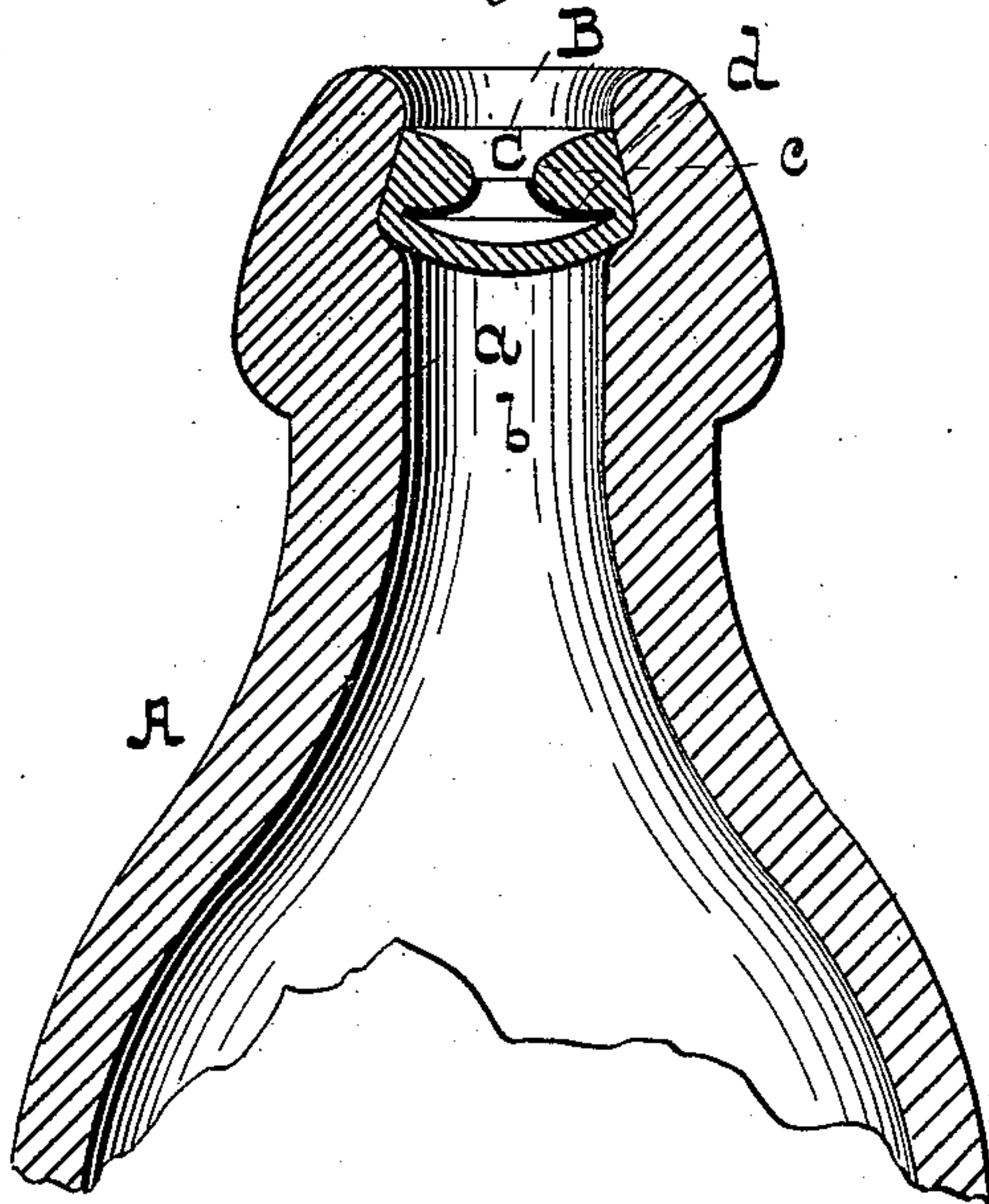


Fig 2.

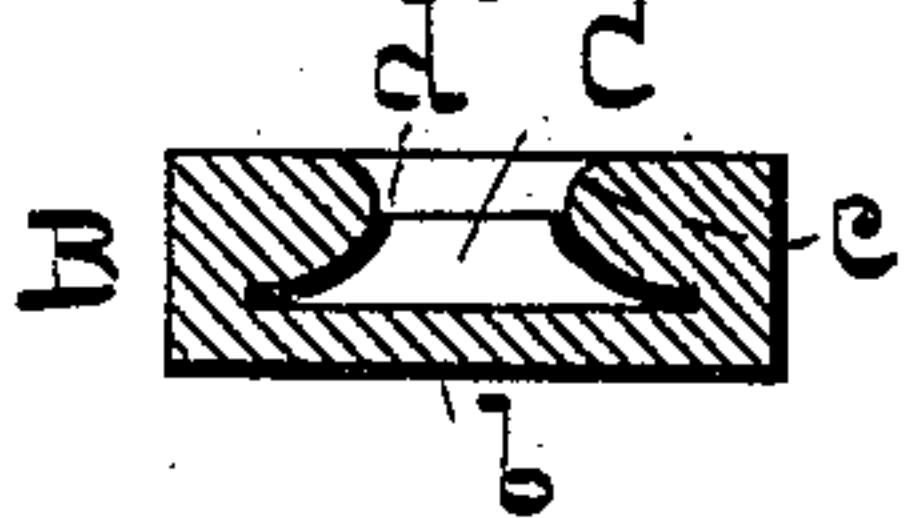


Fig 6.

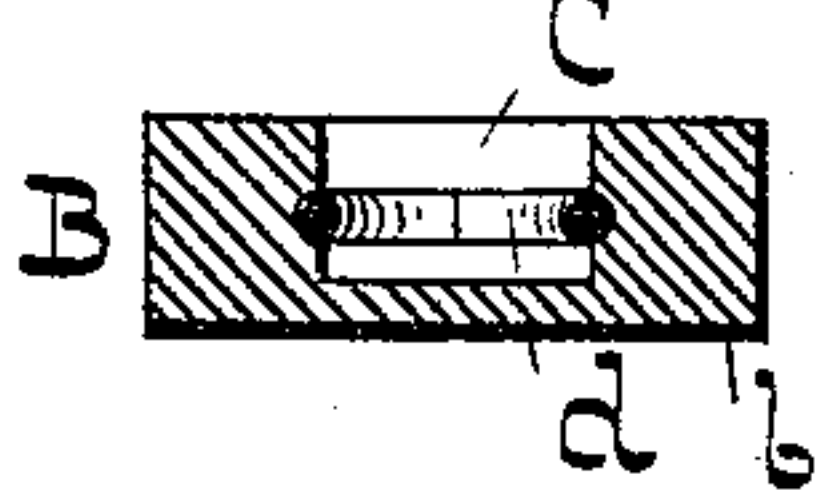


Fig 5.

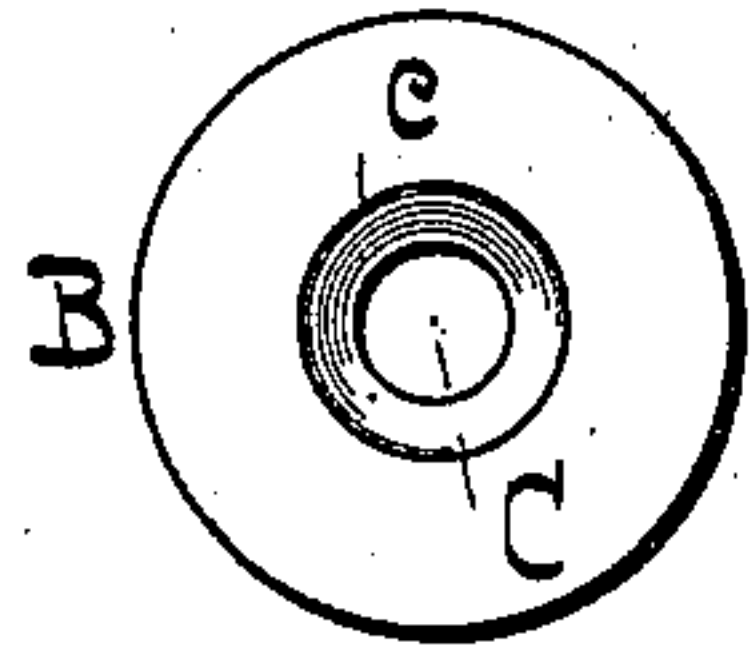


Fig 9.

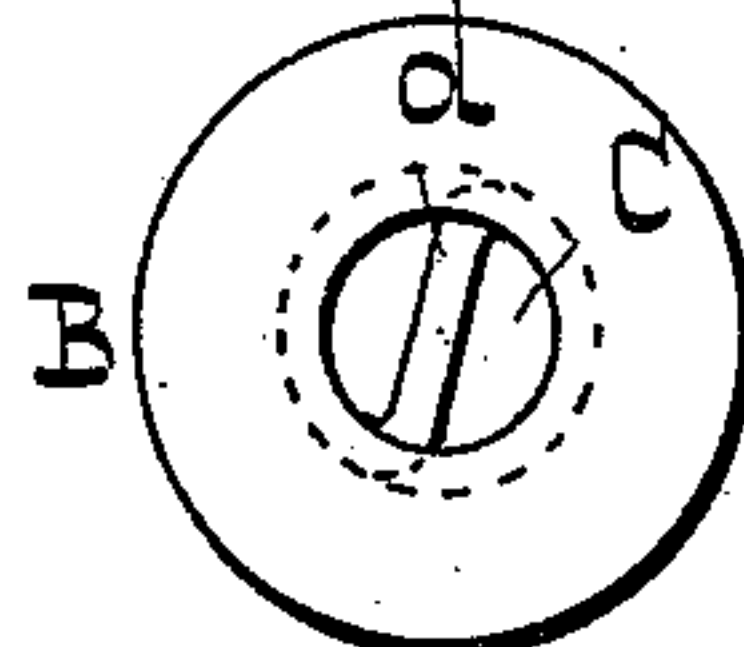


Fig 3.

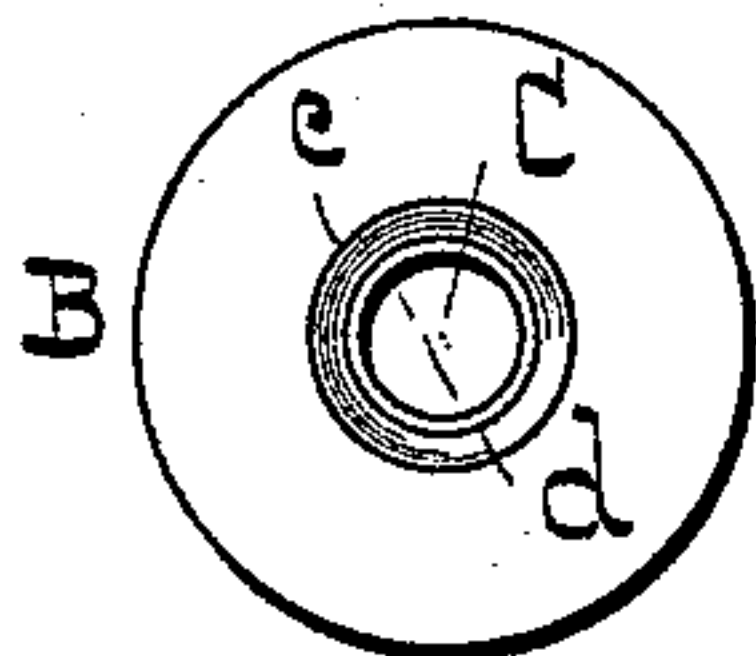


Fig 7.

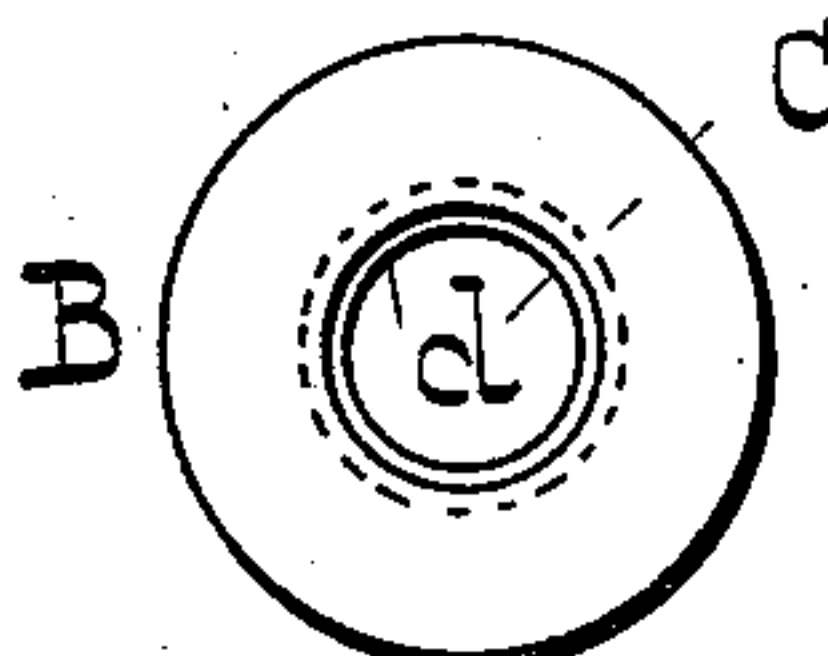
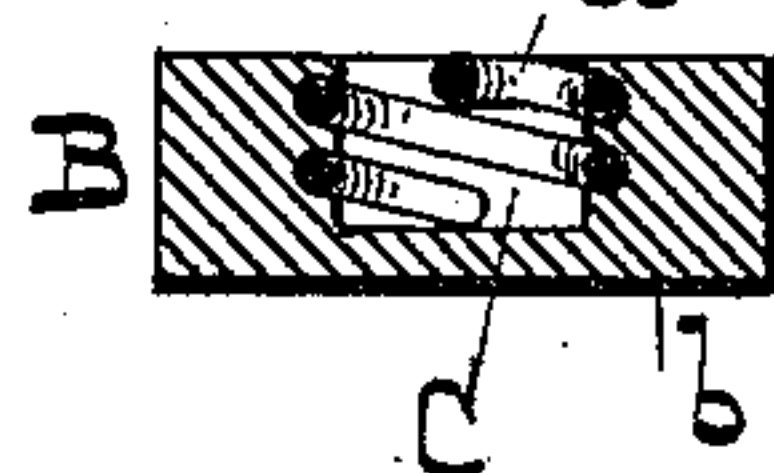


Fig 4.



Fig 8.



-WITNESSES-

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UNITED STATES PATENT OFFICE.

WILLIAM PAINTER, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE CROWN
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BOTTLE SEAL OR STOPPER.

SPECIFICATION forming part of Letters Patent No. 528,486, dated October 30, 1894.

Application filed March 26, 1892. Serial No. 426,490. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PAINTER, of Baltimore, Maryland, have invented certain Improvements in Bottle Seals or Stoppers, of which the following is a specification.

The said invention consists in furnishing the inner surface of the said cavity with a metallic stiffening and protecting device which at once serves to communicate movement derived from the extracting instrument to the entire inner surface of the cavity; and prevents the tearing of the seal in the extracting operation, as will hereinafter fully appear.

In the further description of the said invention which follows, reference is made to the accompanying drawings forming a part hereof, and in which—

Figure 1 is a sectional view of the upper part of a bottle provided with a seal embodying the present improvement. Fig. 2 is a sectional view of the seal before its insertion in the bottle mouth. Fig. 3 is a top view of Fig. 2. Figs. 4 to 9 are views of seals constructed differently from the one shown in the preceding figures and hereinafter described in detail.

Referring to Figs. 1, 2, and 3, A is the bottle, and a the bottle mouth having a groove or recess into which the seal B is inserted. The seal consists of a disk of some flexible substance, preferably rubber, coated on the under side with a layer of material b which is not injuriously acted upon by the contents of the bottle.

C is a cavity in the upper surface of the seal into which the extracting device or instrument consisting of a pointed bar, is inserted as a preliminary step in the extracting operation. The cavity is smaller in diameter at its upper end than at the bottom, and the corner c formed at the outer surface of the seal is rounded off. The overhanging portion of the rubber around the cavity C is protected by a metallic annular plate d.

Figs. 4 and 5 are, respectively, a cross section, and a top view of a seal in which the metallic annular plate is embedded in the material of the seal instead of merely covering the rubber undercut surface as in the

preceding figures, and the extracting instrument has to penetrate a portion of the rubber before coming into contact with the lower portion of the plate.

In Figs. 6 and 7 which represent respectively a cross section and a top view of a seal, the cavity C is cylindrical and instead of an annular protecting plate, a ring of wire is partially embedded in the material of the seal.

Figs. 8 and 9 are, respectively, a cross section, and a top view of a seal with a cylindrical cavity in which is a wire coil with a cross bar instead of either a plate or ring, as shown in the other figures.

It will be understood that in all the constructions shown, the point of the extracting instrument in prizing out the seal is brought into contact with a metallic surface which prevents the tearing of the seal.

I claim as my invention—

1. A flexible bottle seal having therein a hole or depression combined with a metallic ring adapted for the reception of an extracting device, which ring is inserted in the said hole, whereby the movement of the extracting device is communicated to the entire annular surface around the said hole, substantially as specified.

2. A flexible bottle seal having therein a hole or depression for the reception of an extracting device, with the annular surface around the said depression protected by a metallic plate, substantially as specified.

3. A flexible bottle seal having a hole or depression therein for the reception of an extracting device, the material around the said depression being undercut and the undercut surface protected by a metallic plate, substantially as specified.

4. A flexible bottle seal having a hole or depression therein for the reception of an extracting device, the said depression being of a greater diameter at the bottom than at the top, and the undercut surface protected by an annular plate, substantially as specified.

WILLIAM PAINTER.

Witnesses:

JAMES L. MURRILL,
CHAS. H. MILES.