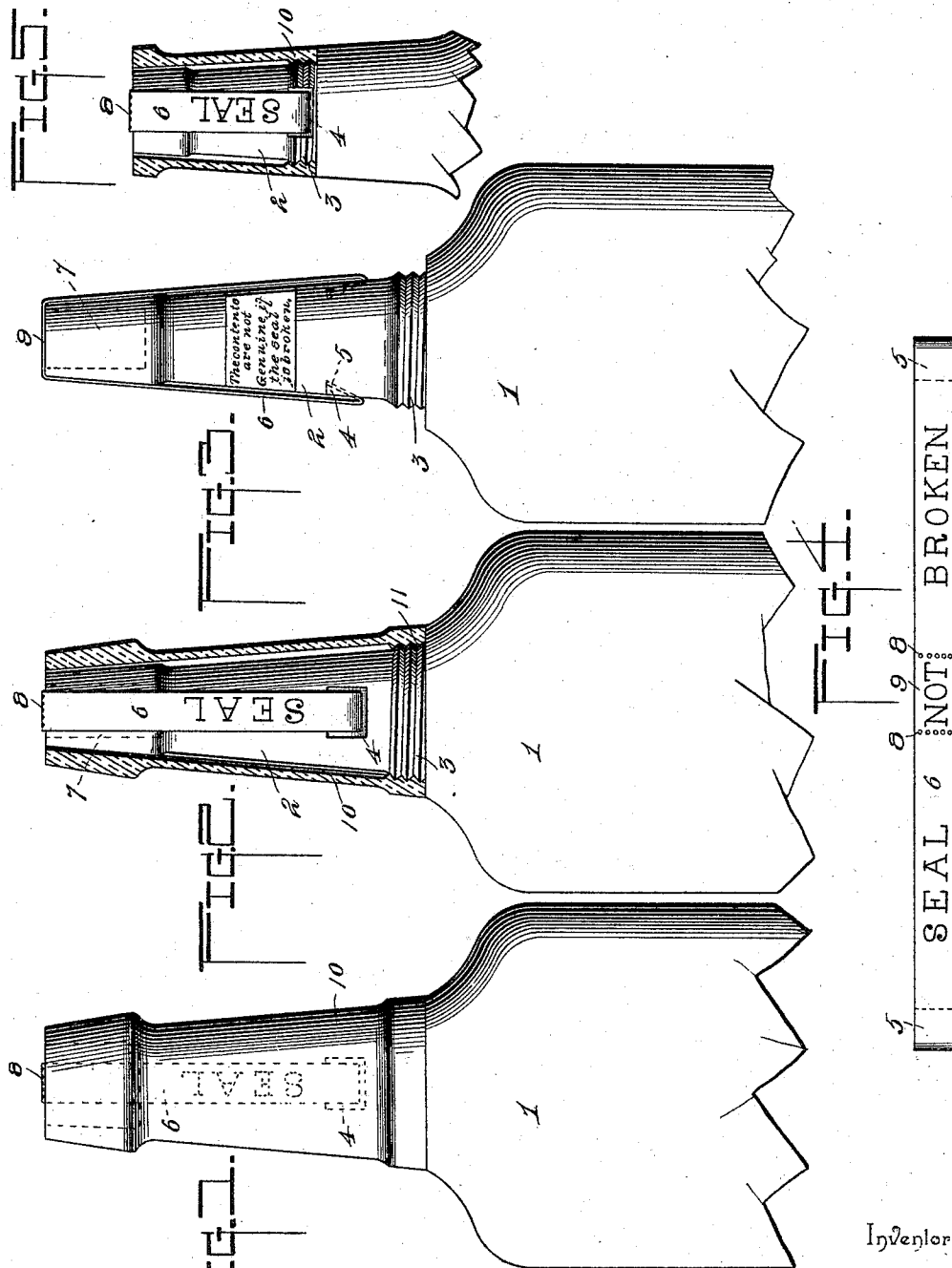


(No Model.)

H. L. FERRIS.
SEALING DEVICE FOR BOTTLES.

No. 579,515.

Patented Mar. 23, 1897.



Witnesses

H. J. Latham.
L. P. Holthausen.

By *his* Attorneys,

Henry L. Ferris.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

HENRY L. FERRIS, OF HARVARD, ILLINOIS.

SEALING DEVICE FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 579,515, dated March 23, 1897.

Application filed November 21, 1896. Serial No. 612,981. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. FERRIS, a citizen of the United States, residing at Harvard, in the county of McHenry and State of Illinois, have invented a new and useful Sealing Device for Bottles, of which the following is a specification.

This invention relates to sealing devices for bottles and it has for its object to provide a new and useful device of this character designed for use in connection with bottles of an ordinary construction to make the bottles non-refillable without detection.

To this end, therefore, the invention primarily contemplates constructing a non-refillable bottle in such a manner that it will be impossible to refill the bottle with a counterfeit material or liquid without detection.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a side elevation of a non-refillable bottle provided with a sealing device constructed in accordance with the present invention. Fig. 2 is a longitudinal sectional view of a sealing device shown applied to a bottle. Fig. 3 is an elevation of the device, showing the transparent protective sleeve removed. Fig. 4 is a plan view of the flexible seal-strip. Fig. 5 is a detail sectional view of a modified arrangement of the sealing device.

Referring to the accompanying drawings, the numeral 1 designates a bottle of ordinary form having an elongated tapering neck 2, such as found on whisky-bottles and the like, and in the present invention the neck 2 of the bottle has preferably formed at its base an exteriorly-threaded portion 3, and above said exteriorly-threaded portion 3 has a pair of reëntrant diametrically opposite catch-notches 4, adapted to receive therein the inturned or angled hook extremities 5 of a flexible continuous seal-strip 6, adapted to span the top of the neck 2 and to have its opposite side portions arranged longitudinally of the neck 2 at diametrically opposite

sides thereof. The flexible seal-strip 6 may be made of tin or other suitable flexible material and when bent to the position shown in Fig. 3 is designed to have its intermediate portion extend directly across the top of the ordinary cork 7, that is fitted in the opening at the outer end of the bottle-neck 2.

At diametrically opposite sides of the neck-opening, or, in other words, at opposite sides of the cork 7 therein, the flexible seal-strip 6 is provided with a series of transverse perforations 8 or equivalent fracture-lines to form therebetween a fracturable section 9, which is disposed directly on the top of the cork, so that when it is removed by breaking the seal at the lines 8 the cork may be readily removed in the usual way without disturbing the position of the opposite side portions of the seal-strip, and in order to carry out the idea of the present invention the fracturable section 9 of the seal-strip is marked with the word "Not," while the opposite side portions of the strip are respectively marked with the words "Seal" and "Broken."

When the seal-strip 6 is fitted in the position described and illustrated, the neck of the bottle and the opposite side portions of the said strip are adapted to be incased within the transparent protective sleeve 10, made of glass or other suitable transparent material and conforming to the shape of the bottle-neck 2. The transparent protective sleeve 10 is of a length equaling the length of the neck 2 and conforms to the outlines thereof, so as to not materially detract from the appearance of the usual neck portion of the bottle, and the said sleeve 10 is made transparent for the purpose of rendering visible the words "Seal" and "Broken," marked, respectively, on opposite side portions of the strip 6, and also to expose to view any label that it may be desired to paste on the neck 2 of the bottle—such, for instance, of the character illustrated in Fig. 3 of the drawings—which label may properly bear the warning notice that "The contents are not genuine if the seal is broken." The transparent sleeve 10 is of a diameter slightly greater than that of the neck 2, so as to freely fit thereover, while at the same time permit of the placing of any suitable label on

the neck 2 of the bottle, and said sleeve 10 is provided at its lower end with an interiorly-threaded portion 11, adapted to engage the exteriorly-threaded portion 3 at the base of the bottle-neck 2.

In using the sealing device the bottle is first filled with its liquid or other contents and the cork 7 tightly fitted in the neck-opening, after which the sealed strip 6 is bent across the cork and outer end of the neck 2 and the two opposite side portions thereof folded in against the neck 2 to bring their hook extremities 5 in engagement with the notches 4 in the side of the neck 2. The threaded portion 3 of the neck is then filled with plaster-of-paris or any other suitable cement material and the transparent sleeve 10 slipped over the neck 2 and screwed tightly onto the threaded portion 3, so that when the plaster-of-paris or other cement material hardens it will be impossible to remove the sleeve 10 without breaking the same. With the sealing device arranged as described the cork 7 cannot be removed without cutting out the fracturable section 9 of the seal-strip, and when this is done and the cork removed the bottle cannot be resealed in the original manner. When the fracturable section 9 of the seal-strip is removed, the side portions of said strip remain in position within the protective transparent sleeve 10 and indicate to users of the bottle that the seal has been broken and the original contents removed.

Slight modifications of the sealing device may be resorted to, such, for instance, as illustrated in Fig. 5 of the drawings, in which figure the neck 2 is illustrated as having the exteriorly-threaded portion 3 located at an intermediate point between the inner and outer ends of the neck, while the notches 4 are formed in the sides of the neck directly in the threaded part 3, but otherwise the modified construction is similar to that already described.

Other changes in the form, proportion, and the minor details of construction may be re-

sorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. A sealing device for bottles comprising a seal-strip engaging with opposite sides of the bottle-neck and having a fracturable section lying across the top of the cork, and a transparent protective sleeve incasing the bottle-neck and seal-strip and permanently fastened to the bottle-neck, substantially as set forth.

2. In a sealing device for bottles, the combination with the bottle-neck and the cork therein, of a continuous flexible seal-strip arranged exterior to the bottle-neck and secured at its extremities thereto, said seal-strip having a fracturable section lying across the top of the cork, and a glass sleeve permanently secured to the bottle-neck and incasing therein said neck and the opposite side portions of the seal-strip, substantially as set forth.

3. In a sealing device for bottles, the combination of a bottle-neck provided with an exteriorly-threaded portion adapted to be filled with cement material, and a pair of diametrically opposite notches, a continuous flexible seal-strip having hook extremities engaging with said notches and an intermediate fracturable section lying directly across the cork in the bottle-neck, and a glass sleeve having an interiorly-threaded portion engaging the exterior threads of the bottle-neck and permanently incasing therein said neck and the opposite side portions of the strip, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY L. FERRIS.

Witnesses:

HOWARD FERRIS,
C. A. STONE.