

H. C. ATKINS.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JAN. 18, 1912.

1,055,595.

Patented Mar. 11, 1913.

Fig. 1.

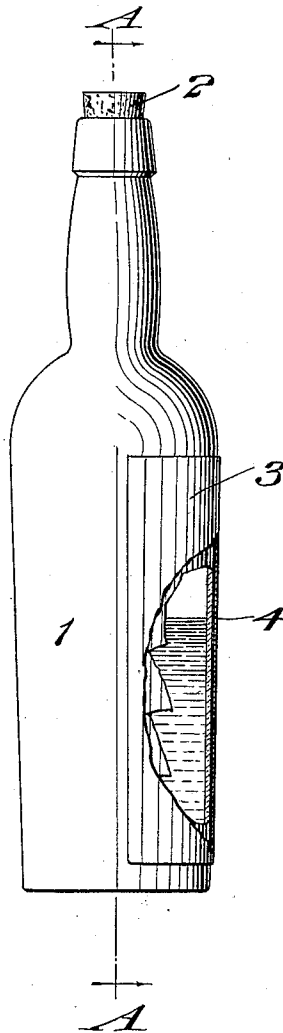
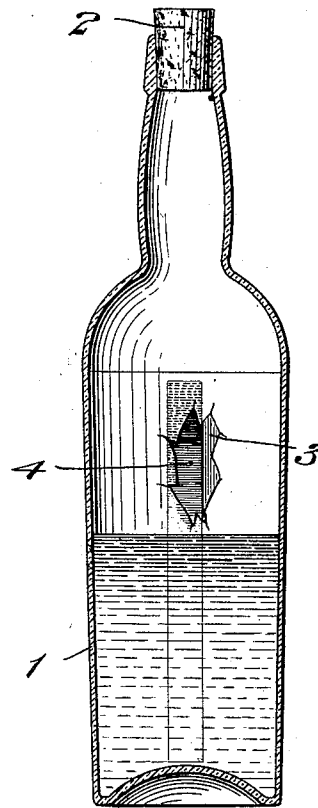


Fig. 2.



Witnesses:-
J. George Barry.
Henry C. Thorne.

Inventor:-
Hubert C. Atkins
by his attorney
Brown & Shward

UNITED STATES PATENT OFFICE.

HERBERT C. ATKINS, OF NEW YORK, N. Y., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-THIRD TO EDWIN DUMBLE AND ONE-THIRD TO JOHN WEGMANN, BOTH OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

1,055,595.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed January 18, 1912. Serial No. 671,822.

To all whom it may concern:

Be it known that I, HERBERT C. ATKINS, a citizen of the United States, and resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Improvement in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles, with the objects in view of providing a device of this character which is simple, cheap and effective, and which may be made from an ordinary bottle without making any change whatever in the structure of the bottle, or adding any mechanical appurtenances thereto; or provision for the arrangement of which may be simply made when the bottle is blown.

In referring to this invention as a non-refillable bottle, I do not mean a bottle which cannot physically be refilled, but mean a bottle which cannot be refilled without its being evident from the appearance of the bottle that the same has been refilled.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a side elevation of a bottle, parts being broken away to disclose the location of the device for indicating whether or not the bottle has been refilled, and Fig. 2 represents a vertical section taken in the plane of the line A—A of Fig. 1, looking in the direction of the arrows.

Broadly considered, the invention contemplates the application to or association with a bottle or other vessel of a device so sensitized as not to be influenced by light when the bottle is in its normal filled condition, but which will be changed in appearance by the action of light when any or all of the contents of the bottle or other vessel is removed.

More specifically, the invention contemplates the application to a bottle or other vessel, of a piece of sensitized paper, which will change its color markedly when subjected to certain light but which will not change its color under the influence of other lights. This piece of paper is so located with respect to the bottle that it will be shielded from the lights to which it is sensitive when the bottle is in its filled condition but will be wholly or partially exposed to

lights to which it is sensitive when the bottle is emptied in whole or in part. This sensitized paper may be of any one of the kinds which are commonly and well known to chemists or for sale on the market, but I find that photographic paper known as "solar bromide" is suitable for the purpose. The paper is so sensitized that when subjected to certain light such as red, amber, etc., it will not change its appearance but when subjected to white, or some other lights, it will decidedly change its color. For instance, paper may be obtained which is white in appearance and will remain white under the influence of amber light but which will turn black or red under the influence of white light. All this is commonly known to chemists; and the initial color of the paper, its sensitiveness to certain kinds of lights and insensitiveness to other kinds of lights, and the color to which the paper will change under the influence of the lights to which it is sensitive, may be varied within large limits to suit particular desires or requirements.

The sensitive paper may be associated with the bottle or other vessel by having it in a tube in the bottle or in a recess in the wall of the bottle or in any other convenient manner so long as it is protected from outside light while the bottle is in its initial filled condition; but I have found that the embodiment of the invention shown in the drawings is very efficacious and simple.

Referring now to the drawings; the bottle is denoted by 1 and may be of conventional shape for holding a liquid, such, for instance, as rye whisky. The bottle may be composed of white glass, and be provided with the ordinary cork 2.

The label on the bottle is denoted by 3 and may be secured to the bottle by pasting in the ordinary manner and in the ordinary location on the bottle. It will be noted that the label 3 extends practically throughout the height of the body portion of the bottle, as is common. The label 3 may either be sufficiently opaque so as to practically prevent the passage of light therethrough, or it may be of such a color that any light which did pass through would not be of such a character as to affect the sensitized paper located beneath the label, as will now be described.

The sensitive paper is indicated by 4 and it may conveniently consist of a strip of a length about equal to the height of the label 3 and of a convenient width such as half an inch. The width of the strip of sensitive paper is not a matter of great importance so long as it is large enough to be plainly seen when exposed. This strip of sensitive paper 4 may be secured in a longitudinal position on the bottle 1 between the label 3 and the body, as clearly shown in the drawings.

The bottle may be filled with the rye whisky and corked in the usual manner.

It will be understood that the applying of the sensitive strip 4 will be done under such conditions of light as not to expose the strip of paper to light to which it is sensitive. The strip of paper in the present illustration may be paper which is white normally and will remain white so long as it is subjected to amber light, but will turn decidedly red in say from one to three minutes more or less upon being exposed to white light.

It will be clearly seen that as long as the bottle is filled with the whisky the strip of sensitive paper 4 will be subject only to amber colored light passing through the liquid, it being protected on the outside by the label 3. If, however, any substantial part of the contents of the bottle is removed, the white light passing through the glass of the bottle and not being modified by the contents, will change that portion of the strip of sensitive paper which extends above the remaining contents from white to red. If, now, the bottle should be refilled, that fact could be immediately ascertained by holding the bottle up to the light and observing the appearance of this strip of sensitive paper.

The paper may be made so as to be sensitive to such a degree that it will change its color in a few seconds, or in several minutes, or even longer, or in any intermediate time, such matters being mere variations of detail which may be altered to suit the desires of the particular manufacturer or user.

This arrangement not only shows unfailingly when the bottle has been emptied and refilled, but will also show when a bottle has been partially emptied for the purpose of dilution.

It will be understood that various changes may be resorted to in the form, character and location of the several parts referred to without departing from the spirit and scope of this invention; hence I do not wish to limit myself strictly to the structure herein set forth, but

What I claim is:—

1. An article of the character described comprising a white glass vessel and a piece of material sensitive to white light secured thereto so as to be protected by the contents of the vessel from white light.

2. An article of the character described comprising a translucent vessel, a label thereon, and a strip of sensitive paper which will be affected by the light passing through the vessel but will not be affected by the light passing through the contents of the vessel, the said strip of paper being so located that it will be protected on one side by the contents of the vessel and on the other side by the label.

3. An article of the character described comprising a translucent vessel, a label thereon, and a strip of sensitive paper of substantially the height of the body of the vessel, which paper will be affected by the light passing through the vessel but will not be affected by the light passing through the contents of the vessel, the said strip of paper being so located that it will be protected on one side by the contents of the vessel and on the other side by the label.

4. An article of the character described comprising a translucent vessel, a label thereon, and a piece of solar bromide paper associated with the vessel in such position that it is protected from white light on one side by the contents of the vessel and on the other side by the label.

5. An article of the character described comprising a vessel, a label thereon, and a strip of sensitive paper, which will be affected by certain lights and will not be affected by other lights, secured between the label and the vessel, whereby it will be protected by the contents of the bottle from the light to which it is sensitive.

6. An article of the character described comprising a vessel, a label thereon and a strip of paper which will decidedly change its color under the influence of light passing through the vessel but will not change its color under the influence of light passing through the contents of the vessel, said strip of paper being secured between the label and the vessel.

In testimony, that I claim the foregoing as my invention, I have signed my name in the presence of two witnesses, this seventeenth day of January 1912.

HERBERT C. ATKINS.

Witnesses:

F. GEORGE BARRY,
OTTO W. HOLMGREN.