Oct. 11, 1932. S. GREENHOUSE 1,882,359

METAL FOIL AND METHOD OF ATTACHING SAME

Filed May 8, 1930

Fig. 1.

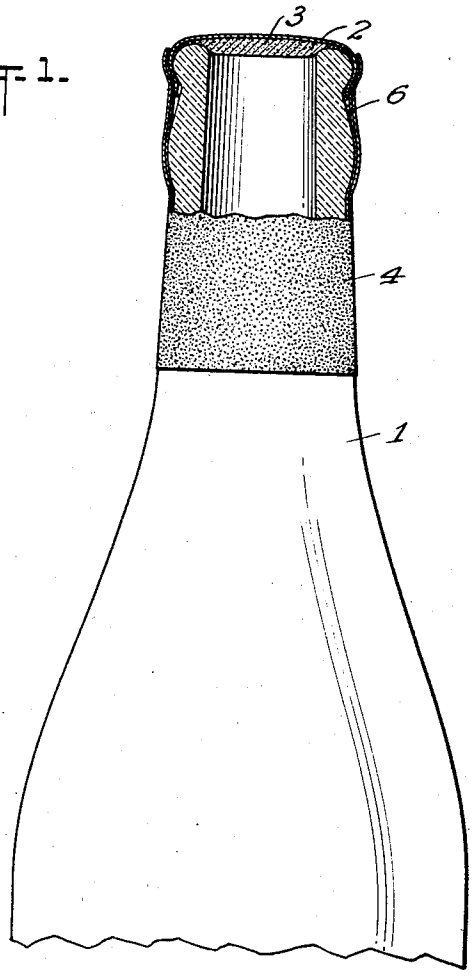
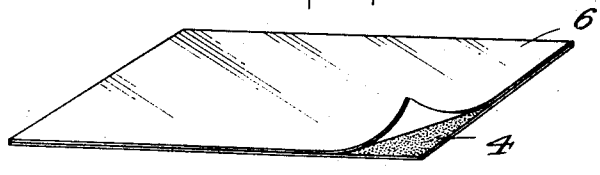


Fig. 2.



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METAL FOIL AND METHOD OF ATTACHING SAME

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The present invention relates to the use of metal foils and the special object of the invention is to facilitate removal of the foil from the object to which it has been attached.

It is common practice to apply metal foils to various objects, such as containers of glass or metal, either to improve the appearance of the container, or to keep the closure clean. It is commonly in use on bottles such as are used for containing beverages.

It has been found that when it is desired to use the container again, after foil has been applied, that the foil is removed only with great difficulty. This is due to the fact that the foil being water-proof, it is not possible in washing the bottle to soak the soluble glue which is underneath the foil, and thus loosen and remove it, as can readily be done with labels made of paper or other substances, which will absorb water. It has been necessary, therefore, in order to remove foil, to develop special machines or to scrape the same away with knives or other sharp implements.

At present, there being no satisfactory and economical method of removing old foil from bottles which are used again for beverages, there is a residuum of caustic soda from the washing solution which adheres to the remnants of old foil which remain on the bottle. This is very unsanitary as the soda is liable to become mixed with the beverage as it is poured from the bottle due to the fact that the liquid follows back along the outside surface of the bottle a sufficient distance to come in contact with the old foil. Even though an attempt has been made to cover it with new foil, in decapping the bottle the old foil is again exposed.

My invention provides a foil and a method of attaching it on any smooth surface such as glass or metal, which permits removal of the foil by washing or scrubbing in hot water. Thus, it may be seen that bottles may be thoroughly cleaned by ordinary washing machinery, even though they have previously had metal foil or any non-absorbent material attached to them with glue.

It can readily be seen, from the description which follows, that this invention is applicable to any non-absorbent material, which it is desired to removably attach to any smooth surface, and it is not intended to limit the invention to the specific embodiments described herein.

Fig. 1 shows a neck portion of a typical glass container, partly in cross-section, with foil secured around the neck in accordance with my invention.

Fig. 2 is a perspective view of an embodiment of the foil which is part of my invention.

Referring to the drawing, Fig. 1 shows a glass bottle 1, closed by a metal cap 2 having a cork insert 3. Surrounding the upper portion of the neck and the sides of the cap 2, is a strip of metal foil 4.

The construction of the metal foil 4 is as follows:

Referring to Fig. 2, in one embodiment the metal foil 4 has a backing 6 co-extensive in area with the foil 4 which is made of some water absorbent material, such as paper. The backing 6 is removably secured to the foil 4 in such manner that the two may be separated by the application of heat. It is desirable that the heat required be less than the boiling point of water, so that the foil and the backing may be separated by the hot water of an ordinary bottle washing machine.

I have found that wax or paraffin are substances suitable for securing the backing to the foil. Ordinary wax paper may be secured to the foil, by simultaneously heating and pressing and the foil then cut up in strips of a size suitable for application to a bottle or other container.

Instead of applying a backing of paper or other fibrous material, it is also possible to coat the surface of the foil with wax, paraffin or other substance which will melt in hot water and apply the foil so coated to the surface of a container, securing it with water-soluble glue.

My invention as just described, facilitates the removal of the metal foil or other non-absorbent material from the surface to which it has been attached in the following man-

ner: The wax or other substance which has been selected to secure the fibrous backing 6 to the foil 4 will melt in hot water. If no fibrous backing has been used, the film of wax or other substance which coats the foil will likewise melt when heat is applied. The coating of glue which secures the foil to the surface, as to a bottle, for example, is separated from the foil itself by the wax, or wax and fibre backing. When a bottle covered with such foil is submitted to the combined heat, scrubbing and washing action of the machines usually used for such purposes, the heat of the washing solution melts the wax or other substance which is between the foil and the fibrous backing or between the foil and the glue, as the case may be. The wax or other substance in this melted state is semi-liquid and becomes slippery, losing its adhesive qualities, and the foil is readily removed by the washing or scrubbing action. It is to be noted that this loosening of the foil is independent of any softening of the glue which holds the combined foil to the glass or metal surface. In the ordinary application of glue directly to the foil, it is impossible for the water, the foil being water-proof, to attack the glue. This is the cause of the great difficulty in removing the foil. When, as has just been described, the foil is removed merely by the application of heat, the washing solution can then attack the glue, wash it away and leave a perfectly clean and sanitary surface.

What I claim is:

In combination, a bottle, a metal foil coated on one side with a wax substance which will melt in hot water, a water-soluble glue interposed between said substance and said bottle for securing said foil to the bottle.

In testimony whereof, I have signed this specification.

SAMUEL GREENHOUSE.