July 18, 1939. H. F. WATERS 2,166,513

PACKAGE AND MATERIAL FOR FORMING THE SAME

Filed May 8, 1935

Fig. 1.

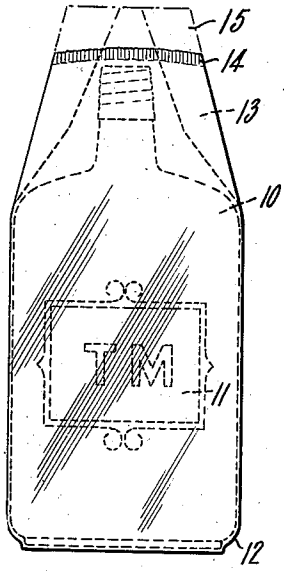


Fig. 2.

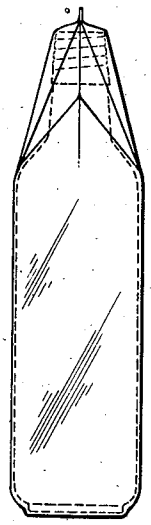


Fig. 3.

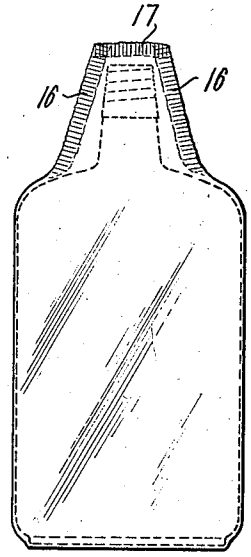


Fig. 4.

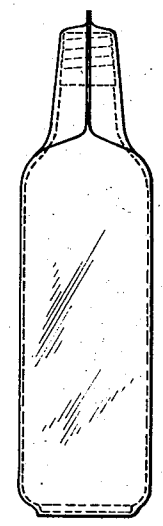


Fig. 5.

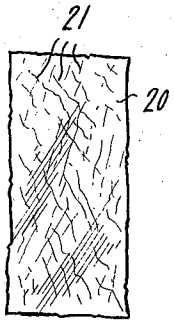


Fig. 6.

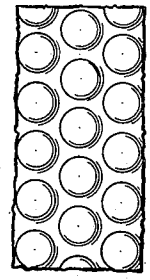


Fig. 7.



Fig. 8.



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UNITED STATES PATENT OFFICE

2,166,513

PACKAGE AND MATERIAL FOR FORMING THE SAME

Harry F. Waters, New York, N. Y.

Application May 8, 1935, Serial No. 20,373

3 Claims. (Cl. 91—68)

My present invention relates to improvements in the art of packaging commodities, particularly liquid goods of a relatively valuable nature. My invention also relates to an improved material, or materials, for use as the outer covering of a package.

In the packing of commodities of a liquid nature, and particularly valuable liquids, a great deal of expense is occasioned in the manufacture and application of pilferproof closures for the bottle, or other container. Types of such closures are numerous, the commonest being generally designated as tear-off caps. In the improvement of my invention, such tear-off caps, and other devices, are rendered unnecessary inasmuch as the ordinary wrap, bag, or box within which the bottles or other containers are placed, are replaced by the subject of my invention.

My invention comprises, in its essential details, an ordinary bag so sealed around the container as to prevent the reapplication thereof once it has been removed. The bag is preferably to be formed of a transparent material having an identifying character so that the container and the labels thereon may be viewed through the bag and so that a counterfeit transparent bag cannot be substituted for the original.

My invention is primarily intended to require the use of bags formed of transparent and self-sealing material. By self-sealing is meant that class of materials which are inherently capable of fusing upon the application of heat, or which comprise base sheets coated with a thermoplastic composition which will fuse upon the application of heat.

The sealing of the bag around the container is best accomplished by means of the device illustrated and described in my copending application filed concurrently herewith, Serial No. 20,370. Although it will be appreciated that other types of sealing means may be used with equal success, it is likewise within the purview of my invention that a transparent material having identifying characteristics may be used, the bag being closed around the container by the application of a line of adhesive to the mouth thereof.

I am aware of the use of transparent wrappers which are formed around the container and sealed in place, but my present invention is in respect to a bag and is distinguished therefrom as embodying a preformed enclosure which merely requires the closure of one end. I am also aware of the use of wrappers made of some such material as cellulose acetate, which are wrapped about the bottles and moistened with a solvent whereupon the wrapper will shrink and become very closely associated with the bottle. My invention is distinguished therefrom in the use of a bag which can be economically manufactured and applied to the containers to achieve the same result without the expensive use of shrinking solvents.

The material contemplated herein is a broad class consisting of, for instance, a flexible sheet composed of a rubber hydrochloride film such as is disclosed in the patent to Calvert, No. 1,989,632, dated January 29, 1935, and known on the market as "Pliofilm", or a material having similar characteristics, cellulose acetate, regenerated cellulose, or other similar materials. Such materials as regenerated cellulose are preferably coated, on at least one side, with a composition such as "Pliofilm", "Bakelite", nitro-cellulose base coating, or other thermoplastic adhesive, which renders the material capable of being sealed upon the application of heat. It is preferred that the entire transparent sheet be formed of "Pliofilm" or similar material which fuses into an integral mass upon the application of heat, but it is within the purview of my invention that the fusible material be merely applied, either to the entire sheet or to the sealing area of a base sheet which in itself is incapable of fusing.

Referring to the drawing wherein preferred embodiments of my invention are illustrated:

Fig. 1 is a front view of a package rendered pilferproof in accordance with my invention;

Fig. 2 is a side view thereof;

Fig. 3 is a view similar to Fig. 1 showing a modification of the closure of the outer bag;

Fig. 4 is a side view of Fig. 3;

Fig. 5 is a plan view of a piece of transparent material having an identifying character;

Fig. 6 is a similar view of a modified material;

Fig. 7 is an edge view of the sheet of material shown in Fig. 6; and

Fig. 8 is an edge view of a further modification.

Referring to Figs. 1 and 2, there is shown in dotted outline a container 10, such as is usually employed for valuable liquid goods. The container is usually labeled with an identifying mark 11 whereby the purchaser recognizes the particular goods which he desires to purchase. It is very simple to obtain counterfeit labels and apply them to bottles of inferior goods. It is also a very simple matter to replace the goods with inferior goods even though a pilferproof cap is applied to the container, since the caps can be counterfeited and appled by the counterfeiter. In order to prevent such malpractices, I apply an outer

covering of transparent material formed into a bag 12 of such dimensions that the container is snugly received therein. The bags 12 may be formed by any usual method, such as by dipping a form into a liquid mass, or by forming a sheet into bags on a bag-making machine of any usual type. The bag is preferably made longer than the container by an amount sufficient to be engaged by a temporary holding means after the side walls have been tucked inward, as at 13, to provide gussets adjacent the top of the container. Thereafter a closure is formed in the bag closely adjacent the upper extremity of the container, preferably by means of a heat sealing unit, such as illustrated and described in my copending application above mentioned. The bag may of course be sealed by a moisture activated adhesive, or by a solvent acting upon the material or its coating. After the closure has been effected as at 14, or during the time of formation of the end closure the protruding excess 15 may be removed in any well known manner, or it may be folded down upon the top of the bag. It is now apparent that the inner dimensions of the bag are such that it cannot be reapplied to the container without there being absolute evidence of tampering.

The form of package illustrated in Figs. 3 and 4 is the same except that the side of the bag at 16 has been sealed as well as the top of the bag at 17, thereby providing a neater package.

In Fig. 5 there is illustrated a sheet of transparent material 20 from which the bags 12 may be made, or the sheet 20 may represent a portion of a bag 12 formed by dipping. The sheet is formed with identifying characteristics which are intended to be the exclusive mark of a single manufacturer. The peculiarity of the sheet is that a number of threads 21, or other opaque particles, are permanently embedded within the sheet. These threads may be varicolored and may be incorporated in a design, or may be loosely distributed throughout the sheet. It is apparent that a sheet may thus be formed which cannot be duplicated with ease by the ordinary counterfeiter, such a person usually not having at his command facilitates for manufacturing similar sheets, and the manufacture of such sheets now residing in the hands of a very few reliable companies.

Figs. 6 and 7 show a further type of identifying character which can be formed in the sheet during the process of manufacturing by means of an embossing roll or similar device. Fig. 8 shows a further form of sheet which can be made during the manufacturing process by means of an embossing roll, or otherwise. Each type of sheet may be appropriated to the exclusive use of a single manufacturer. Some materials, such as nitro-cellulose and cellulose acetate, will naturally tend to form a film of rough, uneven character, such as shown in Fig. 6 or 8, unless such formation is prevented by the skillful application of complicated processes. It is within the scope of my invention to allow a sheet to shrink into its natural form during the manufacture thereof, different materials assuming different forms so that a naturally shrunk sheet of one material will appear very different from a naturally shrunk sheet of another material.

All of the foregoing forms of sheets embody identifying characteristics whereby the product of a single manufacturer may be identified.

Other types of sheets and other forms of bags having other shapes of closures will be readily apparent to the skilled experts in various industries. I do not intend to be limited to the drawing herein except insofar as determined by the scope of the following claims which are to be broadly construed.

I claim:

1. A material of the class described comprising a sheet of substantially transparent flexible material having uniformly dispersed throughout the body thereof a plurality of threadlike particles, and a coating of rubber hydrochloride on at least one face of said sheet.

2. A material of the class described comprising a sheet of substantially transparent, non-thermoplastic flexible material having uniformly dispersed throughout the body thereof a plurality of threadlike particles and a coating of rubber hydrochloride on at least one face of said sheet.

3. A material for use in the packaging art comprising a sheet of flexible material having imbedded therein a plurality of threadlike particles, and a coating of rubber hydrochloride on at least one face of said sheet.

HARRY F. WATERS.