

June 20, 1950

C. NICOLLE

2,512,367

PACKAGE

Filed Jan. 21, 1946

2 Sheets-Sheet 1

Fig. 1

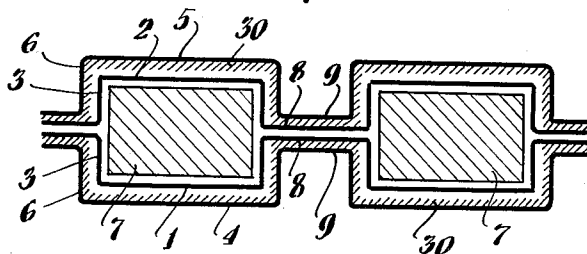


Fig. 2

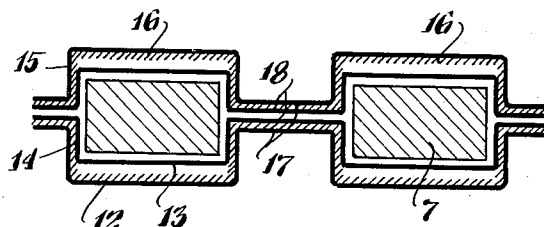


Fig. 3

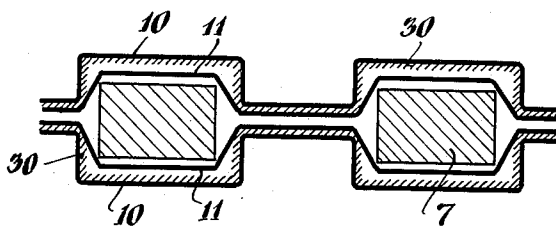
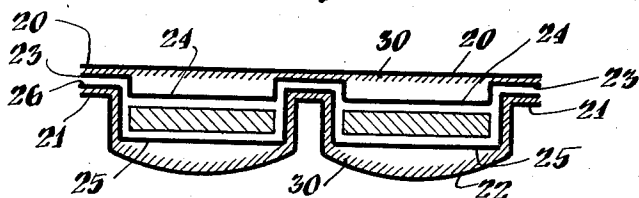


Fig. 4



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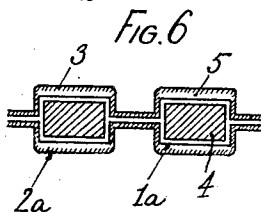
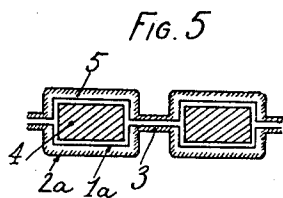
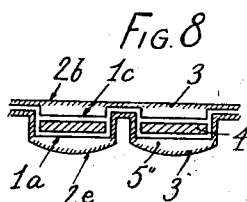
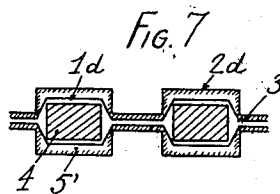
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,512,367

PACKAGE

Charles Nicolle, Gentilly, France

Application January 21, 1946, Serial No. 642,461
In France August 4, 1944Section 1, Public Law 690, August 8, 1946
Patent expires August 4, 1964

6 Claims. (Cl. 206-46)

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This invention relates to packages and more especially to that type of packages which lends itself to the preservation and exhibition of articles or products likely to deteriorate when stored in contact with the atmosphere. It is an object of this invention to improve packages of this kind in such manner as to enable them to protect the goods enclosed therein against deleterious atmospheric action.

The sheets of plastic or cellulose materials utilized up to the present for packaging in general, and more particularly those that lend themselves readily to conformation such as the sheets of cellulose acetate or equivalent plastic materials, employed for the preservation of perishable products, such as chemical, pharmaceutical preparations, food and other products, involves the disadvantage of not being moisture-proof and therefore being incapable of efficiently protecting the products they contain.

According to my invention, in order to obtain a moistureproof wrapper with sheets of cellulose acetate (or equivalent plastic materials) formed with cup-shaped depressions intended to contain the products to be packaged, two sheets of plastic material are formed with cup-shaped depressions and cemented together by means of a moistureproof binder with the cups of one sheet nested in the cups of the other sheet. This cementing together of the two sheets may be effected before or after the goods to be packaged have been deposited in the depressions, which may then be sealed by means of a pair of similarly cemented sheets, either plane or also formed with cup-shaped depressions.

The moistureproof binder employed may be varnish or other relatively inelastic material, since it is not required to conform to the contour of the packaged product.

Other characteristics and advantages of my present invention will moreover appear in the description which is about to follow and from the examination of the accompanying drawing on which have been represented diagrammatically, and merely as examples, various embodiments of my invention.

In the drawings, Figs. 1 to 4 are cross-sections of four packings of different configuration which embody my invention.

Referring to the drawing and first to Fig. 1, 1 and 2 are the bottoms of cup-shaped depressions formed in two superposed sheets of plastic material, for instance cellulose acetate. 3, 3 are the side walls of the depressions in these sheets. Two adjoining depressions form a re-

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ceptacle for an article to be packaged, as indicated at 7. This receptacle is nested in a similar, somewhat larger receptacle formed in two sheets of similar material, 4 and 5 being the bottom of the larger receptacle and 6, 6 being its side walls. 8, 8 are flat sections of the inner sheets which surround the inner receptacle, while 9, 9 are flat sections surrounding the outer receptacle. The side walls 6, 6 of the outer receptacle are materially higher, than the side walls, 3, 3 of the inner receptacle and consequently, while the flat portions surrounding the receptacles are closely adjoined, the bottoms 4, 5 of the outer receptacle are spaced from the bottoms 1, 2 and the side walls 6 of the outer from the side walls 3 of the inner receptacle, forming an all-around air cushion between them. A layer 30 of a moistureproof adhesive varnish covers the inner faces of the outer sheets 4 and 5 and cements them together with the inner sheets 1 and 2 at their contacting flat sections 8 and 9. The flat sections 8, 8 of the inner sheets are also cemented together by an adhesive which preferably also is moistureproof.

In the package shown in Fig. 2 only the cup bottoms 12, 13 of the outer and inner sheets are spaced from each other, while their side walls 14, 15 are in contact and connected by the glue layer 16 that also cements their flat portions 17, 18 together.

The package shown in Fig. 3 also has two outer and two inner sheets formed with depressions nested one in the other. However here the depressions formed in the inner sheets are not only smaller than those of the outer sheets, but also differ in cross section. While the outer depressions 10, 10 have a rectangular cross section, the inner ones 11 have a frusto-conical cross-section.

In the package of Fig. 4 one of the outer sheets 20 is flat, the other 21 is formed with large depressions having outwardly curved bottoms 22. Of the inner sheets the one 23 adjoining the flat outer sheet 20 is formed with low bulging portions 24 which project into the mouths of the cup-shaped depressions 25 of the other inner sheet 26.

In all the figures, as described with reference to Fig. 1, the moistureproof varnish layer 30 covers the inner surfaces of the outer sheets, but this is not a condition.

I wish it to be understood that I do not desire to be limited to the exact details shown and described, for obvious modifications will occur to a person skilled in the art.

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What is claimed is:

1. A moistureproof package comprising two pairs of sheets of non-moistureproof plastic packaging material, each pair comprising an inner sheet and an outer sheet, each inner sheet having convoluted portions separated by flat portions, certain of said portions being adapted to sealingly engage the corresponding portions of the other inner sheet, and a layer of moistureproof, relatively inelastic binder material between and coextensive with each pair of sheets, each said outer sheet having flat portions sealed to the flat portions of the adjacent inner sheet by said binder material and intervening portions spaced from the opposing convoluted portions of said adjacent inner sheet, and said layer of binder material being in spaced relation to one of said sheets of each pair in the portions thereof intermediate said flat portions.

2. A moistureproof package comprising two pairs of sheets of non-moistureproof plastic packaging material, each pair comprising an inner sheet and an outer sheet, each inner sheet having a central portion conforming closely to the contour of a product enclosed by the package and a flat peripheral portion extending entirely around said central portion and adapted to sealingly engage the flat peripheral portion of the other inner sheet, and a layer of moistureproof, relatively inelastic binder material between each pair of sheets, each said outer sheet having a flat peripheral portion sealed to the flat peripheral portion of the adjacent inner sheet by said binder material, and a central portion spaced from the central portion of the adjacent inner sheet, so that the moistureproof material between said central portions is not required to conform to the contour of the product.

3. A moistureproof package comprising two pairs of sheets of non-moistureproof plastic packaging material, each pair comprising an inner sheet and an outer sheet, each inner sheet having a central portion conforming closely to the contour of a product enclosed by the package and a flat peripheral portion extending entirely around said central portion and adapted to sealingly engage the flat peripheral portion of the other inner sheet, each outer sheet having a layer of moistureproof, relatively inelastic binder material on its surface adjacent the inner sheet, each said outer sheet having a flat peripheral portion sealed to the flat peripheral portion of the adjacent inner sheet by said binder material, and a central portion spaced from the central portion of the adjacent inner sheet so that the moistureproof material on said central portion of the outer sheet is not required to conform to the contour of the product.

4. A moistureproof package comprising two pairs of sheets of non-moistureproof plastic packaging material, each pair comprising an inner sheet and an outer sheet, at least one inner sheet having a central cup-shaped depression to receive a product enclosed by the package and a flat peripheral portion adapted to sealingly engage an opposing flat portion of the other inner sheet, and a layer of moistureproof, relatively inelastic binder material between each pair

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of sheets, each said outer sheet having a flat peripheral portion sealed to the flat peripheral portion of the adjacent inner sheet by said binder material, and each outer sheet having adjacent each depression in its associated inner sheet a central cup-shaped depression deeper than the depression in the adjacent inner sheet so that the bottoms of the depressions are spaced from each other and the moistureproof material between said bottoms is effective to protect said inner depression without conforming thereto.

5. A moistureproof package comprising two pairs of sheets of non-moistureproof plastic packaging material, each pair comprising an inner sheet and an outer sheet, each inner sheet having a central cup-shaped depression to receive a product and a flat peripheral portion adapted to sealingly engage an opposing flat peripheral portion of the other inner sheet, each outer sheet having a layer of moistureproof, relatively inelastic binder material on its surface adjacent the inner sheet, each said outer sheet having a flat peripheral portion sealed to the flat peripheral portion of the adjacent inner sheet by said binder material, and a central cup-shaped depression deeper and wider than the depression in the adjacent inner sheet so that the depressions are spaced from each other and the moistureproof material between the depressions is effective to protect the inner depression from moisture without conforming to its contour.

6. A moistureproof package comprising two pairs of sheets of non-moistureproof plastic packaging material, each pair comprising an inner sheet and an outer sheet, each inner sheet having a central portion conforming closely to the contour of a product enclosed by the package and a flat peripheral portion extending entirely around said central portion and adapted to sealingly engage the flat peripheral portion of the other inner sheet, each outer sheet having a layer of moistureproof varnish on its surface adjacent the inner sheet, each said outer sheet having a flat peripheral portion sealed to the flat peripheral portion of the adjacent inner sheet by said varnish, and a central portion spaced from the central portion of the adjacent inner sheet so that the varnish on said central portion of the outer sheet is not required to conform to the contour of the product.

CHARLES NICOLLE.

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