

Dec. 13, 1949

J. E. SNYDER

2,491,423

PACKAGE

Filed Sept. 20, 1947

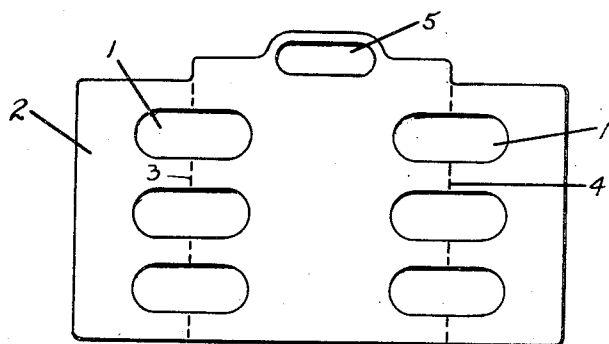


Fig. 1

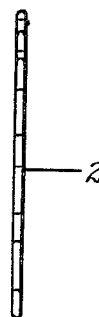


Fig. 2

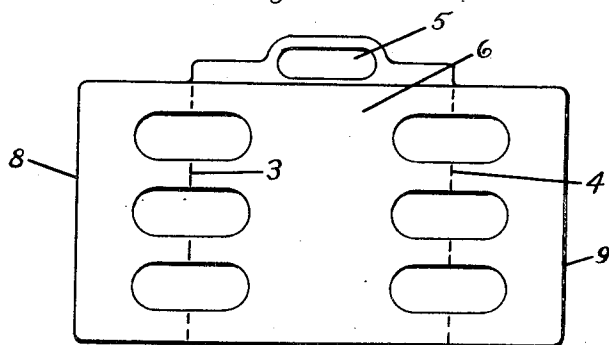


Fig. 3

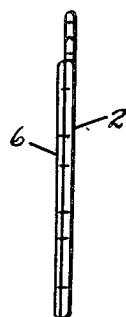


Fig. 4

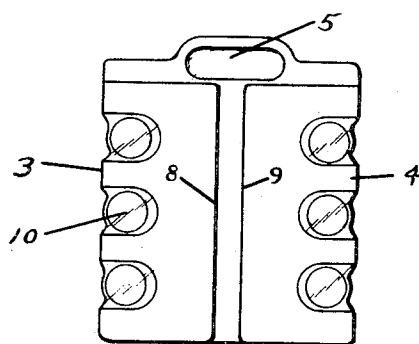


Fig. 5

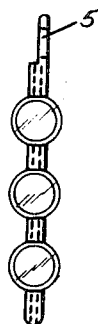


Fig. 6

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UNITED STATES PATENT OFFICE

2,491,423

PACKAGE

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Application September 20, 1947, Serial No. 775,271

6 Claims. (Cl. 99—171)

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This invention relates to an improved package for resiliently supporting a plurality of objects in openings in a sheet of cardboard or the like, the objects being individually enclosed in and supported by a thermo-stretchable film which is stretched over them.

In the preferred form of the invention a film which is both thermo-stretchable and thermo-sealable is employed. The cardboard or the like is covered with the film and folded over at the openings and in the referred form of the invention the cardboard is folded with the film on the inner surface so that the film-covered surfaces of the cardboard may be brought together and thermally sealed to one another around the objects to be packaged.

The invention is particularly adapted for the packaging of fruits and vegetables such as oranges, apples, heads of lettuce, etc. Although the materials packaged are preferably unitary objects, bunches of spinach, carrots, etc. may be packaged as units.

The film employed is preferably rubber hydrochloride film, although other thermo-stretchable film may be employed, and the film may be thermo-sealable as well as thermo-stretchable. Films which may be employed include those made of polyethylene, copolymer of vinyl chloride and vinylidene chloride, etc.

The invention will be further described in connection with the accompanying drawings, in which—

Fig. 1 is a flat view of the cardboard or the like which is employed;

Fig. 2 is an end view of the same;

Fig. 3 is a flat view of the film-covered cardboard;

Fig. 4 is an end view of the same;

Fig. 5 is a flat view of the finished package; and

Fig. 6 is an end view of the same.

In carrying out the invention, tiers of elongated holes are provided in the cardboard and the cardboard is folded at the centerline of each tier. Although only two tiers of holes are illustrated in the drawings, it is obvious that the number of rows may be more or less than that shown.

In the preferred form of the invention, elongated holes 1 are cut in the cardboard 2 and these holes are arranged in two rows, each spaced from the end of the cardboard about one-fourth of its width.

The cardboard is scored at 3 and 4, at about the centerline of each row of holes in order to facilitate folding. A handhole 5 is provided at

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the top of the cardboard to facilitate carrying the finished package.

Fig. 3 shows the same board with the front face covered by rubber hydrochloride film 6. The film is heated in any suitable manner. When the film has reached a temperature of about 190° C. (or any other temperature at which the film becomes stretchable, and preferably heat-sealable also), the objects to be packaged are placed on the film, one object being placed at each of the openings.

With the objects in place over the holes, the two ends of the cardboard 8 and 9 are folded inwardly along the scored lines 3 and 4. The film is stretched around the objects so that the objects are supported at the openings by the stretched film. The film adjoining that stretched around the objects is pressed together with sufficient force to seal the contacting surfaces. Thus, the finished package shown in Figs. 5 and 6 comprises a single cardboard sheet with a handhole 5 which supports a half dozen oranges or apples, etc., designated by the reference numeral 10.

Rubber hydrochloride film is preferred for such packaging operations because once it has been heated it retains its ability to be stretched and sealed for a considerable period after it has cooled to room temperature. Thus, if the film used is rubber hydrochloride film, after heating, it may be allowed to cool before completing the package, but with other films it will be necessary to complete the stretching while the film is still at the temperature required for stretching, and if the package is to be heat-sealed it must also be sealed while hot.

The package provides an easy means for the housewife to carry her purchases from the store to her home and furthermore, preserves the various objects in sealed pockets up to the time of use.

Many modifications in the preferred design shown in the drawings are possible. Thus, instead of heat-sealing contacting surfaces of the film together to hold the cardboard sheets to one another, the overlapping portions of the cardboard may be stapled or fastened in any suitable manner. In this event, the film may be on the outer surface of the cardboard instead of the inner surface as illustrated. Cardboard, chipboard, paperboard and the like are the equivalent of one another so far as their use as the carrier board of this invention is concerned.

What I claim is:

1. A package for fruits or vegetables formed of a stiff sheet with elongated openings therein so that a straight line passed therethrough

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would divide each of the openings along its longer sides into two substantially equal portions, thermo-stretchable film over each opening, the stiff sheet being doubled over at said line and held together thus with at least one fruit or vegetable at each opening supported by the film stretched thereover.

2. A package for fruits or vegetables, formed of a single piece of stiff sheet material, one surface of the sheet being covered with thermo-stretchable thermo-sealable film, the stiff sheet being formed with two vertical rows of openings, each of the openings being horizontally elongated, each end of the stiff sheet being folded inwardly upon itself at about the centerline of each row of openings, the film-covered surfaces of the stiff sheet being thus brought together, the film at each opening being stretched over at least one fruit or vegetable which is thus supported in the opening, and the contacting surfaces of the film between the openings being coalesced to one another.

3. A package for a plurality of fruits or vegetables, formed of a single piece of stiff sheet material with one surface covered with rubber hydrochloride film, two vertical rows of horizontal elongated openings in the stiff sheet, each spaced from opposite ends of the stiff sheet about one-fourth the width of the stiff sheet each end of the cardboard being doubled over at about the centerline of each row of openings to bring the film-covered portions of the stiff sheet together, portions of the film thus brought together being welded to one another, at least one fruit or vegetable being located at each of the openings and being covered by the film which is stretched over the fruit or vegetable so as to support it in the opening, and a handhole through the stiff sheet for convenience in carrying.

4. The method of packaging a plurality of fruits or vegetables in a stiff sheet with a row of elongated openings therein, one surface of the cardboard being covered with thermo-stretchable film, which comprises heating the film, and placing at least one fruit or vegetable thereon at each

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of the openings, and doubling the stiff sheet over along about the centerline of the openings and thus stretching the film over the fruits or vegetables, and then fastening the folded portions of the stiff sheet in this doubled-over relation.

5. The method of packaging a plurality of fruits or vegetables in a stiff sheet with two rows of elongated holes located at about equal distances from opposite ends of the sheet, one surface of the sheet being covered with rubber hydrochloride film, which comprises heating the film, then placing the fruits or vegetables on the film at the several openings, and then folding the ends of the stiff sheet inwardly along lines which are about the centerlines of the rows of openings and thus stretching the film over the fruits or vegetables and pressing the film-covered surfaces together to heat-seal them to one another.

6. The method of packaging which comprises placing fruit or vegetable to be packaged on thermo-stretchable film placed over an elongated opening in a stiff sheet, and then while the film is stretchable, doubling the stiff sheet over along a line which passes through the longer sides of the opening and thereby both stretching the film over the fruit or vegetable to be packaged and enclosing the fruit or vegetable in a pocket thus formed in the film.

JAMES E. SNYDER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,438,089	Carson	Mar. 16, 1948

OTHER REFERENCES

"Plastics World" March 1947, page 14, Article entitled "Hammock Fruit Packing."

"The ABC's of Pliofilm Packaging" published in the Goodyear News Service, pages 1 to 4, received in U. S. Patent Office, May 1, 1947.

Certificate of Correction

Patent No. 2,491,423

December 13, 1949

JAMES E. SNYDER

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows:

Column 3, lines 29 and 30, for the word "cardboard" read *stiff sheet*;

and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 25th day of July, A. D. 1950.

[SEAL]

THOMAS F. MURPHY,
Assistant Commissioner of Patents.