

Nov. 4, 1930.

M. KOPPELMAN

1,780,264

PACKING FOR FRAGILE ARTICLES

Filed July 16, 1926

2 Sheets-Sheet 1

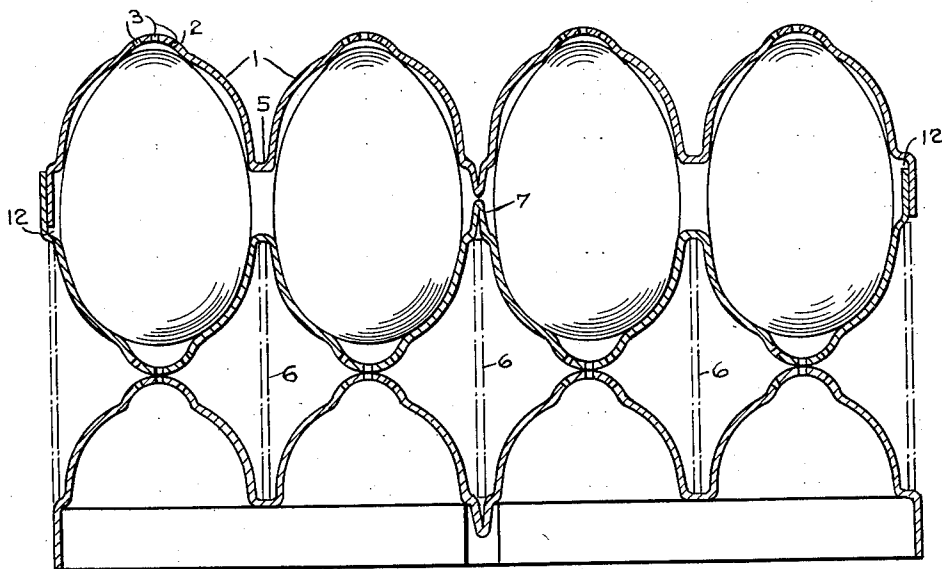


Fig. 1

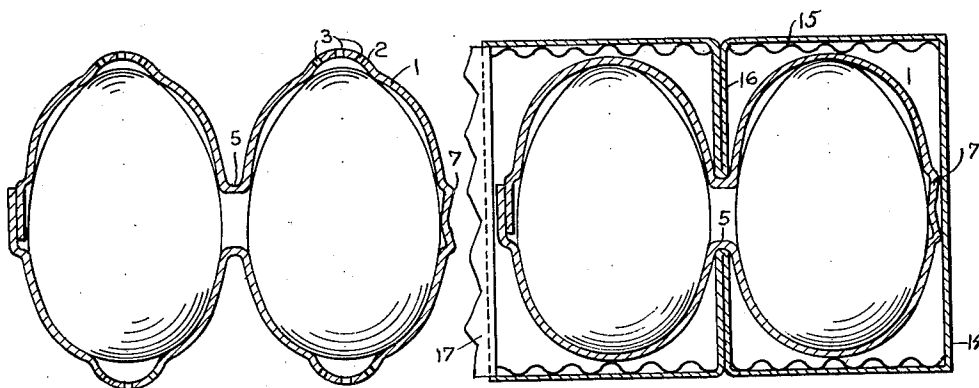


Fig. 2

Fig. 3

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2 Sheets-Sheet 2

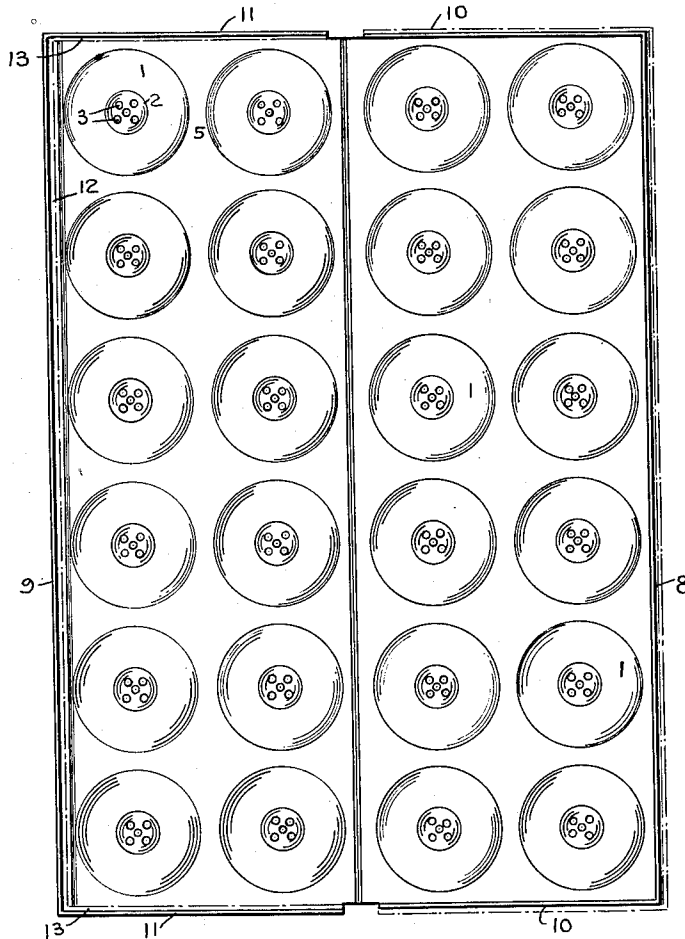


Fig. 4

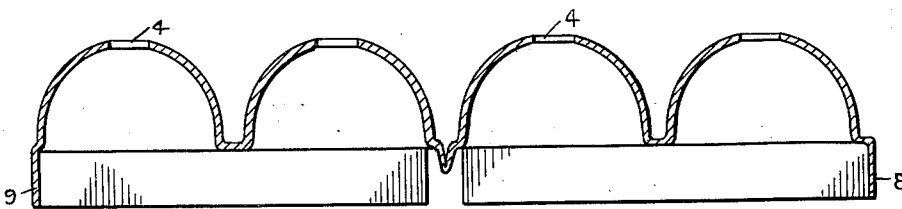


Fig. 5

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UNITED STATES PATENT OFFICE

MORRIS KOPPELMAN, OF BROOKLYN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO HOLED-TITE PACKING CORPORATION, A CORPORATION OF NEW YORK

PACKING FOR FRAGILE ARTICLES

Application filed July 16, 1926. Serial No. 122,777.

The improvements relate to packing and to boxes and cartons for eggs and other fragile articles and have for their objects, among others, the production of a packing and enclosure which will effectively hold, space and protect the said articles while being packed, transported, stored and dispensed and which can be made by the pulp sucking process, or otherwise, at small expense, packed in a small space and re-used.

The improvements are illustrated in the accompanying drawings, which show a specimen embodiment, and in which Figure 1 is a vertical, medial section of the article holders in closed position, with eggs therein; Figure 2 is a similar view showing one of the sheets of holders folded over and enclosing the eggs; Figure 3 is a like view to Figure 2 showing the said folded sheet with slightly modified holders inserted in a carton for transportation by mail or otherwise; Figure 4 is a top plan of one of the folding sheets of holders adapted to receive two dozen and to enclose one dozen articles; and Figure 5 is a vertical medial section on the scale of the Figures 1, 2 and 3 with the small protuberances at the apexes of the cup-like holding members omitted.

In the preferred form the cup-like holding members 1 are in form similar to those of Patent No. 1,510,625 of October 7, 1924, to me and another, and have small protuberances 2 at their apexes, which in the present case are provided with perforations 3 for ventilation. These are particularly useful when fruit is packed therein. The protuberances may be omitted however, as shown in Figure 3, and the members may have apertures 4 at their tops, as shown in Figure 5. The holding members 1 are preferably arranged in rows, and each one is adapted to hold one of the articles to be packed. In the illustrated embodiment each row consists of six holding members, and as there are four rows in each sheet, the sheets will hold twenty-four or two dozen articles. The number of rows and the number of holders in each row may be varied as desired.

Each holder is adapted to receive a portion of the article, and when a second sheet of

holders is placed over the first or bottom sheet with the holders registering, the articles will be substantially enclosed, and held isolated from one another, and protected on all sides against shocks and strains tending to injure them. To provide for this spacing the holders are separated by connecting portions 5, and stiff supporting strips 6 may be placed between alternate sheets so as to engage these portions edgewise and reinforce the packing vertically when it is used in a case or crate, and the articles are packed in layers or tiers.

Each sheet is also provided with an integral hinge 7 on which it may be folded over to form a complete enclosure when removed from the case or when used to pack the articles in small quantities, as for parcel post shipment or sale and delivery to the consumer. Each sheet is also provided with vertical flanges 8 and 9 along its side edges and other flanges 10 and 11 at its ends, the side flanges 8 being slightly nearer the hinge than the flanges 9 and the flanges 10 being inside the flanges 11, so that when the sheet is folded the flanges will fit inside each other and overlap to form a strong and secure closing edge around the package. All the parts described are preferably made integral and are formed in one operation by the well known pulp sucking or fibre felting process.

In order to strengthen the vertical side flanges and give the holders exactly the right spacing small ledges 12 are provided where they join the sheet, and between them and the nearest cup members. By the use of these, when one sheet is placed over the other, the inside flange, at the longitudinal edge of each sheet has its edge abutting against the ledge 12 of the other. The end flanges 10 also cooperate with end ledges 13 in the same manner.

When a limited number of articles is to be packed and shipped, and additional protection is required, a box or carton 14 receiving the holding cup packing is employed, and if desired the packing may be placed in large boxes or crates in these cartons. The casings may also be packed in such boxes or crates in the folded form as illustrated in Figure 2. This enables the vend-

or or other distributor to remove the articles from the case or crate in which they have been packed and shipped and dispense them without handling them individually or even touching them and also enables the dealer, inspector and purchaser to examine them while in the holders. It also makes it possible to seal up the articles in their original package, so that the consumer will be insured against substitution or interference of any kind with the article originally packed. Seals may be applied to the casings or to the carton, or both, or these packages may be provided with an adhesive at overlapping separable edges.

The carton has four sides and may be permanently closed at one end. It is made of a size to receive the desired number of holders snugly on all sides and when the protuberances 2 are not used should have a lining or cushion layer of corrugated paper 15, or excelsior or other shock-absorbing pads. Such paper or pads may also be used between layers arranged as shown in Figure 1, or the well-known "holed-tite" flats such as shown in United States Patent No. 1,429,207 of September 12, 1922, to me and another may be employed instead.

In two sides of the carton are formed longitudinal spacing and supporting ribs 16, by folding in the sheet material of which the sides of the box are made. These ribs extend toward each other from opposite sides of the box and into contact or approximately into contact with the connecting portions 5 of the upper and lower holder-carrying sheets, so that they tend to hold the said sheets and their contents in suspension in the box and to space them from the sides thereof. If desired, they may also have corrugations corresponding to the undulating contour of the said portions 5 so as to hold the packing against endwise movement.

The box 14 is provided with a tuck-in end flap 17 or other suitable closure to close the package after the holders have been passed into position inside.

I claim:

1. A packing for fragile articles comprising a sheet of fibrous material having article receiving recesses therein and a hinge upon which two sections of the sheet are adapted to be folded, and when folded thereon will lie in parallel position with their recesses registering and opposed to form article enclosing members, said hinge extending upright beyond the plane of the sheet and forming a supporting and spacing connection between the sections when folded, said sheet also having flanges turned at an angle thereto and positioned to overlap when the sections are folded.

2. A packing for fragile articles comprising a sheet of material having cup-like article receiving recesses therein arranged in

proximity to one another, a hinge upon which one portion of said sheet may be folded over on another positioned and arranged so that when folded the said recesses will be opposed and will form article enclosing cells, vertical flanges adjacent the outermost of said recesses arranged to overlap each other when said portions are folded on the hinge and form a vertical marginal closure, said flanges and hinge extending upright beyond the plane of the sheet and providing supporting members for said folded sheet portions.

3. A packing for fragile articles comprising a sheet of material having cup-like article receiving recesses therein arranged in proximity to one another, a hinge upon which one portion of said sheet may be folded over on another positioned and arranged so that when folded the said recesses will be opposed and will form article enclosing cells, vertical flanges adjacent the outermost of said recesses arranged to overlap each other when said portions are folded on the hinge and form a vertical closure, said flanges extending vertically beyond the plane of the sheet, said flanges being stepped laterally from the said recesses to space them therefrom and form a shoulder, the shoulder of one flange adapted to be engaged by the outer edge of the other to form a marginal stop and said flanges and hinge forming spacers to separate the opposed recesses and supports for the folded portions of the sheet with said recesses so spaced.

4. A packing for fragile articles comprising a series of cup-like articles receiving members united to form a sheet and having an upright hinge connection for folding them on one another with their concave sides opposed, upright marginal edges constructed and arranged to overlap when the sheet is folded and protuberances at the apexes of said receiving members having an opening therein.

Witness my hand this 12th day of July, 1926, at the city of New York, in the county and State of New York.

MORRIS KOPPELMAN.