

July 18, 1933.

M. KOPPELMAN

1,919,028

PACKING FOR FRAGILE ARTICLES

Filed Feb. 26, 1927

2 Sheets-Sheet 1

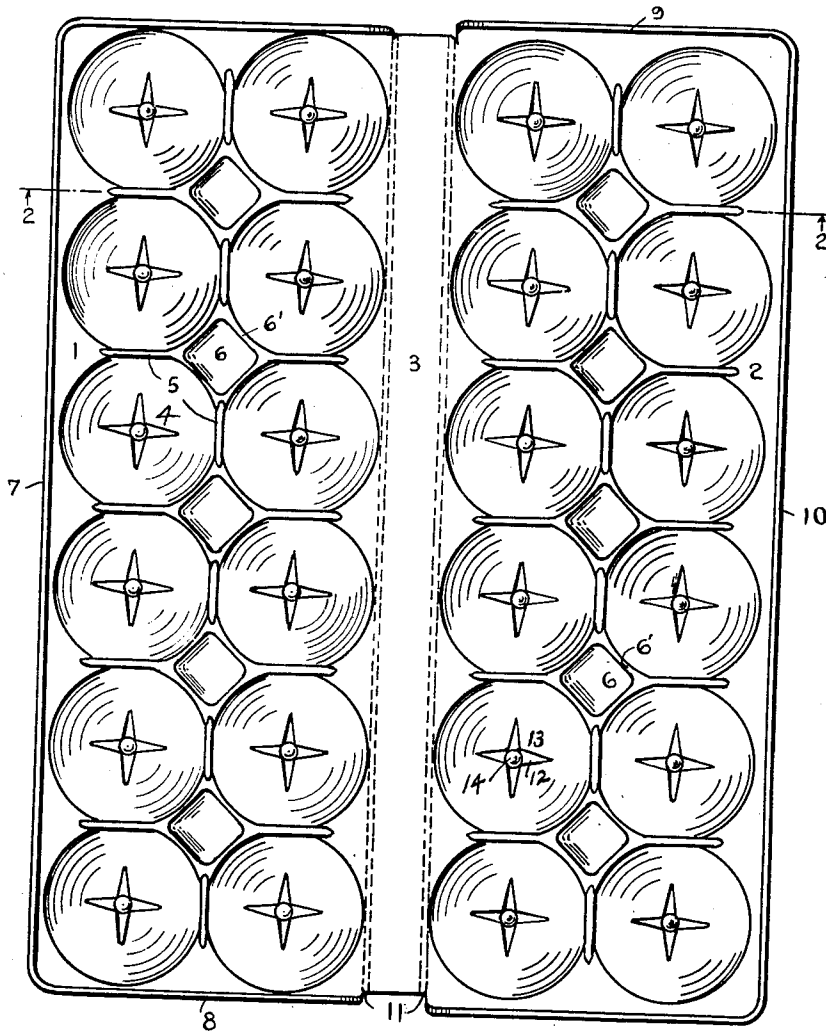


Fig. 1

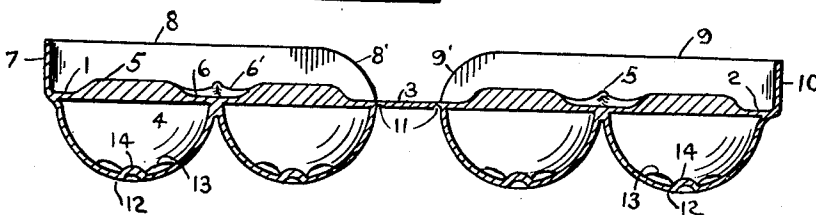


Fig. 2

Inventor
Morris Koppelman
By his Attorney
S. J. Cox.

July 18, 1933.

M. KOPPELMAN

1,919,028

PACKING FOR FRAGILE ARTICLES

Filed Feb. 26, 1927

2 Sheets-Sheet 2

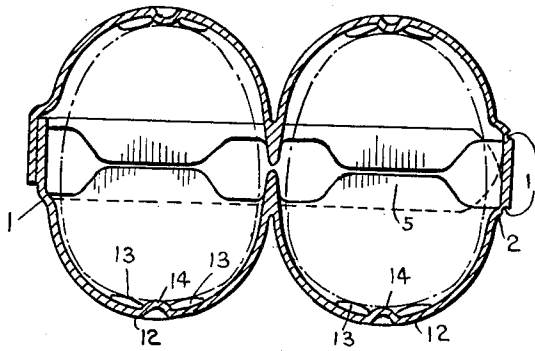


Fig-3

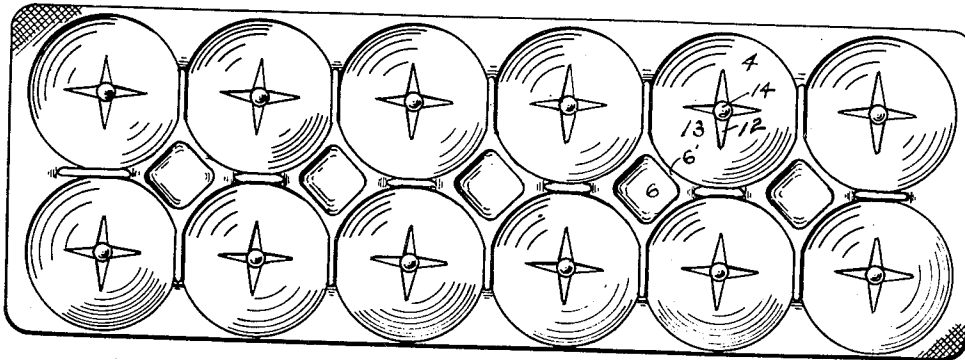


Fig-4

Inventor
Morris Koppelman
By his Attorney *S. J. Cox*

UNITED STATES PATENT OFFICE

MORRIS KOPPELMAN, OF BROOKLYN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO PACKING PRODUCTS CORPORATION, A CORPORATION OF DELAWARE

PACKING FOR FRAGILE ARTICLES

Application filed February 26, 1927. Serial No. 171,120.

The improvements relate to devices for packing eggs and other articles and to boxes or cartons for containing the same, and are in the nature of an improvement in the subject matter of copending application Serial No. 122,777, filed July 16, 1926. The present improvements have for their objects, among others, the provision of novel and effective means for protecting the eggs or other articles from injury due to contact with outside objects or with one another during the packing, transporting and vending of the same and also the provision of a carton or box for containing a limited number of such articles which can be employed for the packing of eggs in standard cases, without decreasing the capacity of the case, and also in other boxes or enclosures, and can be adjusted to form a complete box or carton for various purposes without the employment of an outside box or case.

The improvements are illustrated in the accompanying drawings, in which—

Fig. 1 is a plan of a box or carton embodying the improvements, in open position;

Fig. 2 is a vertical medial section of the same on the line 2—2 of Fig. 1;

Fig. 3 is a vertical section substantially on the same line as that of Fig. 2 of the carton in closed position; and

Fig. 4 is a plan of one of the sheets with holders forming a part of the carton, but with hinge members and closing edges omitted.

The carton consists essentially of two sheets of material 1 and 2 with a connecting portion 3, these three elements being preferably integral, and formed in one operation, preferably by the pulp sucking or felting process in which floating fibres are drawn by suction against a screen, it being one of the objects of the improvements to so construct the entire device that it can be thus formed complete in one operation. The cups or holders 4, the separating and protecting ribs 5, connecting portions 6 and edges or flanges 7, 8, 9 and 10 of the two sides of the carton are also preferably made integral with the other parts in one and the same operation, and this may be accomplished by so shaping the

foraminous die or forming sheet that the pulp will assume the form of the complete box when it is deposited thereon. Folding lines 11 may also be formed along the inner edge of each section in the same operation by introducing wires on the pulp side of the form, so as to reduce the thickness of the pulp sheet deposited along the same.

The dividing and protecting ribs 5 project above the upper edges of the cups or holders 4 and above the substantially horizontal portions 1, 2, 3, and 6, and separate the cups longitudinally and laterally. They are of greater thickness than the walls of the carton, and are substantially V-shaped, which may be the result of the crowding of the fibres into the narrow space between the folds of the form at that point. They thus form not only spacing and protecting ribs between the articles in the cups but form rigid connecting portions between the cups themselves which will prevent them from being easily deformed. They also will prevent the carton from being collapsed by coming in contact with each other when pressure is exerted and the carton is in closed or folded-over position.

The portions 6 between cups are boarded by small ribs or beads 6', which serve to connect the ribs 5, hold the articles in position and greatly strengthen and add to the rigidity of the carton. The portions 6 are preferably made slightly concave or arched, and this tends to add strength and rigidity.

The connecting or hinge portion 3 is separated from the two sections by the folding lines 11, so that when one section is folded over the other it forms the fourth side of the rim and makes a complete enclosure, the ends of this portion are not provided with flanges, so as to leave room for the flanges 9, 10, forming the rim of one section to pass over and overlap the flanges 7 and 8 forming the rim of the other flange. The inner edges of the flanges 8 and 9 are preferably curved as shown at 8', 9' so as to facilitate this telescoping operation.

At the bottom of each cup is provided a cushioning device in the form of two tapering ribs 12 crossing each other and extend-

ing downwardly from the bottom of the cup, and between these ribs slightly bulged portions 13, with a rounded upwardly extending part 14 at the intersection of the ribs.

5 The ribs 12 and bulged portions 13, merge in the smooth surface of the cup bottom a short distance from its extreme bottom, and together with the portions 14 form a cushion which will receive the extremity of the egg

10 or other article and the portions around its extremity and cushion it against any shock due to the dropping of the article into the cup or otherwise, at its ends. The formation is such also that the cushions have a slight

15 gripping effect which tends to prevent the article from moving around in the cup freely. The construction of the cushion is also such that it does not increase the depth of the cup, as the ribs are formed in effect by

20 forming the portions 13, and the portion 14 is an indentation at the intersection of the ribs 12. In this manner a cushion for both ends of the article is provided without increasing the depth of the cup, or the carton,

25 so that the cartons opened or closed, or the separate sheets (Fig. 4) may be used in a standard case, without undue crowding or reducing the egg holding capacity of the case. It will be understood that the exact

30 form of the parts embodying the present improvements is not essential, and that within the limits of equivalency they may be varied in form and arrangement without departing from the scope of the invention. It will also

35 be seen that the ribs 12 will rest upon any surface on which the packing is supported, and will space the cups when they are superimposed one upon another, back to back, and that, together with the bulged portions 13

40 and indentations 14, they will hold the articles out of contact with the supporting surfaces and out of contact with each other at their ends.

What I claim is:

- 45 1. In a packing for fragile articles, a series of cup-like receiving pockets, connecting portions uniting them at their upper parts, said pockets being contiguous to one another, and upstanding, separating and article protecting
- 50 members extending upwardly above the receiving portions of the pockets and their connecting portions, one of said members being interposed between and merging with each pocket and the next pocket.
- 55 2. In packing for fragile articles, a series of cup-like receiving pockets, connecting portions uniting them at their upper parts, said pockets being contiguous to one another, and upstanding, separating and article protecting
- 60 members extending upwardly above the receiving portions of the pockets and their

connecting portions, one of said members being interposed between and merging with each pocket and the next pocket, on a plurality of sides of the pockets.

3. In the packing specified in claim 1 all of 70 said parts being integral and formed in a continuous sheet of material.

4. In the combination of parts specified in claim 1 said protecting members being 75 formed by continuing upwardly the walls of adjacent pockets.

5. In the combination of parts specified in claim 2 the connecting portions intervening between a greater number than two of said 80 pockets being depressed below the upper edges of the pockets and having their edges forming with the said upper edges of the pockets, ribs separating them and the said pockets.

6. In the combination of parts specified in 85 claim 1, said separating and protecting members having a greater thickness than the thickness of the sheet forming the pockets, and forming relatively rigid barriers between pockets, and all of said parts being made in a 90 continuous piece of sheet material.

7. In a packing for fragile articles, a plurality of groups of cup-like receiving members, projections at the tops of said members, a connecting member wider than said projec- 95 tions between one of said groups and the next, said connecting member being at least as wide as two such projections when they are in co-operative position, said groups of receiving members and said connecting member being 100 made in one continuous piece of sheet material, and said piece of sheet material being provided with weak lines between the groups upon which they may be folded one upon another to form an enclosure for articles. 105

8. In a packing for fragile articles, series of cup-like receiving pockets, connecting portions uniting each series, said pockets being contiguous to one another, and upstanding, separating and article protecting members 110 extending above the receiving portions of the pockets and their connecting portions, one of said members interposing and merging with each pocket.

9. In a packing for fragile articles, series 115 of cup-like receiving pockets, connecting portions uniting each series, said pockets being contiguous to one another, and upstanding, separating and article protecting members extending above the receiving portions 120 of the pockets and their connecting portions, one of said members being interposed between and merging with each pocket and the next pocket of a series.

MORRIS KOPPELMAN.