

Dec. 17, 1968

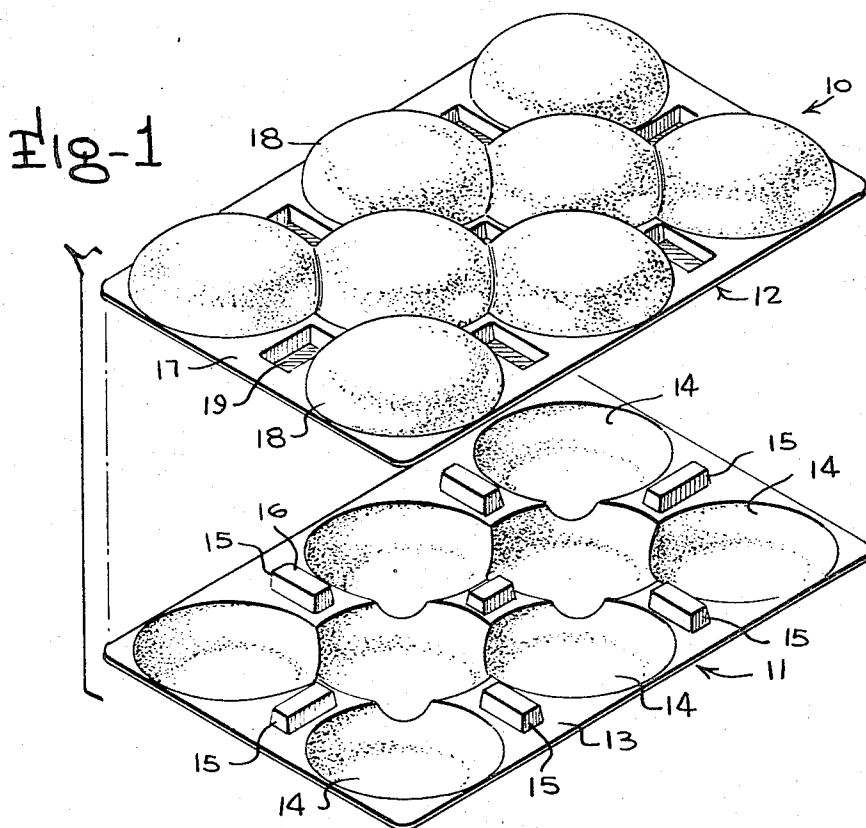
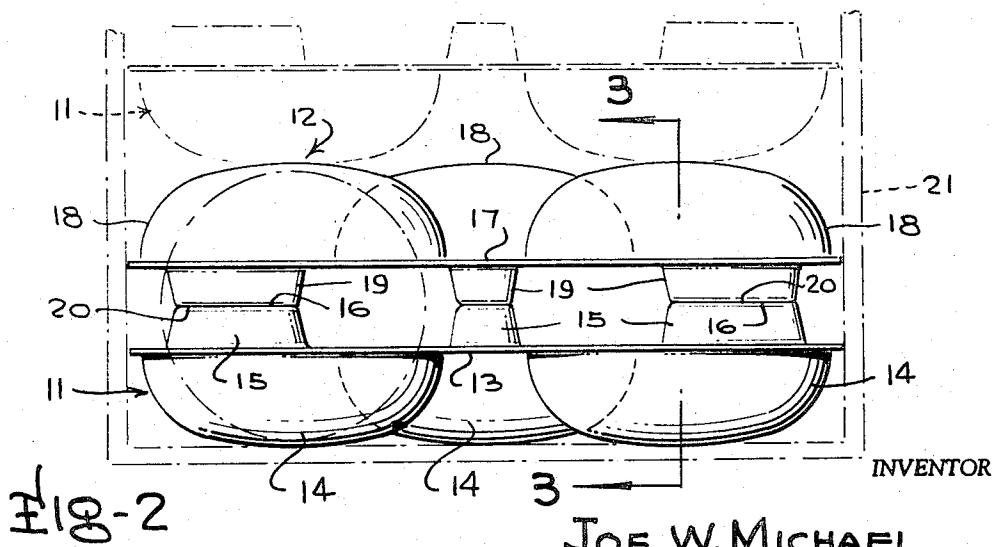
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3,416,690

PACKING TRAY

Filed Jan. 8, 1967

2 Sheets-Sheet 1



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Dec. 17, 1968

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PACKING TRAY

Filed Jan. 5, 1967

2 Sheets-Sheet 2

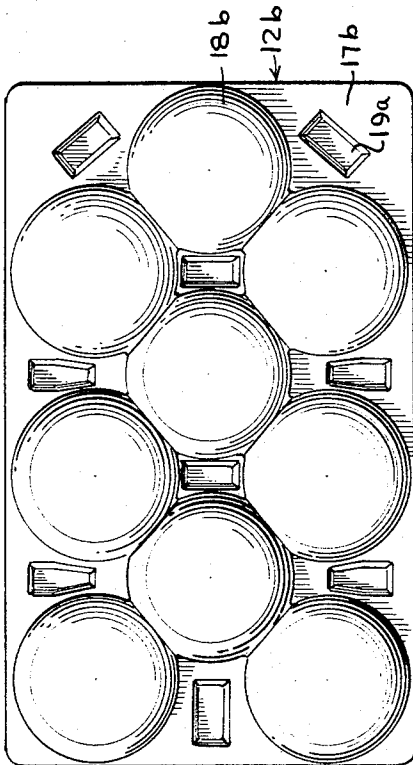


FIG-5

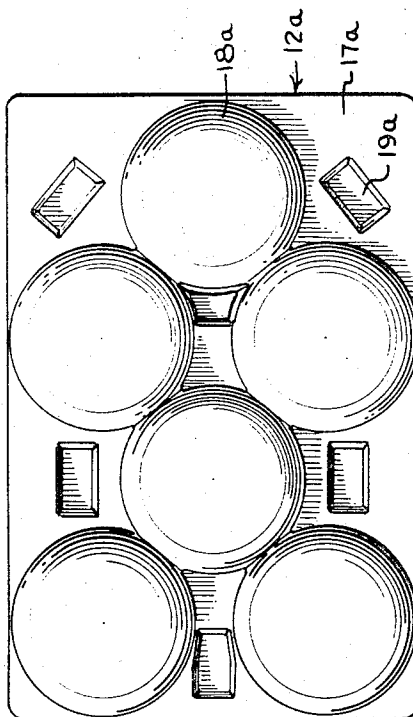


FIG-4

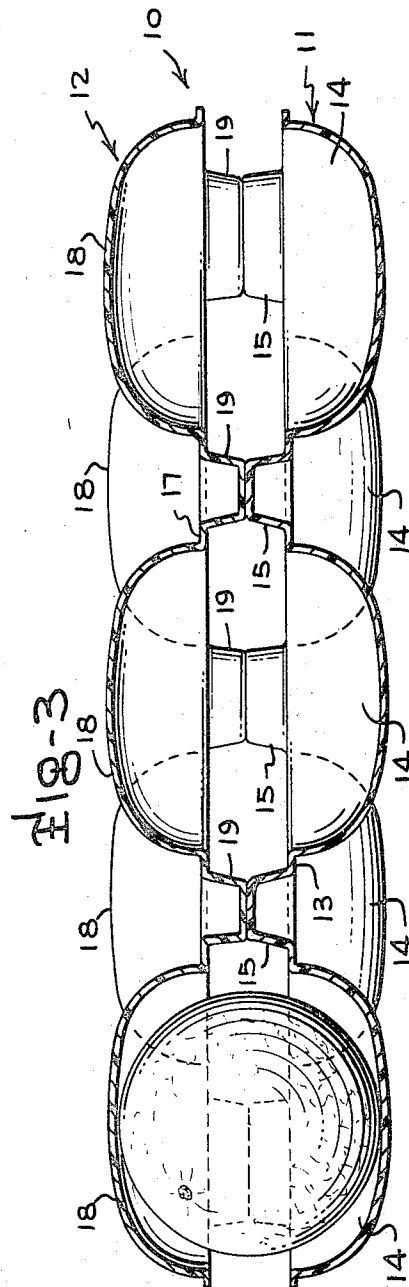


FIG-3

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PACKING TRAY

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Filed Jan. 5, 1967, Ser. No. 607,524

1 Claim. (Cl. 217—26.5)

ABSTRACT OF THE DISCLOSURE

A packing tray comprising a lower section including a base portion having a plurality of depressions opening upwardly for receiving and supporting objects to be held in the tray, said base portion having a plurality of upwardly projecting load bearing elements, an upper section including a base portion adapted to overlie the lower section having a plurality of depressions registerable with the depressions in the lower section when the sections are disposed in overlying relation whereby the depressions in the upper section open downwardly for receiving and forming a cover over the objects supported in the lower section, the second section having a plurality of depending elements registerable with and engageable in seating relation on the load bearing elements when the sections are disposed in overlying relation, the bottom walls of the depressions in each section being substantially flattened to facilitate stacking of a plurality of trays whereby when a plurality of such trays are stacked, the weight of the upper trays is supported entirely by the lower trays thus preventing injury to any of the objects carried in the trays.

This invention relates to a packing tray, and more particularly to a tray for packing delicate or fragile articles such as fruit, vegetables, eggs and the like.

In the prior art, there are many types of trays which are intended for use in packing delicate or fragile foodstuff products such as fruits, vegetables, eggs and the like for storage or shipping purposes. Many of such prior art packing trays, however, have been found not to be entirely satisfactory in construction insofar as their intended use is concerned. Often, such packing trays are apt to engage and crush the products carried thereon during handling, and particularly during stacking of the trays which invariably is necessary during handling. This occurrence results in damage to the products being carried, which impairs their quality even to the extent where a portion of a shipment must be discarded because of poor quality. In addition, it has been found that in many conventional packing trays for foodstuffs, in which the product is intended to be protected from crushing, the product is enclosed by the packing tray components, thus preventing the circulation of air in contact with the product during storage or shipping.

Accordingly, it is the principal object of the present invention to provide a novel packing tray.

Another object of the present invention is to provide a novel packing tray suitable for carrying delicate or fragile foodstuff products such as fruit, vegetables, eggs and the like.

A further object of the present invention is to provide an improved packing tray which is adapted to be stacked in tiers without causing damage to the foodstuff products carried therein.

A still further object of the present invention is to provide a novel packing tray for carrying foodstuff products which are adapted to prevent any load applied to the tray to be transmitted to the product thereby causing damage thereto.

Another object of the present invention is to provide a novel packing tray in which the tray components do not entirely enclose the products being carried, thereby per-

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mitting circulation of air between the products being carried during storage and shipping thereof.

A further object of the present invention is to provide a novel packing tray for foodstuff products, in which each individual article is segregated from the other articles being carried by the packing trays.

A still further object of the present invention is to provide an improved packing tray for foodstuff products, which is simple in construction and inexpensive to manufacture.

Other objects and advantages of the present invention will become more apparent to those persons skilled in the art, from the following description taken in conjunction with the accompanying drawings, wherein:

FIGURE 1 is a perspective view of an embodiment of the invention, illustrating the components thereof in exploded relation;

FIGURE 2 is an enlarged end elevational view of the embodiment shown in FIGURE 1, illustrating the components thereof in their assembled position;

FIGURE 3 is a cross-sectional view taken along line 3—3 in FIGURE 2;

FIGURE 4 is a top plan view of a modification of the embodiment illustrated in FIGURES 1 through 3; and

FIGURE 5 is a top plan view of another modification of the embodiment illustrated in FIGURES 1 through 3.

Briefly described, the present invention relates to a packing tray generally comprising upper and lower sections, the lower section including a base portion having a plurality of depressions for receiving and supporting objects to be held in the tray, the base portion having a plurality of upwardly projecting load bearing elements, the upper section including a base portion adapted to overlie the lower base portion having a plurality of depressions registerable with the depressions in the lower base portion when the upper and lower base portions are disposed in overlying relation, and the upper base portion having a plurality of depending elements registerable with and engageable in seating relation on the load bearing elements of the upper section when the upper and lower base portions are disposed in overlying relation.

Preferably, the registrable depressions in the upper and lower base portions are disposed in staggered rows, the upwardly projecting load bearing elements and the depending elements have coplanar engaging surfaces, and the base portions are planar and disposed in spaced relation when the upper and lower sections are positioned in overlying relation.

Referring to the drawings, there is illustrated an embodiment of the invention in FIGURES 1 through 3. The embodiment comprises a packing tray 10, including a lower section 11 and a cooperating or mating upper section 12. The lower section 11 consists of a substantially rectangular shaped planar base portion 13, having a plurality of depressions or pockets 14 arranged in staggered rows. As best seen in FIGURES 2 and 3, the bottom wall portions of the depressions 14 are substantially flattened and the depressions are adapted to receive and support individual articles, as illustrated in FIGURE 3. The base portion 13 also is provided with a plurality of upwardly projecting load bearing elements 15, which are disposed between the depressions 14. Each of the load bearing elements 15 is provided with a planar seating surface 16.

The upper section 12 is constructed similar to the lower section 11, and includes a substantially rectangular shaped planar base portion 17 which is adapted to overlie the lower base portion 13 in spaced relation when the upper and lower sections 11 and 12 are in their assembled position. The upper base portion 17 is provided with a plurality of depressions 18, which are arranged in staggered rows and are registerable with the depressions 14 in the

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lower base portion 13 when the upper and lower sections 11 and 12 are in the assembled position. The upper base portion 17 further is provided with a plurality of depending elements 19, which are disposed between the depressions 18, and registrable with the upwardly projecting load bearing elements 15 on the lower base portion 13. Each of the depending elements 19 is provided with a planar surface 20, which engages a registrable seating surface 16 on an upwardly projecting load bearing element 15 in seating relation when the upper and lower sections 11 and 12 are assembled. The configuration of the engageable surfaces 16 and 19 are substantially similar. Also, the bottom wall portion of each of the depressions is substantially flattened, as best illustrated in FIGURES 2 and 3.

In the use of the packing tray illustrated in FIGURES 1 through 3, the products to be packed are first placed in the depressions 14 of the lower tray section 11. The upper tray section 12 is then placed on the lower tray section 11, so that the depending elements 19 are seated on the upwardly projecting load bearing elements 15, the upper base portion 17 overlies the lower base portion 13 in spaced relation, and the upper portions of the products positioned in the depressions 14 are received in the upper depressions 18.

With a tray thus assembled, it may be stacked in a crate 21, as illustrated in FIGURE 2, without fear of crushing the articles carried in each of the trays. It will be appreciated that with the construction of the trays as described, the substantially flattened bottom walls of the depressions 14 and 18 facilitate the stacking of the trays and the load applied on each packing tray is transmitted from the upper tray section 12 to the lower tray section 11, through the depending elements 19 seated on the load bearing elements 15. It further will be seen that with such a tray construction, no compressive load is applied to the products carried within the trays and such products will be exposed to permit circulation of air therebetween.

The combined height of the upwardly projecting load bearing elements 15 and the depending elements 19 is made sufficiently large to prevent any contact of the bottom wall of the upper depressions 18 from engaging and transmitting any compressive load to the products carried by the packing trays.

FIGURES 4 and 5 illustrate various modifications of the embodiment illustrated in FIGURES 1 through 3. The modified embodiments are constructed similar to the embodiment illustrated in FIGURES 1 through 3, but are provided with a slightly different arrangement of the depressions and load transmitting elements.

The embodiments of the invention as described, can be constructed of any suitable material and by means of any adequate method. It is preferred, however, that the components of the packing trays be constructed of a sufficiently rigid material to prevent the collapse of the trays. It

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furthermore is preferred that the upper and lower tray sections be constructed either by stamping or molding.

From the foregoing detailed description it will be evident that there are a number of changes, adaptations and modifications of the present invention which come within the province of those skilled in the art. However, it is intended that all such variations not departing from the spirit of the invention be considered as within the scope thereof as limited solely by the appended claims.

What I claim is:

1. A packing tray comprising upper and lower cooperating sections constructed of a rigid material, said lower section including a base portion having a plurality of depressions disposed in staggered rows, opening upwardly for receiving and supporting objects to be held in the tray, the base portion of said lower section having a plurality of upwardly projecting load bearing elements, said upper section including a base portion adapted to overlie the base portion of said lower section, having a plurality of depressions registerable with the depressions in the base portion of said lower section when said sections are disposed in overlying relation whereby the depressions in the base portion of said upper section open downwardly for receiving and forming a cover for the objects supported in the depressions in the base portion of said lower section, the base portion of said upper section having a plurality of depending elements registerable and engageable in seating relation with said load bearing elements when said sections are disposed in overlying relation, said upwardly projecting load bearing elements and said depending elements having coplanar engageable surfaces and a sufficient combined height to space the opposed surfaces of said depressions sufficiently apart so as to prevent any load being applied on said objects disposed in said depressions and to maintain said base portions in spaced relation when said upper and lower sections are positioned together in overlying relation and a load is applied to the upper section, and the bottom walls of said depressions being substantially flattened to facilitate stacking of a plurality of trays.

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U.S. Cl. X.R.

229—2.5; 206—65