Feb. 20, 1923. 1,445,774.

M. KOPPELMAN.

PACKAGE AND PACKAGING METHOD.

FILED OCT. 25, 1921.

Fig. 1.

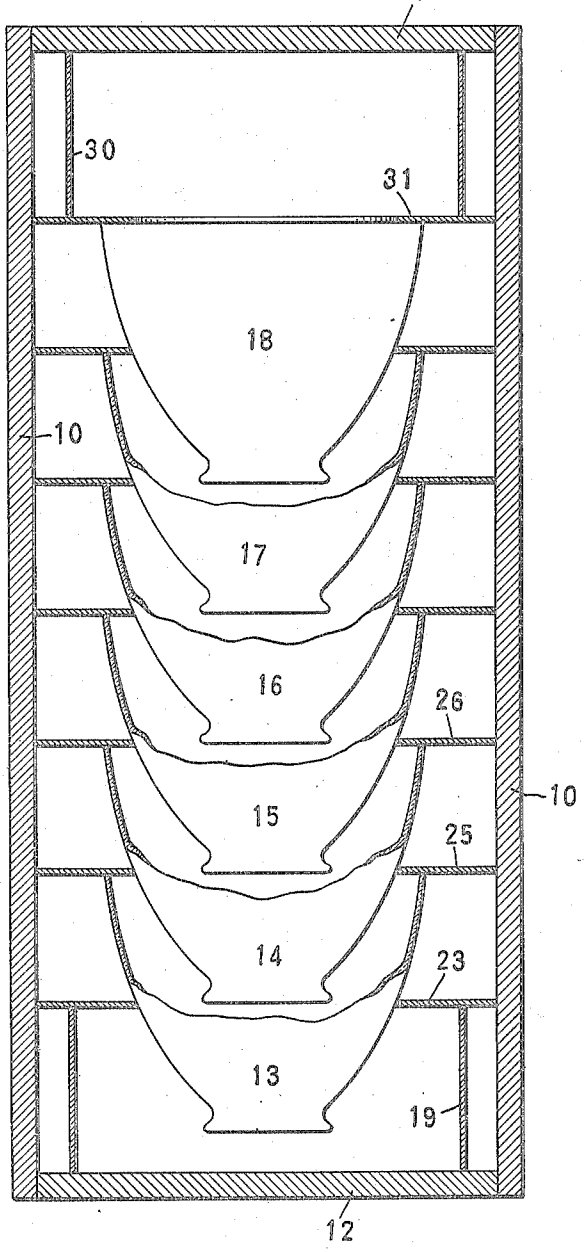


Fig. 2.

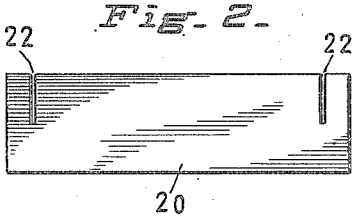


Fig. 3.

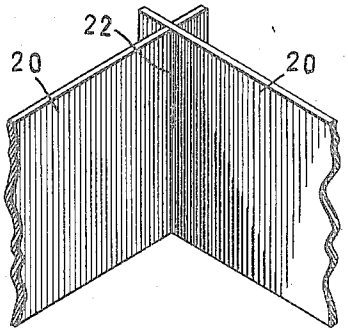
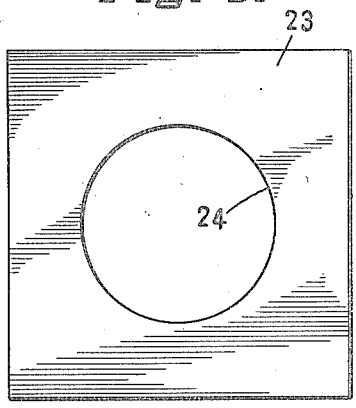


Fig. 4.



Morris Koppelman INVENTOR

BY

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Patented Feb. 20, 1923. 1,445,774

UNITED STATES PATENT OFFICE.

MORRIS KOPPELMAN, OF BROOKLYN, NEW YORK, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO HOLED TITE EGG PACKING CORPORATION, A CORPORATION OF DELAWARE.

PACKAGE AND PACKAGING METHOD.

Application filed October 25, 1921. Serial No. 510,247.

To all whom it may concern:

Be it known that I, MORRIS KOPPELMAN, a citizen of the United States, residing at the borough of Brooklyn, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Packages and Packaging Methods, of which the following is a specification.

This invention relates to packing devices to facilitate the shipment of a plurality of fragile articles within a single container. More particularly, the invention is designed for use in shipping a plurality of articles which are of such shape that they may be "nested" one within the other. In shipping fragile articles which are placed one within the other it has heretofore been necessary to provide an intermediate layer of straw or similar material between adjacent articles to absorb shocks incident to shipping. A great deal of time and material was thus necessitated, and when the package arrived at its destination a great amount of waste material was strewn about in unpacking. It is one object of this invention to obviate the necessity of an intermediate layer of shock-absorbing material between adjacent articles.

Another object of this invention is the provision of means for supporting each of a nest of articles, wherein the articles themselves serve to support the supporting means of the article above.

Another object of this invention is the provision of means for keeping the articles out of contact with any of the walls of the container.

A further object is the provision of means for preventing movement of any of the articles within the container when fully packed.

Other objects and advantages will hereinafter appear.

In the accompanying drawings:

Fig. 1 is a section through the container showing the articles positioned therein ready for shipping.

Fig. 2 is a detail of one of the end-supporting members.

Fig. 3 is another detail of one of the end-supporting members.

Fig. 4 is a plan view of one of the article-supporting members, which serve also to position the members in the container.

Referring to the drawings, there is shown a container having side-walls 10, a top wall 11, and a bottom wall 12. Within this container is positioned for shipping a nest of articles 13 to 18 inclusive. For supporting the lowermost article 13 out of contact with the bottom wall 12, there is provided a member 19 composed of vertical strips 20 positioned near the walls of the container. The member 19 may be formed of any number of strips 20, but is here shown as comprising four strips joined near their ends preferably by saddle-joints (see Fig. 3) formed by cutting downwardly into one strip to form slots 22, and cutting upwardly into the adjoining strips, in a well-known manner. Upon member 19 is mounted a support or carrier 23 (see Fig. 4) which may be of suitable material such as cardboard, and having an opening 24 therein large enough to permit the lower end of article 13 to project therethrough to a depth less than that of member 19 so that article 13 is held out of contact with the bottom of the container. The carrier 23 is of substantially the same inside dimensions as the container and serves to hold article 13 out of contact with the side walls of the container as well as the bottom wall.

A nest is usually formed of articles which are of gradually increasing lateral dimensions from the bottom to the top so that they may be supported at a point somewhere between the bottom and top in a support having an opening whose dimensions are less than the dimensions of the large end of the article but greater than those of the small end. In the present case the articles are shown as round, the circumference gradually increasing from bottom to top. The top of article 13 therefore extends above the top of carrier 23. The present invention makes use of this fact by utilizing the upper edge of article 13 as the supporting means for the next support or carrier 25. The opening 24 in carrier 25 is concentric with the opening in the top of article 13 and is smaller, so that the lower end of article 14 extends into article 13 but is out of contact therewith. The top of article 14 extends above the carrier 25 and may be utilized to carry the next support or carrier 26 for supporting article 15. In this manner the container is filled to within a short distance of the top, the articles being held out of contact with the bottom and side walls of the container, and each article

serving as a support for the carrier of the article above it. To hold the top article 18 out of contact with the top of the container, as well as to prevent movement of said article, the space between the top of article 18 and the top of the container is filled by a member 30 composed of strips similar to strips 20 and similarly joined, said member resting upon the top support 31 carried by the top article 18.

When the top wall 11 is applied, all of the parts within the container are clamped firmly in position, the nest of articles being held out of contact with the top, bottom, and side walls of the container, and each article being held out of contact with adjacent articles and assisting in supporting the article above it.

The above description relates to the preferred form of my invention, but variations may be resorted to within the scope of the following claims:

I claim:

1. The method of shipping a nest of similar articles, consisting in providing a carrier for each article, supporting the carrier for the lowermost article upon a base, and supporting the carriers for each of the other articles upon the article below it, the lines of contact of each carrier with the engaged articles being spaced apart to provide a resilient supporting portion of the carrier for the uppermost of the two engaged articles.

2. The method of packing a nest of similar articles in a container, consisting in providing a carrier for each article which holds said article out of contact with the side walls of the container, supporting the carrier for the lowermost article upon the base of the container and out of contact therewith, and supporting the carrier of each of the other articles upon the article below it, the lines of contact of each carrier with the engaged articles being spaced apart to provide a resilient supporting portion of the carrier for the uppermost of the two engaged articles.

3. The method of packing a nest of similar articles in a container, consisting in providing a carrier for each article, which holds said article out of contact with the side walls of said container, supporting the carrier for the lowermost article upon the base of the container and out of contact therewith, supporting the carrier of each of the other articles upon the article below it, maintaining the uppermost article spaced from the top wall of the container, and providing a filler-member for this space to prevent movement of the uppermost article.

4. A container for shipping a nest of similar articles comprising a carrier for holding each article out of contact with the sides of the container, means for supporting the carrier of the lowermost article on the base of said container, the carrier of each of the other articles being supported upon the article below, the lines of contact of each carrier with the engaged articles being spaced apart to provide a resilient supporting portion of the carrier for the uppermost of the two engaged articles.

5. A container for shipping a nest of similar articles comprising a carrier for holding each article out of contact with the sides of the container, means for supporting the carrier of the lowermost article on the base of said container and for holding said lowermost article out of contact with said said base, the carrier of each of the other articles being supported upon the article below, the lines of contact of each carrier with the engaged articles being spaced apart to provide a resilient supporting portion of the carrier for the uppermost of the two engaged articles.

6. A container for shipping a nest of similar articles comprising a carrier for holding each of said articles out of contact with the sides of the container, means for supporting the carrier of the lowermost article on the base of said container and for holding said lowermost article out of contact with said base, the carrier of each of the other articles being supported upon the article below, and means for holding the uppermost article out of contact with the top of the container and for preventing movement of said uppermost article.

7. Means for supporting out of contact with one another a nest of similar articles, said articles increasing gradually in dimension from the bottom upwardly and having openings at the top so that the bottom of each article may fit into the top of the article below it, said means comprising a carrier for each article supported on the article directly beneath, the lowermost article being supported upon a base, said carriers having openings smaller than the openings in the tops of the articles and positioned substantially concentrically with respect to the openings in said articles, to hold the lower end of each article spaced from the article below it, the lines of contact of each carrier with the engaged articles being spaced apart to provide a resilient supporting portion of the carrier for the uppermost of the two engaged articles.

8. A container for shipping a nest of similar articles open at the top, said container comprising carriers for said articles, said carriers having openings, said articles increasing in dimension from the bottom upwardly, said openings being large enough to permit the lower portion of each article to project therethrough, said carriers holding said articles out of contact with the sides of the container, a member for supporting the carrier of the lowermost article upon the base of the container but out of contact

therewith, the carriers of each of the other articles being supported upon the article below, each of said carriers having an opening substantially concentric with the openings in the tops of the articles, so that the portion of each article above the lowermost which projects below its carrier extends into, but out of contact with, the article below it, the lines of contact of each carrier with the engaged articles being spaced apart to provide a resilient supporting portion of the carrier for the uppermost of the two engaged articles.

9. A container for shipping a nest of similar articles comprising carriers for said articles, said carriers having openings, said articles increasing in dimension from the bottom upwardly and having openings in the tops thereof, the openings in said carriers being large enough to permit the lower portion of each article to project therethrough, said carriers holding said articles out of contact with the sides of the container, a member for supporting the carrier of the lowermost article upon the base of the container but out of contact therewith, the carriers of each of the other articles being supported upon the article below, each of said carriers having an opening substantially concentric with the openings in the tops of the articles, so that the portion of each article above the lowermost which projects below its carrier extends into, but out of contact with, the article below it, there being a space between the uppermost article and the top of the container, a carrier mounted upon the uppermost article, and a member mounted upon said last-named carrier and extending to the top of said container for filling said space and preventing movement of said uppermost article.

10. A packing element for bowl-shaped articles consisting of a resilient plate having an opening therein of a size to receive an intermediate portion of the article at points spaced from the flaring end thereof, whereby the edge of the opening will be spaced radially inward from the line of engagement with an article below to provide an annular resilient portion of the supporting plate between an article seated in the opening and an article below on the flaring edge of which the supporting plate rests.

In testimony whereof I affix my signature.

MORRIS KOPPELMAN.