Aug. 29, 1967 A. S. CLAY 3,338,501

CONTAINER WITH ADJUSTABLE INNER PACKING

Filed March 2, 1966

Fig 1

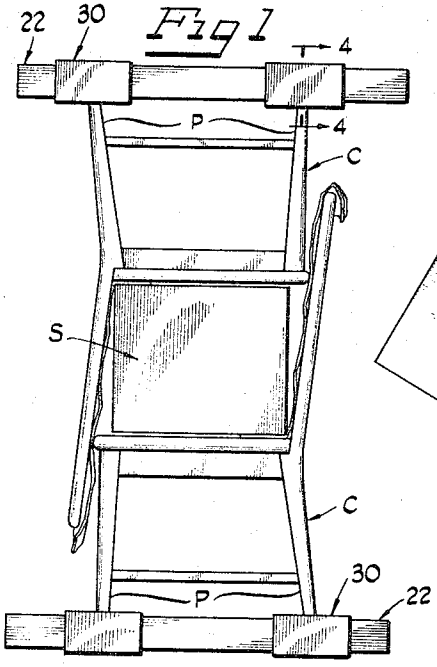



Fig 2

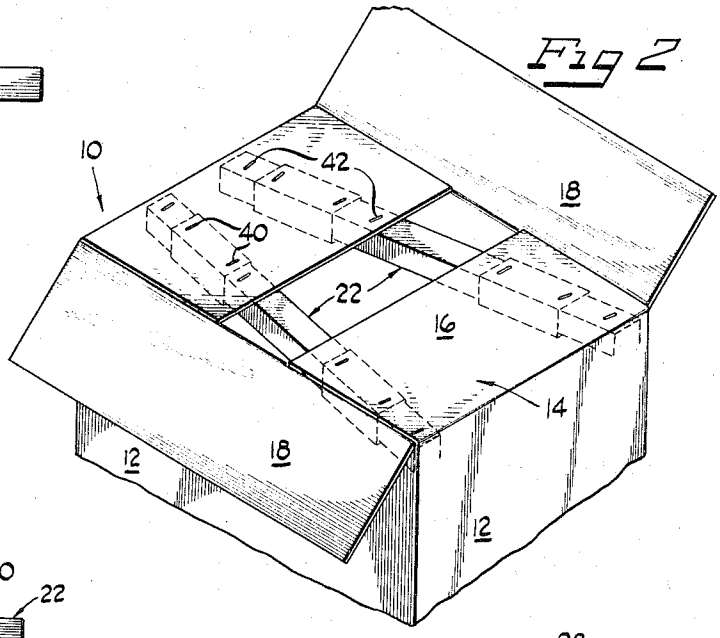



Fig 4

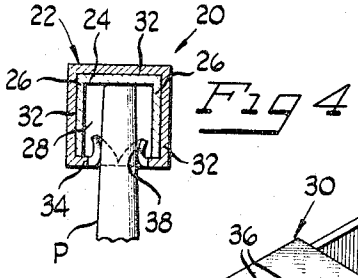
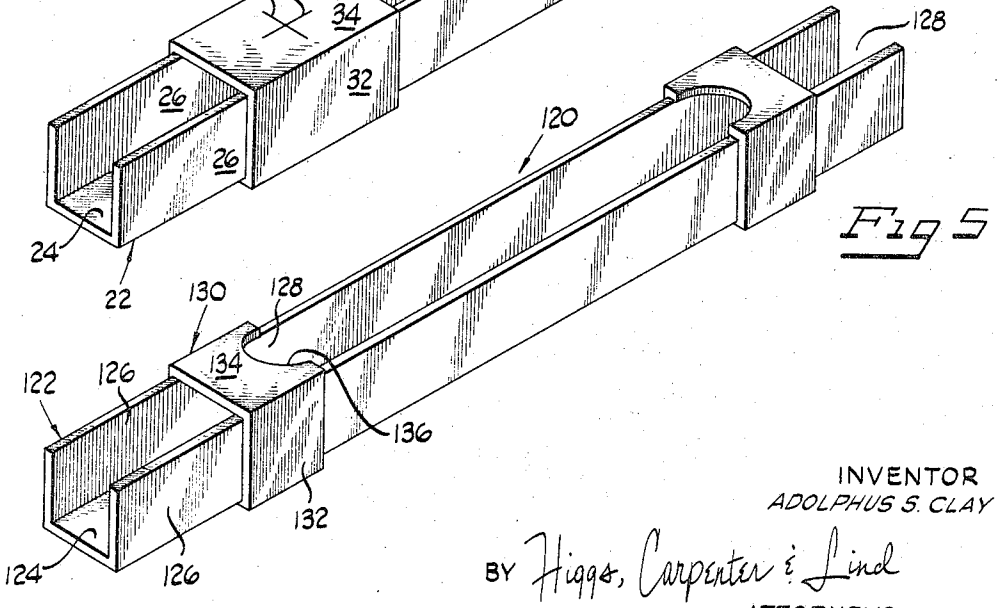



Fig 3




Fig 5




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# 3,338,501
# CONTAINER WITH ADJUSTABLE INNER PACKING

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## ABSTRACT OF THE DISCLOSURE

A paperboard container for packaging objects having projections extending therefrom, comprising, in combination: an outer box having a plurality of walls; at least one inner, hollow elongated packing member including a pair of elements, one of which is movably mounted on the other; said member including means for receiving at least one of said article projections at any desired location along the length of said member; and means for securing said member to a wall of said box to prevent movement of the packaged article within said box.

This invention relates to shipping containers and more particularly to containers of the type employed in the packaging of articles of furniture such as chairs and other irregularly shaped articles having projections such as legs extending therefrom.

The invention comprehends an improvement in an inner packing member which is adjustable to permit articles of varying sizes and shapes to be packaged in outer containers of a common size.

A primary object of the invention is the provision, in an invention of the type described, of an inner packing member adapted to receive projecting portions of a packaged article and to be secured to the outer container to prevent relative movement therebetween.

A more specific object of the invention is the provision, in an article of the type described, of an elongated inner packing member having means for receiving projections of the packaged article at any desired location along the length of said member, and means for securing the packing member to an outer container to prevent relative movement of the packaged article within the outer container.

These and other objects of the invention will be apparent from an examination of the following description and drawings, wherein:

FIGURE 1 is a side elevational view of a pair of packaged articles to which are attached inner packing members embodying features of the invention;

FIGURE 2 is a perspective view of an outer shipping container with the end in a partially opened condition to show the position of the inner packing members within the container;

FIGURE 3 is a perspective view of an inner packing member embodying features of the invention;

FIGURE 4 is a transverse vertical section taken on line 4—4 of FIGURE 1 to illustrate the relationship of the projection of the packaged article to the inner packing member; and

FIGURE 5 is a view similar to FIGURE 3 but illustrating a modified form of the inner packing member.

It will be understood that, for purposes of clarity, certain elements have been intentionally omitted from certain views where they are believed to be illustrated to better advantage in other views.

Turning now to the drawing, and particularly to FIGURE 1, it will be seen that a pair of articles to be packaged, in this case chairs indicated generally at C and having projections extending therefrom in the form of legs P, are shown as placed in back-to-back relationship, or more accurately seat-to-seat relationship, with a spacer



S of any type interposed therebetween. This is a common method of arranging a pair of chairs to pack them in an outer shipping container.

A serious problem in the packaging of chairs or other irregularly shaped articles is that of preventing their movement within an outer shipping container without utilizing a complex or costly contoured packaging member or plurality of packaging members to fill up all of the space between the packaged articles and the outer shipping container.

This invention is concerned with the provision of a packaging arrangement which utilizes a minimum number of packing members which are of simple and inexpensive design and construction and which may be readily employed for packing chairs or other articles of varying sizes and shapes in outer shipping containers of a common size.

A packing element embodying features of the invention is shown in FIGURE 3 and comprises an elongated channel element **22** having a bottom panel **24** and a pair of side panels **26** hinged to and upstanding from the side edges of the bottom panel to define therewith an elongated or longitudinally extending channel or groove **28**. Slidably mounted on inner packing member **20** are positioned one or more sleeve elements **30** each of which comprises a bottom panel and pair of side panels **32** and a top panel **34** all of which are hingedly interconnected to form a tubular structure open at the ends for receiving the channel member and for slidably positioning thereon lengthwise of the channel member. Top panel **34** of the sleeve element may be provided with a pair of intersecting cuts **36** which provide an opening or depression **38** in panel **34** when a projection P of a packaged article is pushed against the outer surface of the sleeve element top panel **34**, as shown in FIGURE 4.

In order to utilize the inner packing member **20** in the packaging of one or more articles, such as the chairs illustrated in FIGURE 1, a pair of sleeve elements **30** are applied to each channel element **22** and are positioned on the channel element, so that the distance between them corresponds to the distance between a pair of legs of the chair. The packing member is then pushed against the chair, so that the ends of the legs of the chair are forced through the top panels **34** of the sleeve elements and into the channel **28** of the channel element. After this has been done to all of the legs of the chair, in the case illustrated two inner packing members are used with two being employed on each chair, the chair and attached packing elements are positioned within the outer shipping container **10** and the inner flaps of the end walls of the shipping container are folded at right angles to the side walls to which they are attached and into overlying engagement with the inner packing elements as shown in FIGURE 2. It will be understood that the height of the spacer element S will vary according to the height of the packaged articles and the height of the packaged outer shipping container, so that when the chairs are placed within the container with the packaging members attached to the chairs the full dimension from end to end of the container will be filled, although the lateral dimensions of the container may be greater than the lateral dimensions of the packaged article.

In order to prevent the lateral movement of the packaged article within the outer container the sleeve elements and the channel elements may be secured to each other and to the inner closure flap **16** of the outer container in any desired manner such as by staples **40** and **42**, respectively.

Thus, it will be understood that there is provided in the invention a simple means of utilizing inner packing elements of a standard size for use with a standard outer shipping container for packaging various types of articles

of various sizes and shapes whereby a minimum amount of material and labor is employed to effect a tight package wherein movement of the articles within the package is prevented.

In FIGURE 5 a modified form of the invention is disclosed. Portions of the structure corresponding to structures in FIGURE 3 of the previously described embodiment have been designated with related numerals. The only difference between the structure of FIGURE 5 and that of FIGURE 3 resides in the top panel **134** of the sleeve element which, instead of being provided with a pair of cross cuts, is provided on one end with an arcuate cut **136** which provides a circular opening **138** designed to receive a projection of a packaged article thereagainst and cooperate with a similar sleeve element at the opposite end of the channel to retain the packaged article in position with respect to the packing member and the outer container after the packing member has been secured to the outer member.

I claim:

**1.** A paperboard container for packaging articles of varying sizes and shapes, such as chairs, having projections, such as legs, comprising in combination:

(a) an outer box having a plurality of side walls hingedly interconnected to form a tubular structure and inner and outer closure flaps hingedly connected to end edges of certain of said side walls and adapted to be folded at right angles thereto into overlapped relation with each other to close the ends of the tubular structure;

(b) at least one inner packing member disposed within said box and including:

(i) an elongated, U-shaped channel element having a bottom panel and a pair of side panels hinged thereto and upstanding therefrom to define therewith a channel open at the top;

(ii) a sleeve element having top, bottom, and side panels hingedly interconnected to form a tubular structure open at the ends for slidably receiving said channel element and having an opening in its top panel for receiving an end portion of a projection of a packaged article;

(c) means for securing said sleeve element to said channel element to maintain it in a predetermined position thereon;

(d) means for securing said channel element to an inner closure flap of said outer box to prevent movement of the packaged article within the outer box.

**2.** A paperboard container for packaging articles of varying sizes and shapes, such as chairs, having projections, such as legs, comprising in combination:

(a) an outer box having a plurality of walls;

(b) at least one inner packing member disposed within said box and including:

(i) a hollow, elongated element;

(ii) a sleeve element having top, bottom, and side panels hingedly interconnected to form a tubular structure open at the ends for slidably receiving said elongated element and having an opening in its top panel for receiving an end portion of a projection of a packaged article;

(c) means for securing one of said elements to the other element and to a wall of said outer box to prevent movement of the packaged article within the outer box.

**3.** A paperboard container for packaging irregularly shaped articles of varying sizes and shapes which have projections extending therefrom, comprising, in combination:

(a) an outer box having a plurality of walls;

(b) at least one inner, hollow elongated packing member including a pair of elements, one of which is movably mounted on the other;

(c) said member including means for receiving at least one of said article projections at any desired location along the length of said member;

(d) means for securing said member to a wall of said box to prevent movement of said packaged article within said box.

**4.** A container according to claim **3**, wherein one of said elements is an elongated hollow element and the other is a tubular element slidably sleeved over said elongated element and having an opening therein for receiving said projection.

**5.** A container according to claim **4**, wherein said tubular element has a panel with a pair of intersecting cuts forming adjacent tongues which are depressable when engaged by said projection to form said opening.

**6.** A container according to claim **4**, wherein the opening in said tubular element comprises a recess in a side edge of said tubular element.

**7.** A container according to claim **4**, and including means for securing said tubular element to said elongated element after the former has been moved to a predetermined position on the latter.

**8.** A container according to claim **4**, wherein a wall of said outer box has an end closure flap, and wherein said inner packing member is secured to said flap.

**9.** A container according to claim **3**, wherein said inner packing member has a length equal to one of the length and width dimensions of said outer box.


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