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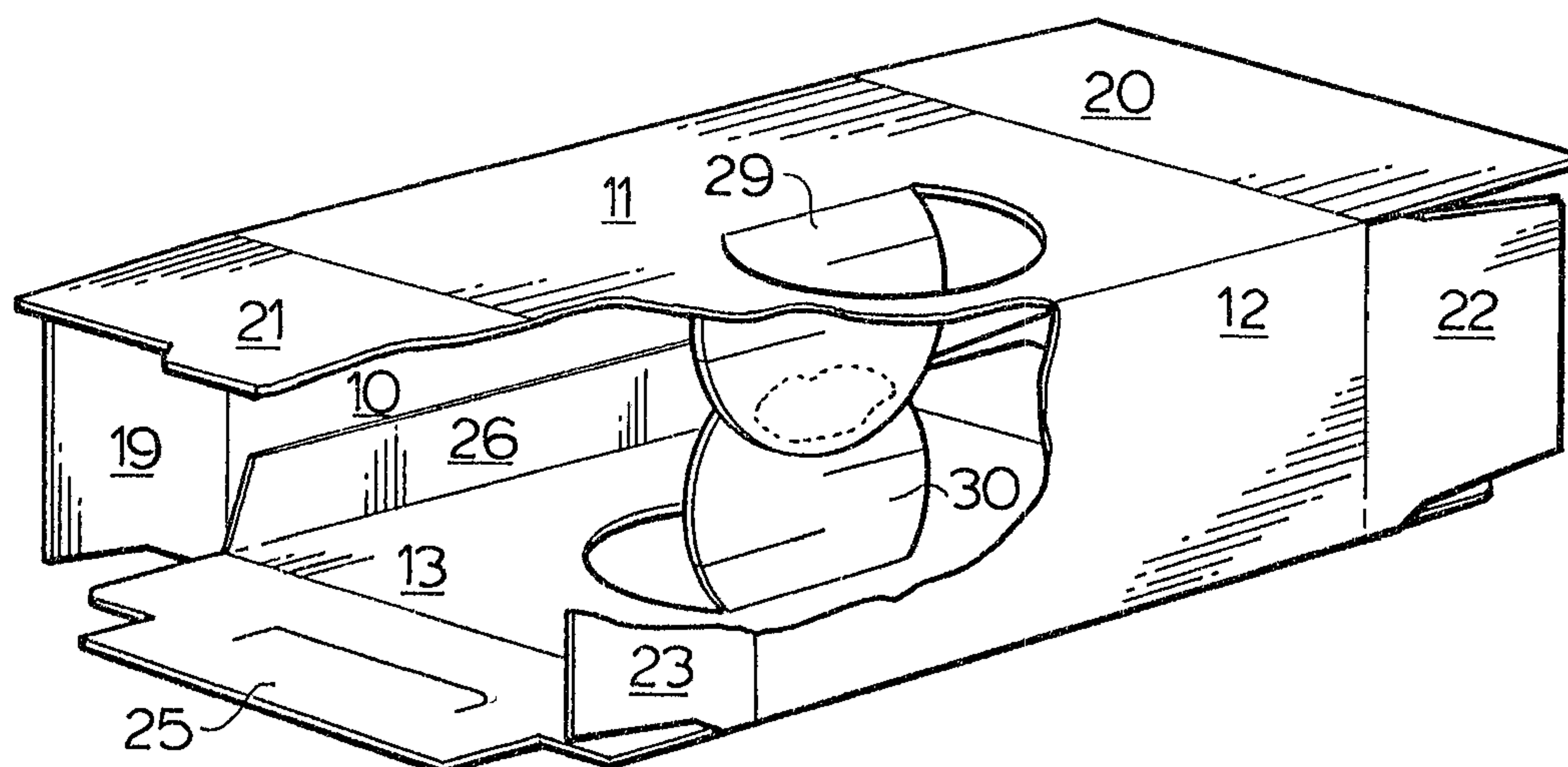
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(54) **CONDITIONNEMENT POUR LAMPES, AVEC FUT INTEGRE**

(54) **LAMP PACKAGE WITH AN INTEGRAL STRUT**



(57) This invention relates to a package which is suitable for the packaging of fragile articles such as electric light bulbs. The package is especially adapted for high speed packaging in that the package may be collapsed to a flat blank for shipping but may be quickly opened in such a manner that each of the opposing sidewalls of the package has a projecting tab extending inwardly therefrom so that the two tabs are joined together to form an integral strut and thus stabilize the two opposing sidewalls of the package. Because of the symmetry of the devices being packaged the projecting tabs must be symmetrically located in a central area of the sidewalls. It will be found that this invention will be applicable to high speed packaging of fragile articles in chipboard cartons which are capable of receiving at least two similar articles such as lamp bulbs.

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LAMP PACKAGE WITH AN INTEGRAL STRUT

ABSTRACT OF THE DISCLOSURE

This invention relates to a package which is suitable for the packaging of fragile articles such as electric light bulbs. The package is especially adapted for high speed packaging in that the package may be collapsed to a flat blank for shipping but may be quickly opened in such a manner that each of the opposing sidewalls of the package has a projecting tab extending inwardly therefrom so that the two tabs are joined together to form an integral strut and thus stabilize the two opposing sidewalls of the package. Because of the symmetry of the devices being packaged the projecting tabs must be symmetrically located in a central area of the sidewalls. It will be found that this invention will be applicable to high speed packaging of fragile articles in chipboard cartons which are capable of receiving at least two similar articles such as lamp bulbs.

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LAMP PACKAGE WITH AN INTEGRAL STRUT**BACKGROUND OF THE INVENTION**

Packaging for fragile articles such as electric light bulbs has taken a variety of forms and
5 until recently most lamp packages have consisted of corrugated paperboard cartons in which two or more light bulbs were packaged in side by side opposing relationship in a sleeve which had open ends, and some energy absorbing medium between the adjacent bulbs.

10 There may be a central partition of the same corrugated paperboard which has cuts to provide movable tabs to allow compact packaging of the adjacent light bulbs.

In some designs the central partition has been eliminated and tabs have been made in the
15 sidewalls of the paperboard sleeve which may be pushed inwardly to provide an energy absorbing surface between the two adjacent bulbs. A second sleeve of similar corrugated paperboard has been generally utilized to cover the open ends of the sleeve in which the bulbs
20 are packaged. This not only ensures that the bulbs are captive in the inner sleeve but also provides an extra measure of shock absorption to the overall package. These packages have generally found utilization in packaging bulbs in multiples of two.

25 Some examples of patents which utilize the

corrugated paper construction are:

- U.S. Patent 3,053,431 to Jacobs;
- U.K. Patent 1,545,465 to Bowler et al;
- U.K. Patent 2,035,960 to Watkins et al;
- 5 Canadian Patent 1,022,506 to Getz et al; and
- Canadian Patent 1,128,904 to Beard.

The use of corrugated paper cartons has proved satisfactory for most purposes for the past fifty years. The corrugated paper gave an excellent
10 measure of shock absorption, but the lamp cartons fabricated therefrom could be crushed rather easily in certain situations leading to lamp breakage.

Lamp cartons fabricated from corrugated paper also suffered from a narrow latitude in ability to
15 accept multiple colour printing on the surface thereof.

It has therefore been the trend to find some other suitable container which would provide a suitable surface for printing advertising messages thereon, and yet provide a stiff structure which might be used on
20 the new higher speed packaging machines, without imminent collapse due to the great accelerations necessary to pack these lamps at high rates.

The material chosen for printing adaptability and acceptable packaging characteristics is a single
25 ply chipboard material.

BRIEF DESCRIPTION OF THE INVENTION

This invention is related therefore to a lamp package suitable for packaging lamps in multiples of two wherein the two bulbs are separated by a unitary
30 tab which is composed of two opposing cooperating tabs projecting from opposing sidewalls which are glued together to form a unitary tab construction.

Lamps may be inserted into this package from both ends simultaneously and the unitary tab member
35 provides the necessary shock absorbing device to

prevent breakage of the adjacent lamps.

The use of a single tab member which essentially ties the two sidewalls together makes for a lamp package with stabilized sidewalls and has great resilience to allow high speed
5 packing techniques.

Because the composite tab consists of the two tabs projecting from both sidewalls of the lamp package, the package is symmetrical so that the lamp package contents may be viewed from either side.

10 **BRIEF DESCRIPTION OF THE DRAWINGS**

FIGURE 1 is a view of the blank which is subsequently folded to form a container for two lamps;

FIGURE 2 is a plan view of the carton of FIGURE 1 shown in the folded glued flattened condition;

15 FIGURE 3 shows a partial perspective of the package formed from the blank of FIGURE 1 in the opened condition with the end flaps open for the insertion of the lamps; and

FIGURE 4 is a side view of the carton, and

FIGURES 5, 6, and 7 are end views of the blank carton
20 showing the various stages of opening,

FIGURE 8 is a side view of a three lamp carton, and

FIGURE 9 is a partial view of a blank showing an alternative embodiment for the strut.

DESCRIPTION OF PREFERRED EMBODIMENT

25 FIGURE 1 shows a blank 9 for a carton used for packing fragile articles such as lamps which is the subject of this invention. Basically the blank is formed of single ply chipboard (cardboard) having sidewalls 10, 11, 12, and 13 which are separated by folding lines 14, 15, 16, and 17. A pair of end
30 flaps 18 and 19 are shown projecting from sidewall 10; flaps 20 and 21 from sidewall 11; flaps 22 and 23 from sidewall 12; flaps 24 and 25 from sidewall 13.

In instances where the carton is to be packed

with electric lamps the carton will be of such a size as to accommodate to electric bulbs in side by side relationship; thus the sidewalls have a greater width dimension than the end walls.

5 Blank 9 also has a pair of tabs 29 and 30 cut or pierced from sidewalls 11 and 13 which are shown to be (in this instance) somewhat circular in shape. The shape does not necessarily have to be exactly as shown but the configuration shown has demonstrated the
10 ability to function well. The size and location of the tabs 29 and 30 is somewhat critical in that these tabs must overlap in the assembled package so that the overlapped portions of the opposing tabs 29 and 30 may be glued together.

15 Referring now to FIGURE 2, the blank 9 is shown in a folded flat position as would be acceptable for shipping carton blanks. In this instance flap 26 is made to be joined to endwall 10 by gluing or other suitable joining method and tabs 29 and 30 are also
20 joined together at the point of overlap as illustrated at 31 in FIGURE 2.

It will be noted tabs 29 and 30 have their fold lines located in the centre of the sidewalls 11 and 13 respectively. By choosing this location the
25 lamp carton blank may be stamped out, printed and shipped in folded flat configuration to the place where the lamp bulbs are to be packaged.

When the package is to be used as a packing carton, the flattened carton is loaded
30 into a lamp packaging machine which subsequently opens the flattened package as shown progressively in FIGURES 5, 6, and 7 to produce the carton shown in FIGURE 3 and inserts two lamps, one from each end. The two tabs 29 and 30 have been previously glued together
35 to form an integral strut which automatically stretches

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across the middle of the two sidewalls when the flat package is opened. Note that the lamp packing machinery does not have to insert a finger or other similar device into the package to erect a projecting tab so as to
5 ensure that a shock absorbing device is between the two lamp bulbs.

Because of this, this particular package has a design which is readily adaptable to high speed packaging techniques while simultaneously providing excellent shock
10 absorbing characteristics because of the inherent resilience of the strut formed by tabs 29 and 30.

FIGURE 4 shows how the strut fits between the nested bulbs to cushion and provide a resiliency for the interface of the nested bulbs.

15 The end flaps will be closed and glued in a manner well known in the lamp packaging art with the end flaps 18, 22, 19, 23 folded inwardly first and subsequently flaps 20 and 24 are folded and glued in the closed position as are flaps 21 and 25. After initial
20 opening of the carton, the purchaser may close the carton by inserting tongue 27 on flap 21 into slot 28 of flap 25.

The shape of the tabs 29 and 30 (each provided with a pair of slits for providing the desired
25 resilience) have been chosen to be somewhat circular in shape but other shapes may provide the necessary resilient cushioning for successfully packaging the nested bulbs. This shape has provided the desired separation and cushioning while providing the purchaser
30 with an aesthetically pleasing aperture on both sides of the carton which provides the purchaser with a good view of the contents. It is believed that other tab shapes will also function in a similar satisfactory manner.

It will be found that the advantages of this package resides in the fact that when the flat carton is unfolded from the flattened shipping condition to the boxlike configuration used in packing, that the
5 strut appears automatically without any external assistance thus allowing a faster packaging speed. The strut by its shape and cuts has excellent natural resilience. The fact the strut extends across the center of the sidewalls only provides extra rigidity to
10 an otherwise excellent packaging carton.

FIGURE 8 is a side view of a three lamp carton showing how the two lamp carton of this invention may be augmented by adding three more walls to provide complete confinement for the third bulb. A
15 four lamp carton with two nested pairs of lamps such as shown in Figure 4 and having a common package wall separating the two pairs will be obvious to those skilled in the lamp packaging art.

Figure 9 is a partial view of a strut
20 composed of a pair of tabs 129 and 130 which are joined by providing a slit extending approximately half way across each of the tabs. The two tabs may then be interlocked together by sliding the two tabs together so that the two mating slits intersect each other and
25 lock the tabs together to form a unitary strut. It will be seen that the shape of the tabs 129 and 130 is slightly different than described previously, but this shape lends itself to this particular method of connecting the two tabs together.

30 While other configurations of tabs may be possible the applicants wish to limit the scope of their invention by the following claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A carton for receiving a plurality of lamp bulbs of similar size and shape, wherein two of the lamp bulbs are stacked together in a side by side nesting relationship; said two lamp bulbs being restrained by a pair of opposing sidewalls which have a strut extending across and joining said opposing sidewalls, said strut being formed by stamping integral tab members from opposing sidewalls of the carton and joining said tab members, and said strut also serving as a resilient separator for said two lamp bulbs inserted into said carton in a nesting relationship.

2. A carton as claimed in claim 1 wherein the tab members are joined by glue.

3. A carton as claimed in claim 2 wherein said tab members are of similar shape and size and are hinged from the center of the sidewalls in such a manner that the carton may be folded into a flat shipping blank.

4. A carton as claimed in claim 3 wherein the tab members are somewhat circular in shape and are hinged along a fold line in the center of the sidewall which is parallel to the longitudinal axis of the carton, each tab having at least one slit therein.

5. The carton as claimed in claim 1, 2 or 3 wherein the carton is formed from single ply chipboard cardboard.

6. A carton blank for assembly into a carton for receiving a pair of lamp bulbs in a nested relationship, said carton blank comprising:

a pair of sidewalls;
a pair of endwalls;
suitable flaps at the remote ends of the sidewalls and endwalls;

a pair of cooperating tabs formed in each of the sidewalls of said carton blank,

said carton blank capable of folding into a flattened assembly suitable for shipping with the pair of cooperating tabs having overlapping portions joined together;

said carton blank capable of being opened from said flattened assembly into an open carton position with the sidewalls oppositely positioned for receiving two lamp bulbs of similar shape and size, the joined overlapping portions of said cooperating tabs resulting in said cooperating tabs being pulled into the carton blank away from respective sidewalls to form an integral strut extending between opposing said sidewalls when the carton blank is opened into the open carton position; and,

said integral strut in the open carton position laterally stabilizing the opposing sidewalls and resiliently separating lamp bulbs inserted into said carton.

7. A carton blank as claimed in claim 6 wherein said cooperating tabs are of circular shape and are hinged from said sidewalls.

8. A carton blank as claimed in claim 6 or 7 in which the blank is formed from single ply chipboard cardboard.

9. A carton blank as claimed in claim 7 wherein the cooperating tabs form hinge lines with said sidewalls

and the overlapping portions of the cooperating tabs are remote from their hinge lines and joined by gluing, and the hinge lines are located in the centre of said sidewalls and extend parallel to a longitudinal axis passing through the said carton in the open carton position.

10. A carton as claimed in claim 6 wherein the tabs are hinged along a fold line in the center of the sidewall which is parallel to the longitudinal axis of the carton and each tab having at least one slit therein.

FIG. 1

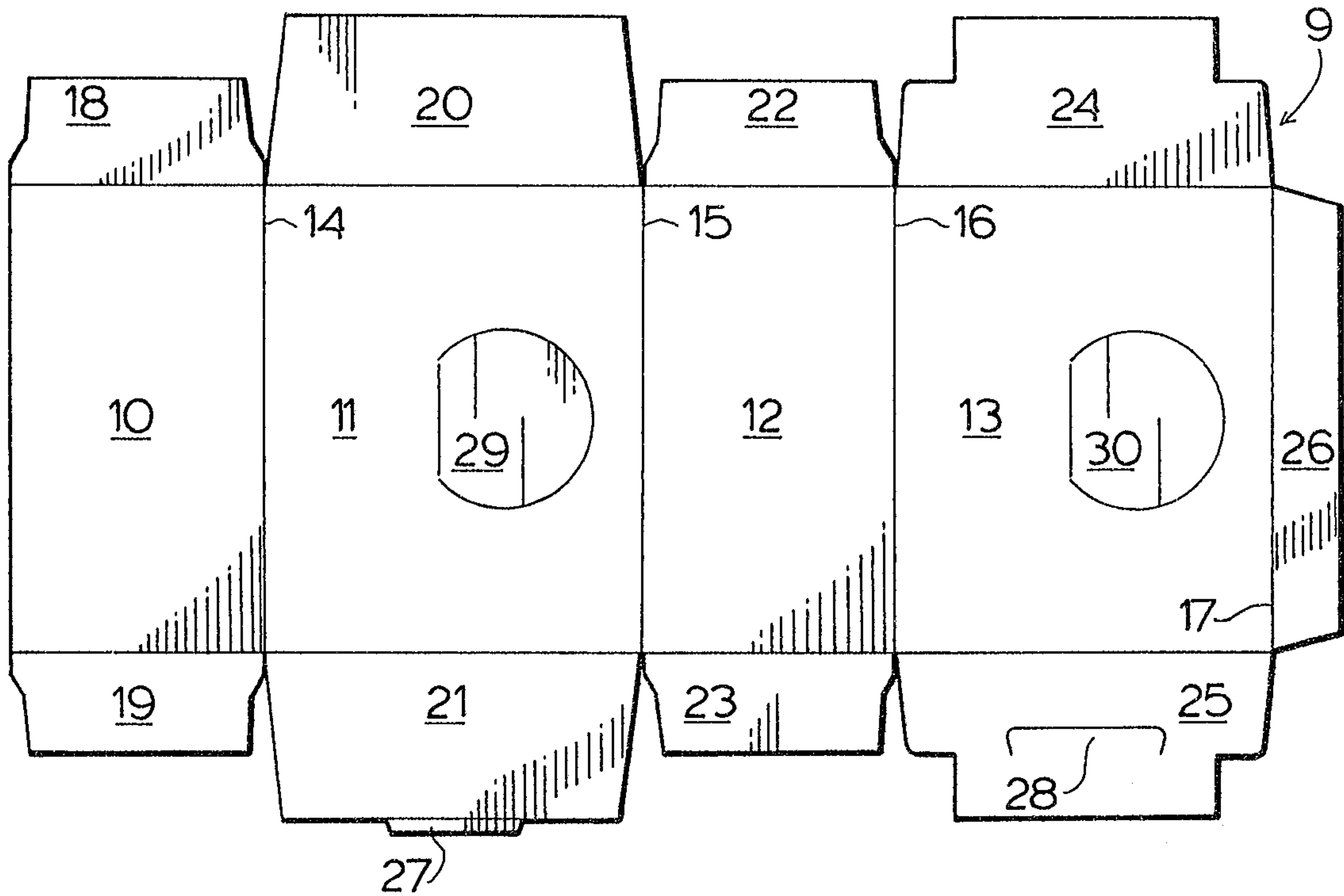
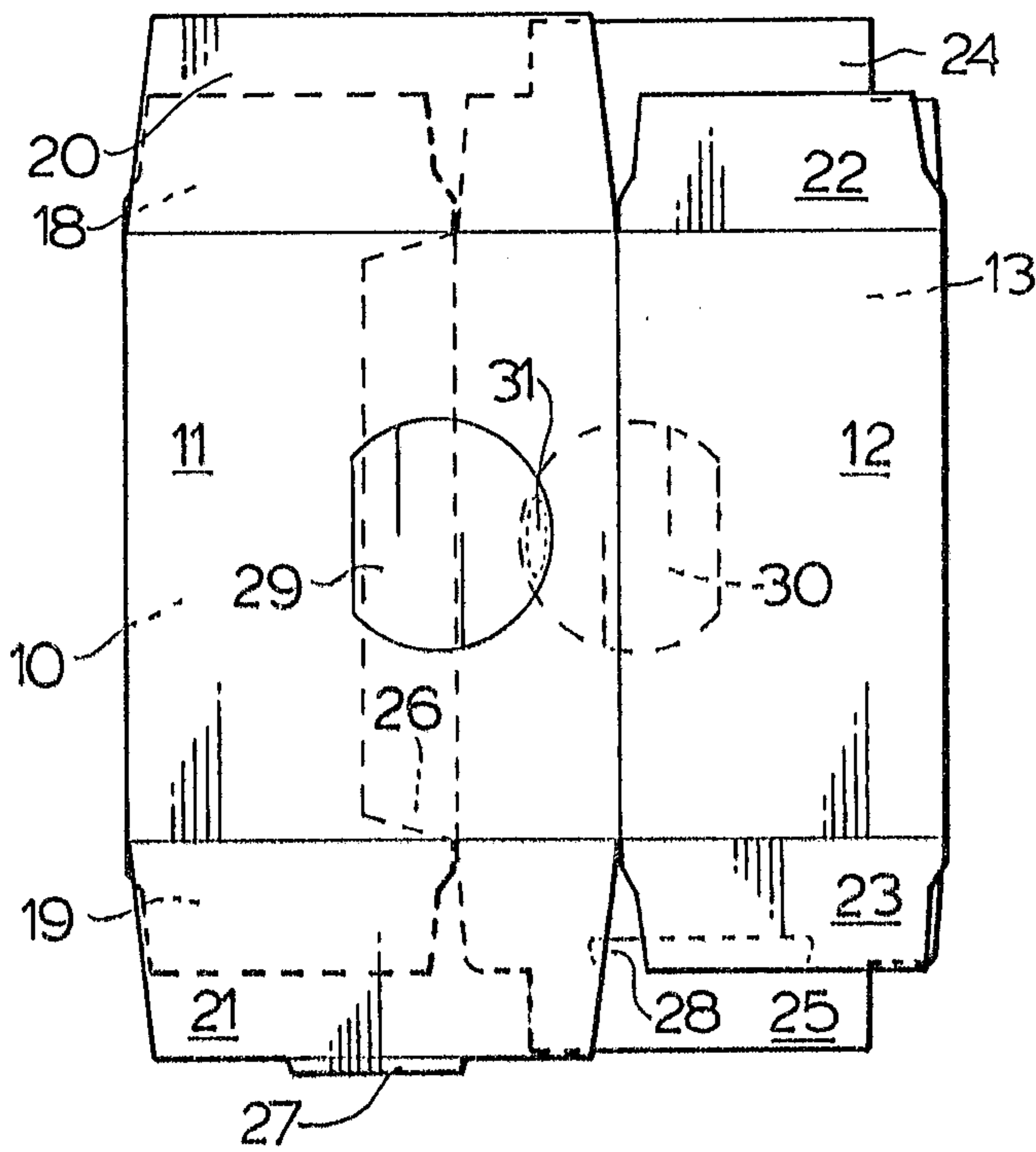


FIG. 2



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FIG. 3

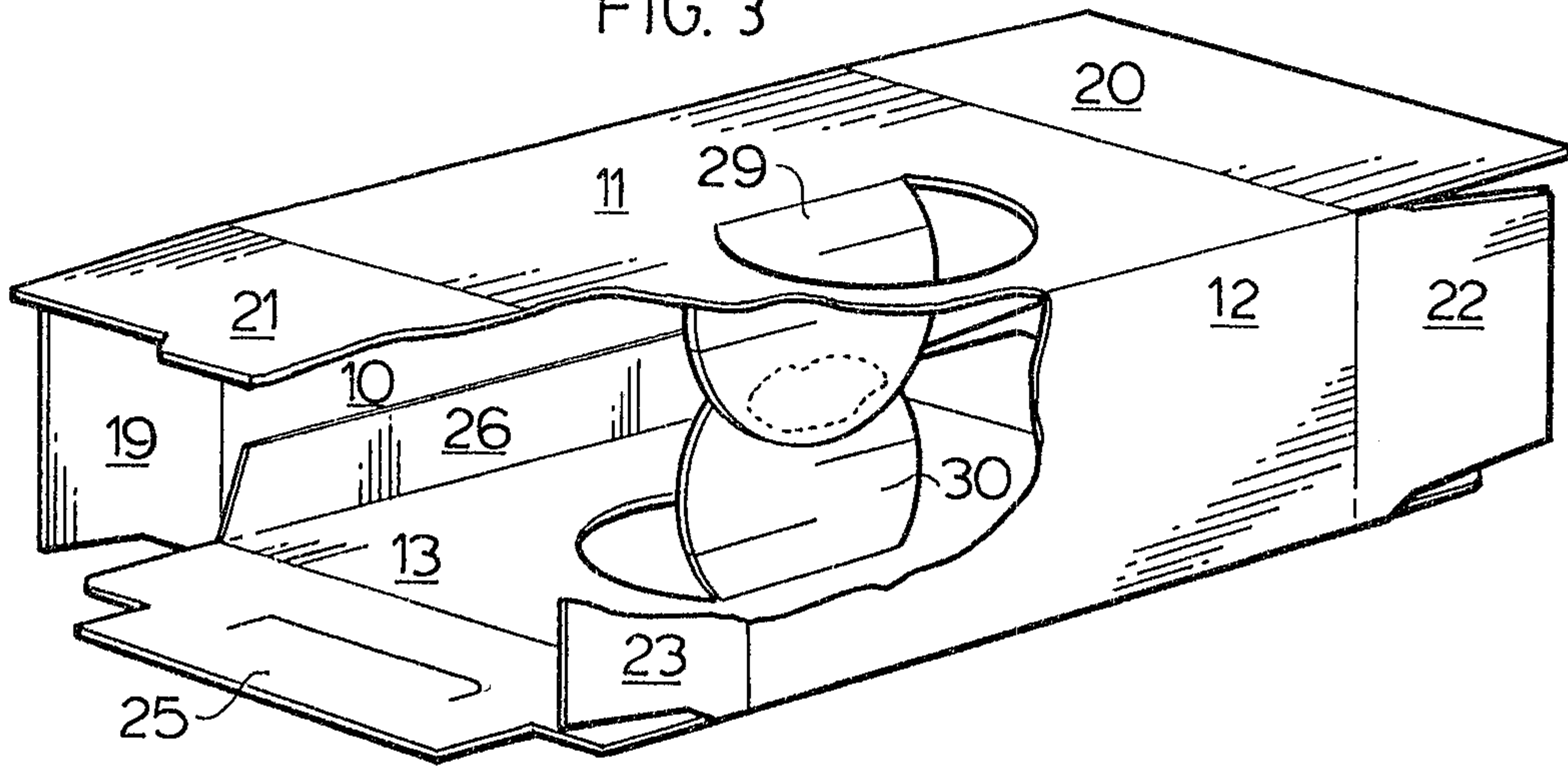
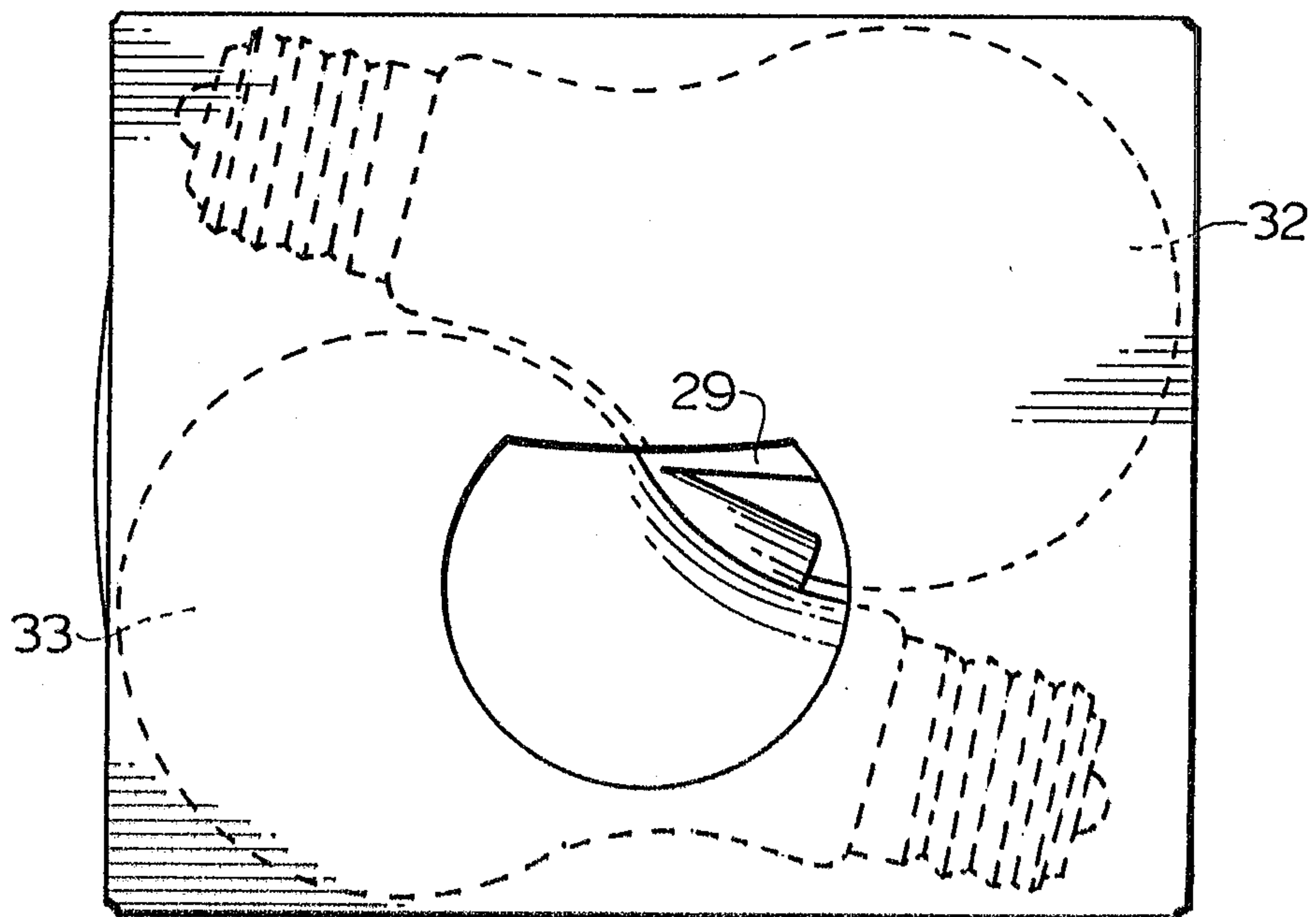
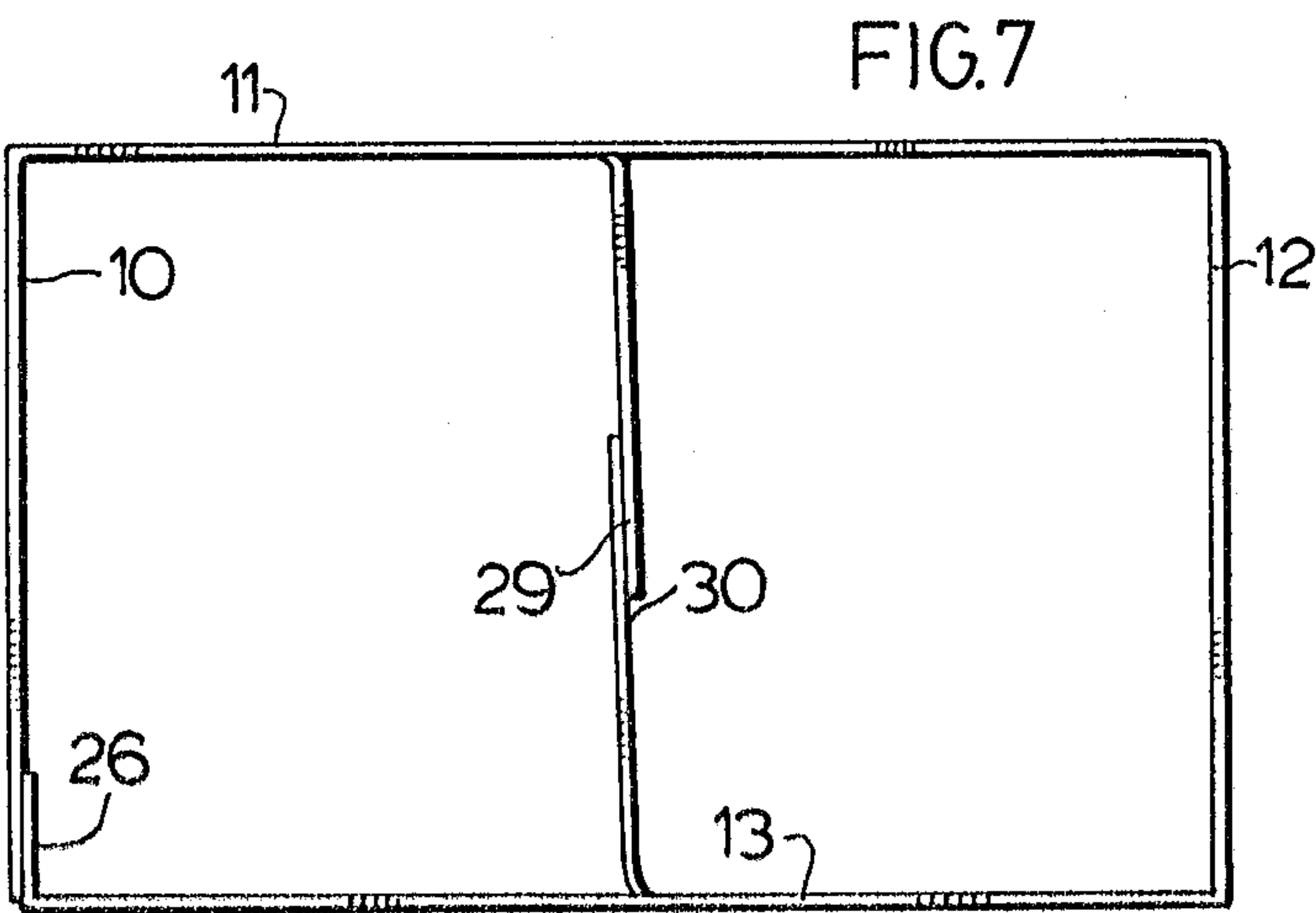
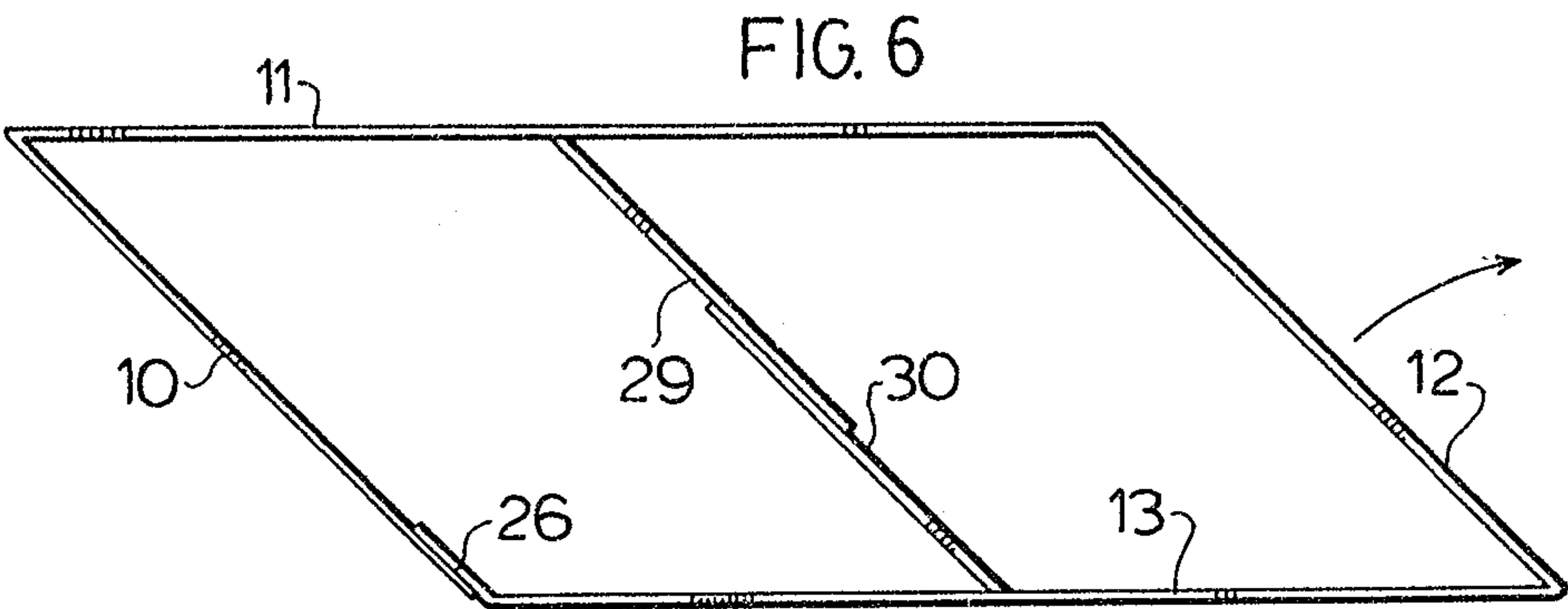
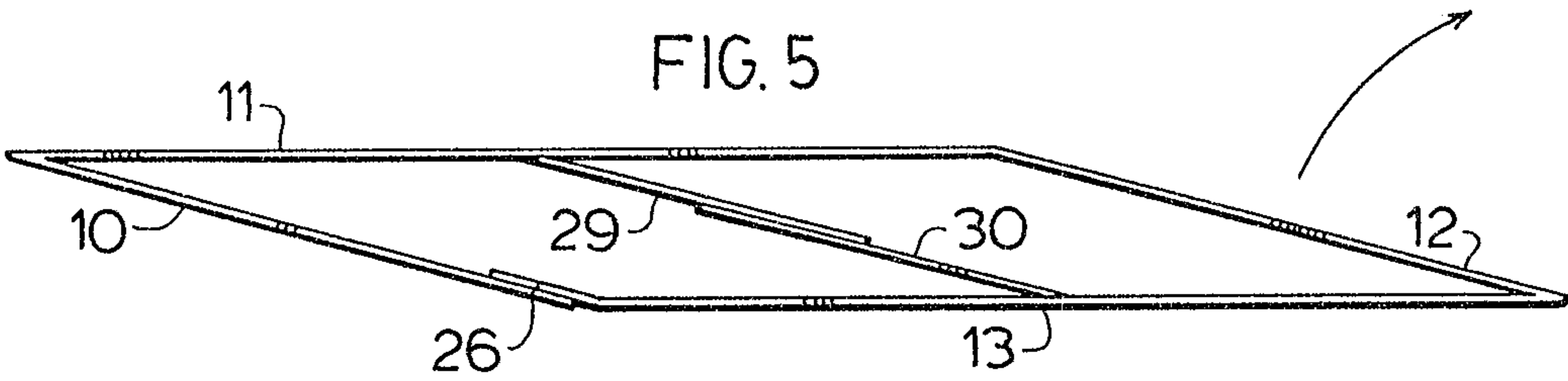


FIG. 4



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FIG. 8

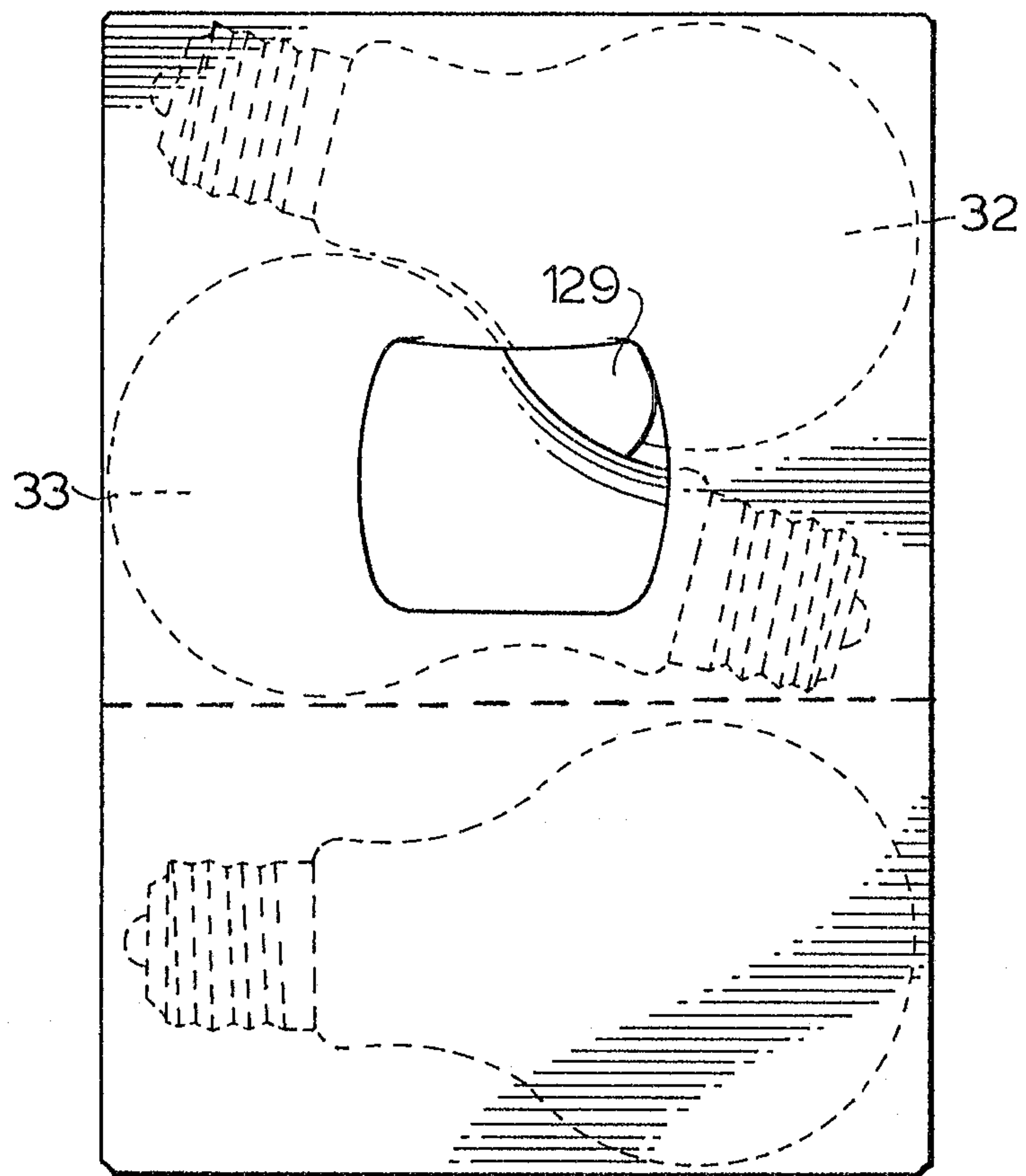
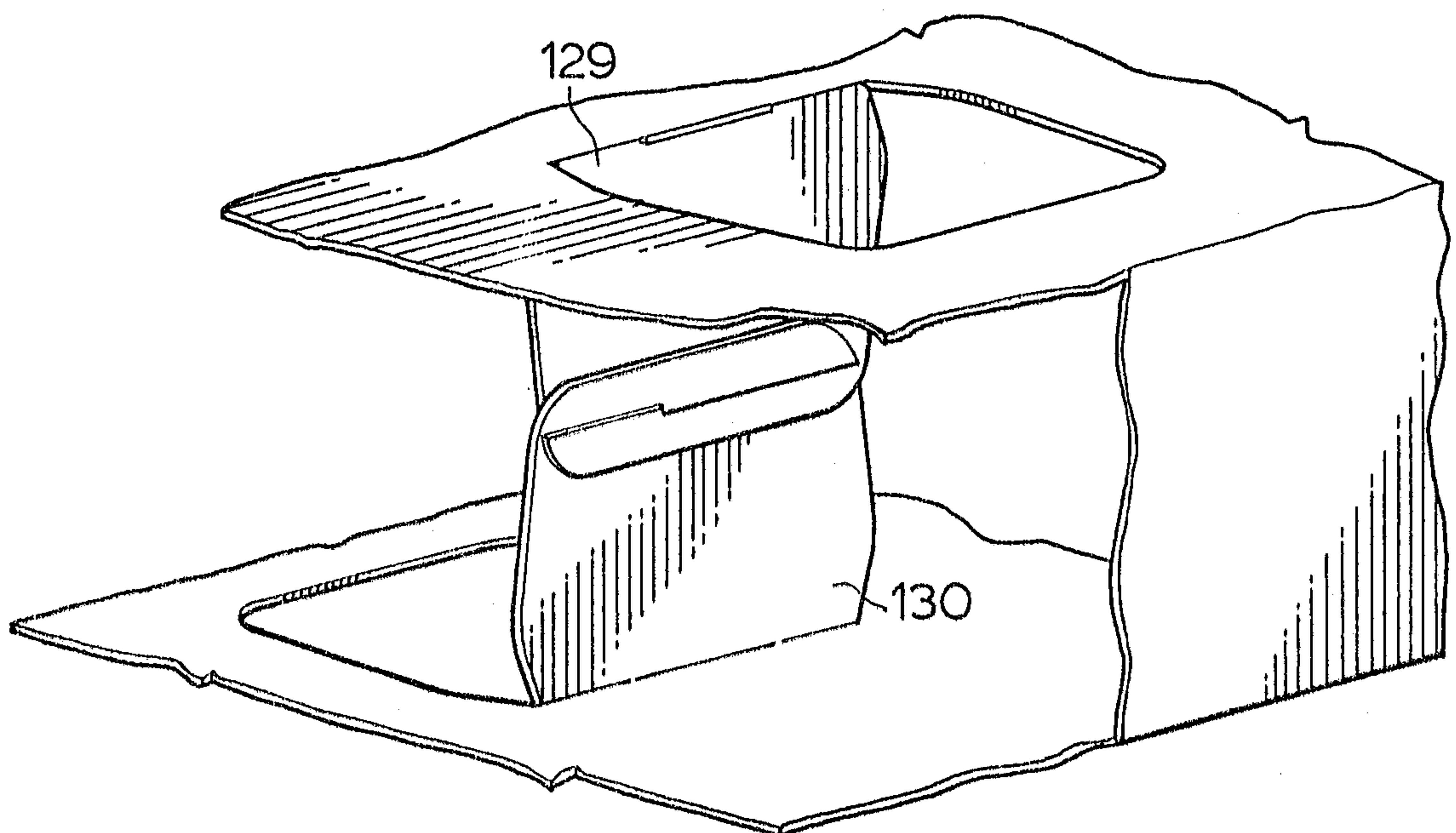


FIG. 9



Adkams and Wilson

