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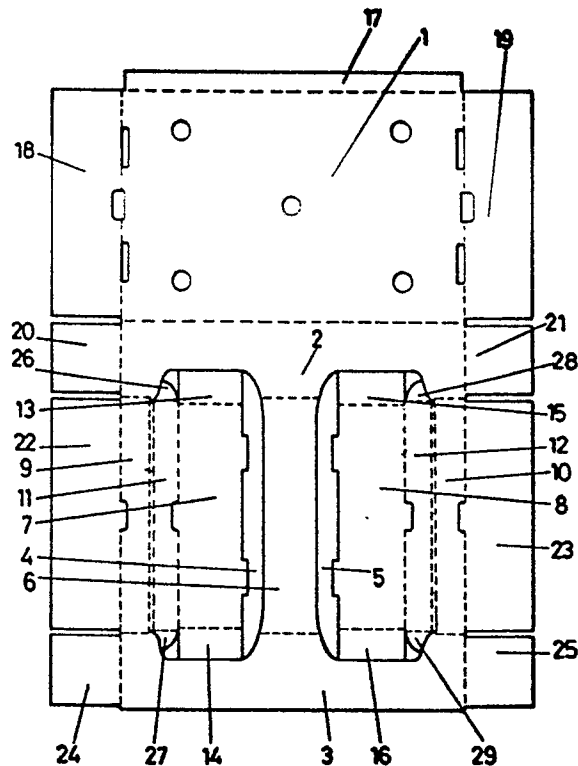
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E-28043 Madrid(ES)(54) **Cardboard box with carrying handle.**

(57) The openings that define the mouths of the box on both sides of the central transversal handle are partially occupied in the flat development of the lamina, by both laps (7-8) equal to the fronts confirmed in other strips (11-12) analogous to the fixed strips (9-10) which limit the opening next to the fronts. The strips (11-12) cited lastly fold over the fixed strips (9-10), the laps (7-8) remaining backed to the fronts. The laps (7-8) have collateral extensions (13 to 16) which are vertically placed next to the larger sides (2-3) and retain with their top edges the strips (11-12), collaborating with this some tongues (26 to 29) which are in prolongation of these strips (11-12) and which in the assembly adapt an intermediate position between the collateral extensions (13 to 16) and the larger sides (2.3.)

**FIG.1****EP 0 374 981 A1**

CARDBOARD BOX WITH CARRYING HANDLE

OBJECT OF THE INVENTION

The purpose which is sought is the manufacturing and selling of a cardboard box with a carrying handle obtained from a single laminar piece which has been provided with punchings and cleavages by means of which the different folding parts and areas are delimited for the forming of the box which results with its ends closed and a larger open surface crossed by a strip which forms the carrying handle.

This type of box is small for the transporting of fruit.

BACKGROUND OF THE INVENTION

In the prior art it is known that a box is obtained in a laminar piece with punchings and cleavages which determine the formation of the different parts of the box.

The obtainment of a strip transversal to the open surface which may be used for manual carrying thereof is also known.

To this regard we can mention as background of the case utility models 102.903 and 139.183.

In these models the surface cut to obtain the central which may be used as a handle folds from the inside out through a folding line to form the smaller walls or fronts.

A rectangular box which has its extremes closed by the above cited central laps results from this.

The resistance of these boxes upon piling results very weak, thus a very thick cardboard is needed to obtain the resistance suitable to the weight of the column of boxes to be supported.

The resulting cost of a box thus formed with suitable thick cardboard ends up having prohibitive prices.

DESCRIPTION OF THE INVENTION

The invention proposed a box of the above cited features which has been designed in such a way that the fronts are reinforced to obtain, in normal cardboard, sufficient resistance for piling.

For this purpose, the laps that have to fold inside out to form the smaller walls or fronts take part of the sides or longitudinal walls of the box. These extensions which exceed the length of the

front back inside over the ends of the sides in the form of a corner so that said sides are reinforced. On the other hand, these laps themselves are of a bigger amplitude than the fronts, so that one part of them remains folded over itself forming a double bridge at the level of the top edge of the fronts, reinforcing it.

Finally, the ends of the cardboard lamina have been prolonged into normal closing laps, or else self-mountable with which it is possible to increase the thickness of the front giving them enough resistance for piling.

As a result of simply combining the normal closing laps with the laps that establish the top opening or mouth of the box, the sought resistance is obtained.

The increase of cardboard which with regard to the known models implies the normal closing laps are compensated by the obtained resistance without attaining the weight of thick cardboard needed for this same resistance.

The space of separation between the laps that reinforce the inside of the fronts and whose folding determines the loading mouth, establishes a transversal strip which can be used as a handle.

BRIEF DESCRIPTION OF THE DRAWINGS

For the purpose that the box of the invention be clearly understood, the present specification is accompanied by three pages of drawings in which the following is shown:

Figure 1.- Elaboration diagram of the cardboard lamina from which the box is obtained. The closing laps of the ends form a normal type whole.

Figure 2.- Elaboration diagram of the cardboard lamina from which the box is obtained. The closing laps of the ends form a self-mountable type whole.

Figure 3.- Perspective of the box in the final assembly stage where it shows the way in which the fronts are reinforced by the laps which form the mouth of the box.

Figure 4.- Section of an assembled box

DESCRIPTION OF A PREFERRED EMBODIMENT

According to the cited drawings it can be seen that the box is formed from a single cardboard piece.

It comprises the bottom -1-, sides -2- and -3- and top surface open by punchings which determine two twin openings -4- and -5- between which

there is a transversal single-piece fringe -6- which forms the carrying handle.

The space determined by the twin openings -4- and -5- form laps -7- and -8- joined to the fringes -9- and -10-.

The laps -7- and -8- are prolonged at their ends by extensions -13-14-15- and -16- which in the folding towards the inside of the laps -7- and -8- they remain coupled to the sides -2- and -3-.

The strips -11- and -12- are adjusted underneath the fringes -9- and -10- reinforcing them.

The lap -17- in which the bottom -1- laterally prolongs is to be joined to the side -3- to form a tube-shaped body which will form the box.

The bottom -1-, the sides -2- and -3- and the surface or top surface determined by the fringes -9- and -10- are prolonged along their ends into normal type closing laps (figure 1) or self-mountable type ones (figure 2), indicated by -18- and -19-, -20- and -21-, -22- and -23- and -24- and -25-.

In figures 3 and 4 of said drawings, one clearly sees how the box is assembled starting from the first operation of forming a tube-shaped body.

The laps -7- and -8- are folded towards the inside together with the strips -11- and -12-. The former to reinforce the closed front with the conventional normal or self-mountable closing laps, remaining parallel to it while the strips -11- and -12- remain underneath the fringes -9- and -10-.

The extensions -13-14-15- and -16- which are folded together with the laps -7- and -8- remain backed to the sides -2- and -3- acting as angular reinforcements.

The strips -11- and -12- have their ends prolonged into tongues -26-27-28 and -29- whose purpose is to serve as a support of the strips -11- and -12- on the extensions -13-14-15 and -16-, upon remaining lodged between these and the sides -2- and -3-.

next to the fronts, the coupling of these laps combining with the conventional or self-mountable closing ones -18-19-20-21-22-23-24 and -25-, in which the bottom -1-, the sides -2- and -3- and the fringes -9- and -10- of the top surface prolong.

2. Cardboard box with carrying handle in accordance with claim 1, characterized because the laps -7- and -8- have their ends prolonged into rectangular extensions -13-14-15 and -16- which are backed inside against the sides -2- and -3-, acting as angular reinforcements.

3. Cardboard box with carrying handle in accordance with claims 1 and 2, characterized because the strips -11- and -12- have their ends prolonged into tongues -26-27-28 and -29-, whose purpose is to serve as a support for the strips -11- and -12- upon the extensions -13-14-15- and -16-, upon remaining lodged between these and the sides -2- and -3-.

Claims

1. Cardboard box with carrying handle, obtained from a single laminar piece, which has been provided with punchings and cleavages which delimit the different folding parts and areas to form a rectangular parallelepiped body, with the ends closed and with a larger open surface crossed by a strip which forms the manual carrying handle, characterized because the surface of the openings -4- and -5- of the larger surface determine the obtainment of two symmetric surfaces, from each one of which is obtained a lap -7- and -8- of dimensions equal to the ends of the box, which totally close upon folding along the line of separation with some strips -11- and -12- which remain housed underneath the fixed fringes -9- and -10- which limit the openings

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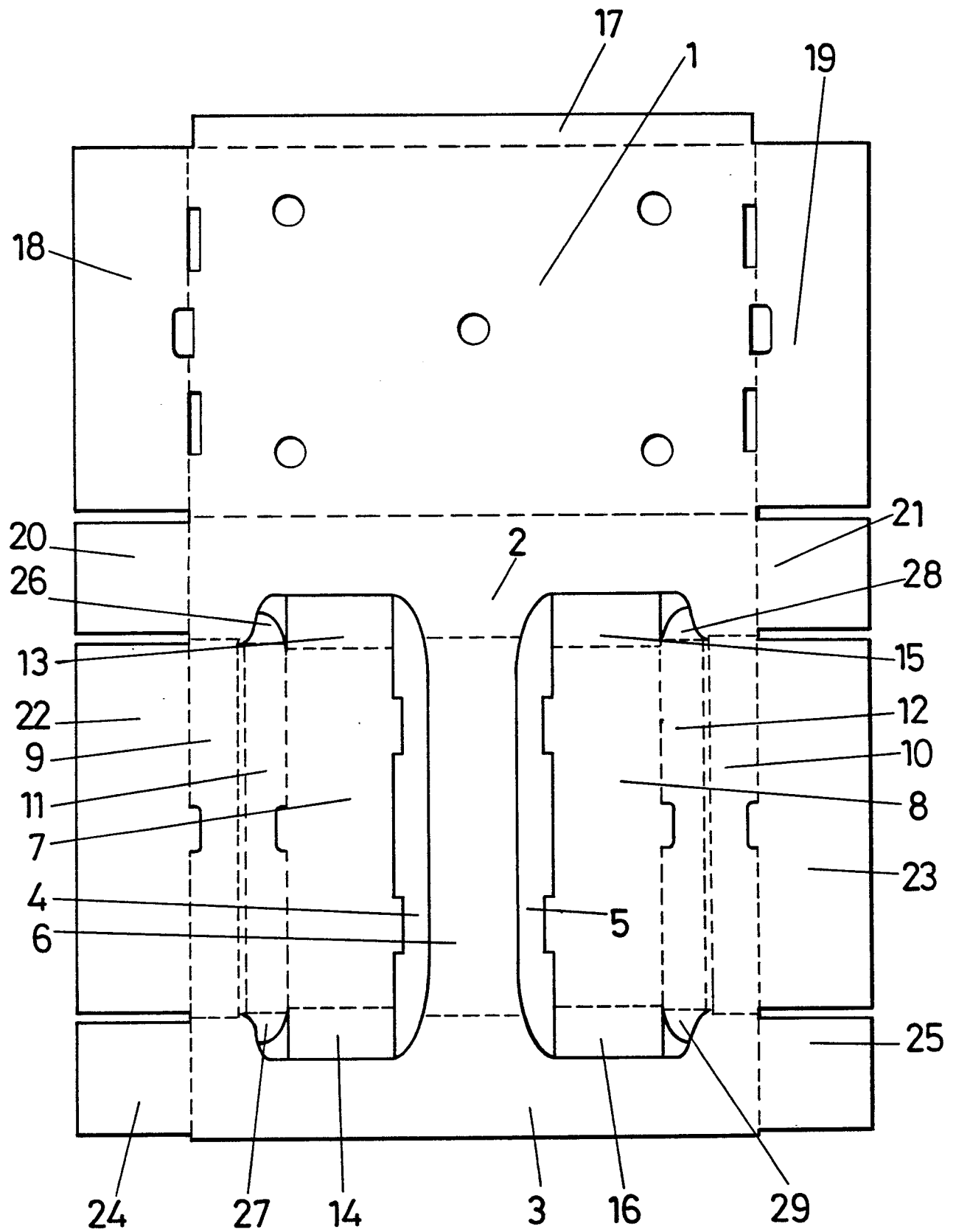


FIG.1

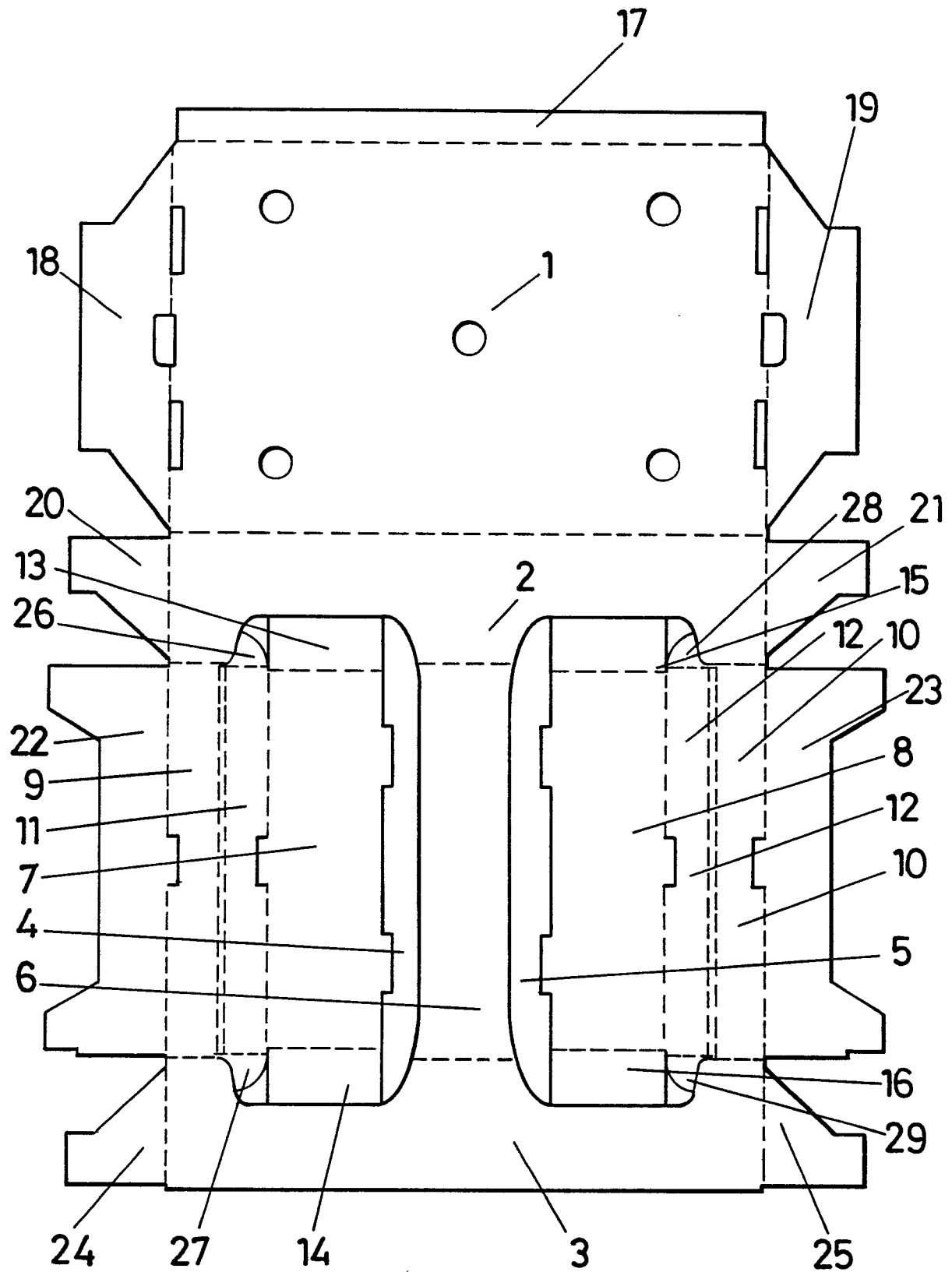


FIG.2

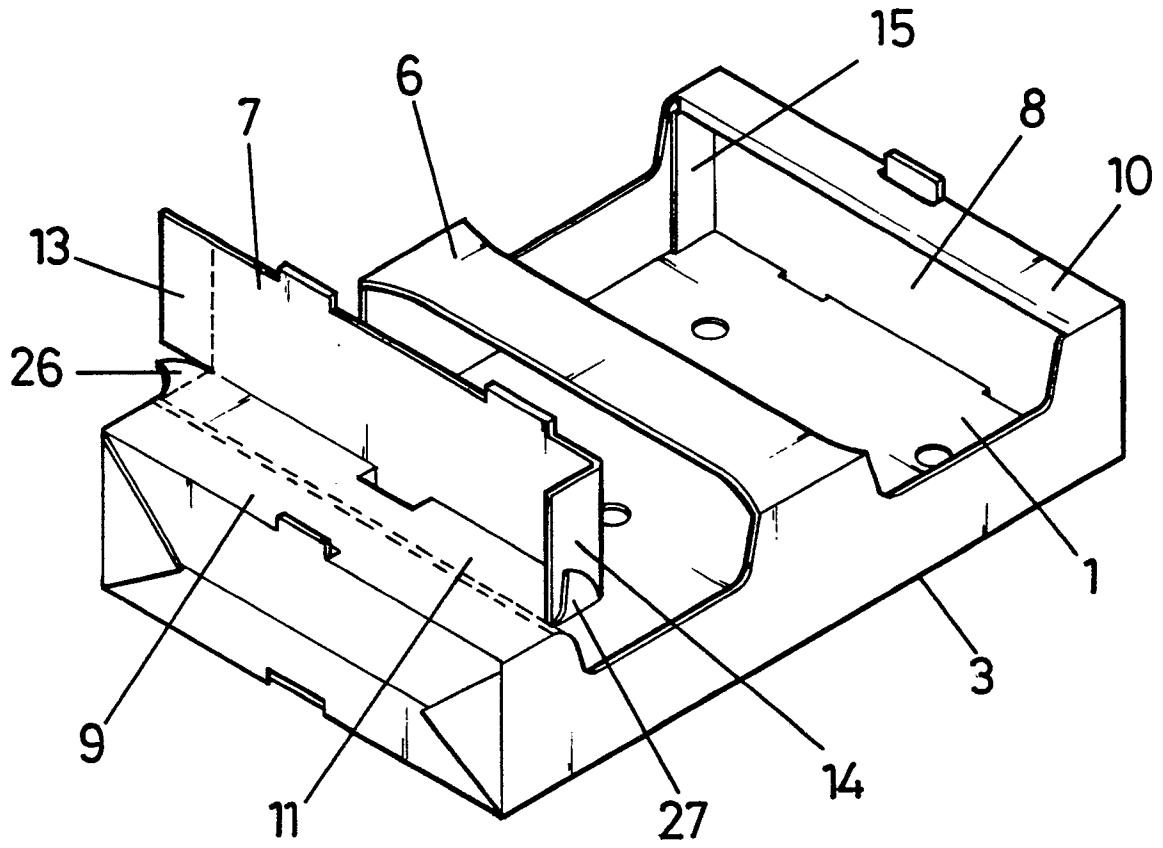


FIG. 3

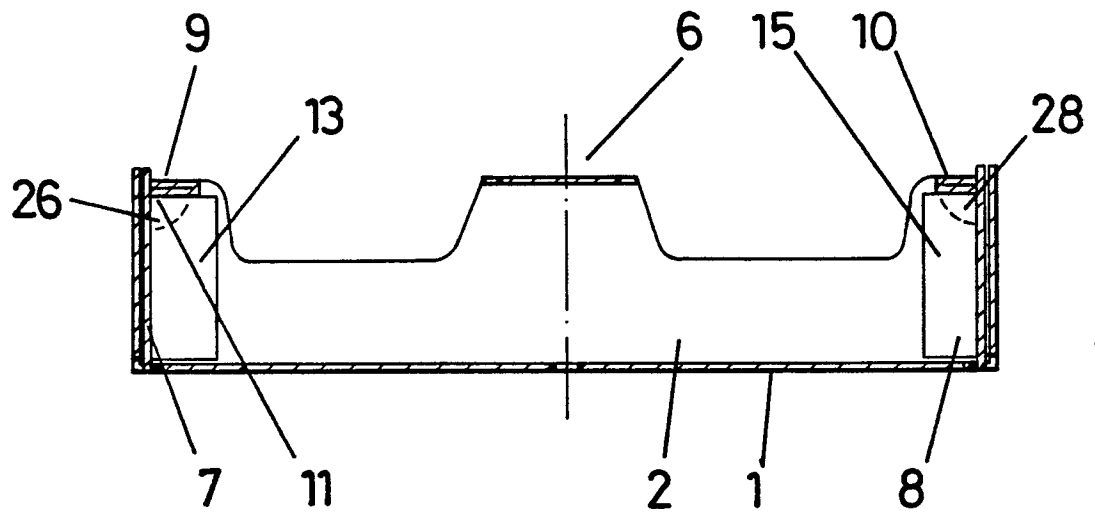


FIG. 4



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	FR-A-2 389 554 (BEGHIN-SAY) * Page 2, line 30 - page 3, line 15; figures 1,2 *	1	B 65 D 5/08 B 65 D 5/46
Y	---	2	
Y	US-A-2 630 265 (HELLAWELL) * Column 3, lines 23-42; figures 6-10 *	2	
A	---	1	
A	US-A-4 658 961 (TAMURA) * Column 3, line 15 - column 4, line 35; figures 4-6 *	1	
A	---	1,2	
A	CA-A-1 125 245 (STARRS) * Figures * -----	1,2	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 65 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28-03-1990	Examiner MARTENS L.G.R.
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