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(54) **BOX PROVIDED WITH A LID HINGEDLY CONNECTED THERETO**

BEHÄLTER MIT EINEM GELENKIG DAMIT VERBUNDENEN DECKEL

CONTENEUR AVEC UN COUVERCLE QUI LUI EST CONNECTE DE MANIERE ARTICULE

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(56) References cited:
GB-A- 408 334 **GB-A- 550 677**
NL-A- 7 411 771

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Description

[0001] The invention relates to a box, comprising:

a container which is provided on one side with at least one outwardly forced first hinge part;
a sheet-metal lid which is provided with a corresponding number of lips which each form a second hinge part and are curved inward;
which first and second hinge parts form part of a hinge;
which lid in the closed situation of the box has an edge engaging over the rim of the container, which edge remote from the or each hinge is a first curled edge such that the free, sharp end edge of the sheet-metal lid is received in the curled edge such that contact with a user is prevented.

[0002] Such a box is known for instance from GB-A-550 677 or NL-A-7411771 in the name of the present applicant.

[0003] A drawback to the known box is that the lid has an edge in the zone adjoining a hinge which consists of a non-modelled sheet-metal part which, due to the small thickness of the sheet-metal lid, has a sharp end edge. It may occur that in handling the box a user injures his fingers on such a sharp edge.

[0004] It is an object of the invention to embody a box of the stated type such that it does not have the mentioned drawback.

[0005] In respect of this objective the box according to the invention has the feature that said edge is bent inward in the zone adjoining a hinge such as to prevent a user making contact with the free sharp end edge of the sheet-metal lid in this zone.

[0006] Another embodiment has the special feature that said edge in said zone is a second curled edge.

[0007] This latter variant can advantageously have the special feature that the first curled edge is formed integrally with the second curled edge.

[0008] It is noted that the latter described two variants can advantageously be manufactured such that the curled edge or all curled edge parts can be formed by a shaping tool in one simultaneous process.

[0009] Yet another embodiment has the feature that a hinge comprises a hinge pin extending through the first and the second hinge parts.

[0010] This latter embodiment has the drawback that a separate component, i.e. the hinge pin, is required to form the hinge.

[0011] In this latter context an advantageous embodiment has the special feature that the first and the second hinge parts co-act directly with each other to form a hinge.

[0012] The invention will now be elucidated with reference to the annexed drawings. Herein:

figure 1 shows a partly perspective view of a box

according to the invention in a first embodiment;
figure 2 shows the cross-section II-II of figure 1;
figure 3 is a partly perspective view of a second embodiment;
figure 4 shows the cross-section IV-IV of figure 3;
figure 5 is a partly perspective view of a third embodiment;
figure 6 shows the cross-section VI-VI of figure 5;
figure 7 is a partly perspective view of the lid according to figure 1; and
figure 8 shows a view corresponding with figure 7 of a variant.

[0013] Figure 1 shows a box consisting entirely of sheet-metal, comprising a container 1 which is provided on one side with two outwardly forced first hinge parts 2, 3, a sheet-metal lid 4 which is provided with two lips 5, 6 which each form a second hinge part and are curved inward. The associated first and second hinge parts form part of a hinge.

[0014] In the closed situation of box 7 the lid 4 has an edge 9 gripping over the rim 8 of container 1, which edge remote from hinges 2, 5; 3, 6 is a first curled edge 10 such that the free, sharp end edge 11 of lid 4 is received in curled edge 10 such that contact with a user is prevented.

[0015] Said edge 9 has a form in the zones adjoining hinges 2, 5; 3, 6 such as to prevent contact by a user with the free, sharp end edge 12 of sheet-metal lid 4 in these zones. Said edge is bent inward in said zones for this purpose. These edge zones are designated 13, 14, 15.

[0016] It will be particularly apparent from figure 2 that the inward bent sharp end edge 12 has a relative position such that contact with a user is effectively prevented.

[0017] Figures 3 and 4 show a variant which corresponds by and large with the embodiment of figures 1 and 2. Box 33 according to these figures 3 and 4 has only one hinge which in principle is embodied in the same manner as hinges 2, 5; 3, 6. In this embodiment a first hinge part 14 is comparatively long and co-acts with an inwardly curved, equally long lip 15 formed on lid 16. The sharp end edges to which the invention relates are designated respectively 17 and 18. As shown particularly clearly in figure 4, this sharp end edge is bent inward in the same way as edge 12 of figures 1 and 2.

[0018] Figures 5 and 6 show a box 19 wherein sharp end edge 20 is made inaccessible to a user in a manner other than in figures 1-4. The curled edge 10, for which the end edge of the lid 21 according to the invention is formed, is described with reference to figures 1 and 2. In the case of lid 21 this curled edge extends to a position close to hinges 2, 5; 3, 6 and therebetween. The diverse curled edge parts are designated respectively 22, 23, 24. It will be apparent that in this way the sharp end edge 20 is effectively made inaccessible.

[0019] Figure 7 shows the lid 4 according to figure 1

at the stage in which lips 5 and 6 have not yet been bent to form the hinges drawn in figure 1. It will be apparent that the longitudinal edges of the lips 5, 6, all designated 27 for the sake of convenience and extending transversely of edges 13, 14, 15, have been cut with a sharp edge and are therefore themselves sharp.

[0020] Figure 8 shows a variant in which the edges designated 27' are bent inward. A subsequent source of damage to clothing of a user or of injury is thus eliminated since a hinge formed on the basis of the structure of figure 8 no longer has any sharp end zones either.

[0021] It is noted that the boxes in question are generally provided with printing. This printing will generally contain information relating to the products stored in the box, for instance cigars, coloured chalk for children or other articles or objects.

Claims

1. Box (7;23;19), comprising:

a container which is provided on one side with at least one outwardly forced first hinge part (2,3;14);

a sheet-metal lid (4;16;21) which is provided with a corresponding number of lips (5,6;15) which each form a second hinge part and are curved inward;

which first (2,3;14) and second (5,6;15) hinge parts form part of a hinge;

which lid (4;16) in the closed situation of the box has an edge (9) engaging over the rim of the container, which edge remote from the or each hinge (2,5;3,6;14,15) is a first curled edge (10; 18) such that the free, sharp end edge of the sheet-metal lid is received in the curled edge (10) such that contact with a user is prevented,

characterized in that

said edge (9;17;20) is bent inward in the zone (13,14,15) adjoining a hinge (2,5;3,6) such as to prevent a user making contact with the free, sharp end edge (12;18) of the sheet-metal lid (4) in this zone (13,14,15).

2. Box as claimed in claim 1,

characterized in that

said edge (20) in said zone is a second curled edge (22,23,24).

3. Box as claimed in claim 2,

characterized in that

the first curled edge (10;18) is formed integrally with the second curled edge (22,23,24).

4. Box as claimed in claim 1,

characterized in that

a hinge comprises a hinge pin extending through the first (2,3;14) and the second hinge parts (5,6;15).

5. Box as claimed in claim 1,

characterized in that

the first (2,3;14) and the second hinge parts (5,6;15) co-act directly with each other to form a hinge.

6. Box as claimed in claim 1,

characterized in that

the longitudinal edges of the lips (27,27') extending transversely of the end edge of the lid are bent inward.

Patentansprüche

1. Schachtel (7; 23; 19) mit:

einem Behälter, der auf einer Seite mit mindestens einem nach außen gedrückten ersten Scharnierteil (2, 3, 14) versehen ist;

einem Deckel (4; 16; 21) aus Metallblech, der mit einer entsprechenden Anzahl von Lippen (5, 6; 15) versehen ist, die jeweils einen zweiten Scharnierteil bilden und nach innen gebogen sind;

wobei die ersten (2, 3; 14) und zweiten (5, 6; 15) Scharnierteile Bestandteile eines Scharniers bilden;

wobei der Deckel (4; 16) bei geschlossener Schachtel mit einer Kante (9) über den Rand des Behälters greift, wobei die Kante im Abstand von dem oder jedem Scharnier (2, 5; 3, 6; 14, 15) ein erster gerollter Rand (10; 18) ist, derart, daß die freie, scharfe Endkante des Blechdeckels in dem gerollten Rand (10) so aufgenommen ist, daß eine Berührung durch einen Benutzer verhindert wird,

dadurch gekennzeichnet, daß

die Kante (9; 17; 20) in der an ein Scharnier (2, 5; 3, 6) angrenzenden Zone (13, 14, 15) nach innen gebogen ist derart, daß eine Berührung des Benutzers mit der freien, scharfen Endkante (12, 18) des Blechdeckels (4) in dieser Zone (13, 14, 15) verhindert wird.

2. Schachtel nach Anspruch 1,

dadurch gekennzeichnet, daß

die Kante (20) in der Zone ein zweiter gerollter Rand (22, 23, 24) ist.

3. Schachtel nach Anspruch 2,

dadurch gekennzeichnet, daß

der erste gerollte Rand (10; 18) einstückig mit dem zweiten gerollten Rand (22, 23, 24) gebildet ist.

4. Schachtel nach Anspruch 1,
dadurch gekennzeichnet, daß
 ein Scharnier einen Schamierstift aufweist,
 der sich durch die ersten (2, 3; 14) und zweiten
 Scharnierteile (5, 6; 15) hindurch erstreckt.

5. Schachtel nach Anspruch 1,
dadurch gekennzeichnet, daß
 die ersten (2, 3; 14) und zweiten Scharnierteile
 (5, 6; 15) direkt zur Bildung eines Scharniers in-
 einandergreifen.

6. Schachtel nach Anspruch 1,
dadurch gekennzeichnet, daß
 die Längskanten der Lippen (27, 27'), die sich
 quer zur Endkante des Deckels erstrecken, ein-
 wärts gebogen sind.

Revendications

1. Boîte (7 ; 23 ; 19) comprenant :

un récipient muni sur une face d'au moins une
 première partie d'articulation forcée vers l'exté-
 rieur (2, 3 ; 14) ;

un couvercle en tôle métallique (4; 16; 21) muni
 d'un nombre correspondant de lèvres (5, 6; 15)
 formant chacune une seconde partie d'articu-
 lation et qui sont recourbées vers l'intérieur ;
 les première (2, 3 ; 14) et seconde (5, 6 ; 15)
 parties d'articulation faisant partie d'une
 articulation ;

le couvercle (4 ; 16) dans l'état fermé de la boîte
 ayant un bord (9) en prise sur la bordure du ré-
 cipient, le bord distant de la ou de chaque arti-
 culation (2, 5 ; 3, 6 ; 14, 15) étant un premier
 bord recourbé (10 ; 18) de sorte que le bord
 d'extrémité libre tranchant du couvercle en tôle
 métallique est reçu dans le bord recourbé (10)
 de façon à empêcher le contact avec un utilis-
 teur,

caractérisé en ce que

ledit bord (9 ; 17 ; 20) est plié vers l'intérieur
 dans la zone (13, 14, 15) attenante à une articula-
 tion (2, 5 ; 3, 6) de telle sorte à éviter à un utilisateur
 de toucher le bord d'extrémité tranchant libre (12 ;
 18) du couvercle en tôle métallique (4) dans cette
 zone (13, 14, 15).

2. Boîte selon la revendication 1,

caractérisée en ce que :

ledit bord (20) dans ladite zone est un second
 bord recourbé (22, 23, 24).

3. Boîte selon la revendication 2,

caractérisée en ce que :

le premier bord recourbé (10 ; 18) est formé
 d'un seul tenant avec le second bord recourbé (22,
 23, 24).

4. Boîte selon la revendication 1,

caractérisée en ce que :

une articulation comprend une tige d'articula-
 tion traversant les première (2, 3 ; 14) et seconde
 parties d'articulation (5, 6 ; 15).

5. Boîte selon la revendication 1,

caractérisée en ce que :

la première (2, 3; 14) et la seconde parties
 d'articulation (5, 6 ; 15) agissent conjointement di-
 rectement entre elles pour former une articulation.

6. Boîte selon la revendication 1,

caractérisée en ce que :

les bords longitudinaux des lèvres (27, 27')
 s'étendant transversalement par rapport au bord
 d'extrémité de la lèvre sont pliés vers l'intérieur.

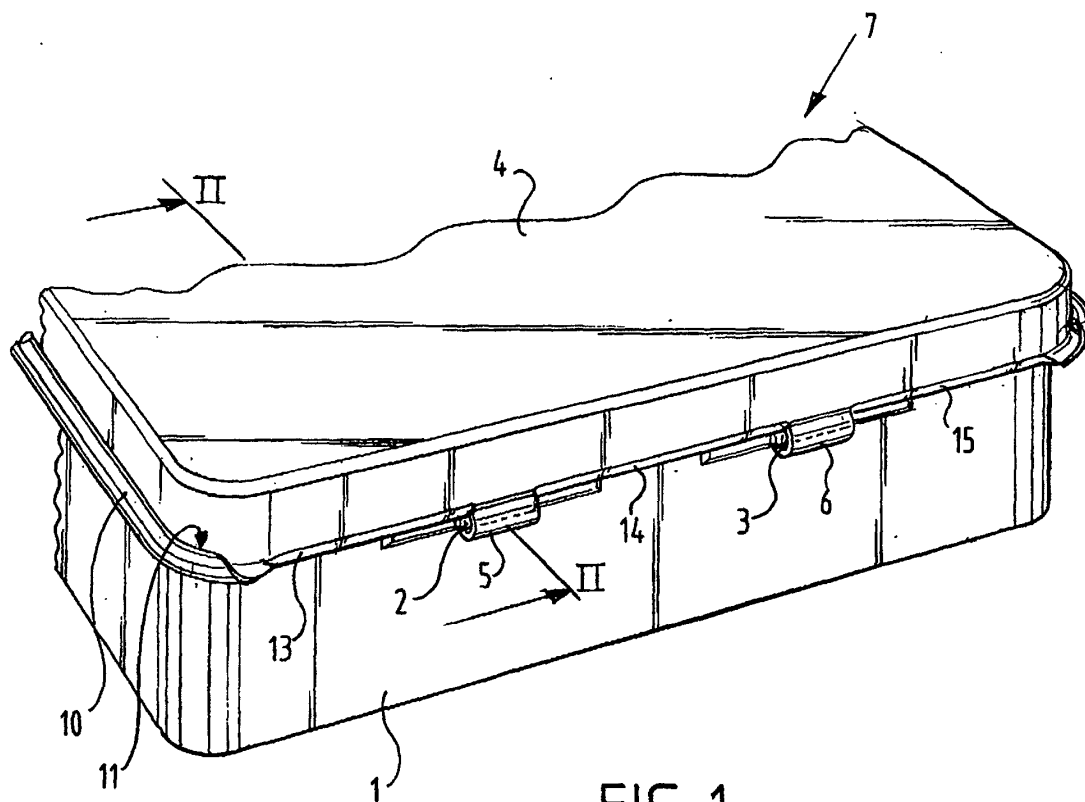


FIG. 1

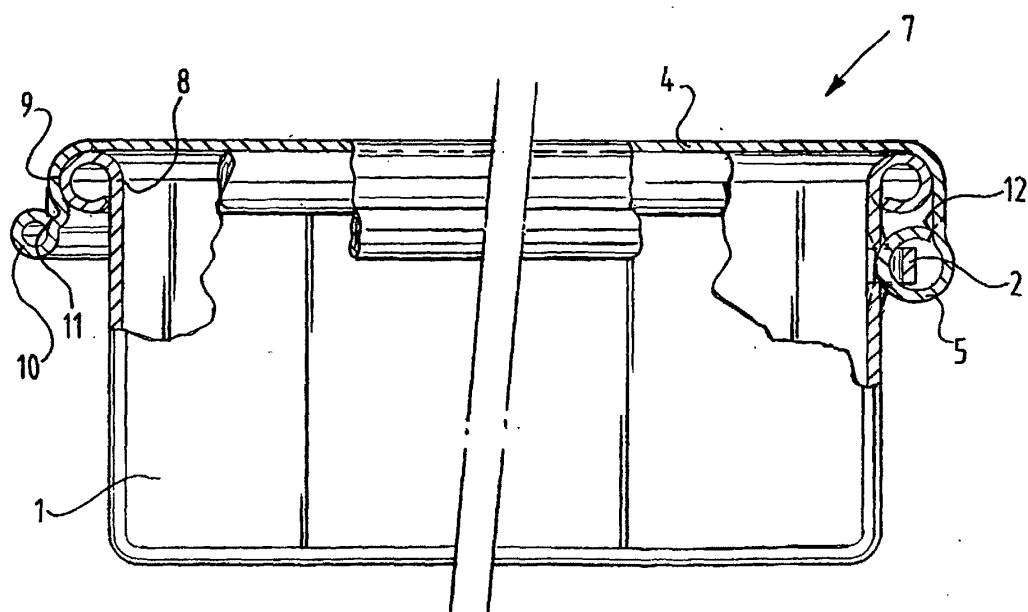


FIG. 2

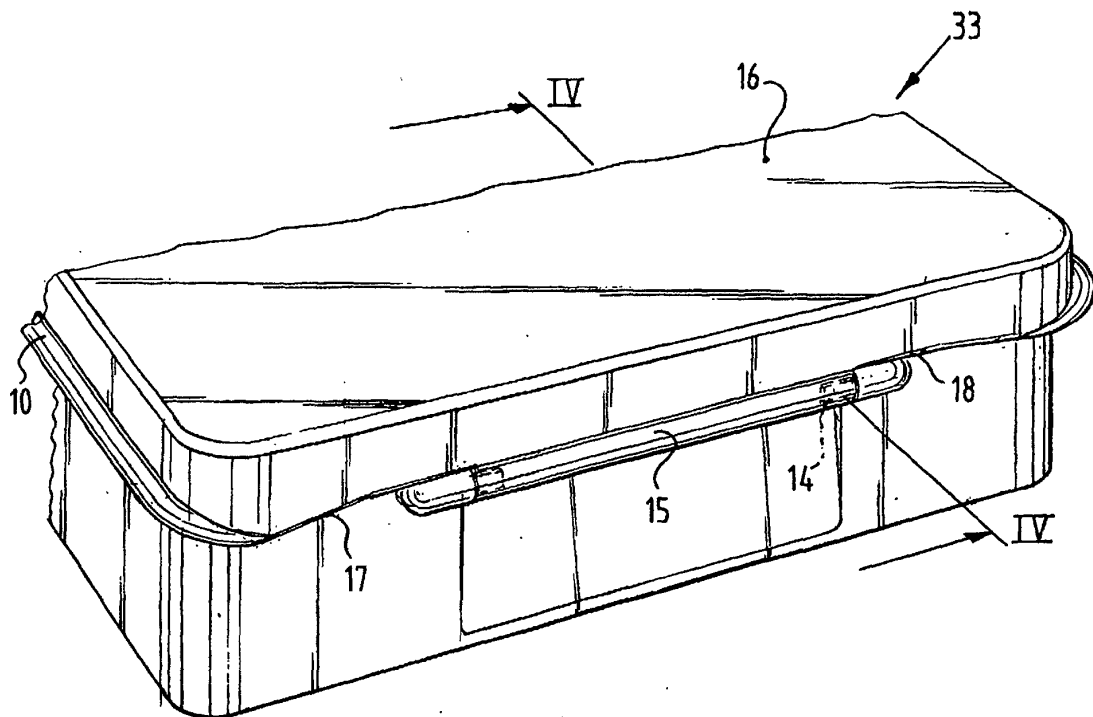


FIG. 3.

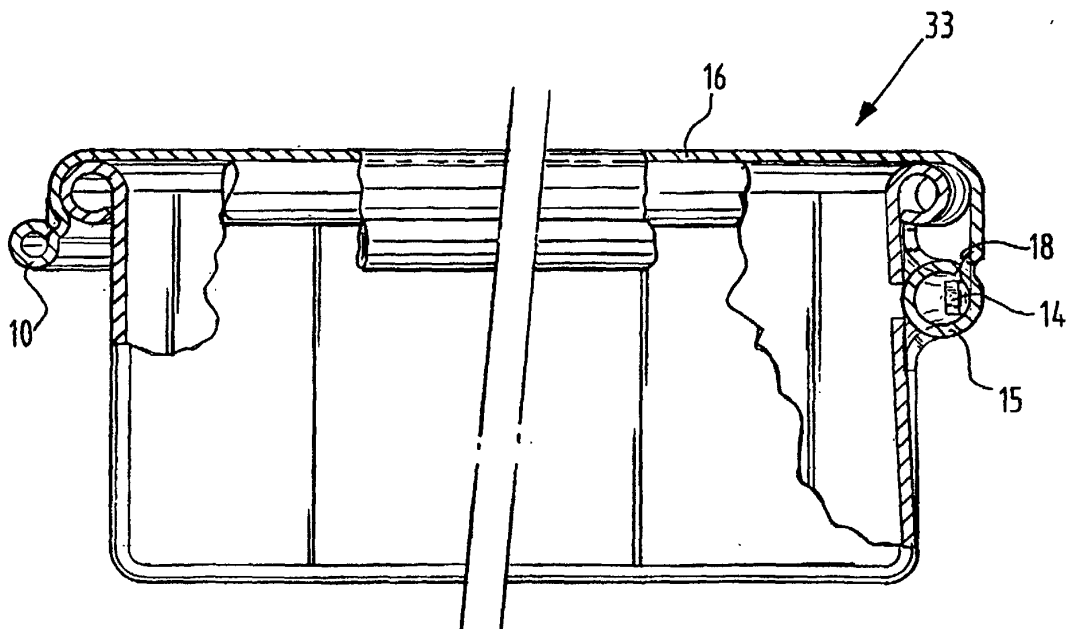


FIG. 4

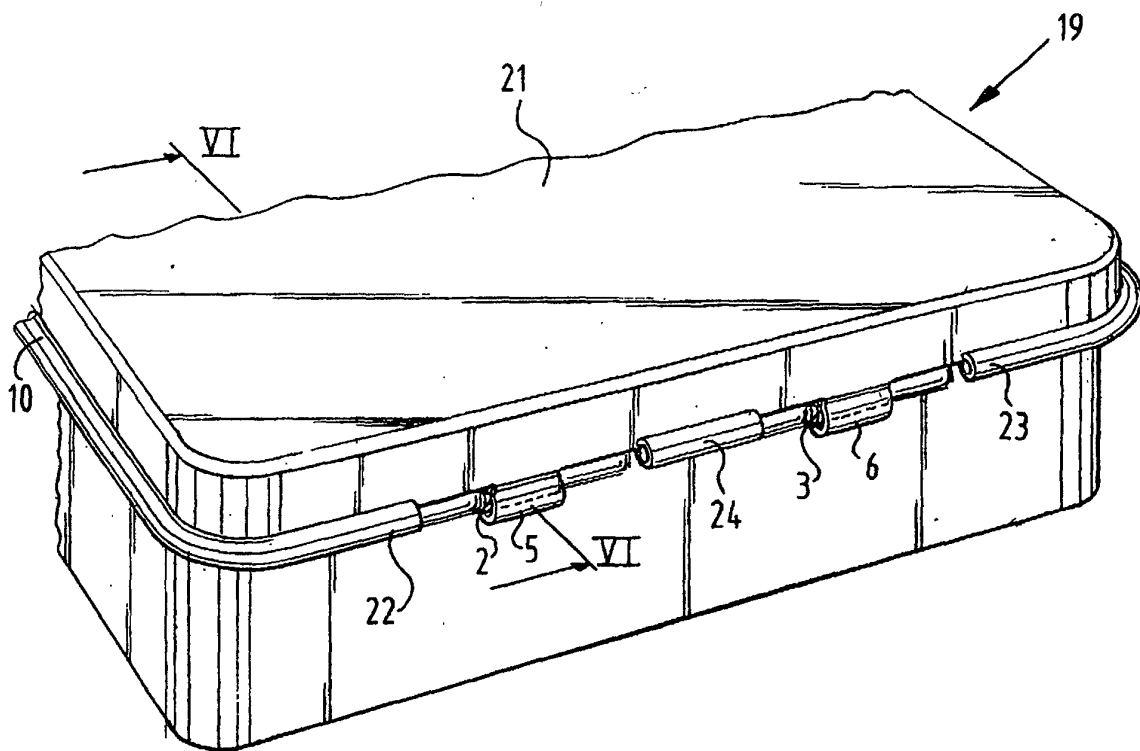


FIG. 5

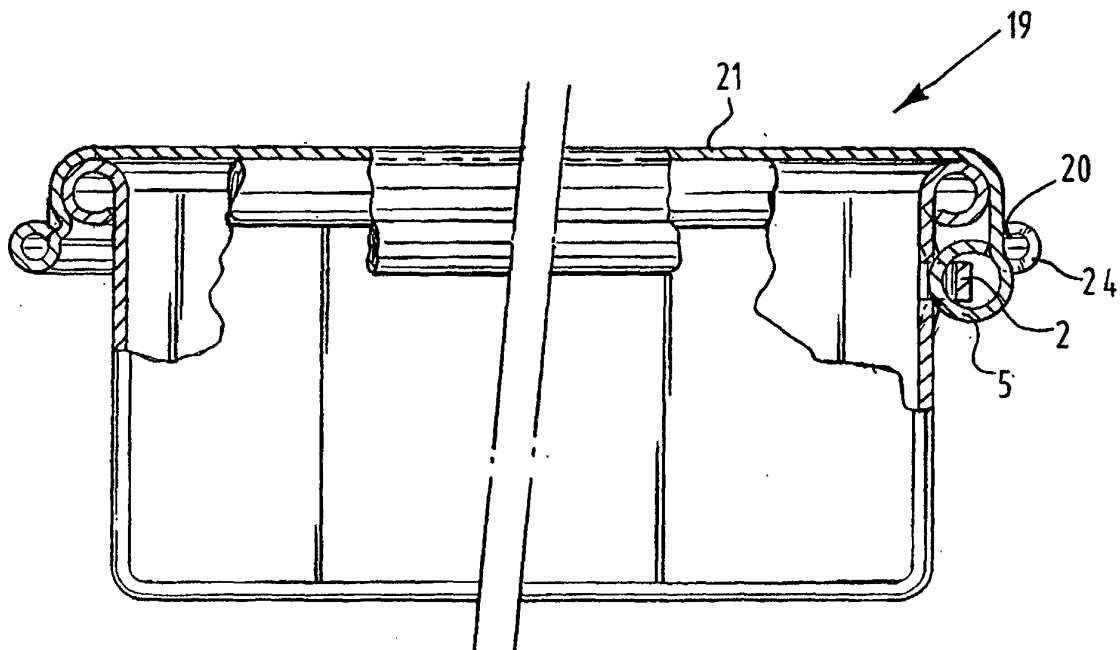


FIG. 6

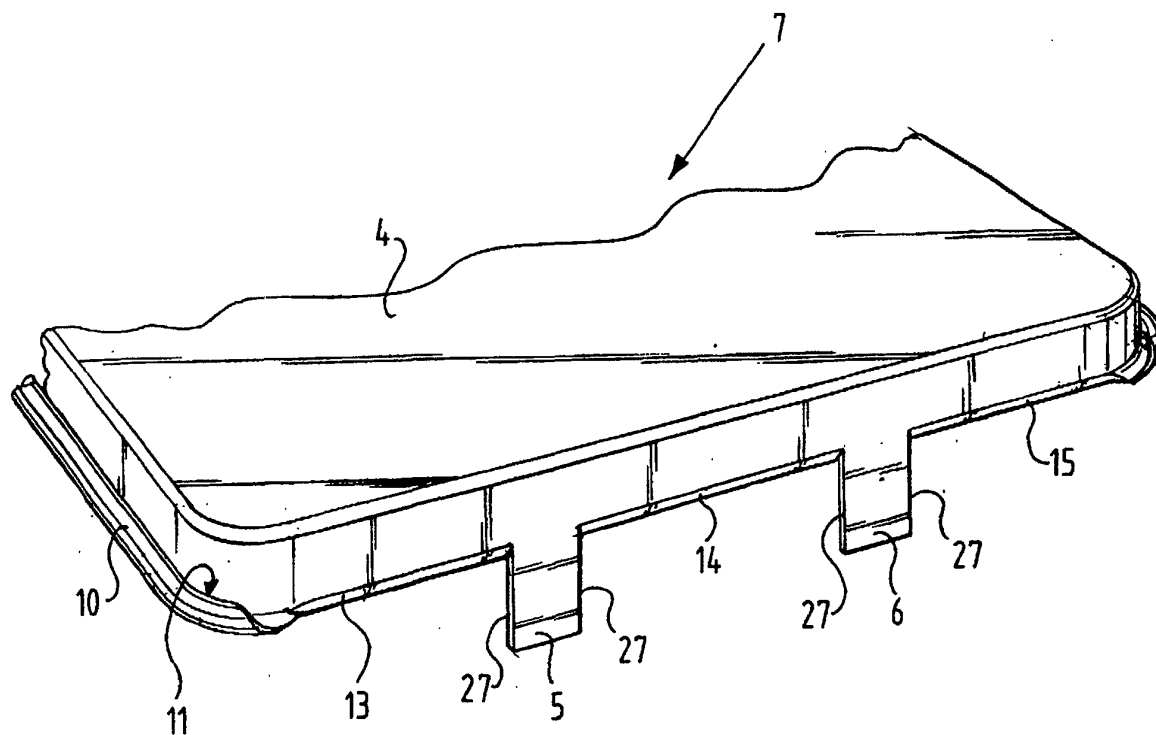


FIG. 7

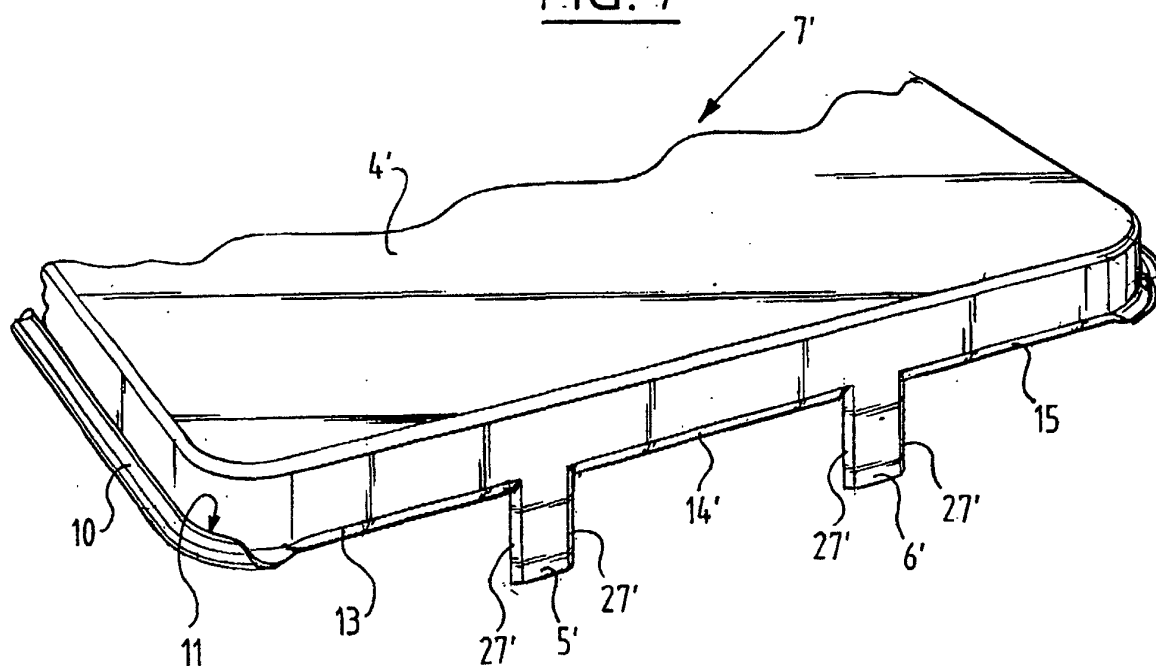


FIG. 8