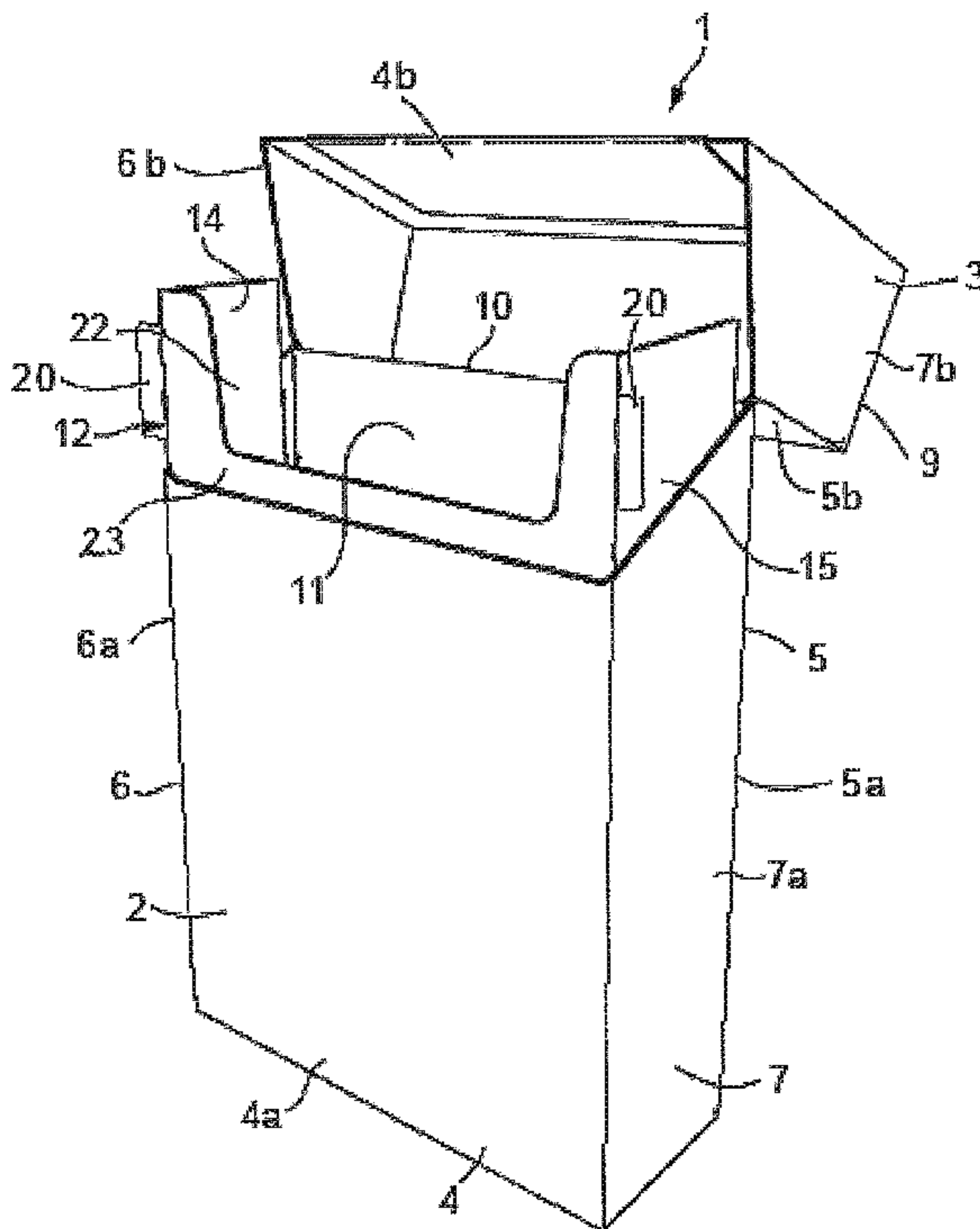




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(57) Abrégé/Abstract:

An inner frame (12 for a pack (1) is disclosed. It comprises a front panel (23) and a side panel (24, 25), wherein the front (12) and/or side panels (24, 25) comprise multiple layers.

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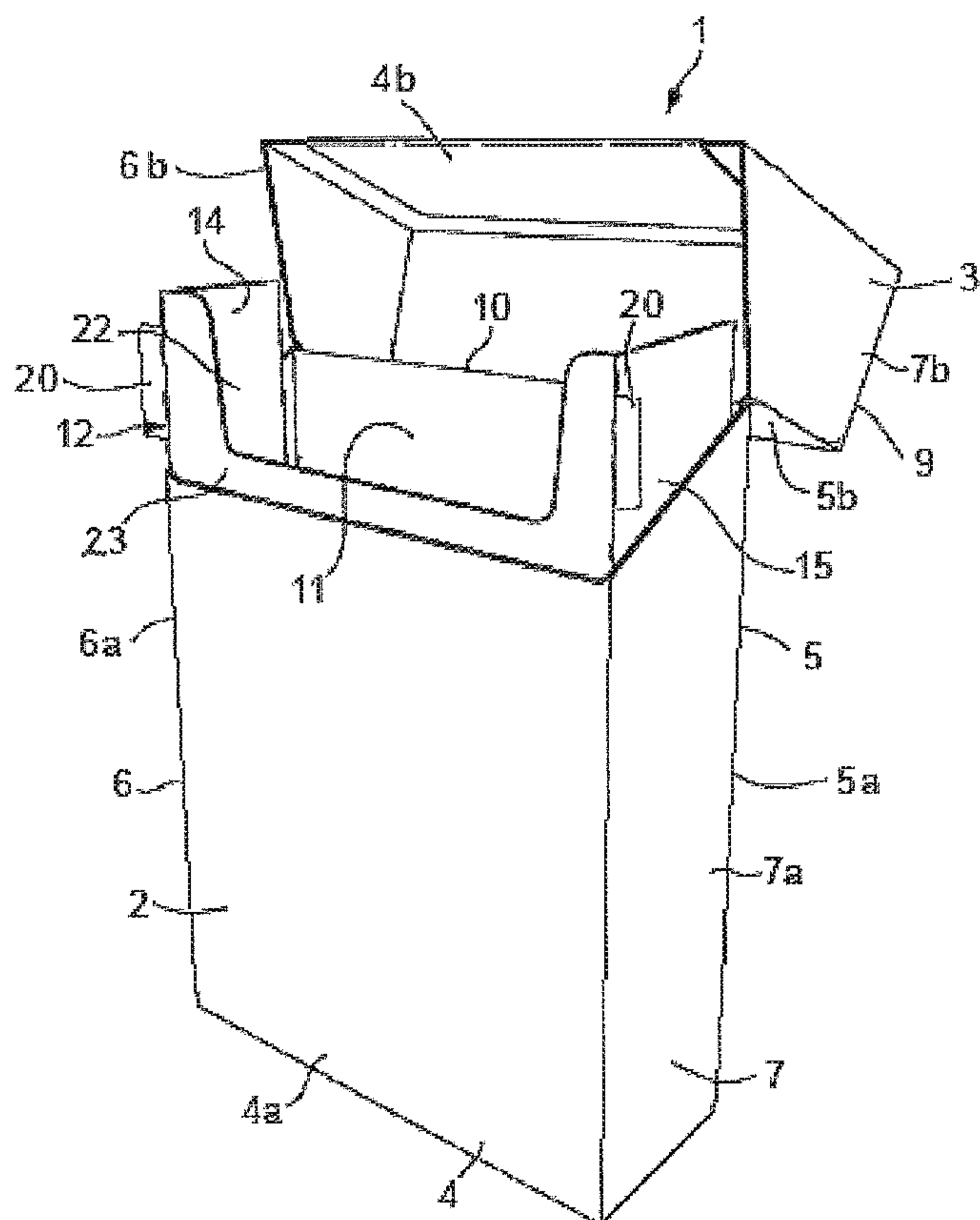


FIG. 1

(57) Abstract: An inner frame (12 for a pack (1) is dis-
closed. It comprises a front panel (23) and a side panel
(24, 25), wherein the front (12) and/or side panels (24,
25) comprise multiple layers.

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SMOKING ARTICLE PACK WITH A BODY AND AN INNER FRAME

Field of the Invention

The invention relates to an inner frame for a pack and to an inner frame for a tobacco
5 industry pack. The invention also relates to a pack comprising an inner frame according
to the invention.

Background

Conventional tobacco industry packs are generally parallelepiped shaped packs having
10 a body portion with an access opening that is reinforced by a support structure that
protrudes from the access opening and surrounds tobacco industry products, for
instance smoking articles such as cigarettes, contained in the pack. Typically, the pack
further comprises a lid configured to open and close the access opening and which
extends over the protruding part of the support structure when the lid is closed.

15

Summary

According to the invention, there is provided an inner frame for a pack, comprising a
front panel and a side panel, wherein the front and/or side panels comprise multiple
layers.

20

The front and side panels may be formed from a single sheet of material. Preferably, the
sheet of material includes fold lines to enable the sheet to be folded about said fold lines
to form said multiple layers.

25 In some embodiments, the inner frame comprises a side panel and a side reinforcement
panel, the side reinforcement panel being positionable so that it overlaps its
corresponding side panel to form a multi-layered side wall.

The side panel may join the front panel at a first fold line and the side reinforcement
30 panel may join the side panel at a second fold line.

In some embodiments, the first and second fold lines are parallel. Alternatively, the
first and second fold lines may extend at an angle relative to each other.

35 In any of the aforementioned embodiments, the front panel may comprise a front
reinforcement panel that joins the front panel at a front panel fold line, the front

reinforcement panel being foldable about said front panel fold line so that it overlaps the front panel to form a multi-layered front wall.

In another embodiment, the front panel comprises a front reinforcement panel that joins the front panel at a front panel fold line and side reinforcement panels that extend from the front
5 reinforcement panel and are joined thereto by a second fold line, the front reinforcement panel being folded about the front panel fold line so that the front reinforcement panel overlaps the front panel and the side reinforcement panels overlap corresponding side wall panels to form multi-layered front and side walls.

The side panel may have a major surface that overlaps a major surface of the side
10 reinforcement panel. The major surface of the side reinforcement panel can be held against the major surface of the side panel by adhesive.

The invention also provides a blank for forming an inner frame according to the invention, for a pack.

The invention also provides a method of forming an inner frame comprising the steps of
15 providing a blank comprising a front panel, a side panel and a side reinforcement panel, and positioning the side reinforcement panel so that it overlaps the side panel.

The invention also provides an inner frame for a tobacco industry pack, comprising a front panel and a side panel, wherein the front and/or side panels comprise multiple layers. The inner frame may comprise any of the features mentioned above.

20 The invention also provides a pack comprising the inner frame according to the invention.

There is also provided a smoking article pack comprising a body having front and rear walls separated by side walls, a hinged lid integrally connected to the rear wall and pivotable relative to the rear wall between open and closed positions and, an inner frame received in the body comprising a front panel that abuts the front wall of the body and side panels, each side
25 panel being joined to the front panel by a first fold-line and extending perpendicularly from

respective edges of the front panel towards the rear wall, wherein each of the side panels comprise side reinforcement panels folded relative to the side panels along a second fold line that extends parallel to the first fold line, each side panel and its associated side reinforcement panel having major surfaces that abut each other, the major surfaces of each side panel and its
5 associated side reinforcement panel being of the same size and shape to overlap over their whole surface area, and wherein the major surface of each side panel and its associated side reinforcement panel are attached to each other using an adhesive.

Brief Description of the Drawings

Embodiments of the invention will now be described, by way of example only, with reference
10 the accompanying drawings in which:

Figure 1 shows a perspective view of an inner frame according to a first embodiment of the invention, disposed in a pack;

Figure 2 shows a front view of the inner frame of Figure 1;

Figure 3 shows a front view of an inner frame according to a second embodiment of the invention; and,

Figure 4 shows a front view of an inner frame according to a third embodiment of the invention.

5

Detailed Description

The inner frame of a tobacco industry pack may increase the rigidity of the pack such that the tobacco industry products held therein are better protected from mechanical damage. The lid and inner frame also engage by friction upon opening and closing the lid and so reduces the risk of the pack accidentally opening.

10

A pack 1 is shown in Figure 1 and comprises a generally parallelepiped container having a body 2 and a hinged lid 3. The pack 1 has major front and rear walls 4, 5, minor side walls 6, 7, a bottom wall 8 and a top wall 9. The front, rear and side walls 4, 5, 6, 7
15 comprise front, rear and side wall body panels 4a, 5a, 6a, 7a, and front, rear and side wall lid panels 4b, 5b, 6b, 7b. The hinged lid 3 is integrally connected to the body 2 at a folding hinge line 10 between the rear body panel 5a and the rear lid panel 5b and is pivotable between an open position in which an access opening 11 in the top of the body 2 is exposed to allow access to tobacco industry products contained therein, and a
20 closed position. An inner frame 12 having a front panel 23 and side panels 24, 25 is disposed within the body 2 of the pack 1 to project out of the opening 11 therein. The inner frame 12 may include a cut-out 22 in the front panel 23 to provide easy access to the contents of the pack 1.

25

Figure 2 shows a blank 21 used to form the inner frame 12 of Figure 1. The blank 21 comprises a single sheet of material, such as cardboard, that comprises a front panel 23 that meets side panels 24, 25 at a first fold line 16, 17. The blank 21 is folded at each fold line 16, 17 and is inserted into the body 2 so that the side panels 24, 25 extend at right angles to the front panel 23. When the inner frame 12 is inserted into the body 2 the side wall body panels 6a, 7a abut the inner frame side panels 24, 25 and the front wall body panel 4a abuts the inner frame front panel 23. When the lid 3 is in the closed position the inner frame 12 is received in the lid 3 so that the front wall body panel 4a abuts the inner frame front panel 23. Likewise, the side wall lid panels 6b, 7b abut the inner frame side panels 24, 25. Therefore, the inner frame front panel 23 and side
30 panels 24, 25 provide an additional layer of material around the opening 11 of the pack 1 to provide reinforcement for the front, rear and side walls 4, 5, 6, 7.

35

The side panels 24,25 of the inner frame 12 further comprise side reinforcement panels 26, 27 that each meet a corresponding side panel 24, 25 at a second fold line 18, 19 which extends in a direction parallel to the first fold line 16, 17. The side reinforcement panels 26, 27 are folded at the second fold line 18, 19 so that a major surface of each side reinforcement panel 26, 27 abuts against a major surface of a corresponding side panel 24, 25 to form a double layer. The side reinforcement panels 26, 27 are preferably folded about respective second fold line 18, 19 in the direction down into the page when viewing Figure 2 so that they lie against an inner surface of the side panels 24, 25, i.e. the surface of each of the side panels 24, 25 which is not visible in Figure 2. However, the side reinforcement panels 24,25 may alternatively be folded about respective second fold line 18, 19 in an opposite direction, so that they lie across a front face of the side panels 24, 25, i.e. the face of each of the side panels 24, 25 which are visible in Figure 2. The side reinforcement panels 26, 27 may be held against the side panels 24, 25 using an adhesive. The use of adhesive may further increase the robustness and rigidity of the inner frame.

The extra layer of material provided by the side reinforcement panels 26, 27 against the side panels 24, 25 improves the rigidity and durability of the inner frame 12 and forms a dual layered side wall. Therefore, the contents of the pack 1 is better protected against external forces applied to the pack 1. In one embodiment, each side reinforcement panel 26, 27 may overlap the whole surface area of a corresponding side panel 24, 25, i.e. each side reinforcement panel 26, 27 may be the same size and shape as a corresponding side panel 24,25. However in an alternative embodiment each side reinforcement panel 26, 27 may be of a different size or shape to its corresponding side panel 24,25 and so may only overlap a portion of a major surface of corresponding side panels 24, 25.

The inner frame 12 may include tabs 20 that extend from the side walls 14, 15 to engage the side wall lid panels 6b, 7b when the lid 3 is in the closed position to increase the friction between the lid 3 and the inner frame 12, although these are optional. The increased friction provided by the tabs 20 increases the resistance to the opening of the lid 3, enabling the lid 3 to better stay in the closed position.

It will be appreciated that, in another embodiment one or more further side reinforcement panels may extend from the side reinforcement panels 26, 27 and be

separated from the side reinforcement panels 26, 27 by a fold-line. The side panels 24,25, the side reinforcement panels 26, 27 and any additional side reinforcement panels provide a multi-layered structure to the inner frame , i.e a side wall having more than two layers.

5

A blank 31 for an inner frame 12 of a second embodiment of the invention is shown in Figure 3 and is identical to the first embodiment, with like features retaining the same reference numerals, except that each second fold line 18, 19 extends in a direction perpendicular to the first fold lines 16, 17. In this embodiment, the side reinforcement
10 panels 26, 27 are folded in the direction down into the page when viewing figure 3, although they could also be folded in the opposite direction.

As mentioned above in connection with the first embodiment, additional side reinforcement panels may extend from the side reinforcement panels 26,27 to enable a
15 multi-layered structure to be formed. Furthermore, a combination of the embodiments shown in Figures 2 and 3 is envisaged in which there is a side reinforcement panel 26, 27 extending from both edges of each side panel 24, 25.

Although in the above described embodiments the second fold lines 18, 19 are described
20 as extending in a direction perpendicular or parallel to the first fold lines 16, 17, the second fold lines 18, 19 may alternatively extend at some other angle to the first fold lines 16, 17.

A blank 41 for an inner fame 12 of a third embodiment of the invention is shown in
25 Figure 4. The blank 41 comprises a front panel 23 that meets side panels 24, 25 at first fold lines 42, 43. The blank 41 is folded at each first fold line 42, 43 so that the side panels 24, 25 extend at right angles to the front panel 23. A front reinforcement panel 28 meets the front panel 23 at a second fold line 44. The front reinforcement panel 28 is folded at the second fold line 44 so that a major surface of the front panel 23 overlaps
30 the front reinforcement panel 28. The blank 41 further comprises side reinforcement panels 26, 27 that each meet the front reinforcement panel 28 at a third fold line 45, 46. The side reinforcement panels 26, 27 are folded at the third fold lines 45, 46 so that each of the side reinforcement panels 26, 27 overlaps a corresponding side panel 24, 25. The side reinforcement panels 26, 27 and/or front reinforcement panel 28 may be held
35 against the corresponding inner frame side panels 24, 25 and/or front panel 23 by adhesive which may further increase the rigidity and robustness of the inner frame.

The increased thickness provided by the front reinforcement panel 28 further improves the rigidity and durability of the inner frame 12 and provides a multi-layered front wall. Additionally, the increased rigidity and thickness of the inner frame 12 provided by the front reinforcement panel 28 increases the friction between the inner frame front
5 panel 23 and the front wall lid panel 4b, thus helping the lid 3 to stay in the closed position.

It will be appreciated that either of the first or second embodiments may also be modified so as to provide the inner frame 12 of these embodiments with a front
10 reinforcement panel 28 that extends from the front panel 23 and which is foldable so that it overlaps the front panel 23 by folding it about a fold line 44, similar to that shown in Figure 4. In these embodiments, the front reinforcement panel 28 will not have the side reinforcement panels 26, 27 extending from them, as these extend from the front panel 23 in the embodiment of Figures 2 and 3.

15 Although in the above described embodiments the front reinforcement panel 28 and side reinforcement panels 26, 27 are held in place by adhesive which may further increase the robustness and rigidity of the inner frame. However, in alternate embodiments (not shown) they may be held in place by other means or, they may just
20 be held in place as a result of the pressure applied to the inner frame by the walls of the pack and the tobacco industry products contained therein.

It shall be appreciated that the present invention is not limited to both the side walls and the front wall of the inner frame comprising a double or multi-layered structure. In
25 any of the embodiments described above only one of the side walls may be formed with a double or multi-layered structure. Alternatively, only one of the side walls and the front wall are formed with multiple layers, or only the front wall is formed by multiple layers.

30 Although in the above described embodiments the side reinforcement panels 26, 27 and front reinforcement panel 28 are integrally formed with the side panels 24, 25 and front panel 23 respectively and are positioned by means of folding, in an alternate embodiment (not shown) the side reinforcement panels 26, 27 and/or front
35 reinforcement panel 28 may be separate sections of material that are arranged against respective side panels 24, 25 and/or front panel using adhesive.

Although in the above described embodiments the inner frame 12 is described for use with a hinged-lid pack, in alternate embodiments (not shown) the inner frame may be used with other pack designs, for example, slide-packs or telescopically extending packs.

5

As used herein, the term “smoking article” includes smokeable products such as cigarettes, cigars and cigarillos whether based on tobacco, tobacco derivatives, expanded tobacco, reconstituted tobacco or tobacco substitutes and also heat-not-burn products. The smoking article may be provided with a filter for the gaseous flow drawn
10 by the smoker.

As used herein, the term “tobacco industry pack” includes any pack that can receive and contain a tobacco industry product.

15 A tobacco industry product refers to any item made in, or sold by the tobacco industry, typically including a) cigarettes, cigarillos, cigars, tobacco for pipes or for roll-your-own cigarettes, (whether based on tobacco, tobacco derivatives, expanded tobacco, reconstituted tobacco or tobacco substitutes); b) non-smoking products incorporating tobacco, tobacco derivatives, expanded tobacco, reconstituted tobacco or tobacco
20 substitutes such as snuff, snus, hard tobacco, and heat-not-burn products; and c) other nicotine-delivery systems such as inhalers, lozenges and gum. This list is not intended to be exclusive, but merely illustrates a range of products which are made and sold in the tobacco industry.

25 In order to address various issues and advance the art, the entirety of this disclosure shows by way of illustration various embodiments in which the claimed invention(s) may be practiced and provide for a superior inner frame. The advantages and features of the disclosure are of a representative sample of embodiments only, and are not exhaustive and/or exclusive. They are presented only to assist in understanding and
30 teach the claimed features. It is to be understood that advantages, embodiments, examples, functions, features, structures, and/or other aspects of the disclosure are not to be considered limitations on the disclosure as defined by the claims or limitations on equivalents to the claims, and that other embodiments may be utilised and modifications may be made without departing from the scope and/or spirit of the
35 disclosure. Various embodiments may suitably comprise, consist of, or consist essentially of, various combinations of the disclosed elements, components, features,

parts, steps, means, etc. In addition, the disclosure includes other inventions not presently claimed, but which may be claimed in future.

CLAIMS:

1. A smoking article pack comprising a body having front and rear walls separated by side walls, a hinged lid integrally connected to the rear wall and pivotable relative to the rear wall between open and closed positions and, an inner frame received in the
5 body comprising a front panel that abuts the front wall of the body and side panels, each side panel being joined to the front panel by a first fold-line and extending perpendicularly from respective edges of the front panel towards the rear wall, wherein each of the side panels comprise side reinforcement panels folded relative to the side panels along a second fold line that extends parallel to the first fold line, each side panel and its associated side reinforcement
10 panel having major surfaces that abut each other, the major surfaces of each side panel and its associated side reinforcement panel being of the same size and shape to overlap over their whole surface area, and wherein the major surface of each side panel and its associated side reinforcement panel are attached to each other using an adhesive.
2. A pack according to claim 1, wherein the front and side panels are formed from
15 a single sheet of material.
3. A pack according to claim 1 or 2, wherein the first and second fold lines are parallel.
4. A pack according to claim 1 or 2, wherein the first and second fold lines extend at an angle relative to each other.
- 20 5. A pack according to any one of claims 1 to 4, wherein the front panel comprises a front reinforcement panel that joins the front panel at a front panel fold line, the front reinforcement panel being foldable about said front panel fold line so that it overlaps the front panel to form a multi-layered front wall.

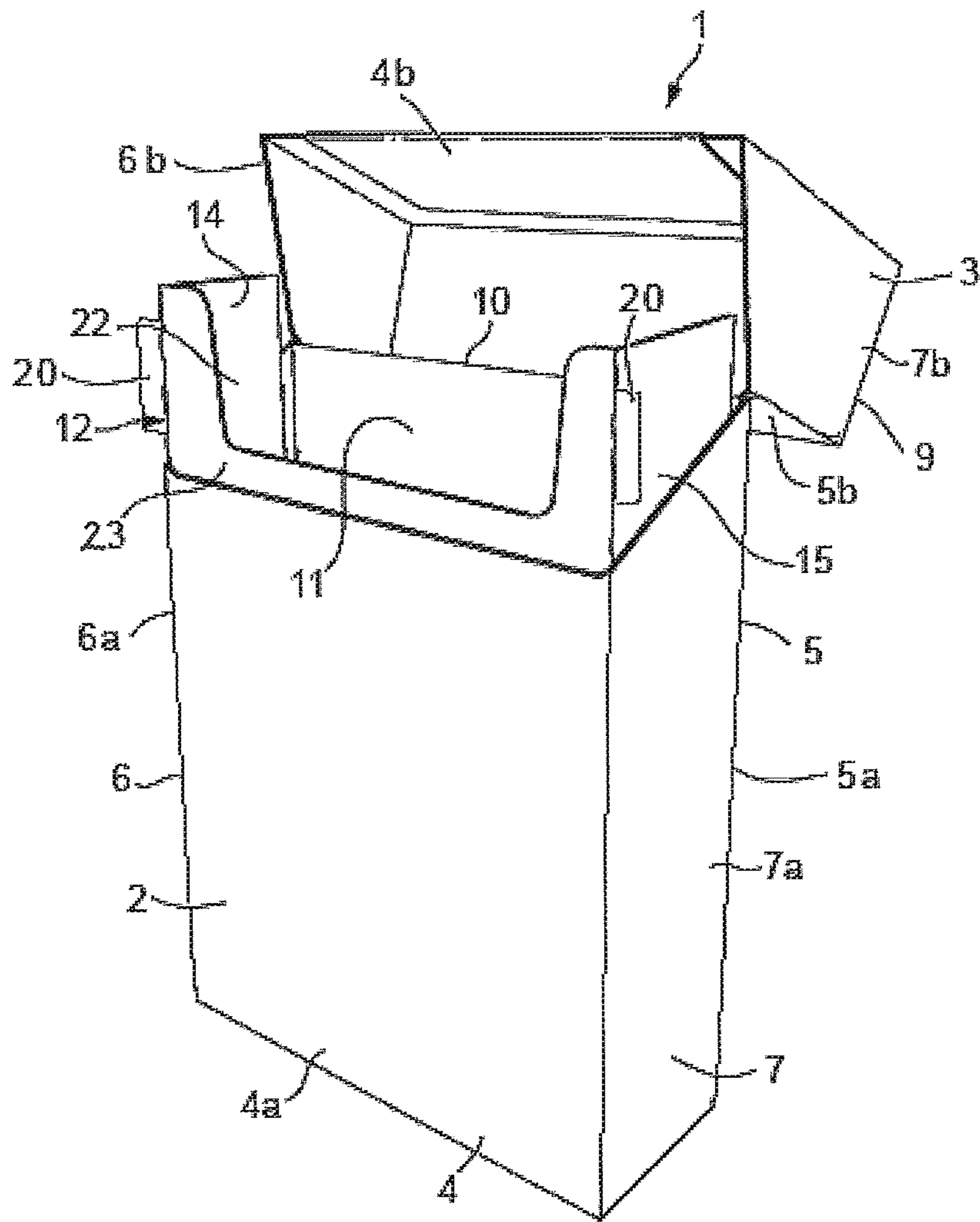


FIG. 1

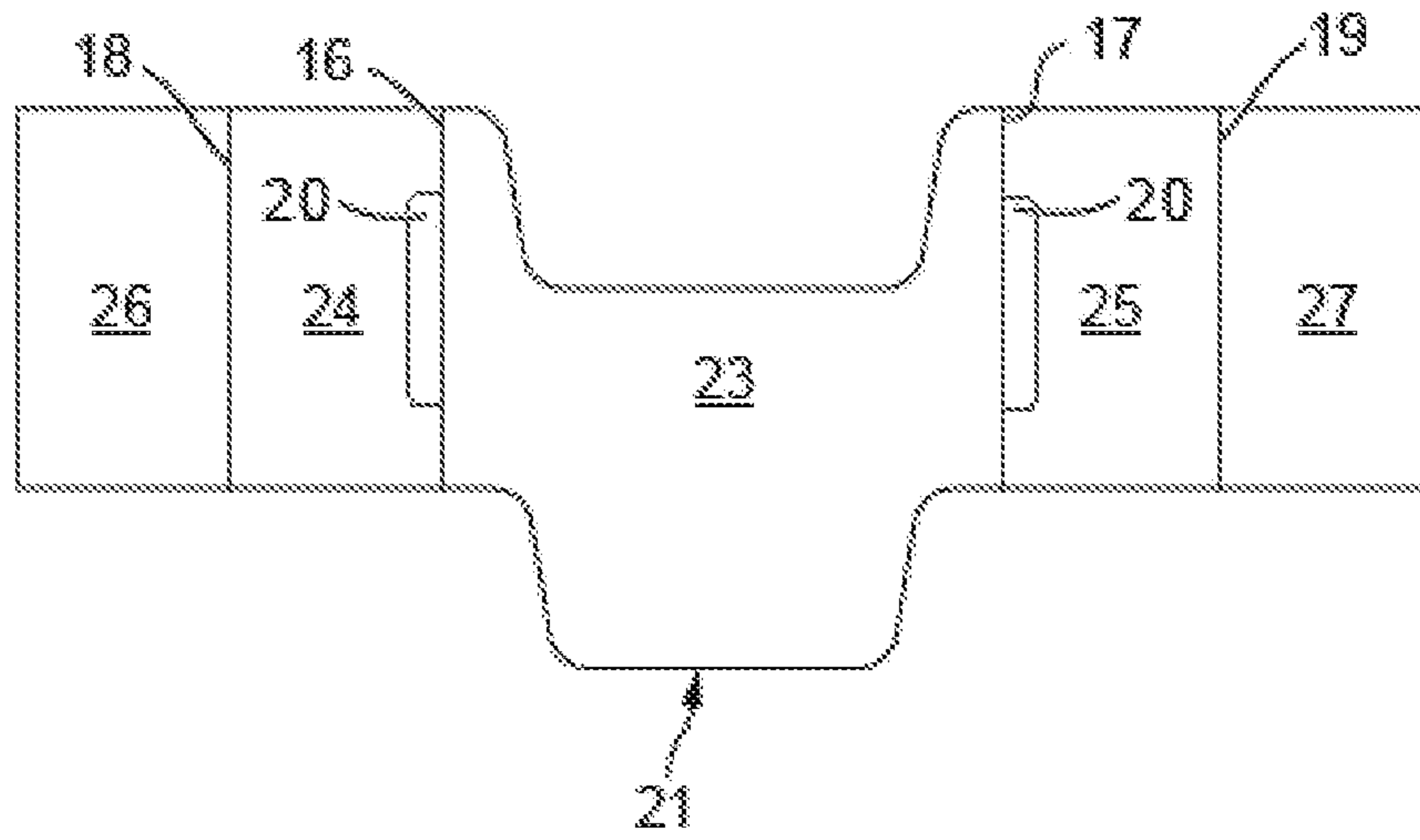


FIG. 2

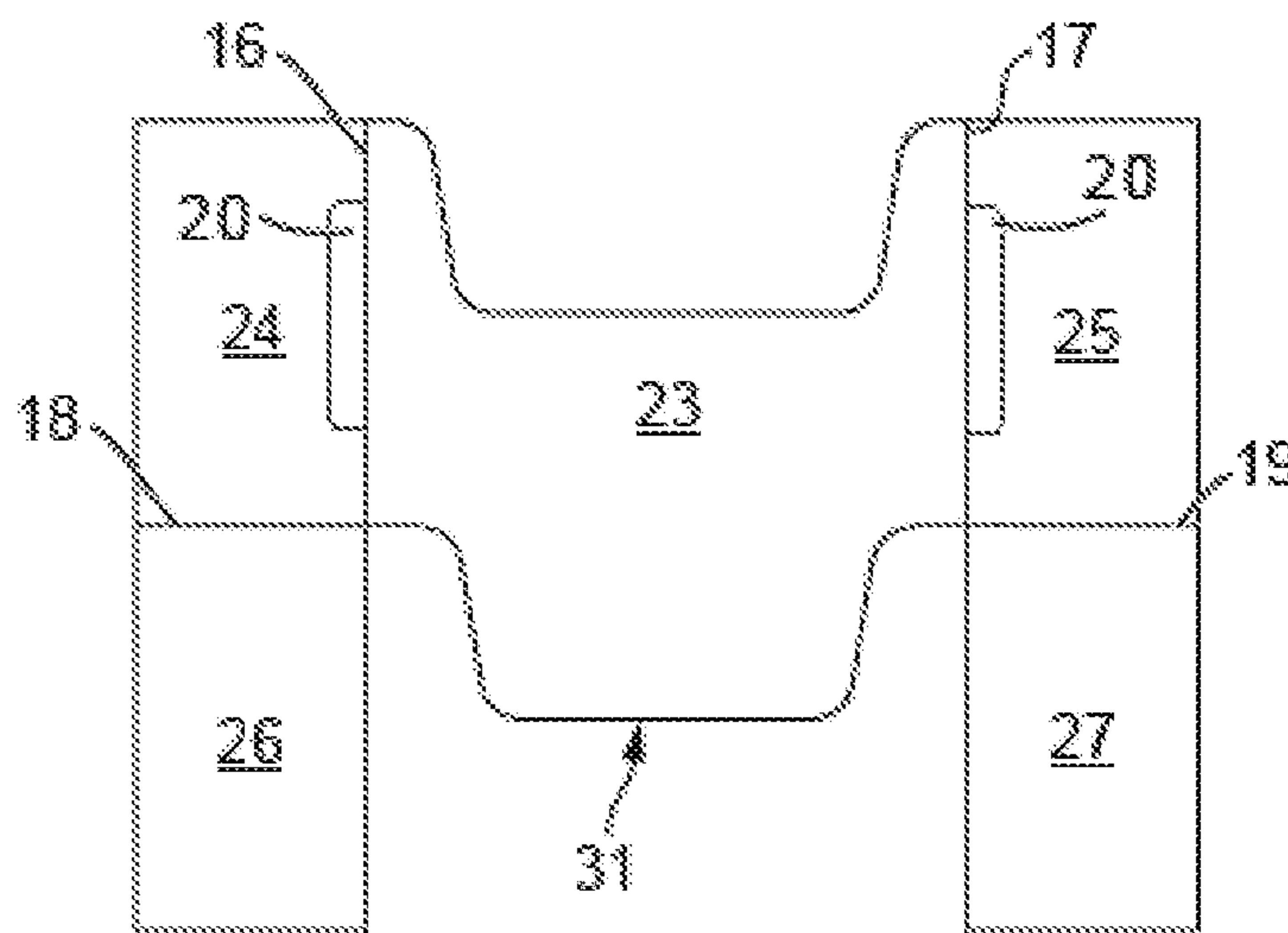


FIG. 3

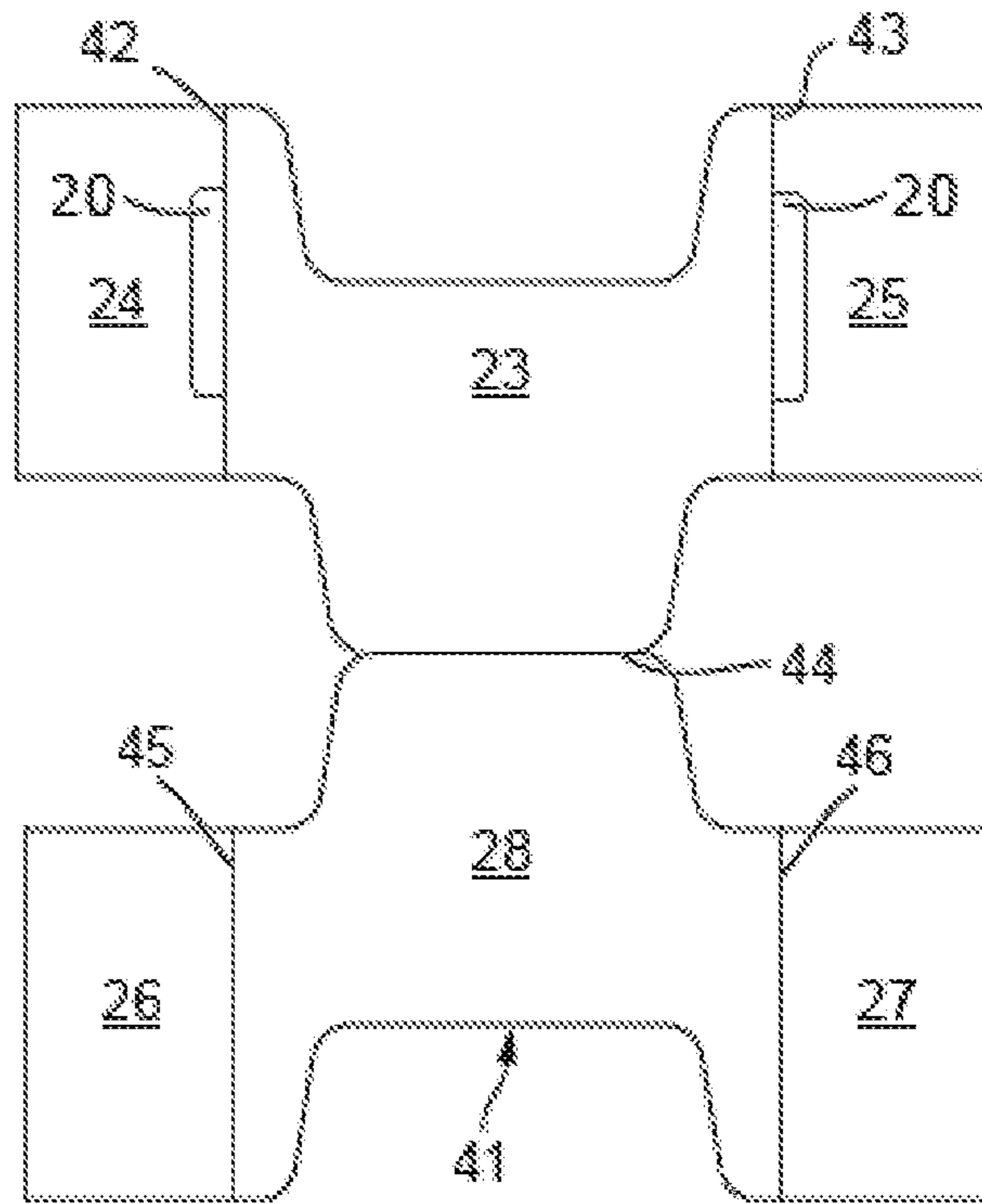


FIG. 4

