



(11) **EP 2 657 927 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention
of the grant of the patent:
21.01.2015 Bulletin 2015/04

(51) Int Cl.:
G09F 21/00 ^(2006.01) **G09F 23/06** ^(2006.01)
G09F 1/10 ^(2006.01)

(21) Application number: **13165429.5**

(22) Date of filing: **25.04.2013**

(54) **Assembly, for example a display**

Baugruppe, zum Beispiel eine Anzeige

Ensemble, par exemple un affichage

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

(30) Priority: **27.04.2012 NL 2008726**

(43) Date of publication of application:
30.10.2013 Bulletin 2013/44

(73) Proprietor: **Vinke Display B.V.
4815 HS Breda (NL)**

(72) Inventor: **Swaenen, Luc Jozef Maria Rita
2321 Hoogstraten (BE)**

(74) Representative: **Grootscholten, Johannes A.M. et
al
Arnold & Siedsma
Bezuidenhoutseweg 57
2594 AC The Hague (NL)**

(56) References cited:
**US-A- 2 791 049 US-A1- 2005 127 622
US-A1- 2008 179 371**

EP 2 657 927 B1

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

[0001] The present invention relates to an assembly, comprising: a structure of disposable material, such as cardboard, to be arranged on a support; and at least one attachment acting on at least the structure for fixedly attaching thereof to the support.

[0002] It is also known to make use of nails or punching staples in order to attach a structure to and on the support, although there are objections to this, particularly when the structure is to be attached to a support such as a displaceable support or a cart or trolley of a display, due to a well-founded fear of damage to the support or the cart or trolley. Reference is made here by way of example to known art, as described in US-2005/127622, which can be deemed the prior art closest to the assembly of the present invention. This document discloses an assembly comprising a support, a structure of cardboard, and at least one attachment acting on the base and the support for fixedly attaching thereof to each other.

[0003] The invention has for its object to provide an improved assembly, this being at least partly achieved by means of an assembly which is distinguished from the known assemblies by the features (in combination) of the appended independent claims. Damage to a support, cart or trolley can hereby be prevented, even when the assembly is erected on the support or the cart or trolley.

[0004] In a preferred embodiment the assembly is such that the base comprises two layers. A grip can thus be provided for the staple. This is particularly the case when the staple comprises: bent legs in the layer of the base lying furthest from the structure. The legs do not therefore extend below or behind the base relative to the structure. In such an embodiment with two layers of the base, an assembly according to the invention can further have the feature that the base is of cardboard and at least one of the layers of the base is a coarse flute, for instance type A, B or C, and the other of the layers of the base is a fine flute, for instance type B, E, F, G or N. Such constitutions of the base provide an extremely strong and robust embodiment which enables application in for instance the field of displays. It is also possible within the scope of the invention to incorporate more than two layers in the base.

[0005] In an embodiment with finer and coarser types of flute cardboard and the bent legs of the staple in the layer of the base lying furthest from the structure it can be advantageous that the layer lying furthest from the structure is that with the fine flute. The coarser, stronger flute cardboard is then as it were embraced by the bent legs of the staple, which results in a strong attachment.

[0006] An additional or alternative embodiment of an assembly according to the invention can have the feature of a support of reusable material such as wood or plastic. This can be a displaceable and/or mobile cart or trolley as are applied in the field of displays. The assembly can here further comprise: at least one coupling acting on the base and the support for releasable coupling thereof. The base and structure can thus be easily disassembled for

reuse of the support or the cart or trolley. It can be favourable here that the coupling comprises an incision defining a hinge in the base and a passage in the support for passage of a pivoting part of the base. A very elegant and simple coupling is thus provided which, for instance in the field of displays, forms a sufficiently strong temporary coupling for the purpose of holding the base, and the structure attached thereto, on a support, cart or trolley as long as use as display is necessary and/or desired, which is often not for very long.

[0007] The staple is preferably arranged with an electrical or pneumatic staple gun with depth adjustment for the depth of the bent legs of the staple. Such staple guns exist but have not been applied in the past in a manner proposed according to the invention, i.e. in combination with a support, cart or trolley, see e.g. US-2008/179371 which can be deemed the closest prior art to the use of the staple gun of the present invention.

[0008] This document discloses the use of an electrical or pneumatic staple gun with depth adjustment for the depth of bent legs of a staple to be placed thereby during attachment to each other of materials.

[0009] It is for this reason that the present invention also relates to the use of an electrical or pneumatic staple gun with depth adjustment for the depth of bent legs of a staple to be placed thereby during attachment to each other of a base of disposable material, such as cardboard, to be arranged on a support, and a structure of disposable material such as cardboard, wherein the staple is at least one of a number of attachments for the purpose of fixed mutual attachment thereof, and wherein the depth adjustment is at least adjustable for the purpose of bending the legs of the staple at a distance from the support within a thickness of the base.

[0010] It is further noted that the invention relates to a displaceable display comprising a mobile support having thereon a base and a structure with an attachment according to the invention formed by at least one staple, assembled in a manner likewise proposed according to the present invention.

[0011] The present invention will be further described hereinbelow on the basis of exemplary embodiments which are shown in the accompanying drawing but to which the present invention is by no means limited, since the definition of the scope of protection is limited to claims which are also appended, in particular the independent claims. The drawing can show diverse embodiments, wherein the same or similar reference numerals may be used for the same or similar elements, components and functionalities.

Fig. 1 is an exploded perspective view of an assembly according to the present invention;

Fig. 2 is a side view of a detail of Fig. 1;

Fig. 3 shows an alternative embodiment of an assembly according to the present invention, once again in perspective view;

Fig. 4 shows an attachment in the embodiment of

Fig. 3 which is likewise applicable in the configuration according to figures 1 and 2; and

Fig. 5 is a schematic view of a manner of arranging a staple in an application according to the present invention.

[0012] Fig. 1 shows an embodiment of an assembly 1 according to the present invention. Assembly 1 comprises a mobile cart or trolley 2 with a recessed portion 4 in upper surface 3 thereof which is shaped to receive a base board 5.

[0013] Cart or trolley 2 is made from reusable material such as plastic, wood or even metal, and on the underside thereof comprises wheels 6, several of which can also be swivel wheels.

[0014] Arranged in recessed portion 4 in upper surface 3 of trolley or cart 2 are protrusions 7 for close-fitting positioning of base board 5. Base board 5 comprises cut-away portions 8 relative to a purely rectangular shape which match protrusions 7. Base board 5 can be placed by being successively or simultaneously tilted in the direction of arrow B and placed in recessed portion 4 relative to the upper surface 3 of cart or trolley 2 in the direction of arrow A.

[0015] Base board 5 further comprises a number of incisions 9 which can be pressed out for the purpose of defining a hinge 10. Pressing out the material of base board 5 surrounded by one of the incisions 9, causes a flap defined by incisions 9 to rotate round hinge 10 so as to be received in a hole or passage 11 in recessed portion 4 relative to the upper surface of cart or trolley 2.

[0016] Recessed portion 4 is preferably embodied such that in arranged position the base board defines the same height as upper surface 3 of cart or trolley 2. In a placed position of base board 5 the flaps defined by incisions 9 can be pressed out so as to rotate around hinges 10 in order to thus form couplings for the purpose of coupling base board 5 and cart or trolley 2.

[0017] A structure, which can likewise be made of cardboard or a similar material, can subsequently be arranged on base board 5 in the direction of arrow C. Staples can then be driven home, for instance using an electrical or pneumatic staple gun, to attach structure 12 to base board 5. Structure 12 comprises a single cardboard sheet with fold lines 15 for forming a back 16 of a display and side walls 17 thereof. Further arranged on the underside of structure 12 are fold lines 18 for the purpose of forming bent edges 14 which, moved in the direction of arrow C, come to rest on base board 5. Staples 19 can subsequently be driven home in the direction of arrow D into base board 5 through bent edges 14 using the above stated staple gun. Structure 12 is hereby attached to base board 5. This will be further described below with reference to Fig. 4.

[0018] Fig. 2 shows that base board 5 can be formed from two (or more) layers of cardboard with a coarse flute and a fine flute. The coarse flute can for instance be of type A, B or C, and the fine flute of for instance type B,

E, F, G or N. Cardboard 20 of the base board is generally designated with reference numeral 20, the coarse flute with reference numeral 21 and the fine flute with reference numeral 22.

[0019] Fig. 3 shows an alternative embodiment of an assembly according to the present invention, comprising a structure 23 and a base board 5. Structure 23 has multiple parts, in contrast to the structure 12 in Fig. 1. A rear wall 16 and side walls 17 are defined with a single cardboard sheet with fold lines 15 therein. Provided on rear wall 16 is an edge 14 bent along a fold line 18 to enable staples 19 to be driven home into base board 5 through bent edges 14, which will be further described below with reference to Fig. 4.

[0020] Structure 23 also comprises at the bottom of side walls 17 a reinforcing board with a bent edge 14 and a fold line 24 thereon. Reinforcing board 25 can be folded back on itself round fold line 24 in the direction of arrow E so as to enclose the underside of side wall 17 of structure 23. A reinforcement of the underside of side walls 17 can thus be provided. In the embodiment shown in Fig. 3 the bent edge 14 forms part of reinforcing board 25.

[0021] As shown in Fig. 4, a bent edge 14 lying flat on base board 5 can be attached to base board 5 by means of a staple 19. Staple 19 has bent legs 26 extending in a layer lying furthest from the structure and so from bent edge 14. In the embodiment of Fig. 4 this is layer 22 with the finer flute. The straighter parts of bent legs 26 protrude here at a right angle through the bent edge 14 and the layer 21 with coarser flute. Layer 21 with coarser flute is thus as it were embraced by bent legs 26 of staple 19 for a good attachment of bent edge 14 to base board 5.

[0022] Fig. 5 shows a highly schematic view of the manner in which a staple gun can function in order to adjust the depth to which the legs 26 of a staple 19 can extend into cardboard. A staple is driven here with force into the cardboard of for instance base board 5 in the direction of arrow F. Staple 19 penetrates here through the upper-lying layer in the figure with coarser flute 21 and, having reached the underlying layer 22 with finer flute, is engaged by a guide pin or similar element in a schematically shown path 27. The guide pin or similar element moves in path 27 at a speed corresponding to the penetration of staple 19 into the cardboard of base board 5. It is the specific intention to bend precisely the tip of legs 26 of staple 19 in order to reach an end position as shown in broken lines in Fig. 5.

[0023] The path 27 of the guide pin or similar element creates holes 28 in the cardboard of base board 5, which are also shown in the view of Fig. 3. Holes 28 can however be kept so small that they have hardly any disruptive effect, which can be a consideration particularly in the case the assembly according to the present invention is used to provide or form a display.

[0024] After examination of the foregoing disclosure of diverse embodiments according to the present invention many additional and alternative embodiments, options and alternatives will occur to the skilled person which all

lie within the scope of protection of the present invention as defined in the appended claims.

Claims

1. An assembly (1), comprising:

- a base (5) of a disposable material, such as cardboard, to be arranged on a support;
- a structure (12) of disposable material, such as cardboard; and
- at least one attachment acting on the base and the structure for fixedly attaching thereof to each other,

wherein the attachment is a staple (19) and the legs of the staple are bent at a distance from the support (2) within a thickness of the base.

2. The assembly as claimed in claim 1, wherein the base comprises two layers (21,22).

3. The assembly as claimed in claim 2, wherein the staple comprises: bent legs (26) in the layer (22) of the base lying furthest from the structure.

4. The assembly as claimed in claim 2 or 3, wherein the base is of cardboard and at least one of the layers of the base is a coarse flute, for instance type A, B or C, and the other of the layers of the base is a fine flute, for instance type B, E, F, G or N.

5. The assembly as claimed in claims 3 and 4, wherein the layer (22) lying furthest from the structure is that with the fine flute.

6. The assembly as claimed in at least one of the foregoing claims, further comprising a support (2) of reusable material such as wood or plastic.

7. The assembly as claimed in claim 6, further comprising at least one coupling acting on the base and the support for releasable coupling thereof.

8. The assembly as claimed in claim 7, wherein the coupling comprises an incision (9) defining a hinge (16) in the base and a passage (11) in the support for passage of a pivoting part of the base.

9. The assembly as claimed in at least one of the foregoing claims, wherein the staple is arranged with an electrical or pneumatic staple gun with depth adjustment for the depth of the bent legs of the staple.

10. The use of an electrical or pneumatic staple gun with depth adjustment for the depth of bent legs of a staple (19) to be placed thereby during attachment to each

other of a base (5) of disposable material, such as cardboard, to be arranged on a support, (2) and a structure (12) of disposable material such as cardboard, wherein the staple is at least one of a number of attachments for the purpose of fixed mutual attachment thereof, and wherein the depth adjustment is at least adjustable for the purpose of bending the legs (26) of the staple at a distance from the support within a thickness of the base.

11. A displaceable display, comprising a mobile support (2) having thereon a base (5) and a structure (12) with an attachment as claimed in at least one of the claims 1-9 formed by at least one staple (19), assembled as claimed in claim 10.

Patentansprüche

1. Baugruppe (1), die Folgendes umfasst:

- eine Basis (5) aus einem wegwerfbaren Material wie etwa Karton, die auf einem Träger angeordnet werden soll,
- eine Struktur (12) aus wegwerfbarem Material wie etwa Karton; und
- zumindest eine Befestigung, die auf die Basis und die Struktur wirkt, um diese fest aneinander zu befestigen,

wobei die Befestigung eine Klammer (19) ist und die Beine der Klammer bei einem Abstand von dem Träger (2) innerhalb einer Dicke der Basis gebogen sind.

2. Baugruppe wie in Anspruch 1 beansprucht, wobei die Basis zwei Lagen (21, 22) umfasst.

3. Baugruppe wie in Anspruch 2 beansprucht, wobei die Klammer Folgendes umfasst:

gebogene Beine (26) in der Lage (22) der Basis, die von der Struktur am weitesten entfernt liegt.

4. Baugruppe wie in Anspruch 2 oder 3 beansprucht, wobei die Basis aus Karton besteht und zumindest eine der Lagen der Basis eine grobe Welle, beispielsweise Typ A, B oder C, ist und die andere der Lagen der Basis eine feine Welle, beispielsweise Typ B, E, F, G oder N, ist.

5. Baugruppe wie in Anspruch 3 oder 4 beansprucht, wobei die Lage (22), die am weitesten von der Struktur entfernt liegt, diejenige mit der feinen Welle ist.

6. Baugruppe wie in zumindest einem der vorgehenden Ansprüche beansprucht, die weiterhin einen Träger (2) aus wiederverwendbarem Material wie Holz

oder Kunststoff umfasst.

7. Baugruppe wie in Anspruch 6 beansprucht, die weiterhin zumindest eine Kopplung aufweist, die auf die Basis und den Träger für eine lösbare Kopplung davon wirkt. 5
8. Baugruppe wie in Anspruch 7 beansprucht, wobei die Kopplung einen Schnitt (9) umfasst, der ein Gelenk (16) in der Basis und einen Durchgang (11) in dem Träger für einen Durchgang eines schwenkbaren Teils der Basis definiert. 10
9. Baugruppe wie in zumindest einem der vorgehenden Ansprüche beansprucht, wobei die Klammer mit einem elektrischen oder pneumatischen Klammergerät mit Tiefeneinstellung für die Tiefe der gebogenen Beine der Klammer angeordnet wird. 15
10. Verwendung eines elektrischen oder pneumatischen Klammergeräts mit Tiefeneinstellung für die Tiefe gebogener Beine einer Klammer (19), die dadurch, während einer Befestigung aneinander von einer Basis (5) aus einem wegwerfbaren Material wie etwa Karton, die auf einem Träger (2) angeordnet werden soll, und einer Struktur (12) aus wegwerfbarem Material wie etwa Karton, angeordnet werden soll, wobei die Klammer zumindest eine einer Anzahl an Befestigungen zum Zweck einer festen gegenseitigen Befestigung davon ist und wobei die Tiefeneinstellung zumindest für den Zweck des Biegens der Beine (26) der Klammer bei einem Abstand von dem Träger innerhalb einer Dicke der Basis einstellbar ist. 20
25
30
35
11. Verschiebbare Auslage, die einen mobilen Träger (2) umfasst mit einer Basis (5) und einer Struktur (12) darauf mit einer Befestigung, wie sie in zumindest einem der Ansprüche 1-9 beansprucht ist, durch zumindest eine Klammer (19), die wie in Anspruch 10 beansprucht montiert ist. 40

Revendications

1. Ensemble (1) comprenant :
 - une base (5) en un matériau jetable, tel que du carton, destiné à être agencée sur un support ;
 - une structure (12) en un matériau jetable, tel que du carton ; et
 - au moins un élément de fixation agissant sur la base et la structure afin de les attacher fixement l'une à l'autre,
 dans lequel l'élément de fixation est une agrafe (19) et les pattes de l'agrafe sont recourbées à une certaine distance du support (2) à l'intérieur d'une épais- 50
55

seur de la base.

2. Ensemble selon la revendication 1, dans lequel la base comprend deux couches (21, 22).
3. Ensemble selon la revendication 2, dans lequel l'agrafe comprend : des pattes recourbées (26) dans la couche (22) de la base agencée au plus loin de la structure.
4. Ensemble selon la revendication 2 ou 3, dans lequel la base est en carton et au moins l'une des couches de la base présente une ondulation grossière, par exemple de type A, B ou C, et l'autre des couches de la base présente une ondulation fine, par exemple de type B, E, F, G ou N.
5. Ensemble selon les revendications 3 et 4, dans lequel la couche (22) agencée au plus loin de la structure est celle présentant l'ondulation fine.
6. Ensemble selon au moins l'une des revendications précédentes, comprenant en outre un support (2) en un matériau réutilisable tel que du bois ou de la matière plastique.
7. Ensemble selon la revendication 6, comprenant en outre au moins un élément de couplage agissant sur la base et le support afin d'assurer leur couplage de manière amovible.
8. Ensemble selon la revendication 7, dans lequel l'élément de couplage comprend une incision (9) définissant une charnière (16) sur la base et un passage (11) sur le support afin d'assurer le passage d'un bras pivotant de la base.
9. Ensemble selon au moins l'une des revendications précédentes, dans lequel l'agrafe est posée avec une agrafeuse électrique ou pneumatique présentant un réglage de profondeur afin d'assurer le réglage de la profondeur des pattes recourbées de l'agrafe.
10. Utilisation d'une agrafeuse électrique ou pneumatique avec un réglage de profondeur afin d'assurer le réglage de la profondeur des pattes recourbées d'une agrafe (19) destinée à être placée ainsi au cours de la fixation l'une sur l'autre d'une base (5) en un matériau jetable, tel que du carton, destinée à être agencée sur un support (2), et d'une structure (12) en un matériau jetable, tel que du carton, dans laquelle l'agrafe est au moins l'une parmi un certain nombre d'éléments de fixation destinés à assurer une fixation mutuelle à demeure de ces dernières, et dans laquelle le réglage de profondeur est au moins réglable dans le but de recourber les pattes (26) de l'agrafe à une certaine distance du support

à l'intérieur d'une épaisseur de la base.

11. Dispositif d'affichage pouvant être déplacé, comprenant un support mobile (2) présentant sur le dessus une base (5) et une structure (12) avec un élément de fixation selon au moins l'une des revendications 1 à 9, formé au moins d'une agrafe (19), assemblés selon la revendication 10.

10

15

20

25

30

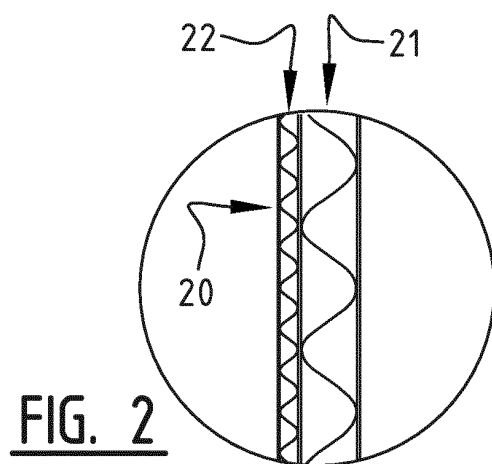
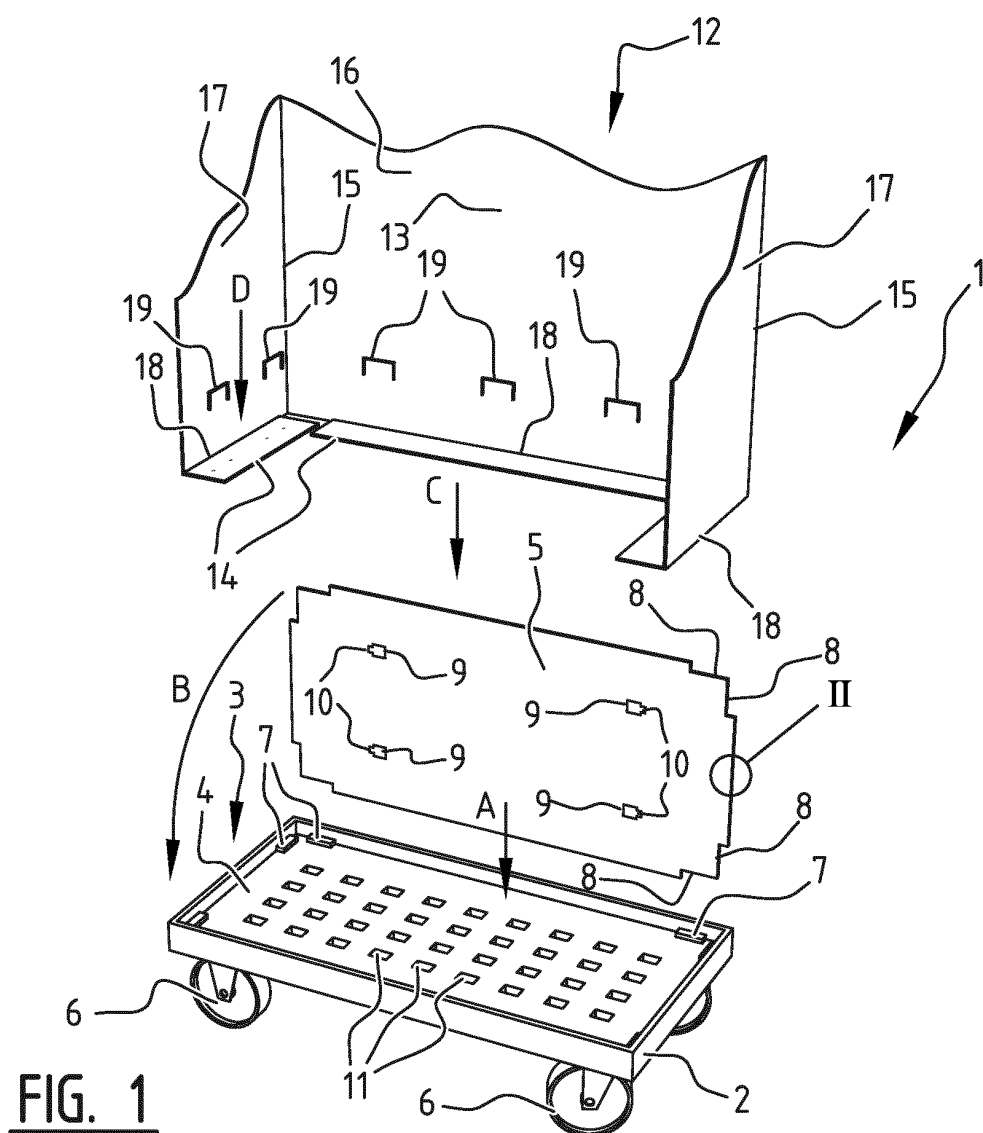
35

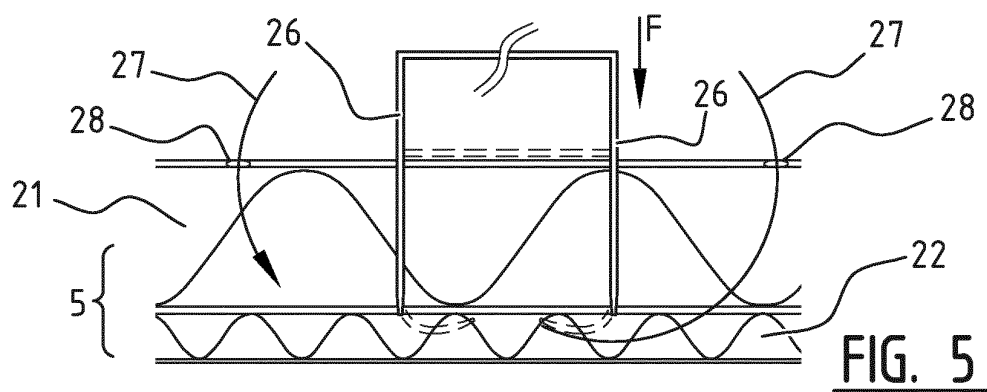
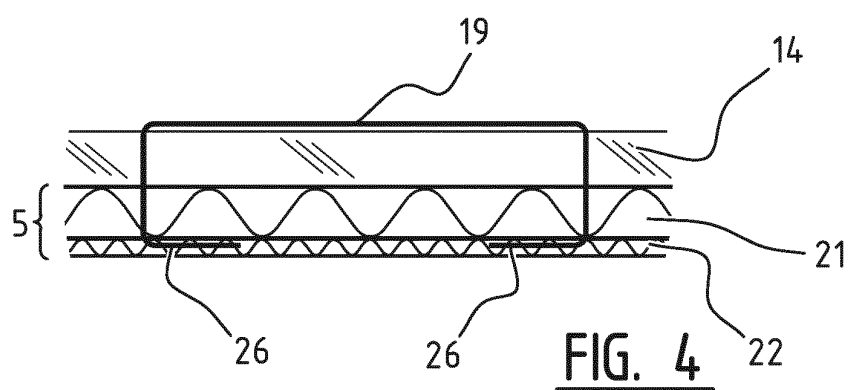
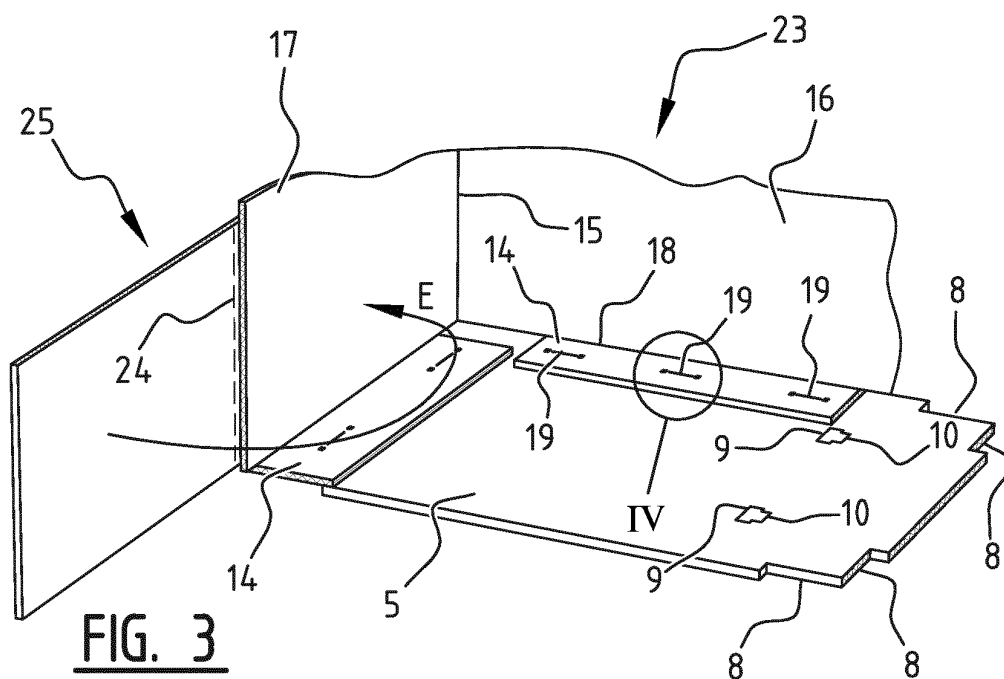
40

45

50

55





REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 2005127622 A [0002]
- US 2008179371 A [0007]