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(71) Applicant: **BERTAGNI 1882 S.p.A.**
36057 Arcugnano (VI) (IT)

(72) Inventor: **BOLLA, Enrico**
37128 Verona (IT)

(74) Representative: **Maroscia, Antonio**
Maroscia & Associati Srl
Piazza del Castello, 26
36100 Vicenza (IT)

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(54) **A PACKAGE WITH MULTIFUNCTIONAL BAND**

(57) Package (2) containing products (P), particularly but exclusively food products, and comprising a multi-functional band (1), wherein the package has opposed faces (9,10) and wherein said band (1) comprises a sheet member (11) suitable to wrap the package (2) and hang

it from a display stand (E), said sheet member (11) being elongate to define a longitudinal axis (L) and having a hole (35) for receiving a support peg of a display stand (E).

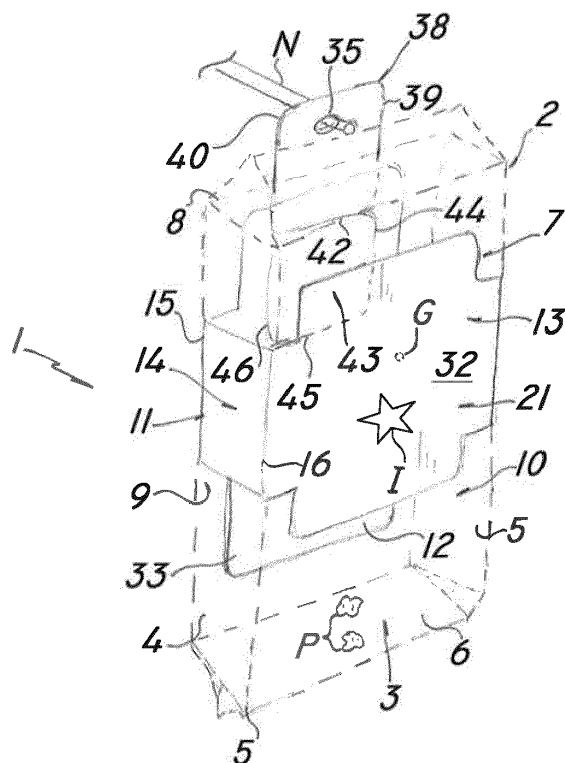


FIG. 1

Description

Field of the invention

[0001] The present invention generally finds application in the field of wrapping and packaging accessories and particularly relates to a multifunctional band for use in packaged containing bulk products, preferably food products.

Background art

[0002] Appropriate accessory elements are known to be used in wrapping and packaging bulk products, preferably food products, for display thereof, which elements are designed to be coupled to their containers.

[0003] Namely, the packages of these products have a semi-rigid tray made of cardboard or another similar material, which is adapted to contain the product designed for consumption, as well as a flexible bag which covers the whole tray to prevent the product from coming out of it and extend its shelf life.

[0004] These accessories consist of a band made of a sheet material, which is adapted to be at least partially wrapped around the bag to impart a given rigidity to the tray and prevent excessive deformation thereof during transport, storage and display to the public.

[0005] Furthermore, this band may have an outer surface printed with symbols and/or text, for easy recognition of the product by the user.

[0006] The band comprises a transverse panel which is adapted to contact the rear face of the package and has a pair of longitudinal panels extending therefrom and designed to wrap the sidewalls of the package. Furthermore, these longitudinal panels are joined to respective appendages which are adapted to cover the front face of the package and to be bonded to each other.

[0007] A first drawback of this arrangement is that this band is not self-supporting and only affords support of the package or stacking of a plurality of packages on a flat support of a refrigerated cabinet or a shelf, while not allowing the package to be hung from display stands with pegs, which are widespread especially in countries such as Switzerland, Germany and Austria.

[0008] Nevertheless, flexible packages are anyway hung from the back of the display stand in the point-of-sale and this may cause the product to be irreversibly damaged.

[0009] For example, an operator may hang the package from the tag by directly piercing the flexible package. This may cause air to enter the package, which will irretrievably alter the preservation state of the food product.

[0010] In an attempt to at least partially obviate this drawback, a coupling member, also in sheet form, is commonly bonded to the bag, and has a hole that may be variously shaped and sized, for receiving the peg.

[0011] Nevertheless, this arrangement makes the whole package particularly complex and considerably in-

creases the manufacturing times and costs.

[0012] Furthermore, the coupling sheet member may be easily torn along its fold line and may easily separate from the package if an inadequate amount of glue was used for bonding.

[0013] In order to eliminate the step of applying a coupling member, bags may be provided with a hole formed at the upper seal, but this arrangement requires expensive and complex equipment.

[0014] Furthermore, as the peg-receiving hole is pierced, a plurality of micro-holes may be formed in the upper portion of the bag, allowing air to enter therein and alter the product preservation state as well as the original aesthetic appearance of the package.

[0015] WO2015051724, US2007248292, US6234673, JPH08198245 and WO9315964 disclose accessories, e.g. bands, that may be applied to packages containing different types of products, and have at least one hole for receiving a peg of a display stand.

[0016] Nevertheless, these bands or accessories are not able to stably support the package and, when they are applied thereto, they do not afford optimal display and identification of the product for the user.

Technical Problem

[0017] In light of the prior art, the technical problem addressed by the present invention consists in providing a multifunctional band, that is designed to be applied to packages to make them self-supporting and allow them to be safely and stably fitted upon the pegs of a display stand, without altering the shelf life of the food product.

Disclosure of the invention

[0018] The object of the present invention is to solve the aforementioned technical problem and obviate the above drawbacks, by providing a multifunctional band designed to be applied to a package, that is highly efficient and relatively cost-effective.

[0019] A further object of the present invention is to provide a multifunctional band for application designed to a package that allows the package to hang from a peg in a particularly safe and stable manner.

[0020] A particular object of the present invention is to provide a multifunctional band for application designed to a package that can be manufactured and applied to the package in a very simple manner.

[0021] A further object of the present invention is to provide a multifunctional band designed to be applied to a package that will not alter the integrity of the package upon which it is applied.

[0022] Another object of the present invention is to provide a multifunctional band designed to be applied to a package that will always maintain the product in an optimal preservation state.

[0023] A further object of the present invention is to provide a multifunctional band that can be applied to the

package using the same machines that are used for prior art identification bands.

[0024] A further object of the present invention is to provide a multifunctional band designed to be applied to a package that will provide quick and accurate identification of the product in the package.

[0025] These objects, as well as other objects that will be more apparent hereafter, are fulfilled by a multifunctional band designed to be applied to a package as defined in claim 1, which comprises a sheet member with a hole for receiving a support peg of a display stand.

[0026] This will allow the package to be hung from the display stands without causing the bag to be broken or torn and the preservation state of the production therein to be hence altered.

[0027] Furthermore, the band of the present invention provides a stable package support, can be manufactured in a simple manner, has a low cost and allows accurate identification of the product contained therein.

[0028] Advantageous embodiments of the invention are obtained in accordance with the dependent claims.

Brief description of the drawings

[0029] Further features and advantages of the invention will be more apparent from the detailed description of a preferred, non-exclusive embodiment of a multifunctional band designed to be applied to a package according to the invention, which is described as a non-limiting example with the help of the annexed drawings, in which:

- FIG. 1 is a front perspective view of a multifunctional band of the invention, wrapped around a package hanging from a peg of a display stand;
- FIG. 2 is a rear perspective view of a multifunctional band wrapped around a package;
- FIG. 3 is a top view of a first embodiment of the multifunctional band in a deployed configuration;
- FIG. 4 is a top view of the multifunctional band of Fig. 3, with an additional detail;
- FIG. 5 is a top view of a second embodiment of the multifunctional band in a deployed configuration;
- FIG. 6 is a perspective view of the multifunctional band of Fig. 1 according to a third embodiment.

Detailed description of a preferred exemplary embodiment

[0030] Particularly referring to the figures, there is shown a multifunctional band, generally designated by numeral 1, which is adapted to at least partially wrap a package 2 containing one or more bulk products P, particularly but without limitation food products.

[0031] The package 2 may comprise a rigid or semi-rigid tray 3 made of cardboard or another similar material, which is adapted to contain the products P, and has, for example, a frusto-pyramidal shape, with a substantially flat bottom wall 4 and four sidewalls 5, 6 defining an open-

ing 7 for introducing the products P.

[0032] Preferably, the tray 3 containing the products P is covered by a protective enclosure 8, conveniently made of a transparent material, e.g. a plastic material or another similar material, to define two opposed faces, referenced 9 and 10 respectively, which also define the opposed faces of the package 2.

[0033] In the preferred embodiment of the figures, the band 1 comprises an elongate sheet member 11, defining a longitudinal axis L, which is designed to wrap the package 2.

[0034] The sheet member 11 may be made of a base material having a substantially uniform thickness of less than 1 mm, selected from the group comprising light cardboard and plastic laminates.

[0035] As best shown in FIGS. 3 to 5, the sheet member 11 comprises at least one pair of transverse panels 12, 13, substantially perpendicular to the longitudinal axis L, which are designed to cover the opposed faces 9, 10 of the package 2 and are joined by a longitudinal panel 14 along respective first transverse fold lines 15, 16.

[0036] Thus, when the band 1 is in use, the two transverse panels 12, 13 are placed at the opposed faces 9, 10 whereas the longitudinal panel 14 wraps a sidewall 5 of the tray 3.

[0037] Furthermore, the transverse panels 12, 13 have respective widths I1, I2, greater than the width I3 of the longitudinal panel 14 with lateral edges 17, 18, 19 substantially parallel to the longitudinal axis L.

[0038] As best shown in FIGS. 3 to 5, the transverse panels 12, 13 will project outwards from the longitudinal panel 14 and will partially cover the opposed faces 9, 10 of the package 2.

[0039] Preferably, the transverse panel 13 that covers the front face 10 of the package 2 may have a smaller width I2 than the transverse panel 12 that covers the rear face 9 thereof for improved vision and identification of the product P by the user.

[0040] The sheet member 11 may comprise two longitudinal appendages 20, 21, connected to the two transverse panels 12, 13 respectively, at their transverse edges 22, 23 opposite to the first transverse fold lines 15, 16.

[0041] These appendages 20, 21 will be substantially aligned and their width I4, I5 will be equal to the width I3 of the longitudinal panel 14.

[0042] Furthermore, these appendages 20, 21 may comprise respective free ends 24, 25, which are designed to be bonded together to wrap and seal the package 2.

[0043] Preferably, one of the appendages 20 may comprise a substantially rectangular intermediate portion 26 having one end 27 joined to the transverse panel 12 through a second transverse fold line 28, and an opposite end 29 joined to the corresponding free end 24 through a third transverse fold line 13.

[0044] The intermediate portion 26 will be adapted to wrap the sidewall 6 of the tray 3, which is opposite to the wall 5 wrapped in the longitudinal panel 14, as shown in

FIGS. 1 and 2.

[0045] Furthermore, the free end 24 of this appendage 20 has substantially trapezoidal plan shape, to more easily overlap and be bonded to the free end 25 of the other appendage 21 at the front face 10 of the package 2.

[0046] As shown in the figures, the transverse panels 12, 13 comprise respective outer surfaces 31, 32 which are adapted to bear text and identification graphic symbols I and respective inner surfaces 33, 34 designed to face toward the protective enclosure 8 of the package 2.

[0047] Furthermore, the inner surfaces 33, 34 of the transverse panels 12, 13 are designed to receive one or more glue dots, generally referenced G, to promote fixation of the band 121 or both of the opposed faces 9, 10 of the package 2.

[0048] Particularly, the glue dots G are adapted to stably fix the respective inner surfaces 33, 34 of the band 1 to the enclosure 8 and the glue may be also selected from the group comprising low-temperature resistant additives.

[0049] According to a peculiar aspect of the invention, the sheet member 11 has a hole 35 for receiving a support peg of a display stand E, as shown in FIG. 1.

[0050] Particularly, the hole 35 may be formed in one of the transverse panels 12, 13 with a supporting function. Preferably, the hole 35 will be formed on the panel 12 placed at the rear face 9 of the package 2.

[0051] The use of this multifunctional band 1 will allow any known type of package 2 for food product preservation to be hung from a display stand E, not shown, without requiring any additional external hanging elements.

[0052] In a first embodiment of the invention, as best shown in FIG. 3, the transverse panel 12 is made of one piece and may comprise an end portion 36 delimited by a longitudinal fold line 37 formed thereon.

[0053] The end portion 36 also has a free lateral edge 17 substantially parallel to a longitudinal axis L, near which the hole 35 for receiving the peg N is formed.

[0054] With this configuration, the user may promote rotation of the end portion 36 about the longitudinal fold line 37 to increase the distance between the hole 35 and the rear face 9 of the package 2 for the peg N to more easily fit therein.

[0055] Conveniently, before application of the band 1 to the package 2, the end portion 36 is folded back out of the panel 12 onto its outer surface 31 to be substantially coplanar therewith.

[0056] As the end portion 36 is folded back it will reduce the width I1 of the panel 12 for easy loading of thereof into existing packaging machines designed for holeless identification bands.

[0057] As shown in FIG. 4, the band 1 may have a substantially semicircular cut 48 formed in the transverse support panel 12 below the fold line 37 and adapted to receive the free longitudinal edge 17 of the end portion 36 and retain the latter when it is folded onto the outer surface 31 of the transverse panel to be coplanar therewith.

[0058] Furthermore, the thickness of the sheet member 11 shall be smaller than a maximum predetermined value of about 2 mm to prevent the band 1 from jamming during application to the package 2.

5 **[0059]** In an alternative embodiment of the invention, as best shown in FIG. 5, the transverse panel 12 may comprise a substantially rectangular die-cut portion 38.

[0060] The die-cut portion 38 may be formed in a central area of the panel 12 and has three consecutive cut edges 39 40, 41 and an uncut connecting edge 42 substantially parallel to the longitudinal axis L for connection to the rest of the panel 12.

10 **[0061]** After die-cutting, a window 43 will be formed on the panel 12, with respective inner edges 44, 45, 46 substantially parallel to the cut edges 39, 40, 41 of the die-cut portion 38.

15 **[0062]** Thus, the operator may selectively promote rotation of the die-cut portion 38 about the uncut edge 42 between an inoperative position and an operative position. The die-cut portion 38 may be folded back about the uncut edge 42 for the hole 35 to project in the fully overturned position.

20 **[0063]** In the inoperative position, the cut edges 39, 40, 41 of the die-cut portion 38 substantially contact the inner edges 44, 45, 46 of the window 43, and in the operative position the cut edges 39, 40, 41 are spaced apart from the inner edges 44, 45, 46 of the window 43.

25 **[0064]** The hole 35 for receiving the peg N may be formed at the cut edge 40 and the latter will be substantially parallel to the uncut connecting edge 42.

30 **[0065]** Furthermore, the distance d1 between the longitudinal cut edge 40 and the uncut connecting edge 42 will be greater than the distance d2 between the latter and the free end edge 17 of the panel 12.

35 **[0066]** Thus, when the die-cut portion 38 is in the operative position the hole 35 will project above the panel 12 for the peg N to easily fit into the hole 35.

[0067] Advantageously, the glue dots G are applied below the longitudinal fold line 37 or below the longitudinal cut edge 40 of the die-cut portion 38.

40 **[0068]** Preferably, the portion of the transverse panel 12 with the hole 35 will be covered with a layer of plastic material 47 to increase the folding strength near the hole 35.

45 **[0069]** Particularly, in the first embodiment as shown in FIG 3, the layer of plastic material 47 will be applied to the end portion 36 of the transverse panel 12.

[0070] Alternatively, in the second embodiment as shown in FIG 5, the layer of plastic material 47 will cover the die-cut portion 38 of the transverse panel 12.

[0071] Preferably, the layer of plastic material 47 will be applied to the inner surface 33 of the panel 12.

50 **[0072]** In either case, the layer of plastic material 47 is applied to the transverse panel 12 before forming the hole 35. A further punching step will be provided for forming the hole 35 in the panel 12 through the sheet member 11 and the layer of plastic material 47.

[0073] In a further embodiment of the invention as

shown in FIG. 6, the band may comprise a counter-panel 49 which is rigidly joined to the transverse support panel 12 and has such a shape as to form a compartment 50 therewith.

[0074] The hole 35 may be formed in a transverse appendage 51 which slidably fits into the compartment 50 such that it will project out of it in the pulled-out position.

[0075] Particularly, the compartment 50 may have a substantially constant average width and a narrower portion 52 at its free end 17, whereas the appendage 51 may have an average width corresponding to the width of the compartment 50 and a wider end portion 53 designed for interference fit with the narrower portion 52 to lock the appendage 51 in the pulled-out position.

[0076] In a further aspect, the invention provides a package 2 for one or more bulk products P, particularly but without limitation food products, characterized in that it is at least partially wrapped in a band 1 as described hereinabove, with a sheet member 11 having a hole 35 for receiving a support peg N of the display stand E without requiring any additional external hanging elements.

[0077] The multifunctional band and the package of the invention are susceptible to a number of changes or variants, within the inventive concept disclosed in the appended claims. All the details thereof may be replaced by other technically equivalent parts, and the materials may vary depending on different needs, without departure from the scope of the invention.

[0078] While the band and the package have been described with particular reference to the accompanying figures, the numerals referred to in the disclosure and claims are only used for the sake of a better intelligibility of the invention and shall not be intended to limit the claimed scope in any manner.

Industrial Applicability

[0079] The present invention is susceptible of industrial application, as it can be produced on an industrial scale in factories in the field of food product and food product package production.

Claims

1. A package (2) containing products (P), particularly but not exclusively food products, and comprising a multifunctional band (1), wherein the package (2) has opposed faces (9, 10), and wherein said band (1) comprises a sheet member (11) suitable to wrap the package (2) and hang it from a display stand (E), said sheet member (11) being elongate to define a longitudinal axis (L) and having a hole (35) for receiving a support peg (N) of a display stand (E); wherein said sheet member (11) comprises at least one pair of transverse panels (12, 13) for covering the opposed faces (9, 10) of the package (2) and a longitudinal panel (14) for joining said transverse

panels (12, 13) together, one of said transverse panels (12, 13) having a supporting function, said hole (35) being formed in said transverse panel (12) with the supporting function; **characterized in that** said transverse panels (12, 13) and said longitudinal panel (14) have lateral edges (17, 18, 19) which are substantially parallel to said longitudinal axis (L), said transverse panels (12, 13) having a width (l1, l2) that is greater than the width (l3) of said longitudinal panel (14) to outwardly project therefrom and **in that** said sheet member (11) comprises two longitudinal appendages (20, 21), connected to said transverse panels (12, 13) respectively and having free ends (24, 25) designed to be joined to the package (2) by bonding.

2. Package as claimed in claim 1, **characterized in that** one of said transverse panels (12, 13) is made of one piece and comprises a respective free longitudinal edge (17) substantially parallel to said longitudinal axis (L), said hole (35) being proximate to said free longitudinal edge (17).
3. Package as claimed in claim 2, **characterized in that** said transverse support panel (12) along its transverse extension, has a longitudinal fold line (37) delimiting an end portion (36) for facilitated coupling to the peg (N) of the display stand (E), said free longitudinal edge (17) being formed in said end portion (36).
4. Package as claimed in claim 3, **characterized in that** said band (1) comprises a substantially semi-circular cut (48) formed in said transverse panel (12) below said fold line (37) and adapted to receive the free longitudinal edge (17) of the end portion (36) and retain the latter when it is folded along said fold line (37) onto the outer surface (31) of the transverse panel (12) to be substantially coplanar therewith.
5. Package as claimed in claim 1, **characterized in that** said transverse panel (12) comprises a substantially rectangular die-cut portion (38) with three consecutive cut edges (39, 40, 41) and an uncut edge (42) substantially parallel to said longitudinal axis (L) for connection to the rest of the panel (12), said die-cut portion (38) being adapted to be folded about said uncut edge (42) to cause said hole (35) to project beyond said free longitudinal edge (17) when said die-cut portion (38) is fully overturned.
6. Package as claimed in claim 5, **characterized in that** said hole (35) is near one of said cut edges (40), which is substantially parallel to said uncut edge (42).
7. Package as claimed in claim 1, **characterized in that** it comprises a counter-panel (49) which is rigidly joined to said transverse support panel (12) and so

shaped to form a compartment (50) therewith, said hole (35) being formed in a transverse appendage (51) which is slidably fitted into said compartment (50) such that it will outwardly project in the pulled-out position.

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8. Package as claimed in claim 7, **characterized in that** said compartment (50) has a substantially constant average width with a narrower portion (52) at its free end (17), said appendage (51) having an average width corresponding to the width of said compartment (50) and a wider end portion (53) adapted for interference fit with said narrower portion (52) upon sliding as thereof to lock said appendage (51) in the pulled-out position. 10
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9. Package as claimed in claim 1, **characterized in that** said appendages (20, 21) of said band (1) are substantially aligned and their width (l4, l5) is substantially equal to the width (l3) of said longitudinal panel (14). 20
10. Package as claimed in claim 1, **characterized in that** said transverse panels (12, 13) have both an outer surface (31, 32) designed to bear text and graphic symbols (l) for identifying the product (P); and an inner surface (33, 34) designed to face the package (2). 25
11. Package as claimed in claim 19, **characterized in that** said inner surfaces (33, 34) of said transverse panels (12, 13) are designed to receive glue dots (G) for fixation thereof to the opposed faces (9, 10) of the package (2), said glue being selected from the group of low-temperature resistant adhesives. 30
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12. Package as claimed in claim 1, **characterized in that** said transverse panel (12) is covered with a layer of plastic material (47) proximate to said hole (35) to increase its folding strength. 40
13. Package as claimed in claim 1, **characterized in that** said sheet member (11) is made of a base material having a substantially uniform thickness, selected from the group comprising light cardboard and plastic 45

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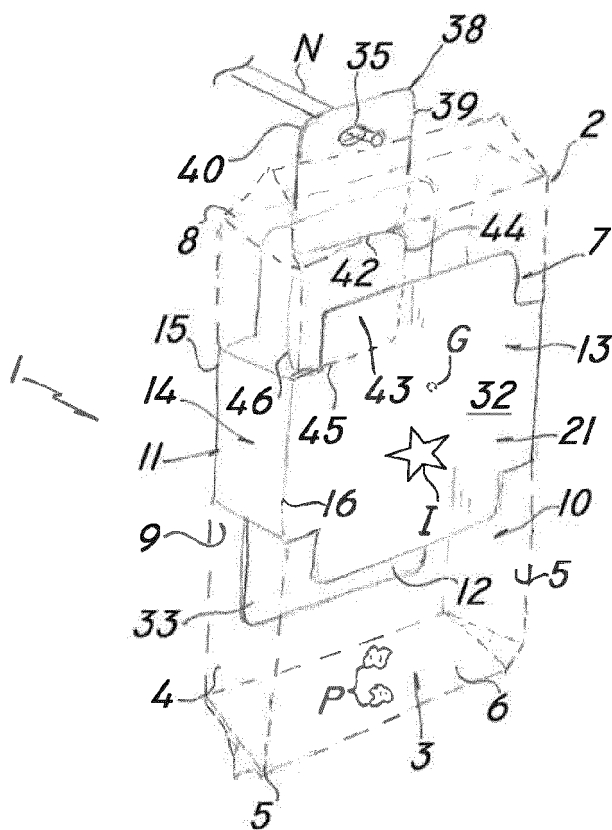


FIG. 1

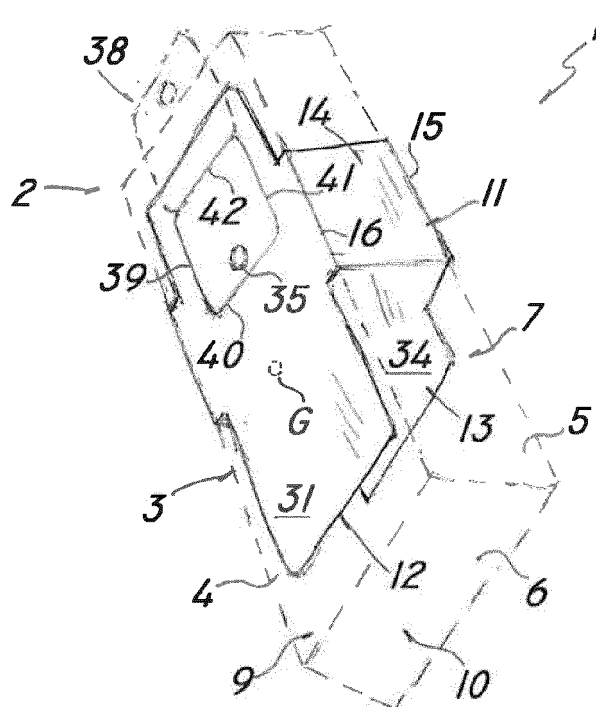


FIG. 2

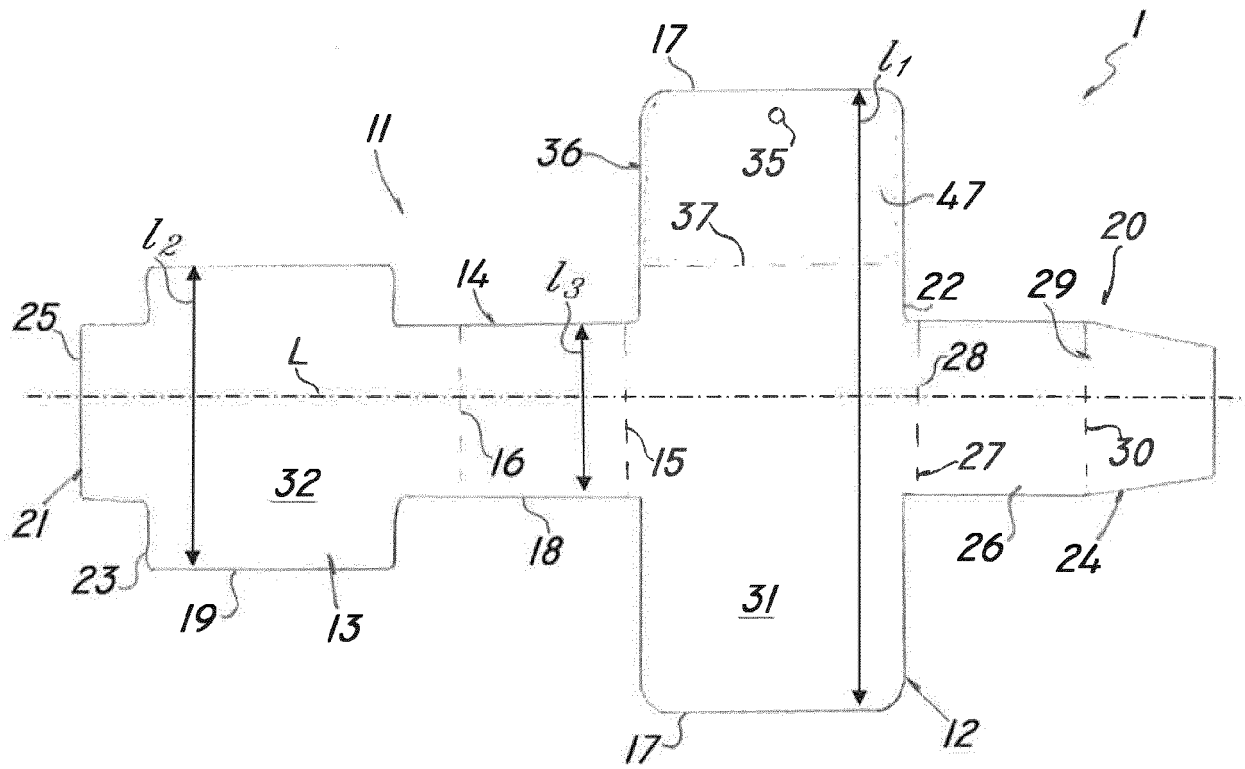


FIG. 3

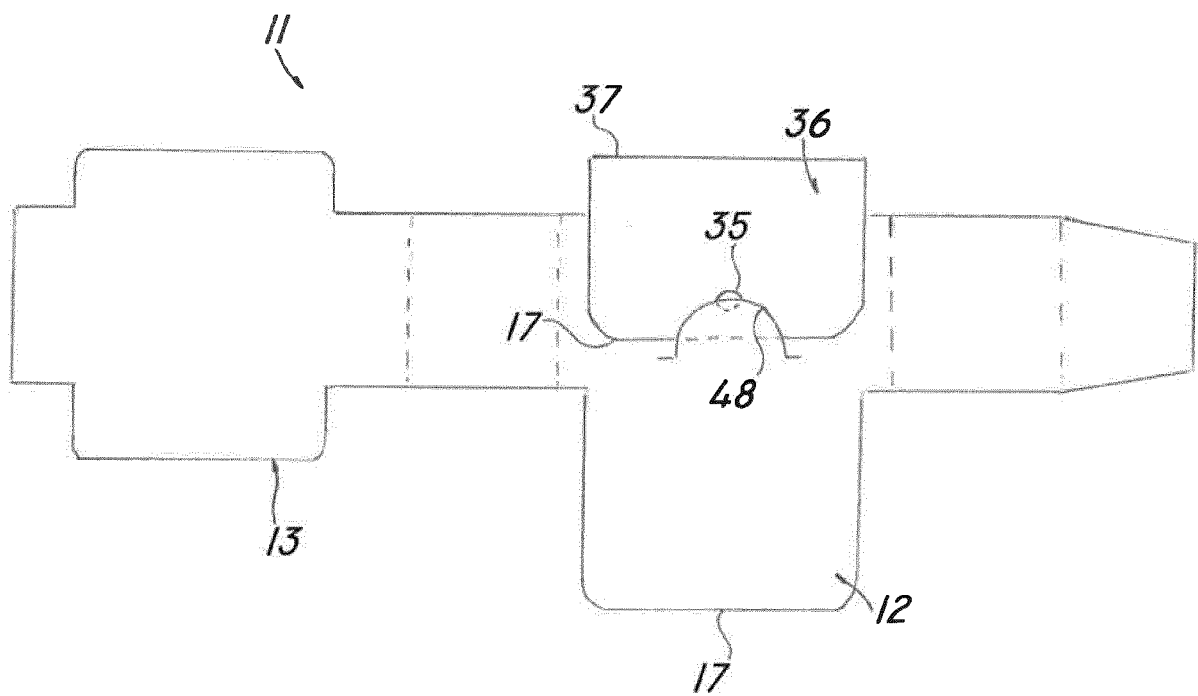


FIG. 4

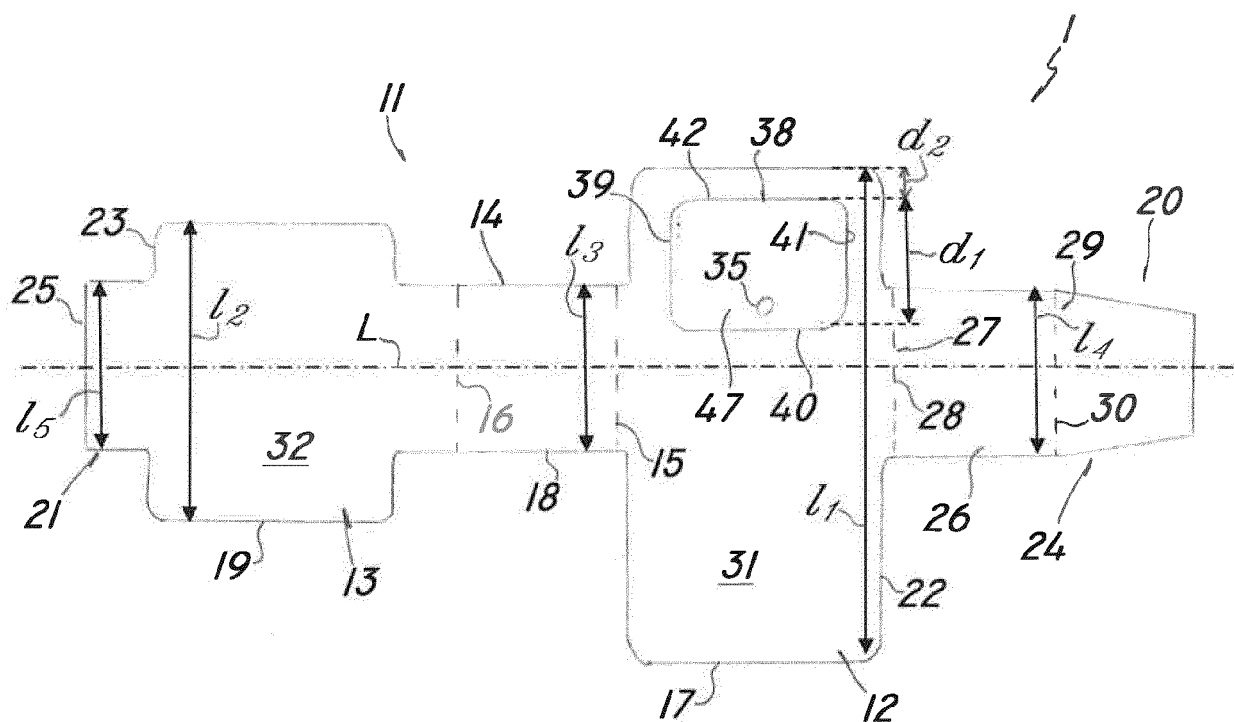


FIG. 5

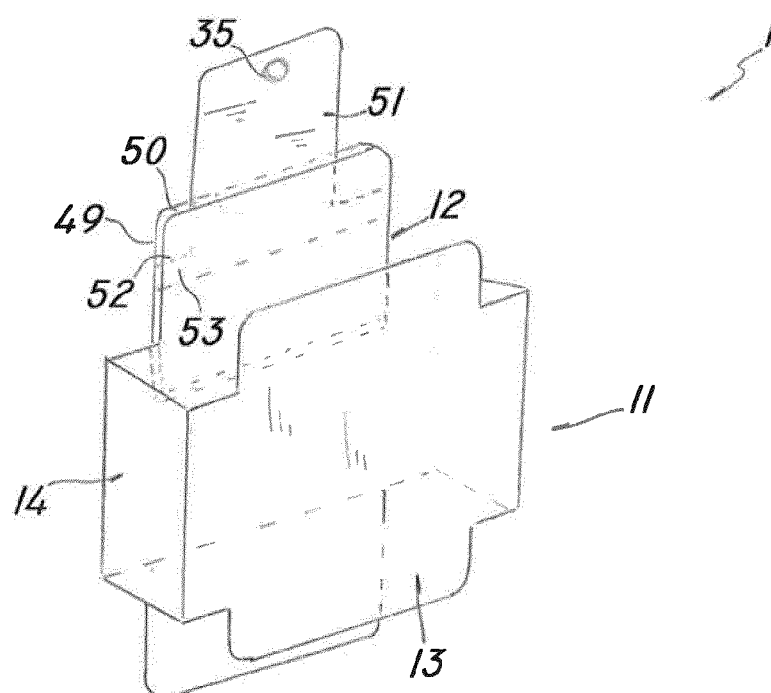


FIG. 6



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Application Number
EP 16 19 9960

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 3 April 2017	Examiner Ngo Si Xuyen, G
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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