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(71) Applicant: **Zeta S.r.l.**
35129 Padova (IT)
 (72) Inventor: **SACERDOTI, Gavriel**
35141 PADOVA (IT)
 (74) Representative: **Modiano, Micaela Nadia et al**
Modiano & Partners
Via Meravigli, 16
20123 Milano (IT)

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(54) **KNIFE GUARD**

(57) A knife guard (10) usable for a knife (11), comprising two layers (12, 13) of plastic material coupled so as to form a pocket (15) for at least the blade (14) of the

knife (11), the two layers (12, 13) being respectively a first layer (12) and a second layer (13). The layers (12, 13) are self-supporting and are made of polypropylene.

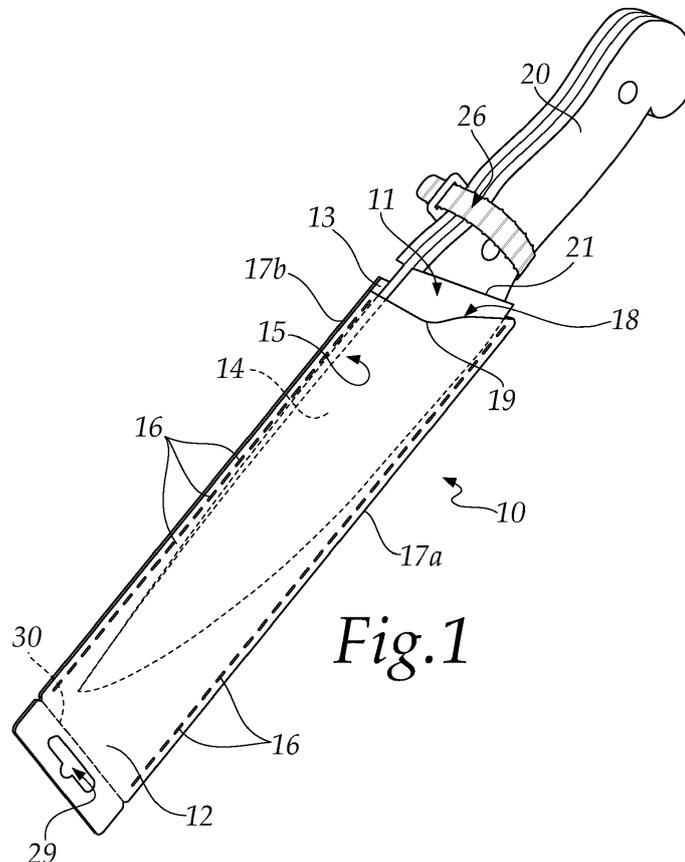


Fig.1

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Description

[0001] The present invention relates to a knife guard.

[0002] The invention is applied in the field of cutlery and can be used in a domestic environment but it can be used also in other environments, such as for example catering.

[0003] Knife guards made of plastic material have nowadays become commercially widespread.

[0004] Usually there are substantially two types of knife guards:

- sleeves for presale display,
- protective sheaths for the blade, adapted to avoid accidental cuts and loss of sharpness.

[0005] These articles are normally provided by coupling two layers of plastic material to form a pocket into which at least the blade is to be inserted.

[0006] This pocket may optionally have, proximate to its blade entry region, an element, usually a strap/band, for locking the handle and preventing the knife from escaping inadvertently from the knife guard.

[0007] These knife guards are substantially provided by means of two types of plastic material:

- protective sheaths for blades are made of self-supporting plastic material,
- sleeves for presale display are made of nonrigid plastic material.

[0008] These known methods have some drawbacks.

[0009] Knife guards made of nonrigid plastic material are generally transparent and are usually stiffened by inserting a cardboard element, on which the trademark of the knife or of the manufacturing company is optionally printed for commercial purposes.

[0010] Alternatively, printing is performed directly on the plastic material, but this impairs the stiffening of the guard.

[0011] This entails a long and awkward production procedure for the knife guard, since it is necessary to provide separately the pocket made of plastic material and the cardboard, optionally overprinting thereon logos and trademarks, with the necessity of subsequently inserting the latter in the pocket.

[0012] Knife guards made of soft plastic material generally have elements for locking the handle of the knife which are constituted by a strap/band.

[0013] This strap/band is provided separately and is inserted in adapted passages located in an element that extends starting from the pocket opening region, monolithically with one of the two layers that compose it.

[0014] Such strap/band is expensive and also affects the overall cost of the knife guard and is not easy to provide, since it has, for example, a press stud for closing or a hook-and-loop element.

[0015] As an alternative, both in knife guards made of

nonrigid plastic material and in knife guards made of self-supporting plastic material, the locking element is provided by means of a self-locking tie of the type used by electricians.

[0016] In this case, however, the locking element can be used only once, since it has to be cut to allow extraction of the knife.

[0017] Furthermore, another drawback is due to the fact that it is necessary to have the two types of knife guard available if it is necessary to have a knife guard for presale display and a knife guard for protecting the blade after sale.

[0018] This causes a considerable expenditure and the need, on the part of manufacturing companies, to have available considerable storage volumes to contain both types of product.

[0019] Finally, currently commercially available knife guards made of plastic material are generally made of materials that cannot be recycled and/or are toxic if disposed of in an incinerator.

[0020] The aim of the present invention is to provide a knife guard that is capable of improving the background art in one or more of the aspects indicated above.

[0021] Within this aim, an object of the invention is to provide a knife guard that can be used both as a presale display for the knife and as a case for storing it after sale.

[0022] Another object of the invention is to provide a knife guard that is easier, simpler and cheaper to provide than currently known knife guards.

[0023] A further object of the invention is to provide a knife guard which is entirely made of recyclable plastic material and/or which is not toxic if disposed of in an incinerator.

[0024] Another object of the invention is to provide a knife guard the aesthetics of which can be customized easily.

[0025] Another object of the present invention is to overcome the drawbacks of the background art in a manner that is an alternative to any existing solutions.

[0026] Another object of the invention is to provide a knife guard that is highly reliable, relatively easy to provide and at competitive costs.

[0027] This aim, as well as these and other objects which will become more apparent hereinafter, are achieved by a knife guard usable for a knife, comprising two layers of plastic material coupled so as to form a pocket for at least the blade of said knife, said two layers being respectively a first layer and a second layer, said knife guard being characterized in that said layers are self-supporting and are made of polypropylene.

[0028] Further characteristics and advantages of the invention will become more apparent from the description of a preferred but not exclusive embodiment of the knife guard according to the invention, illustrated by way of nonlimiting example in the accompanying drawings, wherein:

Figure 1 is a view of a knife guard according to the

invention in an application thereof;
 Figure 2 is a view of the knife guard of Figure 1 from a different angle and without the knife;
 Figure 3 is a view of a different configuration of the knife guard of Figures 1 and 2;
 Figure 4 is a view of a first variation;
 Figure 5 is a view of a second variation;
 Figure 6 is a view of a third variation;
 Figures 7a and 7b are each a view of a configuration of a fourth variation;
 Figures 8a, 8b and 8c are each a view of a configuration of a fifth variation.

[0029] With reference to the figures, a knife guard according to the invention is designated generally by the reference numeral 10. The knife guard 10 can be used for a knife 11.

[0030] Such knife guard 10 comprises two layers made of plastic material, respectively a first layer 12 and a second layer 13, which are coupled so as to form a pocket 15 for at least the blade 14 of the knife 11.

[0031] One of the particularities of the invention resides in the fact that the first layer 12 and the second layer 13 are self-supporting and made of polypropylene.

[0032] This plastic material is completely recyclable and does not produce toxic fumes if disposed of erroneously in an incinerator.

[0033] Polypropylene is advantageously at least partially transparent.

[0034] However, said polypropylene may also be colored.

[0035] Less than total transparency allows the knife guard 10 to conceal and/or mask any scratches that might occur over time by moving the blade 14 of the knife 11 within the pocket 15.

[0036] The layers 12 and 13 can be satin finished or glossy according to requirements.

[0037] The first layer 12 and the second layer 13 have a thickness preferably comprised between 300 μm and 1 mm.

[0038] Such knife guard 10 can be customized easily by printing logos and/or lettering in various colors directly on the first layer 12 and/or on the second layer 13.

[0039] Such printing can be carried out by one or more of the following methods:

- offset printing,
- screen printing,
- digital printing,
- thermal printing,
- relief printing.

[0040] The first layer 12 and the second layer 13 are coupled by means of a weld 16 proximate to the two mutually parallel edges 17a and 17b of the pocket 15 and are parallel to the direction of longitudinal extension of the pocket 15.

[0041] The expression "direction of longitudinal exten-

sion of the pocket 15" in the present description is understood to indicate the main direction of extension of the knife guard 10 which corresponds to the direction of insertion of the blade 14 in the pocket 15.

[0042] This weld 16 allows to reinforce the knife guard 10 locally, increasing its resistance to accidental cuts during the movement of the knife 11.

[0043] In particular, the type of weld 16 is preferably hot welding and/or ultrasound welding.

[0044] As an alternative, it is possible to couple the two layers 12 and 13 for example by adhesive bonding.

[0045] The pocket 15 has, at a first longitudinal end, an entry region 18 for the blade 14, proximate to/at which the end 21 of the handle 20 is located from which the blade 14 of the knife 11 extends, when the blade 14 of the knife is completely inserted in the pocket 15.

[0046] The expression "longitudinal end" in the present description is understood to indicate an end that is regarded with respect to the longitudinal axis of the pocket 15.

[0047] In the entry region 18 of the blade 14, the two layers 12 and 13 have an edge, respectively 19 and 22, which substantially duplicates the profile of the end 21 of the handle 20 of the knife 11.

[0048] The first layer 12 has an edge 19 with a portion 23 that is recessed with respect to the corresponding edge 22 of the second layer 13 in the direction of the second longitudinal end 24 of the pocket 15, which is opposite the first longitudinal end.

[0049] The recessed portion 23 facilitates the operation of extraction and insertion of the blade 14 in the pocket 15.

[0050] An element 25 for supporting an element 26 for locking the handle 20 extends from the edge 22 of the second layer 13.

[0051] The element 26 for locking the handle 20 is perpendicular to the supporting element 25 and is constituted by a band/strap which comprises:

- a portion with a plurality of ridges and/or raised portions 27, which can have various external profiles, for example arc-like (Figure 3), sawtooth-shaped (Figure 5), with another triangular profile, etc.
- a slot 28 into which the portion with the ridges and/or raised portions 27 is to be inserted after wrapping around the handle 20, providing an interlocking between them and firmly retaining the handle 20.

[0052] One alternative (Figure 4) provides for the provision of arc-like notches so as to form crescent-shaped portions 127 which can be lifted to interact selectively with the slot 28.

[0053] In all cases it is necessary to open the locking element 26 in order to release the knife 11.

[0054] The locking element 26 and the supporting element 25 are provided monolithically with the second layer 13.

[0055] The locking element 26 allows temporary and

removable locking.

[0056] Furthermore, the plurality of ridges and/or protrusions 27 ensures adequate fastening on various types of handles both in terms of shape and in terms of dimensions.

[0057] In one constructive variation, the locking element, now 126, is a self-locking tie of the type used by electricians (Figure 6).

[0058] In this case, the locking element 26 must be broken in order to remove the knife 11 and cannot be reused subsequently.

[0059] In other variations, not shown in the figures, the locking element 26 comprises hook-and-loop regions and/or press studs for closure.

[0060] In some constructive variations, not shown in the figures, there is a preweakening region at the edge 22 of the second layer 13 for removing the supporting element 25 and the locking element 26 from the pocket and using the latter simply as a sheath for the blade 14, after the sale of the knife 11.

[0061] The supporting element 25 has, proximate to and/or at the edge 22 of the second layer 13, a region 31 that is inclined with respect to the pocket 15 in order to match the profile of the end 21 of the handle 20, following its contour.

[0062] Such supporting element 25 has, proximate to its free end 32, one or more holes 33.

[0063] The holes 33 can also be used for the self-locking tie 126 for electricians mentioned earlier.

[0064] The expression "free end" in the present description is understood to indicate the end of the supporting element 25 that is not coupled to the pocket 15 and is opposite thereto.

[0065] These holes 33 are used for the optional fixing of the knife guard 10 to a wall after the sale of the knife, for example by means of nails and/or screws not shown in the figures.

[0066] The second longitudinal end 24 of the pocket 15 has an opening/hole 29 in order to be able to hang the knife guard 10 from an exhibitor for the sale of the knife 11.

[0067] The opening/hole 29 is for example a Euro hole.

[0068] Proximate to the second longitudinal end 24 there is a preweakening region 30, which is adapted to facilitate the removal of the second end 24 from the pocket 15 after the purchase of the knife 11.

[0069] The second longitudinal end 24 is formed by at least one of the two layers 12, 13.

[0070] In one constructive variation, shown in Figures 7a and 7b and designated by the reference numeral 210, the locking element 226 comprises a band with a plurality of through holes 227 and a press stud 228 located on the supporting element 225, with the holes 227 adapted to engage said press stud 228.

[0071] In particular, the press stud 228 comprises:

- a male component 229, with a stud 231, in a region of the supporting element 225 that corresponds to

the region from which the locking element 226 extends,

- a female component 230, which is shaped complementarily and is complementary to the male component 229 and is located proximate to/at the free end 232.

[0072] Figure 7b shows an applicative configuration of the constructive variation that has just been described.

[0073] Once the knife 11 has been inserted in the pocket 215, the band of the locking element 226 is wrapped around the handle 20, inserting the stud 231 of the male component 229 in one of its holes 227.

[0074] Then the press stud 228 is closed, coupling the male component 229 to the female component 230.

[0075] Figures 8a to 8c show a further constructive variation of the knife guard, designated by the reference numeral 310.

[0076] The locking element 326 comprises a band with a plurality of through holes 327 and a male component 28 of a press stud, located on the supporting element 325, with the holes 327 adapted to engage the male component 328.

[0077] In particular, the male component 328 of the press stud is provided with a stud 331 and is located in a region of the supporting element 325 that corresponds to the region from which the locking element 326 extends.

[0078] The supporting element 325 has, at/proximate to the free end 332, a through safety hole 330, which is adapted to engage the stud 331 of the male component 328.

[0079] Figures 8b and 8c show two applicative configurations of the constructive variation described above.

[0080] Once the knife 11 has been inserted in the pocket 315, the band of the locking element 326 is wrapped around the handle 20, inserting in one of its holes 327 the stud 331 of the male component 328, as in Figure 8b.

[0081] At this point it is possible to further lock the knife 11 in the knife guard by folding the free end 332 of the supporting element 325, so that the safety hole 330 corresponds to the stud 331 of the male component 328, and also by inserting in the safety hole 330 the stud 331 of the male component 328, as in Figure 8c.

[0082] In practice it has been found that the invention achieves the proposed aim and objects, providing a knife guard which can be used both as a display for the knife pre-sale and as a case thereof after sale.

[0083] The invention provides a knife guard that is easier, simpler and cheaper to provide than currently known knife guards.

[0084] Furthermore, the invention provides a knife guard that is entirely made of plastic material that can be recycled and/or is not toxic if disposed of in an incinerator.

[0085] Finally, the invention provides a knife guard the aesthetics of which can be customized easily.

[0086] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details

may furthermore be replaced with other technically equivalent elements.

[0087] In practice, the materials used, so long as they are compatible with the specific use, as well as the contingent shapes and dimensions, may be any according to the requirements and the state of the art.

[0088] The disclosures in Italian Utility Model Application No. 202019000003101 from which this application claims priority are incorporated herein by reference.

[0089] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

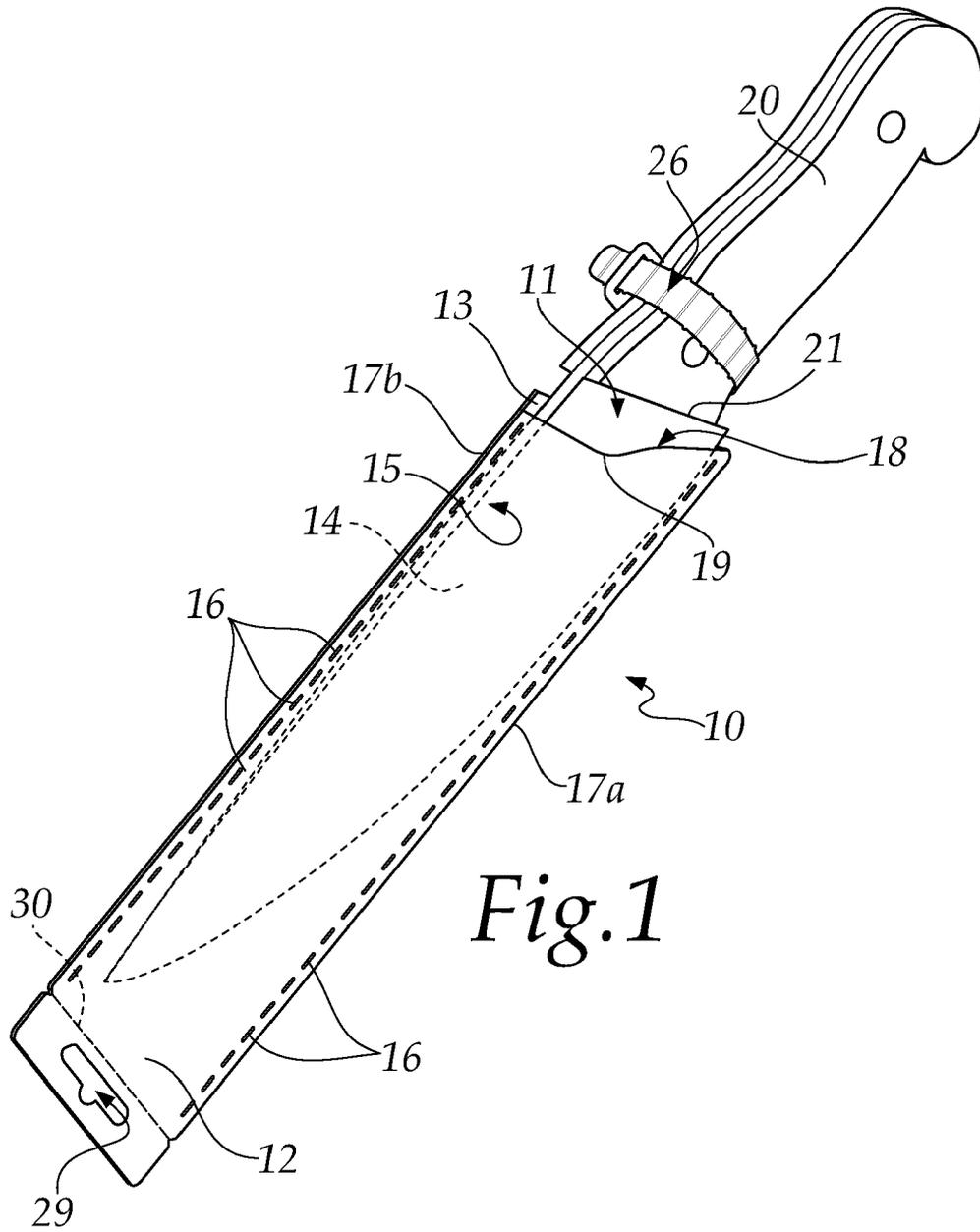
1. A knife guard (10) usable for a knife (11), comprising two layers (12, 13) of plastic material coupled so as to form a pocket (15) for at least the blade (14) of said knife (11), said two layers (12, 13) being respectively a first layer (12) and a second layer (13), said knife guard (10) being **characterized in that** said layers (12, 13) are self-supporting and are made of polypropylene.
2. The knife guard (10) according to claim 1, **characterized in that** said polypropylene is at least partially transparent.
3. The knife guard (10) according to one or more of the preceding claims, **characterized in that** said first layer (12) and said second layer (13) have a thickness preferably comprised between 300 μm and 1 mm.
4. The knife guard (10) according to one or more of the preceding claims, **characterized in that** said first layer (12) and said second layer (13) are coupled by means of a weld (16) proximate to two mutually parallel edges (17a, 17b) of said pocket (15) and are parallel to the direction of longitudinal extension of said pocket (15).
5. The knife guard (10) according to one or more of the preceding claims, **characterized in that** said weld (16) is preferably provided by heat and/or ultrasound.
6. The knife guard (10) according to one or more of the preceding claims, **characterized in that** said pocket (15) has, as a first longitudinal end, an entry region (18) for said blade (14).
7. The knife guard (10) according to one or more of the preceding claims, **characterized in that** in said entry region (18) of said blade (14) said two layers (12, 13) have an edge (19, 22) that substantially follows the profile of the end (21) of said handle (20) of said knife (11).
8. The knife guard (10) according to one or more of the preceding claims, **characterized in that** in said entry region (18) of said blade (14) said first layer (12) has an edge (19) with a portion (23) that is recessed with respect to the corresponding edge (22) of said second layer (13) in the direction of the second longitudinal end (24) of said pocket (15), said second longitudinal end (24) being opposite said first longitudinal end.
9. The knife guard (10) according to one or more of the preceding claims, **characterized in that** an element (25) for supporting a locking element (26) of said handle (20) of said knife (11) extends from said edge (22) of said second layer (13).
10. The knife guard (10) according to claim 9, **characterized in that** said locking element (26) and said supporting element (25) are monolithic with said second layer (13).
11. The knife guard (10) according to claim 10, **characterized in that** said element (26) for locking said handle (20) is substantially perpendicular to said supporting element (25) and is constituted by a band/strap which comprises:
 - a portion with a plurality of ridges and/or raised portions (27), and/or notches so as to form crescents (127) which can be lifted,
 - a slot (28) for the insertion of said portion with the ridges and/or raised portions (27) and/or crescents (127).
12. The knife guard (10) according to claim 11, **characterized in that** said supporting element (25) has, proximate to and/or at said edge (22) of said second layer (13), a region (31) that is inclined with respect to said pocket (15), said region (31) matching the profile of said end (21) of said handle (20).
13. The knife guard (10) according to claim 10, **characterized in that** said supporting element (25) has one or more holes (33) proximate to its free end (32).
14. The knife guard (10) according to claim 13, **characterized in that** said one or more holes (33) have a self-locking band made of plastic material inserted therein.
15. The knife guard (10) according to one or more of the preceding claims, **characterized in that** said second longitudinal end (24) of said pocket (15) is pro-

vided with an opening/hole (29).

16. The knife guard (10) according to one or more of the preceding claims, **characterized in that** a preweakening region (30) is present proximate to said second longitudinal end (24) of said pocket (15). 5
17. The knife guard (10) according to one or more of the preceding claims, **characterized in that** said second longitudinal end (24) is constituted by at least one of said layers (12, 13). 10
18. The knife guard (210) according to one or more of the preceding claims, **characterized in that** said locking element (226) comprises a band with a plurality of through holes (227), and a press stud (228) located on said supporting element (225), said holes (227) being adapted to engage said press stud (228). 15
19. The knife guard (210) according to the preceding claim, **characterized in that** said press stud (228) comprises: 20
- a male component (229), with a stud (231), in a region of said supporting element (225) that corresponds to the region from which said locking element (226) extends, 25
 - a female component (230), which is shaped complementarily and is complementary to said male component (229), located proximate to/at said free end (232). 30
20. The knife guard (310) according to one or more of the preceding claims, **characterized in that** said locking element (326) comprises a band with a plurality of through holes (327), and a male component (328) of a press stud which is located on said supporting element (325), said holes (327) being adapted to engage said male component (328), said male component (328) having a stud (331) and being arranged in a region of said supporting element (325) that corresponds to the region from which said locking element (326) extends. 35 40
21. The knife guard (210) according to the preceding claim, **characterized in that** said supporting element (325) has, at/proximate to said free end (332), a through safety hole (330). 45

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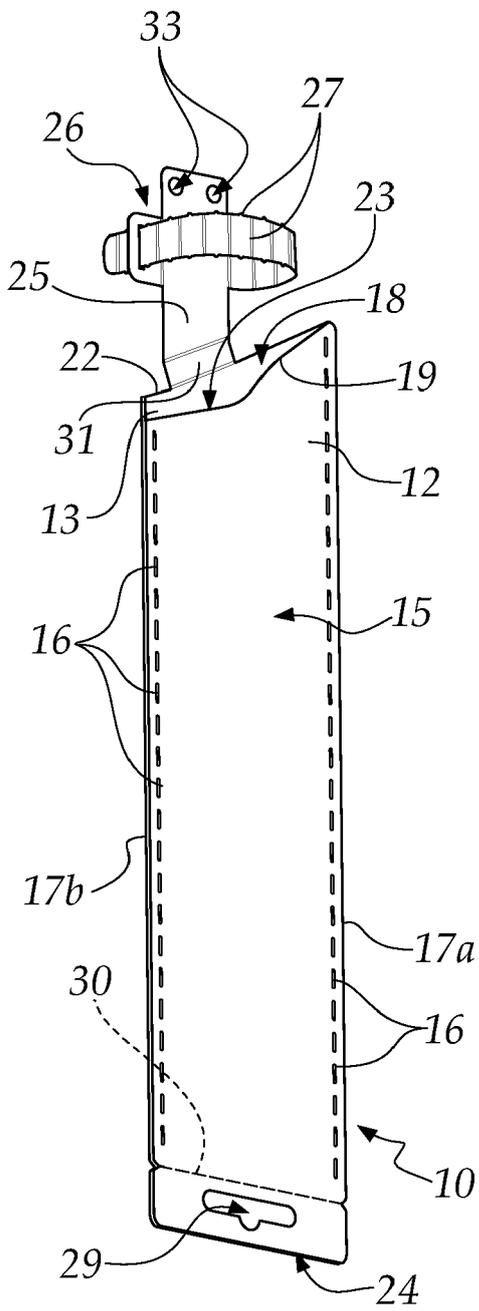


Fig. 2

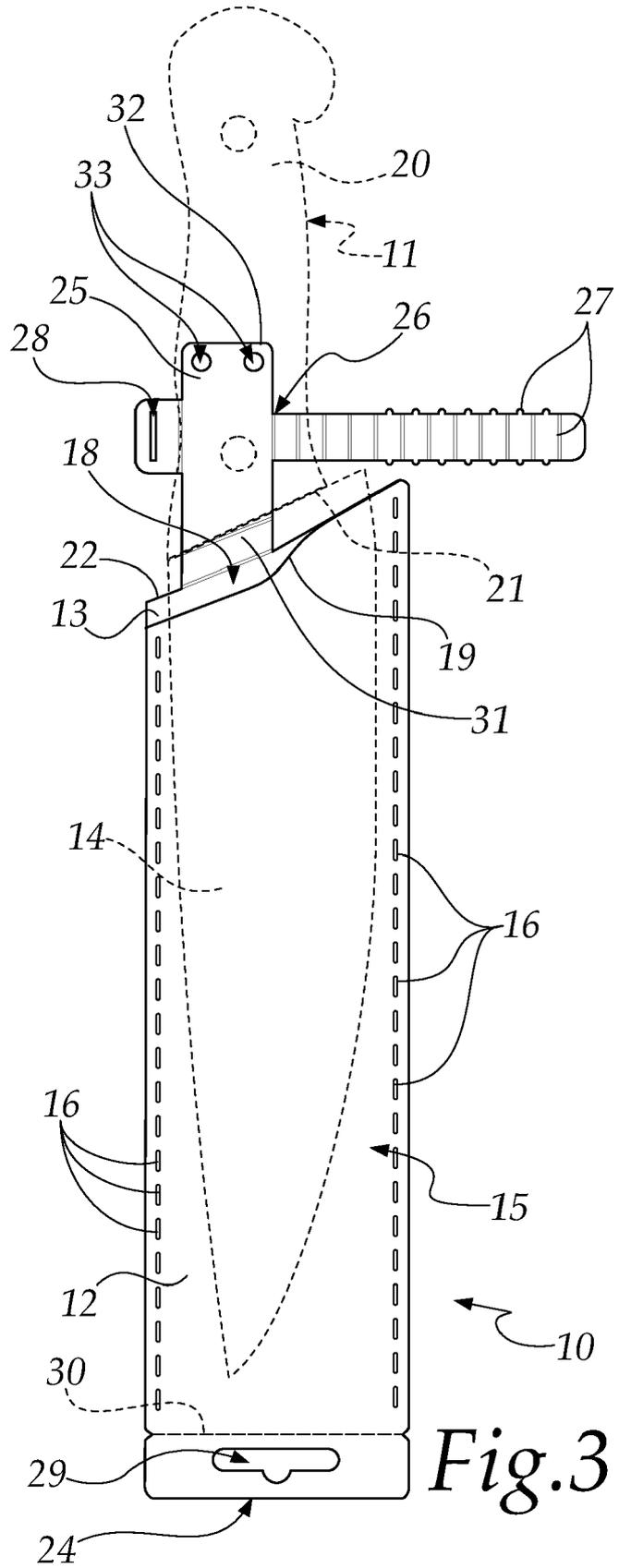


Fig. 3

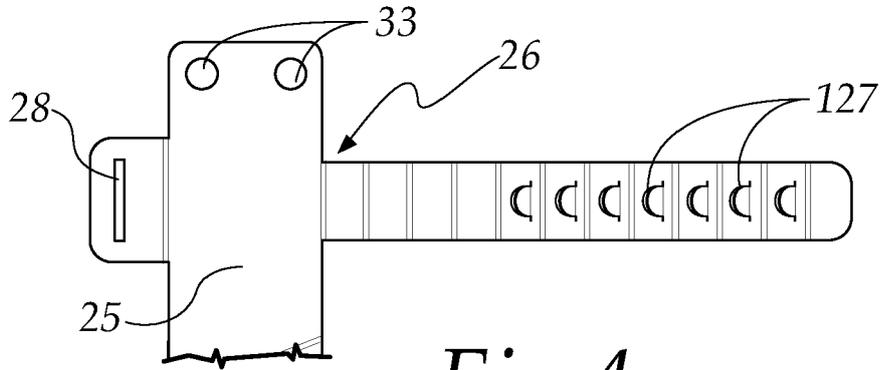


Fig. 4

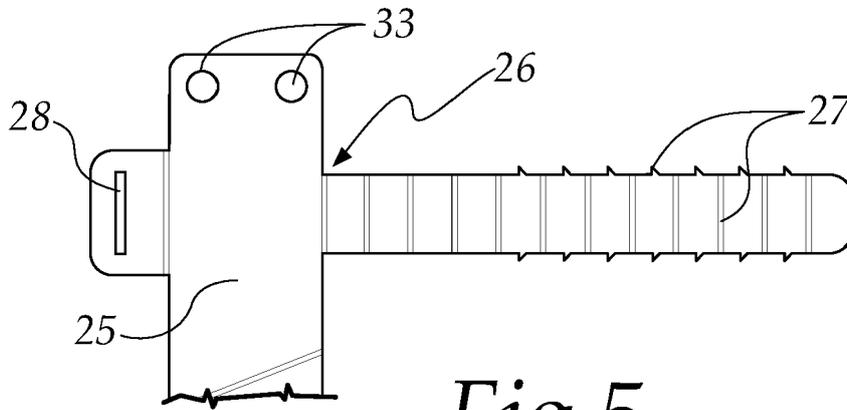


Fig. 5

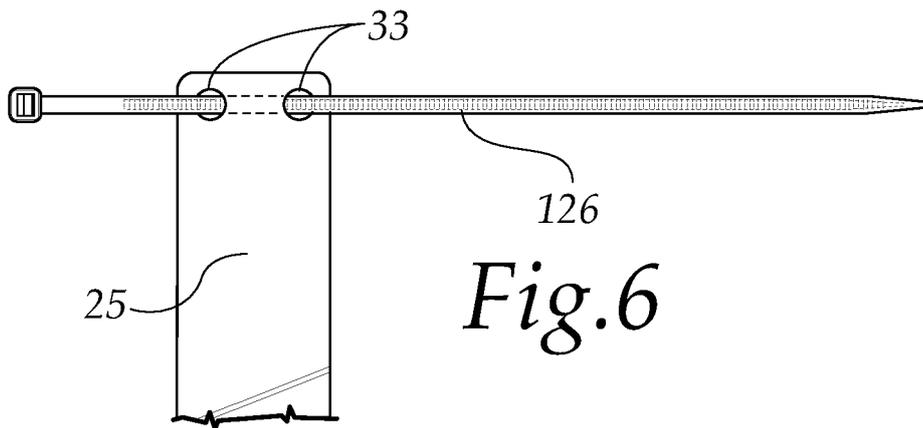


Fig. 6

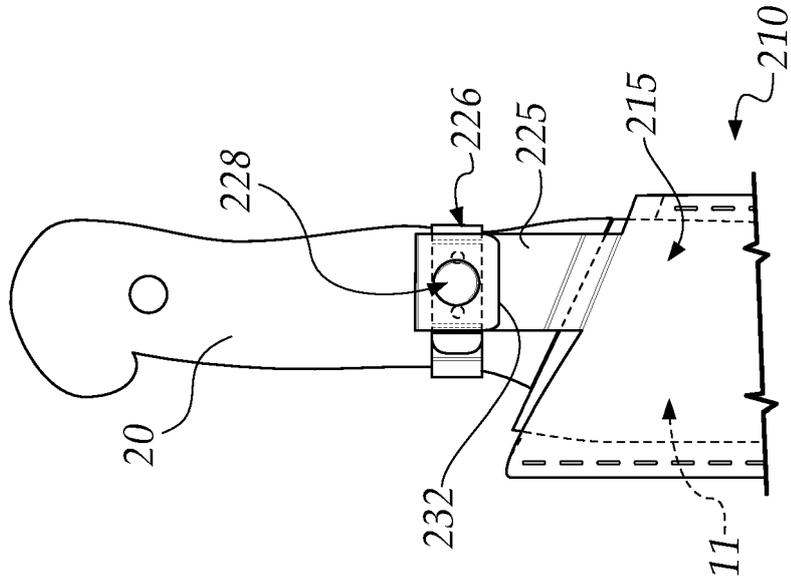


Fig. 7b

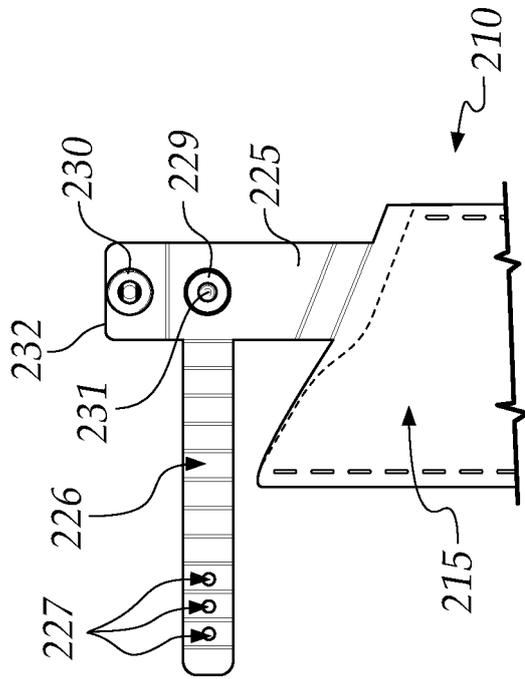


Fig. 7a

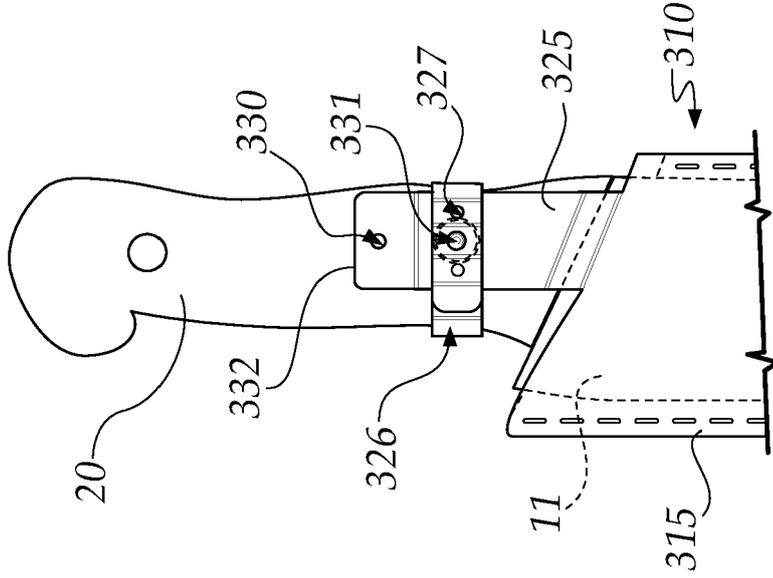


Fig. 8b

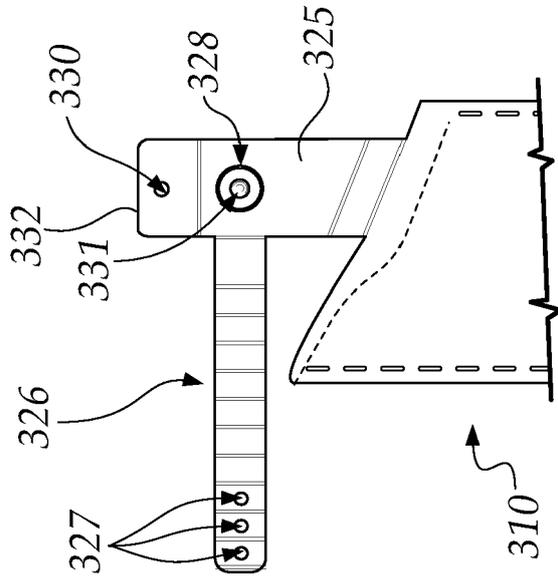


Fig. 8a

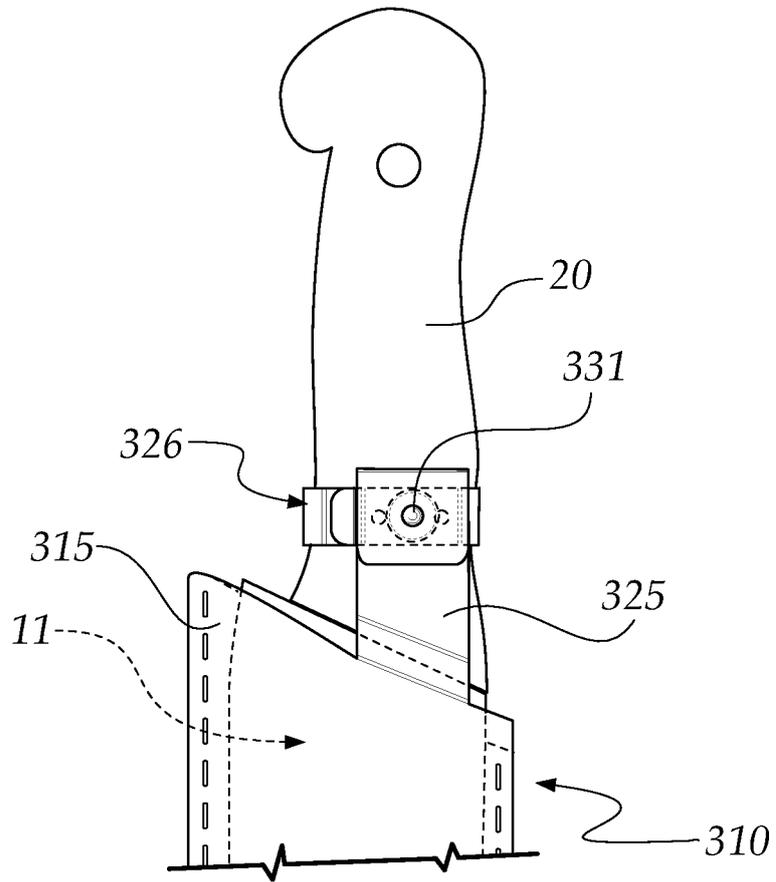


Fig.8c



EUROPEAN SEARCH REPORT

Application Number
EP 20 19 5586

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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
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Place of search		Date of completion of the search	Examiner
Munich		10 February 2021	Calabrese, Nunziante
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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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ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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