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(54) **Support for road signs**

(57) The invention relates to a support for road signs consisting of a first polygonal section bar (1) to a vertex of which a second "C" section bar (3) is secured.

The second section bar (3) is used for applying road signs (10), the edge of which can be easily inserted there-

in, so that road signs can be easily replaced, added or removed.

Advantageously, the first section bar (1) may have an open cross-section, thus acting as a sheath around existing tubular posts (2) for road signs.

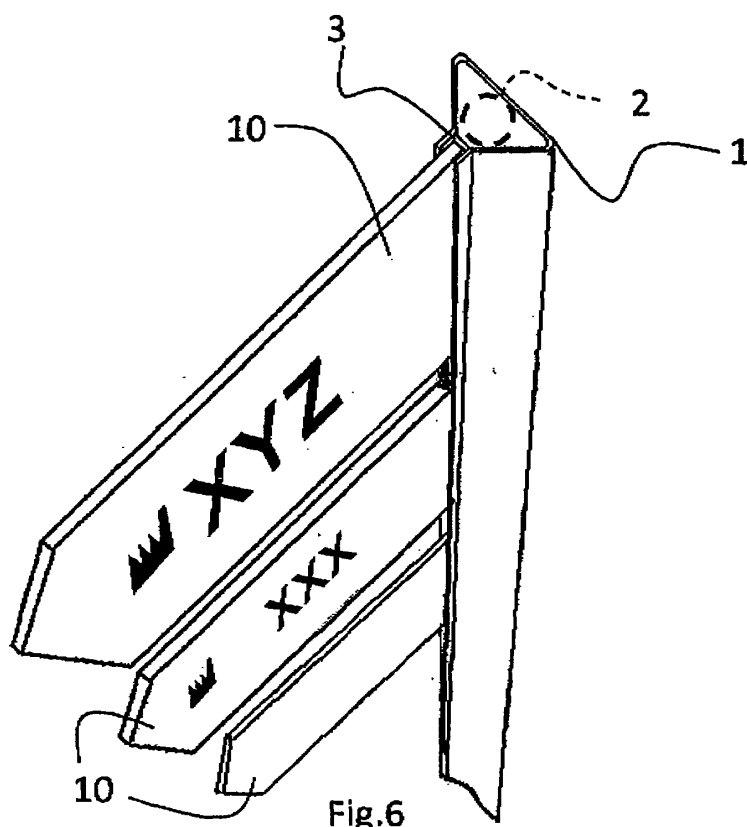


Fig.6

Description

[0001] The present invention relates in general to road signs, i.e. all those signs, panels and the like placed along streets and roads to indicate places, towns, streets or people names, advertisements, and so on.

[0002] As known, road signs and panels are supported by posts having in most cases a straight tubular shape, though they may sometimes be curved or made by section bars or more complex structures.

[0003] The present invention applies in particular, though not exclusively, to posts of any shape for road signs.

[0004] For obvious reasons, said posts and signs must meet the requirements of the road code and other road safety regulations.

[0005] To this end, they are manufactured by using predefined materials, dimensions and shapes, which are not however always suitable for some specific applications.

[0006] For example, as can be easily understood, the requirements for road signs of a city or a town are different from those of an extraurban road, a highway or a viaduct.

[0007] This difference is felt even more in city centres or tourist sites, where aspects related to the so-called urban decoration, i.e. the impact exerted on the surrounding environment by every element being present in the streets, are more important.

[0008] In this frame, it is easy to see that a tubular metal post such as those typically used for road signs is not a very attractive support from an aesthetic point of view, while not being always satisfactory even from a functional point of view as well.

[0009] Indeed, a road sign is usually mounted on these posts through brackets and screw-type clamps; these elements, however, due to the tubular shape of the post cannot always ensure a secure fastening, since they may be moved and rotated about the post by wind, knocks or other external agents.

[0010] Moreover, the post is not suitable for supporting elements other than typical road signs.

[0011] For example, let us consider the cases of waste-paper baskets or temporary panels indicating alternative ways to be followed when roadworks are in progress or the path of sport races and the like.

[0012] Fastening these elements requires *ad hoc* solutions, i.e. which are different according to each specific case, since of course a bracket suitable for supporting a sign can hardly be used for supporting a basket, and vice versa.

[0013] Sometimes signs are to be added to or removed from posts, in which cases it becomes necessary to be able to relocate them in a simple and accurate manner: current sign posts and fastening systems cannot offer an appropriate solution to these needs.

[0014] In fact, brackets and screw type clamps for supporting signs are difficult to loosen and re-tighten after being exposed outdoors to atmospheric agents for a long

time (sometimes rust, dust and the like make it impossible to remove them without breaking them).

[0015] The technical problem that the present invention aims at solving is therefore to provide a support for road signs, intended in particular but not exclusively for road use, which can overcome the above-mentioned drawbacks of current posts.

[0016] In particular, the invention aims at providing a support which, depending on the circumstances, can be used either as an independent post or as an element to be applied to existing posts, so that the latter need not be replaced, thereby achieving evident economical advantages.

[0017] The above technical problem is solved by a support having the features set out in the appended claims.

[0018] These features and the resulting effects and advantages will become apparent from the following description relating to a preferred non-limiting embodiment of the invention; such a description is provided with reference to the annexed drawings, wherein:

- Fig. 1 is a perspective view of a support according to the invention, applied like a sheath to a tubular post for road signs;
- Fig. 2 is a perspective view of a support for road signs according to the invention, provided in the form of a post;
- Fig. 3 is a perspective view of the support according to the invention, with a cap to be applied to the end thereof;
- Figs. 4 and 5 show the cross-section of the support of the preceding figures, with respective mounting conditions of a section bar associated therewith;
- Figs. 6, 7, 8 show respective road signs mounted to supports according to the invention;
- Figs. 9, 10, 11 show the cross-section of respective variants of supports according to the invention;
- Fig. 12 shows a road sign mounted to a pair of supports according to the invention;
- Fig. 13 shows the cross-section of a variant of the support according to the invention;
- Fig. 14 shows a last variant of a road sign.

[0019] With reference to the above-listed drawings, Fig. 1 shows a first embodiment of a support 1 according to the present invention, provided in the form of a sheath associated with a tubular post 2 for road signs.

[0020] As can be seen, sheath 1 surrounds post 2 and consists of a section bar having a substantially triangular cross-section, as described more in detail below, which is open at a vertex where there is a second "C" section bar 3; the connection between sheath 1 and section bar 3 is ensured by through screws 4 longitudinally spaced.

[0021] Sheath 1 may be anchored to the ground or secured to the base of post 2, thus becoming integral therewith, or else it may simply be arranged around it while remaining free in the axial direction.

[0022] The section bar used for manufacturing sheath

1 is preferably made of a plastic material such as polyethylene, PVC, rubber or another appropriate polymer which is resistant to atmospheric agents and compatible with road safety regulations, if used on urban streets or extraurban roads.

[0023] Moreover its triangular shape, and more generally its polygonal shape, makes sheath 1 capable of becoming deformed around post 2, thus partly absorbing the energy produced by a colliding vehicle or the like.

[0024] The second section bar 3 which closes the open vertex of the first one may also be made of the same materials, thus making up together with sheath 1 a resistant but light structure which can easily be installed around existing posts 2 already rooted in the ground.

[0025] The way in which road signs are supported, and more in general the functional aspects of the invention, will be described in detail after a description of another embodiment of the support according to the invention, as shown in Fig. 2.

[0026] As the drawing shows, in this case support 1 according to the invention is an independent post, i.e. not a sheath surrounding another tubular post 2 as in the previous embodiment.

[0027] Since there is no substantial difference from a structural point of view, Fig. 2 still uses the same reference numbers as Fig. 1; of course, unlike the first embodiment, in this case the section bar forming support 1 is anchored to the ground or installed in such a manner as to become self-supporting.

[0028] The triangular polygonal section bar is open at a vertex, where there is a second "C" section bar 3 secured to support 1 through screws 4.

[0029] In this case, since it must be a stand-alone element, i.e. lacking any internal support element, the section bar forming support 1 is preferably made of a metallic material (steel, aluminium or the like) just like traditional tubular posts; of course, alternative materials may also be used, such as, for example, the same aforementioned plastic materials employed when the support according to the invention is applied in the form of a sheath.

[0030] As far as the functional aspects of the latter are concerned, they are the same whether it is used as a sheath around an inner tubular core or as an independent post; therefore, the following will explain the various possible functions of support 1 by referring to different examples shown in Figs. 3-12, in some of which, for simplicity's sake, the profile of tubular post 2 is drawn with a dashed line to indicate that it may nonetheless be present within support 1.

[0031] Referring now to Fig. 3, there is shown a cap 5 applied to the end of support 1 in order to protect the inside thereof from dust and external agents.

[0032] The next Figs. 4 and 5 show respective mounting conditions of section bar 3 on support 1: more specifically, in the first drawing the open side of the "C" cross-section of section bar 3 is facing the inside of support 1, whereas in the second condition it is facing outwards.

[0033] The first mounting condition of section bar 3 is

intended for using support 1 without any signs.

[0034] This possibility is offered by the flat faces of support 1, which are defined by the triangular cross-section thereof: said faces may be used for applying decalcomanias, silk-screen printings and the like, thus providing road directions directly on support 1, without using road signs.

[0035] Instead, road signs can be mounted by using the open portion of section bar 3, which for this purpose is installed facing outwards, as shown in Fig. 5.

[0036] The open portion of the cross-section of section bar 3 may thus house the edges of panels 10, 11 and 12, which are inserted therein as shown in Figs. 6, 7 and 8, which illustrate different types of road signs.

[0037] In this frame, in addition to securing section bar 3 to support 1, screws 4 are also used for holding signs 10, 11 and 12; moreover, as shown in the drawings, the assembling may take place in a versatile manner according to different solutions, i.e. with signs projecting from support 1 (Fig. 6) or supported at their ends (Figs. 7 and 8) between two supports.

[0038] In this regard, it should be pointed out that section bar 3 is de facto a guide in which the sign edges are inserted, so that signs can be added or removed at any time.

[0039] The above description has clearly explained how support 1 allows to solve the technical problem addressed by the invention.

[0040] In fact, it is an element on which road signs can be easily mounted, added or removed without having to use clamps, brackets or other special fasteners.

[0041] This result is obtained thanks to the open cross-section of second section bar 3, which is used as a guide in which edges of the signs can be inserted.

[0042] Furthermore, thanks to the polygonal shape, in particular the triangular shape, of the cross-section of support 1, the latter may also be used for applications other than road signs, in that it may act as a surface on which any type of direction, decoration and the like can be applied (by means of silk-screen printings, decalcomanias, stickers and the like).

[0043] In this way, the support practically becomes a road sign per se, i.e. not requiring the application of panels unlike the other variants, or it may even be used as a road safety element: in fact, when fitted with reflectors, it may be used for delimiting the roadway just like some current stone posts.

[0044] It is apparent that this considerably increases the number of possible applications of the support according to the invention, which is therefore well suited to being adapted to the surrounding environment even aesthetically; this property allows it to be made compliant with any urban decoration requirements previously referred to.

[0045] Of course, the invention may be subject to many variations with respect to the above description.

[0046] For example, reference has already been made to the different materials which may be used for manu-

facturing support 1 or the different ways in which it may be decorated or coloured; in addition to these alternative solutions, there is also the possibility of manufacturing or covering it with reflecting material (plastic or other composite materials).

[0047] Further possible variants are shown in Figs. 9 to 11, which show sectional views of respective alternative embodiments of the cross-section of support 1.

[0048] As shown, said embodiments are all polygonal with four to six sides; they may be advantageously used depending on the dimensions of the support to be created, on the signs to be applied and on the environmental impact to be exerted by the signs.

[0049] A last variant of the invention is finally shown in Fig. 12, which illustrates a sign 12 mounted on two supports 1 without its edges inserted in the open cross-section of section bar 3; indeed, the open portion of the "C" cross-section of the latter is facing towards the inside of support 1, and the panel is secured through screws 4 shown in the preceding drawings.

[0050] It should finally be pointed out that the solutions described above and illustrated in the drawings wherein section bar 1 has an open cross-section are certainly the most preferred ones because they allow support 1 to be easily applied as a sheath around existing tubular posts 2 driven into the ground.

[0051] However, this embodiment might not be strictly necessary because it is also possible to create supports according to the invention wherein second section bar 3 is welded to or made in one piece (e.g. by extrusion) with first section bar 1.

[0052] This solution is visible in Fig. 13, wherein second section bar 3 is welded to first section bar 1 through welded joints 15 at the vertex of the polygonal cross-section of the first section bar.

[0053] Finally, it should not be excluded that a post for road signs can be provided wherein signs are secured directly to first section bar 1, as shown in the last figure 14; in such a case, the open vertex of the polygonal cross-section of section bar 1 performs those functions carried out by second section bar 3 in the other variants.

[0054] A sign 16 can thus be fastened to the open vertex of section bar 1 through screws or any other appropriate means.

[0055] In any case, all of these variants will still fall within the scope of the following claims.

Claims

1. Support for road signs, **characterized by** comprising a first section bar (1) having a substantially polygonal cross-section, and a second section bar (3) arranged along the first section bar (1) at a vertex of the polygonal cross-section thereof.
2. Support according to claim 1, wherein the vertex of the cross-section of the first section bar (1) whereat

the second section bar (3) is arranged, is open.

3. Support according to claim 1 or 2, wherein the second section bar (3) is removably secured to the first section bar (1).
4. Support according to claim 3, wherein the second section bar (3) has a substantially C-shaped cross-section and can be secured to the first section bar (1) with the open portion of its cross-section facing inwards or outwards.
5. Support according to any of the preceding claims, wherein, when facing outwards, the open portion of the cross-section of the second section bar (3) is adapted to house the edges of signs (10, 11, 12) in order to support said signs.
6. Support according to any of the preceding claims, wherein the second section bar (3) is secured to the first section bar (1) by means of screws (4).
7. Support according to any of the preceding claims, wherein the first section bar (1) is made of a plastic or metallic material.
8. Support according to any of the preceding claims, wherein the cross-section of the first section bar (1) is substantially triangular.
9. Support according to any of the preceding claims, wherein the second section bar (3) is made of a plastic or metallic material.
10. Post for road signs, **characterized by** comprising a support (1) according to any of the preceding claims.
11. Post for road signs according to claim 10, comprising a tubular post (2) arranged within the support (1).
12. Post for road signs according to claim 10 or 11, wherein the open portion of the "C" cross-section of the second section bar (3) is facing outwards, and wherein the edge of at least one panel (10, 11, 12) is inserted in the open portion of said section bar (3).
13. Post for road signs according to claim 10 or 11, wherein directions, decorations, reflectors and the like are arranged on its external surface.
14. Post for road signs according to claim 13, wherein said directions, decorations, reflectors and the like are applied through decalcomanias, silk-screen printings, stickers or other equivalent means.
15. Post for road signs, **characterized by** comprising a first section bar (1) having a substantially polygonal cross-section which is open at one of its vertices, a

sign (16) being secured to the section bar (1) with an edge inserted in the open vertex of said cross-section.

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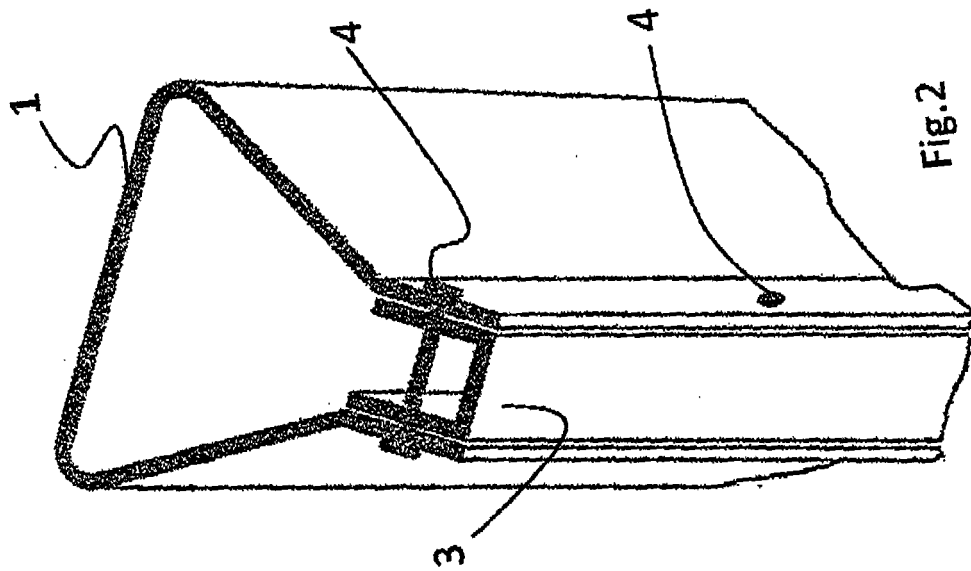


Fig. 2

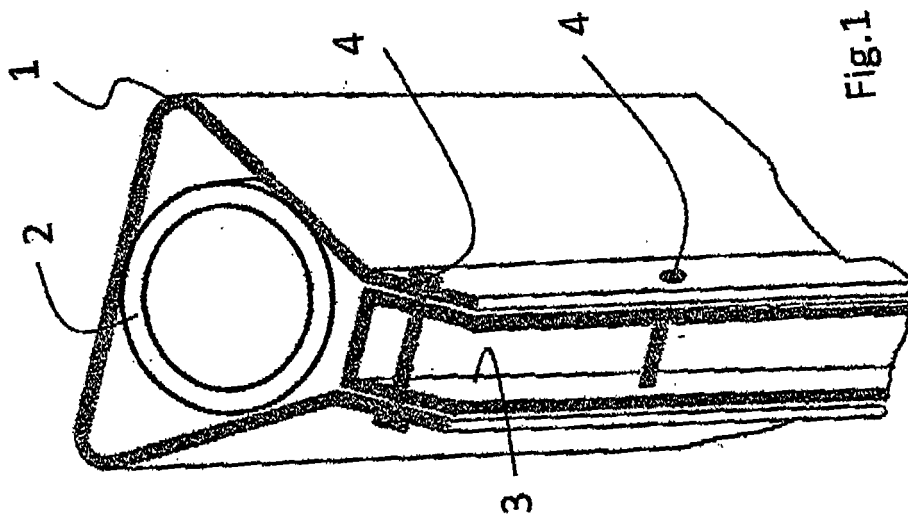
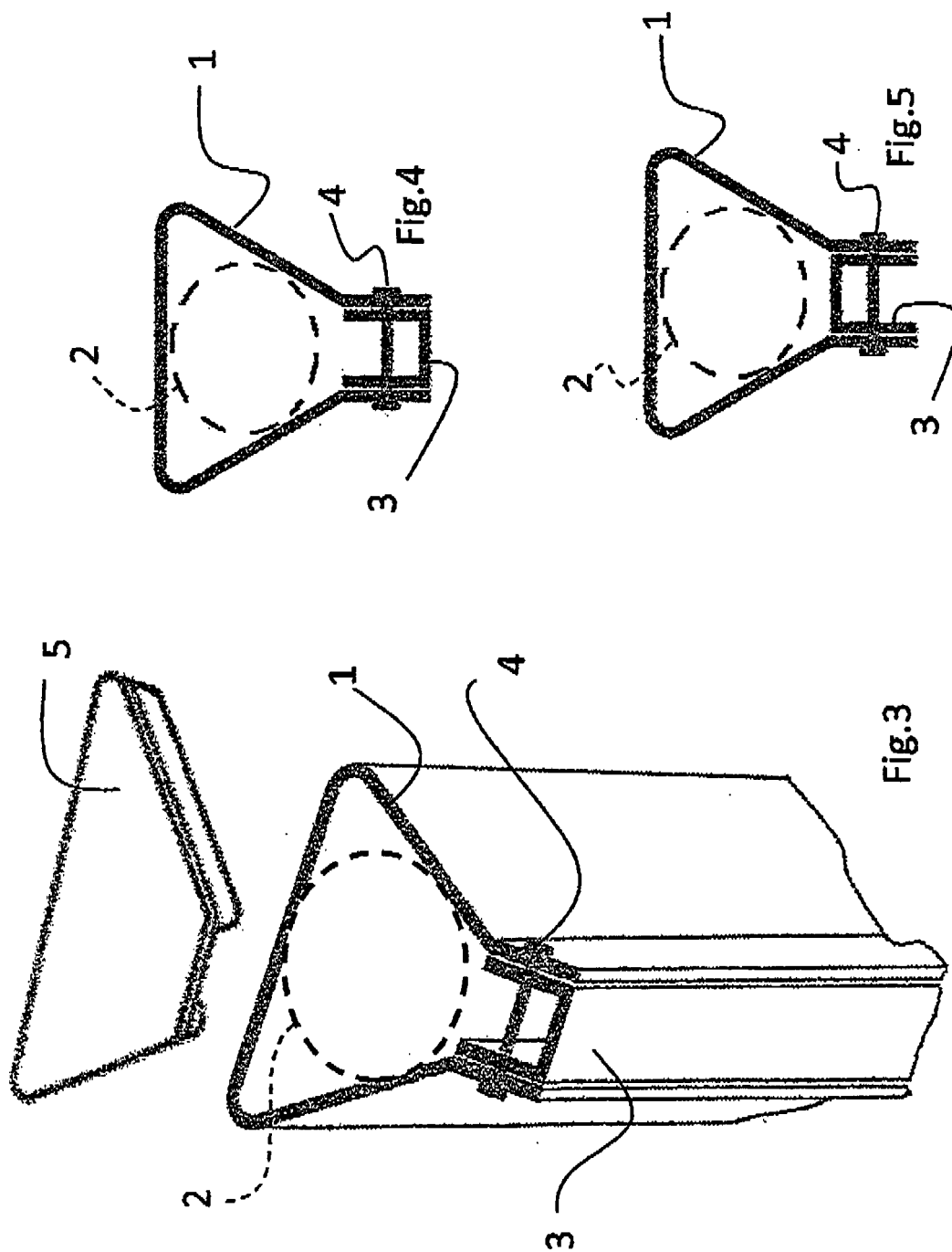
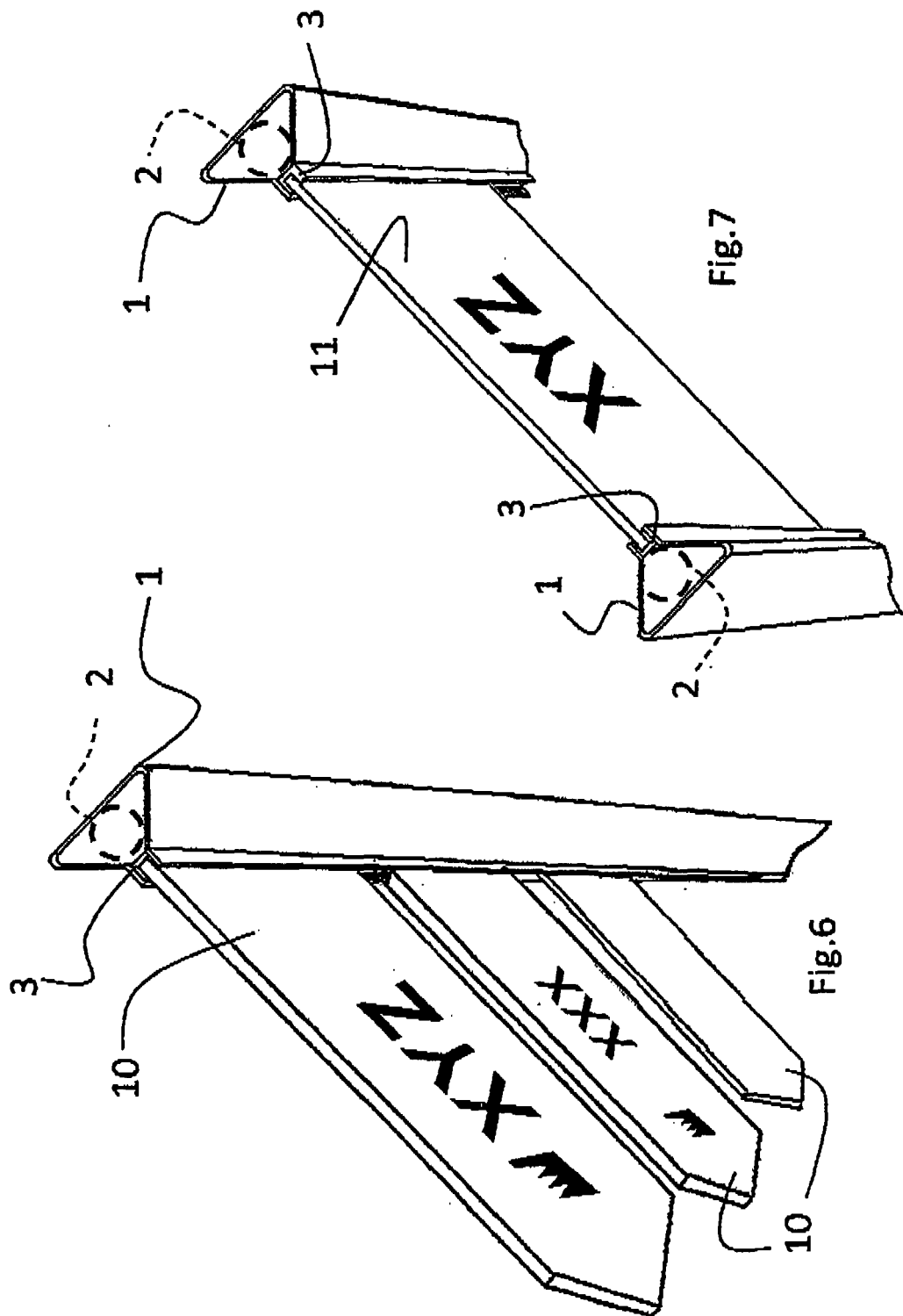
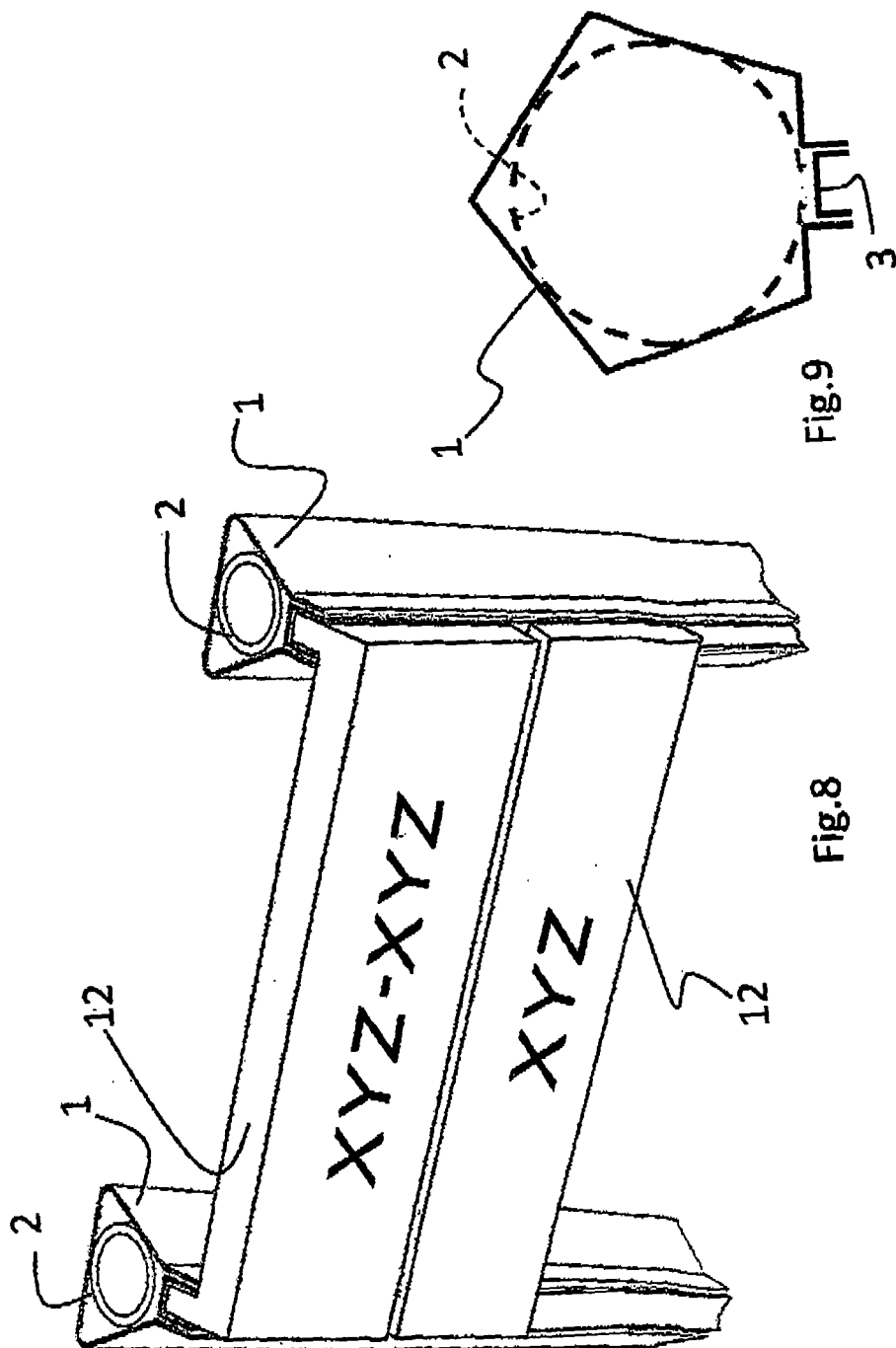
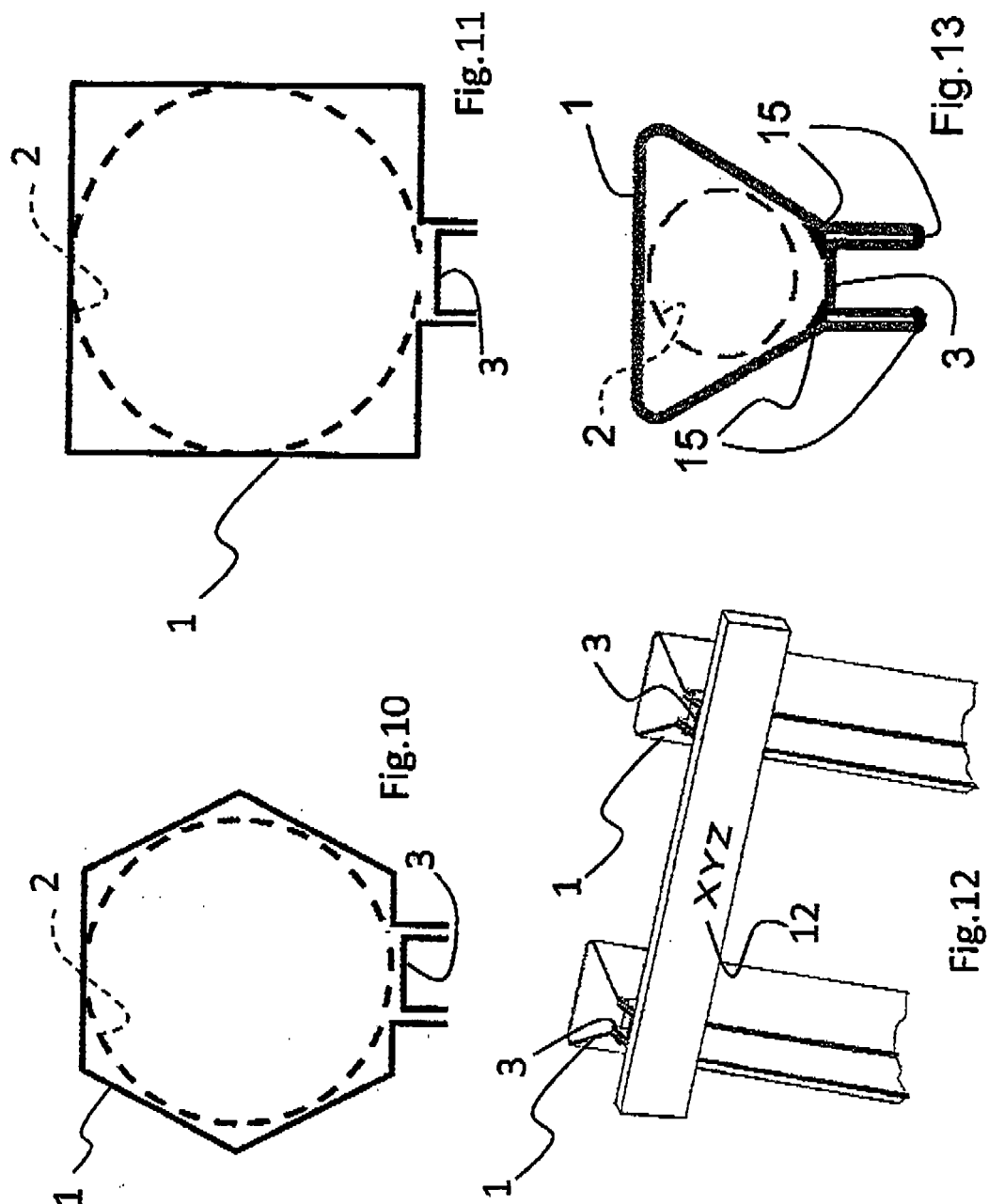


Fig. 1









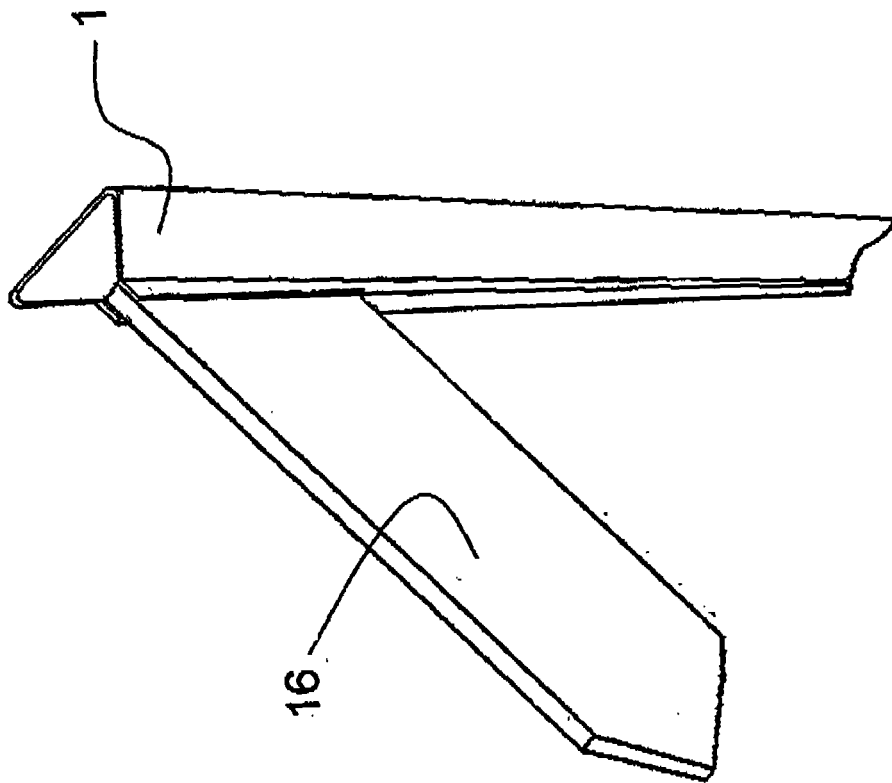


Fig.14