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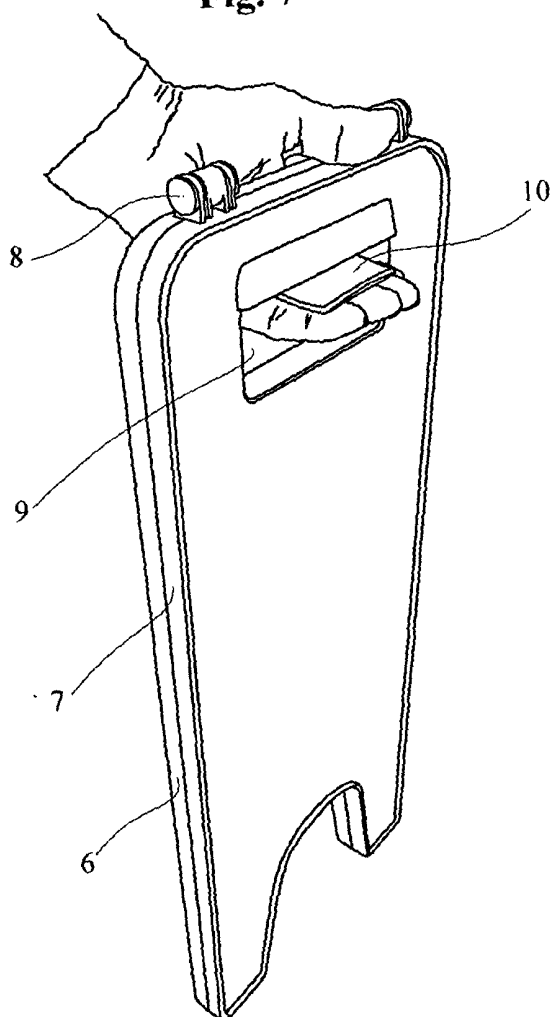
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(54) **Easel-shaped two-sided work in progress and warning sign with improved bundling**

(57) The invention relates to a sign where one of the wing elements (6,7) that are hinged to each other like a book has a hinged plate (10) on the upper edge of its opening (9) for gripping, and that said protruding plate (10) creates an appendage for hanging the sign itself to an edge or a support of a fixed or mobile load-bearing structure.

Fig. 7



Description

[0001] Equipment or devices for indicating work in progress (and/or danger or for any other exigency), can be of various types, more or less practical in positioning in places where they are needed, and for later being removed to be set aside for use at a later time.

[0002] This can occur on a road, near building sites, in hospital corridors during cleaning, to prevent people from transiting, or for warning those who happen by of the existence of a particular situation that is inconvenient, or dangerous, or of a general obstacle, or for pointing out any precautions to be taken at that particular time and at that particular place.

[0003] Well known in this regard are the double-sided signs composed of some flat elements that are hinged together, which are opened when needed like a book on its edges, so as to constitute a type of easel, and when they are no longer needed are closed and taken away.

[0004] From now on a single flat element here will be called a "wing".

[0005] Said signs have openings near the top so they can be gripped.

[0006] In the space above the openings there is a through hole that is generally used to hang the sign on a trolley, for example the multi-purpose type for cleaning, like the one used in hospital corridors, which is equipped with a special overhanging pin to be inserted.

[0007] We should bear in mind that said signs do not have any appendages that come out from the outer surfaces because they would hinder the signs being stacked on top of each other for storage or transportation.

[0008] One of the problems of the double-faced signs that have been considered, in the event that the above-mentioned signs need to be taken from the trolleys which transport them to be positioned where needed, usually in places with heavy pedestrian traffic to indicate some danger, is the lack of practicality and speed for the operator who has to use them, and a similar problem exists for the operator when said signs have to be loaded again onto said trolleys.

[0009] It is clear that said insertion manoeuvre means the operator has to pay extra attention, with a loss of time that creates some inconvenience in work like that of cleaning, where the employment, recuperation and returning to their proper places of the various equipment takes place frequently and this handling occurs almost automatically without requiring excessive physical effort and very quickly.

[0010] The purpose of this patent is to enhance this firmly established procedure of picking up the signs and putting them back.

[0011] This is achieved by adopting signs with a plate entirely hinged along the top edge of an opening, which when not used is hung inside the opening and which, when a hand is put in the opening to grip the sign, said plate rotates towards the inside; while because of its functionality said plate is made to rotate in such a way that it

protrudes from the outer surface of the wing on which it is hinged so as to constitute a suitably angled appendage.

[0012] To take off the sign the operator puts his hand in the opening and lifts the sign keeping it suspended. Likewise, to put the sign back the operator puts his hand in the opening, with no special care required, and puts it back hanging it on a rim, or a trolley support or on the rims of any accessories carried by the trolley.

[0013] To hang more than one sign, the trolley has to be fitted with rims or supports (like horizontally positioned tubes) taking into account that the plate has its free end curved downwards so as to get a better grip corresponding to a type of anchorage.

[0014] What has just been described becomes clear from an examination of the attached diagrams.

[0015] Fig. 1 is a frontal view of a sign currently on the market. We can see the hinging, the opening for gripping and the hole above for hanging the sign up.

[0016] Fig. 2 shows the sign from fig. 1 with the two wings against each other.

[0017] Fig. 3 is a front view of the sign shown in fig. 1, in an open position.

[0018] Fig. 4 shows the sign of fig. 3 with the wings open wide so that it makes an easel shape.

[0019] Fig. 5 shows the sign made according to this patent with the wings hinged at the top and closed. We can see that at the top of the opening of one of the wings a plate with a curved end is hinged, protruding outwards. In said position the plate can be applied to any available horizontal rim or profile to support the sign. It should be specified that the plate shown protruding, when left free, its natural position is that of hanging.

[0020] Fig. 6 shows the sign from fig. 5 viewed from the side and from the front.

[0021] Fig. 7 shows the sign supported with the hand of an operator inserted into the opening.

[0022] Fig. 8 shows the sign of fig. 7 opened up, where the opening is restricted by two blocking appendages on the hinge connections. We can see again that the plate that is hinged at the top of one of the openings is in its natural vertically hanging position.

[0023] Fig. 9 shows that using a jointed plate it is possible to hang a sign to another that is already hanging up.

[0024] Fig. 10 is a close-up of the top part of the two signs put together of fig. 9.

[0025] Fig. 11 shows the internal part of a wing of a sign (which in the case in question does not have the opening at the base that constitutes the support legs) where we can see how the hinge engages the upper rim of the opening with the plate.

[0026] Fig. 12 shows the outline of the articulated plate. We can see the external shape above the housing for the hinging, which rests on a special striker plate of the opening that limits its free rotation upwards.

[0027] Fig. 13 is a flatwise view of the inside part of the plate of fig. 12. We can see the configuration of the housings for connecting with the pin carried by the sign.

[0028] Fig. 14 shows the inside of the plate viewed

from above.

[0029] It is well known that signs on the market are composed of two wings 1, 5 hinged 2 together at the top, which when not being used rest next to each other and when they need to be used are separated at the base so as to make a kind of easel. The degree of opening is limited by special strikers 11 placed at the hinges 2 with which one of the wings is equipped.

[0030] Towards the top, both the wings, which are practically mirror images of each other, have two openings that allow the operator to grip them.

[0031] In the space above the openings 3 the wings have a hole that is used to connect them to a wall, for example, of a multi-purpose trolley for cleaning that has an protruding peg.

[0032] Obviously the insertion operation has to be done carefully, with correct centring. If there are several signs, then the peg has to be long enough or else there have to be several pegs.

[0033] Existing signs, similar to the signs made according to this patent, virtually have a corresponding configuration regarding the wings 1, 5 as well as the hinging 2 at the top, and also with regard to strikers 11 that limit the opening at the bottom, and also the openings 3 and the suspension holes 4.

[0034] In the signs made in accordance with the patent, the two wings 6, 7 both have apertures 9 so that the operator can grip them.

[0035] One of the wings 8 has, on the upper inside part of the opening 9, a special arrangement of pins 12 to which the housing 14 of a special plate 10 is connected.

[0036] Said plate 10 is made in such a way that when not being used it remains in its natural hanging state.

[0037] For the operator to take the sign 6, 7 the plate 10 rotates inwards with a horizontal disposition on the upper part of the hole of the apertures 9.

[0038] The function of the plate 10 is to make it rotate towards the outside of the wing 8 on which it is hinged reaching the locking position 16, 16.

[0039] In said position, because the free end 13 is curved, the plate 10 constitutes an effective protruding appendage capable of engaging special rims 17 and supports for supporting the entire sign 7, 8.

[0040] The plate 10 in said position of protruding appendage is also capable of engaging the lower rim of an opening of another sign placed right in front of it.

[0041] This type of connection can be used in succession for several signs.

[0042] In said manner, to an initial sign 7, 8 supported by a fixed or mobile load-bearing structure 17 you can hang a succession of other signs 7, 8.

[0043] What has just been explained is the originality of the invention, as well as its high degree of inventiveness that revolutionises an already well-established system for hanging the sign, which invention makes a mobile protruding appendage just to realise the suspension of the sign without therefore increasing the dimensions when putting several signs on top of each other.

Claims

1. Easel-shaped two-sided work in progress and warning sign with improved bundling, **characterized by** the fact that the wing elements (8) of the sign (7) have a plate (10) which is hinged (12, 14) along the top edge of its opening (9) used for gripping.
2. Easel-shaped two-sided work in progress and warning sign with improved bundling according to claim 1, **characterised by** the fact that the configuration of the pin (12) in line with the top edge of the opening (9) of the wing element (8) is such that it allows the plate hinged to it to hang in its normal position when the sign is not being used, and to be rotated inwards when the sign (7, 8) is being gripped and to be rotated towards the outside of the wing (8) onto which it is hinged, becoming slightly protruding towards the outside in order to be put above the edge or a support /17) of a load-bearing structure so that the sign itself (7, 8) is supported.
3. Easel-shaped two-sided work in progress and warning sign with improved bundling according to claim 1, **characterised by** the fact that the plate (10), when it is protruding outside of the opening (9) of the wing (8) to which it is hinged (12, 14) is kept at an acute angle with the surface of the wing (8) beneath, so that in addition to supporting the sign (7, 8) it keeps it against the structure (17) that supports it.
4. Easel-shaped two-sided work in progress and warning sign with improved bundling according to one or more of the previous claims, **characterised by** the fact that a successive sign (7, 8), with respect to a previous sign (7, 8) already hanging (17) using its plate (10) positioned on the outside of its opening (9) of the wing (8) to which it is hinged (12, 14), is hung on the lower edge of the opening (9) of the wing (7) of the sign (7, 8), next to the one before it.
5. Easel-shaped two-sided work in progress and warning sign with improved bundling according to one or more of the previous claims, **characterised by** the fact that the plate (10) has an end (13) that is curved downwards in order to increase the grip of the suspension of the sign (7, 8) with anchorage functions.

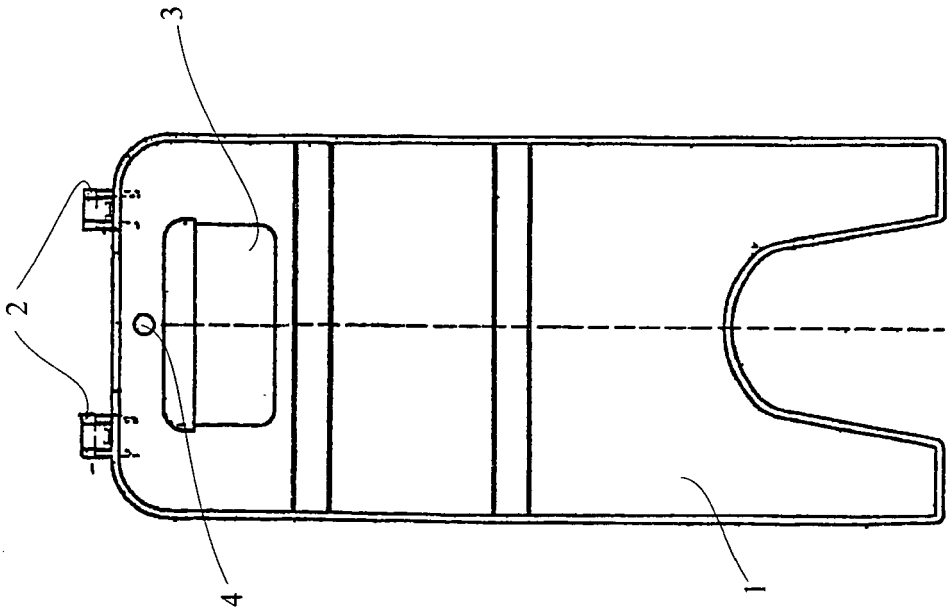


Fig. 1

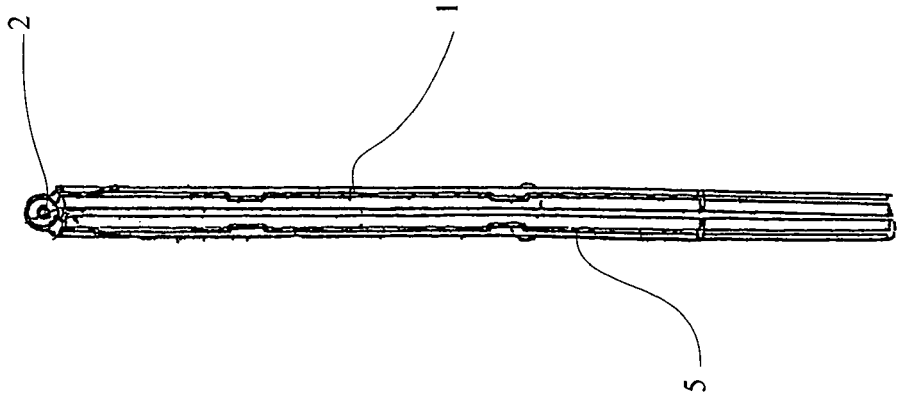
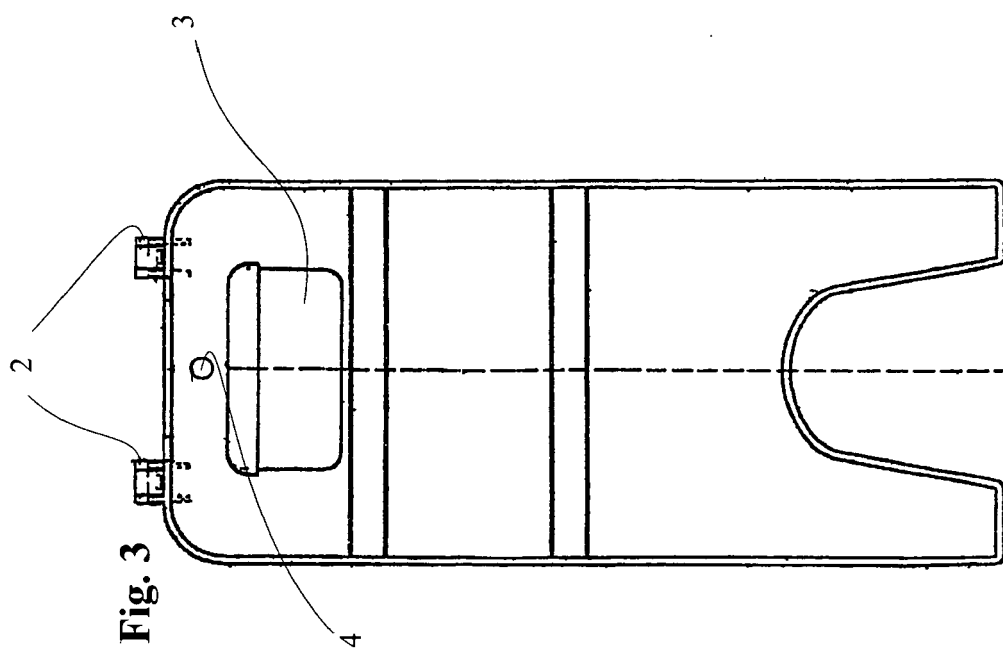
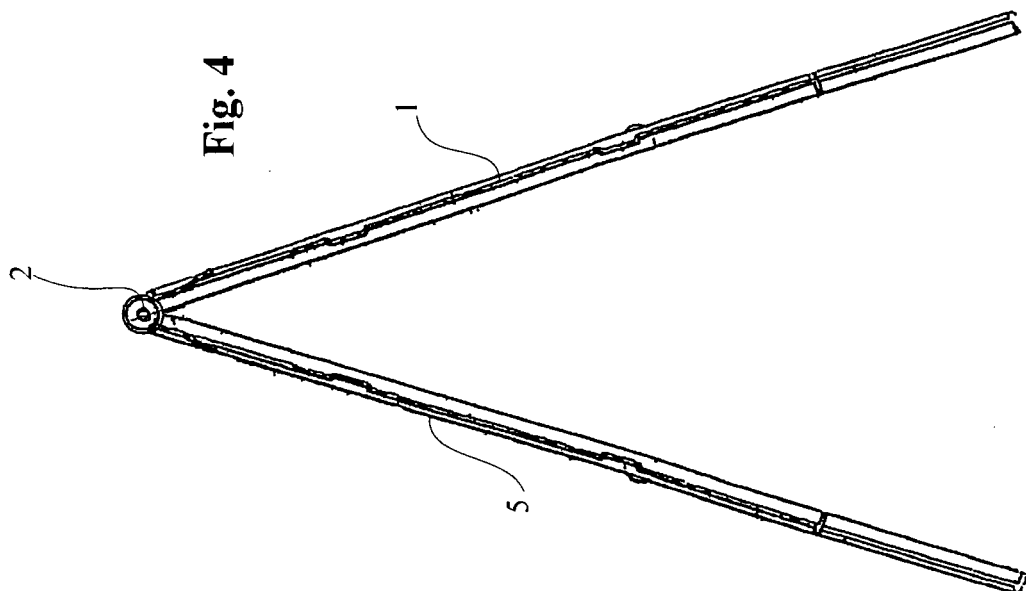
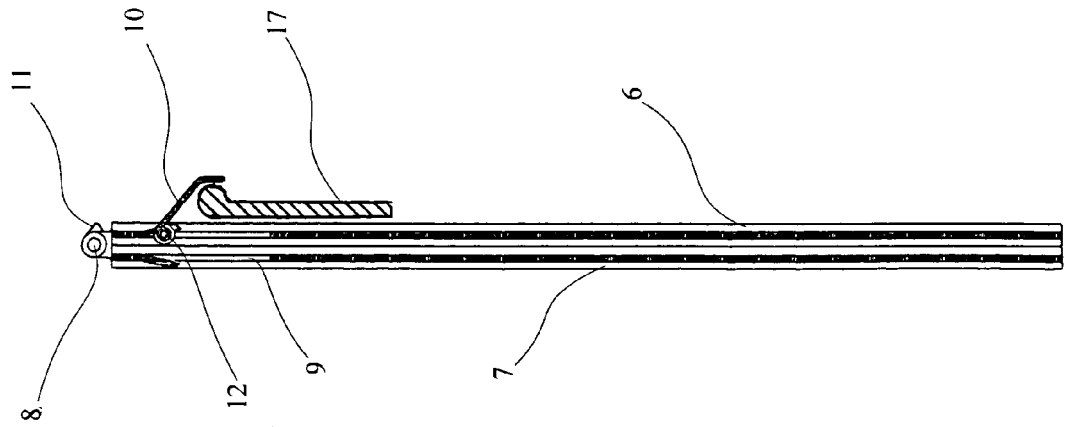
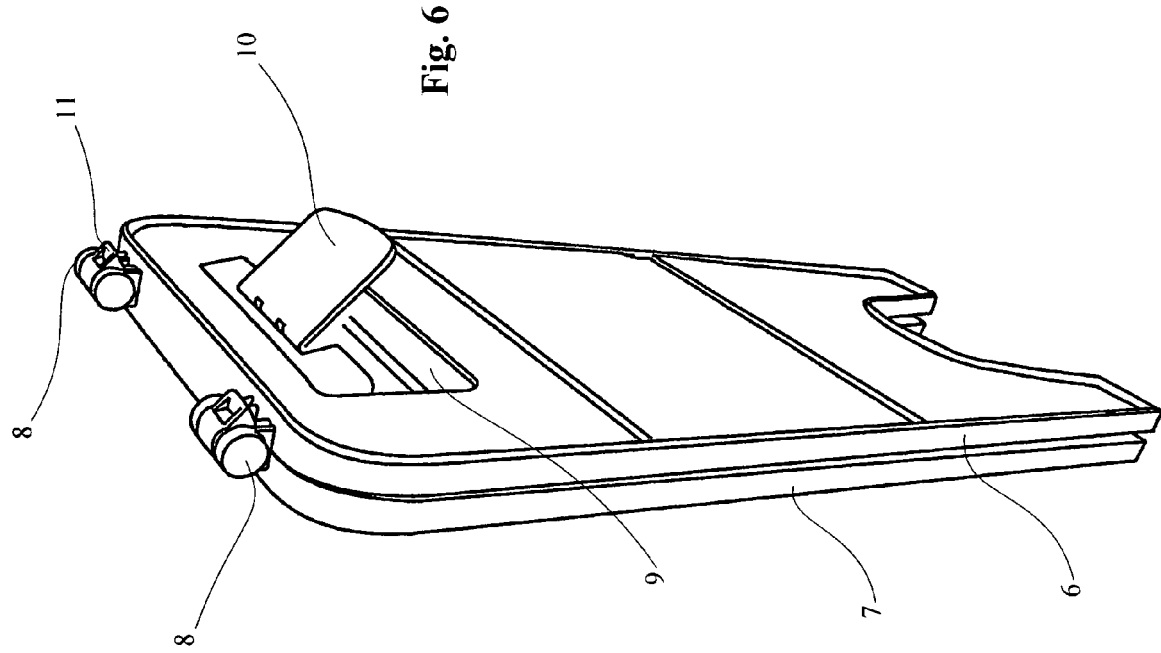
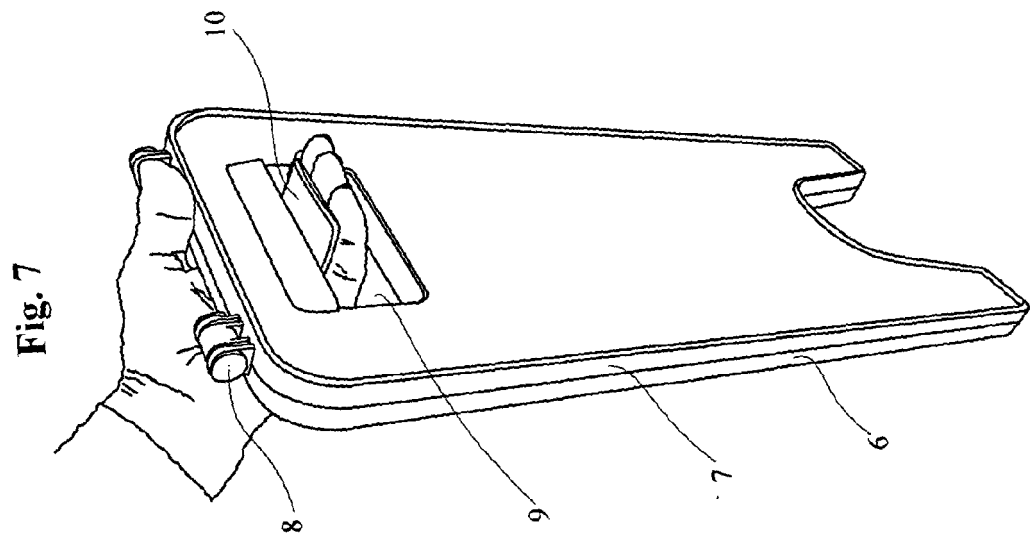
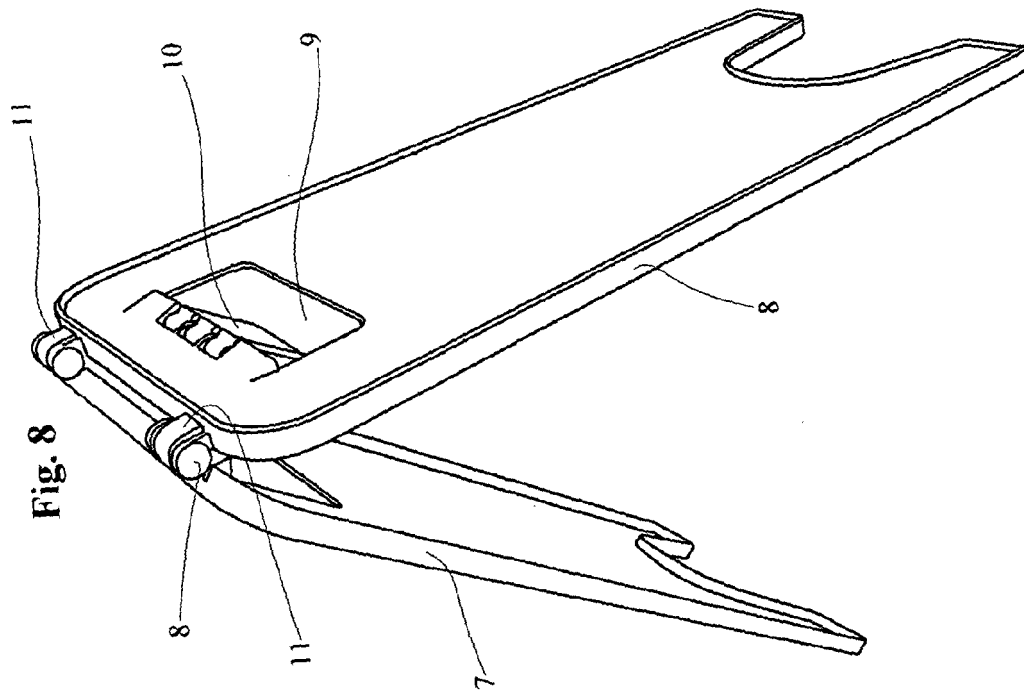


Fig. 2







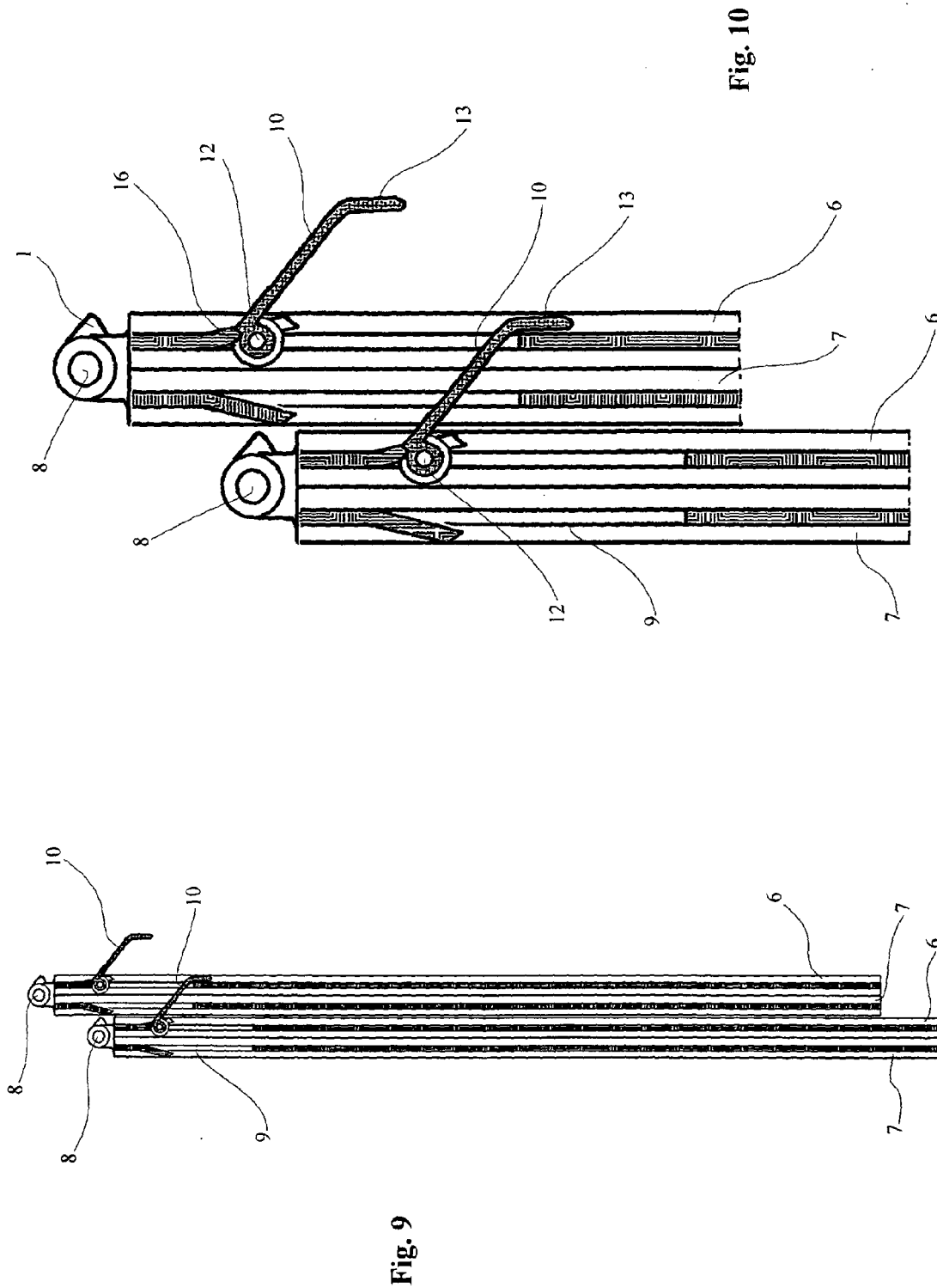


Fig. 11

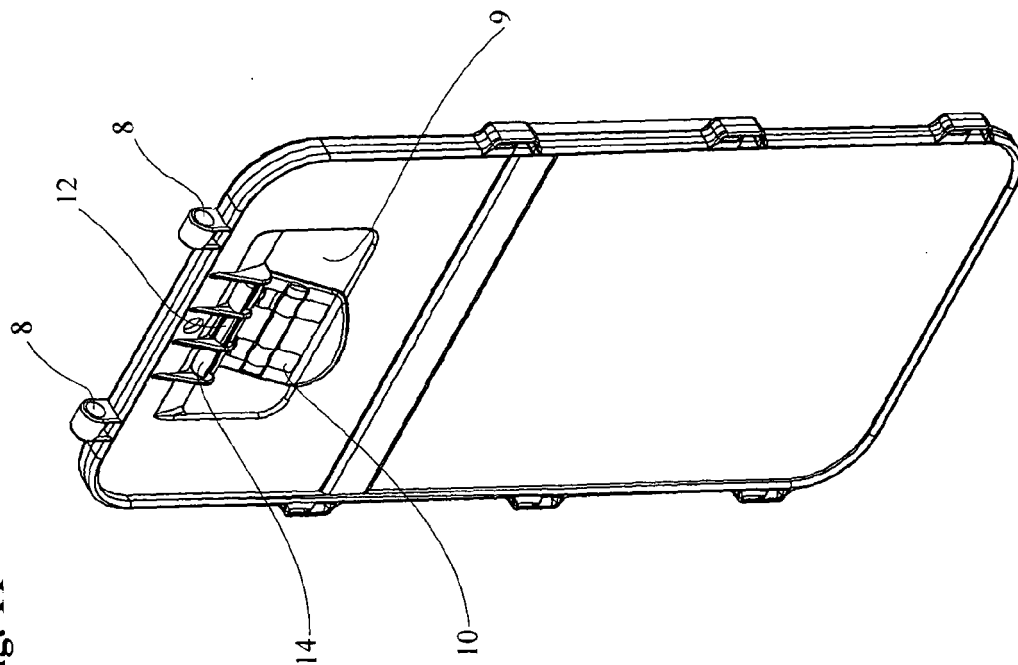


Fig. 12

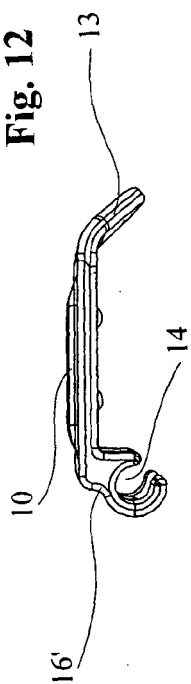


Fig. 13

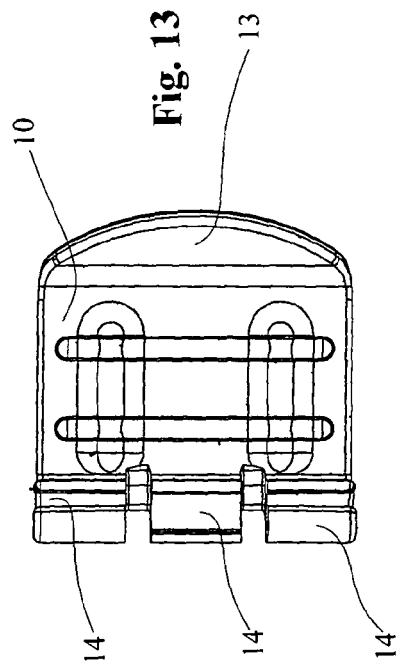
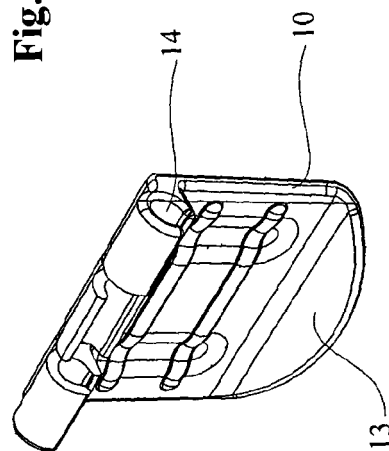


Fig. 14





EUROPEAN SEARCH REPORT

Application Number
EP 09 00 7349

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Place of search The Hague		Date of completion of the search 14 August 2009	Examiner Lechanteux, Alice
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p> <p>& : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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