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(54) **Mounting system for a panel**

(57) The present invention relates to a mounting system for a panel provided for easily and thoroughly attaching a panel (P) having an advertising information printed thereon to the sides of road vehicles or fixed sides to facilitate a better arrangement and a proper tensioning of the panel (P). The mounting system for a panel has a frame comprising a first profile (2) including an elongated first bead retaining portion (10) for receiving a first bead (B) extending along a first lateral side of said panel (P). The frame further comprises at least a second profile (18) for receiving an elongated retainer (32). The elongated retainer (32) includes an elongated second bead retaining portion (38 - 44) for receiving a second bead (C) extending along at least a second lateral side of the panel (P) for tensioning the panel (P) when thoroughly mounting the elongated retainer (32) to the frame.

Fig. 1

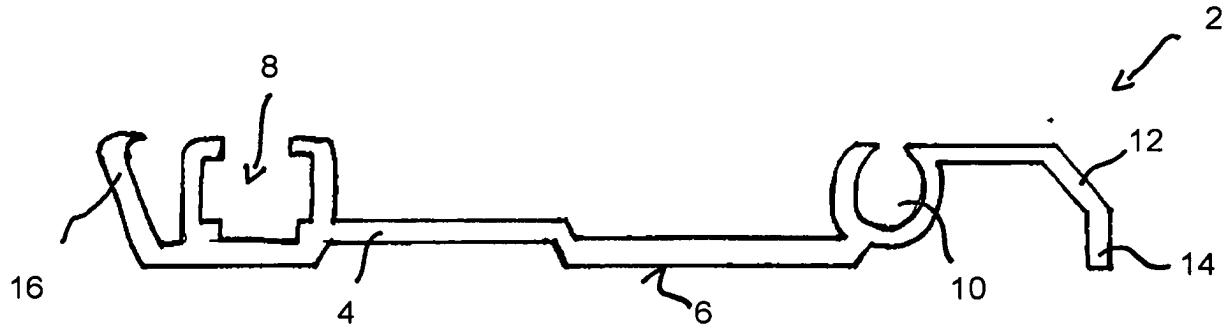

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Fig. 2

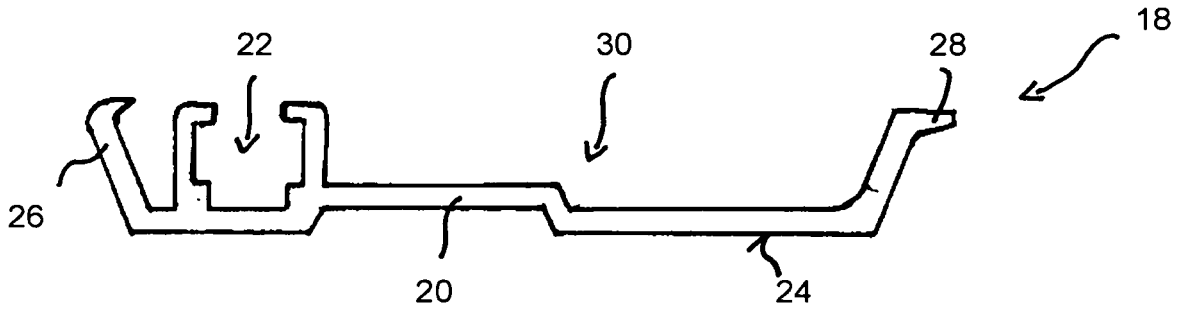
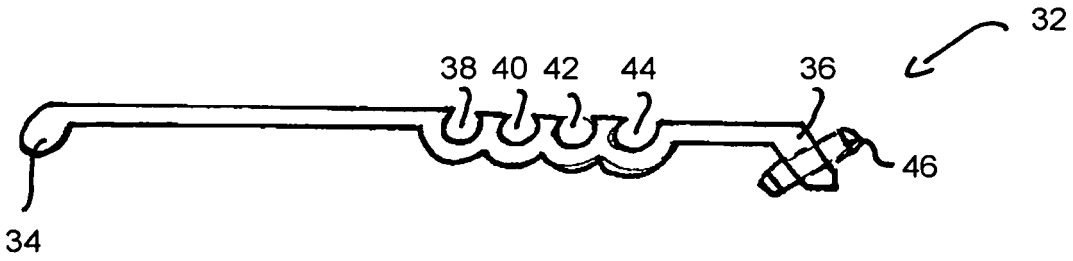


Fig. 3



Description

[0001] The present invention relates to advertisements, and more particularly, but not exclusively, to a system for selectively attaching advertisements to the sides of road vehicles or fixed sides in a readily demountable manner. The present invention aims to provide a mounting system suitable for easily and thoroughly attaching a panel to the road vehicles or fixed sides.

[0002] It is, for example, known from EP1 399 908 to attach a panel having an advertising information printed thereon to the side of a road vehicle, in particle to the side of a larger road vehicle like a van. This panel can be affixed to the sides of the road vehicle by arranging a plurality of fasteners on the side of the road vehicle at the rim of the panel to be affixed thereto. While such a system might work for rather light and woven meshed materials constituting the panel and allowing air to pass therethrough, the fastening system does not provide a thorough tensioning of the panel. Accordingly, wrinkles may be seen on the surface of the panel. Furthermore, there is the risk that the panel will becoming loose from the fasteners as the same is not thoroughly attached to the side of the road vehicle with the entire periphery of the panel. Accordingly, prior attempts have been made to provide a mounting system for a panel having a bead for securing the panel to an elongated profile.

[0003] The Applicants prior PCT-application, PCT-AU2003-001525, discloses a mounting system according to the preamble of claim 1. This mounting system has a mechanism including an elongated frame and an elongated retainer. The elongated retainer includes an elongated bead retaining portion. The frame includes an elongated channel for receiving the retainer. The frame also includes an elongated locating lip for locating an elongated edge of the retainer which can be held at said locating lip in a pivotable manner. Furthermore, means for securing a second elongated edge of the retainer to the frame is also provided. Those means for securing are arranged remote from the inner side of the frame, whereas the elongated locating lip is positioned at the inner periphery of the frame. A panel to be affixed to the mounting system known from this prior art will be inserted with its bead to one of the elongated bead retaining portions provided with the elongated container. The retainer is positioned with first elongated edge at the elongated locating lip, and is then pivoted onto the contact point thus formed. In the course of this pivoting movement, the panel is tensioned and brought into a shape corresponding to the geometry of the frame. This tension is held by bringing the means for securing of the frame into a recess formed in the vicinity of the second elongated edge of the retainer thereby fixing the securing to the frame.

[0004] The above-mentioned system is suitable for properly tensioning the panel over a frame. However, it does not lead to fully satisfying results as the handling thereof is rather inconvenient in particular, with a plurality of different panels which have to be affixed to the mounting system for frequently changing the advertisement displayed on the vehicle.

[0005] It is the object of the present invention to improve the known mounting system through facilitating a better arrangement and the proper tensioning of the panel in particular to a road vehicle.

[0006] As a solution to the above object, the present invention provides a mounting system in accordance with claim 1 of the present application.

[0007] According to the present invention, the mounting system has a frame comprising a first profile including an elongated first bead retaining portion for receiving a first bead extending along a first lateral side of said panel. Furthermore, the frame comprises at least a second profile for receiving an elongated retainer. Said retainer includes an elongated second bead retaining portion for receiving a second bead extending along at least a second lateral side of said panel.

[0008] When mounting the panel to said mounting system, the first lateral side of said panel is attached to the frame by inserting the first bead into the elongated first bead retaining portion of the first profile. This first profile is stationary with respect to the vehicle or fixed side to which it is to be attached. After this, the panel is already attached to said object with its one lateral side. The prefixing of the panel in the aforementioned way facilitates tight tensioning of the panel by inserting the second bead into an elongated bead retaining portion provided by a elongated retainer. Said retainer is a separate part, which is attached to the second profile, preferably in a manner suitable for tensioning the panel when thoroughly mounting the elongated retainer to the frame, as already describead in WO 2004-044874.

[0009] On a regular basis, the frame will be constituted of four profiles. The upper side of the frame has the first profile, thereby further facilitating mounting of the panel. Once the panel has been inserted with its first bead into the elongated first bead retaining portion, the panel is simply hanging down from the first profile. The other lateral sides of the panel can be easily attached to the elongated retainers and tensioned by pivoting said retainers around the second profiles, as already describead in WO 2004-044874.

[0010] Further objects, advantages and features of the invention will become evident from the following description of an embodiment of the invention in combination with the drawings. In the drawings:

Fig. 1 is a sectional view of an embodiment of a first profile;

Fig. 2 is a sectional view of an embodiment of a second profile;

Fig. 3 is a sectional view of an embodiment of the retainer;

Fig. 4 is a sectional view of the embodiment in Fig. 1,

with a sectional view of a panel to be affixed thereto;

Fig. 5 is an embodiment of a leading edge of the panel to be affixed to the mounting system of the present invention and;

Fig. 6 is a plane view of a corner plate for connecting the profiles depicted in Fig. 1 and 2;

[0011] Fig. 1 was a cross sectional view of a first profile 2, comprising an elongated first base for providing a first mounting surface 6 for mounting said first profile 2 to a truck (not shown), and carrying a first receiving channel 8 at its one lateral side and an elongated first bead retaining portion 10 at the other, both being open to a face of the first profile 2 opposed to the mounting surface 6. This elongated first bead retaining portion 10 is laterally projected by a first elongated hinged edge 12, extending in a diagonal direction with respect to the mounting surface 6 and having attached to its free end a first leg 14 extending perpendicularly to the mounting surface 6. On the other lateral side, the first profile 2, has an elongated locating lip 16 laterally projecting the first receiving channel 8.

[0012] The embodiment of the second profile 18 shown in Fig. 2 has an elongated second base 20 essentially formed in an identical way as the elongated first base 4 of the first profile 2. Accordingly, there is provided a second receiving channel 22 projecting from the elongated second base 20 onto the side thereof opposed to a mounting surface 24. On the lateral side of said second receiving channel 22, there is provided an elongated locating lip 26 projecting the second receiving channel 22 in a direction perpendicular to the mounting surface 22.

[0013] At the opposing lateral edge of said second profile 18, there is provided an elongated securing rim 28, projecting from the mounting surface 24, such that line connecting the elongated locating lip 26 and elongated securing rim 28 is essentially parallel to the mounting surface 24.

[0014] Between said elongated securing rim 28 and said second receiving channel 22, there is provided an elongated channel 30.

[0015] The embodiment of the elongated retainer 32, shown in Fig. 3, is essentially a flat sheet comprising at its one lateral end an elongated edge 34 and at its opposing lateral end, a second elongated hinged edge 36. Between said elongated edge 34 and said elongated second hinged edge 36, the elongated retainer 32 has a flat upper surface with four openings of elongated second bead retaining portions 38, 40, 42 and 44. Those elongated second bead retaining portions 38 through 44 and said elongated first bead retaining portion 10 are formed as longitudinally extending groove having an essentially C-shaped cross section. The elongated first bead retaining portion 10 has a constitution different from the elongated second bead retaining portions 38 through 44. In the shown embodiment, both elongated bead retaining portions 10, 38 through 44 have the same circular shape but the elongated first bead retaining portion 10 is larger than the elongated second bead retaining portion 38 through 44, which all have identical size.

[0016] The elongated retainer 32 furthermore has means for securing formed by a threaded bolt 46 threadably engaged in the second elongated hinged edge 36.

[0017] Fig. 6 shows an embodiment of a corner piece 48 which can be attached to a supporting structure of a vehicle. When fastening said corner piece 48 to said vehicle, the side of a flat plate member 49 of said corner piece 48 visible in Fig. 6 will face towards the vehicle. For securing said corner piece 48, the same provides securing means 50. The plate member 49 has a rectangular shape with reinforced rims 52 and is preferably made from a thermoplastic material by injection molding. The corner piece 48 has two fingers 54 extending perpendicular to each other which are made of metal and preferably secured to the plate member 49 by injecting the thermoplastic material around the fingers 54. The fingers 54 are provided with receiving apertures 56. The width of the plate member 49 at a side being projected by one of the fingers 54, corresponds to the width of each first and second profile 2, 18.

[0018] For assembling the mounting system shown in the embodiment to a vehicle, the corner pieces 48 will be attached to the respective first and second profiles 2, 18 thereby forming a frame having four profiles 2, 18 and four corner pieces 48. In the shown embodiment the frame comprises one first profile 2 forming one leg of the frame and three second profiles 18 for forming the other three legs of the rectangular frame. The profiles 2, 18 are secured to the corner piece 48 through the receiving apertures 56 my means to threads received in said retaining portions and extending through the mounting surface 6 of the profiles 2, 18 within the receiving channel 8, 22. Those first and second receiving channels 8, 22 receive the respective fingers 54. The frame thus formed is attached to the vehicle such that the first profile forms the upper leg of the frame. After this, the forward plane of the plate member will project and thereby cover the interface between the profiles 2, 18 and the corner piece 48.

[0019] For affixing a panel to said frame, the panel P, as shown in Fig. 5, has a bead B at a first lateral side thereof. This first bead B is adapted to be received in said elongated first bead retaining portion 10 of said first profile 2. At the other three lateral sides of said panel P, second beads C are provided. Those second beads C are adapted to be received in each of the elongated second bead retaining portions 38 through 44.

[0020] At one end of the frame thus formed there is provided a hoisting means. Said hoisting means may comprise a spool which may be motor driven, or a roll 58 freely rotateably supported at one of the corner pieces 48 which is arranged at one of the ends of the first profile 2. The panel P furthermore has a hole 60 arranged at

one corner of said panel P essentially directly below the first bead B.

[0021] For mounting said panel P to said frame attached to the vehicle, a rope which may be fixed to the motor driven spool or wound at least partially around roll 58, is attached to the hole 60. Then, the forward end of the panel P is arranged relative to the first profile 2 such that the first bead B is in alignment with the elongated first bead retaining portion 10. The forward end of the panel P is inserted into said elongated first bead retaining portion 10. Then, the user may pull the rope to fully insert the first bead B into the respective first bead retaining portion 10. The seconds Beads C are each inserted into suitable elongated second bead retaining portions 38 through 44 in respective elongated retainers 32 assigned to the three second profiles 18.

[0022] The elongated retainers 32 are then subsequently attached to the assigned second profiles 18. For this, the elongated edge 34 is brought into contact with the elongated locating lip 26 of the respective elongated retainer 32. From the plurality of elongated second bead retaining portions 38 through 44 of each retainer 32, a respective elongated second bead retaining portion has been elected which provides thorough tensioning of the panel inserted with its second bead C in said elongated second bead retaining portion. The elongated retainer 33 is pivoted around the contact point between the elongated edge 34 and the elongated locating lip 26. Through this, the panel already attached to the frame at the opposite lateral side is tensioned. Full and sufficient tension of the panel P is achieved after the elongated retainer 32 has been brought essentially in parallel alignment with the second profile 18. Then, the threaded bolt 46 is turned to project the securing rim 28 of the second profile 18. For esthetic purposes, said threaded bolt 46 has an Allen Key head allowing the threaded bolt to be inserted into the second elongated hinged edge 36 of the elongated retainer 32. For avoiding corrosion, the threaded bolt 46 should have a plain front surface urging against the securing rim 28 and avoiding high stress at the contact point between bolt 46 and first profile 18. Further, the threaded bolt 46 should be made of a non-corrosive material.

[0023] After securing all three elongated retainers 32 to the frame, the panel P is tightly affixed to the frame and thoroughly tensioned.

[0024] The hoisting means facilitate mounting of the panel to the mounting system. As already mentioned above, the hoisting means can be comprise a motor driven spool suitable for receiving the entire length of rope needed to pull the first bead B in the entire elongated bead retaining portion 10. In an alternative embodiment, facilitating mounting of the panel P and the dismounting thereof, a closed loop rope may be provided in the vicinity of the first profile 10 and extending essentially in parallel with the elongated first bead retaining portion 10. Such rope may e.g. extend slightly above the first elongated hinged edge 12. The closed loop rope should have a hook or the like which can easily be inserted into hole 60. By driving this closed loop rope by means of a motor, the panel can easily be attached to the first profile 2. Inverting the rotational direction of the motor, the panel P can be removed from said first profile.

Reference List

[0025]

2	first profile
4	elongated first base
6	mounting surface
8	first receiving channel
10	elongated first bead receiving protion
12	elongated first hinged edge
14	first leg
16	elongated locating lip
18	second profile
20	second base
22	second receiving channel
24	mounting surface
26	elongated locating lip
28	securing rim
30	elongated channel
32	elongated retainer
34	elongated edge
36	elongated second hinged edge
38 - 44	elongated second bead retaining portion
46	threaded bolt
48	corner piece
49	plate member
50	fastening means
52	rim
54	finger
56	receiving aperture
58	roll
60	hole
P	pane
C	second bead
B	first bead

Claims

1. A mounting system for a panel P having a bead (B, C) comprising:

a frame comprising a first profile (2) including an elongated first bead retaining portion (10) for a first bead (B) extending along a first lateral side of said panel (P),
and at least a second profile (18) for receiving an elongated retainer (32) including an elongated second bead retaining portion (38 - 44) for receiving a second bead (C) extending along at least a second lateral side of said panel (P).

2. A mounting system for a panel according to claim 1,

characterized in that said elongated first bead retaining portion (10) has a different constitution than said elongated second bead retaining portion (38 - 44).

3. A mounting system for a panel according to claim 1 or 2 **characterized in that** first or second bead retaining portions (10, 38 - 44) has a C-shaped cross section.

4. A mounting system for a panel according to any of the preceding claims, **characterized in that** said first bead retaining portion (10) is formed in one with said first profile (2).

5. A mounting system for a panel according to any of the preceding claims, **characterized in that** said elongated retainer (32) has a plurality of elongated second bead retaining portions (38 - 44) arranged between an elongated edge (34) and an elongated second hinged edge (36),
said second profile (18) has a flat profile base (20) forming part of an elongated channel (30) for receiving said plurality of elongated second bead retaining portions (38 - 44) between an elongated locating lip (26) for locating said first edge (34) of said retainer (32) and an elongated securing rim (28),
wherein securing means (46) or securing said elongated second hinged edge (36) of said retainer (32) to said securing rim (28) of said second profile (18) are provided.

6. A mounting system for a panel according to any of the preceding claims, **characterized in that** a corner piece (58), having a first finger (54) and a second finger (54) is provided,
that said first profile (2) has a first receiving channel (8), and
said second profile (18) has a second receiving channel (22)
wherein said first receiving channel receives one finger (54) of said corner piece (58) and said second receiving channel (22) receives the other finger (54) of said corner piece (48) for connecting said first profile (2) and second profile (18).

7. A mounting system according to any of the preceding claims, **characterized in that** said first profile (2) forms an upper leg of a frame and said second profiles (18) form the other legs of said frame and that said first and second profiles (2, 18) are connected by identical corner pieces (48).

8. A mounting system for a panel according to claim 7, **characterized in that** means for hoisting (58) of said panel (P) on said first profile (2) are provided at a corner of said frame.

9. A mounting system for a panel according to claim 8, **characterized in that** said panel (P) has a hole (60) attachable to said hoisting means for hoisting said panel (P) on said first profile (2).

Fig. 1

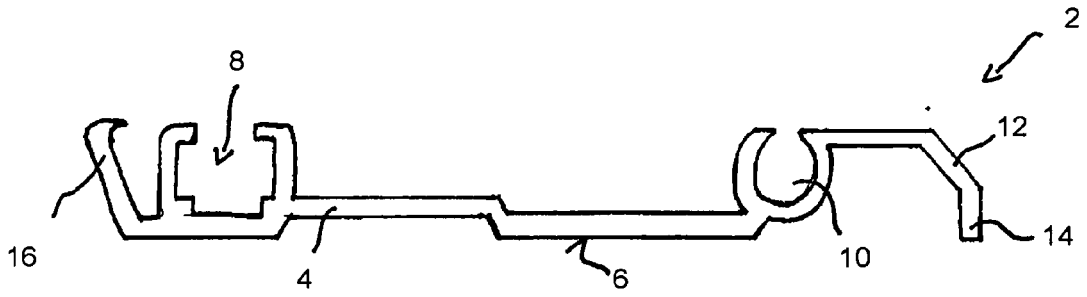


Fig. 2

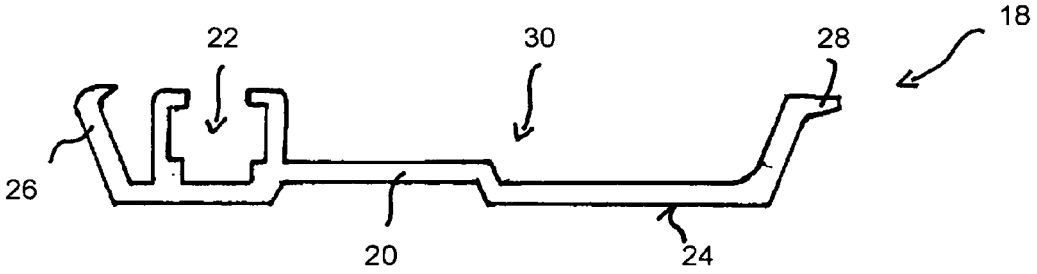


Fig. 3

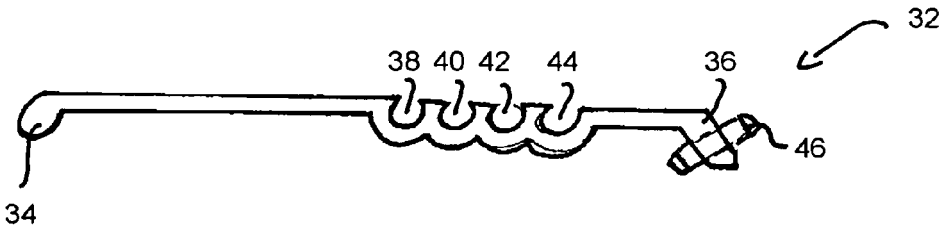


Fig. 4

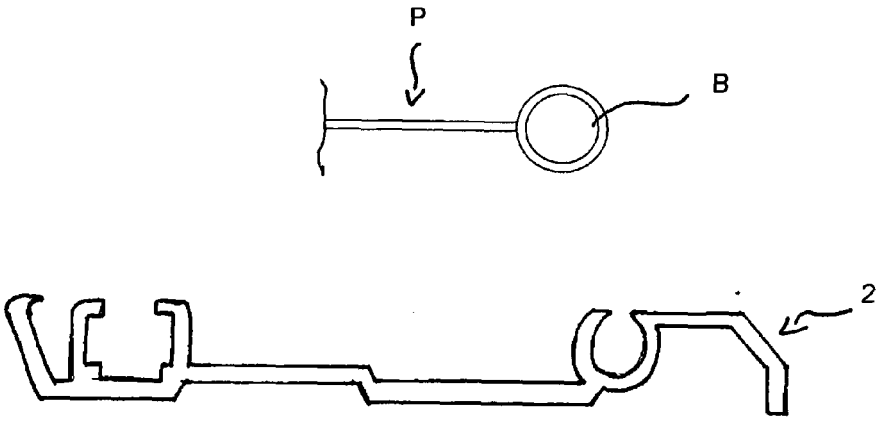


Fig. 5

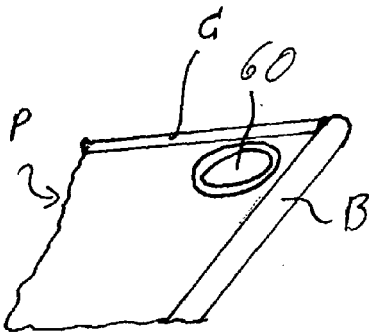
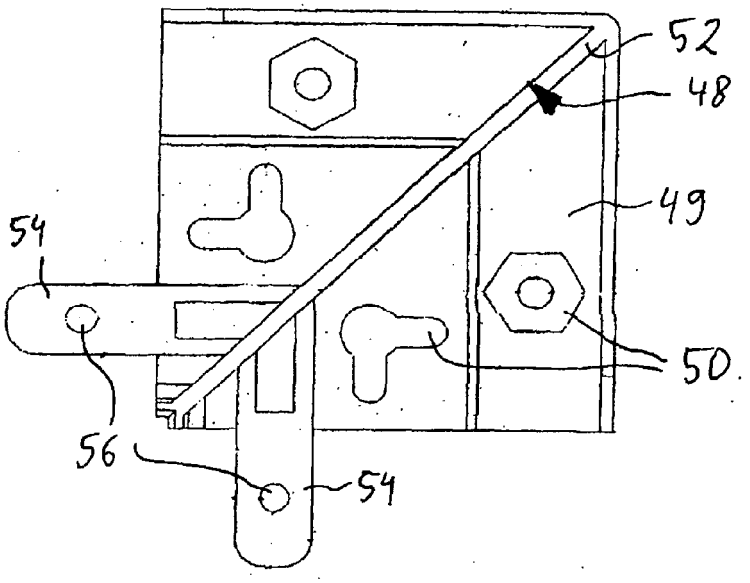


Fig. 6



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EUROPEAN SEARCH REPORT

Application Number
EP 06 00 3779

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Y	WO 2004/044874 A (TRUCKSIGNS AUSTRALIA PTY LIMITED; THAMM, ANDREAS; VAN STRAATEN, NICO;) 27 May 2004 (2004-05-27) * page 4, line 25 - page 5, line 25 * * page 10, line 1 - page 11, line 21 * * figures 1-3,9-22 *	5-7	
A	FR 2 693 822 A (GARNERO JACQUES) 21 January 1994 (1994-01-21) * column 2, line 22 - column 3, line 6 * * figures 1-6 *	1,8,9	TECHNICAL FIELDS SEARCHED (IPC) G09F
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	29 May 2006	Pantoja Conde, A

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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