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(56) Documents Cited:
JP 2003048474 A **US 6682116 B1**
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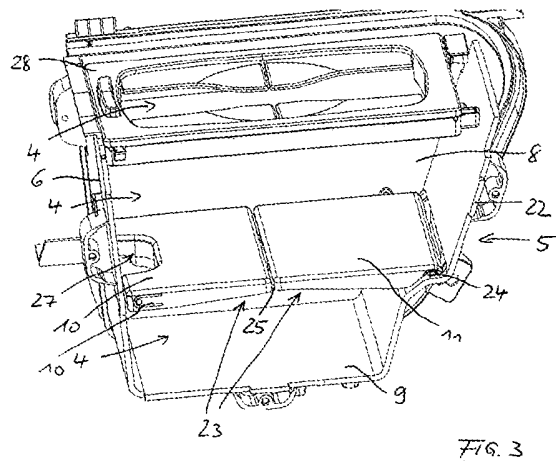
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(54) Abstract Title: **Vehicle fixture for holding a receptacle.**

(57) The invention relates to a fixture element 3 for a motor vehicle, with an upwardly open casing 5 for accommodating at least one receptacle, wherein the casing exhibits at least one lateral clamping element (29, Figure 2). The casing incorporates at least one hinged support 10, 11 which is parallel and spaced apart from a floor 9 in a first latchable setting, as well as essentially perpendicular to the floor in a second setting. The respective clamping element is further arranged above the support relative to its first setting. In such a fixture element, it is proposed that the hinged support be able to pivot around an axis 24 mounted in the casing, wherein the support exhibits two support sections 10, 11 interconnected so that they can pivot around an axis 25 situated parallel to the casing axis. The two support sections are toggled and folded toward each other when the support is moved from the first setting to the second setting.



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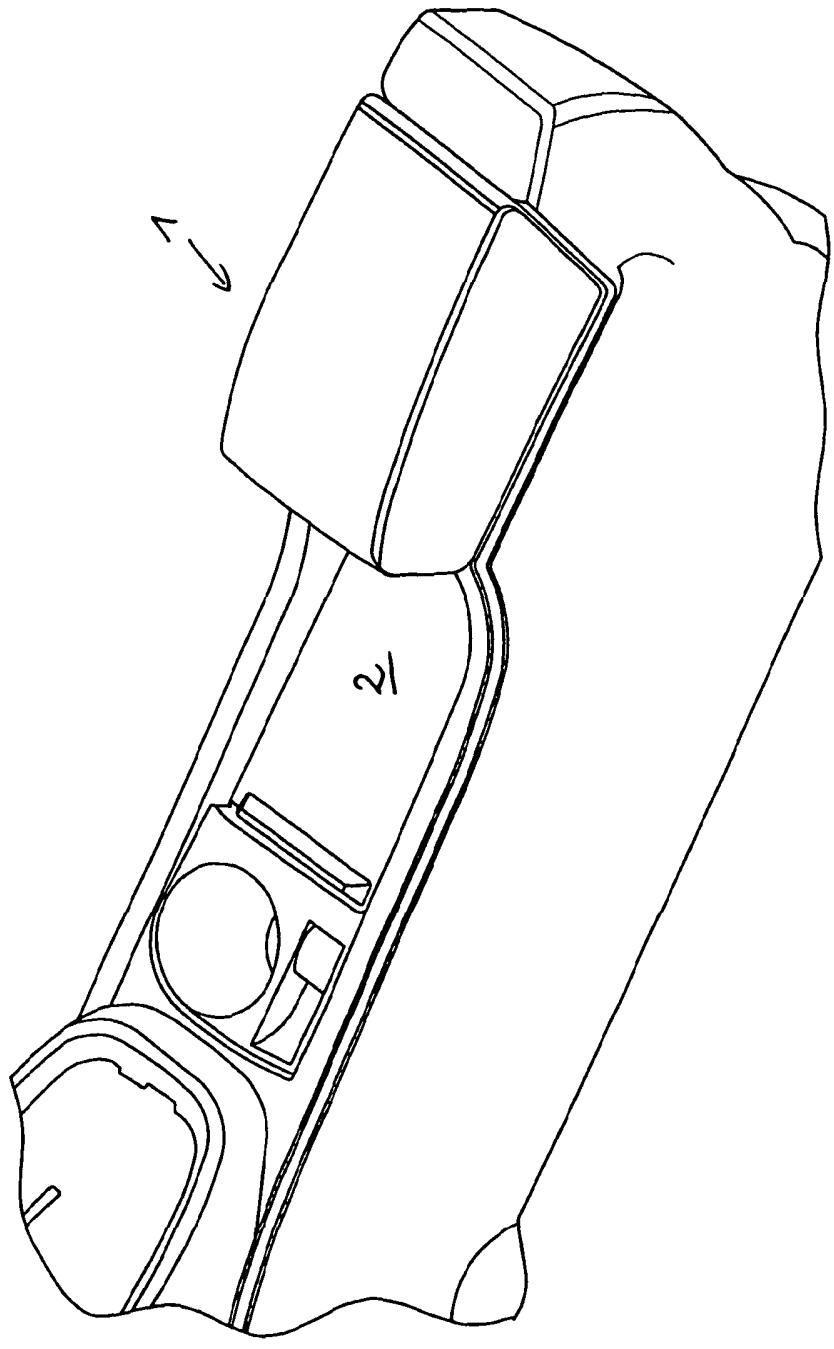


FIG. 1

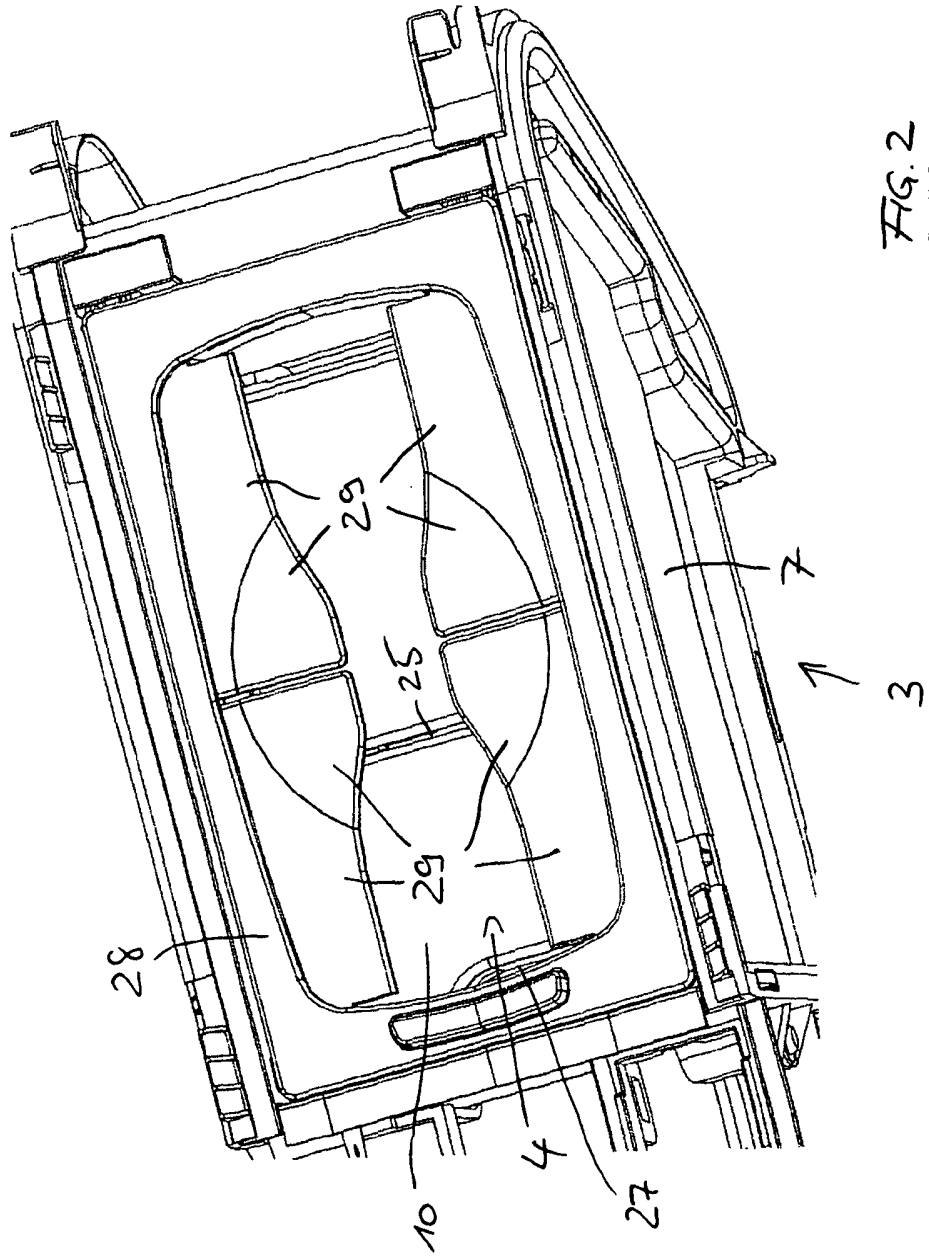


FIG. 2

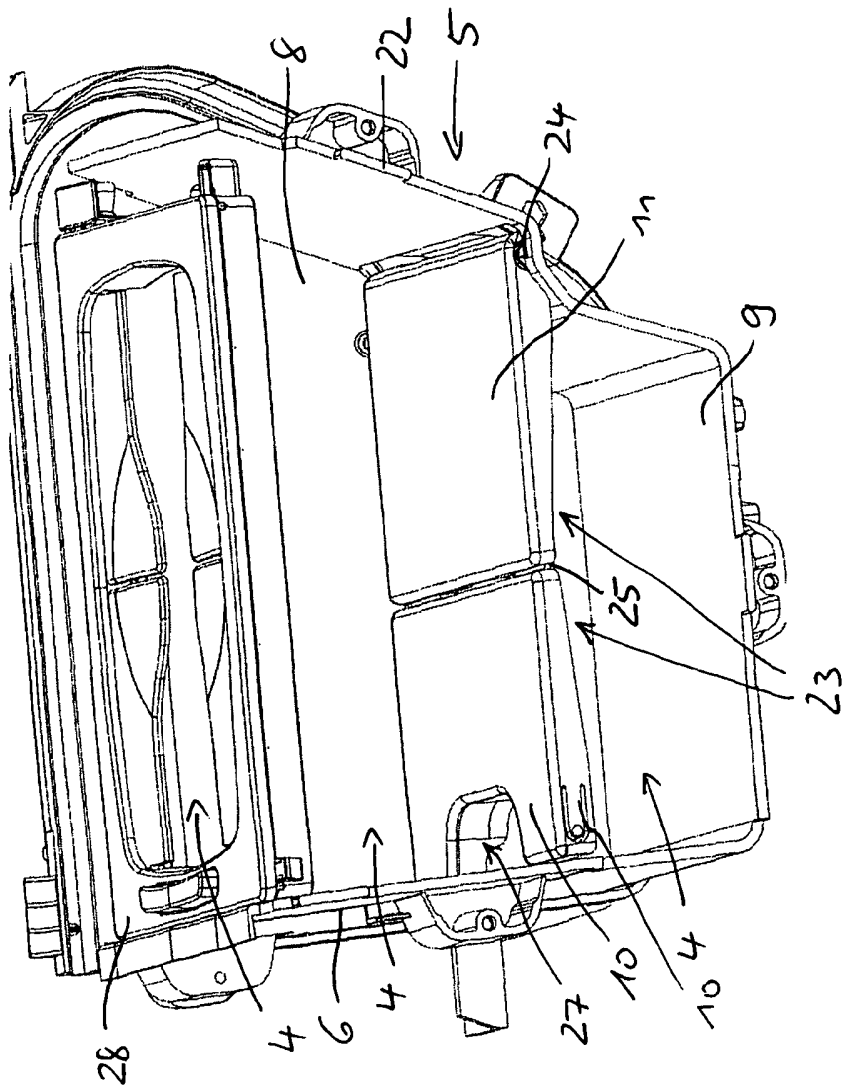


FIG. 3

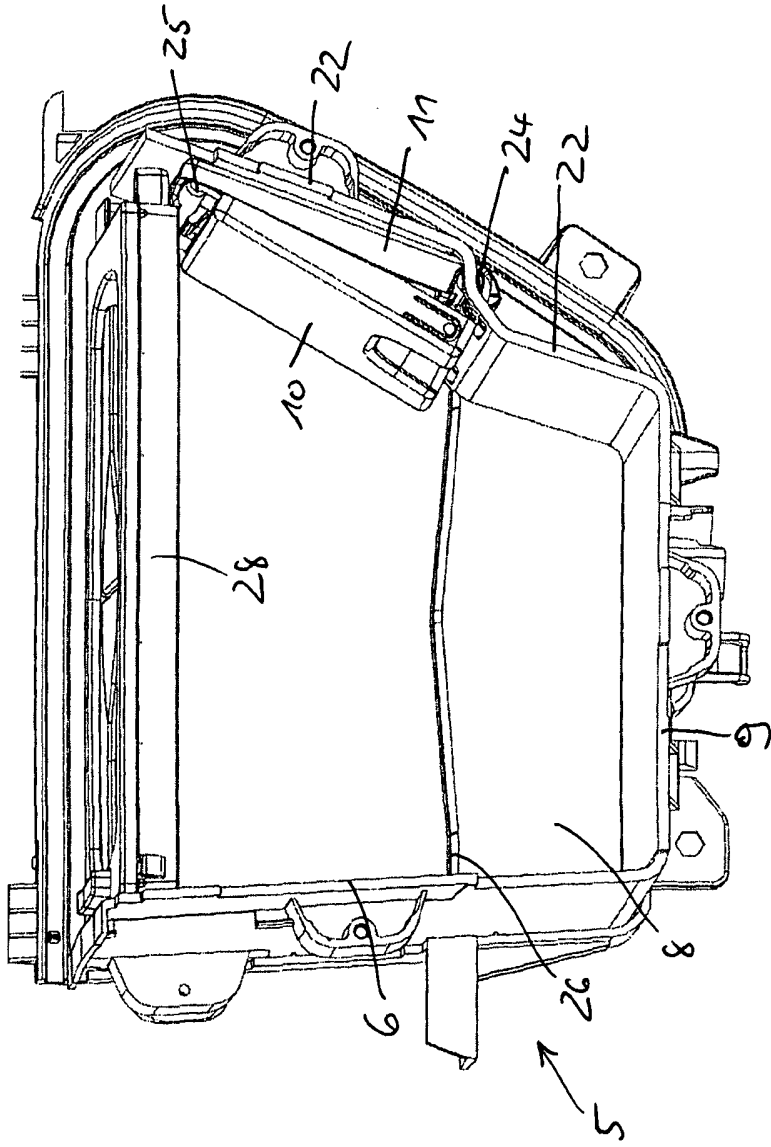


FIG. 5

FIXTURE ELEMENT, IN PARTICULAR FOR MOTOR VEHICLES, FOR
HOLDING A RECEPTACLE

SPECIFICATION

The invention relates to a fixture element, in particular for motor vehicles, with an upwardly open casing for accommodating at least one receptacle, wherein the casing exhibits a floor and at least one lateral clamping element, wherein the casing incorporates at least one hinged support, which is parallel and spaced apart from the floor in a first latchable setting, as well as essentially perpendicular to the floor in a second setting, and wherein the respective clamping element is further arranged above the support relative to its first setting.

Such a fixture element is described in German Patent Application 10 2007 061 203.8.

The object of the present invention is to further develop this fixture element in such a way as to enable a space-saving accommodation of the fixture in its second setting in the area of one side of the casing.

The object is achieved by virtue of the fact that the hinged support can be pivoted around an axis mounted in the casing, wherein the support exhibits two support sections interconnected so that they can pivot around an axis situated parallel to the casing axis, wherein the two support sections are folded toward each other when the support is moved from the first setting to the second setting.

Therefore, the invention makes it possible to toggle the support from its first setting to its second setting.

In the first setting of the support, two support planes are formed in the casing for the at least one receptacle. If the foldable support is in the first setting and latched, wherein the support is placed under the upper lower end of the opening of the casing, an area for holding the at least one receptacle is formed in the casing above the support. Another area for holding one or more additional objects is then created under the support. By contrast, if the hinged support is in its second setting, a holding area with a greater overall depth is created, thereby extending from the upper end of the opening in the casing to the floor of the casing. In this case, the casing can accommodate a larger receptacle, viewed in its extension perpendicular to the floor area of the casing.

The toggling support sections preferably fold backward into their second setting relative to the orientation of the motor vehicle. This movement of the support sections corresponds to the ergonomically convenient movement when the fixture element is situated next to the vehicle passengers oriented in the traveling direction, in particular the driver.

In particular, the pivoting hinge of the two support sections is designed in such a way that the two support sections abut each other flatly in the second setting of the section. This enables a very space-saving accommodation of the support in its second setting inside the casing.

From the standpoint of an ergonomically convenient access to the casing, and hence the at least one receptacle accommodated by the casing, it is viewed as especially advantageous if the support section pivoted in the casing is swiveled by an angle of up to 120° in the second setting of the support relative to the position of this support section in the first setting of the support. This slightly inclined position of the support section relative to the

perpendicular in its second setting makes it possible to reach into this area of the casing at a corresponding incline, making objects arranged inside the casing especially easy to get to.

The pivoting axis of the two support sections in the second setting of the support is preferably spaced a greater distance away from the floor than in the first setting of the support. Consequently, the two support sections are preferably folded up from the flat position in the first setting of the support. Hence, the support sections are situated closer to the casing opening in the second setting of the support, thereby making them especially easy to grasp when returning the support back to the first setting.

In particular to provide a structurally especially advantageous manufacturing process and minimize the plurality of parts, it is provided that the two support sections are essentially identical in design.

To enable easy and reliable grasping of the support, one advantageous embodiment of the invention provides that at least one of the support sections exhibit a recess open toward the pivoting axis of the two support sections or toward the casing. In the area where the support can be folded, or in the area of the free end of the support, it therefore becomes possible to grasp and pivot one of the support sections, whether it be from the first setting to the second setting, or from the second setting to the first setting.

According to the invention, the at least one receptacle is held by means of the at least one lateral clamping element. In this regard, the invention proposes that the casing exhibit an upper frame, in particular one that can be clamped with the casing section exhibiting the floor and walls of the casing. The frame preferably exhibits the at

least one lateral clamping, which in particular is elastic. If the frame can be clamped with the casing section, the frame with the clamping element can be removed from the casing section. This type of use is indicated in cases where receptacles held by the casing need not be fixed in place.

Additional features of the invention are described in the subclaims, the following description of the drawing and the drawing itself.

One preferred exemplary embodiment of the invention is illustrated in the drawing and explained in the following description. Shown on:

Figure 1 is a section of a middle console of a passenger car, wherein the casing of the fixture element is closed by means of a roller blind;

Figure 2 is a section of the middle console according to Figure 1, with the roller blind open and the support in the first setting, viewed from above at an incline;

Figure 3 is a spatial view of the section of the middle console shown on Figure 2, viewed from the side at an incline;

Figure 4 is the section of the middle console shown on Figure 3, with the support in an intermediate setting, viewed from the side at an incline; and

Figure 5 is the section of the middle console shown on Figures 3 and 4, in the completely folded setting of the support, viewed from the side at an incline.

Depicted is a section of a middle console 1 with a horizontally sliding roller blind 2 located above the

fixture element 3 according to the invention mounted in the middle console 1. The roller blind 2 covers the opening 4 of the casing 5 of the fixture element 3 in the setting shown on Figure 1; the roller blind 2 is not shown on Figures 2 to 5.

The fixture element 3 is designed as a module, and hence can be inserted into an opening in the middle console 1 depending on how the vehicle is outfitted. The casing 5 of the fixture element 3 is box-shaped, with a front face wall 6 extending perpendicular to the floor 9 of the casing, a rear face wall 22 extending at an angle of roughly 110° relative to the floor 9, and also lateral walls 7 and 8 arranged perpendicular to the front face wall 6, which connect the two face walls 6 and 22.

A hinged support 23 is arranged inside the casing 5, and here formed by two lamellar support sections 10 and 11. The support section 11 can be pivoted around an axis 24 situated in the rear lateral wall 22. This axis 24 is arranged parallel to the floor 9, and located slightly under half the height of the casing 5. The end of the support section 11 facing away from the axis 24 is pivoted with the other support section 10 by means of another axis 25. As opposed to the axis 24 arranged in the upper area of the support section 11, the pivoting axis 25 is situated between the two support sections 10 and 11 in the lower area of the support sections 10 and 11 in relation to their extended arrangement corresponding to the first setting of the support 23. In this first, horizontal setting of the support 23 arranged parallel to the floor 9, the end area of the support section 10 facing away from the axis 25 abuts a stop 26 of the front face wall 6. In this setting, the facing front surfaces of the support sections 10 and 11 come into contact above the axis 25, so that this extended setting of the support 23 represents its lower end setting.

The support 23 can be folded by toggling into the end setting also shown on Figure 5 via the intermediate setting illustrated on Figure 4. In this end setting corresponding to the second setting of the support 23, the support section 11 abuts the rear face wall 22, and the support section 10 is folded against the support section 11. In this second setting, the axis 25 is positioned slightly below the roller blind 2.

The support 23 can be folded especially easily if in particular the support section 10 exhibits a recess 27 open toward its free end, through which this support section 10 can be grasped and in particular moved from the first setting to the second setting of the support 23. The support 23 is moved from the second setting to the first setting either manually, or latching means are provided to fix the support 23 in its second setting, keeping the support 23 in this position prestressed by a spring, wherein the support 23 is moved to its first setting by force of the spring during manual release of the latching mechanism.

The casing 5 exhibits an upper frame 28, which can be clamped with the casing section that exhibits the floor 9 and walls 6, 7, 8 and 22 of the casing 5. The frame 28 accommodates several lateral clamping elements 29, which extend parallel to the floor 9, and project into the clear space of the frame 28. These clamping elements 29 are lip-shaped and elastic. As a consequence, these clamping elements 29 can reliably hold one or more receptacles in the fixture element 3.

REFERENCE LIST

Middle console	1
Roller blind	2
Fixture element	3
Opening	4
Casing	5
Front face wall	6
Lateral wall	7
Lateral wall	8
Floor	9
Support section	10
Support section	11
Rear face wall	22
Support section	23
Axis	24
Axis	25
Stop	26
Recess	27
Frame	28
Clamping element	29

CLAIMS

1. A fixture element (3), in particular for motor vehicles, with an upwardly open casing (5) for accommodating at least one receptacle, wherein the casing (5) exhibits a floor (9) and at least one lateral clamping element (29), wherein the casing (5) incorporates at least one hinged support (23), which is parallel and spaced apart from the floor (9) in a first latchable setting, as well as essentially perpendicular to the floor (9) in a second setting, and wherein the respective clamping element (29) is further arranged above the support (23) relative to its first setting, according to German Patent ... (Reference No. 10 2007 061 203.8), characterized in that the hinged support (23) can be pivoted around an axis (24) mounted in the casing (5), wherein this support (23) exhibits two support sections (10, 11) interconnected so that they can pivot around an axis (25) situated parallel to the casing axis (24), wherein the two support sections (10, 11) are folded toward each other when the support (23) is moved from the first setting to the second setting.
2. The fixture element according to claim 1, characterized in that the two support sections (10, 11) abut each other flatly in the second setting of the support (23).
3. The fixture element according to claim 1 or 2, characterized in that the support section (11) pivoted in the casing (5) swivels by an angle of up to 120° in the second setting of the support (23) relative to the position of this support section (11) in the first setting of the support (23).

4. The fixture element according to one of claims 1 to 3, characterized in that the pivoting axis (25) of the two support sections (10, 11) in the second setting of the support (23) is spaced a greater distance away from the floor (9) than in the first setting of the support (23).
5. The fixture element according to one of claims 1 to 4, characterized in that the two support sections (10, 11) are identical in design except for how the one support section (11) is mounted in the casing (5).
6. The fixture element according to one of claims 1 to 5, characterized in that the casing (5) exhibits a face wall (22), and the support (23) is folded against this face wall (22) in its second setting.
7. The fixture element according to one of claims 1 to 6, characterized in that the support (22) is latched in its second setting against the force applied by a spring.
8. The fixture element according to one of claims 1 to 7, characterized in that at least one of the support sections (11) exhibits a recess (27) open toward the pivoting axis (25) of the two support sections (10, 11), in particular that the support section (11) pivoted in the casing (5) exhibits a recess (27).
9. The fixture element according to one of claims 1 to 8, characterized in that the casing (5) exhibits an upper frame (28), in particular an upper frame (28) that can be clamped with the casing section exhibiting the floor (9), face walls (6, 22) and lateral walls (7, 8) of the casing (5).

10. The fixture element according to claim 9, characterized in that the frame (28), which exhibits at least one lateral clamping element (29), in particular the clamping element (29), is elastic.



Application No: GB0908381.7

Examiner: Mr Sean O'Connor

Claims searched: 1-10

Date of search: 27 August 2009

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
A	-	US2006/027722 A1 (HOSHI) See abstract and figures 1, 15, 16.
A	-	US2006/037984 A1 (MISUMI) See abstract and figures 7a-7d.
A	-	US6682116 B1 (OKUMURA) See abstract and figures.
A	-	JP2003048474 A (NIFCO) See abstract and figure 3.
A	-	US2004/016859 A1 (NISHIZAWA) See abstract and figures regarding hinged support.

Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^X :

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Worldwide search of patent documents classified in the following areas of the IPC

B60N; B60R

The following online and other databases have been used in the preparation of this search report

WPI, EPODOC, TXTE

International Classification:

Subclass	Subgroup	Valid From
B60N	0003/10	01/01/2006