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(54) **ROAD SAFETY BARRIER COMPRISING CONCEALED EDGES**

(57) The invention relates to a road safety barrier of the type that comprises a double wave fence (10) or barrier and a plurality of vertical supports (2) for connecting the barrier to the ground. According to the invention, each post is fixed to the double wave fence with a fixing means comprising a U-shaped part (3) which clamps the post (2) and which is fixed tightly to same with the aid of a screw (5). The free ends of the aforementioned part (3)

are bent orthogonally inwards, stacked against one another and perforated for the passage of another screw (7) which is used to fix a second part (8) thereto. The ends of the second part project forward in order to be fitted to the marginal zones of the double wave fence (10), the latter being equipped with arched curves at said point, at which the screws (9) for fixing the second part (8) are positioned. In this way, the barrier is fixed solidly with a high impact absorption power.

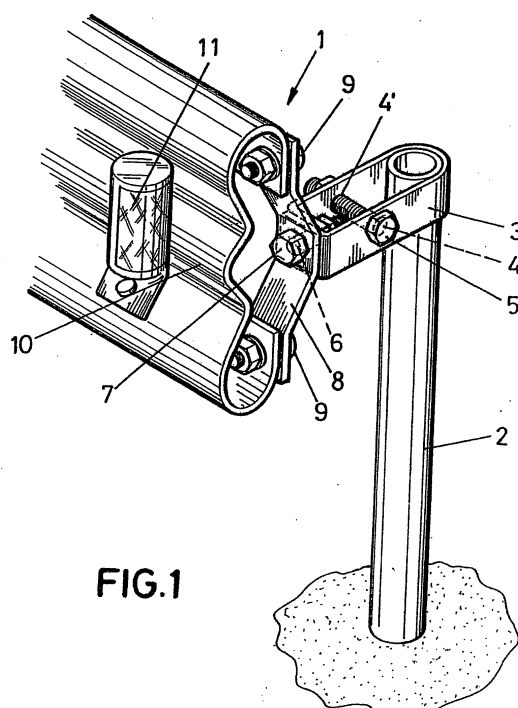


FIG.1

Description

DESCRIPTION

OBJECT OF THE INVENTION

[0001] The present specification relates to a Utility Model application corresponding to a road safety barrier comprising concealed edges, the evident purpose of which is based on being configured as a barrier located on the sides of a roadway, generating, due to its incorporation, means which prevent a vehicle from driving off the roadway in the event of an accident, having several consequences; and at the same time, in accordance with the features of the beam having a suitable bend incorporated in the barrier, it substantially reduces the impact, allowing at the same time easy replacement by means of conventional screwing thereof.

[0002] In accordance with the reduction of the beam support flanges, the invention is configured as a substantially more economical installation, and since it has a beam supported on the cushion elements provided with hidden edges, it prevents accident victims from being cut should they impact against it.

FIELD OF THE INVENTION

[0003] This invention is applicable within the industry dedicated to the manufacture of protective highway accessories, complements and elements.

BACKGROUND OF THE INVENTION

[0004] The applicant has knowledge of the existence of a plurality of highway fences or guardrails made and distributed in multiple shapes.

[0005] The applicant also knows the incorporation in this type of elements of profiles referred to as "double wave" or "N" profiles, which have exposed edges constituted as cutting edges.

[0006] The applicant also knows of the existence of different protective barriers intended for preventing especially motorcyclists from being able to be introduced under the barrier thus constituted in the event of an impact against such barriers, accordingly preventing the risk of cutting off any of his or her limbs.

[0007] However, the applicant does not know of the current existence of an invention provided with the features described in this specification.

DESCRIPTION OF THE INVENTION

[0008] The road safety barrier comprising concealed edges proposed by the invention has a plurality of features differentiating it from known elements of a similar application, having great simplicity in its installation, and at the same time incorporating suitable means for replacing it in a very short time period in the event that it breaks

due to an impact.

[0009] More specifically, the road safety barrier comprising concealed edges object of the invention is constituted from a support body, duly fixed to the surface of the ground, having a clamp in the part considered to be appropriate, generally in the upper middle part, and even being able to incorporate several clamps for supporting the beam-bearing elements on the direct cushion element, the clamp having a general U-shape is placed after its curved area against the support body, incorporating two opposite perforations, and the ends thereof are bent and adjacent to where there is a through perforation, in which a screw is located, retaining a semi-vertically positioned part, having two bent areas at each of its ends projecting from the rectangular central area, in which the incorporation of a beam is carried out by means of screws and nuts, constituting the impact receiving area.

[0010] In accordance with the flexibility established in this beam and with the simplicity incorporating the upper part fixed to the support for its relevant replacement in the event of repair, the invention has suitable means for being used in a conventional manner.

[0011] In accordance with the beam having curved edges, the barrier prevents possible cuts in vehicle occupants who impact against the barrier, even being able to incorporate "silemblock" (a rubber block) cushion if it were considered necessary.

[0012] The invention also has reflective elements on the outer surface of the beam with hidden edges.

[0013] It must also be indicated that the invention can incorporate one, two or three support elements of the beam, virtually closing off the outer sides of the row of support posts.

DESCRIPTION OF THE DRAWINGS

[0014] To complement the description being made and for the purpose of aiding to understand the features of the invention, a drawing is attached to the present specification as an integral part thereof in which the following has been shown with an illustrative and non-limiting nature:

Figure 1 shows a perspective view of the object of the invention corresponding to a road safety barrier comprising concealed edges.

PREFERRED EMBODIMENT OF THE INVENTION

[0015] In view of this figure, it can be observed how the road safety barrier (1) comprising concealed edges is constituted from a generally cylindrical vertical support (2) incorporating in the upper middle area the coupling of a part (3) with a general U-shape which is placed against the upper end of the body (2) at its curved area, incorporating two opposite perforations (4) and (4') and having at its ends relevant bending, located at the adjacent ends, having a perforation (6) in the area opposite

to the area for fixing to the vertical support (2) where a screw (5) with a nut is introduced for fixing a part (8), having in the central area a planar and rectangular part, and from the smaller sides of which respective projections diagonally emerge, and the ends of which are located vertically, where there are perforations for the passage of screws with a nut (9) and which manage to fix the beam (10) located in the outer area.

[0016] Accordingly, the road safety barrier (1) comprising concealed edges incorporates simplified elements for their fixing to the vertical support (2) configured by the body (3) which, in cooperation with the perforations (4) and (4') as well as with the front perforation (6), manage to retain the beam (10).

[0017] It must also be pointed out that the protective road safety barrier comprising concealed edges can incorporate "silemblock" (a rubber block) and specifically the beam can be externally provided with reflective elements (11).

[0018] The post (2) constituting the support element of the beam (10) can have one or more parts (3) parallel to part (3) which, assembled with the previously described elements, completely close off the area occupied by the length of the post (2), having joined to the parts (3) other beams (10) with hidden edges, in other words, duly curved and being used in the inner faces of the beam (10) to be fixed to the part (3) through screws (7).

4. A road safety barrier comprising concealed edges according to the previous claims, **characterized in that** parallel flanges or parts (3) can be incorporated on the post (2) in a suitable number and at different heights, supporting the fixing elements of the beam (10) with or without reflective elements (11).

5. A road safety barrier comprising concealed edges according to the previous claims, **characterized in that** the beam (10) incorporates its curved longitudinal ends on which perforations are made for the passage of screws (9), the curved areas of the beam (10), adjacent to the flanges or similar parts (3), being fixed to the post (2).

Claims

1. A road safety barrier comprising concealed edges intended to be installed on sides of roadways, highways or the like and constituted by vertical supports (2) fixed at their lower end to the surface of the ground, **characterized in that** the upper middle area of the vertical support (2) incorporates a part (3) having a U-shape fixed at its inner area in correspondence with its curved end to the support (2), having opposite perforations (4) and (4') located on its larger sides, whereas the remaining end of the part (3) has a bend, a perforation (6) existing in which a screw (7) with a nut is introduced for the fixing of a part (8) having in its central part a planar area from which two projections diagonally emerge, finished at their ends with planar and vertical elements provided with perforations for the passage of screws (9) in which the fixing of a beam (10) is established.

2. A road safety barrier comprising concealed edges according to claim one, **characterized by** allowing incorporating a "silemblock" (a rubber block).

3. A road safety barrier comprising concealed edges according to the previous claims, **characterized in that** reflective elements (11) can be incorporated in the outer area of the beam (10).

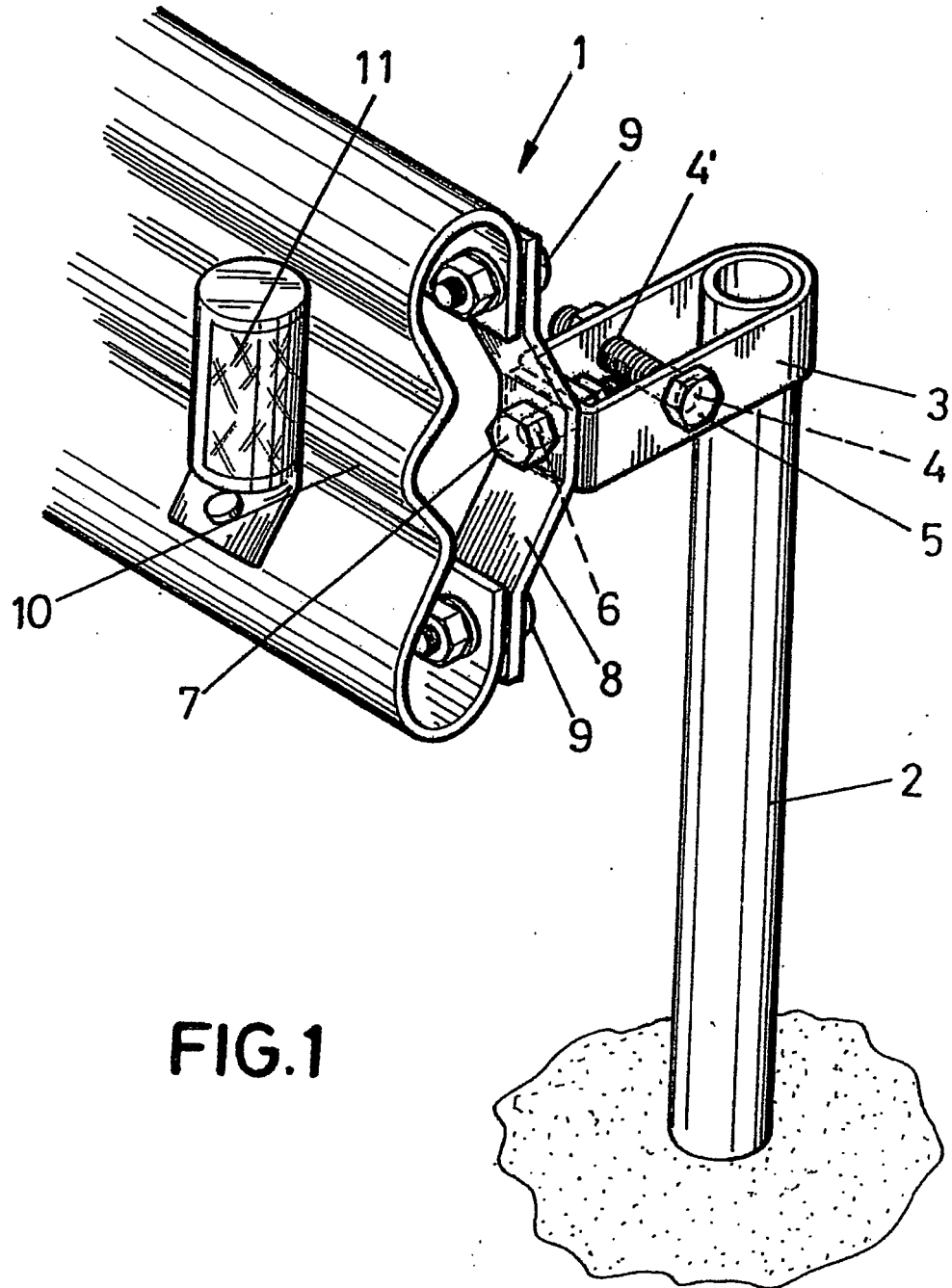


FIG.1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ ES 2005/000187

A. CLASSIFICATION OF SUBJECT MATTER		
IPC 7 : E01F 15/04		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC 7 : E01F 15/+		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
CIBEPAT.EPODOC.WPI.PAJ		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
04 July 2005 (04.07.05)		13 July 2005 (13.07.05)
Name and mailing address of the ISA/ S.P.T.O.		Authorized officer
Facsimile No.		Telephone No.

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International application No.
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