

(19)



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(11)

EP 0 589 097 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
24.04.1996 Bulletin 1996/17

(51) Int Cl.⁶: **E01F 15/00**

(21) Application number: **92202994.7**

(22) Date of filing: **30.09.1992**

(54) Guide rail section

Leitschwellenelement

Elément de barrière routière

(84) Designated Contracting States:
BE DE GB NL

(30) Priority: **15.09.1992 EP 92202825**

(43) Date of publication of application:
30.03.1994 Bulletin 1994/13

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(56) References cited:
EP-A- 0 462 307 **DE-U- 8 700 353**

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Description

The invention relates to a guide rail section for partitioning part of a roadway, provided with a foot and side walls adjoining the foot, wherein at one extremity of the guide rail section the foot and/or the side walls can be coupled to the respective foot or side walls of a similar guide rail section and wherein at least one wall of the guide rail is provided with a hole and a detachable assembly hatch fitting in it near the extremity.

Such a guide rail section is known from practice and is used for composing a guide rail of it by coupling several guide rail sections together. Guide rail sections are manufactured in a factory and then transported to the desired place of erection. In this place the guide rail sections must be easy to couple in order to make the roadway on the spot available for traffic again as soon as possible. The intercoupling of guide rail sections takes place with strips of sheet metal which are laid longitudinally over the extremities of two guide rail sections adjoining each other and are fastened to the guide rail sections with bolts and nuts and/or rivets. In order to be able to reach the bolt or nut in the interior of a guide rail section, an assembly hatch is fitted near the extremity of a guide rail section. The known assembly hatch has a rectangular shape and is fastened to the guide rail section by means of a number of bolts. On a guide rail strength requirements are imposed both as to longitudinal and transverse load. The assembly hatch must not reduce the strength properties of the guide rail to beneath the minimum strength requirements.

A drawback of the known assembly hatch is that fitting of it after guide rail sections have been coupled together requires much time. It is strived for to have a day or night shift install at least thousand metres of guide rail sections. The necessity of fitting the assembly hatch constitutes a limitation of the amount of guide rail that can be installed per shift.

Another drawback is that, in case of a temporary installation, after some time the assembly hatch is hard to remove due to which the removal of a temporary guide rail requires much time.

An object of the invention is to provide a guide rail section with which the above-mentioned problems are eliminated or reduced to a considerable extent and with which other added advantages are achieved.

To this end a guide rail section in accordance with the invention is characterized in that the assembly hatch is provided with at least a twist-lock fastening for the clamping of it in the wall. The twist-lock fastening enables quick fitting of the assembly hatch; the design of the construction can be so sturdy that the twist-lock fastening is still detachable without a problem after long exposure to the outside climate.

A further embodiment of the invention suitable for application with a great variety of shapes of the assembly hatch is characterized in that the twist-lock fastening comprises an arm fastened on the hatch which arm is

suitable for being brought into locking contact with the inward part of the wall.

An embodiment of the invention in which the assembly hatch can be fitted very quickly, is characterized in that the assembly hatch is an essentially circular plate and that the inward part of the wall is provided with a clamping plate on which the arm can be brought into locking contact. This embodiment has the added advantage that less concentration of stress occurs around the hole in which the assembly hatch fits due to which the mechanical strength of the guide rail section is influenced less disadvantageously.

After being shaped the guide rail sections are galvanized to make them resistant to the corroding effect of the climate. To prevent residual acid from the galvanizing baths from being left in slits, a further embodiment of the invention is characterized in that the clamping plate is fastened at a distance from the wall.

To further simplify the fastening of the assembly hatch a further embodiment of the invention is characterized in that the assembly hatch is provided with means for turning the assembly hatch around its centre.

The invention will be illustrated in the following with reference to a drawing.

In the drawing

Fig. 1A is a longitudinal view of a guide rail section, Fig. 1B is a front view of a guide rail section and Fig. 2 is a further detail of an assembly hatch in accordance with the invention.

In Fig. 1A reference number (1) represents a guide rail section. Guide rail section (1) has a foot (2) and side walls (3). At one extremity side wall (3) is provided with a round hole (4) in which an assembly hatch (5) is fitted. At the extremity near assembly hatch (5) a composite flange (6) is fastened by means of a number of rivets (7). If desired, the other extremity of the guide rail section can be provided with a second hole (8) and an assembly hatch (9) fitting in it.

Fig. 1B shows a front view of a guide rail section. At one extremity the guide rail section is provided with a composite flange (6) which runs across practically the entire inner wall of the guide rail section. This flange (6) is to be connected to the extremity of a similar guide rail section by means of bolts.

Fig. 2 shows part of a guide rail section with the hole (4) and the assembly hatch (5) fitted in it. The round assembly hatch (5) is provided with arms (11) which are fastened rigidly to the assembly hatch (5). On the inner wall of the guide rail section clamping plates (12) are fitted at a distance from the wall. In the drawn situation the parts (13) of the arms (11) lie under the clamping plates (12), viewed in the drawn situation, and are in locking contact with the clamping plates (12). The strip (14) is a stop for limiting the angle of rotation of the assembly hatch. Reference number (15) indicates a central hole in the assembly hatch in which an appropriate tool fits to

enable rotation and with that fastening or detachment of the assembly hatch.

Claims

1. Guide rail section (1) for partitioning part of a roadway, provided with a foot (2) and side walls (3) adjoining the foot, wherein at one extremity of the guide rail section the foot and/or the side walls can be coupled to the respective foot or side walls of a similar guide rail section and wherein at least one wall of the guide rail is provided with a hole (4,8) and a detachable assembly hatch (5,9) fitting in it near the extremity, characterized in that the assembly hatch is provided with at least a twist-lock fastening for the clamping of it in the wall.
2. Guide rail section in accordance with claim 1, characterized in that the twist-lock fastening comprises an arm (11) fastened on the hatch which arm is suitable for being brought into locking contact with the inward part of the wall.
3. Guide rail section in accordance with claim 2, characterized in that the assembly hatch is an essentially circular plate and that the inward part of the wall is provided with a clamping plate (12) on which the arm is to be brought into locking contact.
4. Guide rail in accordance with claim 3, characterized in that the clamping plate is fastened at a distance from the wall.
5. Guide rail in accordance with claim 3 or 4, characterized in that the assembly hatch is provided with means (15) for turning the assembly hatch around its centre.

Patentansprüche

1. Führungsschienenabschnitt (1) zum Abtrennen eines Teils einer Fahrbahn mit einem Fuß (2) und an den Fuß anschließenden Seitenwänden (3), wobei an einem Ende des Führungsschienenabschnittes der Fuß und/oder die Seitenwände mit jeweils dem Fuß oder den Seitenwänden eines ähnlichen Führungsschienenabschnittes gekuppelt werden kann, und wobei wenigstens eine Wand der Führungsschiene nahe des Endes mit einer Öffnung (4, 8) und einem in sie eingesetzten lösbaren Montagedeckel (5, 9) versehen ist, dadurch **gekennzeichnet**, daß der Montagedeckel mit wenigstens einer Twistlock-Befestigungsvorrichtung versehen ist, um ihn in der Wand festzuklemmen.

2. Führungsschienenabschnitt nach Anspruch 1, dadurch **gekennzeichnet**, daß die Twistlock-Befestigungsvorrichtung einen an dem Deckel befestigten Arm (11) aufweist, welcher Arm geeignet ist, in Verriegelungskontakt mit dem innenliegenden Teil der Wand gebracht zu werden.
3. Führungsschienenabschnitt nach Anspruch 2, dadurch **gekennzeichnet**, daß der Montagedeckel eine im wesentlichen kreisförmige Platte ist und daß der innenliegende Teil der Wand mit einer Klemmplatte (12) versehen ist, an der der Arm in Verriegelungskontakt gebracht wird.
4. Führungsschiene nach Anspruch 3, dadurch **gekennzeichnet**, daß die Klemmplatte mit einem Abstand von der Wand befestigt ist.
5. Führungsschiene nach Anspruch 3 oder 4, dadurch **gekennzeichnet**, daß der Montagedeckel mit Mitteln (15) versehen ist, um den Montagedeckel um seine Mitte zu drehen.

Revendications

1. Tronçon (1) de glissière de sécurité pour séparer une partie d'une route, comportant un pied (2) et des parois latérales (3) contiguës au pied, sachant qu'en une extrémité du tronçon de glissière de sécurité le pied et/ou les parois latérales peuvent être raccordés au pied ou aux parois latérales correspondants d'un tronçon de glissière de sécurité similaire et sachant que l'une au moins des parois de la glissière de sécurité comporte un trou (4, 8) et une trappe d'assemblage détachable (5, 9) qui s'emboîte dans celui-ci près de l'extrémité, caractérisé en ce que la trappe d'assemblage comporte au moins une fixation à verrou tournant qui la serre dans la paroi.
2. Tronçon de glissière de sécurité selon la revendication 1, caractérisé en ce que la fixation à verrou tournant comprend un doigt (11) fixé sur la trappe, ce doigt pouvant être amené en contact de verrouillage avec la partie intérieure de la paroi.
3. Tronçon de glissière de sécurité selon la revendication 2, caractérisé en ce que la trappe d'assemblage est une plaque sensiblement circulaire et la partie intérieure de la paroi comporte une plaque de serrage (12) sur laquelle le doigt est amené en contact de verrouillage.
4. Tronçon de glissière de sécurité selon la revendication 3, caractérisé en ce que la plaque de serrage

est fixée à une certaine distance de la paroi.

5. Tronçon de glissière de sécurité selon la revendication 3 ou 4, caractérisé en ce que la trappe d'assemblage comprend un moyen (15) pour faire tourner la trappe d'assemblage autour de son centre.

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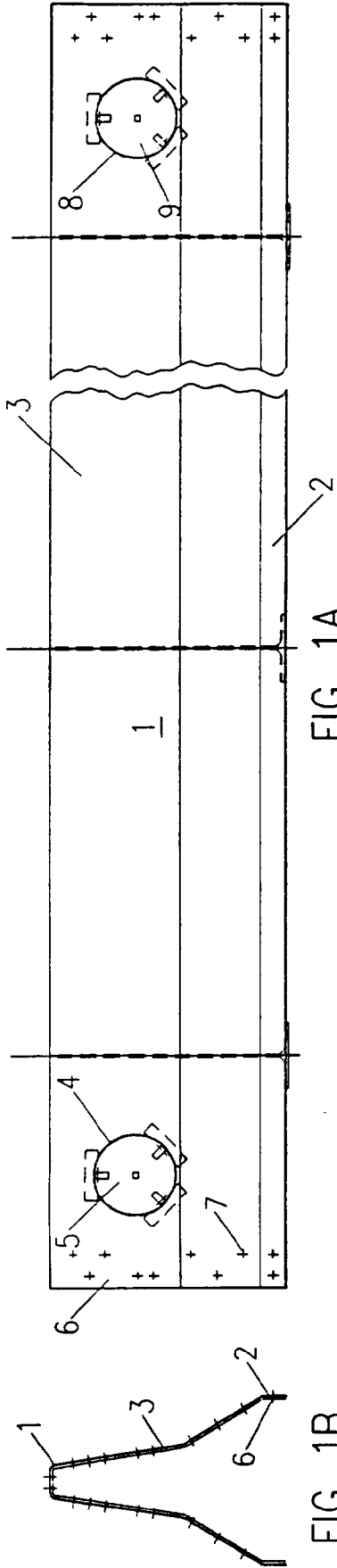


FIG. 1A

FIG. 1B

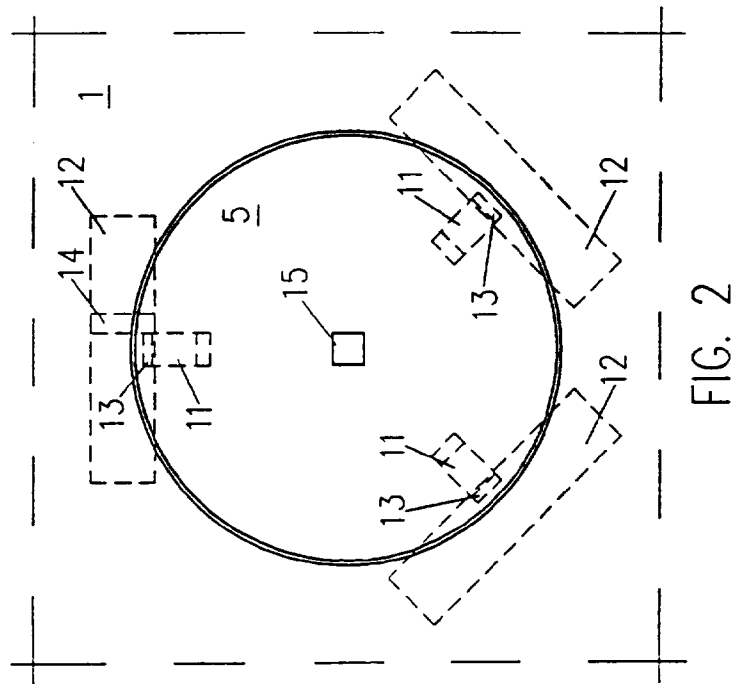


FIG. 2