

(19)



(11)

EP 1 570 142 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention of the grant of the patent:
26.05.2010 Bulletin 2010/21

(51) Int Cl.:
E04F 11/16^(2006.01) E04F 19/02^(2006.01)

(21) Application number: **03777494.0**

(86) International application number:
PCT/PL2003/000120

(22) Date of filing: **13.11.2003**

(87) International publication number:
WO 2004/044346 (27.05.2004 Gazette 2004/22)

(54) **Construction kit comprising a fixing moulding and an antislip insert**

Bausatz mit einer Befestigungsleiste und einem Gleitschutzeinsatzteil

Ensemble de pièces comprenant une baguette de fixation et un insert antidérapant

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

(30) Priority: **13.11.2002 CZ 200213677 U**

(43) Date of publication of application:
07.09.2005 Bulletin 2005/36

(73) Proprietor: **Wesolowska, Malgorzata**
25-316 Kielce (PL)

(72) Inventors:
• **Wesoiowska, Malgorzata**
25-316 Kielce (PL)
• **Sztemon, Milan**
73601 Haviriv (CZ)

(74) Representative: **Garstka, Antoni Czeslaw**
Tumlin-Wegle 87
26-050 Zagnansk (PL)

(56) References cited:
DE-A- 3 638 485 US-A- 3 334 456
US-A- 4 066 285

EP 1 570 142 B1

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

[0001] The subject of the invention is a construction kit comprising a fixing moulding with a recess and a trapezoid antislip insert, used as a protecting element of stair nosings landings, terraces and in threshold mouldings of wheelchair ramps.

[0002] DE 36 38 485 describes a protective moulding for a stair nosing. This profile in the form of edge moulding has a lengthwise recess of approximately trapezoid cross-section with a lower base being wider, wherein an antislip insert of rough grooved surface is placed in the recess. Because of little height of the antislip insert, it happens during usage that it slips out of the recess in the protective profile.

[0003] US 3,334,456 disclose an antislip cover of stair steps with flexible inserts.

In one embodiment, the insert with trapezoid outline and with rough external surface has a groove with a widening of trapezoid outline. The insert is fastened with this groove on a protrusion jutting out of a recess in the fixing moulding. The widening, which is in the shape of a trapezoid with the longer base thereof at the top, begins at the base of the trapezoid outline of the insert. Near the said groove the insert has arched recesses, which reduce the cross-section of the insert near the groove.

[0004] A slight widening of the groove, which begins near the base of the outline, does not provide sufficient resistance against the insert slipping out from the recess in the fixing moulding. The arched recesses, which reduce the cross-section of the insert near the groove, enable bending of the insert, which bending eases slipping out of the insert from the fixing moulding.

[0005] The aim of the invention is to provide a construction kit that overcomes these drawbacks.

[0006] This aim is achieved with a construction kit according to the invention, which kit is such that it comprises a fixing moulding with a recess and an antislip insert, with a rough outer surface, and a trapezoidal cross-section, said insert being provided on its lower side with a lengthwise extending groove adapted to be seated on a protrusion extending from the recess so as to fasten said insert onto said moulding, wherein the shape of the protrusion corresponds with the shape of the groove, that the groove on its lower side ends with a widening, preferably of triangular cross-section, and the protrusion has a widening of corresponding shape and that said insert is provided with at least one protrusion of rhomboid outline increasing the outline of the insert and said recess of the moulding on its bottom is provided with a channel of corresponding outline adapted to receive said protrusion. Preferably, said widening has a triangular cross-section, the vertex of the widening being pointed upwards and the base of the widening being located downwards.

[0007] The groove of the insert and the corresponding protrusion of the fixing moulding at a depth have rectangular outline, which evolves into a triangle whose base is wider than the width of the rectangular outline of the

groove. Such a combination of outlines forms a kind of steps which co-operate to efficiently prevent the insert falling out of the recess in the fixing moulding.

[0008] Preferably, the symmetry axis of the groove coincides with the symmetry axis of the antislip insert.

[0009] Said insert may have shoulders near the groove preferably with an outline of a rectangular trapezoid, and the moulding channels of corresponding outline adapted to receive said shoulders.

[0010] The solution of the invention allows secure fastening of the antislip insert in the recess of the fixing moulding both protecting stair nosings and mouldings being threshold elements of wheelchair ramps.

[0011] The subject of the invention is presented in embodiments in the drawing, where Fig. 1 presents the transverse view of the insert, Fig. 2 - transverse view of the fixing moulding protecting stair nosing, Fig. 3 - view of a flat threshold moulding of the threshold element, and Fig. 4 - perspective view of the insert fixed in the fixing moulding.

[0012] An insert 1 of the construction kit with rough grooved external surface and trapezoid transverse outline has on its lower side a lengthwise groove 2 adapted to be seated on a protrusion 4 jutting out of a recess in the moulding 5, 5' fixing the insert 1 to the base. The lengthwise groove 2 of the insert 1 in its cross-section ends with a widening 3 of triangular cross-section, the vertex of the triangle being pointed upwards and the base of the triangle being located at the base 101 of the trapezoid antislip insert 1. The protrusion 4 of the fixing moulding 5, 5' has a widening 6 of cross-section whose shape corresponds with the shape of the cross-section of the lengthwise groove 2 of the trapezoid antislip insert 1. The base of the triangle of the widening 3 is wider than the width of the groove 2. Such a combination of the outline of the groove forms a kind of steps 301, 302, which co-operate with corresponding widenings 601, 602 of the protrusion 4 jutting out of the recess in the fixing moulding 5, 5'. The symmetry axis of the lengthwise groove 2 coincides with the symmetry axis of the trapezoid antislip insert 1. The trapezoid antislip insert 1 has protrusions 7 of rhomboid outline situated below the base 101 of the trapezoid antislip insert 1, and the fixing moulding 5, 5' has channels 9, whose cross-section corresponds with the shape of the cross-section of the protrusions 7 of the insert 1.

[0013] The insert 1 near the groove 2 has shoulders 8 below the base 101 of the trapezoid insert 1, and the fixing moulding 5, 5' has channels 10 whose cross-section shape corresponds with the cross-section shape of the shoulders 8.

Claims

1. Construction kit comprising a fixing moulding (5) with a recess and an antislip insert (1), which has a rough outer surface and a trapezoidal cross-section, said

insert being adapted to be seated on said recess and being provided on its lower side with a lengthwise extending groove (2) adapted to be seated on a protrusion (4) extending from the recess so as to fasten said insert (1) onto said moulding (5), wherein the shape of the protrusion (4) corresponds with the shape of the groove (2), **characterized in that** said groove (2) on its lower side ends with a widening (3), preferably of triangular cross-section, and the protrusion (4) has a widening (6) of corresponding shape and that said insert (1) is provided with at least one protrusion (7) of rhomboid outline increasing the outline of the insert and said recess of the moulding (5) on its bottom is provided with a channel (9) of corresponding outline adapted to receive said protrusion (7).

2. The construction kit of claim 1, **characterized in that** said widening (3) has a triangular cross-section, the vertex of the widening (3) being pointed upwards and the base of the widening (3) being located downwards.
3. The construction kit of claim 1 or 2, **characterized in that** the symmetry axis of the groove (2) coincides with the symmetry axis of the antislip insert (1).
4. The construction kit of any of claims 1 to 3, **characterized in that** said insert (1) has shoulders (8) near the groove (2), preferably with an outline of a rectangular trapezoid and the moulding (5, 5') has channels (10) of corresponding outline adapted to receive said shoulders (8).

Patentansprüche

1. Das Baumodell, das aus einer Befestigungsleiste (5) mit einer Nut sowie aus einer Antirutscheinlage (1) besteht, die eine raue Außenoberfläche hat und im Querschnitt ein trapezförmiges Profil aufweist und zum Aufsetzen auf die besagte Nut angepasst ist, und auf ihrer unteren Seite eine Längsrille (2) enthält, die zum Aufsetzen auf den Vorsprung (4) bestimmt wird, ausgedehnt so von der Nut, um die besagte Einlage (1) an der Leiste (5) zu befestigen, wobei die Form des Vorsprungs (4) der Form der Rille (2) entspricht, **dadurch gekennzeichnet, dass** die Rille (2) an ihrer unteren Seite mit einer Erweiterung (3) endet, vorteilhaft dreieckigen Querschnitts und der Vorsprung (4) eine Erweiterung (6) entsprechender Form hat, und dass die besagte Einlage (1) mindestens mit einem Vorsprung (7), der ein Parallelogrammprofil bildet, ausgestattet ist, der den Umriss der Einlage vergrößert, und am Boden der Leiste (5) ein Kanal(9) mit einem entsprechenden Profil vorhanden ist, der dem Erhalt des besagten Vorsprungs (7) dient.

2. Das Baumodell nach Anspruch 1, **dadurch gekennzeichnet, dass** die besagte Erweiterung (3) einen dreieckigen Querschnitt aufweist, wobei der Scheitelpunkt der Erweiterung nach oben gerichtet ist und die Basis der Erweiterung (3) unten platziert ist.
3. Das Baumodell nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die Symmetrieachse der Rille (2), mit der Symmetrieachse der trapezförmigen Antirutscheinlage (1) übereinstimmt.
4. Das Baumodell, nach Anspruch 1, 2 oder 3, **dadurch gekennzeichnet, dass** die besagte Einlage (1) Wülste (8) nah an der Rille (2) hat, die vorteilhaft das Profil eines rechteckigen Trapezes bilden und die Leiste (5,5') Kanäle mit entsprechenden Formen enthält, um die besagten Wülste (8) zu erhalten.

Revendications

1. Un kit de construction comprenant un moulage de fixation (5) avec un logement et un insert anti-dérapant (1), qui a une surface externe rugueuse et un insert déjà mentionné en forme trapézoïdale adapté audit logement et qui sur sa face inférieure-dans le sens de sa longueur
 - possède une fissure (2) adaptée à se positionner sur un relief (4) qui s'étend à partir du logement de la façon à bloquer ledit insert (1) dans le moulage mentionné (5) dont la forme du relief (4) correspond à la forme de la fissure (2) qui à l'extrémité de sa partie basse possède un élargissement (3) dont la section transversale a de préférence la forme d'un triangle et le relief (4) avec une ouverture (6) en forme correspondante du dit insert (1) possède au moins un relief (7) du profil à losange qui augmente le profil de l'insert du dit logement du moulage (5) possède au fond un canal (9) de profil correspondant, adapté à recevoir ledit relief (7).
2. Le kit de construction de la demande 1 se **caractérise par** l'élargissement mentionné (3) à section transversale triangulaire où le sommet de l'élargissement (3) doit être dirigée vers le haut pendant que la base de d'élargissement (3) se trouve en bas.
3. Le kit de construction de la demande 1 ou 2 est **caractérisé en ce que** l'axe de symétrie de la fissure (2) coïncide avec l'axe de symétrie de l'insert antidérapant (1).
4. Le kit de construction de la demande de 1 à 3 est **caractérisée par le fait que** ledit insert (1) a des épaules (8) près de la fissure (2), avec un contour de préférence d'un trapèze rectangulaire et le mou-

lage (5, 5') possède des canaux (10) de profil correspondant adaptés à recevoir lesdits épaules (8).

5

10

15

20

25

30

35

40

45

50

55

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- DE 3638485 [0002]
- US 3334456 A [0003]