

(19)



(11)

EP 2 101 014 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
01.10.2014 Bulletin 2014/40

(51) Int Cl.:
E04G 5/08 (2006.01) E04G 1/15 (2006.01)

(21) Application number: **08170448.8**

(22) Date of filing: **02.12.2008**

(54) **Scaffolding board**

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Planche d'échafaudage

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR**

(30) Priority: **10.03.2008 DK 200800360**

(43) Date of publication of application:
16.09.2009 Bulletin 2009/38

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Description

Field of the Invention

[0001] The present invention concerns a scaffolding board with a substantially plane top side with a surface for persons staying on it, and with projecting stop limits at the underside of the scaffolding board limiting displacement of the scaffolding board in its longitudinal direction when the scaffolding board is placed on two transverse beams.

[0002] The invention furthermore concerns a use of such a scaffolding board for establishing a scaffolding floor.

Background of the Invention

[0003] Scaffolding boards made of a number of wooden fillets that are clamped together and provided with a stopper at the underside are commonly known.

[0004] A number of scaffolding boards are used together for establishing a scaffolding floor.

[0005] During storage on the construction site, it is desirable to be able to stack and store the scaffolding boards with the least possible volume. During transport to and from the construction site, it is also desirable to be able to stack and store the boards in a safe way such that they are locked in relation to each other.

[0006] As the prior art scaffolding boards (see CA 2 508 598 A1) are provided with a protruding stopper, stacking is made difficult. It is necessary to turn the scaffolding boards with top side facing top side and underside facing underside, respectively, in order to limit the volume as much as possible. There will always be a spacing of minimum the height of a stopper between scaffolding boards that lie with underside against underside if the boards are stacked in the above mentioned way. Besides, displacement of the scaffolding boards is possible.

[0007] During transport, which often occurs on an open platform, the scaffolding boards are to be secured in a safe way. The scaffolding boards are to be secured to the platform with girths and secured against displacement in several directions. It is necessary with a strong clamping to the platform in order to provide sufficient frictional force between the individual scaffolding boards in the stack so as to avoid displacing during transport.

[0008] The scaffolds are primarily erected in the outdoors. The boards are therefore exposed to wind and weather, and since they are made of wood, they will absorb some water. This results in a weight increase. Weight increase up to 50% caused by this water absorption is not uncommon.

[0009] A scaffold erected up along several storeys will normally have a limited number of scaffolding floors, frequently only one. This is due to the carrying capacity of the scaffold, but also because transporting a large number of scaffolding board to the construction site is thereby avoided. The scaffolding floor will thus be moved

from one storey to the next while working upwards or downwards the building. Moving of the scaffold occurs manually in that as a scaffold worker moves each scaffolding board from one storey to the next. Therefore, it is very inconvenient if the weight of the scaffolding boards is increased unnecessarily.

Object of the Invention

[0010] It is the object of the invention to provide a scaffolding board that takes up as little space as possible in stacked condition. Moreover, it is desirable that the scaffolding board has integrated means that contribute to securing a stack of scaffolding boards such that the individual scaffolding boards do not slide in relation to each other during transport.

Description of the Invention

[0011] According to the present invention, this is achieved by a scaffolding board of the type specified in the introduction which is peculiar in that recesses are provided at the top side of the scaffolding board for receiving the stop limits when two scaffolding boards are superposed, and that the stop limits and recesses are provided extending across part of the width and length, respectively, of the scaffolding board.

[0012] Hereby is achieved that the scaffolding boards can be stacked very close. The volume within which the scaffolding boards can be stacked is only determined by the size of the scaffolding boards. The volume is optimised hereby.

[0013] The stop limits and the recesses are designed such that they interact with small clearance. This limits the possibility of the scaffolding boards being displaced in the transverse and longitudinal directions in the stacked condition. Hereby it becomes easier to secure a stack of scaffolding boards during transport.

[0014] In some cases, it will only be necessary with a minimal clamping in order to secure the stack during transport. For very low stacks, clamping may be omitted entirely. Such a low stack is only to be secured against displacing in the plane of the platform.

[0015] The scaffolding board is preferably used for making a scaffolding floor in a scaffold, where scaffolding boards are placed on the longitudinal beams of the scaffold which are transverse in relation to the longitudinal direction of the scaffolding boards, and where the stop limits interact with the longitudinal beams, limiting displacement of the scaffolding boards in their longitudinal direction.

[0016] According to a further embodiment, the scaffolding board according to the invention is peculiar in that it is provided by one or more profiled sections.

[0017] In production, it may be necessary to make the scaffolding board of one or more sections that are mounted side by side. The reason for this may be that the manufacturing equipment only can produce sections of a cer-

tain width.

[0018] According to a further embodiment, the scaffolding board according to the invention is peculiar in that it is provided by at least two profiled sections, and that the stop limits and recesses are disposed between the sections.

[0019] The stop limits provide spacing between the profiled sections. This provides that a scaffolding worker can use the interspace as a grip. The individual stop limit may be a block with a projecting part under the scaffolding board. The projecting part of the block fits into the recess formed by the interspace between the sections or a groove in the interspace. The recess corresponding to the projecting part of the block may also be formed in the top side of the block. The recess will often be a round hole, and the projecting part of the block will be a cylinder that fits into the hole.

[0020] According to a further embodiment, each section has a top side connected with side members extending at a right angle from the top side so as to constitute an edged U-section, where the opening of the U-section faces the underside of the scaffolding board.

[0021] Hereby is achieved a high strength-to-weight ratio. Therefore it becomes possible to make the scaffolding boards with reduced weight. This is a great advantage for the handling of the scaffolding boards.

According to a further embodiment, the side members of the U-section are L-shaped such that flanges are formed at the underside of the scaffolding board.

[0022] By using a section with this shape, a further increase of the moment of inertia of the section is attained and hereby a further increase in the strength-to-weight ratio. The weight of the scaffolding board is further reduced thereby.

[0023] According to a further embodiment, the scaffolding board is provided with one or more grips at the top side and/or the underside.

[0024] Hereby it will be easier for a scaffolding worker to move the scaffolding boards from one storey to the next. Handling of the scaffolding boards during stacking is also made appreciably easier.

[0025] If the scaffolding board is made up of U-sections, the grips may be provided between the side members of the U-sections. This gives access to handling from the underside of the scaffolding board. At the top side, a grip may be provided by means of a hole pattern in the top side of the scaffolding board. Or a gap between the sections can be used, if such exists.

[0026] According to a further embodiment, the scaffolding board is optionally made of aluminium, steel, wood or synthetic material.

[0027] The scaffolding boards will preferably be made of aluminium as this is readily available and easy to work. Besides, aluminium does not absorb water and will therefore not increase in weight when exposed to the weather. Steel has properties comparable to aluminium. It may be heavier, but will still save weight compared with wood. If a further weight saving is desired, the scaffolding boards

can be made of synthetic material such as carbon fibre composite. This material, however, is relatively expensive, and will rarely find application. Wood can be used where advantageous.

[0028] According to a further embodiment, the top side of the scaffolding board is provided with a pattern of apertures.

[0029] Hereby is achieved that water collected on the surface of the scaffolding board can be conducted away and drained off.

[0030] According to a further embodiment, the edges of the apertures may be bent up or down.

[0031] Hereby is may be provided a skidproof surface, and the draining action at the apertures may be further enhanced.

Description of the Drawing

[0032] The invention will then be explained in more detail with reference to the accompanying drawing, where:

Fig. 1 shows an isometric view of the top side of a scaffolding board;

Fig. 2 shows an isometric view of the bottom side of a scaffolding board;

Fig. 3 shows a second isometric view of the top side of a scaffolding board;

Fig. 4 shows a sectional view of a part of a profiled section;

Fig. 5 shows a side view of a scaffolding board lying on transverse beams; and

Fig. 6 shows a draft of a scaffold.

[0033] In the explanation of the Figures, identical or corresponding elements will be provided with the same designations in different Figures. Therefore, no explanation of all details will be given in connection with each single Figure/embodiment.

Detailed Description of the Invention

[0034] Figs. 1-3 show a preferred embodiment of the scaffolding board 1. The scaffolding board 1 consists of two profiled sections 7, a number of stop limits 3 and a two end pieces 17. The sections 7 are arranged side by side with an interspace there between. The stop limits 3 are provided in this interspace forming part of the recess 6. The stop limits 3 are fastened to the side members 8 of the sections facing the former. The profiled sections 7 are furthermore fastened to the end pieces 17. The recess may also be constituted by the interspace between the sections or a groove (not shown).

[0035] On Fig. 2, the projecting part of the stop limits appears at the underside 4. In the shown embodiment, the projecting part of the stop limits 3 is cylindric, but it may also have other shapes.

[0036] On Fig. 3, one section 7 is hidden in order to show the stop limits 3 from above 2 the section 7. Each

stop limit 3 is provided with a recess 6. The projecting parts of stop limits 3 are received in the recesses 6 when two or more scaffolding boards 1 are stacked upon each other.

When scaffolding boards 1 are stacked on e.g. a lorry platform for transport to a construction site, they will typically be arranged with the top side 2 facing the platform. Since there are no projecting parts at the top side, the scaffolding board 1 will lie flat on the platform. Scaffolding boards 1 which subsequently are laid upon the lowermost scaffolding board 1 will receive the projecting stop limits 3 in the recesses 6 such that these scaffolding boards 1 also lie flatly. If the lowermost scaffolding board 1 is sufficiently secured against displacement on the platform during transport, the rest of the stack cannot be displaced as the stop limits and the recesses cooperate to retain the boards in the stack. The lowermost scaffolding board 1 is secured either by support beams or friction due to the weight of the stack or clamping of the stack with a girth.

[0037] The grips 10 at the underside 4 make it easier for a scaffolding worker to handle the scaffolding boards 1 during stacking or when a scaffolding floor is to be moved between the storeys.

[0038] According to the shown embodiment, the scaffolding board 1 is provided with a pattern of apertures 11 at the top side 2. The purpose of these apertures 11 is to provide for draining water away from the scaffolding floor.

[0039] The longitudinal direction 16 of the scaffolding board is indicated with an arrow on Figs. 1-3.

[0040] Fig. 4 shows a sectional view through a profiled section 7. In the shown embodiment, the section 7 is an edged U-section with side members 8 which are L-shaped such that flanges 9 are formed at the underside 4 of the section 7 are formed. The sectional view shows how some of the apertures 11 are bent upwards 12 at the top side 2. This makes the top side 2 skidproof. Other apertures are bent downwards 13. This will provide that water is more easily drained off the scaffolding board 1.

[0041] Figure 5 shows how the scaffolding board 1 can be positioned on a scaffold. The underside 4 of the scaffolding board is supported by transverse beams 5. The stop limits 3 form stoppers that limit displacement in the longitudinal direction 16 of the scaffolding board. It has to be possible to displace the scaffolding board 1 a bit, since the distance between the scaffold and a wall 19 will vary. The top side 2 of the scaffolding board is part of the scaffolding floor 14.

[0042] The scaffolding board 1 has a cantilevered part 20 as the scaffold is disposed spaced apart from the wall 19. A so-called kick board 18 (mangler) is provided over one transverse beam 5 in order to prevent the scaffolding board 1 from tipping when persons stay on the cantilevered part 20.

[0043] The scaffolding board 1 may furthermore be provided without a cantilever part 20.

[0044] The symmetric disposition and number of the

stop limits provide that the scaffolding board 1 does not have to be arranged in a certain way in relation to the longitudinal direction 16.

[0045] Fig. 6 shows a building scaffold 15 with a scaffolding floor 14 at one level. The scaffolding floor 14 consists of a number of scaffolding boards 1. The scaffolding boards 1 are supported by the longitudinal beams 5 of the scaffold.

Claims

1. A scaffolding board (1) with a substantially plane top side (2) with a surface for persons staying on it, and with projecting stop limits (3) at the underside (4) of the scaffolding board (1) limiting displacement of the scaffolding board in its longitudinal direction (16) when the scaffolding board is placed on two transverse beams (5), **characterised in that** recesses (6) are provided at the top side (2) of the scaffolding board (1) for receiving the stop limits (3) when two scaffolding boards (1) are superposed, and that the stop limits (3) and recesses (6) are provided extending across part of the width and length, respectively, of the scaffolding board.
2. Scaffolding board (1) according to claim 1, **characterised in that** the scaffolding board (1) is provided by one or more profiled sections (7).
3. Scaffolding board (1) according to claim 1 or 2, **characterised in that** the scaffolding board (1) is provided by at least two profiled sections (7), and that the stop limits (3) and recesses (6) are disposed between the sections (7).
4. Scaffolding board (1) according to claim 2 or 3, **characterised in that** each section (7) has a top side (2) connected with side members (8) extending at a right angle from the top side (2) so as to constitute an edged U-section, where the opening of the U-section faces the underside (4) of the scaffolding board.
5. Scaffolding board according to claim 4, **characterised in that** the side members (8) of the U-section are L-shaped such that flanges (9) are formed at the underside (4) of the scaffolding board (1).
6. Scaffolding board (1) according to any preceding claim, **characterised in that** the scaffolding board (1) is provided with one or more grips (10) at the top side (2) and/or the underside (4).
7. Scaffolding board (1) according to any preceding claim, **characterised in that** the scaffolding board (1) is optionally made of aluminium, steel, wood or synthetic material.

8. Scaffolding board (1) according to any preceding claim, **characterised in that** the top side (2) of the scaffolding board is provided with a pattern of apertures (11).
9. Scaffolding board (1) according to claim 8, **characterised in that** the edges of the apertures are bent up (12) or down (13).
10. Use of a scaffolding board (1) according to any preceding claim for making a scaffolding floor (14) in a scaffold (15), where scaffolding boards (1) are placed on the longitudinal beams (5) of the scaffold which are transverse in relation to the longitudinal direction (16) of the scaffolding boards, and where the stop limits (3) interact with the longitudinal beams (5), limiting displacement of the scaffolding boards in their longitudinal direction (16).

Patentansprüche

1. Gerüstplatte (1) mit einer im Wesentlichen ebenen Oberseite (2) mit einer Oberfläche, auf der sich Personen aufhalten können, und mit hervorstehenden Anschlagbegrenzungen (3) an der Unterseite (4) der Gerüstplatte (1), die eine Verschiebung der Gerüstplatte in ihrer Längsrichtung (16) begrenzen, wenn die Gerüstplatte auf zwei Querbalken (5) angeordnet ist, **dadurch gekennzeichnet, dass** Aussparungen (6) auf der Oberseite (2) der Gerüstplatte (1) vorgesehen sind, um die Anschlagbegrenzungen (3) aufzunehmen, wenn zwei Gerüstplatten (1) übereinandergelegt werden, und dass die Anschlagbegrenzungen (3) und die Aussparungen (6) so vorgesehen sind, dass sie sich jeweils über einen Teil der Breite und der Länge der Gerüstplatte erstrecken.
2. Gerüstplatte (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Gerüstplatte (1) durch einen oder mehrere mit Profilen versehene Abschnitte (7) bereitgestellt ist.
3. Gerüstplatte (1) nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die Gerüstplatte (1) durch mindestens zwei mit Profilen versehene Abschnitte (7) bereitgestellt ist und dass die Anschlagbegrenzungen (3) und die Aussparungen (6) zwischen den Abschnitten (7) angeordnet sind.
4. Gerüstplatte (1) nach Anspruch 2 oder 3, **dadurch gekennzeichnet, dass** jeder Abschnitt (7) eine Oberseite (2) besitzt, die mit Seitenelementen (8) verbunden ist, die sich unter einem rechten Winkel von der Oberseite (2) erstrecken, um einen mit Kanten versehenen U-Abschnitt zu bilden, wobei die Öffnung des U-Abschnittes der Unterseite (4) der Gerüstplatte zugewandt ist.

5. Gerüstplatte (1) nach Anspruch 4, **dadurch gekennzeichnet, dass** die Seitenelemente (8) des U-Abschnittes L-förmig sind, so dass Flansche (9) an der Unterseite (4) der Gerüstplatte (1) ausgebildet sind.

6. Gerüstplatte (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Gerüstplatte (1) mit einem oder mehreren Griffen (10) an der Oberseite (2) und/oder der Unterseite (4) versehen ist.

7. Gerüstplatte (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Gerüstplatte (1) wahlweise aus Aluminium, Stahl, Holz oder einem Kunststoff hergestellt ist.

8. Gerüstplatte (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Oberseite (2) der Gerüstplatte mit einem Muster von Öffnungen (11) versehen ist.

9. Gerüstplatte (1) nach Anspruch 8, **dadurch gekennzeichnet, dass** die Kanten der Öffnungen nach oben (12) oder unten (13) gebogen sind.

10. Verwendung einer Gerüstplatte (1) nach einem der vorhergehenden Ansprüche, um einen Gerüstboden (14) in einem Gerüst (15) herzustellen, wobei Gerüstplatten (1) auf den Längsbalken (5) des Gerüsts angeordnet sind, die quer in Bezug auf die Längsrichtung (16) der Gerüstplatten verlaufen, und wobei die Anschlagbegrenzungen (3) mit den Längsbalken (5) wechselwirken und eine Verschiebung der Gerüstplatten in ihrer Längsrichtung (16) beschränken.

Revendications

1. Planche d'échafaudage (1) avec un côté supérieur sensiblement plan (2) comprenant une surface pour les personnes se tenant sur celui-ci, et comprenant des butées de limite saillantes (3) en dessous (4) de la planche d'échafaudage (1) limitant le déplacement de la planche d'échafaudage dans sa direction longitudinale (16) lorsque la planche d'échafaudage est placée sur deux poutres transversales (5), **caractérisée en ce que** des évidements (6) sont prévus au niveau du côté supérieur (2) de la planche d'échafaudage (1) pour recevoir les butées de limite (3) lorsque deux planches d'échafaudage (1) sont superposées, et **en ce que** les butées de limite (3) et les évidements (6) sont prévus s'étendant sur une partie de la largeur respectivement de la longueur de la planche d'échafaudage.
2. Planche d'échafaudage (1) selon la revendication 1, **caractérisée en ce que** la planche d'échafaudage (1) est fournie par une ou plusieurs sections profilées

(7).

3. Planche d'échafaudage (1) selon la revendication 1 ou 2, **caractérisée en ce que** la planche d'échafaudage (1) est fournie par au moins deux sections profilées (7), et **en ce que** les butées de limite (3) et les évidements (6) sont disposés entre les sections (7). 5
4. Planche d'échafaudage (1) selon la revendication 2 ou 3, **caractérisée en ce que** chaque section (7) a un côté supérieur (2) relié à des éléments latéraux (8) s'étendant à angle droit par rapport au côté supérieur (2) de manière à constituer une section en U angulaire, où l'ouverture de la section en U fait face au côté inférieur (4) de la planche d'échafaudage. 10 15
5. Planche d'échafaudage selon la revendication 4, **caractérisée en ce que** les éléments latéraux (8) de la section en U sont en forme de L de telle manière que des brides (9) sont formées au niveau de la face inférieure (4) de la planche d'échafaudage (1). 20
6. Planche d'échafaudage (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** la planche d'échafaudage (1) est pourvue d'un ou de plusieurs points de préhension (10) au niveau du côté supérieur (2) et/ou du dessous (4). 25
7. Planche d'échafaudage (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** la planche d'échafaudage (1) est éventuellement constituée d'aluminium, d'acier, de bois ou d'un matériau synthétique. 30 35
8. Planche d'échafaudage (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** le côté supérieur (2) de la planche d'échafaudage est pourvu d'un motif d'ouvertures (11). 40
9. Planche d'échafaudage (1) selon la revendication 8, **caractérisée en ce que** les bords de ces ouvertures sont repliés vers le haut (12) ou vers le bas (13). 45
10. Utilisation d'une planche d'échafaudage (1) selon l'une quelconque des revendications précédentes pour la fabrication d'un plancher d'échafaudage (14) dans un échafaudage (15), où des planches d'échafaudage (1) sont placées sur les poutres longitudinales (5) de l'échafaudage qui sont transversales par rapport à la direction longitudinale (16) des planches de l'échafaudage, et où les butées de limite (3) interagissent avec les poutres longitudinales (5), limitant le déplacement de planches de l'échafaudage dans leur direction longitudinale (16). 50 55

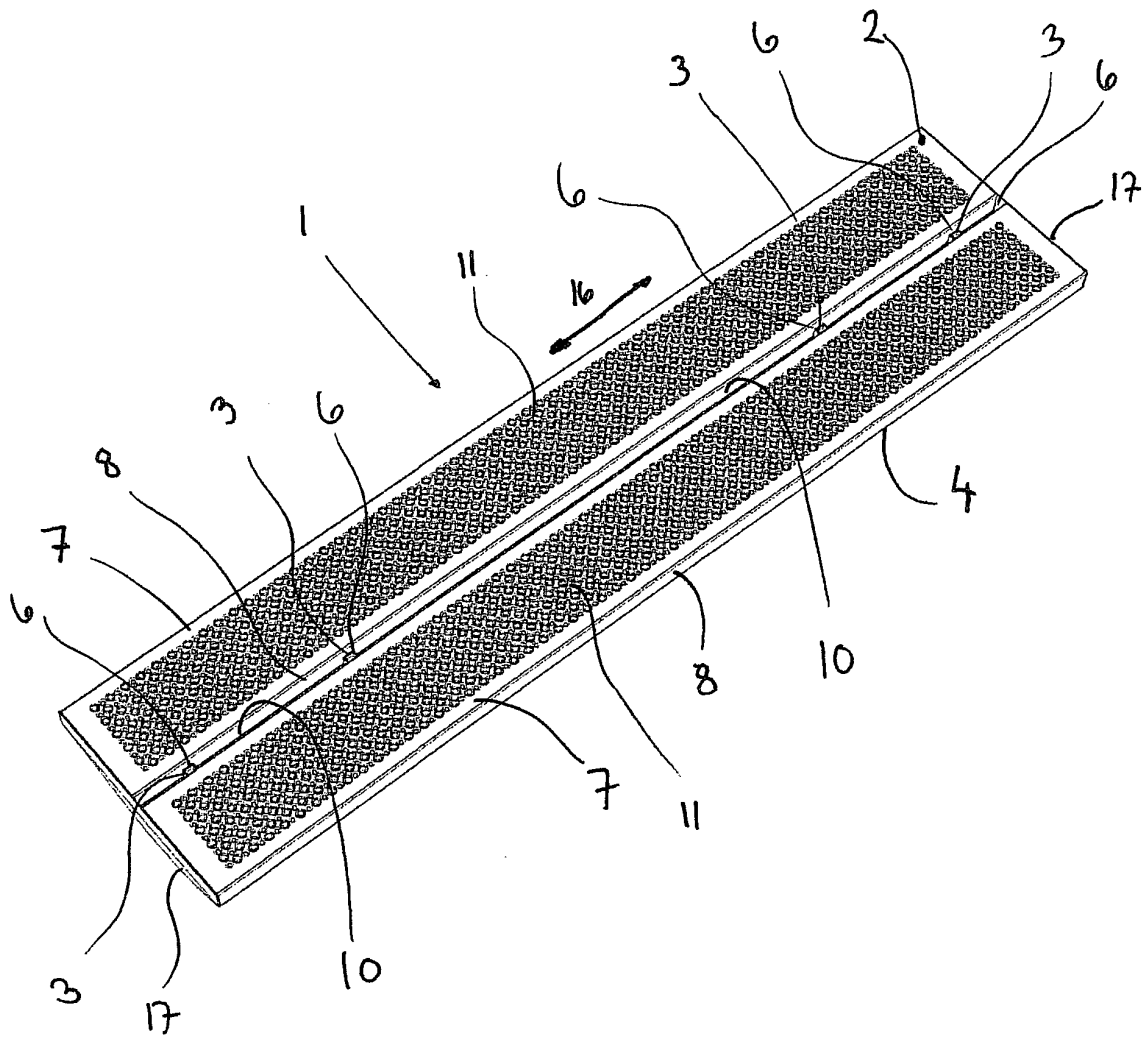


Fig. 1

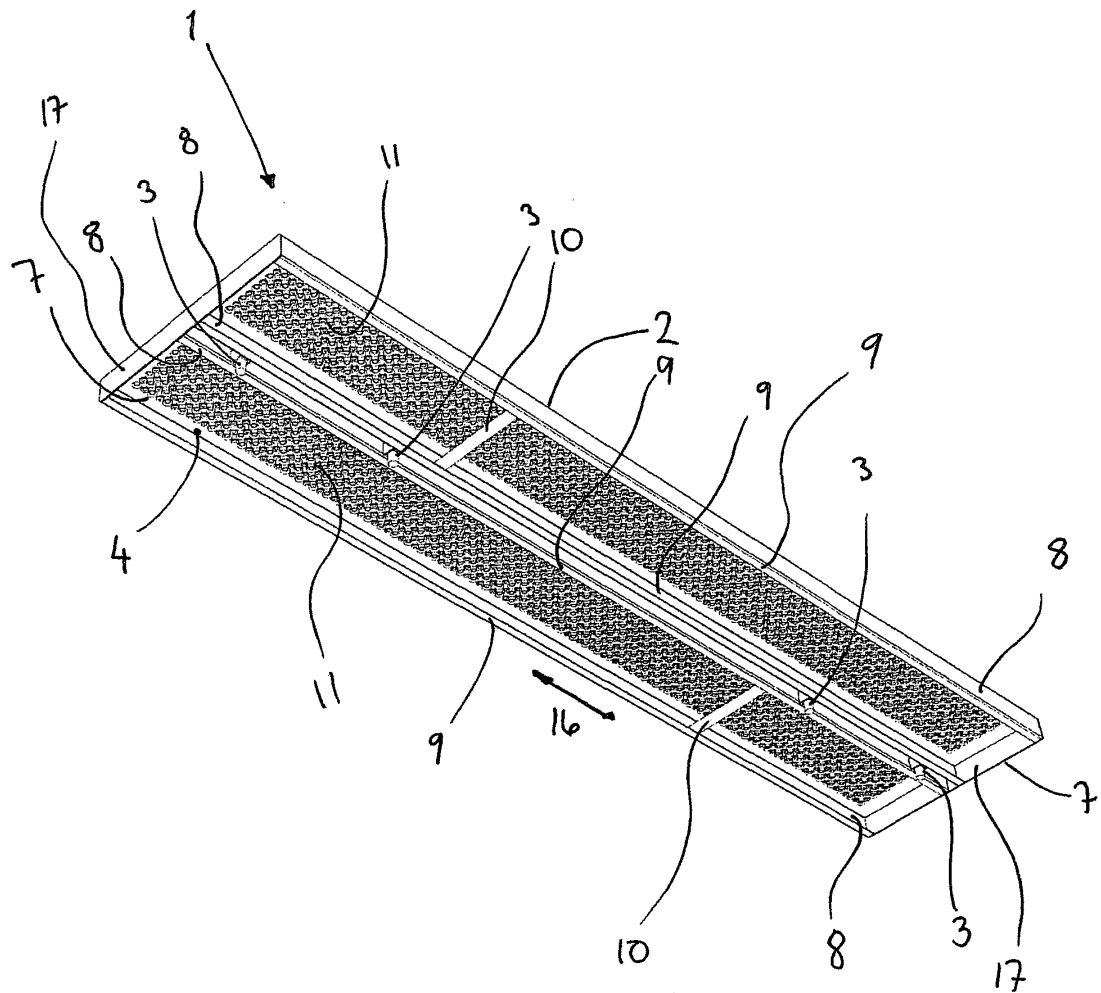


Fig. 2

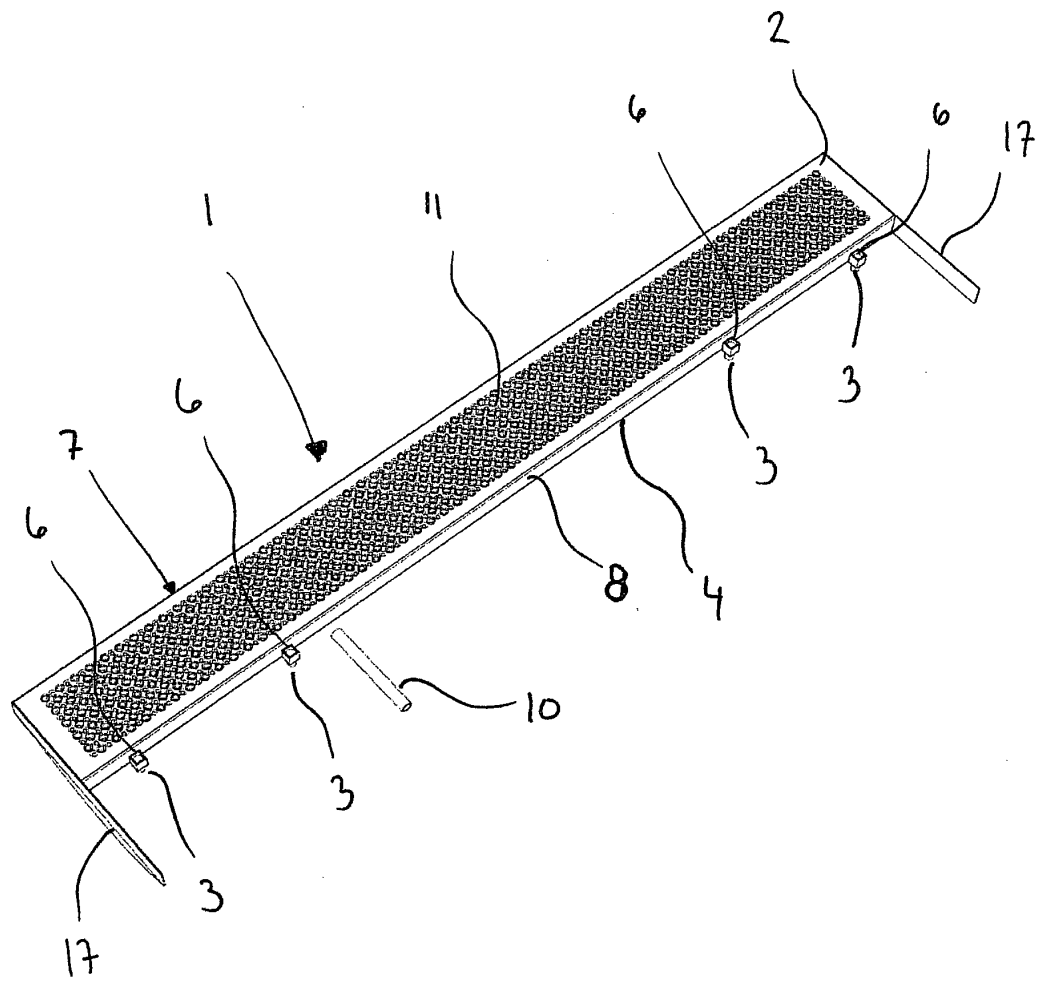
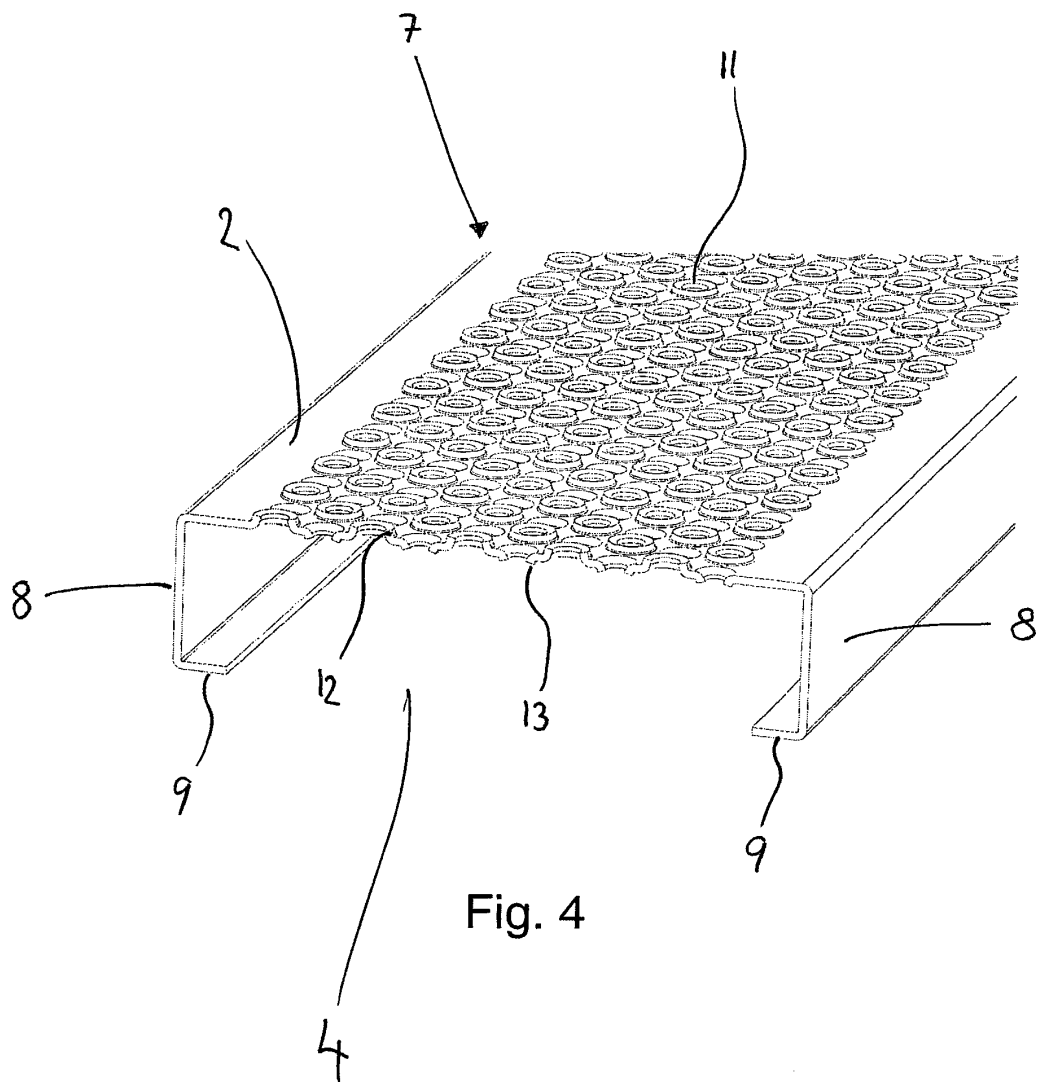


Fig. 3



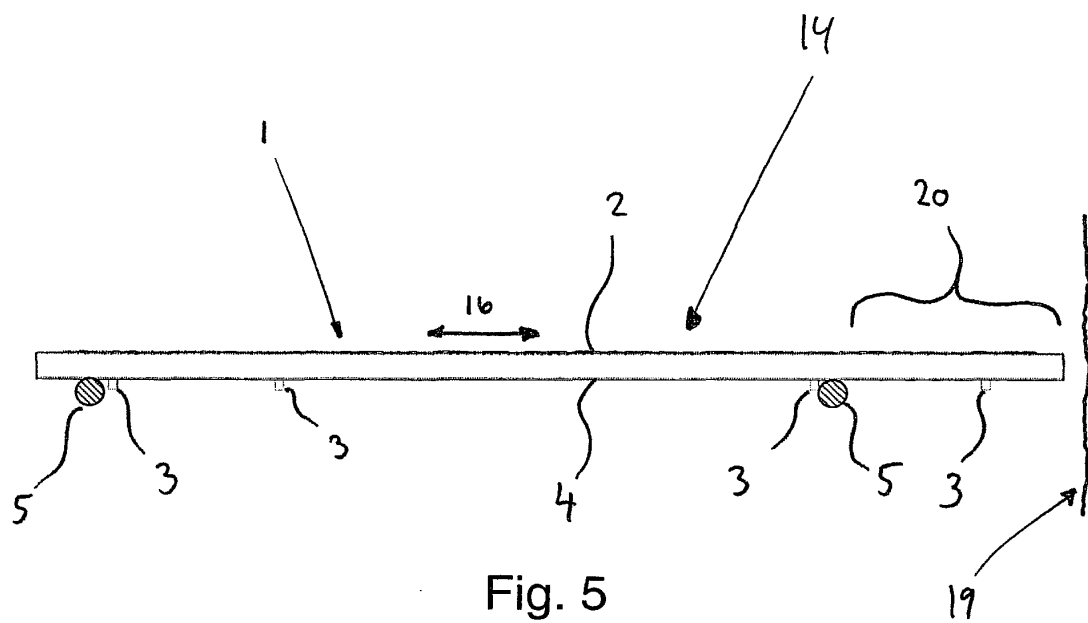


Fig. 5

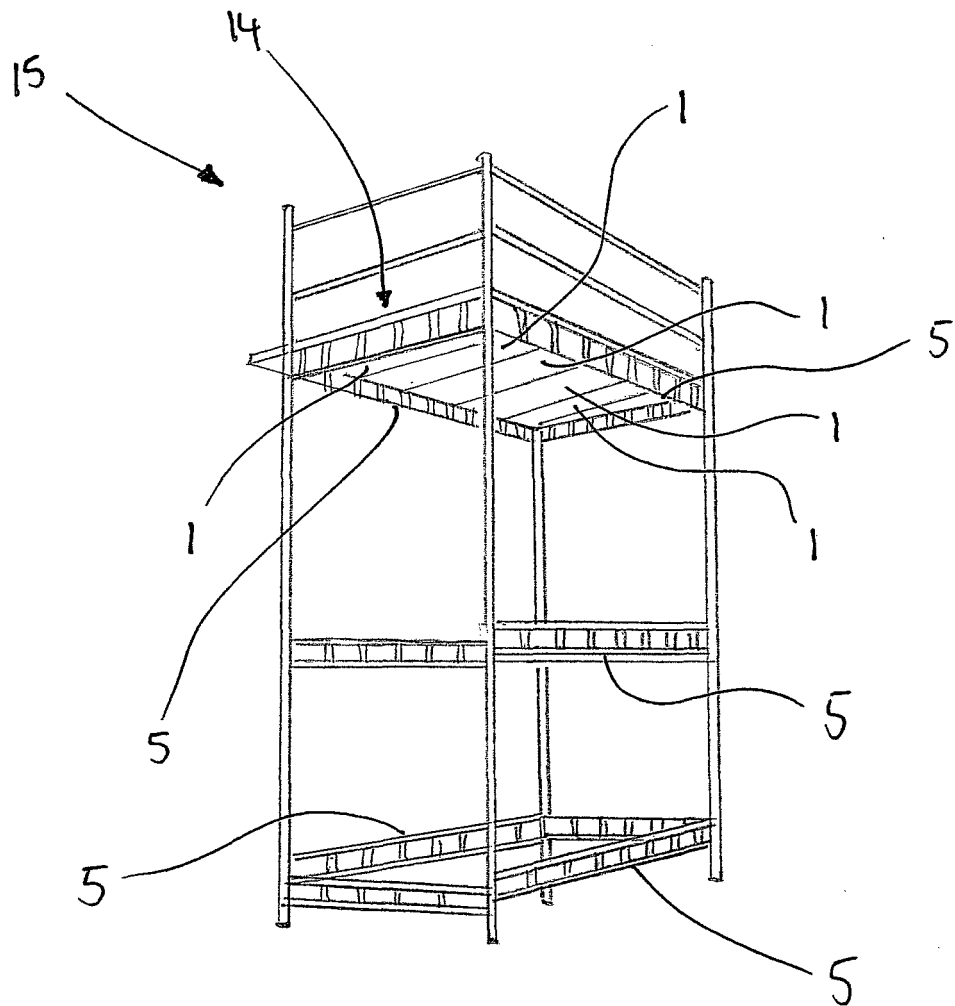


Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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