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(54) **A SYSTEM FOR SUPPORTING SLATS FOR FALSE CEILINGS**

(57) A ceiling slats support system characterized in that it comprises:
- a plurality of profiles (2, 2', 2", 2"') parallel to one another and fixable to the ceiling,
- a plurality of supporting profiles (4) substantially inverted U-shaped, adapted to be engaged with U-shaped slats (8),
- a plurality of V-shaped clips (6), which prongs are elastically compressible against one another to be subsequently inserted in a hole (34) provided for in the supporting profile (4) and, as a result of the expansion thereof, to support said supporting element (4)
characterized in that
- each supporting profile (4) is provided with hooking elements to support the slat (8), and
- the V-shaped clips (6) are inserted in a hole (18, 22, 48) provided for in the profiles (2, 2', 2", 2"') fixable to the ceiling.

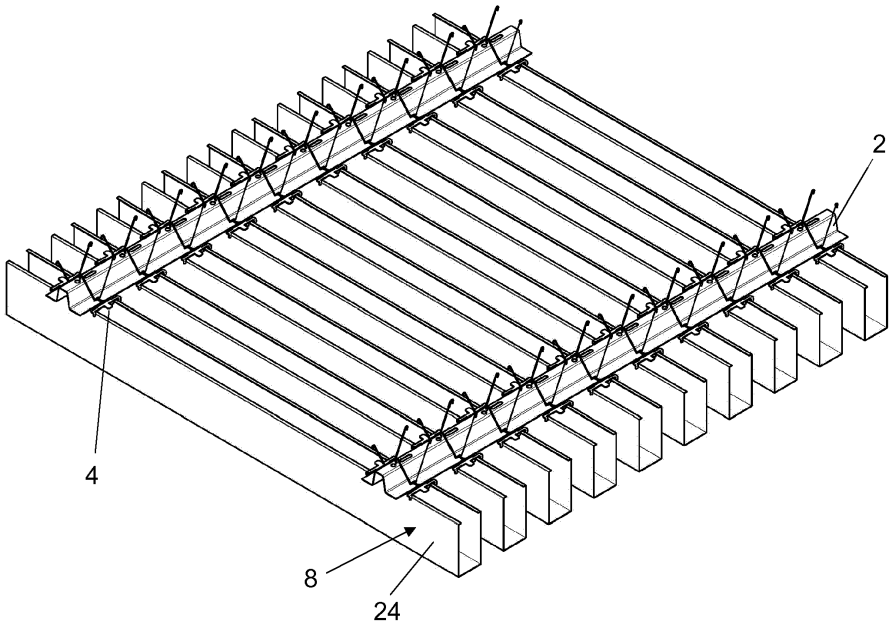

FIG. 1

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Description

[0001] The present invention relates to a system for supporting slats for false ceilings.

[0002] It is the object of the invention to provide a support system for false ceilings consisting of slats parallel to one another, which system allows to fix the slats to the ceiling in a simple and easy manner.

[0003] Such object, as well as others which will become apparent from the following description, are achieved in accordance with the invention by a system for supporting slats for false ceilings as described in claim 1.

[0004] The present invention is hereinafter further clarified in a preferred embodiment thereof and in some operational variants shown merely by way of explanation and not by way of limitation with reference to the appended tables of drawings, in which:

Figure 1 shows a perspective view of the system for supporting slats in accordance with the invention in a first embodiment,
Figure 2 shows a perspective view of the supporting profile of the slat and the relevant spring,
Figure 3 shows a side view thereof,
Figure 4 shows in section the fixing of the slat to the supporting profile,
Figure 5 shows the detail of the fixing of the supporting profile of the slat to the supporting section bar,
Figure 6 shows, in the same view of Figure 1, the support system in a first embodiment variant,
Figure 7 shows an exploded perspective view of the mounting step,
Figure 8 shows the support system assembled with the slat,
Figure 9 shows a perspective view of the support system in a second embodiment variant,
Figure 10 shows an exploded perspective view thereof during the mounting step,
Figure 11 shows an assembled view thereof,
Figure 12 shows a perspective view of the support system in a third embodiment variant,
Figure 13 shows an exploded perspective view thereof, and
Figure 14 shows an assembled view thereof.

[0005] As it may be seen from the Figures, the support system in accordance with the invention substantially comprises:

- a plurality of parallel Ω-shaped section bars 2 fixable to the ceiling,
- a plurality of inverted U-shaped supporting profiles 4, fixable to the section bars 2 by means of V-shaped clips 6,
- a plurality of U-shaped slats 8 which may be removably engaged with the supporting profiles 4.

[0006] In particular, each Ω-shaped section bar 2 has the horizontal upper surface 10 affected by circular 12 or slotted holes 14 for fixing conventional hangers (not shown in the drawings) integral with the ceiling.

[0007] Furthermore, the horizontal flaps 16 of each Ω-shaped section bar 2 are affected by a plurality of substantially T-shaped openings 18, with the head 20 of the T running longitudinally with respect to the section bar 2 and the shank 22 being orthogonal thereto.

[0008] The longitudinal edges of the horizontal surface 32 of each profile 4 extend by means of a step 26 to form two vertical tabs 24 with a distance therebetween substantially corresponding to the distance between the flaps 28 of the slat 8 which has the upper edges 30 folded inwardly by 90°.

[0009] The supporting profile 4 is further affected, at the horizontal surface 32, by two transverse slotted holes 34.

[0010] The clip 6 has the prongs 36 inclined outwardly with respect to a hinge portion 38, which length is greater than the length of the slotted hole 34 provided for in the profile.

[0011] For mounting the system for supporting slats in accordance with the invention, one should proceed in the following manner.

[0012] The prongs 36 of the clip 6 are brought together and passed through the holes 34 of the supporting profiles 4 from below the surface 32; then the prongs are released so that the supporting profile 4 rests on the portion 38 and is supported thereby.

[0013] Then the slats 8 are engaged by inserting the steps 26 of the supporting profile 4 between the side surfaces 28 and the upper edges 30 folded by 90°.

[0014] Finally, after fixing the parallel Ω-shaped section bars 2 to the ceiling, the prongs 36 of the clips 6 are brought back together and passed through the shanks 22 of the openings 18 of the flap 16 to then expand, following the release thereof, into the heads 20 and elastically keep the supporting element 4 fixed to the slat 8.

[0015] In the embodiment shown in Figures 6, 7 and 8, the ceiling fixing section bar 2' is inverted Ω-shaped and is provided, at the central band 40, with a slotted hole 42.

[0016] Similarly, the supporting element is affected at the upper surface by three transverse slotted holes 44.

[0017] For the mounting of the system in this embodiment, as in the preceding case, the prongs of the clip 6 are inserted inside the slotted hole 44 of the supporting element 4 and subsequently, after fixing the slat 8 to the supporting element 4, the clip is inserted into the slotted hole 42 of the section bar 2' fixable to the ceiling.

[0018] In the embodiment shown in Figures 9, 10 and 11, the ceiling supporting profile consists of a section bar 2" having a U-shaped section affected, at the central band 46, by slotted holes 48.

[0019] In the embodiment shown in Figures 12, 13 and

14, the supporting section bar consists of a U-shaped profile 2"' with which an inverted U-shaped profile 50 is engaged, by embracing it. Said profile 50 has at a lower end thereof a flap 54 folded by 90°, affected by a slotted hole 56 in which the spring 6 is engaged once it has been engaged in the slotted hole 48 of the support 4.

Claims

1. A ceiling slats support system **characterized in that** it comprises:

   - a plurality of profiles (2, 2', 2", 2"') parallel to one another and fixable to the ceiling,
   - a plurality of supporting profiles (4) substantially inverted U-shaped, adapted to be engaged with U-shaped slats (8),
   - a plurality of V-shaped clips (6), which prongs are elastically compressible against one another to be subsequently inserted in a hole (34) provided for in the supporting profile (4) and, as a result of the expansion thereof, to support said supporting element (4)

   characterized in that

   - each supporting profile (4) is provided with hooking elements to support the slat (8), and
   - the V-shaped clips (6) are inserted in a hole (18, 22, 48) provided for in the profiles (2, 2', 2", 2"') fixable to the ceiling.

2. A support system according to claim 1 **characterized in that** the section bar (2, 2') is Ω-shaped.

3. A support system according to claim 1 **characterized in that** the section bar (2", 2"') is U-shaped.

4. A support system according to claim 1, **characterized in that** the holes (18, 34, 44, 42) are slotted holes.

5. A support system according to claim 1 **characterized in that** the slats have the ends (30) of the vertical flaps (28) folded by 90° towards the inside.

6. A support system according to claims 1 and 5, **characterized in that** the hooking elements consist of steps (26) formed by the edges of the horizontal surface of the profile (4) with the flaps thereof (24), said steps forming the support for the ends (30) of the vertical flaps (28)

7. A support system according to claim 1, **characterized in that** each clip (6) has, at the hinge area, an elongated portion (38) which length is greater than the length of the slotted holes (18, 34, 42, 48) provided for in the section bar.

8. A support system according to claim 3 **characterized in that** an inverted U-shaped profile (50), embracing the U-shaped profile and extending downwards into a 90°-folded portion (54), which is affected by a slotted hole (56) in which the clip (6) is engaged, engages the U-shaped section bar (2"').

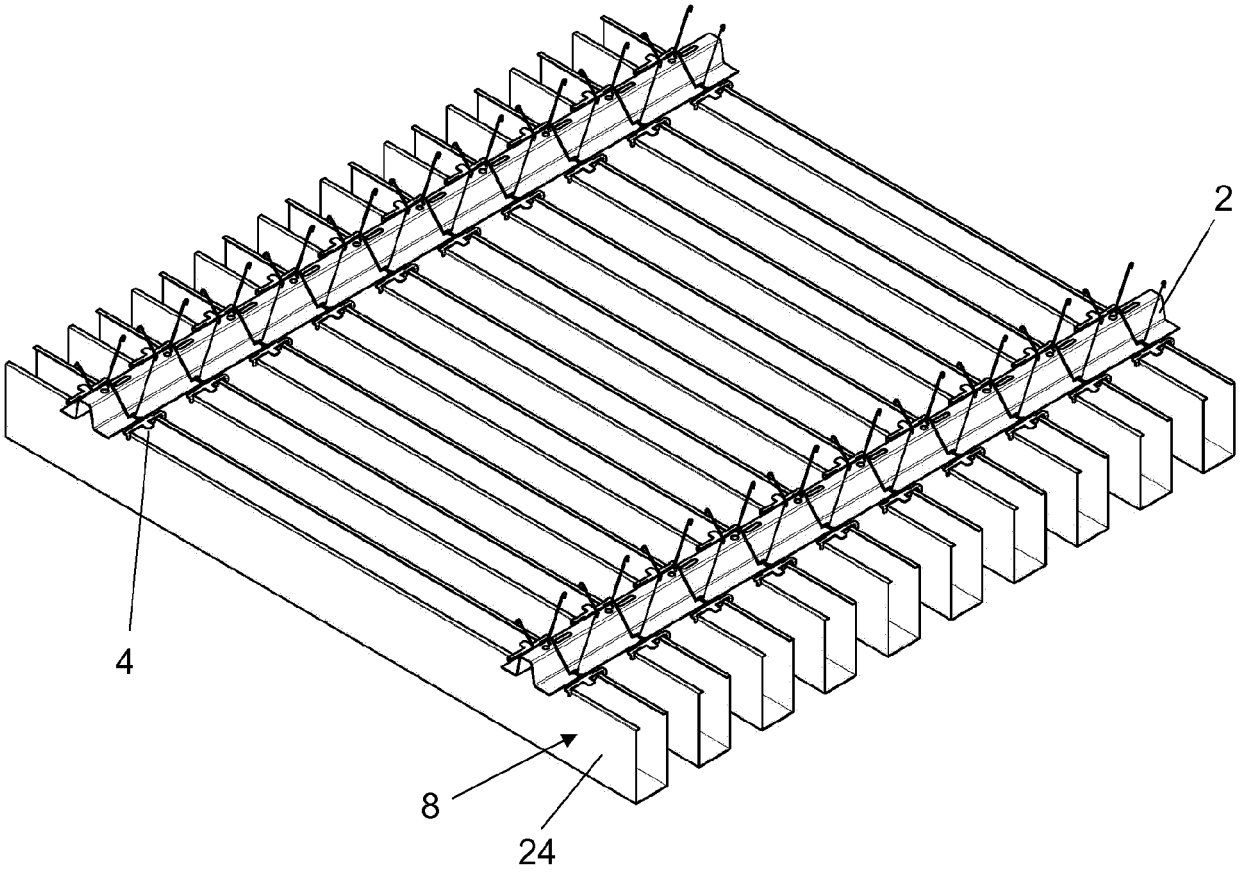


FIG. 1

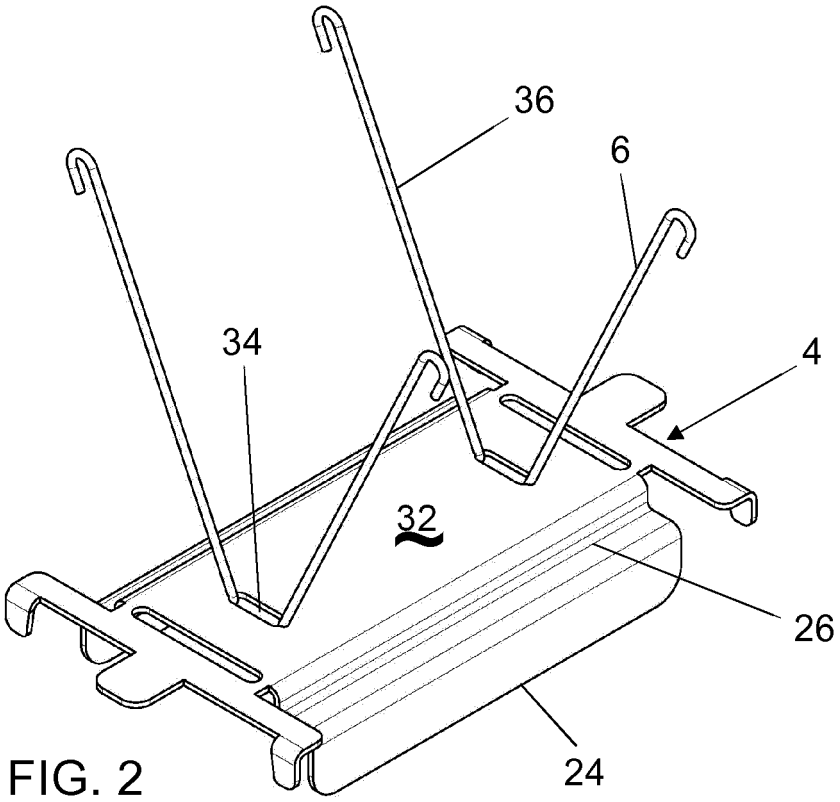


FIG. 2

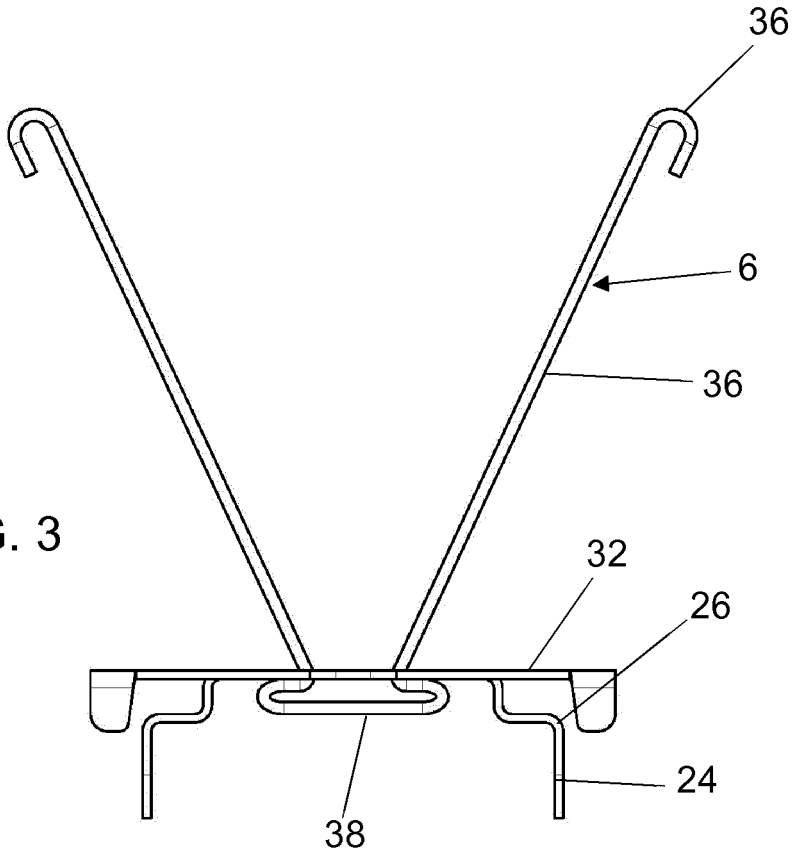


FIG. 3

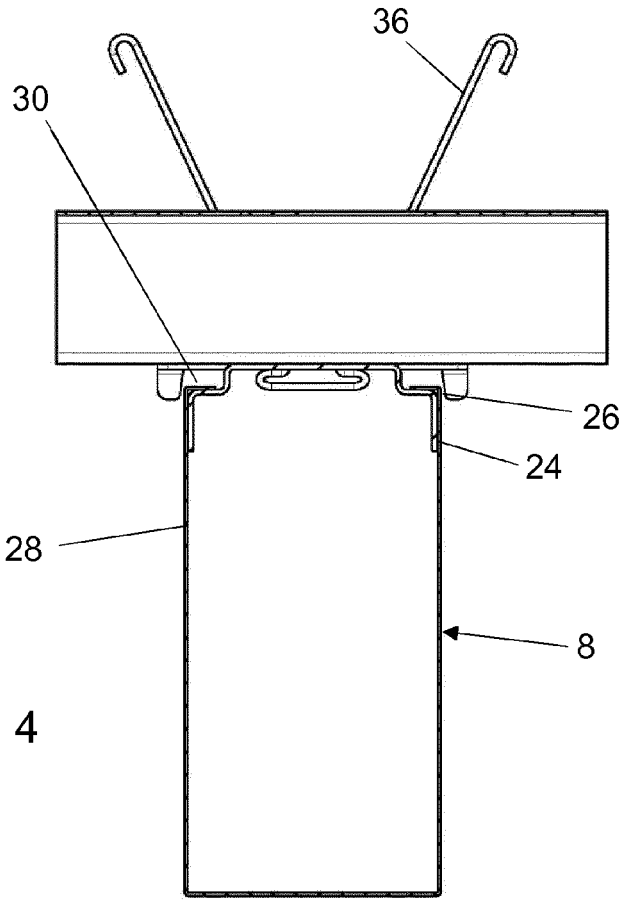


FIG. 4

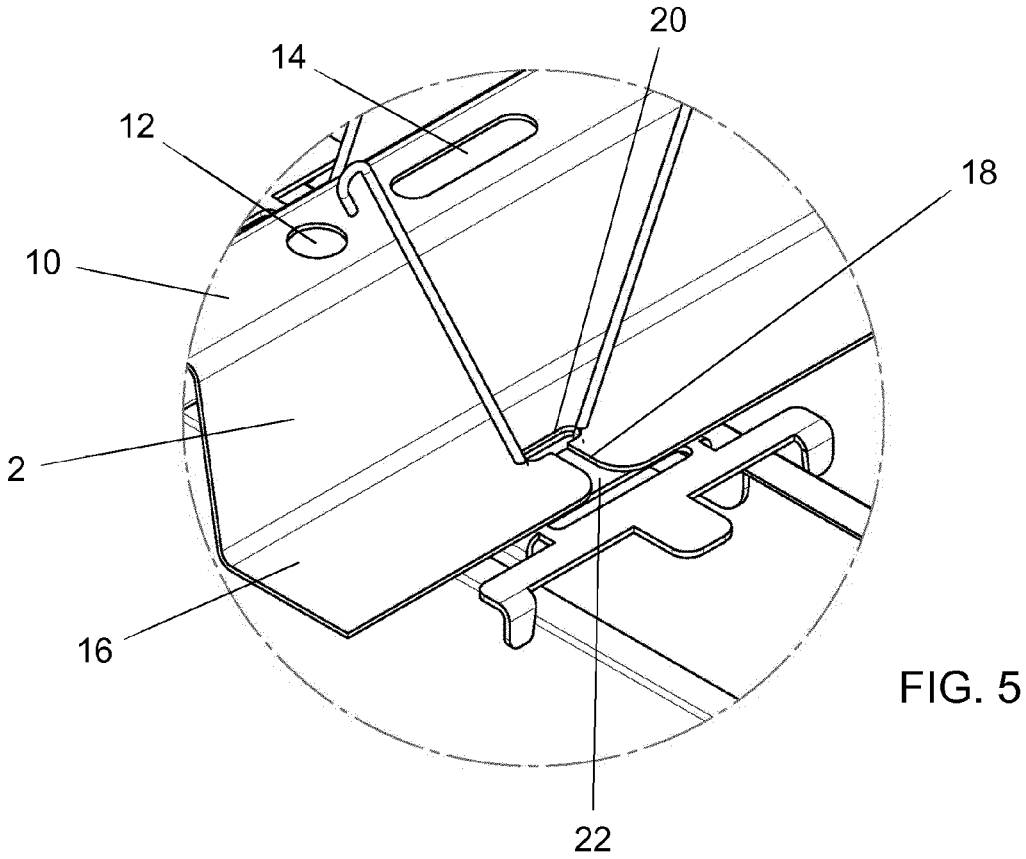


FIG. 5

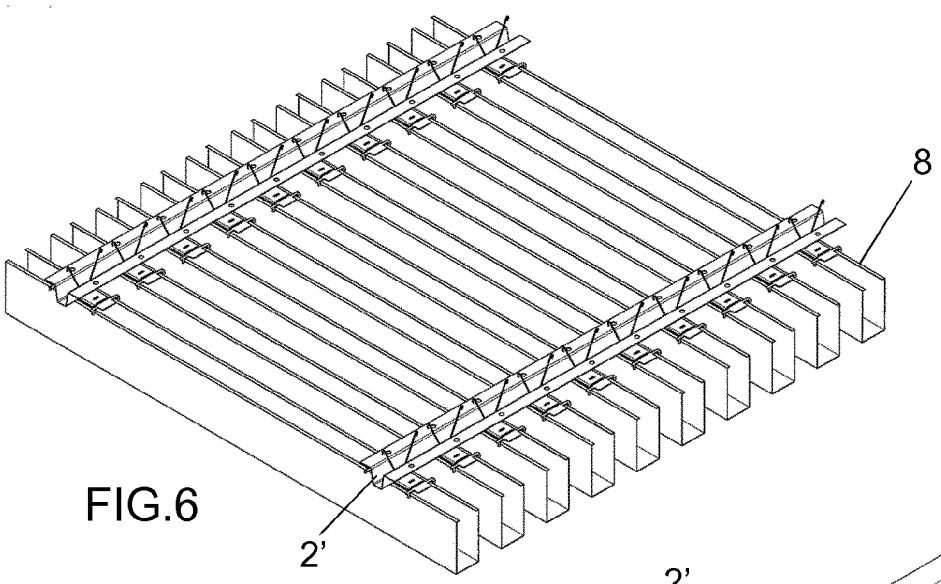


FIG.6

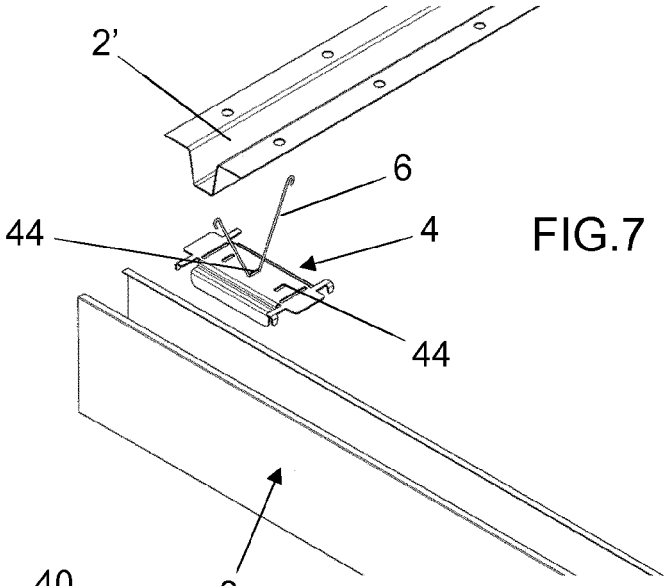


FIG.7

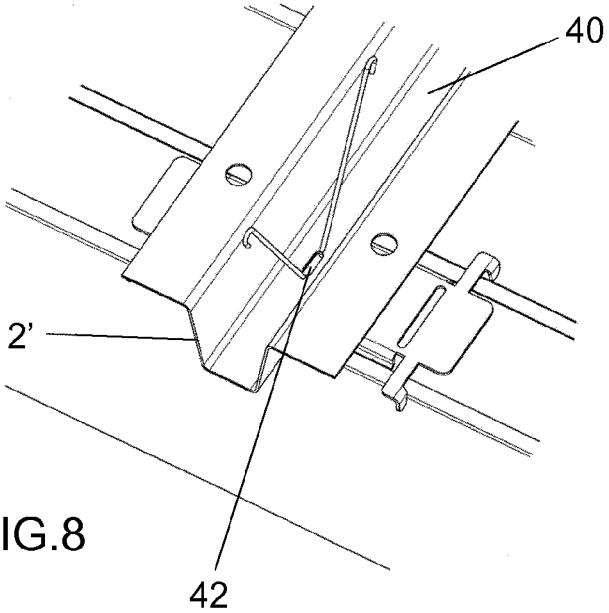
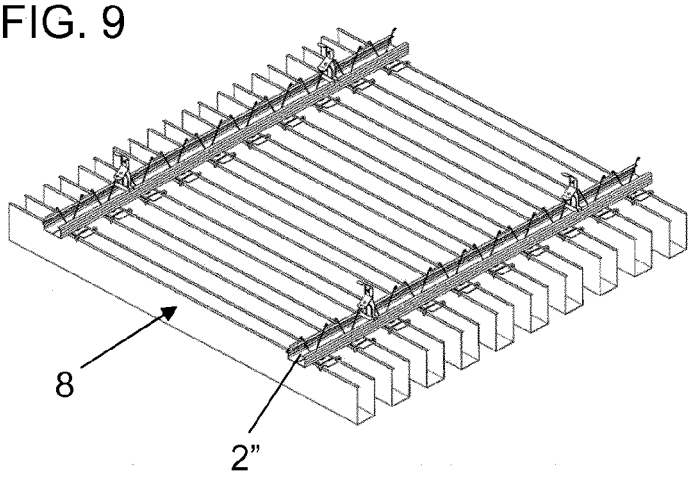


FIG.8

FIG. 9



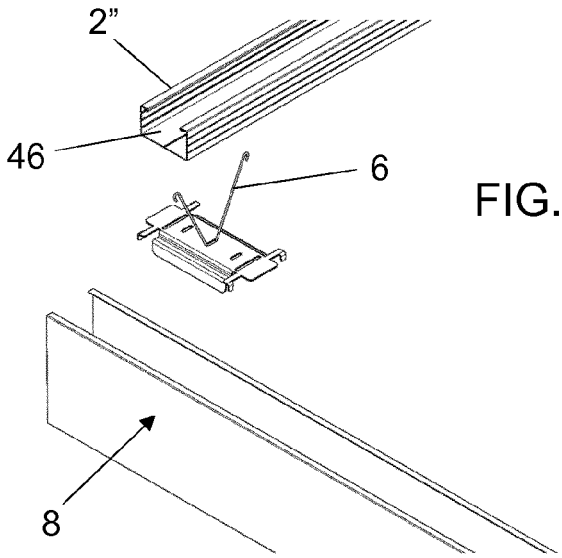


FIG. 10

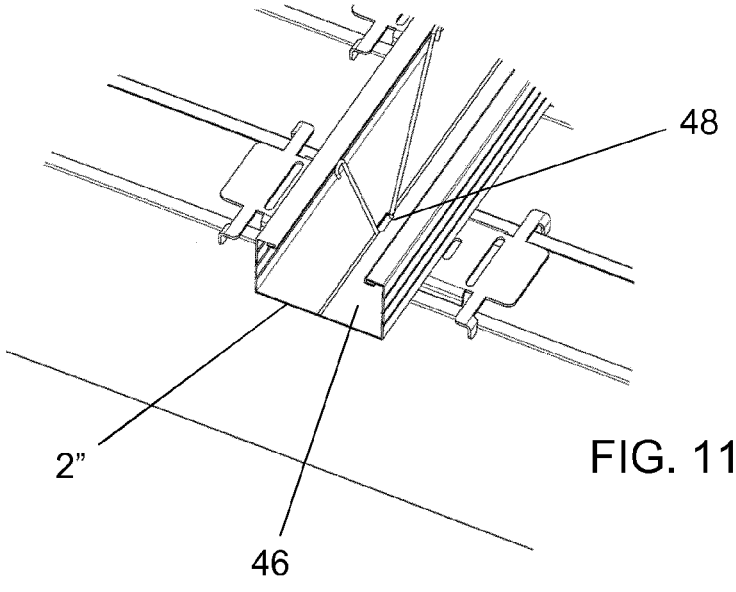


FIG. 11

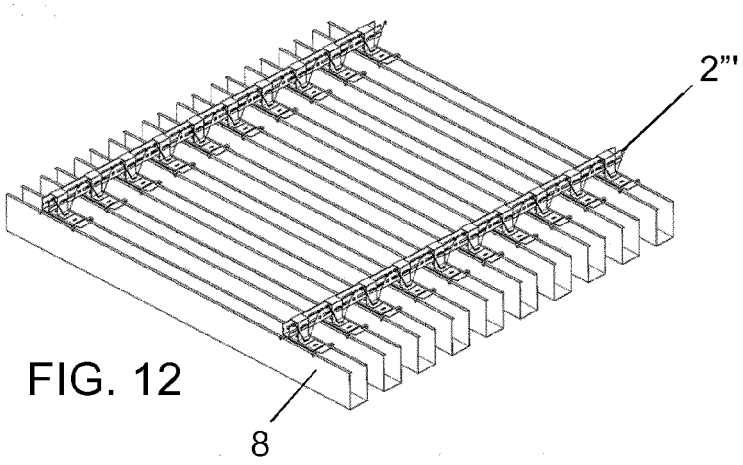


FIG. 12

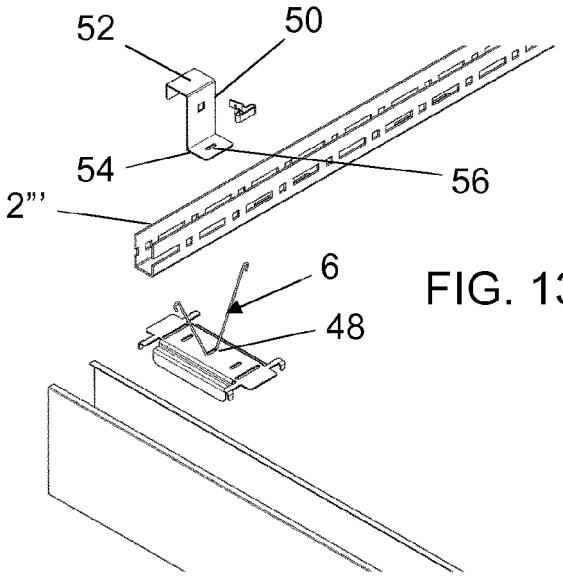


FIG. 13

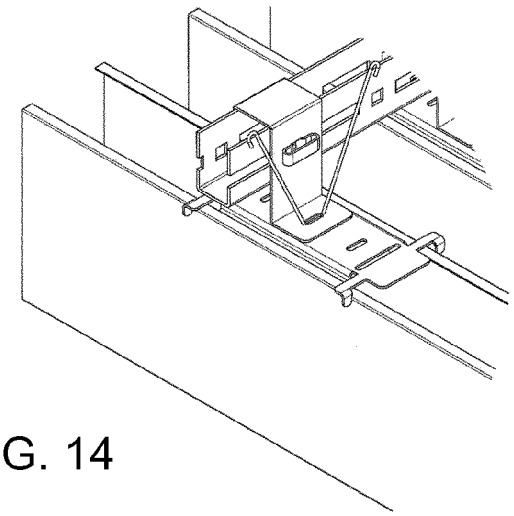


FIG. 14

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EUROPEAN SEARCH REPORT

Application Number
EP 18 16 9692

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E04B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	12 September 2018	Lopes, Claudia

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