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(54) **Inverted T profile for forming false ceiling support structures**

(57) An inverted T profile for forming false ceiling support structures, consisting of a central web (4) which extends from an upper tube (6) and terminates in two horizontal flanges (8), characterised in that each end of the web comprises a drawn seat (10) which extends into a lip (12) to define a aperture (14), each end of the web extending into a substantially rectangular tab (16) having the same height as the aperture (14) and as the drawn seat (10), said tab comprising a non-rectilinear cut (20) which forms a tooth (22) projecting from the plane of the tab towards the drawn seat (10), the articulation axis of said tooth being non transverse to the longitudinal axis of the web, the tooth (22) of a first profile being engagable by the edge (26) of the aperture (14) of a second adjacent profile when the tab (16) of said first profile is inserted into the drawn seat (10) of the adjacent second profile and vice versa.

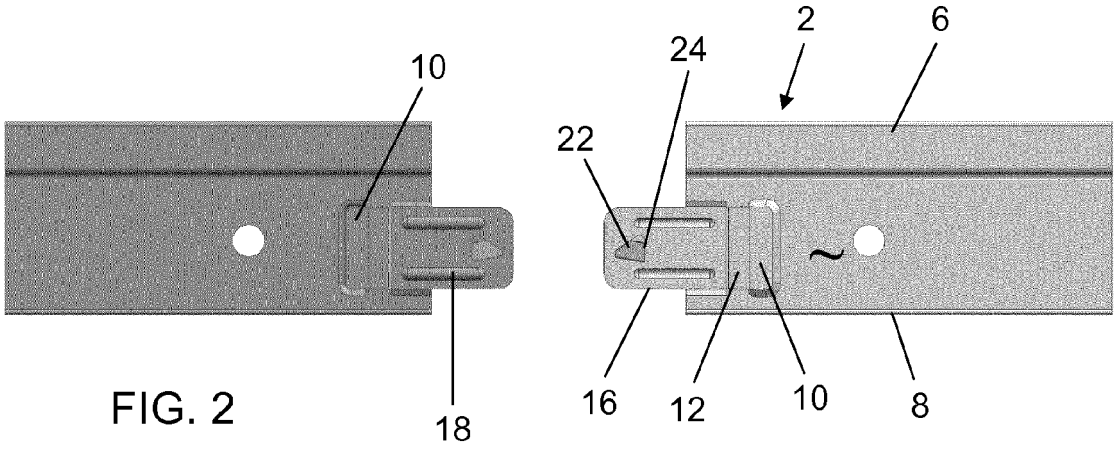

FIG. 2

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Description

[0001] The present invention relates to an inverted T profile for forming false ceiling support structures.

[0002] Structural elements for supporting false ceilings are known consisting of a plurality of stringers (inverted T profiles of about 3 metres in length) coupled together longitudinally by a plurality of cross-members (also of inverted T shape) which are inserted with their end in suitably slotted holes provided vertically in the webs of the stringers.

[0003] An object of the invention is to provide an inverted T profile which can be easily coupled to the adjacent profile but which at the same time enables simple disengagement therefrom without the use of particular equipment.

[0004] This object and others which will be apparent from the ensuing description are attained according to the invention by an inverted T profile as described in claim 1.

[0005] A preferred embodiment of the present invention is further clarified hereinafter with reference to the accompanying drawings, in which:

Figure 1 is an end perspective view of an inverted T profile according to the invention,
Figure 2 is a perspective view of two profiles being joined together,
Figure 3 shows them in the same view as Figure 2 but joined together,
Figure 4 shows them in longitudinal section in engaged configuration, and
Figure 5 is a detailed view of a variant of the tooth.

[0006] As can be seen from the figures, the inverted T profile 2 according to the invention is obtained by bending, blanking and shaping a metal band to form a central web 4 which extends from an upper tube 6 and terminates lowerly in two horizontal flanges 8.

[0007] Each end of the central web of the profile comprises a drawn seat 10 which extends into a lip 12 which defines in the web 4 an aperture 14.

[0008] Moreover each end of the web extends into a substantially rectangular tab 16 having the same height as the aperture 14 and as the drawn seat 10.

[0009] The tab comprises a two longitudinal ridges 18 projecting from the surface on opposite sides of the lip 12 with respect to the plane of the web 4.

[0010] The tab comprises a mistilinear cut 20 which forms a substantially triangular elastically deformable tooth 22, with an edge 24 cut transverse to the longitudinal axis of the profile.

[0011] Said tooth 22 projects elastically from the surface of the tab on the same side as the drawn seat 10.

[0012] In particular the articulation axis of the tooth 22 relative to the tab 16 can have any orientation with exception of that transverse to the longitudinal axis of the profile.

[0013] To engage the T profiles, the procedure is as follows.

[0014] Two T profiles are placed side by side at the ends of the webs 4 and each tab 16 is inserted into the drawn seat 10 of the adjacent profile while maintaining the ridges 18 external such that the projecting parts of the two teeth face each other. By virtue of this insertion the teeth 22 are compressed by the tab of the adjacent profile until they reach the aperture 14. From here they return to their original unstressed configuration, preventing mutual disengagement of the two profiles as a result of the counteraction offered by the edge 24 of the tooth 22 against the vertical edge 26 of the aperture 14.

[0015] In the embodiment illustrated in Figure 5, the tooth 22 presents along its articulation axis a slotted hole 28 to facilitate articulation of the tooth.

[0016] To disengage the profiles the two teeth 22 have merely to be pressed with the fingers such as to position them substantially coplanar with the tab 16 so as not to offer any opposition to the disengagement of the adjacent profile.

[0017] From the aforegoing it is apparent that the inverted T profile according to the invention can be engaged with the adjacent profile in a simple and comfortable manner and be disengaged therefrom using only the hands.

[0018] In a variant, not represented in the drawings, the convex portion, the lip, the tab with the ridges and the tooth pertain to a single piece formed separately and subsequently fixed to the end of the profile web by rivets.

Claims

1. An inverted T profile for forming false ceiling support structures, consisting of a central web (4) which extends from an upper tube (6) and terminates in two horizontal flanges (8), **characterised in that** each end of the web comprises a drawn seat (10) which extends into a lip (12) to define an aperture (14), each end of the web extending into a substantially rectangular tab (16) having the same height as the aperture (14) and as the drawn seat (10), said tab comprising a non-rectilinear cut (20) which forms a tooth (22) projecting from the plane of the tab towards the drawn seat (10), the articulation axis of said tooth being non transverse to the longitudinal axis of the web, the tooth (22) of a first profile being engagable by the edge (26) of the aperture (14) of a second adjacent profile when the tab (16) of said first profile is inserted into the drawn seat (10) of the adjacent second profile and vice versa.

2. A profile as claimed in claim 1, **characterised in that** said tab (16) comprises at least one ridge (18) parallel to the longitudinal axis of the profile.

3. A profile as claimed in claim 1, **characterised in that**

the tab (16) comprises two ridges, one end of which extends beyond the tooth edge (24) which acts against the edge (26) of the aperture (14) of the adjacent profile.

4. A profile as claimed in claim 1, **characterised in that** the articulation axis of the tooth with respect to the tab comprises a slot.

5. A profile as claimed in claim 4, **characterised in that** the articulation axis of the tooth with respect to the tab comprises a slotted hole (28).

6. A profile **characterised in that** the convex portion, the lip, and the tab with the tooth are provided on a single piece fixed to the ends of the webs by rivets.

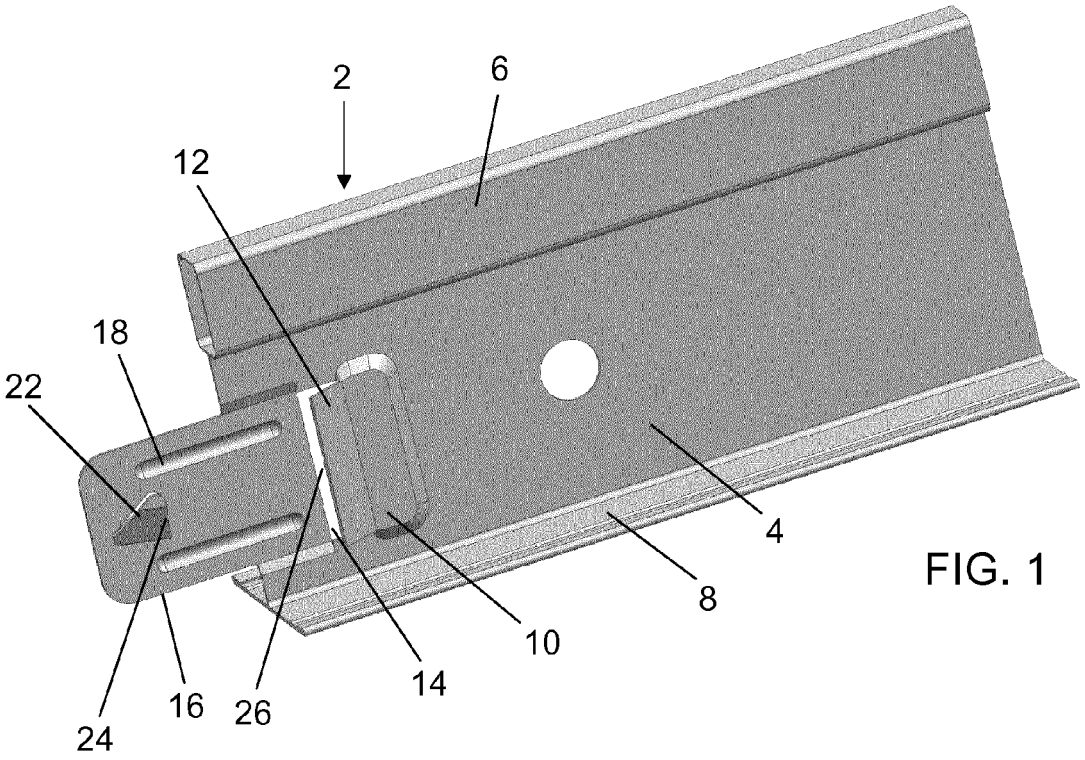


FIG. 1

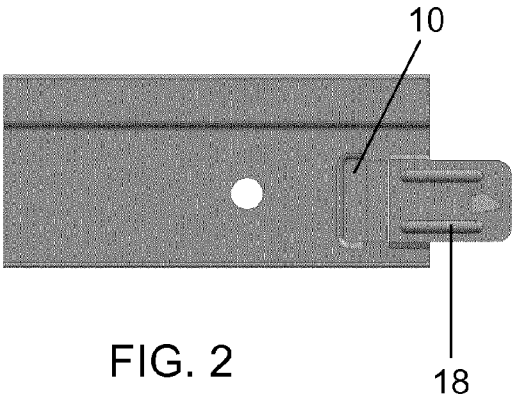
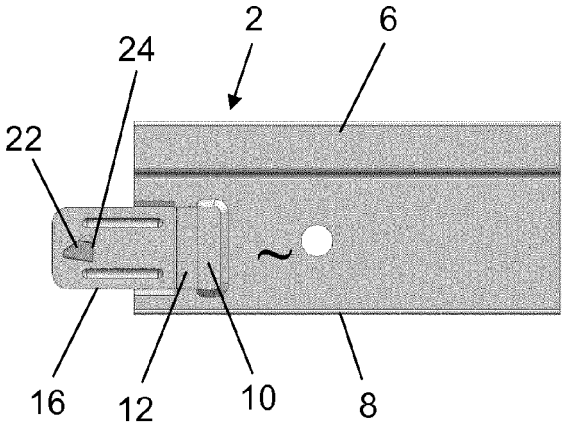


FIG. 2



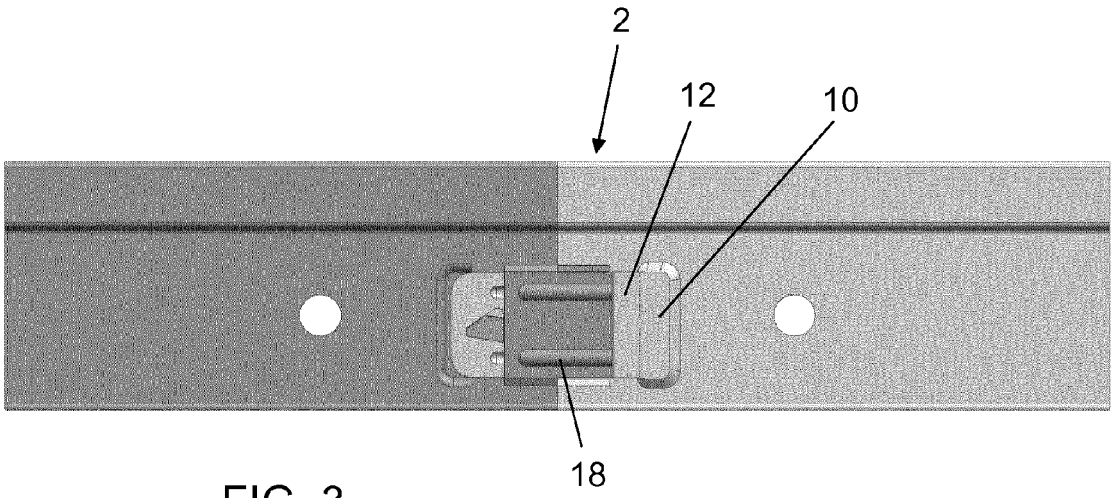


FIG. 3

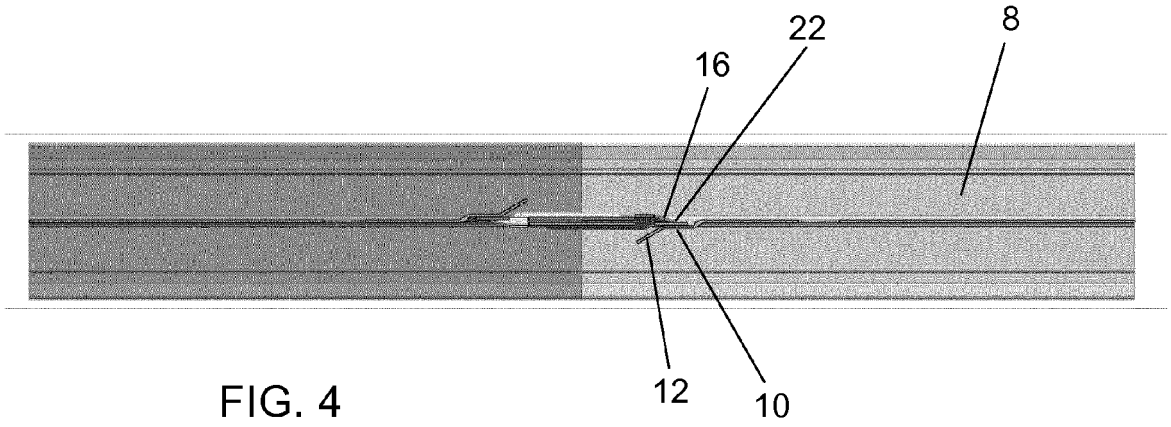


FIG. 4

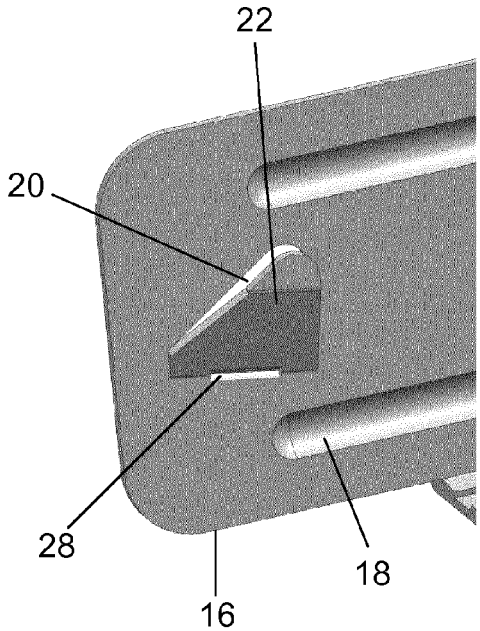


FIG. 5