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(54) **Partition wall**

Trennwand

Cloison de séparation

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(56) References cited:
EP-A- 0 004 603 **DE-A- 1 409 983**
DE-A- 2 043 784 **DE-A- 2 147 075**
DE-A- 2 149 168 **DE-A- 2 535 913**
DE-A- 3 508 078 **GB-A- 2 209 063**

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Description

[0001] The invention relates to a partition wall for a building structure, as described in the preamble of claim 1.

[0002] Such partition wall is described in DE-A-1 409 983. Further DE-A-2 043 784 shows an assembly according to which separate parts of a damping material are provided between the U-profile and the building structure and between the partition wall and the building structure and said U-profile.

[0003] Now the object of the invention is to obtain a more stable connection between said U-profile and the building structure or a part secured to it and this is obtained by applying the features according to the characterizing portion of claim 1.

[0004] So only the damping material is secured to the building structure by means of said screws, while there can be no contact between the screws and the U-profile.

[0005] Obviously the head of a screw must have a sufficiently large diameter in order to prevent that the damping material will locally be compacted too much, or will be pushed away. Therefore it is provided that standard screws are employed, with a washer beneath the head of the screw, the diameter of the openings in the U-profile being slightly larger than the outer diameter of said washer.

[0006] In order to enable easy mounting of the wall panels and in order to prevent that these are contacting the building structure, it can be provided for that, as is the case in said DE-A-1 409 983, the damping material protrudes beyond the body of said U-profile at both sides of this over a distance almost equal to the thickness of the wall panels. According to the invention, however, only a part of the damping material protrudes beyond the body of said U-profile such that the wall panels are engaging said protruding parts as well as the legs of the U-profile and the remaining part of the damping material.

[0007] When applying U-profiles in the form of brackets for assembling a lowered ceiling, the damping material will be secured on the outer plane of the U-profile body such as by means of bonding, stapling or in a similar way, and the damping material will extend to beyond the body, while a second, likewise U-shaped, profile is applied across the damping material, having its legs extending in the same direction, yet across a greater length than the legs of the first U-profile, said second U-profile likewise being connected to the damping material by bonding, stapling or in a similar way.

[0008] The distance between the legs of the first U-profile will be such that the profile fits exactly over the rails connected to the rail structure, while the legs of said second profile will be connected to means for supporting the ceiling panels.

[0009] To that end, the legs of said second profile can be provided with openings made in the end edges and extending vertically when in mounted condition, with the

end edges converging from the openings to form bevelled parts for resiliently pushing apart the legs turned to each other of a C-profile, which legs can be accommodated in the openings on mounting the C-profile.

[0010] The invention is further explained by way of embodiments, illustrated in the drawing, in which:

Fig. 1 shows a cross-section across the lower part of a partition obtained with application of the method and the means according to the invention;

Fig. 2 shows a plan view of a part of the partition of Fig. 1, but omitting the wall panels and the screw;

Fig. 3 shows a cross-section and view of some parts of a lowered ceiling and of the bracket applied with it in particular;

Fig. 4 shows a side view of the bracket of Fig. 3; and Fig. 5 shows a plan view of the bracket of Fig. 3 and of a part of the control units belonging to it.

[0011] Figures 1 and 2 show a partition 1 standing on the floor 2 of a building structure 3. The wall 1 comprises the U-profile 4 consisting of the body 5 and the legs 6. The damping material 8 is connected to the outer plane 7 of the body 5 by means of bonding, stapling or in a similar way. The material 8 consists of two layers 9 and 10 likewise connected to each other. The layer 10 protrudes beyond the layer 9, so that on mounting the wall panels 11, they can bear on the layer 10. Further, starting from U-profile 4, profiles not further indicated extend in vertical direction for supporting the wall panels 11.

[0012] In the damping material 8, bores 12 have been made through which screws can extend for securing the damping material to the floor 2. Beneath the head 14 of a screw 13 there is the washer 15 so that the force exerted by the screw 13 on the material 8 will be distributed across a sufficiently large surface thereof. In the body 5 of the U-profile 4, an opening 16 has been made, which is larger than the diameter of the washer 15. Owing to this, there will be no mechanical contact between the washer 15 and the U-profile 4 and neither will there be any rigid connection between the U-profile and the floor 2 of the building structure 3.

[0013] Mounting the partition near the ceiling and near a wall of the building structure 3 will take place in the same way as described by means of the Figures 1 and 2. Obviously, there the damping material 8 connected to the U-profile 4 lies against the ceiling or the wall.

[0014] The Figures 3 - 5 illustrate the way of mounting a lowered ceiling to a building structure. Parts corresponding to the structure according to the Figures 1 and 2 have been indicated with the same reference numbers.

[0015] Rails 17 are connected to the building structure 3. Brackets 18 are placed across the rails 17, said brackets comprising a first U-profile 4 consisting of the body 5 and the legs 6. The outer plane 7 of the body 5 again provided with the damping material 8 protruding beyond the body. Across the damping material 8, a second U-

profile 19 has been applied, consisting of the body 20 and the legs 21.

[0016] As appears from Figure 4 in particular, the side edges 22 of the legs 21 are provided with openings 23 for accommodating the legs 24 of a C-profile 25 therein. The C-profile 25 is square to the legs 21. Ceiling panels not further indicated can be attached to the profiles 25. In order to enable easy mounting of the profiles 25, the side edges 22 of the legs 21 are provided with bevelled portions 26 beneath the openings 23. Due to this, on mounting the profile, the legs 24 of the C-profile 25 can be resiliently pushed apart so that they can subsequently snap into the openings 23.

[0017] It will be obvious, that only some possible embodiments of a method and of the means applied therewith according to the invention have been illustrated in the drawing and described above and that many modifications can be made without leaving the inventive idea as defined in the appended claims.

Claims

1. Partition wall (1) for a building structure (3), comprising partition panels (11) spaced apart by U-profiles (4) wherein the body (5) of the U-profiles is connected to the building structure (3) or to a part rigidly secured to it by means of a layer (8) of a flexible or resilient damping material, such as felt for example, said damping material being fixedly connected, such as by means of bonding, stapling or the like, to the body (5) of said U-profile and to said building structure (3) or the part secured to it, said damping material further having portions extending laterally beyond said body such that said partition panels are connected to the legs (6) of said U-profiles and do not contact the building structure (3), **characterized in that** the damping material (8), present between the body (5) of said U-profile (4) and the building structure (3) is thicker than said extending portions and is provided with bores (12) for passing screws (13), the body (5) of said U-profile (4) being provided with openings (16) extending concentrically to said bores (12) and being larger than the heads (14) of screws (13) by which the damping material (8) is secured to the building structure (3).
2. Partition wall according to claim 1, **characterized in that** standard screws (13) are employed, with a washer (15) beneath the head (14) of the screw, the diameter of the openings (16) in the U-profile (4) being slightly larger than the outer diameter of said washer (15).
3. Partition wall according to claim 1 or 2 and comprising a lowered ceiling, **characterized in that** rails (17) are connected to the building structure (3) on which rails brackets (18), comprising two pieces of

U-profile (4, 19) distanced from each other and with damping material (8) between the bodies of these, are positioned and in which to the outer lying piece of U-profile (19) C-profiles (25) are connected for supporting the ceiling panels, said C-profiles running at right angles to said rails (17).

Patentansprüche

1. Trennwand (1) für ein Bauwerk (3), mit Trennpaneelen (11), die mittels U-Profilen (4) voneinander beabstandet sind, wobei die Basis (5) der U-Profile mit dem Bauwerk (3) verbunden ist oder mit einem Teil verbunden ist, welches an dem Bauwerk stabil befestigt ist, wobei die Verbindung mittels einer Schicht (8) aus einem flexiblen oder elastischen Dämpfungsmaterial hergestellt ist, beispielsweise Filz, wobei das Dämpfungsmaterial fest mit der Basis (5) des U-Profiles und dem Bauwerk (3) oder einem Teil verbunden ist, welches an dem Bauwerk sicher befestigt ist, wobei die Verbindung mittels Bonden, Klammern oder ähnlichem hergestellt ist, wobei das Dämpfungsmaterial weiterhin Abschnitte aufweist, die sich seitwärts über die Basis hinaus erstrecken, so dass die Trennpaneele mit den Armen (6) der U-Profile verbunden sind und das Bauwerk (3) nicht berühren, **dadurch gekennzeichnet, dass** das Dämpfungsmaterial (8), welches zwischen der Basis (5) der U-Profile (4) und dem Bauwerk (3) vorhanden ist, dicker ist als die sich erstreckenden Abschnitte und dass Bohrungen (12) vorhanden sind, durch die Schrauben (13) hindurch passen, wobei die Basis (5) des U-Profiles (4) Öffnungen (16) aufweist, die sich konzentrisch zu den Bohrungen (12) erstrecken und die größer sind als die Köpfe (14) der Schrauben (13), mittels deren das Dämpfungsmaterial (8) an dem Bauwerk (3) sicher befestigt ist.
2. Trennwand nach Anspruch 1, **dadurch gekennzeichnet, dass** Standardschrauben (13) Verwendung finden, mit einer Beilagscheibe (15) unter dem Kopf (14) der Schraube, wobei der Durchmesser der Öffnungen (16) in dem U-Profil (4) geringfügig größer ist als der Außendurchmesser der Beilagscheibe (15).
3. Trennwand nach Anspruch 1 oder 2 und mit einer abgesenkten Decke, **dadurch gekennzeichnet, dass** Schienen (17) mit dem Bauwerk (3) verbunden sind, an dem Schienenträger (18) positioniert sind, die zwei Stücke U-Profile (4, 19) aufweisen, die voneinander beabstandet sind, wobei Dämpfungsmaterial (8) zwischen den Basen der beiden U-Profile vorgesehen ist, und wobei an den außen liegenden Abschnitten des U-Profiles (19) C-Profile (25) angebracht sind, die die Deckenpaneele tra-

gen, wobei die C-Profile im rechten Winkel zu den Schienen (17) verlaufen.

Revendications

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1. Paroi de séparation (1) pour une structure de bâtiment (3) comportant des parois de séparation (11) espacées par des profils en U (4), dans laquelle le corps (5) des profils en U est relié à la structure de bâtiment (3) ou à une partie fixée de manière rigide sur celle-ci, par l'intermédiaire d'une couche (8) constituée d'un matériau d'amortissement souple ou élastique, tel que du feutre, par exemple, ledit matériau d'amortissement étant relié de manière fixe, tel que par l'intermédiaire d'un collage, d'un agrafage ou analogue, au corps (5) dudit profil en U et à ladite structure de bâtiment (3) ou à la partie fixée sur celui-ci, ledit matériau d'amortissement ayant en outre des parties s'étendant latéralement au-delà dudit corps, de telle sorte que lesdits panneaux de séparation sont reliés aux pattes (6) desdits profils en U et ne sont pas en contact avec la structure de bâtiment (3), **caractérisée en ce que** le matériau d'amortissement (8), présent entre le corps (5) dudit profil en U (4) et la structure de bâtiment (3), est plus épais que lesdites parties s'étendant latéralement et est muni d'alésages (12) pour laisser passer des vis (13), le corps (5) dudit profil en U (4) étant muni d'ouvertures (16) s'étendant concentriquement auxdits alésages (12) et étant plus grandes que les têtes (14) des vis (13) par lesquelles le matériau d'amortissement (8) est fixé sur la structure de bâtiment (3).
2. Paroi de séparation selon la revendication 1, **caractérisée en ce que** des vis standards (13) sont utilisées, des rondelles (15) étant en dessous de la tête (14) de la vis, le diamètre des ouvertures (16) du profil en U (4) étant légèrement plus grand que le diamètre extérieur de ladite rondelle (15).
3. Paroi de séparation selon la revendication 1 ou 2, et constituant un plafond abaissé, **caractérisée en ce que** des rails (17) sont reliés à la structure de bâtiment (3) sur lesquels des étriers de rails (18), constitués de deux pièces ayant un profil en U (4, 19) éloignées l'une de l'autre et ayant du matériau d'amortissement (8) entre les corps de celles-ci, sont positionnés et dans laquelle sur la pièce située à l'extérieur du profil en U (19) sont reliés des profils en C (25) destinés à supporter les panneaux de plafond, lesdits profils en C s'étendant à angle droit par rapport auxdits rails (17).

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FIG. 1

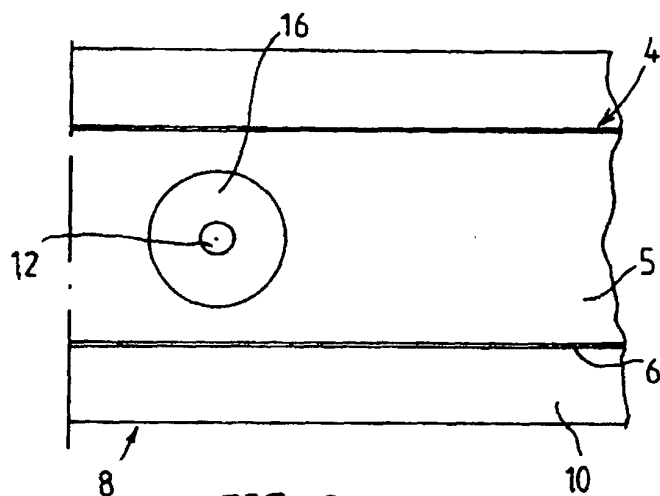
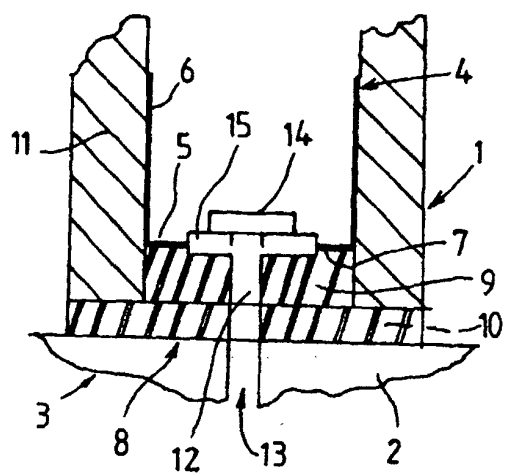


FIG. 2

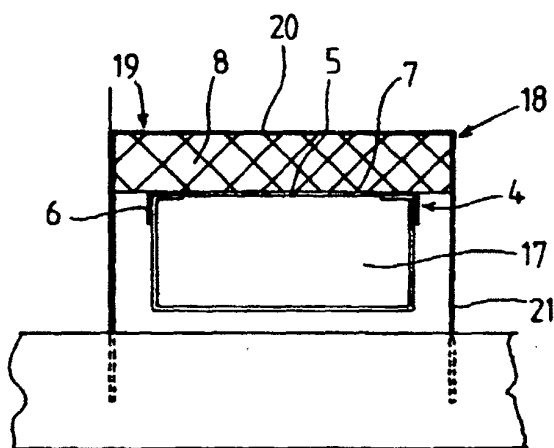


FIG. 3

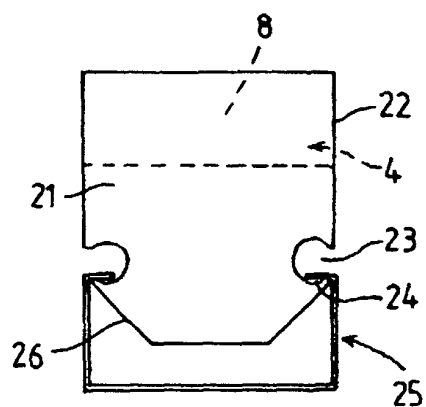


FIG. 4

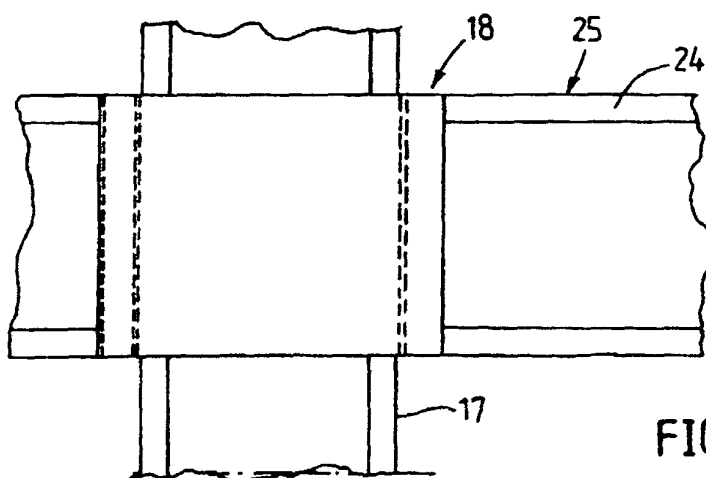


FIG. 5