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(54) **Threshold**

(57) The invention relates to a threshold (1) suitable for use in homes and business accommodations, characterized by widthways being embodied with a slightly arched profile (4), and at the ends in the longitudinal di-

rection of the profile with attachable fastening members (5,6) for mounting to an underground (3). The profile is embodied with a substantially flat topside (7), and sides (8,9) that widthways slope downwards from the topside.

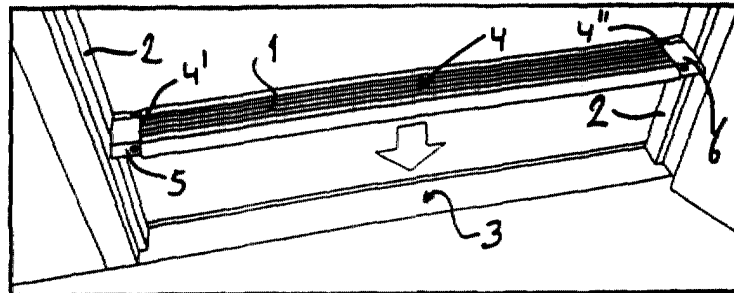


FIG. 1

Description

[0001] The invention relates to a threshold suitable for use in homes and business accommodations, widthways embodied with a slightly arched profile, and at the ends in the longitudinal direction of the profile with attachable fastening members for mounting the threshold.

[0002] Such a threshold can be crossed without significant problems even if the person is sitting in a wheelchair or using a walking aid with wheels.

[0003] US-A 3,014,253 discloses a threshold, widthways embodied with a slightly arched profile, using at the ends in the longitudinal direction of the profile attachable fastening members for mounting the threshold. Said fastening members are fastened to a doorframe by means of screws. In order to conceal the portion of the fastening member mounted on the doorframe, the same is finished by applying some timbering to the doorframe.

[0004] US-A-3,667,192 also discloses such a threshold. The fastening members of the threshold known from this publication are embodied as clamps that are slidable in the longitudinal direction and can be fastened to the ends of the profile of the threshold and subsequently driven into the doorframe. Thus with this embodiment of the threshold, the fastening members remain out of sight; however, one drawback is that the dimensions of the threshold are required to be in exact conformity with the doorframe in which it is to be fitted while, as in US-A 3,014,253, the doorframe incurs noticeable damage.

[0005] US-A 3,778,931 relates to a threshold widthways embodied with a slightly arched profile and at the ends in the longitudinal direction of the profile with attachable fastening members formed such that they extend under the doorjamb and are fastened thereto at both sides of said doorframe by means of screw fastenings. This requires very exact dimensioning of the threshold while also making mounting of the threshold very complicated.

[0006] One object of the invention is to provide a threshold as referred to in the preamble that forms a suitable transition between rooms having different floors, involving different floor conditions. Examples of these are carpeting, tiles, parquet, concrete, etc.

[0007] Yet another object of the invention is to provide a threshold that is suitable to bridge differences in level between adjacent rooms, that can tolerate a load while retaining its shape, is anti-slip, and in addition makes a pleasing design possible.

[0008] Yet another object of the invention is to provide a threshold that is a simple to manufacture and that can be mounted quickly and at low-costs, while mounting does not cause any damage to the doorframe such as to be visible after the threshold is removed.

[0009] In accordance with the invention, these objectives and additional advantages are provided by a threshold as characterized in the appended claims.

[0010] Primarily, the threshold according to the inven-

tion is characterized in that the fastening members are designed for fastening to an underground. For one thing, this provides a simple manner of mounting the threshold according to the invention, without causing permanent damage to the doorframe.

[0011] The profile is preferably embodied such as to have a substantially flat topside, and sides that widthways slope downwards from the topside.

[0012] In order to promote the safe use of the threshold, it is desirable for the topside of the profile to be furnished with an anti-slip provision, such as ridges or projections.

[0013] Preferably the profile and the fastening members are embodied with engaging projections and recesses or grooves for slidably receiving the projections. This makes mounting easy, also because there are no strict requirements regarding the accuracy of the dimensioning of the threshold according to the invention, while still allowing the entire width of the threshold to be utilized by the slidable coupling of the profile and the fastening members.

[0014] A suitable embodiment of the threshold is characterized in that the fastening members are equipped to be fastened to an underground with the aid of screws, nails or similar means.

[0015] In another aspect of the invention, the threshold is characterized in that the same comprises cover plates to conceal the fastening members and the transition area between the fastening members and the profile. This complies with the aesthetic objective of the invention, so as to provide a pleasing product.

[0016] This may be further promoted in the embodiment that is characterized in that the cover plates are slidable in the longitudinal direction of the profile. This renders a precise dimensioning of the threshold according to the invention unnecessary, while when mounted, the optical effect will be of a threshold with an exact fit.

[0017] For the sake of convenience and simplicity of mounting, the cover plates are preferably provided with projections that can be arranged around rims of the fastening members for the realization of a snap-on connection.

[0018] The invention will now be further elucidated with reference to the drawing in which

Figure 1 shows a perspective view of the threshold according to the invention at a position above the mounting position in a door frame; and the Figures 2 to 4 shows various stages of mounting relating to the threshold according to the invention.

[0019] Similar parts in the drawing are identified by the same reference numbers.

[0020] With reference first to Figure 1, a threshold 1 is shown, suspended between the jambs 2 of a doorframe. In the mounted position, the threshold 1 will be lowered onto the underground 3. The threshold 1 according to the invention is characterized in that width-

ways it is embodied with a slightly arched profile 4, as is clearly shown in Figure 2. At the ends 4' and 4" in the longitudinal direction of the profile 4, fastening members 5,6 are provided to be coupled with the profile 4, which fastening members serve for fastening the threshold 1 to the underground 3. Preferably the profile 4 is embodied with a substantially flat topside 7 (see Figure 2) with widthways, from the topside downward sloping sides 8 and 9. Figure 2 further clearly shows that at the topside 7, the profile 4 is furnished with an anti-slip provision, being in the case illustrated a series of ridges. The profile 4, as well as the fastening members 5,6, is embodied with engaging projections 10 and recesses or grooves 11 for slidably receiving the projections 10. In the situation illustrated, the projections 10 are provided on the fastening members 5,6, and to engage these, the profile 4 is provided with grooves 11. Naturally, the projections may also be provided on the profile, and the grooves or recesses may be provided in the fastening members.

[0021] Figure 2 further shows that the fastening members 5,6 are embodied with recesses 12, which serve for fastening the fastening members 5,6 to the underground 3 with the aid of screws, nails or similar means. Figure 3 shows the manner in which this may be accomplished.

[0022] Figure 4, subsequently shows the threshold 1 in the mounted condition wherein all that remains to be done is to fit a cover plate 13 at the two ends 4', 4", to conceal the fastening members 5,6 and the transition area between the fastening members 5,6 and the profile 4. Preferably the cover plates are slidable in the longitudinal direction of the profile 4 in order to allow them to abut closely to the jambs 2.

[0023] It is further desirable for the cover plates 13 to be provided with projections (not shown) that can be arranged around rims of the fastening members 5,6 for the realization of a snap-on connection. When the cover plates 13 are in position, the mounting of the threshold 1 is all completed.

[0024] The above specification is to be understood as being a non-limiting exemplary embodiment of the threshold according to the invention which merely serves to elucidate the appended claims, which will determine the protective scope merited by the present invention.

[0025] Although the threshold according to the invention has substantially been developed to replace thresholds in existing homes in order to create a safe living environment, the threshold according to the invention may also be applied in new building projects when a threshold is required between two rooms because of, for example, a difference in level or because the floors have different finishes.

[0026] The threshold according to the invention is characterized by a particularly fine design and the possibility of bridging differences in level between adjacent rooms of up to approximately 30 mm. The threshold according to the invention can be mounted within ten min-

utes. With the threshold according to the invention many accidents in the living and working environment may be avoided. The majority of accidents people are involved in are known to be accidents in the domestic environment.

[0027] A particularly suitable embodiment of the threshold according to the invention that can be manufactured at low costs is one in which the profile is made of anodized aluminium. Embodying the profile with an anti-slip provision in the form of projections or ridges as described above, moreover strengthens the profile. Apart from the arching profile providing a safe transition between floors, it is also possible to mount the threshold according to the invention such as to incline slightly in order to bridge differences in levels between said floors.

Claims

1. A threshold (1), suitable for use in homes and business accommodations, widthways embodied with a slightly arched profile (4), and at the ends (4', 4") in the longitudinal direction of the profile (4) with attachable fastening members (5, 6) for mounting the threshold, **characterized in that** the fastening members (5, 6) are designed for fastening to an underground.
2. A threshold according to claim 1, **characterized in that** the profile (4) is embodied with a substantially flat topside (7), and sides (8, 9) that widthways slope downwards from the topside (7).
3. A threshold according to claim 1 or 2, **characterized in that** the topside (7) of the profile (4) is furnished with an anti-slip provision, such as ridges or projections.
4. A threshold according to one of the preceding claims, **characterized in that** the profile (4) and the fastening members (5, 6) are embodied with engaging projections (10) and recesses or grooves (11) for slidably receiving the projections.
5. A threshold according to one of the claims 1-4, **characterized in that** the fastening members (5, 6) are equipped to be fastened to an underground with the aid of screws, nails or similar means.
6. A threshold according to one of the preceding claims, **characterized in that** the same comprises cover plates (13) to cover the fastening members (5, 6) and the transition area between the fastening members (5, 6) and the profile (4).
7. A threshold according to claim 6, **characterized in that** the cover plates (13) are slidable in the longitudinal direction of the profile (4).

8. A threshold according to claim 6 or 7, **characterized in that** the cover plates (13) are provided with projections that can be arranged around rims of the fastening members (5, 6) for the realization of a snap-on connection.

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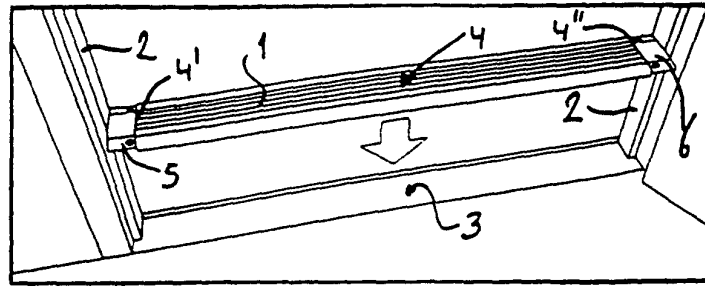


FIG. 1

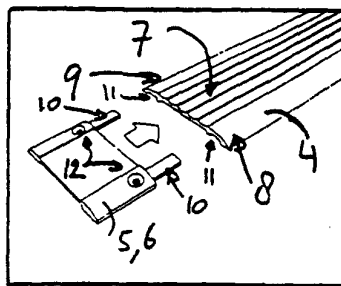


FIG. 2

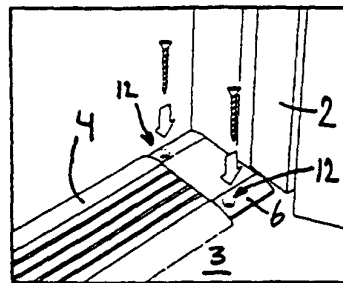


FIG. 3

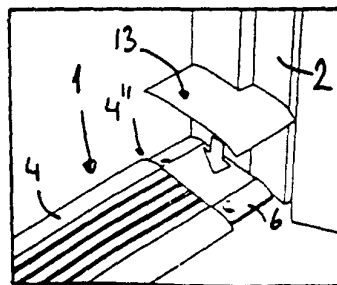


FIG. 4