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(71) Applicant: **Whiting, Richard Anthony**
49 Muirfield Drive
Mickleover, Derby DE3 9YF (GB)

(72) Inventor: **Whiting, Richard Anthony**
49 Muirfield Drive
Mickleover, Derby DE3 9YF (GB)

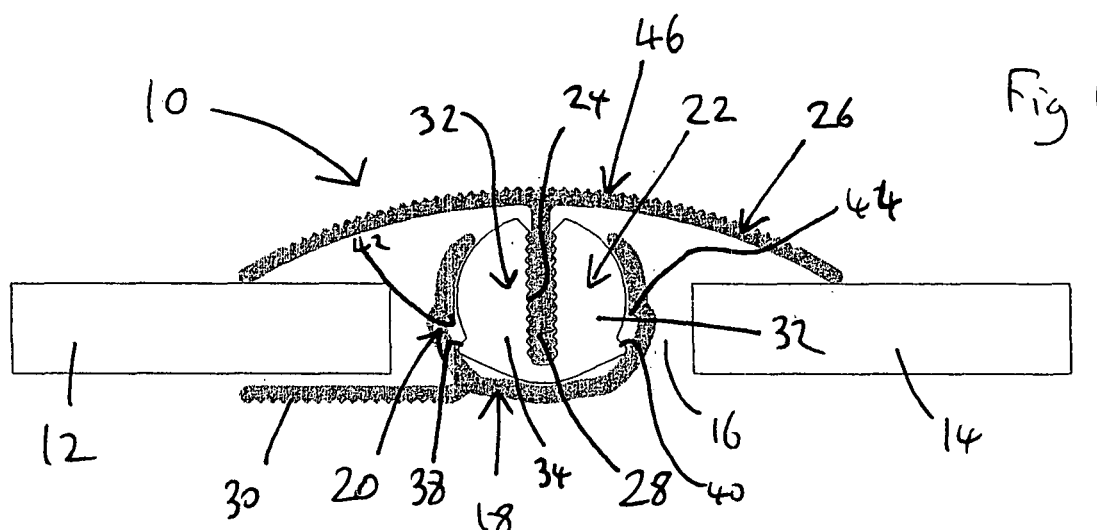
(30) Priority: **24.09.2005 GB 0519531**

(74) Representative: **Swindell & Pearson**
48 Friar Gate
Derby DE1 1GY (GB)

(54) **Engaging assembly for flooring**

(57) An engaging assembly (10) for flooring comprises a floor engaging member (18) having a holder portion (20) and a connector (22) receivable in the holder portion. The holder portion (20) can hold the connector (22), and the connector has a first securing formation (24). A cover member (26) is provided to cover adjacent flooring elements (12, 24). The cover member has a second securing formation (28) which can co-operate with the first securing formation to secure the cover member to the floor engaging member (18). The connector (22) is movable relative to the holder portion (20) to adjust the orientation of the cover member (26) relative to the floor engaging member (18).

ments (12, 24). The cover member has a second securing formation (28) which can co-operate with the first securing formation to secure the cover member to the floor engaging member (18). The connector (22) is movable relative to the holder portion (20) to adjust the orientation of the cover member (26) relative to the floor engaging member (18).



Description

[0001] This invention relates to engaging assemblies for flooring. More particularly, but not exclusively, the invention relates to engaging assemblies for arrangement between flooring materials, particularly, but not exclusively at doorways.

[0002] Engaging assemblies for making good the junction between, for example, adjacent carpets such as at doorways are known and are used to ensure that the edges of floor covering materials and any fixing substances or devices that may have been employed are concealed.

[0003] Suitable flooring materials can be carpets, tiles, laminate flooring, and solid wooden flooring. The thickness of such materials, including adhesive, underlay, and the like can be in the range of 8mm to 21 mm. Designs of flooring materials to cope with such dimensional ranges require several different parts.

[0004] According to one aspect of this invention, there is provided an engaging assembly for flooring, the engaging assembly comprising:

a floor engaging member having a holder portion;

a connector receivable in the holder portion, wherein the holder portion can hold the connector, the connector having a first securing formation;

a cover member to cover adjacent flooring elements, the cover member having a second securing formation which can cooperate with the first securing formation to secure the cover member to the floor engaging member;

wherein the connector is movable relative to the holder portion to adjust the orientation of the cover member relative to the floor engaging member.

[0005] Preferably, the connector is movable within the holder portion, and may be rotatably movable within the holder portion whereby the orientation of the cover member relative to the holding member can be pivotally adjusted.

[0006] The holder portion may be of a generally cylindrical configuration to allow the aforesaid rotatable movement of the connector therein.

[0007] The connector may be of a generally cylindrical configuration.

[0008] Stop formations may be provided in the holder portion and on the connector to restrict movement of the connector relative to the floor engaging member. The connector may comprise a main portion and a first stop formation extending outwardly from the main portion. The holder portion may define a recess to receive the connector. The holder portion may include a second stop formation extending into the recess to engage the first stop formation on the connector, thereby restricting movement of the connector relative to the holder portion.

[0009] The connector may comprise a pair of generally opposite first stop portions. The holder may comprise a pair of generally opposed second stop portions. Each of the first stop formations can engage respective second stop formations to prevent movement of the connector relative to the holder in opposed direction. Conveniently, the, or each, first stop formation may comprise a shoulder extending outwardly from the connector. Conveniently, the, or each second stop formation may comprise a shoulder extending into the recess defined by the holder portion.

[0010] The engaging assembly may comprise a coupling member for coupling the cover member to the connector. In the preferred embodiment, the coupling member allows the engaging assembly to accommodate greater heights of flooring.

[0011] The coupling member may comprise a first securing formation to cooperate with the second securing formation on the cover member. The coupling member may comprise a second securing formation to cooperate with the first securing formation on the connector.

[0012] One of the first and second securing formations may comprise a securing recess, and the other of the first and second securing formations may comprise a securing projection. The securing projection and the securing recess are suitably sized such that the securing recess can receive the securing projection tightly therein.

[0013] Preferably, each of the securing projection and the securing recess is provided with serrations to provide a secure fit between the two components.

[0014] In one embodiment, the first securing formation comprises the securing recess, and the second securing formation comprises the securing projection.

[0015] The coupling member may comprise a main body, which may define the aforesaid recess. The holder portion of the connector may define a trough formation to receive the main body of the coupling member. The trough formation may have side walls and end walls to hold the main body securely therein.

[0016] The holder portion may define the securing recess. The securing recess may extend from the trough formation.

[0017] Desirably, the cover member comprises a cover portion to conceal the junction between adjacent articles of flooring. The cover portion may have a curved profile and the second securing formation may be provided generally centrally of the cover portion.

[0018] The cover member may be provided with ribs. The ribs may provide a suitable gripping surface and also act to obscure surface blemishes and to add interest to the appearance.

[0019] Preferably, the cover member may be elongate. The floor engaging member may be elongate. Preferably, the length of the cover member may be such that it can be cut to size to fit a junction between flooring. The floor engaging member may be of such a length that it can be cut to size to fit the junction.

[0020] Preferably, the connector may be shorter than

the floor engaging member and the cover member and may comprise a pair of end portions, each defining the aforesaid securing recess.

[0021] Conveniently, the coupling member may be of substantially same length as the connector.

[0022] Embodiments of the invention will now be described by way of example, with reference to the accompanying drawings, in which:

Fig 1 is an end view of an engaging assembly for flooring in a first situation;

Fig 2 is an exploded perspective view of the embodiment shown in Fig 1;

Fig 3 is a perspective view of the embodiment shown in Fig 1 in an assembled condition;

Fig 4 is an end view of an embodiment shown in Fig 1 in an assembled condition;

Fig 5 is an exploded view of the engaging assembly shown in Fig 4;

Fig 6 is an assembled view of the engaging assembly shown in Fig 4;

Fig 7 is an end view of the embodiment of the engaging assembly in a third situation;

Fig 8 is an exploded view of the arrangement shown in Fig 7;

Fig 9 is an assembled view of the arrangement shown in Fig 7;

Fig 10 is an end view of an embodiment of the invention in a fourth situation;

Fig 11 is an exploded perspective view of the embodiment shown in Fig 10;

Fig 12 is an assembled perspective view of the embodiment shown in Fig 10;

Fig 13 is an embodiment of the invention in a fifth arrangement;

Fig 14 is an exploded view of an arrangement shown in Fig 13;

Fig 15 is an assembled view of the embodiment shown in Fig 15 in perspective;

Fig 16 is an embodiment of the invention in a sixth arrangement;

Fig 17 is an exploded perspective view of the ar-

rangement shown in Fig 16;

Fig 18 is an assembled perspective view of the arrangement shown in Fig 16; and

Fig 19 is a perspective view showing a coupling member and a partly cut away view of a connecting member.

[0023] Referring to Figs 1 to 3 in the drawings, there is shown an engaging assembly 10 for use between flooring elements 12, 14 arranged adjacent each other at a junction 16. In Figs 1 to 3, the flooring elements 12, 14 may have a height of substantially 6mm.

[0024] The engaging assembly 10 comprises a floor engaging member 18 having a holder portion 20. The engaging assembly 10 also comprises a connector 22 which is received by the holder portion 20 and is held by the holder portion 20.

[0025] The connector 22 defines a first securing formation in the form of a serrated main securing recess 24.

[0026] The engaging assembly 10 also includes a cover member 26 for covering the junction 16 between the adjacent flooring elements 12, 14. The cover 26 comprises a second securing formation in the form of a serrated projection 28. The projection 28 is received by the main securing recess 24 in the connector 22, and the connector 22 is arranged in a midpoint position, such that the recess 24 extends generally vertically.

[0027] The floor engaging member 18 comprises a fixing member in the form of a substantially flat strip 30 which extends under the flooring member 12. This holds the floor engaging member 18 in its position.

[0028] The connector 22 comprises a generally cylindrical main body 32 and end walls 34, 36 at opposite ends of the main body 32. A pair of outwardly extending shoulders, 38, 40 extend generally opposite each other from a lower region of the end walls, 34, 36.

[0029] A pair of cooperating second formations in the form of inwardly extending shoulders, 42, 44 extend inwardly from the holder portion 20 of the floor engaging member 18. The inwardly extending shoulders 42, 44 are intended to engage the shoulders 38, 40 respectively to prevent rotation of the connector 22 beyond the shoulders 42, 44 as explained below.

[0030] The connector 22 is shown more clearly in part section in Fig 19, from which it can be seen that it defines a trough 70 bounded by the end walls 34, 36 and side walls 72, 74.

[0031] The main body 32 further includes a substantially semi-cylindrical support portion 76 to support a coupling member 56, as will be explained below. The support portion 76 defines a securing recess centre region 24A being a region of the main securing recess 24. The end walls 34, 36 define securing recess end region 24B, also forming part of the main securing recess 24.

[0032] The cover member 26 comprises a generally arcuate elongate cover portion 46 from which the projec-

tion 28 extends generally centrally therefrom. The projection 28 extends substantially wholly lengthwise of the cover portion 46.

[0033] In the arrangement shown in Figs 1 to 3, the flooring members 12, 14 are each generally 6mm in height.

[0034] Referring to Fig 4 to 6, there is shown the engaging assembly 10 which is used to cover a junction 16 between adjacent flooring elements 12, 48 in which the flooring element 48 has a greater height than the flooring element 12. In the embodiment shown, the height of the flooring element 12 could be, for example, 6mm and the height of the flooring element 48 could be, for example, 12mm. As can be seen, the projection 28 is inserted part-way into the recess 24 and the connector 22 is pivoted from its midpoint position as shown in Fig 1. This allows the cover portion 46 of the cover member 26 to engage the top surfaces of each of the flooring elements 12, 48.

[0035] Figs 7 to 9 show an arrangement of the embodiment shown in Figs 1 to 3, in which the engaging assembly 10 is used at a junction 16 between flooring elements 50, 48, which both have a height of substantially 12mm. In the arrangement shown in Figs 7 to 9, projection 28 is inserted only about a third of the way into the recess 24 to enable the cover member 26 to engage the top surfaces of each of the first and second flooring elements 50, 48. As can also be seen, the connector 22 is positioned in its midpoint position, such that the recess 24 extends generally vertically.

[0036] Referring to Figs 10 to 12, there is shown an arrangement of the engaging assembly 10 which is used at a junction 16 between flooring elements 52, 54, both of which are substantially 15mm in height. As can be seen, the projection 28 is not received in the recess 24 in the connector 22. Instead, a coupling member 56 is provided which includes a main body 58 defining a securing recess 60, and having a securing projection 62 extending from the main body 58.

[0037] As can be seen the use of the coupling member 56 has the advantage that it allows the engaging assembly 10 to be used with flooring from a height greater than 12mm. Indeed, as will be seen below, the use of the coupling member 56 allows the engaging assembly 16 to be used with flooring having a height of up to substantially 19mm. The connector 22 is arranged substantially symmetrically in the holder portion 20.

[0038] Figs 13 to 15 shows the engaging assembly 10 with the coupling member 56 at junction 16 between flooring elements 50, 64 where the flooring element 50 has a height of substantially 12mm, and the flooring element 64 has a height of substantially 19mm. As can be seen, the connector 22 is arranged within the holder portion 20 at an angle thereto such that the recess 24 is tilted from the vertical and the cover portion 46 of the cover member 26 engage the top surfaces of both of the flooring elements 50, 64.

[0039] In the arrangements shown in Figs 16 to 18, the engaging assembly 10 is provided at a junction 16 be-

tween a flooring element 12 having a height of substantially 6mm, and a flooring element 66 having a height of substantially 19mm. As can be seen, the connector 22 is arranged at such an angle within the holder portion 20 that the outwardly extending shoulder 40 on the main body 32 of the connector 22 engages the inwardly extending shoulder 44 on the holder portion 20 of the floor engaging member 18. As can be seen, the cover member spans the gap between the flooring member 12, 66. Also, the recesses 24, 60 and the projection 62, 28 are tilted from the vertical.

[0040] Referring to Fig 19, the connector 22 is shown in part section so that the trough formation 70 and the support portion 76 can be clearly seen. The coupling member 56 is also shown.

[0041] The trough formation 70 is configured such that it can receive the main body 58 of the coupling member 56; as shown by the broken lines 80. The end walls 34, 36 and the side walls 72, 74 engage the main body 58 of the coupling member 50.

[0042] When the main body 58 is received in the trough 70, the securing projection 62 is received in the securing recess centre region 24A defined by the support portion 76, and the main body is held securely within the trough formation 70.

[0043] There is thus provided in the above described embodiments, a floor engaging assembly which can make good the junction between adjacent flooring members having a height difference of up to substantially 13mm.

[0044] The preferred embodiment has the advantage that only three or four different components are required, thereby providing a product that is easy to assemble and install and means that the consumer or tradesman purchasing the product does not need to make any choices concerning sizes. Moreover, he is not required to make any decisions regarding assembly sequences or handling.

[0045] A further advantage of the preferred embodiment is that it requires only two full length components, i.e. the floor engaging member 18 and the cover 26, that are coupled to each other by one or two shorter components of comparatively low cost.

[0046] The preferred embodiment also has the advantage that it can be used with all different floorings and the only purchasing decision that the consumer or tradesman needs to make is the finish.

[0047] The use of the coupling member 56 provides a further advantage in the preferred embodiment that it is not necessary for the person installing the floor engaging assembly to have realised the need to use the coupling member prior to commencing the installation. If the installer realises that the flooring is too high to enable the components to fit together without the coupling member 56, then the coupling member can simply be inserted into the connecting member 22 to enable the projection 28 on the cover member to be inserted into the coupling member 56. This provides the advantage that there is no

need for the installer to disassemble the floor engaging assembly or to backtrack in any way.

[0048] It is envisaged that the cover member 26 and the floor engaging member will be provided in long lengths that can be cut to size. It is further envisaged that the floor engaging members 18 and the cover member 26 will have a length of up to 900mm. Connecting members 22 and, if necessary, coupling member 56 are used in length, of about 25mm. In the preferred embodiment, it is likely that four connecting members 22 and four coupling members 56 will be required for each 900mm length of floor engaging member 22 and cover member 26.

[0049] Various modifications can be made without departing from the scope of the invention, for example, the dimension of the various components could be adjusted to fit different types of flooring.

[0050] Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinafter referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. An engaging assembly for flooring, the engaging assembly comprising:

a floor engaging member having a holder portion;
a connector receivable in the holder portion, wherein the holder portion can hold the connector, the connector having a first securing formation;
a cover member to cover adjacent flooring elements, the cover member having a second securing formation which can cooperate with the first securing formation to secure the cover member to the floor engaging member;

wherein the connector is movable relative to the holder portion to adjust the orientation of the cover member relative to the floor engaging member.

2. An engaging assembly for flooring according to claim 1, wherein the connector is movable within the holder portion, whereby the orientation of the cover member relative to the holder portion can be adjusted.
3. An engaging assembly for flooring according to claim 2, wherein the connector is rotatably movable within the holder portion, whereby the orientation of the cover member can be rotatably adjusted.
4. An engaging assembly for flooring according to claim 3, wherein the holder portion is of a generally cylindrical configuration to allow the aforesaid rotatable movement of the connector therein.

5. An engaging assembly for flooring according to claim 4, wherein the connector is of a generally cylindrical configuration.
6. An engaging assembly for flooring according to any of claims 2 to 5, wherein stop formations are provided in the holder portion and on the connector to restrict movement of the connector relative to the floor engaging member.
7. An engaging assembly for flooring according to claim 6, wherein the connector comprises a main portion and a first stop formation extending outwardly from the main portion, the holder portion defines a recess to receive the connector, and the holder portion includes a second stop formation extending into the recess to engage the first stop formation on the connector, thereby restricting movement of the connector relative to the holder portion.
8. An engaging assembly for flooring according to claim 7, wherein the connector comprises a pair of generally opposite first stop portions, and the holder comprises a pair of generally opposed second stop portions.
9. An engaging assembly for flooring according to claim 7 or claim 8, wherein each of the first stop formations can engage a respective second stop formation to prevent movement of the connector relative to the holder portion.
10. An engaging assembly for flooring according to any of claims 7 to 9, wherein the, or each, first stop formation comprises a shoulder extending outwardly from the connector, and the, or each second stop formation comprises a shoulder extending into the recess defined by the holder portion.
11. An engaging assembly for flooring according to any preceding claim, wherein the engaging assembly comprises a coupling member for coupling the cover member to the connector.
12. An engaging assembly for flooring according to claim 11, wherein the coupling member comprises a first second securing formation to cooperate with the second securing formation on the cover member, and the coupling member further comprises a second securing formation to cooperate with the first securing formation on the connector.
13. An engaging assembly for flooring according to claim 12, wherein one of the first and second securing formations is of a generally cylindrical configuration to allow the aforesaid rotatable movement of the connector therein.

mations comprises a securing recess, and the other of the first and second securing formations comprises a securing projection, the securing projection and the securing recess being suitably sized such that the securing recess can receive the securing projection tightly therein. 5

novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.

14. An engaging assembly for flooring according to claim 13, wherein each of the securing projections and the securing recess is provided with serrations to provide a secure fit between the two components. 10
15. An engaging assembly for flooring according to claim 14, wherein the first securing formation comprises the securing recess, and the second securing formation comprises the securing projection. 15
16. An engaging assembly for flooring according to claim 14 or claim 15, wherein the coupling member comprises a main body which defines the aforesaid recess, and the holder portion of the connector defines a trough formation to receive the main body of the coupling member, the trough formation having side walls and end walls to hold the main body securely therein. 20
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17. An engaging assembly for flooring according to claim 16, wherein the holder portion comprises an end portion to define the securing recess, the end portions being provided at the end of the trough formation. 30
18. An engaging assembly for flooring according to any preceding claim, wherein the cover member comprises a cover portion to conceal the junction between adjacent elements of flooring, the cover portion having a curved profile and the second securing formation being provided generally centrally of the cover portion. 35
19. An engaging assembly for flooring according to claim 19, wherein the cover member is provided with ribs to provide a suitable gripping surface. 40
20. An engaging assembly for flooring according to claim 18 or claim 19, wherein the cover and the floor engaging members are elongate. 45
21. An engaging assembly for flooring according to claim 20, wherein the cover member is of such a length that it can be cut to size to fit a junction between flooring, and the floor engaging member is of such a length that it can be cut to size to fit the junction. 50
22. An engaging assembly for flooring substantially as herein described with reference to the accompanying drawings. 55
23. Any novel subject matter or combination including

