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(56) Documents Cited:
GB 2322880 A
GB 1094592 A
US 5010703 A
GB 2211090 A
EP 1748123 A2

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(54) Abstract Title: **Floor edge trim element**

(57) An elongate profile 30 for covering a gap (3 figure 1) between a wall (1 figure 1) and a floor covering (4 figure 1) comprises a first leg 32 extending downwardly into the gap, a second leg 34 extending laterally across the gap and for a short distance across the floor covering, and a flexible third leg 42 extending outwardly and upwardly from the second leg to provide a smooth transition to the wall. The second and third legs are preferably resiliently biased respectively towards the floor covering and the wall by a residual stress induced during installation. The second leg may be joined to the first leg by an integral hinge portion 36. The first leg of the trim element is preferably bonded to the wall by means of an adhesive 40 which has a protective peel-off film 41. The trim element may be a unitary extruded plastics moulding.

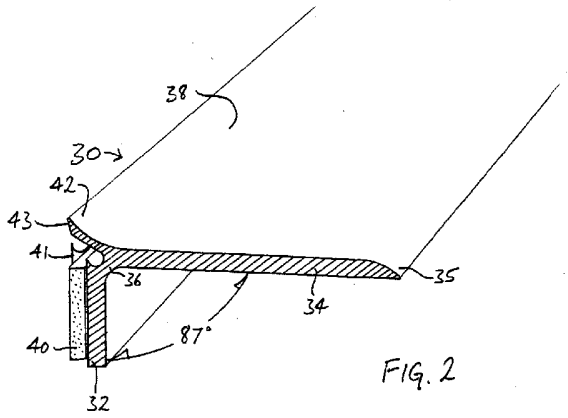

FIG. 2

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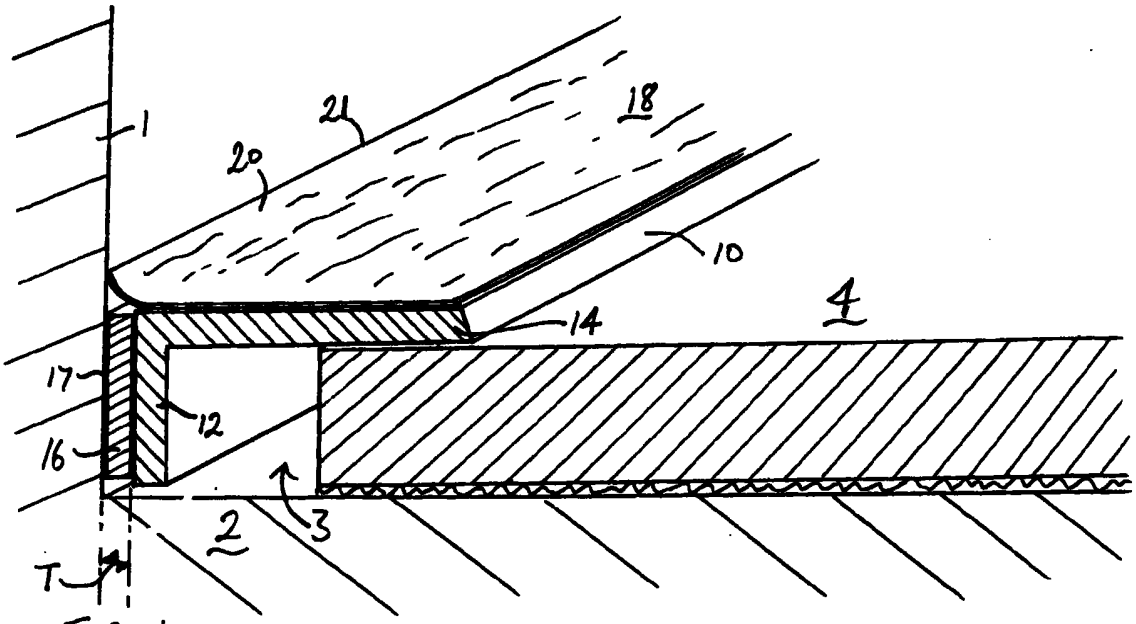

FIG. 1

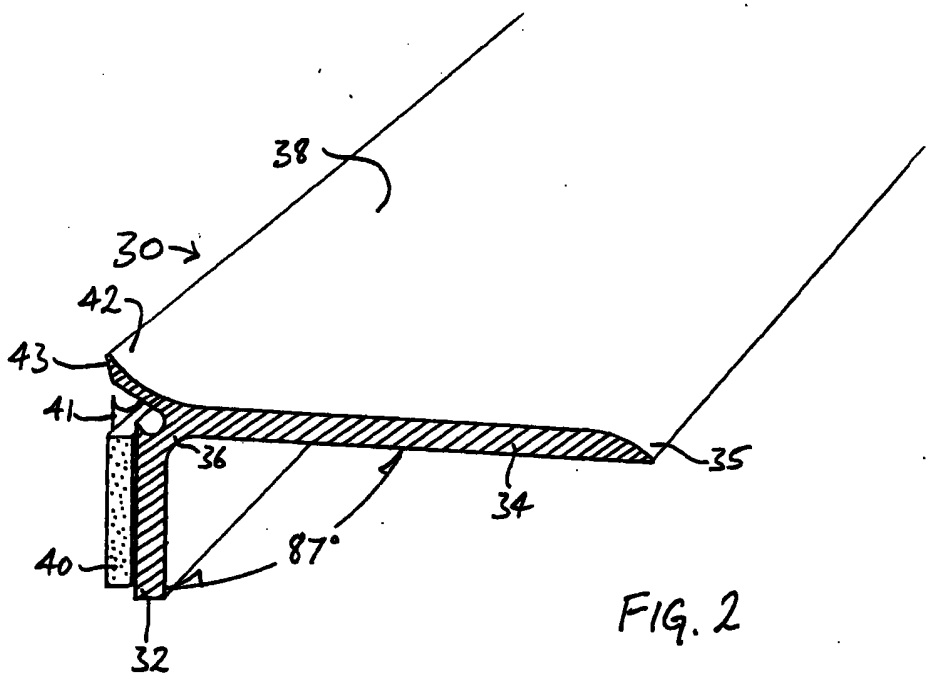

FIG. 2

Floor edge trim element

This invention relates to elongate strips or profiles for installation at the junction of a floor and a wall, particularly for covering a gap between the wall and a floating floor covering.

Floor coverings such as laminate flooring are typically only around 5mm – 10mm in thickness and are laid on a thin, resilient underlay so as to leave an expansion gap of some 10mm – 15mm between the edge of the floor covering and the base of the wall. In this specification, the term "wall" is taken to include any fixed skirting, i.e. a board or strip permanently attached to the base of the wall. It is desirable to cover this gap with an elongate trim element so as to prevent the ingress of dirt and to provide a visually attractive transition between the floor covering and the wall.

It is known, for example from EP 1 114 901 and EP 1 359 267, to provide a skirting board which is attached to the wall just above the floor covering and has a soft, elastic finishing profile at its top and bottom edges. The finishing profiles are urged respectively against the wall and the floor covering so as to provide a smooth transition which is visually attractive and accommodates expansion of the floor covering while preventing the ingress of dirt.

However, where a fixed skirting already exists, it may be undesirable to attach a second skirting to it, both for aesthetic reasons and because the second skirting will then project into the room to an unacceptable extent, comprising its own thickness plus the thickness of the existing fixed skirting.

Moreover, floating laminate flooring is often installed in rooms having a modern, minimalist decor which may be spoiled by the introduction of a skirting element.

A more practical and aesthetically acceptable trim element for a modern floating floor covering is disclosed for example by GB 2 374 093 A, comprising a hardwood strip having a downwardly extending leg which is received in the expansion gap between the floor covering and the wall, and a laterally extending leg which extends across the expansion gap and for a short distance just above the surface of the floor covering. Similarly, L-shaped trim profiles made from metal or plastics material are disclosed for example by GB 2 355 994, by DE 201 06 575 U1, and (for use with a carpet) by GB 1 026 077.

It is important when installing trim elements that the trim is attached to the wall or floor rather than to the floor covering, so that the floor covering is free to expand and contract and hence to move relative to the floor and the wall without buckling. However, this gives rise to some difficulty in fixing the trim element in position.

Where a thin layer of contact adhesive is used, it is found that unevenness in the wall surface can lead to patchy adhesion, which leaves gaps between the wall and the trim element. A gap filling adhesive, or an adhesive tape or foam strip or the like can alternatively be used; however, this can leave an unsightly crevice or band of adhesive between the trim element and the wall, which can trap dirt as well as being difficult to fill or paint without spoiling the decorative finish of the floor covering. An adhesive tape or foam strip can also allow the trim element to gradually move away from the wall, which opens up the crevice and exacerbates the problem.

For this reason it is sometimes preferred to fix the trim element by means of nails or screws fastened to the wall or the floor. However, this is time consuming and gives rise to the risk of puncturing hidden pipes or cables, as well as requiring finishing of the nail or screw holes.

It is the object of the present invention to provide a trim element which addresses at least some of the above mentioned difficulties.

According to the present invention there is provided a trim element as defined in the accompanying claims.

Two embodiments will now be described, purely by way of example and without limitation to the scope of the claims, and with reference to the accompanying drawings, in which:

Fig. 1 shows the first embodiment; and

Fig. 2 shows the second embodiment.

Referring to Fig. 1, a first embodiment of the trim element comprises an L-shaped elongate plastics profile 10 having a downwardly extending leg 12 about 6mm in length and a laterally extending leg 14 about 22mm in length. The downwardly extending leg is provided with a double sided adhesive strip 16. A thin strip of flexible plastics material 18 is bonded to the upper surface of the laterally extending leg 14, and is wider than the width of the upper surface so that it overlaps and forms a third leg 20. The flexible plastics material 18 can be manufactured in a variety of surface finishes to match a variety of different types of flooring. The correct material 18 can then be selected and applied to the profile before the profile is delivered to the customer together with the corresponding type of flooring.

In use, the trim element is attached by means of the adhesive strip 16 to a wall 1 (which might comprise for example a masonry or plaster surface or a fixed skirting) at its junction with a floor 2 so that its leg 12 extends downwardly into

the expansion gap 3 between the wall 1 and a floor covering 4. The floor covering 4 is typically a floating floor covering such as for example a laminate flooring having a wood finish on its upper surface. The laterally extending leg 14 extends across the gap 3 and for a short distance just above the floor covering 4 so that the floor covering is free to move underneath it as it expands and contracts.

In the installed position as shown, the flexible third leg 20 extends upwardly away from the floor 2 and outwardly towards the wall 1 so that it extends to cover the thickness T of the adhesive strip 16. Its thin, flexible edge 21 extends beyond the inner surface 17 of the adhesive strip so that it is pressed resiliently against the wall 1 during installation. The edge 21 of the third leg thus forms a smoothly curved transition between the wall and the laterally extending leg 14, which makes it easy to clean.

Referring to Fig. 2, a second embodiment of the trim element comprises a unitary (e.g. extruded) plastics moulding 30 having a downwardly extending leg 32 and a laterally extending leg 34 which are joined by a narrowed, resilient hinge portion 36 to define an included angle of less than 90°, preferably about 87° as shown. The downwardly extending leg is provided with an adhesive foam strip 40 for attachment to the wall. The outer adhesive face is protected by a peel-off film 41. A third leg 42 is thinner than the other legs so that it is more resiliently flexible, and curves up smoothly from the laterally extending leg 34 above the hinge portion 36.

During installation, the peel-off film 41 is first removed before the pressing portion 38 of the profile is pressed firmly down towards the floor and towards the wall in the gap between the wall and the floor covering, so that the adhesive strip 40 adheres to the wall leaving the legs 42, 34 in a resiliently stressed position. The pressure applied during installation tends to slightly open up the included angle between the two legs 32, 34, so as to leave the laterally extending leg 34 sloping

down slightly towards its tapered nose 35, which is pressed resiliently against the surface of the floor covering. During installation, the tapered, flexible inner edge 43 of the third leg 42 is also pressed against the wall, so that the leg 42 extends to cover the thickness of the adhesive strip 40 and conforms closely to the wall surface to provide a smoothly curved transition from the laterally extending leg 34 to the wall.

The third leg 42 extends from the laterally extending leg 34 so that, in addition to the resilient movement of leg 42 relative to leg 34, both legs also tend to move together with respect to the downwardly extending leg 32. Any slight upward movement of the laterally extending leg 34 relative to the downwardly extending leg 32 (which occurs during installation due to the pressure applied to the pressing portion 38) therefore tends to pivot the third leg 42 about the hinge portion 36 so that its inner edge 43 is pressed more firmly against the wall. The pressure of the third leg 42 against the wall, which might otherwise tend to open up the adhesive joint, is thus balanced by the downward pressure of the nose 35 against the floor covering, so that the residual stress induced by pressure on the pressing portion 38 during installation results in a largely vertical, upward force on the adhesive strip 40, which the adhesive joint is much better able to withstand. This greatly reduces movement in the adhesive joint over time, ensuring that the trim element remains firmly in position, while any small movement which does occur is absorbed by the resilient movement of the third leg 42.

At the same time, the slight downward angle of the laterally extending leg 34 and the resilient downward pressure at the nose 35 allows the trim element to remain in contact with the floor covering while absorbing downward movements of the floor covering resulting from the weight of furniture and transient forces from people walking across the floor, as well as horizontal movements as the floor covering expands and contracts.

In summary, an elongate profile for covering a gap between a wall and a floor covering comprises a moulded strip of plastics material having a first leg extending downwardly into the gap and adhered to the wall, a second leg extending laterally across the gap and for a short distance across the floor covering, and a preferably flexible third leg extending outwardly and upwardly from the second leg to cover the adhesive joint and provide a smooth transition to the wall. The second and third legs are preferably resiliently biased respectively towards the floor covering and the wall by a residual stress induced during installation, and may be joined to the first leg by an integral hinge portion.

The trim element may be made for example from PVC and preferably has a decorative surface finish to match that of the floor covering, which may be provided for example by an inline hot stamping process or a heat transfer film applied during the extrusion process, or by means of a film applied after the extrusion process. In alternative embodiments, the downwardly extending leg might be fixed by a separately applied adhesive rather than an adhesive tape. The third leg might be rigid rather than flexible, and might be attached to the downwardly and laterally extending legs by a hinge portion. The downwardly extending leg might alternatively be provided with holes for receiving screws, or might cooperate with a separate mounting profile which is attached to the wall or the floor before joining it to the trim element. The novel trim element can be used with tiles or any other floor coverings having a thickness sufficient to accommodate the length of the downwardly extending leg, as well as with floating laminate flooring, and its dimensions are selected to suit the application.

CLAIMS

1. A trim element for covering a gap between a floor covering and a wall,

comprising an elongate profile having a downwardly extending leg and a laterally extending leg,

the downwardly extending leg being attachable to the wall,

so that in an installed position the downwardly extending leg extends downwardly into the gap

and the laterally extending leg extends across the gap just above the floor covering;

characterised in that the profile includes a third leg,

wherein in the installed position the third leg extends upwardly away from the floor and outwardly towards the wall.

2. A trim element according to claim 1, characterised in that the third leg is resiliently biased towards the wall in the installed position.

3. A trim element according to claim 2, characterised in that the third leg is flexible.

4. A trim element according to any preceding claim, characterised in that the laterally extending leg and the downwardly extending leg define an included angle of less than 90°.

5. A trim element according to any preceding claim, characterised in that the laterally extending leg is resiliently biased towards the floor in the installed position.

6. A trim element according to any preceding claim, characterised in that the downwardly extending leg is adhered to the wall.

7. A trim element according to claim 6, characterised in that the downwardly extending leg is provided with an adhesive component protected by a peel-off film.

8. A trim element according to claim 6 or claim 7, characterised in that the downwardly extending leg is adhered to the wall by an adhesive component having a thickness,

and the third leg extends towards the wall to cover the thickness of the adhesive component.

9. A trim element according to any preceding claim, characterised in that the trim element comprises a unitary plastics moulding.

10. A trim element according to claim 9, characterised in that the laterally extending leg and the downwardly extending leg are joined by a narrowed portion comprising a hinge.

11. A trim element according to claim 10, characterised in that the third leg extends from the laterally extending leg above the hinge in the installed position.

12. A trim element according to any of claims 1 – 8, characterised in that the third leg is formed by a thin strip of flexible material which is bonded to the laterally extending leg.

13. A trim element according to any preceding claim, characterised in that the trim element has a surface finish which is matched to the floor covering.

14. A trim element substantially as described with reference to the accompanying drawings.

Amendments to the claims have been filed as follows:

1. A trim element for covering a gap between a floor covering and a wall,

comprising an elongate profile having a downwardly extending leg and a laterally extending leg,

the downwardly extending leg being attachable to the wall,

so that in an installed position the downwardly extending leg extends downwardly into the gap

and the laterally extending leg extends across the gap just above the floor covering;

characterised in that the profile includes a third leg,

wherein in the installed position the third leg extends upwardly away from the floor and outwardly towards the wall;

and in that the trim element is adapted to be fixed in an installed position by attachment of the downwardly extending leg to the wall

such that in the installed position the third leg is supported pressingly against the wall by the attachment of the downwardly extending leg to the wall.

2. A trim element according to claim 1, characterised in that the third leg is resiliently biased towards the wall in the installed position.

3. A trim element according to claim 2, characterised in that the third leg is flexible.

4. A trim element according to any preceding claim, characterised in that the laterally extending leg and the downwardly extending leg define an included angle of less than 90°.

5. A trim element according to any preceding claim, characterised in that the laterally extending leg is resiliently biased towards the floor in the installed position.

6. A trim element according to any preceding claim, characterised in that the downwardly extending leg is adhered to the wall.

7. A trim element according to claim 6, characterised in that the downwardly extending leg is provided with an adhesive component protected by a peel-off film.

8. A trim element according to claim 6 or claim 7, characterised in that the downwardly extending leg is adhered to the wall by an adhesive component having a thickness,

and the third leg extends towards the wall to cover the thickness of the adhesive component.

9. A trim element according to any preceding claim, characterised in that the trim element comprises a unitary plastics moulding.

10. A trim element according to claim 9, characterised in that the laterally extending leg and the downwardly extending leg are joined by a narrowed portion comprising a hinge.

11. A trim element according to claim 10, characterised in that the third leg extends from the laterally extending leg above the hinge in the installed position.

12. A trim element according to any of claims 1 – 8, characterised in that the third leg is formed by a thin strip of flexible material which is bonded to the laterally extending leg.

13. A trim element according to any preceding claim, characterised in that the trim element has a surface finish which is matched to the floor covering.

14. A trim element according to any preceding claim, characterised in that the third leg is shorter than the downwardly extending leg.

15. A trim element according to any preceding claim, characterised in that the third leg is thinner than the downwardly extending leg.

16. A trim element substantially as described with reference to the accompanying drawings.

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Application No: GB0711412.7 **Examiner:** Mr Haydn Gupwell

Claims searched: 1-14 **Date of search:** 28 August 2007

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1-11 & 13	EP1748123 A2 (DOELLKEN & CO GMBH W) see abstract and figure 3 especially.
X	1-5, 7, 9 & 13	GB2322880 A (PAUL HEALEY) see whole document especially figure 1.
X	1-5, 7, 9-12 & 13	US5010703 A (PEARLMAN et al) see whole document especially figures 1 & 2.
X	1, 2, 3, 5, 9, 7 & 13	GB2211090 A (WELLMARK PLASTICS LIMITED) see whole document especially figures 1 & 2.
X	1-4, 7, 9, 12 & 13	GB1094592 A (WARD & GOLDSTONE LIMITED) see whole document especially figures 1 & 2.

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^{X} :

Worldwide search of patent documents classified in the following areas of the IPC

E04F

The following online and other databases have been used in the preparation of this search report

EPODOC, WPI

International Classification:

Subclass	Subgroup	Valid From
E04F	0019/04	01/01/2006