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(54) Trim and method of use

(57) A trim for an electrical fitting especially for use in relation to a tiled surface (1) includes a first portion (5) sandwiched between a fitting face plate (8) and a recessed wall portion (6) and a second portion (22), connected to the first portion by a third trim portion and abutting the tiles. Seals are formed between the trim, the surface and the fitting giving a degree of water resistance.

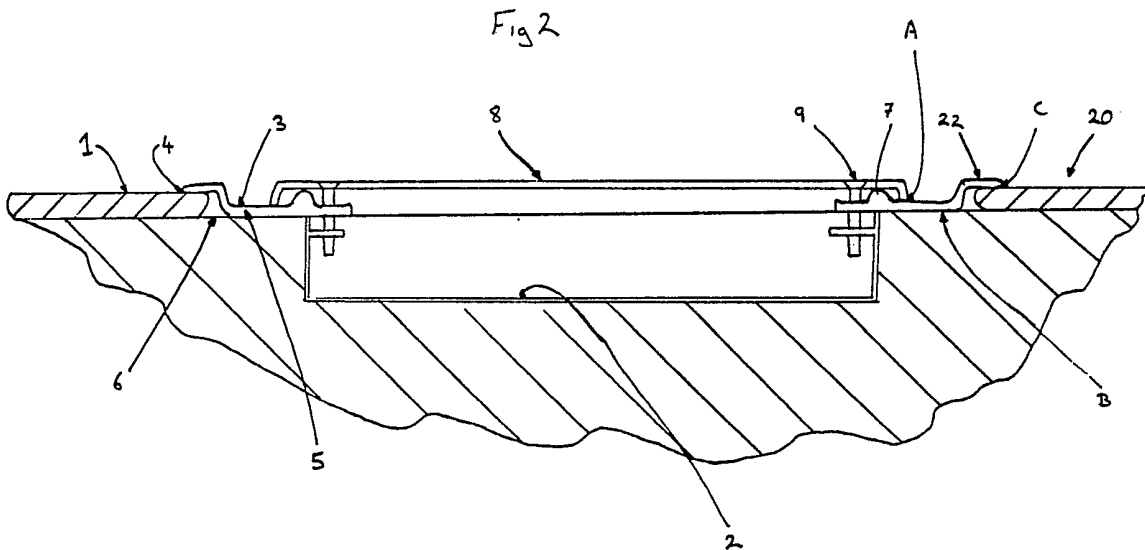


Fig 1

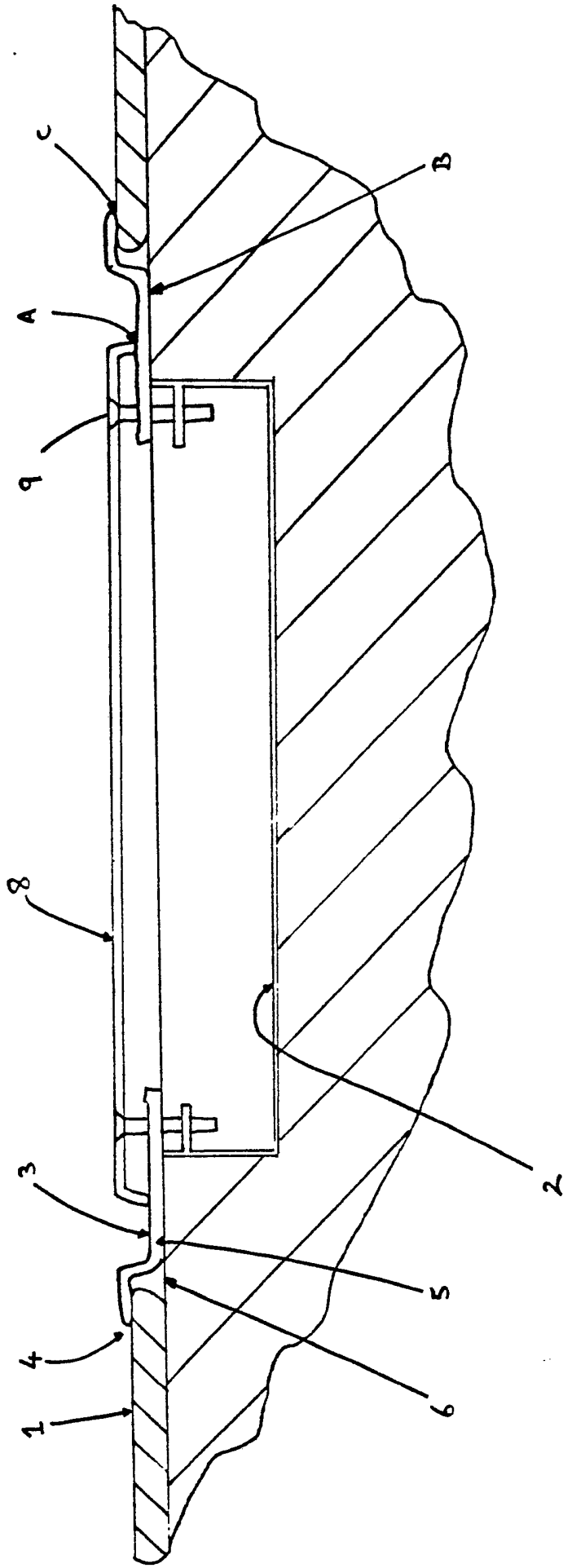
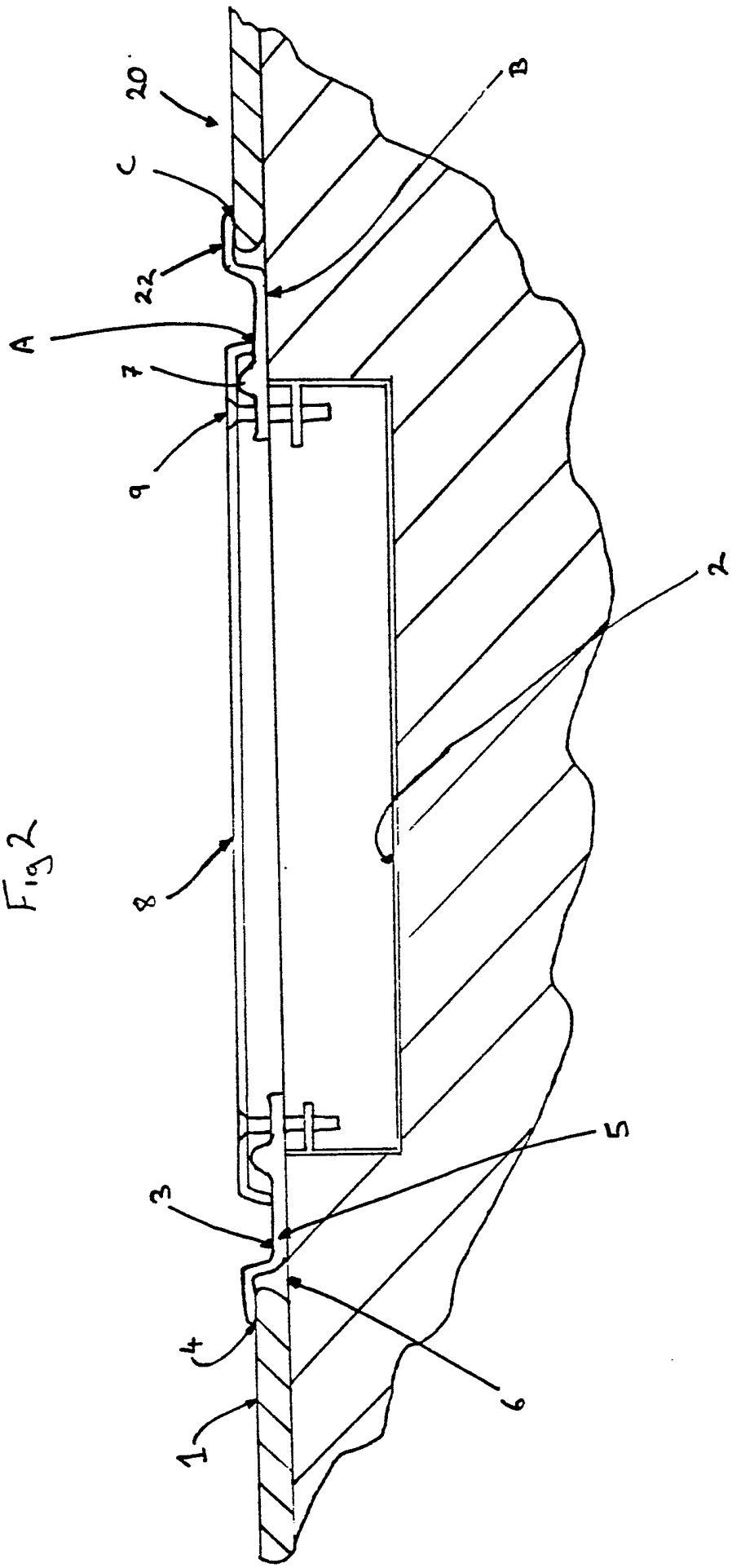


Fig 2



TRIM AND METHOD OF USE

This invention relates to trims and methods of using the same. Preferably, but not exclusively, trims are decorative accessories placed around fittings such as domestic electrical sockets, switch gear and the like accommodated within a cavity in a surface.

As is well known the tiling of walls and floors is relatively straightforward until discontinuities such as edges or holes for electrical fittings are reached. In order to accommodate such a discontinuity it is generally necessary to cut pieces from one or more tiles and to shape the cut tiles. The cutting and shaping of tiles is difficult for the unskilled worker and may result in the wastage of many tiles. Even for the skilled artisan tile cutting is time consuming. Very considerable skill is required neatly to abut tiles to an electrical fitting and gaps which cause accumulation of dirt and moisture generally result.

Frames and fittings of various kinds are known, see, for example, GB 1585760, GB 2032181, GB 2168206, GB 2203996, US 4770643 and US 3619476. Prior art fittings do not successfully combine a neat decorative finish with reliable seals especially in the case of cavities in tiled surfaces.

The invention seeks to provide an improved trim.

At least some embodiments of the invention provide a

trim which is usable on a tiled surface.

At least some embodiments of the invention provide a trim able to provide effective water resistance to the fitting.

According to the invention there is provided in combination a main surface having therein a cavity surround by a recessed portion for accommodating a fitting with a face plate, a trim; and a fitting having a face plate; said trim having the form of a one-piece component composed of a first continuous wall portion with first or inner and second or outer opposed surfaces, the inner surface of the first portion of said trim overlying the cavity and the recessed portion, a second continuous wall portion having first or inner and second or outer opposed surfaces, said second continuous portion projecting outwardly from said first continuous portion, said first portion lying inboard said second portion and a third portion connecting said first continuous portion and said second continuous portion; and means for securing the face plate of the fitting against said trim, said inner surface of said second continuous portion tightly abutting said main surface to establish a substantially continuous area of sealing contact therewith, the inner surface of said first continuous portion of said trim being close to or preferably tightly abutting the recessed portion to establish a substantially continuous area of sealing

contact therewith, and said outer surface of said first continuous portion tightly abutting the face plate to establish a substantially continuous area of sealing contact therewith.

According to the invention there may be provided a main surface having a cavity surrounded by a recessed portion, a trim and a face plate, the trim comprising a first trim portion having a face lying adjacent and preferably abutting the recessed portion with a substantially unbroken area of contact, a second face of the first trim portion abutting the face plate with a substantially unbroken area of contact, and a second trim portion having a face abutting the main surface with a substantially unbroken area of contact.

According to another aspect of the invention there is provided a method of mounting a face plate over a cavity in a main surface surrounded by a recessed portion, the method comprising the steps of applying a trim to a recessed portion of the surface, said trim comprising a first continuous portion with an inner surface for overlying the cavity and the recessed portion, and an outer surface for abutment with the face plate, a second continuous portion with an inner surface for overlying the main surface and an outer surface, said first portion lying inboard said second portion, a third portion connecting said first continuous portion and said second continuous portion, and means for securing the face plate

against said trim, and securing the face plate to the surface over the cavity tightly abutting said inner surface of said second continuous portion and establishing a substantially continuous area of sealing contact therewith, preferably tightly abutting said inner surface of said first continuous portion of said trim to the recessed portion and establishing a substantially continuous area of sealing contact therewith and establishing a substantially unbroken area of contact therewith and tightly abutting said outer face of said first continuous portion tightly abutting the face plate and establishing a substantially continuous area of sealing contact therewith.

The invention still further provides a method of mounting a face plate over a cavity in a main surface surrounding a recessed portion, the method comprising the steps of applying a trim to the recessed portion of the surface, the trim comprising a first trim portion having a first face for lying adjacent and preferably abutting the recessed portion and a second face for abutting the face plate and a second trim portion having a face for overlying the main surface, and securing the face plate to the surface over the cavity such that the first face of the first trim portion lies adjacent or preferably abuts the recessed portion forming a substantially unbroken area of contact, the second face of the first trim portion

abuts the face plate forming a substantially unbroken area of contact, and a face of the second portion abuts the main surface forming a substantially unbroken area of contact.

The invention further provides for the use of a trim in providing at least a degree of water resistivity to an electrical fitting.

In some embodiments of the invention the trim is provided with a fourth portion which may be in the form of a lip. The fourth portion abuts the face plate and forms a further unbroken area of contact and thus may enhance the water resistivity of the arrangement.

The trim is preferably somewhat deformable or resilient and may be made for example of brass, injection moulded PVC and other plastics material. This allows the trim to conform to the surface and/or face plate increasing the area of contact and thus may enhance the water resistivity of the arrangement.

The first and second portions are preferably substantially planar spaced apart sheets so as to give a neat appearance.

The invention will be illustrated by reference to the accompanying drawings of which:

Figure 1 is a lateral cross-section of a trim according to the invention fitted to a surface.

Figure 2 is a lateral cross-section of a trim according to a further embodiment of the invention.



In accordance with the method aspect of the invention tiles (1) defining a main decorative surface (20) are laid so as to approach a cavity (2) in which there is a box for a switch (not shown). Cabling (not shown) associated with the switch may be required. Edges of the tiled area approach but do not abut the cavity thereby defining a recessed portion (6). The precise width of the recessed portion is not critical as will be explained hereinafter.

A trim in accordance with the invention is then placed in the recessed portion defined by the tiles. As tiles are of generally similar thickness (4 to 6 mm for wall tiles and 9 to 11 mm for floor tiles), and cavities for switch boxes are of generally similar dimensions only a limited range of trims will usually be required. It will be appreciated that if the trim is deformable then one type may accommodate a range of tile thicknesses. It will be further appreciated that custom and law in individual states or countries may further restrict the particular range of trims required for the state or country.

The trim is preferably of deformable or resilient material such as PVC or rubber. Relatively plastic metals such as stainless steel, copper or brass may be used. In plan view or front elevation the trim can be generally rectangular or square but other shapes may be chosen to suit the switch box or the outward appearance

required.

The trim (3) has a first portion (5) which lies inboard second portion (22). The first and second portions are connected by a third portion (30). In cross-section the trim has a dog-leg appearance as the first and second portions are spaced apart by the third portion.

The extreme outboard edge of the second portion (22) abuts the surface of the tiles and can lie generally parallel with the tiles and/or the first portion. This end may be rounded. The first portion (5) of the trim can contact the untiled recessed portion (6) and may partially extend over the switch box cavity (2). The extreme inboard edge of the trim is generally provided with mounting means such as lugs for fasteners. In the embodiment of Figure 2, the inboard edge of the first portion is provided with an upstanding lip (7) which abuts the face plate (8) forming a further seal.

If desired, the trim may be bedded in on a layer of sealant, adhesive or cement or a gasket for example of resilient material especially foamed material, but this is not essential. The face plate (8) is secured over the switch box (2). Securing means such as machine screws (9) or other threaded fasteners can secure the face plate over the switch box (2). As the screws are tightened a moisture-proof seal is formed between the face plate and recessed surface (at point B) and between the trim and the

tile (at point C). Area rather than point contact may result. Other fasteners such as claws engaging recesses may be used. Similarly by biasing the end (4) of the trim away from its original position by means of tile (1) a liquid tight seal is provided.

The completed assembly may be cleaned with a damp cloth without moisture penetrating the fitting thereby reducing the danger of electric shock during cleaning operations. The assembly may also be readily cleaned thereby reducing the possibility of build up of mold, algae, fungi, bacteria or chemical residues.

If the trim is made of electrically conducting material the securing means should also be of conductive material. This results in the trim being in electrical contact with the switchbox (2) and thus earthed.

Those portions of the trim which are exposed in the completed assembly may be provided with decoration for example by embossing or painting.

Because an edge of the tile (1) is hidden from view under the trim the edge may be roughly cut. The edges need not be a constant distance from the edge of the cavity. It is sufficient that each tile edge is positioned under the trim. In the embodiments shown a significant amount of the first portion is exposed. This allows for easy cleaning but it may be preferred for aesthetic reasons to reduce the size of the exposed

portion.

By appropriate selection of the tile, trim and box sizes, it may be possible to effect neat fitting without any tile cutting.

The invention further allows face plates to be partially or completely recessed relative to the main surface thereby giving a neat appearance and in at least some circumstances, reducing the likelihood of damaging the face plate in normal use.

Those skilled in the art will be able to devise modifications to the invention in both its object and method embodiments.

In particular those skilled will appreciate that the invention is not restricted to tiled surfaces and may be used where a surface is both recessed and provided with a cavity.

CLAIMS

1. In combination:

a main surface having therein a cavity surrounded by a recessed portion for accommodating a fitting with a face plate;

a trim; and

a fitting having a face plate;

the trim comprising:

a first portion with inner and outer surfaces the inner surface of the first portion of the trim overlying the recessed portion;

the second portion having inner and outer surfaces, projecting outwardly from the first portion; and

a third portion connecting the first portion and the second portion; and

means for securing the face plate of the fitting against the trim with the inner surface of the second portion abutting the main surface to establish a substantially continuous area of sealing contact therewith;

the inner surface of the first portion of the trim abutting the recessed portion to establish a substantially continuous area of sealing contact therewith; and

the outer surface of the first portion abutting the face plate to establish a substantially continuous area of sealing contact therewith.

2. The combination of claim 1, the trim having a fourth portion, comprising an outwardly extending lip inboard the substantially continuous area of sealing contact between the face plate and the outer surface of the first portion and abutting the face plate to establish a substantially continuous area of sealing contact therewith.

3. The combination of claim 1 or claim 2, wherein the trim is deformable.

4. The combination of claim 3, wherein the trim comprises injection moulded plastics material, rubber or metal.

5. The combination of any one of the preceding claims wherein first portion and the second portion are substantially planar spaced apart sheets.

6. The combination of claim 5, wherein the first and the second portions of the trim are spaced apart by 4 to 11mm.

7. A method of mounting a face plate over a cavity in a main surface surrounded by a recessed portion, the method comprising the steps of applying a trim to a recessed portion of the surface, the trim comprising:

a) a first portion with an inner surface for

overlying the cavity and the recessed portion and an outer surface for abutment with the face plate,

b) inboard the first portion a second portion with an inner surface for overlying the main surface and an outer surface,

c) a third portion connecting the first portion and the second portion; and

means for securing the face plate against the trim, and securing the face plate to the surface over the cavity tightly abutting the inner surface of the second portion and establishing a substantially continuous area of sealing contact therewith, tightly abutting the inner surface of the first portion of the trim to the recessed portion and establishing a substantially continuous area of sealing contact therewith and tightly abutting the outer face of the first continuous portion tightly abutting the face plate and establishing a substantially continuous area of sealing contact therewith.

8. A trim for surface substantially as described herein by reference to the drawings.

9. A method of mounting a trim on a surface substantially as described herein by reference to the drawings.