

(21) Application No: 2305143.6

(22) Date of Filing: 06.04.2023

(71) Applicant(s):
Window Widgets Limited
Unit C Quedgeley West Business Park, Bristol Road,
Hardwicke, Gloucestershire, GL2 4PA,
United Kingdom

(72) Inventor(s):
Michael Hart
Markus Springer

(74) Agent and/or Address for Service:
Barker Brettell LLP
100 Hagley Road, Edgbaston, BIRMINGHAM,
B16 8QQ, United Kingdom

(51) INT CL:
E06B 7/10 (2006.01) F24F 13/18 (2006.01)

(56) Documents Cited:
GB 2113825 A EP 0324820 B1
US 6648750 B1
JPS55110693

(58) Field of Search:
INT CL E06B, F24F
Other: SEARCH-PATENT

(54) Title of the Invention: Trickle vent cover
Abstract Title: TRICKLE VENT COVER

(57) A trickle vent cover 1 comprising: a canopy member 3 defining a volume 13 and having an upper edge 23. An uppermost and rearmost point of the volume, the canopy comprises: a cover portion 9 at least partially enclosing the volume, such that the volume has an open rear 21 and an open base 19. A fitting portion 11 extends rearwards from the upper edge, wherein and is arranged to engage a top 71 of a window frame 55 to hold and locate the trickle vent cover. The open rear of the volume is arranged to receive air from a trickle vent 69 through the window frame. The canopy member also comprises a connection means arranged to detachably receive and hold a grille member 5 at the base of the volume. Also claimed are a window with the cover, a kit with the cover and a method of fitting the kit.

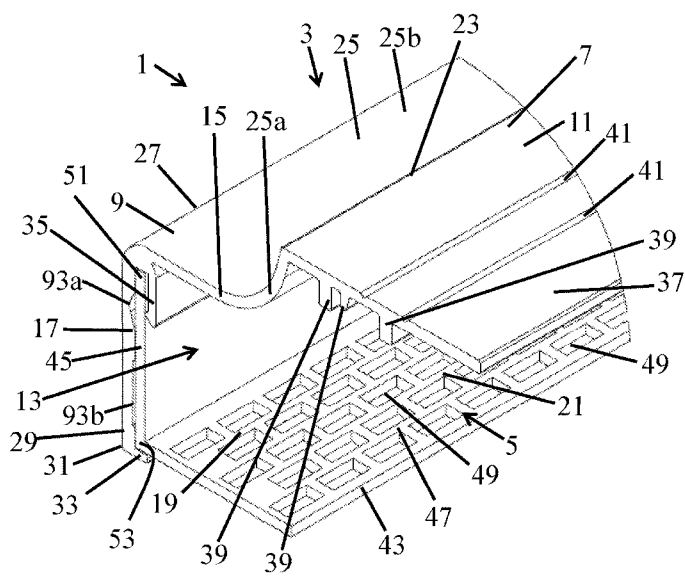


FIG. 1

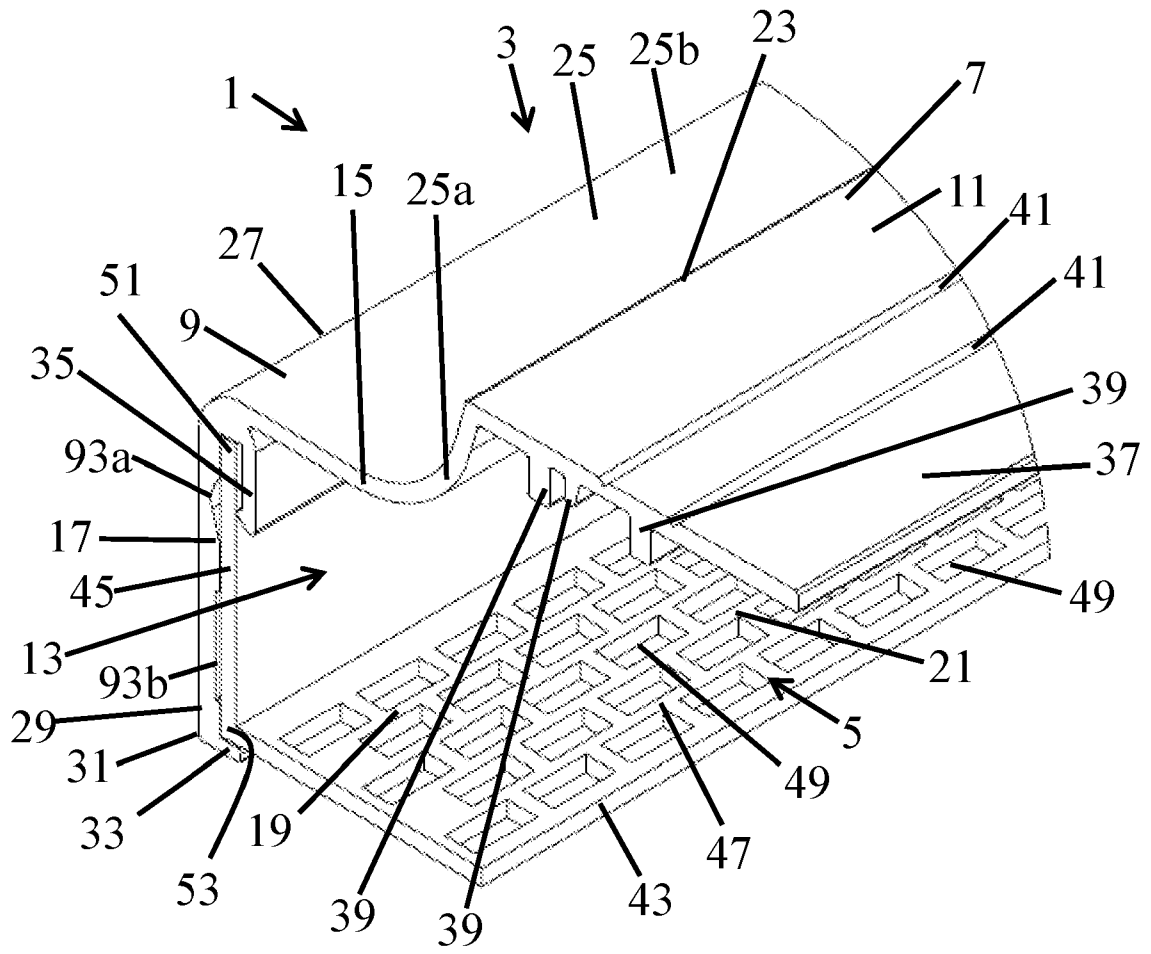


FIG. 1

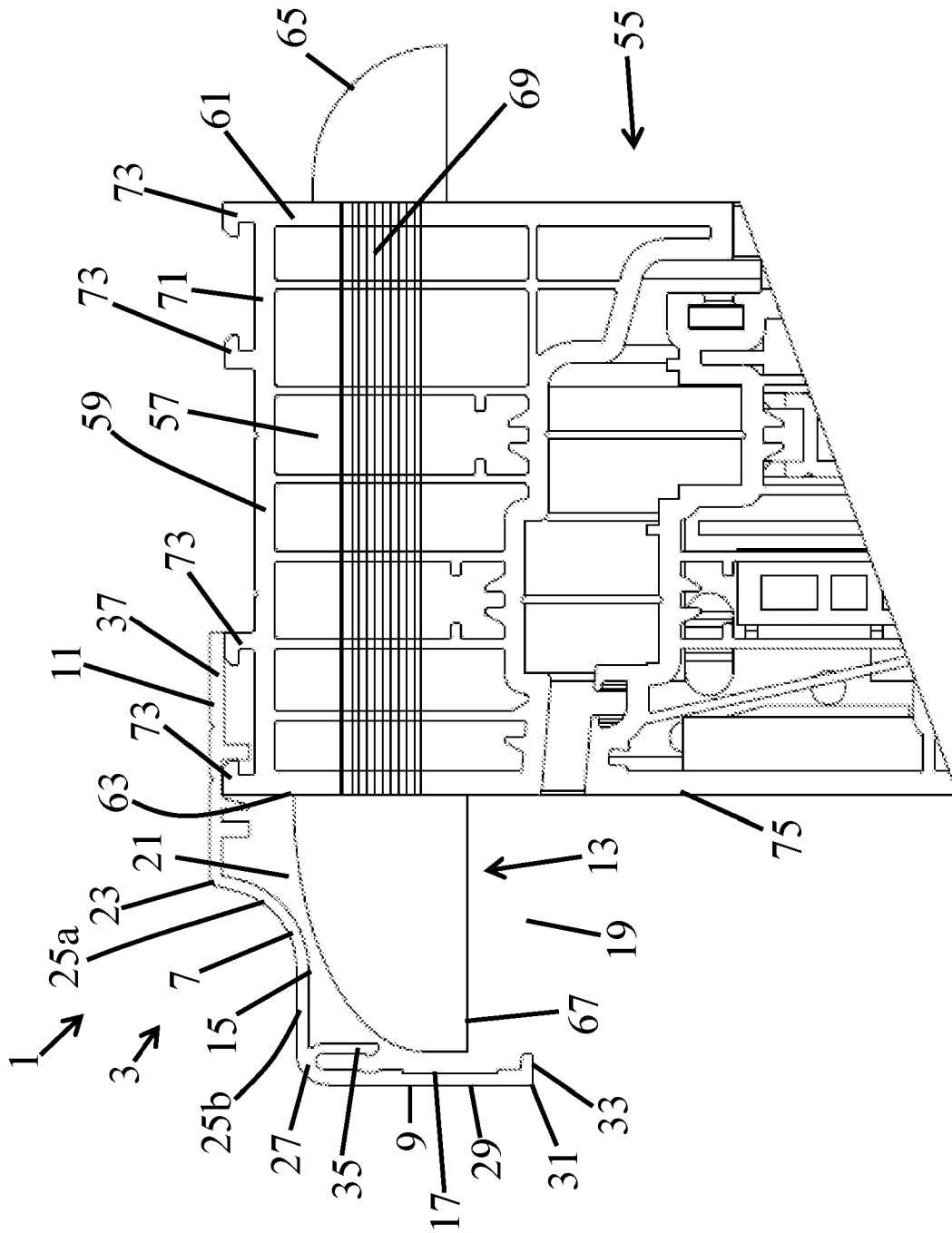


FIG. 2

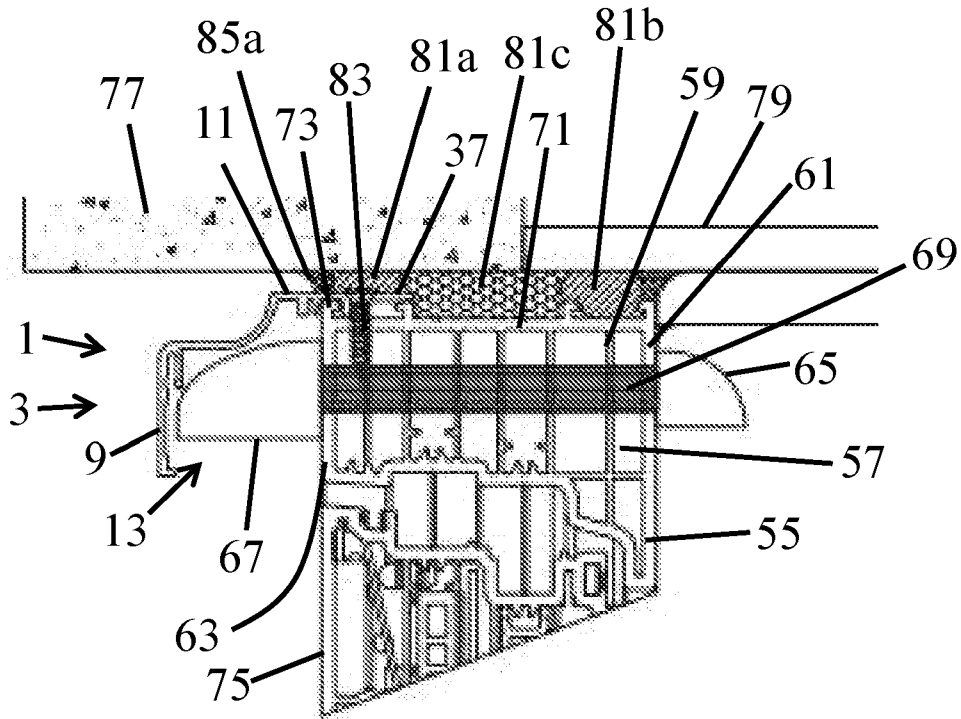


FIG. 3

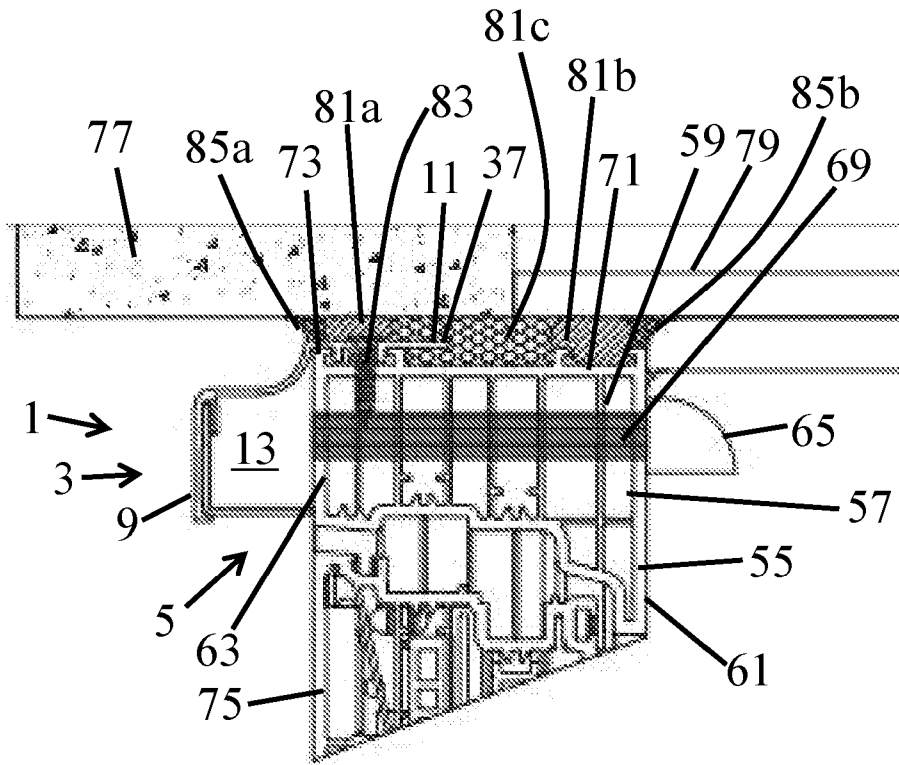


FIG. 4

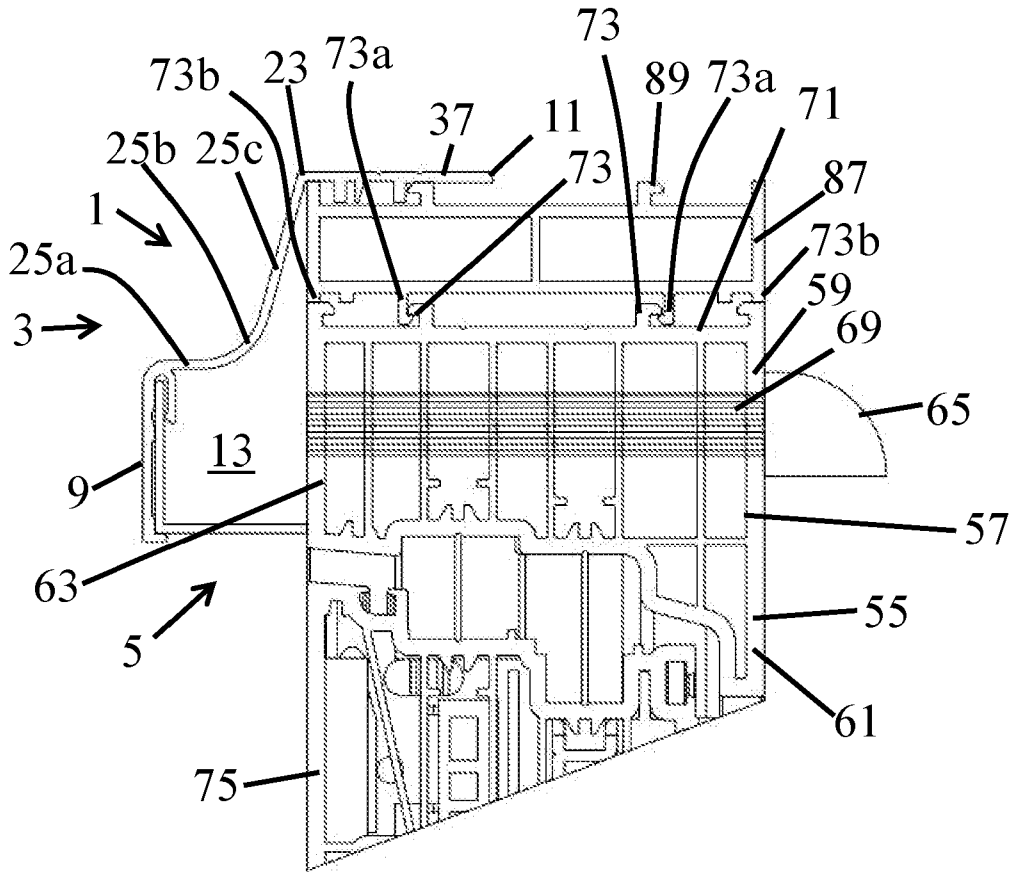


FIG. 5

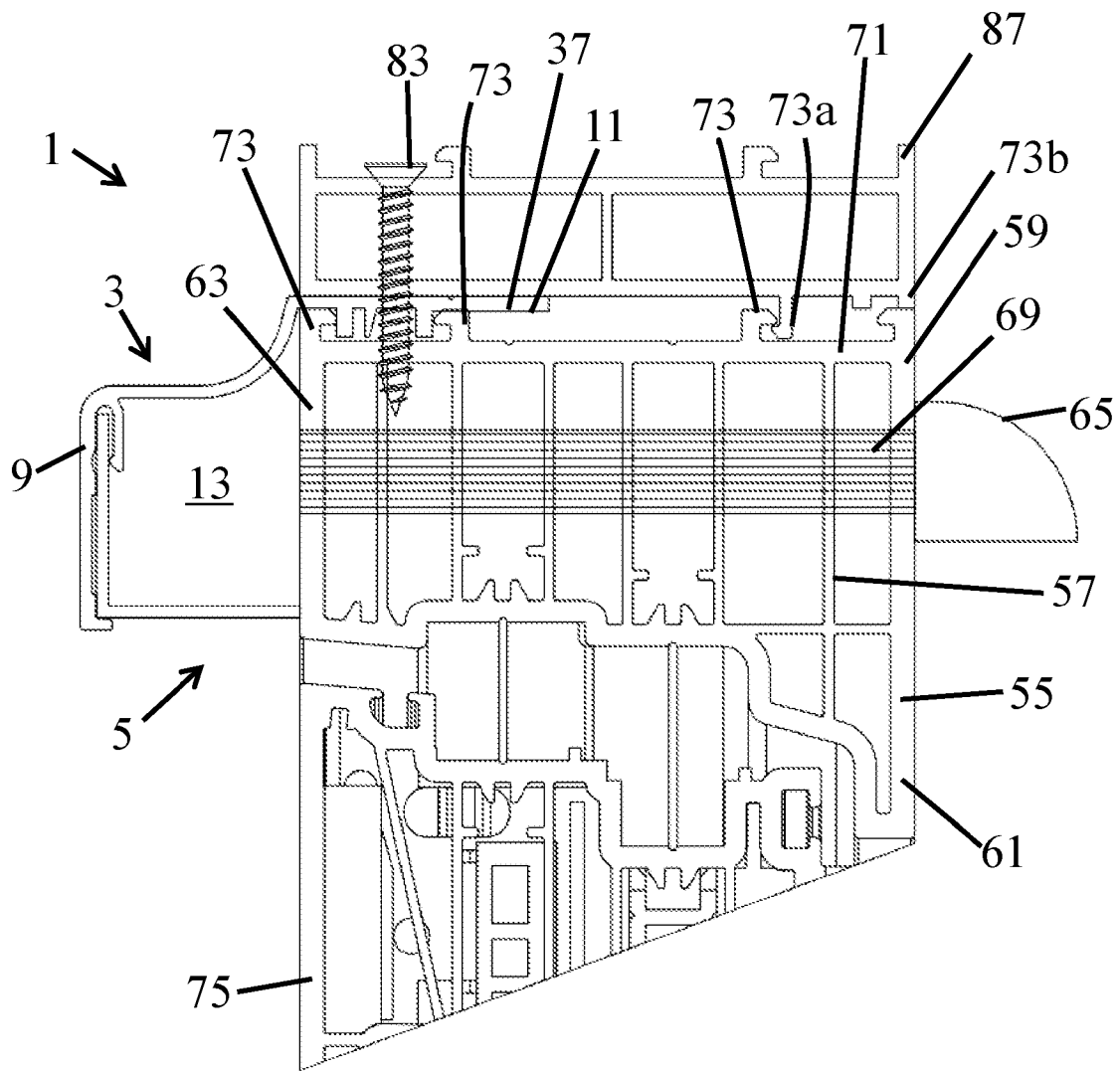


FIG. 6

TRICKLE VENT COVER

The present disclosure relates to a cover for a trickle vent.

5 Many modern window frames include trickle vents. Trickle vents are a small opening extending through the frame, to allow a low flow of air into or out of the building, even when the window is closed.

10 On many windows, a cover or canopy is provided over the opening for the trickle vent. This can be provided on both the exterior and interior of the window. The cover helps direct the airflow through the trickle vent, and includes a grille or mesh to act as a fly screen.

15 Currently, trickle vent covers are fitted by securing them to the faces of the frame, around the vent opening. For example, the cover may be secured by screws and/or adhesive, and/or interengaging projections or other means.

20 Trickle vents typically only extend for a small length across the width of the window frame, and trickle vent covers typically extend a length only slightly longer than the vent itself. This can cause uneven sightlines on the window, which may be undesirable.

25 According to a first aspect of the invention, there is provided a trickle vent cover having: a canopy member defining a volume, and having an upper edge at an uppermost and rearmost point of the volume, the canopy including: a cover portion at least partially enclosing the volume, such that the volume has an open rear and an open base; and a fitting portion extending rearwards from the upper edge of the canopy member, wherein the fitting portion is arranged to engage a top of a window frame to hold and locate the trickle vent cover with respect to the window frame, and
30 wherein the open rear of the volume is arranged to receive air from a tickle vent through the window frame, the canopy member further comprising connection means arranged to detachably receive and hold a grille member at the base of the volume.

35 A first section of the cover portion may extend forwards and downwards from the upper edge of the canopy member.

At least part of the first section of the canopy member may follow a convex curve, in cross-section from the ends of the volume, the curve having a centre of the radius of curvature outside the volume.

5

A part of the first section extending from the top edge of the canopy member may extend linearly, in cross-section from the ends of the volume.

10 Part of the first section may extend in forward direction, perpendicular to the rear of the volume, the part following a convex curve may be provided between the part of the upper portion that extends in forward direction and the top edge of the canopy member.

15 The canopy member may comprise a second section spaced from the rear of the volume by the first section.

The second section may extend substantially parallel to the rear of the volume

20 The first section of the canopy member may extend from the upper edge of the canopy member to an intermediate edge. The second section may extend from the intermediate edge to a lower edge of the canopy member, the lower edge at a lowermost and frontmost part of the volume.

25 The first section and second section may join at substantially ninety degrees.

The connection means may comprise projections formed on an interior surface of the canopy member, the projections arranged to engage and hold the grille member.

30 The connection means may comprise a ledge extending into the volume at a base of the volume. The ledge may form a seat for at least part of the grille member extending. The ledge may extend partway across the base of the volume.

The fitting member may comprise a top plate extending perpendicular to the rear of the volume, and one or more interengaging projections. The top plate may be arranged

to extend over a top of a window frame, and the interengaging projections may be arranged to engage corresponding projections in the top of the window frame.

The fitting member may include a plurality of interengaging projections, to enable the trickle vent cover to be held in different positions relative to the window frame.

The top plate may be received between the top of a window frame and a unit arranged to vertically extend the window frame.

The trickle vent cover may further include a grille member closing the base of the volume. The grille member may include and a plurality of openings arranged to allow passage of air therethrough and removably connected to the canopy member.

The grille member may include formations arranged to engage the connection means on the canopy member, to hold the grille member in place.

According to a second aspect of the invention, there is provided a window having: a frame holding a pane of glass; a trickle vent formed through the frame perpendicular to the pane of glass, the trickle vent only extending a portion of the width of the frame parallel to the horizontal extent of the pane of glass; and a trickle vent cover of the first aspect on an external side of the frame, the trickle vent cover extending the full width of the frame, wherein the rear of the volume engages the frame.

A lower edge of the canopy member at a lowermost and frontmost part of the volume may vertically align with a top edge of a window sash in the window frame.

The frame may be formed with an integral or pre-existing trickle vent cover extending substantially the length of the trickle vent. The integral or pre-existing trickle vent cover may be received in the volume formed by the canopy member, and the grille member is not included in the trickle vent cover.

Alternatively, the frame may be provided without an integral or pre-existing trickle vent cover. The grille member may then be included.

The frame may comprise an add-on extender to increase the height of the claim.

The fitting member may engage the top of the add-on extender. Alternatively, the fitting member may be secured between the frame and the add-on extender.

- 5 According to a third aspect of the invention, there is provided a kit comprising a trickle vent cover of the first aspect and a grille member arranged to close the bottom of the volume, the grille member including a plurality of openings arranged to allow passage of air therethrough.
- 10 According to a fourth aspect of the invention, there is provided a method of fitting a kit of the third aspect to a window frame, the method comprising, prior to installing the window frame into a wall opening: if the frame includes or is formed with an integral or pre-existing trickle vent cover extending substantially the length of the trickle vent, discarding the grille member; or if the frame is formed without an
- 15 integral or pre-existing trickle vent cover, or the integral or pre-existing trickle vent cover is removed, fitting the grille member to the canopy member, subsequently to discarding or fitting the grille member, securing the fitting means to the window frame.
- 20 The method may form the window of the second aspect.

Various embodiments of the invention provide for a vent cover that is easy to install and fit, and which also provides for a consistent sight line across the entire width of the window. Furthermore, having a canopy member with a volume extending the width

25 of the window does not restrict airflow through the trickle vent.

Trickle vent covers according to embodiments of the invention can be used to replace existing trickle vent covers that do not extend the full width of the window. The volume of the canopy member is able to receive a pre-existing trickle vent cover, and

30 so embodiments of the invention can be used with frames that have existing covers, without having to remove the existing cover, which may cause damage to the frame, or may not even be possible. The ability to detachably receive a grille closing the bottom of the volume means that the grille can be omitted when the pre-existing cover is still in place, but also means embodiments can be used where the existing trickle vent

35 cover is removed (or where the frame does not have an existing cover).

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

- 5 **Figure 1** illustrates a trickle vent cover according to a first embodiment, including a grille member;
- Figure 2** illustrates a window frame with the trickle vent cover of Figure 1, fitted, with the grille member removed;
- Figure 3** illustrates the window frame of Figure 2 fitted into a window;
- 10 **Figure 4** illustrates the trickle vent cover of Figure 1 fitted to an alternative window frame and fitted into a window, with the grille member in place;
- Figure 5** illustrates an alternative embodiment of a trickle vent cover fitted to a window frame, with the grille member in place; and
- Figure 6** illustrates a further embodiment of a trickle vent cover fitted to a window frame, with the grille member in place.

15

Figure 1 shows a trickle vent cover 1 in perspective view from one end. The trickle vent cover 1 comprises a canopy member 3 and a grille member 5 that are connectable together.

20

In the example now being discussed, the canopy member 3 is formed of an extruded aluminium profile 7. The shape of the profile 7 will be described as viewed from the end on. It will be appreciated that aluminium profile 7 has the same cross section along its entire length (i.e. across the entire width of the window).

25

The canopy member 3 is formed of a cover portion 9 and a fitting portion 11, which meet at a first edge 23 extending along the length of the canopy member 3. In use, as will be described below, the fitting portion 11 engages with a window frame to hold the trickle vent cover 1 in place, whilst the cover portion 9 projects outwards from the face of a window frame.

30

The cover portion 9 defines a volume 13 that is bounded by the extruded aluminium profile 7 on the top 15 and front 17 of the volume 13. The edge 23 defines the uppermost and rearmost edge of the volume 13, and may also be referred to as an upper edge. The rear 21 and base 19 of the volume 13 are open.

35

From the upper edge 23, a first section 25 of the aluminium profile 7 extends downwards and forwards in a curved region 25a. The curved region 25a then extends into a flattened region 25b. The radius of curvature is such that when viewed from the front, the curve is convex. In other words, the centre of the radius of curvature is

5 outside the volume 13

The flattened region 25b extends horizontally, to an intermediate edge 27, extending parallel to the first edge 23.

10 From the intermediate edge 27 a second section 29 of the aluminium profile 7 extends vertically downwards, along the front 17 of the volume 13, to a lower edge 31. The intermediate edge 27 may be right angled, or rounded in the transition between the sections 25, 29.

15 The lower edge 31 defines the lowermost and frontmost part of the volume 13.

From the lower edge 31 a ledge 33 extends a short way across the base 19 of the volume 13. This only extends across a small part of the base 19, to leave the majority of the base 19 open.

20

Within the volume 13, a projection 35 extends parallel to and space from the second section 29 of the aluminium profile 7. This projection 35 only extends from the underside of the first section 25a, near the intermediate edge 27, partway down the vertical extent of the second section 29.

25

The fitting portion 11 includes a planar plate 37 extending horizontally backwards from the upper edge 23.

A number of projections 39 extend downwards from the plate 37. The projections 39 are spaced and shaped to engage with corresponding projections formed on the top of a window frame, as will be discussed in more detail below.

30

The grille member 5 is formed of an extruded PVC profile 43. The shape of the profile 43 will be described as viewed from the end on. It will be appreciated that PVC

35 profile 43 has the same cross section along its entire length.

The PVC profile 43 is right angled in shape, having a front plate 45 extending vertically, and a base plate 47 extending horizontally backwards from the front plate 45. The base plate 47 is formed with an array of rectangular openings 49 to allow
5 passage of air through the base plate 47.

In the assembled trickle vent cover 1, the front plate 45 of the grille member 5 extends parallel to and abuts the second section 29 of the cover portion 9 of the canopy member 3, on the inner face of the second section 29. An upper region 51 of the front
10 plate 45 is retained and located between the second section 29 of the cover portion 9 of the canopy member 3 and the interior projection 35, whilst a lower edge 53 of the front plate 45 rests on the ledge 33 formed at the lower edge 33 of the canopy member 3.

15 The base plate 47 of the grille member 5 closes the base 19 of the volume 13, whilst the openings 49 allow passage of air into or out of the volume 13.

Figure 2 illustrates the trickle vent cover 1 of Figure 1, fitted to a window frame 55.

20 The window frame 55 includes a frame profile 57 formed of PVC or aluminium extrusion. A horizontally extending top member 59 of the frame is shown in cross-section in Figure 2. The top member 59 has a trickle vent 69 extending from an interior face 61 of the frame 55 to an exterior face 63. The trickle vent 69 only extends for a portion of the length of the top member 59 (which is the width of the window).

25 The frame 55 is formed with an interior trickle vent cover 65 on the interior face 61 of the frame 55 and an exterior trickle vent cover 67 on the exterior face 63 of the frame 55. The interior and exterior trickle vent covers 65, 67 extend for approximately the same length as the trickle vent 69.

30 A trickle vent cover 1 as discussed above is fitted onto the exterior face 63 of the window frame 55. As shown in Figure 2, the fitting portion 11 of the trickle vent cover 1 extends over the upper surface 71 of the top member 59 of the window frame 55. The top plate 37 extends parallel to the upper surface 71, (perpendicular to the
35 window pane) and the projections 39 extend downwards and engage with

corresponding projections 73 formed on the upper surface 71 of the top member 59 of the window frame 55 to hold the canopy member 3 in place.

5 The cover portion 9 (and in the example shown in Figure 2, part of the fitting portion) extend out from the exterior face 63 of the top member 59 of the frame 55, with the exterior trickle vent cover 67 received in the volume 13 formed by the cover portion 9.

10 The lower edge 53 of the trickle vent cover 1 aligns with edge of the window frame 55 where it meets the sash 75, to provide a single continuous line of sight.

Once the trickle vent cover 1 is installed, air can pass into or out of the building through the trickle vent 69 and the volume 13 formed under the cover portion 9 of the canopy member 3.

15

As shown in Figure 3 (discussed below), the trickle vent cover 1 is secured to the frame 55 by screws 83 provided spaced along the length of the trickle vent cover 1. This is omitted from Figure 2 for clarity.

20 A pair of grooves 41 extend lengthwise, along the upper face of the plate 37 of the fitting portion 11, parallel to the upper edge 23, intermediate edge 27, and lower edge 33. The grooves 41 provide an indication of where to position screws 83 when fixing the canopy member 3 into place.

25 In the example shown in Figure 2, the grille member 5 is omitted. In different situations, the grille member 5 may be omitted for one or more of the following reasons:

- Since an existing cover is provided, the functionality of the grille member 5 is not required (it is provided by the existing cover);
- 30 - The provision of the grille member 5 in addition to the existing cover may inhibit air flow;
- Since an existing cover is provided, there is not enough space for the grille member 5 and the existing cover 67 ;
- Due to the horizontal spacing of canopy member 3 relative to the frame 5
- 35 (which is adjustable, as discussed below), the grille member 5 does not

fully close the gap between the second section 29 of the canopy member 3 and the frame 55, leaving a gap between the grille member 5 and the frame 55.

5 Figure 3 illustrates the window frame 55 shown in Figure 2, with the trickle vent cover 1 installed, fitted into a window opening. On an exterior side of the window opening, the window frame 55 is fitted against the brick wall 77 (or another exterior wall) whilst on the interior side, the window frame 55 is fitted against plasterboard 79 or another internal finish.

10

A first rubber seal 81a is provided at an exterior side of the frame 55, between the upper surface of the fitting portion 11 of the trickle vent cover 1 and the brick wall 77 and a second rubber seal 81b is provided at an interior side of the frame 55, between the upper surface 71 of the frame 55 and the internal wall 79. Insulation foam 81c is
15 provided in the gap between the seals 81a, 81b and the frame 55 and the wall.

The join between the frame 55 and the wall 77, 79 is then finished, on both the interior and exterior side, by a bead of sealant or caulk 85a, 85b. On the exterior side, the space formed by the shape of the first section 25 of the cover portion 9 of the
20 canopy member 3 allows for easy access for an installer to form the bead.

Figure 4 shows an alternative embodiment of the trickle vent cover 1 of Figure 1, fitted to a window frame 55 in a window. This embodiment is the same as the embodiments discussed above, unless stated otherwise.

25

In the embodiment in Figure 4, the frame 55 does not already include a trickle vent cover 67 on the external side. In this case, the grille member 5 is included.

The trickle vent cover 1 is provided separately to the frame 55, and, as discussed
30 above, can be used with frames with an existing trickle vent cover in place or removed (or without a trickle vent cover). The trickle vent cover 1 may be provided as a kit comprising a length of the canopy member 3 and a length of the grille member 5. The grille member 5 may be separate from or fitted into the canopy member 3 for shipping.

The window frame 55 with the trickle vent cover 1 is installed using the steps discussed below.

5 Firstly, if the grille member 5 is not needed, for example where a trickle vent cover is to be kept in place, it may be discarded (or removed from the canopy member 3 if it is provided in place). Alternatively, if the grille member 5 is needed, for example where the existing trickle vent cover is to be removed, it may be retained or fitted in the canopy member 3.

10 The canopy member 3 has open ends, and so the grille member 5 can simply be slid in to or out of the end of the canopy member 5. Alternatively, the grille member 5 can be installed from the rear 21 of the volume 13 or in any other suitable way. The grille member 5 and/or projections 35 and/or ledge 33 for retaining the grille member 5 may be resiliently deformable to allow this.

15

Where necessary, the cover member 3 and grille member 5 may be cut to length by the installer. Alternatively, the cover member 3 and grille member 5 may be pre-cut to standard lengths.

20 The cover member 3 is secured to the frame 55 using the interengaging projections 39, 73 and screws 83, and then the frame 55 is installed in the window opening with the seals. Finally, the sealant bead 85a, 85b is formed.

25 As discussed above, the fitting portion 11 includes a number of projections 39 extending from the horizontal plate 37. Comparison of Figures 3 and 4 shows that this allows the horizontal position of the canopy member 3 to be modified by using different projections 39 to engage the frame 55. Thus, the amount the trickle vent cover 1 projects out of the frame 55 can be varied. This may be used where, for example, greater space is needed to fit in an existing canopy cover 67, or for any other
30 reason.

Figures 5 and 6 show two further embodiments. These embodiments are the same as discussed above, unless stated otherwise. The embodiments shown in Figures 5 and 6 include the grille member 5 fitted into place, and the frame 55 without an existing
35 cover. However, it will be appreciated that the embodiments in Figures 5 and 6 may be

used with or without the grille member 5, and with or without an existing cover in the volume 3 defined by the canopy member 3.

In the embodiments shown in Figures 5 and 6, the frame 55 includes an addon unit 87
5 to increase the height of the frame 55. This may be used, for example, when greater access is needed to the plaster line on the interior side of the window.

Interengaging projections 73a are formed on the base of the addon unit 87, spaced
10 along the bottom surface of the addon unit 87. The projections 73a on the addon unit 87 engage similar projections 73 spaced along the top 71 of the top member 59 of the frame 55. These are at least some of the interengaging projections 73 as used by the canopy portion 3 of the trickle vent cover 1.

Furthermore, feet 73b are provided at the edges of the addon unit 87 to vertically
15 space the addon unit 87 from the top member 59 of the frame 55

The embodiments shown in Figures 5 and 6 show two different examples of fitting a trickle vent cover 1 to a frame 55 with an addon unit 87.

20 In the example shown in Figure 5, the first section 25 of the cover portion 9 is vertically elongated such that the fitting portion 11 extends over the top surface 89 of the addon unit 87. The top surface 89 of the addon unit 87 includes projections 91 in a similar manner to the top surface 71 of the top member 59 of the window frame 55. Therefore, the canopy member 3 is secured to the window frame 55 in a similar
25 manner as discussed above in relation to Figures 2 and 3.

In order to form the vertically elongated first section 25, the first section inclined region 25c between the upper edge 23 and the curved region 25b. This ensures the canopy member 3 is vertically extended without increasing the amount the trickle vent
30 cover 1 projects from the frame 55.

Although not shown, the canopy member 3 may be secured to the frame by a screw 83 extending through the fitting portion 11, the addon unit 87 and into the top member 59 of the frame 55.

35

In the example shown in Figure 6, the fitting portion 11 of the canopy member 3 is sandwiched between the top member 59 of the frame 55 and the addon unit 87.

5 In order to accommodate the fitting portion 11 of the canopy member 3 in the space between the top member 59 of the frame 55 and the addon unit 87, the projections 73a and feet 73b on the bottom of the addon unit 87 are removed in the region where the fitting member 11 is received.

10 The canopy member 3 is secured to the engaging projections 73 in this region. Some projections 73a on the bottom of the addon unit 87 are retained, as these are away from the region where the fitting portion 11 is received. These are still engaged. With the projections 73 on the top member 59 of the frame 55.

15 In the region of the fitting portion 11 of the canopy member, the addon unit 87 sits on the fitting portion 11. Away from the fitting portion, the addon unit 87 sits on the top member 59 of the frame 55, in a similar manner to Figure 5.

20 As in the other embodiments, a screw 83 may be provided extending through the addon unit 87, the fitting portion 11, and into the top member 59 of the frame 55. Alternatively, the screw may only extend through the fitting portion 11 and top member 59 of the frame, and the addon unit 87 may be provided on top of the screw 83.

25 The projections 73a on the addon unit 87 may be removed by an installer during installation for example by machining, or versions of the addon unit 87 without projections in this region may be pre-made.

30 The shape of the trickle vent cover 1 discussed above and shown in the Figures is given by way of example only. The canopy member 3 may have any suitable shape that provides a volume 13 capable of receiving an existing trickle vent cover. For example, the first section 25 of the canopy member may have any curve, incline or other shape that allows easy access for the installer to apply the sealant bead 85. The second section 29 need not be planar and may have any suitable shape.

In the example discussed above and shown in the Figures, the grille member 5 has an array of rectangular openings 49 to allow passage of air. However, the grille member 5 may have any suitable shape and arrangement of openings 49, or may be any suitable mesh or grille structure.

5

In the example discussed above, the profile 7 for forming the canopy member 3 is extruded aluminium. This may powder coated and foil finished to match the window frame 55. It will be appreciated that any suitable material, formed in any suitable way, with any desired finish applied to the canopy member 3.

10

Likewise, in the example discussed above the profile 43 for forming the grille member 5 is extruded PVC. However, any suitable material may be used for the grille member 5.

15 For both the canopy member 3 and grille member 5 may have a painted finish, may be finished by anodising, or by transfer printing.

In the example discussed above, the grille member 5 is connected to the canopy member 3 by a projection 35 that is used to retain the grille member 5 and a ledge 33 for the grille member 5 to sit on. This is just one example of a connection means that can be used to locate and hold the canopy member 3 and grille member 5 relative to each other.

20 The projection 35 and ledge 33 may take any suitable shape or form. As discussed above, the projection 35 and/or ledge 33 and/or grille member 5 may be resiliently deformable to enable connection and disconnection of the canopy member 3 and grille member 5.

30 In some examples, the grille member 5 may have projections that engage with features formed on an inner surface of the canopy member 3 to connect the grille member 5 to the canopy member 3.

In further examples, the projection 35 and/or ledge 33 and/or grille member 5 may be shaped to prevent disassembly once assembled, or to prevent disassembly unless a force above a threshold is applied.

35

In yet further example, screws, nails, rivets, pins, adhesive or other mechanical or chemical connection means may be used. Furthermore, a combination of connection means may also be used.

5

In the examples discussed above, the canopy member 3 has open ends to allow the grille member 5 to be slid into the ends of the canopy member 3. However, this need not be the case, and the ends of the grille member may be closed. Alternatively, detachable ends may be provided to fit over the ends of the canopy member 3.

10

In the examples discussed above, the canopy member 3 is secured to the frame 55 by a fitting portion that includes a top plate 37 with projections 39 to engage parts of the frame 55, and/or by a screw 83 and/or by being held between two parts of the frame 55. Any one or more of these fitting means may be used alone or in combination.

15

Furthermore, the fitting portion may secure the canopy member to the frame 55 using any other suitable means, such as adhesives, rivets, clips and the like, in addition to or in combination with the other fitting means.

20 The canopy member 3 discussed above has projections 39 to allow the canopy member 3 to be fitting in a number of different positions. The position of the canopy member 3 may be variable with any of the fitting methods discussed above. Alternatively, the fitting portion may be arranged to only allow connection in a single position.

25 Optionally, as shown in Figure 1, the inner surface of the canopy member 3 may include recesses 93a, 93b. A first recess 93a may be provided vertically aligned with the lower end of the projection 35 for retaining the grille member 5. This may be provided to allow for tooling of the canopy member 3. Instead of or as well as these, further recesses 93b may be provided to reduce material and hence weight of the
30 canopy member 3.

In the embodiments discussed above, a trickle vent cover 1 for fitting to the exterior of a window is discussed. However, it will be appreciated that a similar cover may be fitted to the interior using similar means.

35

Claims

1. A trickle vent cover having:
 - 5 a canopy member defining a volume, and having an upper edge at an uppermost and rearmost point of the volume, the canopy including:
 - a cover portion at least partially enclosing the volume, such that the volume has an open rear and an open base; and
 - a fitting portion extending rearwards from the upper edge of the canopy member,
 - 10 wherein the fitting portion is arranged to engage a top of a window frame to hold and locate the trickle vent cover with respect to the window frame, and wherein the open rear of the volume is arranged to receive air from a trickle vent through the window frame,
 - 15 the canopy member further comprising connection means arranged to detachably receive and hold a grille member at the base of the volume.
2. The trickle vent cover of claim 1, wherein a first section of the cover portion extends forwards and downwards from the upper edge of the canopy member.
- 20 3. The trickle vent cover of claim 2, wherein at least part of the first section of the canopy member follows a convex curve, in cross-section from the ends of the volume, the curve having a centre of the radius of curvature outside the volume.
4. The trickle vent cover of claim 3, wherein a part of the first section extending
25 from the top edge of the canopy member extends linearly, in cross-section from the ends of the volume.
5. The trickle vent cover of claim 3 or claim 4, wherein part of the first section extends in forward direction, perpendicular to the rear of the volume, the part
30 following a convex curve being provided between the part of the upper portion that extends in forward direction and the top edge of the canopy member.
6. The trickle vent cover of any of claim 2 to 5, wherein the canopy member comprises a second section spaced from the rear of the volume by the first section.

7. The trickle vent cover of claim 6, wherein the second section extends substantially parallel to the rear of the volume

8. The trickle vent cover of claim 6 or claim 7, wherein the first section of the canopy member extends from the upper edge of the canopy member to an intermediate edge, and wherein the second section extends from the intermediate edge to a lower edge of the canopy member, the lower edge at a lowermost and frontmost part of the volume.

9. The trickle vent cover of claim 8, wherein the first section and second section join at substantially ninety degrees.

10. The trickle vent cover of any preceding claim, wherein the connection means comprises projections formed on an interior surface of the canopy member, the projections arranged to engage and hold the grille member.

11. The trickle vent cover of any preceding claim, wherein the connection means comprises a ledge extending into the volume at a base of the volume, wherein the ledge forms a seat for at least part of the grille member extending, the ledge extending partway across the base of the volume.

12. The trickle vent cover of any preceding claim, wherein the fitting member comprises a top plate extending perpendicular to the rear of the volume, and one or more interengaging projections, the top plate arranged to extend over a top of a window frame, and the interengaging projections arranged to engage corresponding projections in the top of the window frame.

13. The trickle vent cover of claim 12, wherein the fitting member includes a plurality of interengaging projections, to enable the trickle vent cover to be held in different positions relative to the window frame.

14. The trickle vent cover of claim 12 or claim 13, wherein the top plate is received between the top of a window frame and a unit arranged to vertically extend the window frame.

15. The trickle vent cover of any preceding claim, further comprising a grille member closing the base of the volume, the grille member including and a plurality of openings arranged to allow passage of air therethrough and removably connected to the canopy member.
- 5
16. The trickle vent cover of claim 15, wherein the grille member includes formations arranged to engage the connection means on the canopy member, to hold the grille member in place.
- 10 17. A window having
- a frame holding a pane of glass;
 - a trickle vent formed through the frame perpendicular to the pane of glass, the trickle vent only extending a portion of the width of the frame parallel to the horizontal extent of the pane of glass; and
 - 15 a trickle vent cover as claimed in any preceding claim on an external side of the frame, the trickle vent cover extending the full width of the frame, wherein the rear of the volume engages the frame.
18. The window of claim 17, wherein a lower edge of the canopy member at a lowermost and frontmost part of the volume vertically aligns with a top edge of a window sash in the window frame.
- 20
19. The window of claim 17 or claim 18, wherein:
- 25 the frame is formed with an integral or pre-existing trickle vent cover extending substantially the length of the trickle vent, and
 - the integral or pre-existing trickle vent cover is received in the volume formed by the canopy member, and the grille member is not included in the trickle vent cover.
- 30 20. The window of claim 17 or claim 18, wherein:
- the frame is provided without an integral or pre-existing trickle vent cover, and
 - the grille member is included.

21. The window of any preceding claim, wherein the frame comprises an add-on extender to increase the height of the claim.
22. The window of claim 21, wherein the fitting member engages the top of the
5 add-on extender.
23. The window of claim 21, wherein the fitting member is secured between the frame and the add-on extender.
- 10 24. A kit comprising a trickle vent cover as claimed in any of claims 1 to 14 and a grille member arranged to close the bottom of the volume, the grille member including a plurality of openings arranged to allow passage of air therethrough.
- 15 25. A method of fitting a kit as claimed in claim 24 to a window frame, the method comprising, prior to installing the window frame into a wall opening:
if the frame includes or is formed with an integral or pre-existing trickle vent cover extending substantially the length of the trickle vent, discarding the grille member; or
if the frame is formed without an integral or pre-existing trickle vent cover, or the integral or pre-existing trickle vent cover is removed,
20 fitting the grille member to the canopy member,
subsequently to discarding or fitting the grille member, securing the fitting means to the window frame.



Application No: GB2305143.6

Examiner: Mr Kunal Saujani

Claims searched: 1-25

Date of search: 24 October 2023

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, 2, 6-9, 12, 24	EP0324820 B1 (HAMILTON) See Figure 12 noting trickle vent cover 11B over trickle vent 11A, the cover including a fitting member 51 for engaging the top of the window, the open rear of the vent receives air from the window, the cover also holding a grill 24
X	1, 2, 6-8, 10, 11, 15-17, 20, 24, 25	JPS55110693 U See Figure 1 noting the trickle vent cover 11 for covering trickle vent 5 in frame D the cover portion enclosing a volume with an open rear and open base, a fitting portion (clip below 8a) engages the top of the window frame and a connection means 12 can hold a grille 14
X	1, 2, 6-12, 14-17, 20, 21, 23, 24, 25	US6648750 B1 (WISEMEN) - See Figure 1 noting trickle vent cover 80 including a cover over a volume 62 with an open back and an open base 66, a fitting portion (below 34) engages the top of a window frame and a connector 90 for holding grille 70 and frame extender 38
X	1, 2, 6-9, 12, 24	GB2113825 A (TITON) - See Figures 1 and 2b noting a cover having a canopy 2 with a over a volume holding a grill 40

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

E06B; F24F

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

SEARCH-PATENT



International Classification:

Subclass	Subgroup	Valid From
E06B	0007/10	01/01/2006
F24F	0013/18	01/01/2006