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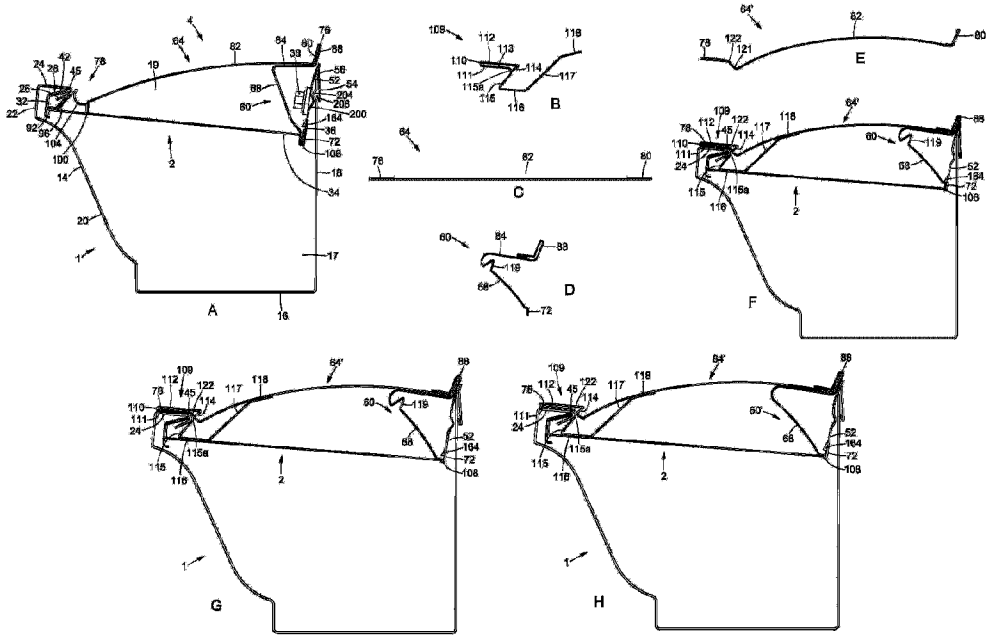
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(54) Titre : PROTEGE-GOUTTIERE ET TROUSSE DESTINEE A UNE GOUTTIERE MUNIE D'UN SUPPORT

(54) Title: GUTTER GUARD AND KIT FOR GUTTER HAVING HANGER



(57) Abrégé/Abstract:
There is provided a gutter kit comprising a gutter and a gutter hanger member. The gutter has a bottom wall, a front wall extending from the bottom wall and a rear wall extending from the bottom wall defining a trough having an open top, the rear wall having a first discontinuity formed along a length thereof. The gutter hanger member hasa front portion, a central portion and a rear portion. The front portion is engageable with the front wall of the gutter and the rear portion is engageable with the rear wall of the gutter. The rear portion has an inner segment and an outer segment defining a channel therebetween. The rear wall of the gutter is receivable within the channel. The inner segment has a second discontinuity protruding therefrom in a direction of the outer segment and is cooperatively engageable with the first discontinuity.

ABSTRACT

There is provided a gutter kit comprising a gutter and a gutter hanger member. The gutter has a bottom wall, a front wall extending from the bottom wall and a rear wall extending from the bottom wall defining a trough having an open top, the rear wall having a first discontinuity formed along a length thereof. The gutter hanger member hasa front portion, a central portion and a rear portion. The front portion is engageable with the front wall of the gutter and the rear portion is engageable with the rear wall of the gutter. The rear portion has an inner segment and an outer segment defining a channel therebetween. The rear wall of the gutter is receivable within the channel. The inner segment has a second discontinuity protruding therefrom in a direction of the outer segment and is cooperatively engageable with the first discontinuity.

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GUTTER GUARD AND KIT FOR GUTTER HAVING HANGER

TECHNICAL FIELD

The technical field generally relates to a gutter guard and gutter guard kits. More particularly, the technical field relates to a gutter guard and gutter guard kits that can be installed onto a gutter that has already been secured to a supporting structure.

BACKGROUND

Rain gutters are useful to collect rainwater that runs off the roof of a house or of a building and to route collected rainwater away from the foundation to a proper drainage area in order to avoid damages to the foundation, the soffit, the windows and/or the doors, for instance. Rain gutters generally include a trough channeling the rainwater to a downpipe or downspout, the trough being affixed to a supporting structure of the house or building such as the fascia board.

One or more gutter hanger members are used to support the gutter. One or more fasteners further secure the gutter hanger members to the supporting structure, whereby the gutter hangs from the supporting structure. Typically, each gutter hanger member engages front and rear walls of the gutter and part of the gutter hanger member is positioned slightly below the upper edges of the walls. The gutter hanger members may be positioned intermittently along the length of the gutter. Alternatively, a single continuous gutter hanger member, such as the T-Rex™, continuous hanger from Alu-Rex™, extending along the length of the gutter can be used to support the gutter.

Leaves and debris may accumulate within the trough of the gutter, which can prevent the rainwater from flowing through the trough. Gutter guards are used to protect the gutter by preventing leaves and debris from enter the trough of the gutter while still permitting rainwater to enter the trough.

SUMMARY

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According to one aspect, there is provided a gutter guard kit for covering an opening of a gutter having a front wall and a rear wall and further having a gutter hanger member secured thereto, the opening being defined by a top edge of the front wall and a top edge of the rear wall and the gutter hanger member being secured to the gutter from an engagement of a first end thereof with the front wall of the gutter and an engagement of a second end thereof with the rear wall of the gutter, the kit comprising: a support member having a rigid support portion, a hanger engagement portion extending from a first edge of the body portion and a guard retaining portion extending from a second edge of the body portion, the hanger engagement portion being engageable with the gutter hanger member at an engagement location below the top edge of the rear wall of the gutter; and a guard member having a plurality of throughholes formed therein, the guard member being engageable at a first end with at least one of the front wall of the gutter and the front end of the gutter hanger member and at a second end with the guard retaining portion of the support member, the guard member having a negative slope in a direction from its second end to its first end when engaged with the support member and said at least one of the front wall of the gutter and the front end of the gutter hanger member.

According to another aspect, there is provided a gutter guard for covering an opening of a gutter having a front wall and a rear wall and further having a gutter hanger member secured thereto, the opening being defined by a top edge of the front wall and a top edge of the rear wall and the gutter hanger member being secured to the gutter from an engagement of a first end thereof with the front wall of the gutter and an engagement of a second thereof with the rear wall of the gutter, the gutter guard comprising a rigid support portion, an engagement portion extending from a first edge of the rigid support portion, and a guard portion having a plurality of throughholes formed therein and extending from a second edge of the rigid support portion, the engagement portion being engageable with the gutter hanger member at an engagement location below the top edge of the rear wall of the gutter and the guard portion being engageable with at least one of the front wall of the gutter and the front end of the gutter hanger member, the guard portion

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having a negative slope in a frontward direction when the gutter guard is engaged with the gutter hanger member and the at least one of the front wall of the gutter and the front end of the gutter hanger member.

According to yet another aspect, there is provided a gutter kit comprising a gutter having a bottom wall, a front wall extending from the bottom wall and a rear wall extending from the bottom wall defining a trough having an open top, the rear wall having a first discontinuity formed along a length thereof; and a gutter hanger member having a front portion, a central portion and a rear portion, the front portion being engageable with the front wall of the gutter and the rear portion being engageable with the rear wall of the gutter, the rear portion having an inner segment and an outer segment defining a channel therebetween, the rear wall of the gutter being receivable within the channel, the inner segment having a second discontinuity protruding therefrom in a direction of the outer segment and being cooperatively engageable with the first discontinuity.

According to yet another aspect, there is provided a gutter guard kit for covering an opening of a gutter having a front wall and a rear wall and further having a gutter hanger member secured thereto, the opening being defined by a top edge of the front wall and a top edge of the rear wall and the gutter hanger member being secured to the gutter from an engagement of a first end thereof with the front wall of the gutter and an engagement of a second end thereof with the rear wall of the gutter. The gutter guard kit includes an interfacing member having a C-shaped section defining a channel, a blocking portion extending downwardly from the C-shaped section and a bottom portion extending rearwardly from the blocking portion, the C-shaped section being engageable with the front wall of the gutter and the bottom portion being engageable with the gutter hanger member; and a guard member having a plurality of throughholes formed therein, the guard member having a front end region being receivable within the channel of the C-shaped section of the interfacing member to be engaged therewith and an opposed rear end region, the guard member having a negative slope in a direction from its opposed rear end region to its front end region when engaged with the gutter and the interfacing member.

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According to yet another aspect, there is provided a gutter guard kit for covering an opening of a gutter having a front wall and a rear wall and further having a gutter hanger member secured thereto, the opening being defined by a top edge of the front wall and a top edge of the rear wall and the gutter hanger member being secured to the gutter from an engagement of a first end thereof with the front wall of the gutter and an engagement of a second end thereof with the rear wall of the gutter. The kit includes a support member having a rigid support portion, a hanger engagement portion extending from a first edge of the body portion and a guard retaining portion extending from a second edge of the body portion, the hanger engagement portion being engageable with the gutter hanger member at an engagement location below the top edge of the rear wall of the gutter, the body portion having a resilient folded rib defined therein; and a guard member having a front end region, a rear end region, and a plurality of throughholes formed therein, the front end region of the guard member being engageable with at least one of the front wall of the gutter and the front end of the gutter hanger member and the rear end region of the guard member being engageable with the guard retaining portion of the support member, the guard member having a negative slope in a direction from its rear end region to its front end region when engaged with the support member and said at least one of the front wall of the gutter and the front end of the gutter hanger member, a height of the rear end region of the guard member being adjustable from folding or expanding of the resilient folded rib.

According to yet another aspect, there is provided a gutter guard kit for covering an opening of a gutter having a front wall and a rear wall and further having a gutter hanger member secured thereto, the opening being defined by a top edge of the front wall and a top edge of the rear wall and the gutter hanger member being secured to the gutter from an engagement of a front portion thereof with the front wall of the gutter and an engagement of a rear portion thereof with the rear wall of the gutter, the rear portion having an inner segment and an outer segment defining a channel receiving the rear wall of the gutter. The kit includes a support member having a rigid support portion, a flange extending rearwardly from a first edge of the rigid support portion, a guard retaining portion extending from a second edge

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of the rigid support portion, the flange being engageable with the gutter hanger member from at least one of being disposed on a top surface of the gutter hanger member and abutting the inner segment of the rear portion of the gutter hanger member; and a guard member having a front end region, a rear end region, and a plurality of throughholes formed therein, the front end region of the guard member being engageable with at least one of the front wall of the gutter and the front end of the gutter hanger member and the rear end region of the guard member being engageable with the guard retaining portion of the support member, the guard member having a negative slope in a direction from its rear end region to its front end region when engaged with the support member and said at least one of the front wall of the gutter and the front end of the gutter hanger member.

According to yet another aspect, there is provided a gutter guard for covering an opening of a gutter having a front wall and a rear wall and further having a gutter hanger member secured thereto, the opening being defined by a top edge of the front wall and a top edge of the rear wall and the gutter hanger member being secured to the gutter from an engagement of a first end thereof with the front wall of the gutter and an engagement of a second end thereof with the rear wall of the gutter, the gutter guard comprising a rigid support portion, an engagement portion extending from a first edge of the rigid support portion, and a guard portion having a plurality of throughholes formed therein and extending from a second edge of the rigid support portion, the rigid support portion having a resilient folded rib defined therein, the engagement portion being engageable with the gutter hanger member at an engagement location below the top edge of the rear wall of the gutter and the guard portion being engageable with at least one of the front wall of the gutter and the front end of the gutter hanger member, the guard portion having a negative slope in a frontward direction when the gutter guard is engaged with the gutter hanger member and the at least one of the front wall of the gutter and the front end of the gutter hanger member, a height of the gutter portion being adjustable from folding or expanding of the resilient folded rib

According to yet another aspect, there is provided a gutter guard for covering an opening of a gutter having a front wall and a rear wall and further having a gutter

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hanger member secured thereto, the opening being defined by a top edge of the front wall and a top edge of the rear wall and the gutter hanger member being secured to the gutter from an engagement of a front portion thereof with the front wall of the gutter and an engagement of a rear portion thereof with the rear wall of the gutter, the rear portion having an inner segment and an outer segment defining a channel receiving the rear wall of the gutter, the gutter guard comprising a rigid support portion, a flange extending from a first edge of the rigid support portion, and a guard portion having a plurality of throughholes formed therein and extending from a second edge of the rigid support portion, the flange being engageable with the gutter hanger member from at least one of being disposed on a top surface of the gutter hanger member and abutting the inner segment of the rear portion of the gutter hanger member and the guard portion being engageable with at least one of the front wall of the gutter and the front portion of the gutter hanger member, the guard portion having a negative slope in a frontward direction when the gutter guard is engaged with the gutter hanger member and the at least one of the front wall of the gutter and the front end of the gutter hanger member

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the embodiments described herein and to show more clearly how they may be carried into effect, reference will now be made, by way of example only, to the accompanying drawings which show at least one exemplary embodiment, and in which:

Figure 1A illustrates a cross-sectional view of a gutter, a gutter hanger member and gutter guard according to an example embodiment;

Figure 1B illustrates a cross-sectional view of an interfacing member for engaging and supporting a gutter guard according to an example embodiment;

Figure 1C illustrates a cross-sectional view of an unshaped guard member according to one example embodiment;

Figure 1D illustrates a cross-sectional view of a support member for engaging and supporting a gutter guard according to one example embodiment;

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Figure 1E illustrates a cross-sectional view of a shaped guard member according to an alternative example embodiment for use with the interfacing member shown in Figure 1B;

Figure 1F illustrates a first example embodiment of a gutter assembly having an interfacing member and a support member, wherein the support member includes an engagement portion with an inverted “L-shaped” flange and a folded rib;

Figure 1G illustrates a second example embodiment of a gutter assembly having the interfacing member and the support member, wherein the support member includes an engagement portion with a horizontally extending flange and the folded rib;

Figure 1H illustrates a third example embodiment of a gutter assembly having the interfacing member and the support member, wherein the support member includes the engagement portion with the horizontally extending flange and the folded rib;

Figure 2 illustrates a cross-sectional view of a gutter, a gutter hanger member and one-piece gutter guard according to an example embodiment;

Figure 3 is a perspective photograph of a gutter, a gutter hanger member and a two-piece gutter guard according to an example embodiment;

Figure 4 is a close-up perspective photograph of the assembly of Figure 3.

It will be appreciated that for simplicity and clarity of illustration, elements shown in the figures have not necessarily been drawn to scale. For example, the dimensions of some of the elements may be exaggerated relative to other elements for clarity.

DETAILED DESCRIPTION

In the following description, there is described various embodiments related to a gutter guard. As will be readily understood by one skilled in the art, the gutter guard, gutter hanger member and gutter according to the embodiments presented herein and equivalents thereto may be provided separately or in combination. Such combination may or may not be commercialized as a kit to be assembled. In

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another embodiment, a gutter guard that may be commercialized as a standalone component to fit over a traditional gutter is provided.

Although the embodiments of the gutter guard and corresponding parts thereof consist of certain geometrical configurations as explained and illustrated herein, not all of these components and geometries are essential and thus should not be taken in their restrictive sense. It is to be understood, as also apparent to a person skilled in the art, that other suitable components and cooperation thereinbetween, as well as other suitable geometrical configurations, may be used for the gutter guard, as will be briefly explained herein and as can be easily inferred herefrom by a person skilled in the art.

Moreover, it will be appreciated that positional descriptions such as “front”, “rear”, “upper”, and the like should be taken in the context of the figures only and should not be considered limiting. More particularly, they correspond to the position and orientation of the gutter, when mounted to a supporting surface of a supporting structure, and the gutter guard when mounted onto a gutter. The rear position corresponds to portions adjacent to the supporting surface while the front position corresponds to portions opposed to the supporting surface. The inner position corresponds to portions/surfaces facing the gutter trough while the outer position corresponds to portions/surfaces facing outwardly.

Having discussed the general context of the gutter guard, optional embodiments will be discussed further hereinbelow. The embodiments according to the following description are given for exemplification purposes only.

Referring now to Figure 1A, therein illustrated is a cross-sectional view of a gutter 1 being supported by a gutter hanger member 2 and have installed thereon a gutter guard 4 according to a first example embodiment.

The gutter 1 includes a front wall 14 and a rear wall 18 extending upwardly from a bottom wall 16 to define a trough 17 having an open top 19. The open top 19 of the gutter 1 may be defined between a top edge of the front wall 14 and a top edge

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of the rear wall 18 of the gutter 1. In the embodiment shown, the front wall 14 of the gutter 1 includes, successively, an outwardly inclined segment 20, an upright segment 22, an upper rim 24 and a downwardly frontwardly extending flange 26. The succession of the upright segment 22, the upper rim 24 and the downwardly frontwardly extending flange 26 forms an inward recess 28. In turn, the upper rim 24 and the downwardly frontwardly extending flange 26 form a hook portion 45 projecting in the inward recess 28. It will be understood that the shape of the front wall 14 can vary from the embodiment described above with reference to Figure 1.

The gutter hanger member 2, engageable with the gutter 1, includes a front portion 32, a central portion 34, and a rear portion 36. The front portion 32 and the rear portion 36 are respectively engageable with the front wall 14 and the rear wall 18 of the gutter 12. The central portion 34 extends between and connect the front portion 32 and the rear portion 36. A mechanical fastener 38 secures the gutter hanger member 2 and the gutter 1 to the supporting structure (not shown). As described elsewhere herein, the gutter hanger member 2 may be a hanger bracket.

In one embodiment, the gutter hanger member 2 includes a plurality of hanger brackets that are positioned along the length of the gutter 1 and that engage the gutter 1. A mechanical faster 38 is provided for each bracket to secure the gutter hanger member 2 and the gutter 1 to the supporting structure.

In another embodiment, the gutter hanger member 2 includes a plurality of spikes and ferrules that are positioned along the length of the gutter 1 and that engage the gutter 1. The spikes act as the mechanical fastener for securing the gutter hanger member 2 to the supporting structure.

In yet another embodiment, the gutter hanger member 2 may be a continuous gutter hanger extending along a length of the gutter 1. The central portion 34 of continuous gutter hanger member 2 can have a plurality of through holes formed therein, such as being perforated.

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In the illustrated embodiment, the front portion 32 includes at a front end thereof, an upwardly extending segment 42 projecting upwardly and rearwardly from a front edge of the central portion 34. The upwardly extending segment 42 is configured to be inserted into the inward recess and engage the hook portion 45 in order to cause the front portion 32 to be retained with the front wall 14 of the gutter 1.

The rear portion 36 of the gutter hanger member 2 includes a gutter wall-engaging section, or gutter wall-contacting section, which includes an inner segment 52 and an outer segment 54 defining a channel therebetween. This channel allows the rear portion 36 of the gutter hanger member 2 to receive an upper section of the rear wall 18 of the gutter 1 therein.

As illustrated, when the gutter hanger member 2 is engaged with the gutter 1, the central portion 34 thereof is received below a top edge 56 of the rear wall 18 of the gutter 1.

Continuing with Figure 1A, the gutter guard 4 includes a support member 60 and a guard member 64. The support member 60 has a rigid support portion 68, a hanger engagement portion 72 and a guard retaining portion 76. The hanger engagement portion 72 is engageable with the gutter hanger member 2. The hanger engagement portion 72 engages the gutter hanger member 2 at an engagement location that is below the top edge 56 of the rear wall 18 of the gutter 1. For example, and as illustrated, the engagement location corresponds to an interface between the central portion 34 and rear portion 36 of the gutter hanger member 2.

When this engagement is formed, the support member 60 is retained by the hanger engagement portion 72. Furthermore, the rigid support portion 68 is oriented to project upwardly from the first location. The rigid support portion extends upwardly along the rear wall 18 of the gutter 1 and the inner segment 52 of the rear portion 36 of the gutter hanger member 2. As illustrated, the rigid support portion 68 may extend slightly inwardly to form an acute angle with the central portion 34 of the gutter hanger member 2. This slight inward extension accommodates the head of

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the fastener 38 that is protruding inwardly from the inner segment 52 of the gutter hanger member 2.

The guard member 64 has a plurality of throughholes formed therein that allow passage of liquid from an upper surface of the guard member 64 to a lower surface of the guard member 64 while capturing and restricting passage therethrough of debris, such as tree leaves.

Upon the support member 60 being engaged with the gutter hanger member 2, a first end region 78 of the gutter guard 4 is engageable with at least one of the front wall 14 of the gutter 1 and the front portion 32 of the gutter hanger member 2. It will be appreciated that the first end region 78 corresponds to a front end region of the gutter guard 4.

The gutter guard 4 is further couplable at its second end region 80 with the hanger member 2. In the illustrated example, the gutter guard 4 is engageable at its second end region 80 to the guard retaining portion 76 of the support member 60. It will be further appreciated that the second end region 80 corresponds to a rear end region of the gutter guard 64. When the guard member 64 is engaged at its first and second end regions 78, 80, a central portion 82 of the guard member 64, located between its first and second end regions 78, 80, extends over the opening 19 of the gutter 1 between the front and rear walls 14, 18 thereof, and above the gutter hanger member 2. Accordingly, the gutter guard 4 is coupled to the gutter hanger member 2 via the support member 60.

It is appreciated that, in an alternative embodiment, the guard member 64 can be integrally formed with the support member 60. That is, the guard member 64 and the support member 60 have a one-piece construction.

According to one example embodiment, the guard retaining portion 76 of the support member 60 includes a lip sub-portion 84 that extends rearwardly from the rigid support portion 68. As illustrated, the lip sub-portion 84 may also extend rearwardly from the rigid support portion 68. The lip sub-portion 84 presents an

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upper surface that is oriented substantially transversely to the rear wall 18 of the gutter 1. A bottom of the second end region 80 of the guard member 64 is disposed against the upper surface of the lip sub-portion 84 when the guard member 64 engages the support member 60.

The guard retaining portion 76 of the support member 60 may include a backstop sub-portion 88 extending upwardly from the lip sub-portion 84. The backstop sub-portion 88 may be formed of a rearward upwardly extending segment and a frontward segment extending forwardly from the rearward upwardly extending segment that together form a slot. The second end region 80 of the guard member 64 can be received within the slot. The second end region 80 may further abut against the backstop sub-portion 88.

According to an embodiment, and as illustrated in Figure 1A, the first end region 78 of the guard member 64 includes a forwardly extending flange 92 which abuts against the front portion 32 of the gutter hanger member 2. The front portion 32 acts to block displacement of the guard member 64 in the frontward direction.

The first end region 78 of the guard member 64 may further include an inclined segment 96 extending upwardly and rearwardly from the flange 92. The inclined segment 96 abuts the downwardly frontwardly extending flange 26 of the front wall 14 of the gutter 1. The downwardly frontwardly extending flange 26 acts to block displacement of the guard member 64 in the upward direction.

The first end region 78 may further include a downwardly extending rib 100 that is supported by the central portion 34 of the gutter hanger member 2 when the first end region 78 engages the at least one of the first front wall 14 of the gutter 1 and the front portion 32 of the gutter hanger member 2. The downwardly extending rib 100 is joined to the inclined segment 96 by an arched segment 104. The downwardly extending rib 100 and the arched segment 104 cooperate to provide structural rigidity and ensure abutment of the inclined segment 96 against the downwardly frontwardly extending flange 26 of the front wall 14 of the gutter 1.

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According to various example embodiments where the gutter guard 4 is formed of a resilient material, the arched segment 104 acts like a spring member. When the gutter guard 4 is appropriately positioned, the arched segment 104 causes the inclined segment 96 to be biased towards the front wall 14 of the gutter 1, such as the downwardly frontwardly extending flange 26 thereof. The arched segment 104 may also cause the downwardly extending rib 100 to be biased towards the top surface of the central portion 34 of the gutter hanger member 2.

It will be appreciated that due to the rigid support portion 88 being oriented to project upwardly from the engagement location of the support member 60 with the gutter hanger member 2, the guard retaining portion 76 is located above the engagement location. Accordingly, when the second end region 80 of the guard member 64 engages the support member 60, the second end region 80 is also positioned above the engagement location. The rigid support portion 68 may be sized so that the guard retaining portion 76 is located in proximity of the top edge 56 of the rear wall 18 of the gutter 1. As a result, the second end region 80 of the guard member 64 is also located in proximity of the top edge 56 of the rear wall 18 when engaged with the guard retaining portion 76. For example, and as illustrated, the rigid support 68 is sized so that the guard retaining portion 76 (and the second end region 80 of the guard member 64) is located above the top edge 56 of the rear wall 18 of the gutter 1.

It will be further appreciated that the positioning of the guard retaining portion 76 and the second end region 80 of the guard member 64 causes the guard member 64 to have a negative slope from its second end region 80 towards its first end region 78 when engaged to the guard retaining portion 76 and the at least one of the front portion 32 of the gutter hanger member 2 and the front wall 14 of the gutter 1. It was observed that this negative slope in the frontward direction promotes passage of liquid through the guard member 64 into the gutter 1 and reduces accumulation of debris on the guard member 64 that would otherwise restrict flow of liquid.

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According to an example embodiment, and as illustrated, the gutter hanger member 2 includes a longitudinal channel 108 extending along the length of the gutter hanger member 2. The longitudinal channel 108 is formed at or in proximity of the interface between the central portion 34 and rear portion 36 of the gutter hanger member 2. The longitudinal channel 108 may extend downwardly from the central portion 34 of the gutter hanger member 2. The engagement portion 72 of the support member 60 includes a lip that is sized to be received within the longitudinal channel 108. Insertion of the lip within the longitudinal channel 108 forms the engagement of the hanger engagement portion 72 to the gutter hanger member 2.

According to various example embodiments, the guard hanger member 2 is formed of sheet metal, such as aluminum sheet metal. The sheet metal can be bent and folded to form various portions of the guard hanger member 2. A region of the sheet metal near a first edge thereof can be appropriately folded to form the upper portion 32. A central region of the sheet metal can be bent to form a u-shaped cross-section corresponding to the longitudinal channel 108. A region of the sheet metal forming the guard hanger member 2 near a second edge thereof can be appropriately folded to form the inner segment 52 and the outer segment 54. The sheet metal can be perforated.

According to various example embodiments, the support member 60 is formed of sheet metal, such as aluminum sheet metal. The sheet metal forming the support member 60 can be bent and folded to form various portions of the support member 60. A region of the sheet metal near a first edge thereof can be appropriately folded to form the lip of the engagement portion 72 for insertion into the longitudinal channel 108 of the gutter hanger member 2. A central portion of the sheet metal can be appropriately bent to form the rigid support portion and the lip sub-portion 84 of the retaining portion 68. A region of the sheet metal near a second edge thereof can be appropriately folded to form the backstop sub-portion 88, including the rearward upwardly extending segment and the frontward segment thereof.

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According to various example embodiments, the guard member 64 is in the form of a sheet. The sheet may be sheet metal, such as aluminum sheet metal. Alternatively, the sheet may be a wire mesh, such as a metal wire mesh and, more particularly, an aluminum wire mesh. The sheet forming the guard member 64 can be bent and folded to form various portions of the guard member 64. A region of the sheet near a first edge thereof can be appropriately folded and bent to form the first end region 78 thereof, such as the flange 92, inclined segment 96, arched segment 104 and downwardly extending rib 100. A region of the sheet near the second edge thereof can be appropriately folded and bent to form the second end region 80 thereof. The second end region 80 may be folded upon itself to form a double layer that is inserted into the backstop sub-portion to form engagement with the guard retaining portion 68 of the support member 60.

According to various example embodiment, the guard member 64 and the support member 60 can be provided together within a kit. The guard member 64 and the support member 60 can be retrofitted to a gutter that has already been secured to the supporting surface.

The gutter hanger member 2 can also be provided within the kit with the guard member 64 and the support member 60. For example, the gutter hanger member 2 includes the longitudinal channel 108 that is sized to receive the engagement portion 72 of the support member 60.

Referring now to Figure 1B, therein illustrated is a cross-sectional view of an interfacing member 109 that is operable to provide an interfacing between the front end region 78 of the gutter guard 4', the front wall 14 of the gutter 1 and the front portion 32 of the gutter hanger member 2.

The interfacing member 109 includes a substantially C-shaped section 110 having a bottom layer 111 and a top layer 112. The bottom layer 111 and the top layer 112 define a channel 113 therebetween. A first end of the interfacing member 109 includes a downwardly-extending hook 114 extending from the top layer 112 towards the bottom layer 111.

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The interfacing member 109 further includes a blocking portion 115 extending from the bottom layer 111. The blocking portion 115 is oriented downwardly and forwardly from the bottom layer 111. A bottom portion 116 extends rearwardly from the blocking portion 115. A supporting portion 117, which terminates in a supporting lip 118, extends upwardly and rearwardly from the bottom portion 116. For example, and as illustrated, the supporting portion 117 extends upwardly past the C-shaped section 110, and rearwardly therefrom.

The interfacing member 109 may be formed of a material that is more rigid than the gutter guard 64. For example, the interfacing member 109 is formed of aluminum. The interfacing member 109 may be formed by appropriately folding an aluminum sheet to obtain the cross-sectional shape as illustrated.

Various portions of the interfacing member 109 may be perforated (i.e. having throughholes) while other portions of the interfacing member 109 are non-perforated (solid, without throughholes). More particularly, the C-shaped section 110 and the blocking portion 115 may be non-perforated. The bottom portion 116 and the supporting portion 117 including the supporting lip 118 may be perforated.

Figure 1C illustrates a cross-sectional view of unshaped guard member 64 according to one example embodiment. As described elsewhere herein, the guard 64 is formed of wire mesh and, more particularly, metal wire mesh. In the unshaped configuration, a first end region 78 of the guard member 64 is folded onto itself to form a double-ply (or bight). Similarly, a second end region 80 is also folded onto itself to for a double ply (or bight).

Figure 1E illustrates a cross-sectional view of a shaped guard member 64' according to an alternative example embodiment for use with the interfacing member 109. An upward fold 121 is formed in proximity of the first end region 78 while the first end region 78 is oriented substantially horizontally. The central portion 82 is shaped to be arched convexly. The first end region 78 also includes an arched segment 122 provided forwardly of the upward fold 121 and the arched

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central portion 82. A second end region 80 is folded to be oriented upwardly and also includes an inward fold.

Figures 1F, 1G, and 1H, illustrate various example embodiments of a gutter assembly with the interfacing member 109 and the guard member 64'. The front end region 78 is received within the channel 113 between bottom layer 111 and top layer 112 of the C-shaped section 110. The front end region 78 of the guard member 64' maintains frictional engagement with the bottom layer 111 and the top layer 112. The C-shaped section 110 is disposed on the upper rim 24 of the front wall 14 of the gutter hanger member 2.

The gutter assembly having the interfacing member 109 shares various similarities with the gutter assembly described herein with reference to Figure 1A. It will be understood that the description provided herein with respect to Figure 1A is also applicable to the embodiments described in Figures 1F, 1G, and 1H, as appropriate.

The blocking portion 115 includes a transitional arched sub-portion 115a extending rearwardly from the bottom layer 111. The arched sub-portion 115a contours the outer surface of the hook 45 of the gutter 1. The arched sub-portion 115a may be sandwiched between the hook 45 of the gutter 1 and the arched segment 122 of the guard member 64'. Frictional engagement of the bottom layer 111 with the upper rim 24 and frictional engagement of the arched sub-portion 115a of the blocking portion 115 with the hook 45 maintain the position of the interfacing member 109 with the gutter 1.

The blocking portion 115 further extends downwardly and forwardly towards the upper surface of the central portion 34 of the guard hanger member 2. The guard member 64' may be pinched between the hook 114 and the transitional arched sub-portion of the blocking portion 115.

The bottom portion 116 of the interfacing member 109 abuts against the upper surface of the central portion 34 of gutter hanger member 2 and is supported

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thereby. The bottom portion 116 frictionally engages the central portion 34 of the gutter hanger member 2 to maintain its position therewith.

The supporting portion 117 of the interfacing member 109 extends upwardly and rearwardly from the gutter hanger member 2. It includes a supporting lip 118, which engages a lower surface of the guard member 64'. For example, and as illustrated, the supporting lip 118 is angled to follow the arched form of the guard member 64'.

As described elsewhere, the interfacing member 109 maintains engagement and positioning of the gutter 1, gutter hanger member 2 and the guard member 64' relative to one another. Additionally, the blocking portion 115 acts to restrict flow of water pooling over the gutter hanger member 2 and direct such water towards the centre of the gutter hanger member 2. Similarly, the hook 114 also acts to restrict flow of water toward the first end region 78 of the guard member 64'.

The supporting portion 117 is substantially resilient and acts to support and maintain the arched shape of the guard member 64'. A downward force applied on the guard member 64' (ex: from debris or water collecting a guard member 64') is counter-acted by the supporting portion 117 including the supporting lip 118 of the interfacing member 109.

Referring now to Figure 1D, there is illustrated a cross-sectional view of a support member 60' according to an alternative example embodiment. It will be appreciated that the support member 60' also includes a rigid support portion 68 having a substantially concavely arched shaped extending forwardly when engaged with the gutter hanger member 2, which improves structural rigidity of the support member 60' and further contributes to the guard member 64' maintaining its arched shaped.

Optionally, as illustrated, the body portion 68 of the support member 60' may include a folded rib 119, which in the embodiment shown in Figures 1F and 1G is folded upwardly. The folded rib 119 is substantially resilient, which allows the sides

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of the folded rib 119 to be folded towards one another under force while being biased in a direction away from one another.

As illustrated in Figures 1F, 1G, and 1H, in use, the support member 60 is positioned between the guard member 64' and the gutter hanger member 2 to support and raise the second end region of the guard member 64'. For example, and as illustrated, the lower surface of the guard member 64' abuts against a lip sub-portion 84 of the support member 60. The support member 60, being resilient and being biased in an upward position, assists in maintaining a height of the second end region 80 of the guard member 64'.

Where the folded rib 119 is provided in the support member 60, the sides of the folded rib 119 may be displaced under force towards one another to adjust the effective height of the support member 60 and suitably position the support member 60 between the guard member 64' and the gutter hanger member 2. The sides of the folded rib 119 can then be released, which causes the lip sub-portion 84 to abut against the guard member 64' and maintain a constant height of the second end region 80 of the guard member 64' above the gutter hanger member 2.

Referring now to Figures 1G to 1H, there is shown that the support member 60 has an engagement portion 72 in the form of a flange extending rearwardly from the concavely arched shaped portion. When the support member 60 is appropriately positioned between the gutter guard 64' and the gutter hanger member 2, a substantially horizontally extending section of the flange 72 is disposed against a top surface of the gutter hanger member 2 and an end of the flange 72 abuts against an inner segment 52 of the gutter hanger member 2. Due to the support member 60 being resilient, the flange 72 is biased towards the top surface and the inner segment 52 of the gutter hanger member 2.

For example, and as illustrated, the flange 72 is positioned between the upper surface of the gutter hanger member 2 and a protruding member 164 formed in the inner segment 52. These delimit the upward and downward movement of the

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flange 72 of the support member 60' and maintains a proper positioning of the support member 60' to continue supporting the second end region 80 of the gutter member 64'.

Figures 1F to 1H respectively show two different embodiments of the flange 72 of the support member 60. In the embodiment shown in Figure 1F, the shape is in the form of an inverted "L-shaped" flange extending downwardly and rearwardly from the concavely arched shaped portion. It includes the substantially horizontally extending section a substantially vertically extending section abutting against the inner segment 52 of the gutter hanger member 2. The end of the vertically extending section is inserted in the channel 108 defined in the gutter hanger member 2.

In Figures 1G and 1F, the flange 72 of the support member 60 includes solely the substantially horizontally extending section, which is disposed against the top surface of the gutter hanger member 2 with the end abutting the inner segment 52 of the gutter hanger member 2. The flange 72 covers the channel 108 defined in the gutter hanger member 2.

Turning now to Figure 1F, the support member 60' illustrated therein in use within a gutter assembly has a body portion 68 having a continuously arched shape (i.e. does not include a folded rib 119). It was observed that the body portion 68 having this continuously arched shape can also be effective in maintaining engagement of the support member 60' with the gutter hanger member 2 while supporting the guard member 64'.

Referring now to Figure 2, therein illustrated is a cross-sectional view of a gutter 1 being supported by a gutter hanger member 2 and having installed thereon a one-piece gutter guard 4' according to a second example embodiment. The gutter guard 4' is also to be used for providing protection to the gutter 1 and is operable to be mounted over the open top 19 of the gutter. Unlike the gutter guard 4 described herein with reference to figure 1, the one-piece gutter guard 4' has a one-piece construction.

The gutter 1 of Figure 2 is substantially similar to the gutter 1 described herein with reference to Figure 1, and the description provided with reference to Figure 1 is also applicable to the gutter 1 of Figure 2.

The gutter hanger member 2 of Figure 2 is substantially similar to the gutter hanger member 2 described herein with reference to Figure 1, and the description provided with reference to Figure 1 is also applicable to the gutter hanger member of Figure 2.

The gutter guard 4' includes a rigid support portion 120, a hanger engagement portion 128, a guard portion 132 and a front engagement portion 136. The hanger engagement portion 128 of the one-piece gutter guard 4' is similar to the hanger engagement portion 72 described herein with reference to the gutter guard 4. The hanger engagement portion 128 is engageable with the gutter hanger member 2 at a location that is below the top edge 56 of the rear wall 18 of the gutter 1. For example, and as illustrated, the location of this engagement corresponds to an interface between the central portion 34 and the rear portion 36 of the gutter hanger member 2.

According to the example embodiment in which the gutter hanger member 2 includes a longitudinal channel 108 (also shown in Figure 2), the engagement portion 72 of the support member 60 can include a lip that is sized to be received within the longitudinal channel 108 to form the engagement of the hanger engagement portion 128 to the gutter hanger member 2.

The engagement causes the one-piece gutter guard 4' to be retained at a first end by the hanger engagement portion 128. When so retained, the rigid support portion 120 extends upwardly along the rear wall 18 of the gutter 1 and the inner segment 52 of the rear portion 36 of the gutter hanger member 2. The hanger engagement portion 128 extends from a first edge of the rigid support portion 120. As illustrated, the rigid support portion 120 may extend slightly inwardly to accommodate the head of the fastener 38 that is protruding inwardly from the inner segment 52 of the gutter hanger member 2.

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It will be appreciated that the one-piece gutter guard 4' is also couplable to the hanger member 2. In the example illustrated in Figure 2, the one-piece gutter guard 4' is directly coupled to the hanger member 2 through engagement of the hanger engagement portion 128 with the gutter hanger member 2.

The guard portion 132 extends transversely from a second edge of the rigid support portion 120. When the hanger engagement portion 128 is engaged with the gutter hanger member 2, the guard portion 132 extends in the frontward direction from the rigid support portion 120 the front wall 14 of the gutter 1.

The guard portion 132 has a plurality of throughholes formed therein that allow passage of liquid from an upper surface of the guard portion 132 to a lower surface of the guard portion 132 while capturing and restricting passage therethrough of leaves and debris.

The front engagement portion 136 is engageable with at least one of the front wall 14 of the gutter 1 and the front portion 32 of the gutter hanger member 2. When the front engagement portion 136 is so engaged, and the hanger engagement portion 128 is engaged with the gutter hanger member 2, the guard portion 132 of the one-piece gutter guard 4' extends over the opening 19 of the gutter 1 between the front and rear walls 14, 18, thereof.

According to an embodiment, and as illustrated, the front engagement portion 136 of the one-piece gutter guard 4' includes a pinched segment 140 that is insertable into a space defined between the upwardly extending segment 42 of the front portion 32 and the central portion 34 of the gutter hanger member 2. As illustrated, the pinched sub-portion 140 frictionally engages a lower surface of the upwardly extending segment 42 and an upper surface of the central portion 34 so as to be pinched therebetween. The front engagement portion 136 further includes a flange 144 extending in the frontward direction and adapted to be disposed on an upper surface of the upper rim 24 of the front wall 14 of the gutter 1. The flange 144 can frictionally engage the upper rim 24. It will be appreciated that that the flange 144 and the pinched sub-portion 140 also provides a pinching action of the upper rim

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24 and the upwardly extending segment 42 to further improve retention of the front engagement portion with one or both of the front wall 14 of the gutter 1 and the front portion 32 of the gutter hanger member 2. The front engagement portion 136 further includes an inclined segment 148 extending between the flange 144 and the pinched sub-portion 140. The inclined segment 148 is sized and shaped to follow the outer contour of the hook 45 of the front wall 14 of the gutter 1 and guides positioning of the flange 144 over the upper rim 24 and the pinched segment 140 between the upwardly extending segment 42 and the central portion 34.

However, it will be understood that the front engagement portion 136 may have other structural configurations that allow engagement with the at least one of the front wall 14 of the gutter 1 and the front portion 32 of the gutter hanger member 1. For example, the front engagement portion 136 can have a structure that is similar to the front end region 78 of the gutter member 64 of the gutter guard 4. Similarly, referring back to Figure 1, the front end region 78 of the gutter member 64 may have the structural configuration of the front engagement portion 136 of the gutter guard 4' illustrated in Figure 2.

According to an example embodiment, and as illustrated, the interface between the rigid support portion 120 and the guard portion 132 can include a lip sub-portion 152 extending rearwardly from the rigid support portion 120. An end of the guard portion 132 is disposed on the lip sub-portion 152 to provide mechanical support to the guard portion 132 extending across the opening 19.

The interface may further include a backstop sub-portion 156 extending upwardly from the rearward end of the guard portion 132. The backstop portion 156 can abut against a top region of the inner segment 52 of the gutter hanger member 2, a top region of the rear wall 18 of the gutter 1 or the supporting structure and is effective in maintaining the position of the guard portion 132 of the gutter guard 4' over the opening 19 of the gutter 1. However, it will be understood that in other embodiments, the guard portion 132 can be appropriately positioned without abutting the top region of the inner segment 52.

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It will be appreciated that due to the rigid support portion 120 being oriented to project upwardly from the location of engagement of the hanger engagement portion 128 with the gutter hanger member 2, the guard portion 132 is located above the engagement location (corresponding to where the engagement portion 128 engages the gutter hanger member 2). Accordingly, the rearward end of the guard portion 132 is also positioned above the location of the engagement. The rigid support portion 120 may be sized so that the guard portion 132 is located in proximity of the top edge 56 of the rear wall 18 of the gutter 1. For example, and as illustrated, the rigid support portion 120 is sized so that the rearward end of the guard portion 132 is located above the top edge 56 of the rear wall 18 of the gutter 1.

It will be further appreciated that the positioning of the rearward end of the guard portion 132 causes the guard portion 132 to have a negative slope from its rearward end towards its frontward end when the gutter guard 4' is engaged with the gutter hanger member 2 and the at least one of the front portion 32 of the gutter hanger member 2 and the front wall 14 of the gutter 1. It was observed that this negative slope in the frontward direction reduces accumulation of leaves and debris on the that would otherwise restrict flow of liquid.

According to various example embodiments, the one-piece gutter guard 4' is in the form of a sheet. The sheet may be sheet metal, such as aluminum sheet metal. Alternatively, the sheet may be a metal mesh, such as aluminum mesh. The sheet forming the gutter guard 4' can be bent and folded to form various portions thereof. A region of the sheet metal near a first edge thereof can be appropriately folded and bent to form the front engagement portion 136, such as the pinched segment 144, inclined segment 148 and flange 144. One or more folds and/or bends may be made at the interface between the guard portion 132 and the rigid support portion 120 to form the backstop sub-portion 156 and the lip sub-portion 152. A region of the sheet metal near a second edge thereof can be appropriately folded to form the hanger engagement portion 128. It will be understood that entire gutter guard 4' can be formed of a single sheet of metal or metal mesh.

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In one example embodiment, and as illustrated, an interface between the front engagement portion 136 and the frontward end of the guard portion 132 includes a second inclined segment 160 extending rearwardly and downwardly from the flange 144. A folded rib 162 may be formed between the second inclined segment 160 and the flange 144 to ensure that orientation of the second inclined segment 160 is maintained and/or reinforced. The second inclined segment 160 is oriented in this way so that the negative slope of the guard portion 132 in the frontward direction can be achieved while still positioning the flange 144 over the upper rim 24 of the front wall 14. Alternatively, the front engagement portion of the gutter guard 4' can have the configuration described herein with respect to Figure 1 (ex: front end region, downwardly extending rib 100, inclined segment 96 and arched segment 104).

It will be appreciated that the guard member 64 is illustrated in Figure 1 to have an arched cross-section when engaged with the support member 60 and the at least one of the front wall 14 of the gutter 1 and the gutter hanger member 2. Guard portion 132 of the gutter guard 4' is illustrated in Figure 2 to have a straight cross-section when engaged with the gutter hanger member 2 and gutter 1. It will be understood that either straight or arched configuration may be applicable to the guard member 64 of gutter guard 4 and the guard portion 132 of the one-piece gutter guard 4'.

Referring now to Figure 1 and 2 together, according to an example embodiment, the gutter hanger member 2 includes means for maintaining engagement of the hanger engagement portion 72 of the support member 60 or hanger engagement portion 128 of the gutter guard 4' with the gutter hanger member 2. The means for maintain engagement may include a protruding member 164 projecting forwardly from the inner segment 52 of the gutter hanger member 2. The protruding member 164 may be located in proximity and above the location of engagement of the hanger engagement portion 72, 128 with the gutter hanger member 2. For example, the protruding member 164 may be positioned slightly above the longitudinal channel 108 of the gutter hanger member 2. The protruding member

72 is positioned to block displacement of the engagement portion 72, 128 in an upward direction that could lead to disengagement of the engagement portion 72, 128 from the gutter hanger member 2. In one example embodiment, the protruding member 72, 128 may be one or more crimps formed in the inner segment 52 of the gutter hanger member 2. The crimps may be located spaced-apart along a length of the gutter hanger member 2 (ex: where the gutter hanger member 2 is a continuous hanger).

According to one example embodiment, and as illustrated in Figure 1, the rear wall 18 of the gutter 1 and the gutter hanger member 2 have cooperating discontinuities to promote maintaining engagement of the gutter hanger member 2 with the gutter 1.

As illustrated in Figure 1, the inner segment 52 has a discontinuity 200 in the shape of a rearwardly extending protrusion. The discontinuity 200 may be a longitudinal rib. Alternatively, the discontinuity 200 may be one or more studs. The discontinuity 200 cooperatively engages a discontinuity 204 in the shape of a forwardly extending protrusion formed in the rear wall 18 of the gutter 1. As illustrated, the discontinuity 204 protrudes forwardly from the rear wall 18 of the rear wall 18 and may be a longitudinal rib or one or more studs. The discontinuities 200 and 204 are located to engage one another when an upper section of the rear wall 18 is received within the channel defined between the inner segment 52 and outward segment 54 of the gutter hanger member 1.

In the illustrated example, the discontinuity 204 of the rear wall 18 is located above the discontinuity 200 of the inner segment 52 of the gutter hanger member 2 when the upper section of the rear wall 18 is appropriately received within the channel. The upper surface of the discontinuity 200 of the inner segment 52 abuts a lower surface of the discontinuity 204 of the rear wall 18 to restrict displacement of the gutter hanger member 2 in the upward direction relative to the gutter 1.

The outer segment 54 of the gutter hanger member 2 may also include a discontinuity for promoting maintaining engagement of the gutter hanger member

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2 with the gutter 1. For example, and as illustrated, a discontinuity 208 of the outer segment 54 protrudes inwardly and is adapted to be received within a notch or recess formed on an outer surface of the rear wall 18. The discontinuity 208 may be a hook-like fold. The notch or recess of the rear wall 18 may result from forming the discontinuity 204 of the rear wall 18 in that bending the rear wall 18 to form the forwardly extending protrusion 204 also forms the recess on a rear surface of the rear wall 18.

According to various example embodiments wherein the gutter hanger member 2 is formed of a sheet metal, the discontinuity 200 may be formed by appropriately bending the sheet metal when manufacturing the gutter hanger member 2. Similarly, the discontinuity 204 may be formed by appropriately bending the rear wall 18 of the gutter 1 when manufacturing the gutter.

While the discontinuity 200 of the inner section 52 and the discontinuity 204 of the rear wall 18 are in the form of protrusions oriented towards one another in the illustrated example, it will be understood that other configurations of cooperating discontinuities are also contemplated.

According to an example embodiment, and as illustrated, the discontinuity 200 of the inner segment 52 acts as a guide for fastening of the gutter hanger member 2 using the mechanical fastener 38 to the gutter 1 and the supporting structure. For example, opening one or more openings for receiving the fasteners 38 can be located in alignment with the discontinuity 200 of the inner segment 52. Proper placement of the fasteners 38 further promotes alignment of the discontinuities 200, 204 and 208 and for maintaining engagement of the gutter hanger member 2 with the rear wall 18 of the gutter 1 and reducing upward displacement of the gutter hanger member 2 relative to the rear wall 18 of the gutter 1.

The gutter guard 4 and the gutter guard 4' described herein are useful for protecting the trough of the gutter 1 from tree leaves and debris. Advantageously, the gutter guard 4, 4' may be retrofitted onto a gutter that has already been secured to the supporting structure by the gutter hanger member.

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In situations where the gutter hanger member already provides a level of protection against debris and tree leaves (such as where the gutter hanger member is a continuous hanger having a perforated central portion), the gutter guard 4, 4' may be installed to improve the protection against leaves and debris. Some gutter hanger members have a negative slope in a rearward direction when secured to the gutter and the supporting structure. This slope may cause pooling of leaves and debris, which may reduce the ability of the gutter hanger member to permit flow of liquid therethrough into the trough of the gutter. By installing the gutter guard 4, 4' over the gutter hanger member, the former performs the main role of capturing leaves and debris, thereby reducing the pooling on the gutter hanger member.

While the above description provides examples of the embodiments, it will be appreciated that some features and/or functions of the described embodiments are susceptible to modification without departing from the spirit and principles of operation of the described embodiments. Accordingly, what has been described above has been intended to be illustrative and non-limiting and it will be understood by persons skilled in the art that other variants and modifications may be made without departing from the scope of the invention as defined in the claims appended hereto.

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CLAIMS

1. A gutter kit comprising:

a gutter having a bottom wall, a front wall extending from the bottom wall and a rear wall extending from the bottom wall defining a trough having an open top, the rear wall having a first discontinuity formed along a length thereof; and

a gutter hanger member having a front portion, a central portion and a rear portion, the front portion being engageable with the front wall of the gutter and the rear portion being engageable with the rear wall of the gutter, the rear portion having an inner segment and an outer segment defining a channel therebetween, the rear wall of the gutter being receivable within the channel, the inner segment having a second discontinuity protruding therefrom in a direction of the outer segment and being cooperatively engageable with the first discontinuity.

2. The gutter kit of claim 1, wherein the cooperating engagement of the first discontinuity of the rear wall of the gutter with the second discontinuity of the rear portion of the gutter hanger member restricts an upward displacement of the gutter hanger member relative to the gutter.

3. The gutter kit of claim 2, wherein the first discontinuity is a longitudinal rib and wherein the second discontinuity is a longitudinal rib, and

wherein an upper surface of the first discontinuity abuts a lower surface of the discontinuity to restrict upward displacement of the gutter hanger member relative to the gutter.

4. The gutter kit of claim 2 or 3, further comprising a fastener operable for securing the rear portion of the gutter hanger member to the rear wall of the gutter and a supporting structure; and

wherein the first discontinuity is aligned with an opening for receiving the fastener.

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5. The gutter kit of any one of claims 1 to 4, wherein the outer segment of the rear portion of the gutter hanger member comprises a third discontinuity protruding in a direction of the inner segment and being cooperatively engageable with the first discontinuity.

6. The gutter kit of claim 5, wherein the first discontinuity in the rear wall of the gutter comprises a recess formed in the rear wall; and

wherein the upon engagement of the third discontinuity of the outer segment with the first discontinuity, the third discontinuity is received within the recess.

7. The gutter kit of any one of claims 1 to 6, further comprising a gutter guard for covering the open top of the gutter, the gutter guard having a guard member with a plurality of throughholes formed therein, the gutter guard being engageable at a first end with at least one of the front wall of the gutter and the front portion of the gutter hanger member and being couplable at a second end with at least one of the gutter hanger member, the rear wall of the gutter and the supporting structure; the gutter guard having a negative slope in a frontward direction when the gutter guard and engaged at its first end with the front wall of the gutter and is coupled at its second end to the gutter hanger member, the first end of the gutter guard having an inclined segment engageable with the front wall of the gutter, a downwardly extending rib being supported by the gutter hanger member and an arched segment joining the inclined segment and the arched segment.

8. The gutter kit of claim 7, wherein the gutter guard further comprises a rigid support portion being configured to be directly coupled to the gutter hanger member.

9. The gutter kit of claim 7, wherein the gutter guard is coupled to the gutter hanger member via a support member.

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10. The gutter kit of any one of claims 7 to 9, wherein the inclined segment is configured to engage a downwardly frontwardly extending flange of the front wall of the gutter.

11. The gutter kit of any one of claims 7 to 10, wherein the gutter guard is formed of a resilient material, and wherein the arched segment biases the inclined segment towards the front wall of the gutter and biases the downwardly extending rib towards the gutter hanger member.

12. The gutter kit of claim 9, wherein the support member has a rigid support portion, a hanger engagement portion extending from a first edge of the rigid support portion and a guard retaining portion extending from a second edge of the rigid support portion, the hanger engagement portion being engageable with the gutter hanger member at an engagement location below a top edge of the rear wall of the gutter; and the gutter guard being engageable at the second end with the guard retaining portion of the support member.

13. The gutter kit of one of claims 9 and 12, wherein the gutter hanger member has formed therein a longitudinal slot and wherein the hanger engagement portion of the support member is received within the longitudinal slot when engaged with the gutter hanger member.

14. The gutter kit of claim 12, wherein upon the hanger engagement portion engaging the gutter hanger member at the engagement location, the rigid support portion of the support member extends from the engagement portion along the rear wall of the gutter and in a direction of the top edge of the rear wall.

15. The gutter kit of claim 14, wherein upon the hanger engagement portion engaging the gutter hanger member at the engagement location, the guard retaining portion is located proximate the top edge of the rear wall of the gutter.

16. The gutter kit of claim 14, wherein upon the hanger engagement portion engaging the gutter hanger member at the engagement location, the guard retaining portion is located above the top edge of the rear wall of the gutter.

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17. The gutter kit of any one of claims 12 to 16, wherein the guard retaining portion of the support member comprises a lip sub-portion and a backstop portion, a first edge of the lip sub-portion corresponding to the second edge of the rigid support portion and the backstop portion extending upwardly from a second edge of the lip sub-portion, a second end of the guard member being disposed on a top surface of the lip sub-portion and abutting against the backstop portion when retained.

18. The gutter kit of any one of claims 9, and 12 to 17, wherein the support member is formed of sheet metal.

19. The gutter kit of any one of claims 12 to 17, wherein the hanger engagement portion is formed of a double layer of the sheet metal corresponding to a longitudinal edge of the support member being folded onto itself.

20. The gutter kit of any one of claims 7 to 19, wherein the guard member is formed of a meshed metal defining the throughholes thereof.

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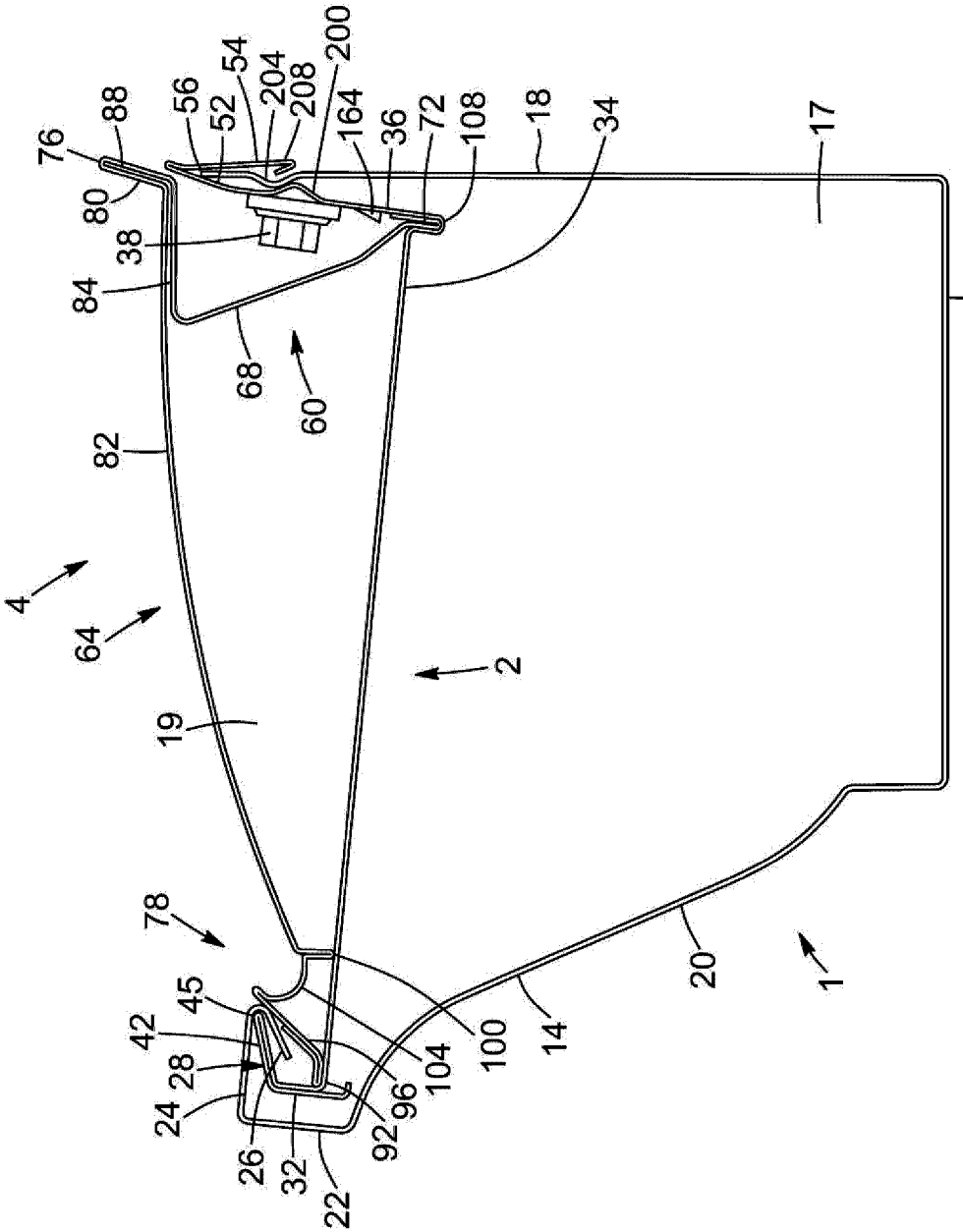

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FIG. 1A

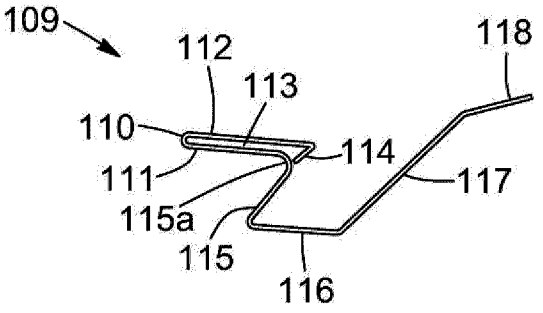


FIG. 1B

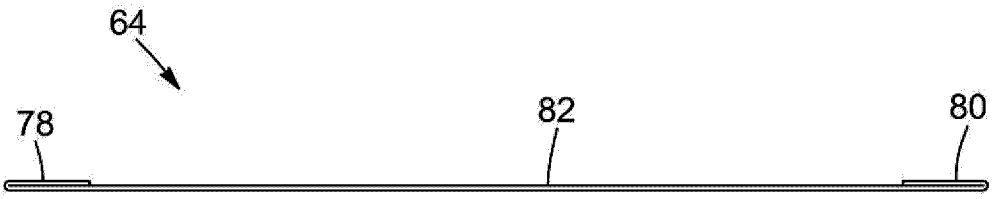


FIG. 1C

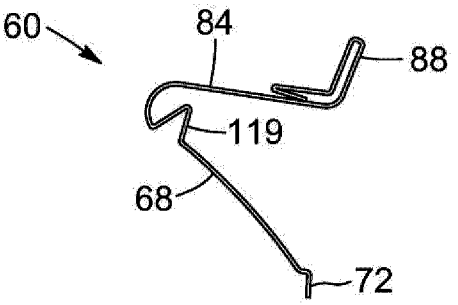


FIG. 1D

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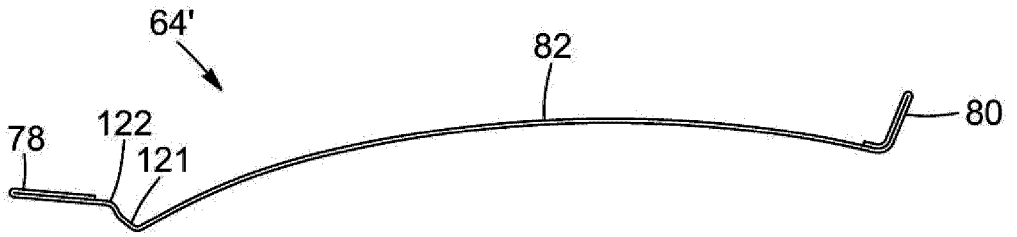


FIG. 1E

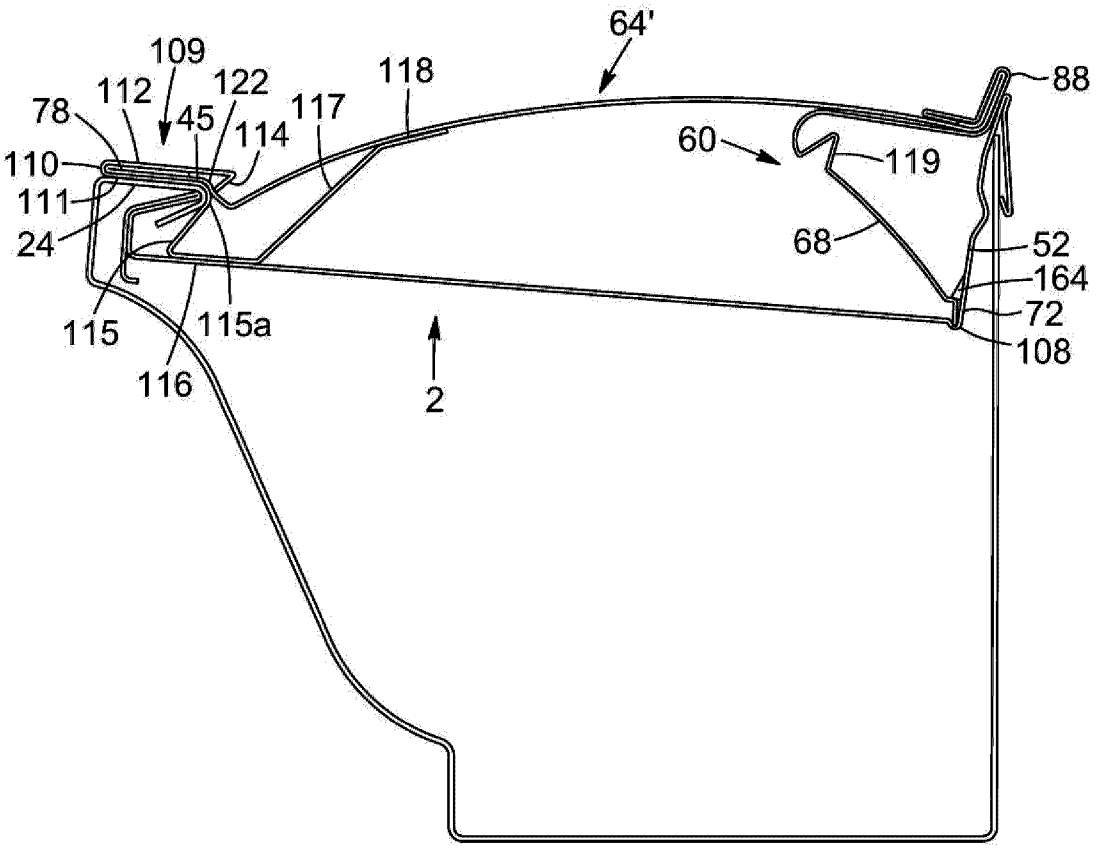


FIG. 1F

Date Reçue/Date Received 2024-02-26

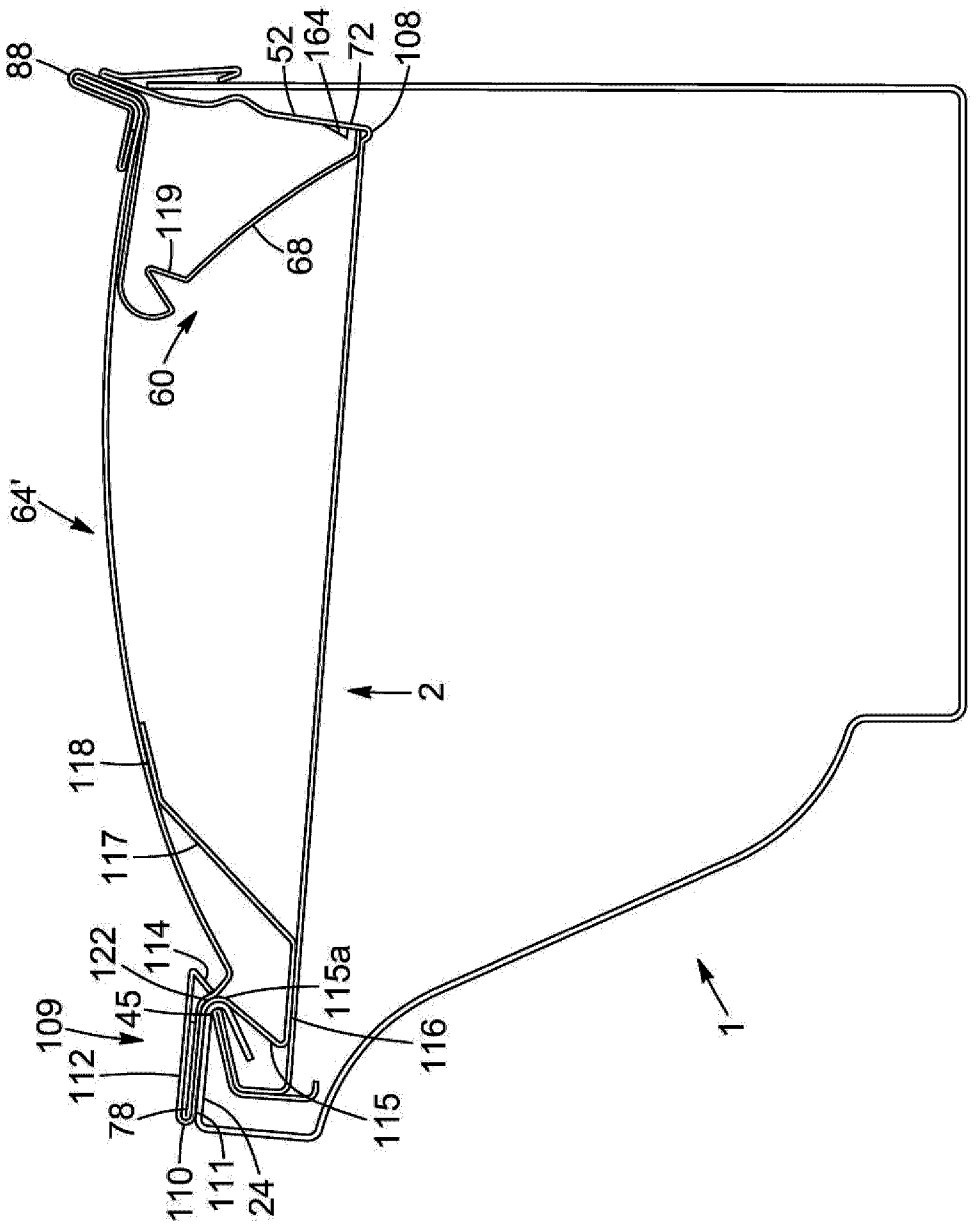

88
52
164
72
108
119
68
60
64'
2
118
117
122
114
115a
45
109
116
112
78
115
110
111
24
1

FIG. 1G

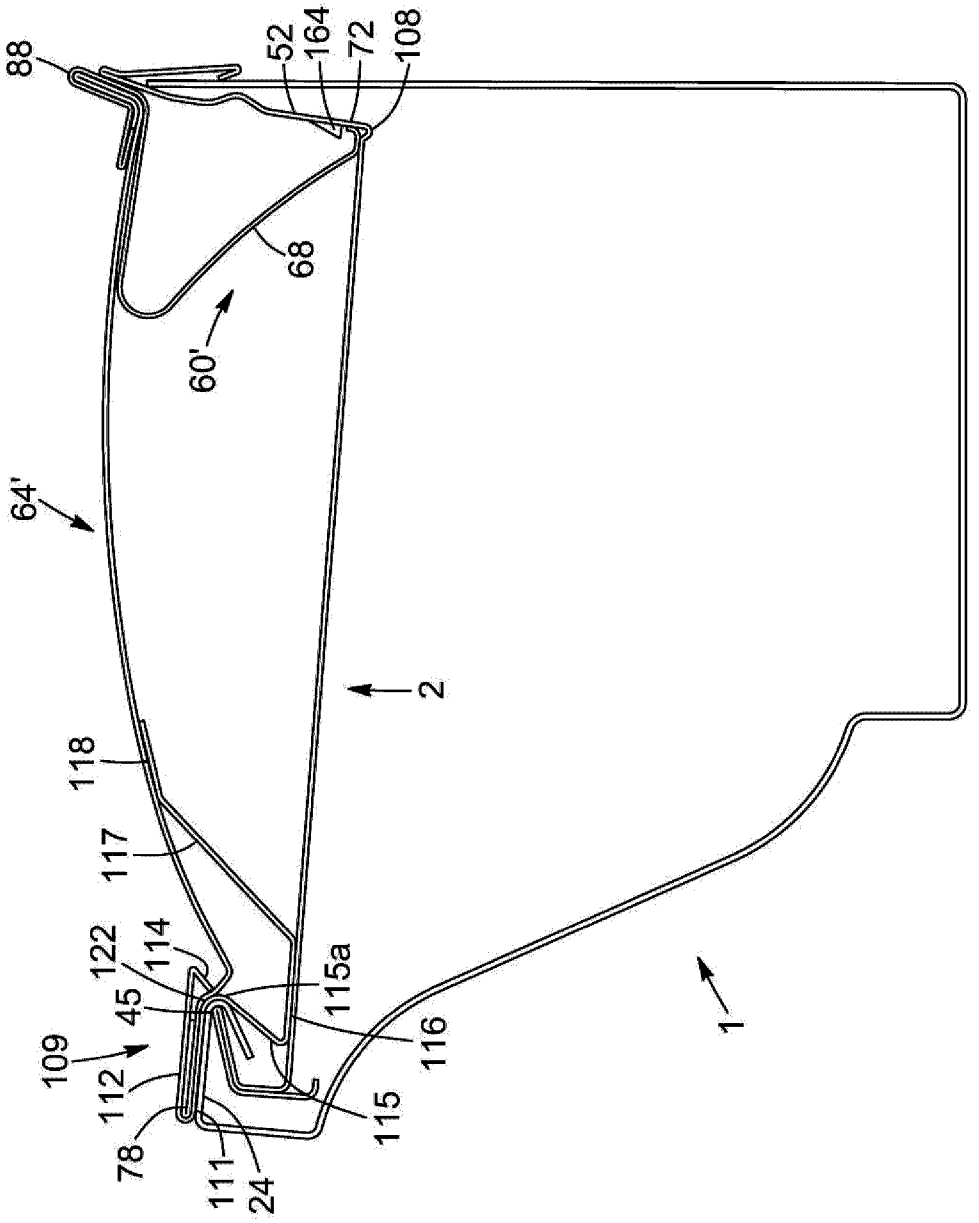

88
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115a
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24
1

FIG. 1H

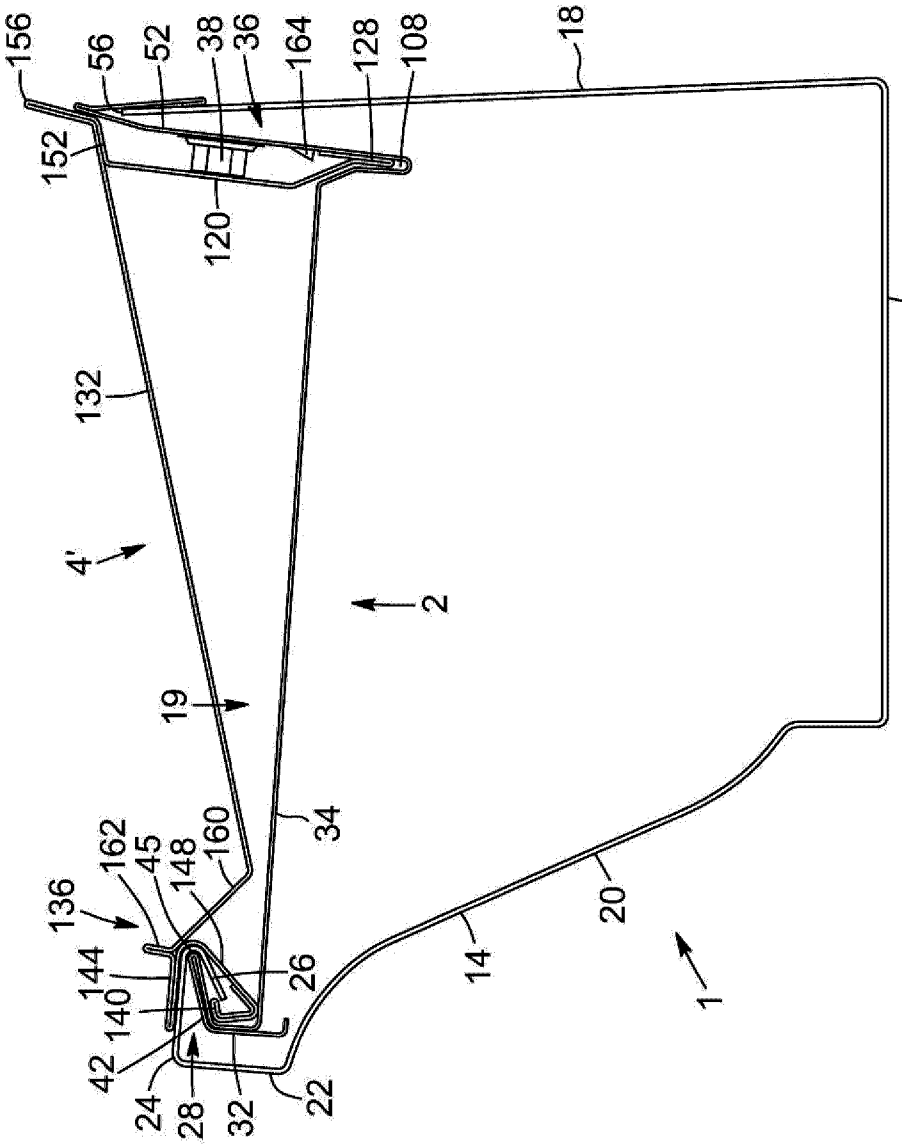


FIG. 2

Date Reçue/Date Received 2024-02-26

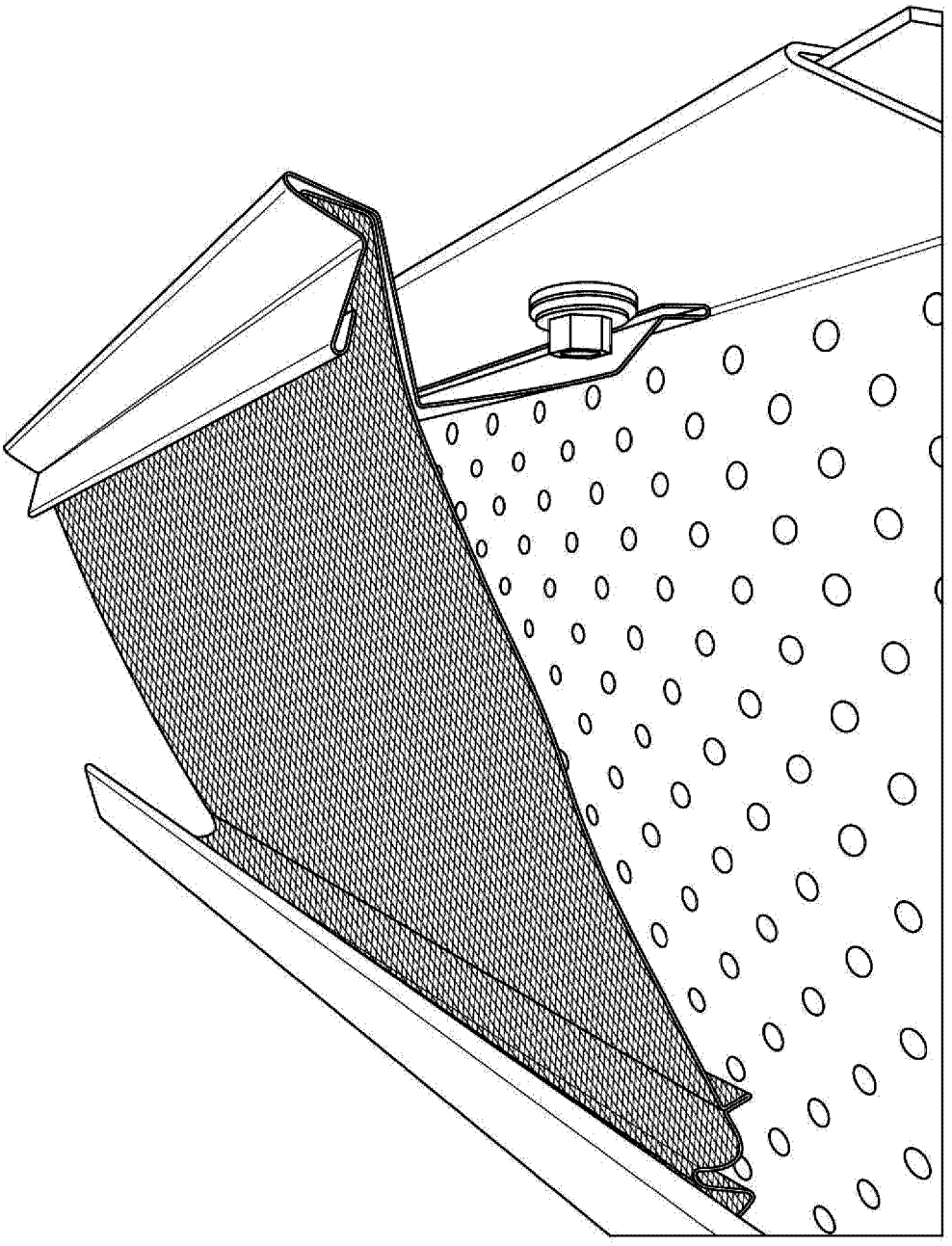


FIG. 3

Date Reçue/Date Received 2024-02-26

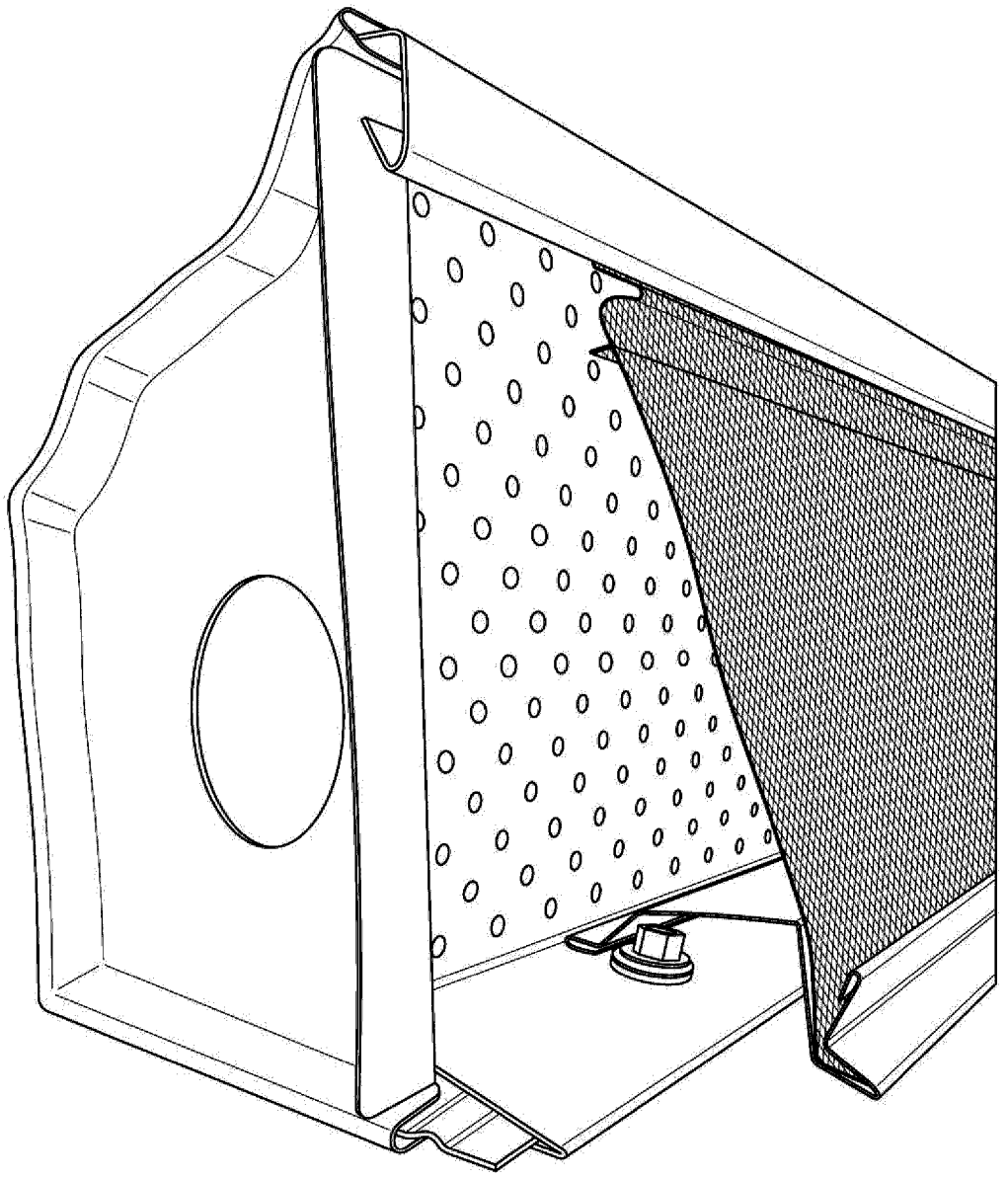


FIG. 4

Date Reçue/Date Received 2024-02-26