(57) Abrégé/Abstract:
A support for a railing of a roof hatch having a coaming has an angle body with a first elongate member and a second elongate members that is perpendicular to the first elongate member. First and second brackets extend inward from the first and second elongate members, respectively. Each bracket has a coaming-receiving portion that is sized and shaped to directly engage the inner surface, upper surface and outer surface of the hatch coaming, and a flashing covering portion that is sized and shaped to receive the flashing. The bracket engages the coaming such that the angle body is supported laterally adjacent to the flashing of the coaming. One or more post supports connected to and extending outward from angle body.
ABSTRACT OF THE DISCLOSURE

A support for a railing of a roof hatch having a coaming has an angle body with a first elongate member and a second elongate members that is perpendicular to the first elongate member. First and second brackets extend inward from the first and second elongate members, respectively. Each bracket has a coaming-receiving portion that is sized and shaped to directly engage the inner surface, upper surface and outer surface of the hatch coaming, and a flashing covering portion that is sized and shaped to receive the flashing. The bracket engages the coaming such that the angle body is supported laterally adjacent to the flashing of the coaming. One or more post supports connected to and extending outward from angle body.
TITLE

[0001] Support for a roof hatch rail

TECHNICAL FIELD

5 [0002] This relates to a support for a roof hatch rail

BACKGROUND

[0003] Roof hatches are often surrounded by a rail for safety reasons. Such a rail is available from PSM Roof Hatch Railings Inc. (see http://www.psmroofhatchrailings.ca/). As depicted in Fig. 1 and 2, a railing 102 surrounds a hatch 104 in a roof 106. Hatch 104 has a coaming 105 and a cover 107. Referring to Fig. 2, railing 102 is supported by a corner support 108, which attached to hatch 104 below the flashing 110. Other railing supports may be mounted directly to the roof, although this is not preferred as it requires holes in the roof surface as opposed to a protected area under the flashing 110. Railing 102 includes support posts 112 and cross pieces 114.

SUMMARY

[0004] There is provided a support for a railing of a roof hatch, the roof hatch comprising a hatch cover supported by a hatch coaming mounted to the roof, the hatch coaming comprising an inner surface surrounding an opening in the roof, an upper surface, an outer surface and flashing extending out from an outer surface of the hatch body and spaced downward from the upper surface. The railing support comprises an angle body comprising a first elongate member and a second elongate members that is perpendicular to the first elongate member, and a first bracket extending inward from the first elongate member and a second bracket extending inward from the second elongate member, each bracket having a coaming-receiving portion that is sized and shaped to directly engage the inner surface, upper surface and outer surface of the hatch coaming, and a flashing covering portion that is sized and shaped to receive the flashing, the bracket engages the coaming such that the angle body is supported laterally adjacent to the flashing of the coaming. There are one or more post supports connected to and extending outward from angle body.

[0005] According to another aspect, the first and second elongate members may be connected at a corner of the angle body. There may be a post support connected to and
extends outward from the corner of the angle body.

[0006] According to another aspect, the first and second brackets may further comprise an underlying portion that extends through the opening of the roof and engages an under surface of the roof. The underlying portion may be pin connected to the under surface of the roof.

[0007] According to another aspect, the brackets may be pin connected to the coaming.

[0008] According to another aspect, one or more flashing inserts may be inserted between the flashing and the coaming. The one or more flashing inserts may underlie the bracket.

[0009] According to another aspect, the flashing engaging portion is sized and shaped to directly engage the flashing.

[0010] According to another aspect, there is provided a method of installing a railing around a roof hatch, the roof hatch comprising a hatch cover supported by a hatch coaming mounted to the roof, the hatch coaming comprising an inner surface surrounding an opening in the roof, an upper surface, an outer surface and flashing extending out from an outer surface of the hatch body and spaced downward from the upper surface, the railing comprising support posts and cross members supported by the support posts, the method comprising the steps of: providing railing supports as described above; installing the railing supports at each corner of the roof hatch by placing the first and second bracket over the hatch coaming such that the angle body is supported laterally adjacent to the flashing of the coaming; and installing the support posts and the cross members around the roof hatch by installing the support posts in the post supports.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] These and other features will become more apparent from the following description in which reference is made to the appended drawings, the drawings are for the purpose of illustration only and are not intended to be in any way limiting, wherein:

FIG. 1 is a perspective view of a prior art hatch railing system.

FIG. 2 is a side elevation view of a prior art corner support.
FIG. 3 is a perspective view of a railing support.
FIG. 4 is a top plan view of a railing support installed on a hatch coaming.
FIG. 5 and 6 are side elevation views of the railing support installed on a hatch coaming.
FIG. 7 is a side elevation view of an alternative railing support.

DETAILED DESCRIPTION

[0012] A support 10 for a railing of a roof hatch is shown in FIG. 3 through 7, and is used to support posts 112 around hatch coaming 105. Hatch coaming 105 is mounted to roof 106 and has an inner surface 116 surrounding an opening 118 in roof 106, an upper surface 120, an outer surface 122 and flashing 110 that extends out from outer surface 122 and is spaced downward from upper surface 120. Hatch coaming 105 has a cross-section defined by these features, and support 10, as will be described below, has a similar shape that engages hatch coaming 105.

[0013] Referring to FIG. 3 and 4, support 10 has an angle body 12 with first and second elongate members 14 and 16 that are perpendicular to each other. As shown, elongate members 14 and 16 are connected to each other at a corner 18 of angle body 12. Elongate members 14 and 16 are preferably flat pieces of metal that lie along flashing 110 when installed. Other shapes and materials may be used. In order to support elongate members 14 and 16, first and second brackets 20 and 22 are attached and extend inward from first and second elongate members 14 and 16, respectively. As shown, first and second brackets 20 and 22 are welded to the outer surface of elongate members 14 and 16 such that the inner surface of elongate members 14 and 16 are free to engage flashing 110 when installed.

[0014] Referring to FIG. 5 and 6, brackets 20 and 22 have a coaming-receiving portion 24 that is sized and shaped to directly engage the inner surface 116, upper surface 120 and outer surface 122 of hatch coaming 105. Coaming-receiving portion 24 engages coaming 105 in such a way that it does not interfere with hatch cover 107. Bracket 20/22 also has a flashing covering portion 26 that is sized and shaped to receive flashing 110. Preferably,
flashing covering portion 26 also directly engages flashing 110. As shown, an insert 28 may be placed behind flashing 110 to provide structural support flashing 110 against bracket 20/22. Insert 28 may extend along some or all of flashing 110, but preferably at least underlies the portion adjacent to brackets 20 and 22. As can be seen, bracket 20/22 engages hatch coaming 105 such that angle body 12 is supported laterally adjacent to flashing 110 of hatch coaming 105. Referring to FIG. 5 and 6, flashing 110 may have different sizes, and may have different shapes. Bracket 20/22 is preferably designed based on the type of flashing being used in any particular installation.

[0015] Referring to FIG. 3 and 4, support 10 also has one or more post supports 30 that are connected to and extend outward from angle body 12. Preferably, there is one post support 30 that extends out from corner 18, such that post 112 is held at an equal distance from elongate members 14 and 16. Similar to what is shown in FIG. 1, these posts 112 are then used to support cross pieces 114 as part of a railing 102. It will be understood that other designs may also be used, depending on the design of railing 102. For example, post support 30 may extend out from only one elongate member 14 or 16, or there may be a post support 30 on each.

[0016] Angle body 12 is preferably mounted in such a way that there are no holes in roof 106 or coaming 105 that may become exposed to the elements or a build-up of moisture, such as in a spring thaw. In addition, brackets 20 and 22 are more fully supported by coaming 105, as the weight is borne primarily by upper surface 120. This can be compared with FIG. 2, where the weight of railing 102 is supported by the pin connection, and where a bending moment is applied at that connection due to the spacing of posts 112 from coaming 105. Referring to FIG. 5 and 6, brackets 20 and 22, due to their shape, are already well-supported against coaming 105, but may be further engaged by pin connections using nails or screws 32, as shown in FIG. 5. Alternatively, referring to FIG. 7, a bolt may pass through bracket 20/22 and the upper portion of coaming 105. This is preferably done such that it is sheltered by hatch cover 107. Alternatively or in addition, bracket 20/22 may be provided with an underlying portion 34 that extends through opening 118 of roof 106 and engages an under surface of roof 106. Underlying portion 34 may then be pin connected in place. For ease of
installation and to provide alternative uses, underlying portion 34 is preferably removable from and adjustable relative to the inside of bracket 20/22.

[0017] Referring to FIG. 4, support 10 is installed by placing brackets 20 and 22 over coaming 105 such that the top of coaming 105 is received within coaming-receiving portion 24 such that coaming-receiving portion 24 is immediately adjacent and directly engages coaming 105. When brackets 20 and 22 are installed, elongate members 14 and 16 are positioned adjacent to flashing 110. In order to support brackets 20 and 22 as well as elongate members 14 and 16, inserts 28 may be placed between flashing 110 and coaming 105.

Referring to FIG. 5 – 7, brackets 20 and 22 are secured in place, such as by using pin connectors. Pin connectors 32 may be placed in various locations through brackets 20 and 22 or through elongate members 14 and 16, and may or may not pass through coaming 105. Alternatively, brackets 20 and 22 may be secured by underlying portion 34, which may also be pin connected in place using pin connectors 32 into the under surface of roof 106.

[0018] In this patent document, the word "comprising" is used in its non-limiting sense to mean that items following the word are included, but items not specifically mentioned are not excluded. A reference to an element by the indefinite article "a" does not exclude the possibility that more than one of the element is present, unless the context clearly requires that there be one and only one of the elements.

[0019] The following claims are to be understood to include what is specifically illustrated and described above, what is conceptually equivalent, and what can be obviously substituted. The scope of the claims should not be limited by the preferred embodiments set forth in the examples above.
What is claimed is:

1. A support for a railing of a roof hatch, the roof hatch comprising a hatch cover supported by a hatch coaming mounted to the roof, the hatch coaming comprising an inner surface surrounding an opening in the roof, an upper surface, an outer surface and flashing extending out from an outer surface of the hatch body and spaced downward from the upper surface, the railing support comprising:
   an angle body comprising a first elongate member and a second elongate members that is perpendicular to the first elongate member;
   a first bracket extending inward from the first elongate member and a second bracket extending inward from the second elongate member, each bracket having a coaming-receiving portion that is sized and shaped to directly engage the inner surface, upper surface and outer surface of the hatch coaming, and a flashing covering portion that is sized and shaped to receive the flashing, the bracket engages the coaming such that the angle body is supported laterally adjacent to the flashing of the coaming; and
   one or more post supports connected to and extending outward from angle body.

2. The railing support of claim 1, wherein the first and second elongate members are connected at a corner of the angle body.

3. The railing support of claim 2, comprising a post support that is connected to and extends outward from the corner of the angle body.

4. The railing support of claim 1, wherein the first and second brackets further comprise an underlying portion that extends through the opening of the roof and engages an under surface of the roof.

5. The railing support of claim 1, wherein the brackets are pin connected to the coaming.

6. The railing support of claim 4, wherein the underlying portion is pin connected to the under surface of the roof.
The railing support of claim 1, further comprising one or more flashing insert inserted between the flashing and the coaming.

The railing support of claim 7, wherein the one or more flashing inserts underlies the bracket.

The railing support of claim 1, wherein the flashing engaging portion is sized and shaped to directly engage the flashing.

A method of installing a railing around a roof hatch, the roof hatch comprising a hatch cover supported by a hatch coaming mounted to the roof, the hatch coaming comprising an inner surface surrounding an opening in the roof, an upper surface, an outer surface and flashing extending out from an outer surface of the hatch body and spaced downward from the upper surface, the railing comprising support posts and cross members supported by the support posts, the method comprising the steps of:

providing railing supports, each railing support comprising:

an angle body comprising first and second elongate members extending perpendicularly from a corner of the angle body;

a first bracket extending inward from the first elongate member and a second bracket extending inward from the second elongate member, each bracket having a coaming-receiving portion that is sized and shaped to directly engage the inner surface, upper surface and outer surface of the hatch coaming, and a flashing covering portion that is sized and shaped to receive the flashing; and

one or more post supports connected to and extending outward from angle body;

installing the railing supports at each corner of the roof hatch by placing the first and second bracket over the hatch coaming such that the angle body is supported laterally adjacent to the flashing of the coaming; and

installing the support posts and the cross members around the roof hatch by installing the support posts in the post supports.
11. The method of claim 10, wherein the first and second elongate members are connected at a corner of the angle body.

12. The method of claim 10, comprising a post support that is connected to and extends outward from the corner of the angle body.

13. The method of claim 10, wherein the first and second brackets further comprise an underlying portion that extends through the opening of the roof and engages an under surface of the roof.

14. The method of claim 10, further comprising the step of pin connecting the brackets to the coaming.

15. The method of claim 13, further comprising the step of pin connecting the underlying portion to the under surface of the roof.

16. The method of claim 10, further comprising the step of inserting one or more flashing inserts between the flashing and the coaming.

17. The method of claim 16, wherein the one or more flashing inserts is inserted to underlie the bracket.

18. The method of claim 10, wherein the flashing engaging portion is sized and shaped to directly engage the flashing.