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Inzeo

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(54) **ANCHOR BAR SPLICE**

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(52) **U.S. Cl.** **52/96**; 52/60; 52/97; 52/300; 52/309.4; 428/71

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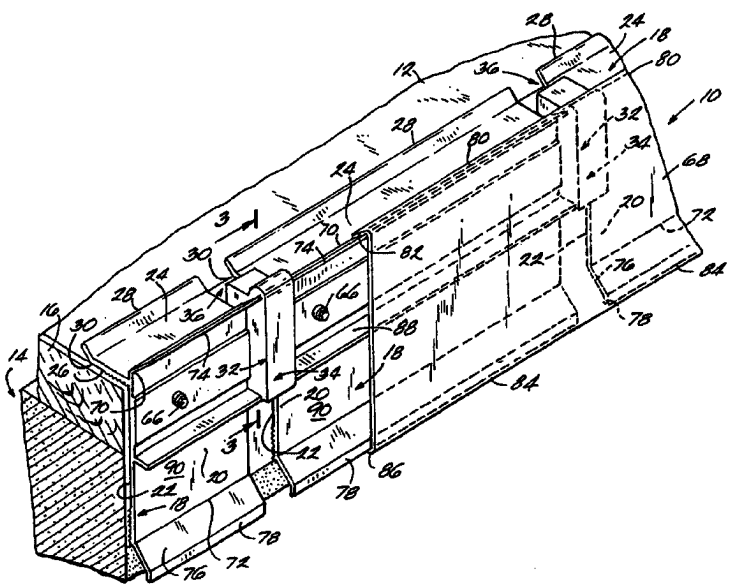
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(57) **ABSTRACT**

The present invention is directed to a fascia assembly that includes a first anchor bar, a second anchor bar, and an anchor bar splice. The first and second anchor bars are mounted to a vertical surface of an edge of a roof. The first anchor bar includes a first end, and the second anchor bar includes a second end that is adjacent to the first end of the first anchor bar. The anchor bar splice is positioned between the first end of the first anchor bar and the second end of the second anchor bar for preventing the passage of water between the first and second anchor bars. The anchor bar splice includes a resilient shell that defines a cavity and a foam core within the cavity.

17 Claims, 3 Drawing Sheets



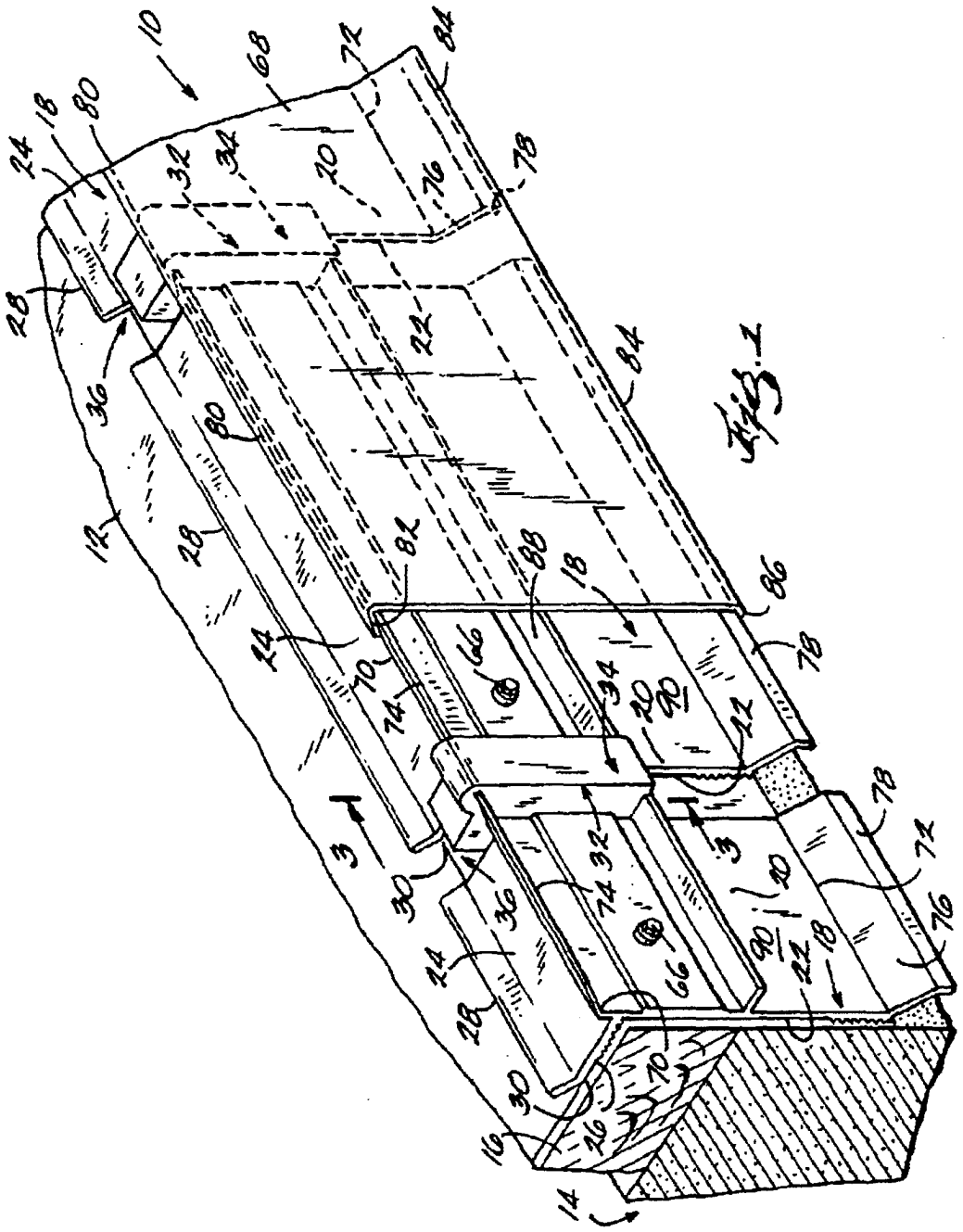


Fig. 1

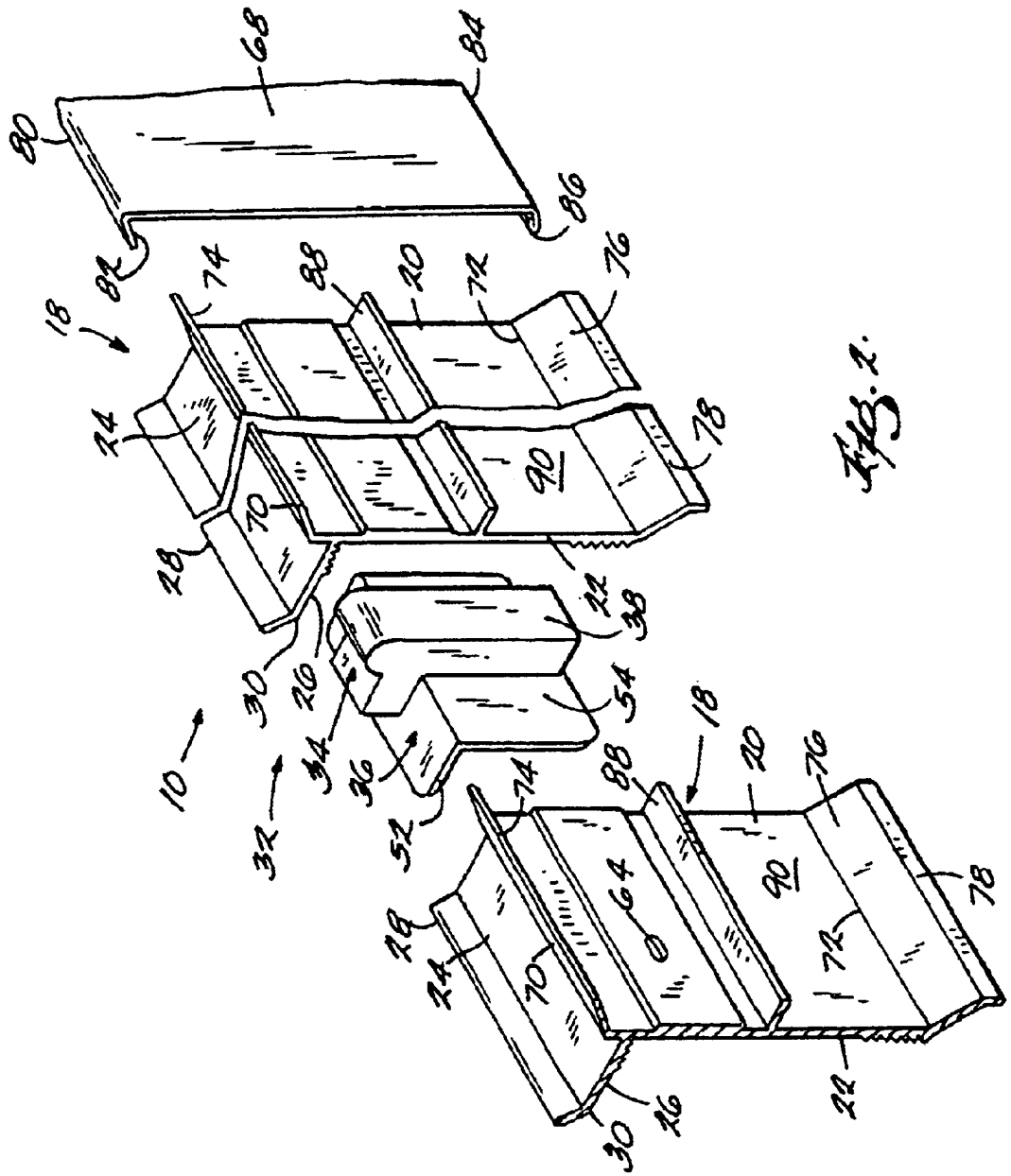

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Fig. 1.

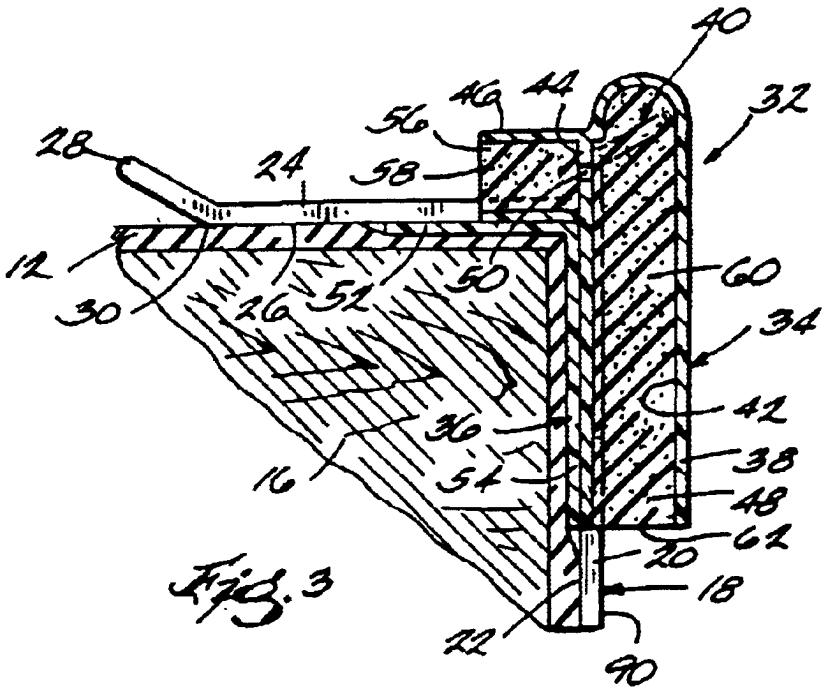

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Fig. 3

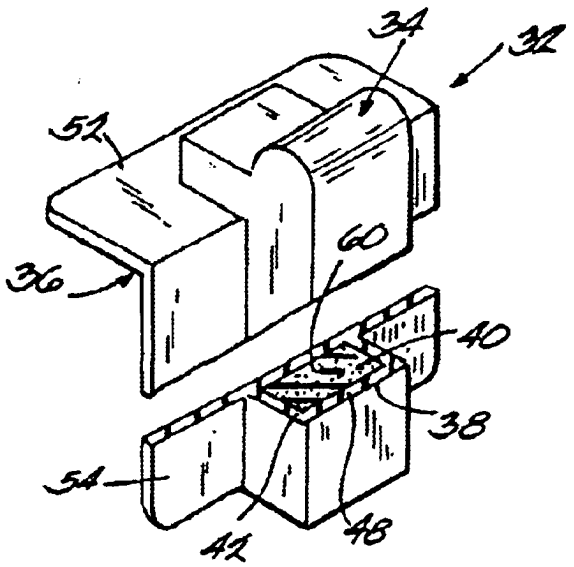

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Fig. 4

ANCHOR BAR SPLICE

FIELD OF THE INVENTION

The invention relates to fascia assemblies, and more particularly to fascia assemblies that include anchor bar splices.

BACKGROUND OF THE INVENTION

Large rubber membranes are commonly used for covering and protecting a roof such as a flat roof. Some membranes are laid over the surface of the roof and secured in place by fascia assemblies that rigidly secure the edge of the membrane to the edge of the roof. The fascia assemblies prevent the membrane from being pulled away from the edge of the roof by large wind forces and also allow for the mounting of decorative covers.

Fascia assemblies include anchor bars that are mounted consecutively to the edge of the roof in an end to end relationship to completely cover the edge of the roof. Typically, the anchor bars include upwardly extending flanges. The upwardly extending flanges prevent rainwater that accumulates on the membrane from flowing over the anchor bars and onto the ground below. Anchor bar splices are generally positioned between adjacent ends of consecutive anchor bars to prevent the flow of rainwater between consecutive anchor bars.

Some anchor bar splices include a sheet metal or aluminum angled portion and a foam spacer portion that is glued to the metal angled portion. The angled portion is coupled between the roof and consecutive anchor bars and the foam spacer is compressed between adjacent ends of consecutive anchor bars.

SUMMARY OF THE INVENTION

The present invention is directed to a fascia assembly that includes an anchor bar splice that improves the seal between adjacent ends of consecutive anchor bars by providing a spacer that includes a water-resistant resilient shell and a resilient compressible foam within the shell. The present invention also simplifies the manufacture of the anchor bar splice by providing an anchor bar splice that is capable of being injection molded. The present invention also increases the service life of the anchor bar splice by integrally forming an angle portion with the spacer to eliminate the use of adhesives that typically degrade when subjected to normal weather conditions.

One embodiment of the present invention is directed to a fascia assembly for engaging the upper portion of a roof. The roof includes an upper surface and an elongated edge that defines a generally vertical surface. The fascia assembly includes a first anchor bar, a second anchor bar, and an anchor bar splice. The first and second anchor bars are mounted to the vertical surface of the edge of the roof. The first anchor bar includes a first end, and the second anchor bar includes a second end that is adjacent to the first end of the first anchor bar. The anchor bar splice is positioned between the first end of the first anchor bar and the second end of the second anchor bar for preventing the passage of water between the first and second anchor bars. The anchor bar splice includes a resilient shell that defines a cavity and a foam core within the cavity.

Another embodiment of the present invention is directed to an anchor bar splice for use in a fascia assembly that engages the upper portion of the roof. The anchor bar splice includes a resilient shell that defines a cavity and a foam core within the cavity.

Other features and advantages of the invention will become apparent to those skilled in the art upon review of the following detailed description, claims, and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a fascia assembly including an anchor bar splice embodying the present invention.

FIG. **2** is an exploded view of the fascia assembly shown in FIG. **1**.

FIG. **3** is a cross-section view of the anchor bar splice taken along line **3**—**3** in FIG. **1**.

FIG. **4** is a partial cutaway view of the anchor bar splice shown in FIG. **1**.

Before one embodiment of the invention is explained in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced or being carried out in various ways. Also, it is understood that the phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting. The use of "including" and "comprising" and variations thereof herein is meant to encompass the items listed thereafter and equivalents thereof as well as additional items. The use of "consisting of" and variations thereof herein is meant to encompass only the items listed thereafter. The use of letters to identify elements of a method or process is simply for identification and is not meant to indicate that the elements should be performed in a particular order.

DETAILED DESCRIPTION

Illustrated in FIG. **1** is a fascia assembly **10** that secures the edge of a rubber membrane **12** to the surface of a flat roof **14**. The rubber membrane **12** is supported by the flat generally horizontal upper surface of the roof **14**, and the edge of the membrane **12** extends over the vertical face of a conventional wooden nailer **16** such that the extending portion of the membrane **12** can be secured against the vertical face of the nailer **16**.

Referring also to FIG. **2**, the fascia assembly **10** includes elongated anchor bars **18** that are positioned in an end to end relationship along the edge of the roof **14**. The anchor bars **18** secure the rubber membrane **12** to the nailer **16** to thereby prevent the edge of the rubber membrane **12** from pulling upwardly away from the edge of the roof **14**. Each anchor bar **18** includes a rigid plate **20** that has a generally planar rearward surface **22** adapted to engage that portion of the rubber membrane **12** folded over the edge of the roof **14**. The rigid plate **20** also clamps that portion of the membrane **12** securely against the vertical face or surface of the nailer **16**. In the illustrated arrangement, a portion of the vertical plate **20** extends above the surface of the roof **14**, and the remainder of the vertical plate **20** engages the vertical face of the nailer **16** forming the edge of the roof **14**.

The anchor bar **18** also includes a flange **24** projecting from the rearward surface **22** of the vertical plate **20**. The rearwardly extending flange **24** includes a lower surface **26** that is adapted to engage the rubber membrane **12** and secure it downwardly against the upper surface of the nailer **16** such that the rubber membrane **12** cannot be pulled away from the surface of the roof **14** or away from the edge of the roof **14**.

In a preferred form of the invention the flange **24** and the plate portion **20** of the anchor bar **18** are rigid and integrally

joined. This construction can be achieved by producing the anchor bar **18** as an elongated extrusion of material such as aluminum. The aluminum extrusion will produce a rigid structure wherein the flange **24** and plate **20** are substantially inflexible with respect to one another such that the projecting end of the flange **24** cannot be pulled upwardly away from the surface of the roof **14** in response to an upward force by the membrane **12** against the flange **24**.

In a preferred form of the invention the rearwardly extending flange **24** will also include an edge portion **28** extending along its length, the edge portion **28** being inclined upwardly. The inclined edge portion **28** of the flange **24** is joined to the flange **24** by a curved lower surface **30** such that the surface of the flange **24** that engages the rubber membrane **12** does not include sharp corners which might pierce the membrane **12**. The inclined edge portion **28** of the flange **24** prevents rainwater that accumulates on the membrane **12** from flowing over the anchor bar **18** and onto the ground below the roof **14**.

The fascia assembly **10** also includes anchor bar splices **32** that are positioned between one end of a first anchor bar **18** and an adjacent end of a second adjacent anchor bar **18**. The anchor bar splices **32** prevent water that accumulates on the membrane **12** from flowing between adjacent anchor bars **18** and down to the ground below the roof **14**. Each anchor bar splice **32** includes a spacer **34** connected to an angled portion **36**.

The spacer **34** is compressed between the adjacent ends of the adjacent anchor bars **18** to seal the gap between the adjacent anchor bars **18**. As best shown in FIGS. **3** and **4**, the spacer **34** includes a resilient shell **38** and a foam core **40**. The foam core **40** is positioned within a cavity **42** that is defined by the shell **38**. The shell **38** is made from EPDM rubber and the foam core **40** is made of EPDM foam. EPDM, commonly known as ethylene propylene di-methane, is water and chemical resistant and also resists aging caused by weather and the presence of ozone. The shell **38** includes a wall **44** that divides the cavity into first and second sections **46**, **48**. The wall **44** includes a hole **50** that is in communication with the first and second sections **46**, **48**. The physical characteristics of the foam core **40** allow the spacer **34** to be compressed between adjacent anchor bars **18** and the physical characteristics of the shell **38** provide a water resistant seal against each of the adjacent anchor bars **18**.

The angled portion **36** of the anchor bar splice **32** includes an upper flange **52** and a lower flange **54** that extends perpendicularly from the upper flange **52**. The upper flange **52** is pressed between the lower surface **26** of the rearwardly extending flange **24** of the anchor bar **18** and the upper surface of the membrane **12**, and the lower flange **54** is pressed between the rearward surface **22** of the vertical plate **20** of the anchor bar **18** and the vertical face of the nailer **16** in order to fix the position of the anchor bar splice **32** between adjacent anchor bars **18**.

The anchor bar splice **32** is formed by injection molding such that the shell **38** and the angled portion **36** are integrally formed with each other. Once the shell **38** is formed, a first portion **56** of the foam core **40** is inserted through a first opening **58** and mounted in the first section **46** of the cavity **42** and a second portion **60** of the foam core **40** is inserted through a second opening **62** and mounted in the second section **48** of the cavity **42**. In the illustrated embodiment, the first and second portions **56**, **60** of the foam core **40** are glued to the shell **38** in the respective sections **46**, **48** of the cavity **42**.

Referring again to FIGS. **1** and **2**, a plurality of apertures **64** are provided through the vertical plate portion **20**. The apertures **64** are spaced apart along the length of the anchor bar **18**, and screws **66** can extend through the apertures **64** to rigidly secure the anchor bar **18** to the wooden nailer **16** forming the edge portion of the roof **14**.

When the anchor bars **18** are in place, as illustrated in FIG. **1**, the lower surfaces **26** of the rearwardly extending flanges **24** clamp the edge of the rubber membrane **12** downwardly against the upper surface of the wooden nailer **16**, and the rearward faces **22** of the vertical plate portions **20** of the anchor bars **18** similarly clamp the downwardly extending edge of the rubber membrane **12** firmly against the vertical planar face of the wooden nailer **16**. The fascia assembly **10** thus provides a very rigid and secure mechanism for clamping the edge of the rubber membrane **12** against the surface of the roof **14** and secures the rubber membrane **12** in place and is resistant to even large upward forces on the membrane **12** which might be caused by high winds.

The fascia assembly **10** also includes cover plates **68** which are positioned over the anchor bars **18** to provide a decorative cover for the anchor bars **18** and the screws **66** used to secure the anchor bars **18** to the edge of the roof **14**. In the illustrated arrangement, the anchor bar **18** includes upper and lower edges **70**, **72**. The upper edge **70** includes a flange portion **74** inclined upwardly and forwardly. The lower elongated edge **72** of the anchor bar **18** similarly includes a second flange portion **76** which is inclined downwardly and forwardly and which terminates in a downwardly extending lip **78**. Each cover plate **68** includes an upper edge **80** that defines a lip **82** adapted to hook over the flange portion **74** of the anchor bar **18** to engage the flange portion **74**. A lower edge **84** of the cover plate **68** includes a resilient lip **86** adapted to be resiliently forced over the lip **78** of the lower flange portion **76**. Once the lip **82** has been hooked over the edge **70** of the upper flange **74**, the lower lip **86** of the cover plate **68** can be forced over the lip **78** of the lower flange portion **76** and will resiliently hold the cover plate **68**.

In the illustrated construction, the anchor bar **18** also includes a rib **88** extending forwardly from a forward face **90** of the plate **20**. The rib **88** functions to support the cover plate **68** and to provide increased rigidity to the anchor bar **18**.

We claim:

1. A fascia assembly for engaging the upper portion of a roof, the roof having an upper surface and an elongated edge, the edge of the roof defining a generally horizontal surface and a generally vertical surface, the fascia assembly comprising:

a first anchor bar including

a vertically-oriented plate adapted to engage with the vertical surface of the edge of the roof, the plate having an upper portion and a lower portion,

a horizontally-oriented flange extending from the upper portion of the plate and adapted to engage with the horizontal surface of the edge of the roof, and

a first end;

a second anchor bar including

a vertically-oriented plate adapted to engage with the vertical surface of the edge of the roof, the plate of the second anchor bar including an upper portion and a lower portion,

a horizontally-oriented flange extending from the upper portion of the plate of the second anchor bar and

adapted to engage with the horizontal surface of the edge of the roof, and

a second end adjacent to the first end of the first anchor bar; and

an anchor bar splice positioned between and engaged with the first end and the second end for preventing the passage of water between the first and second anchor bars, the anchor bar splice including

a resilient shell defining a cavity, and

a foam core within the cavity.

2. The fascia assembly of claim **1**, wherein the anchor bar splice includes an angle portion having an upper flange adapted to be coupled between the upper surface of the roof and the flanges of the first and second anchor bars and a lower flange adapted to be coupled between the vertical surface of the roof and the plates of the first and second anchor bars.

3. The fascia assembly of claim **2**, wherein the shell is integrally formed with the angle portion.

4. The fascia assembly of claim **1**, wherein the shell is made of EPDM rubber, and the foam core is made of EPDM foam.

5. The fascia assembly of claim **1**, wherein the shell includes a wall that divides the cavity into first and second sections.

6. The fascia assembly of claim **5**, wherein the shell includes a first opening that is in communication with the first section of the cavity and a second opening that is in communication with the second section of the cavity.

7. The fascia assembly of claim **6**, wherein the core includes a first portion that is mounted within the first section of the cavity and a second portion that is mounted within the second section of the cavity.

8. The fascia assembly of claim **7**, wherein the first and second portions of the core are mounted to the respective first and second sections of the cavity with adhesive.

9. The fascia assembly of claim **5**, wherein the wall includes an aperture that is in communication with both the first and second sections of the cavity.

10. An anchor bar splice for use in a fascia assembly that is adapted to engage the upper portion of the roof, the roof having an upper surface and an elongated edge, the edge of the roof defining a generally horizontal surface and a generally vertical surface, the fascia assembly including a first anchor bar having a vertically-oriented plate adapted to engage with the vertical surface of the edge of the roof, the plate having an upper portion and a lower portion, a horizontally-oriented flange extending from the upper portion of the plate and adapted to engage with the horizontal surface of the edge of the roof, and a first end, and a second anchor bar having a vertically-oriented plate adapted to engage with the vertical surface of the edge of the roof, the plate of the second anchor bar having an upper portion and a lower portion, a horizontally-oriented flange extending from the upper portion of the plate of the second anchor bar and adapted to engage with the horizontal surface of the edge of the roof, and a second end adjacent to the first end of the first anchor bar, the anchor bar splice positionable between the first end and the second end for preventing the passage of water between the first and second anchor bars, the anchor bar splice comprising:

a resilient shell defining a cavity;

a foam core within the cavity; and

an angle portion including upper and lower flanges connected to the shell, wherein the upper flange and the lower flange are substantially at right angles relative to each other for engaging the horizontal and vertical surfaces of the roof edge and for positioning between and engaging with the first and second ends of the first and second anchoring bars.

11. The anchor bar splice of claim **10**, wherein the shell is integrally formed with the angle portion.

12. The anchor bar splice of claim **10**, wherein the shell is made of EPDM rubber, and the foam core is made of EPDM foam.

13. The anchor bar splice of claim **10**, wherein the shell includes a wall that divides the cavity into first and second sections.

14. The anchor bar splice of claim **13**, wherein the shell includes a first opening that is in communication with the first section of the cavity and a second opening that is in communication with the second section of the cavity.

15. The anchor bar splice of claim **14**, wherein the core includes a first portion that is mounted within the first section of the cavity and a second portion that is mounted within the second section of the cavity.

16. The anchor bar splice of claim **15**, wherein the first and second portions of the core are mounted to the respective first and second sections of the cavity with adhesive.

17. The anchor bar splice of claim **13**, wherein the wall includes an aperture that is in communication with both the first and second sections of the cavity.

* * * * *