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ROOFING STRUCTURE

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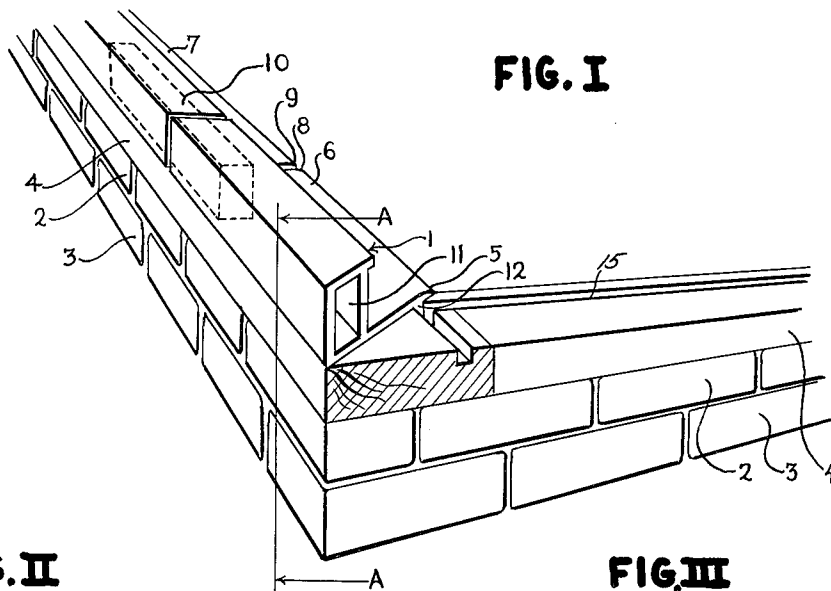


FIG. II

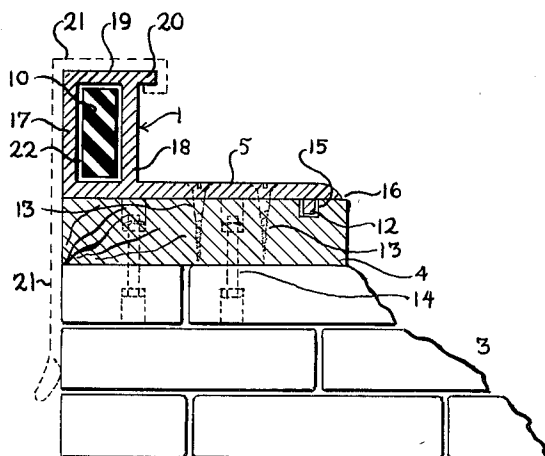


FIG. III

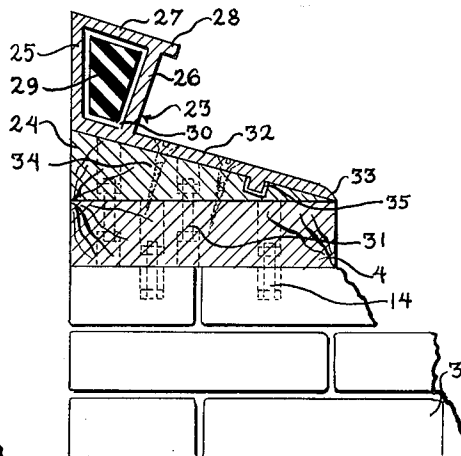
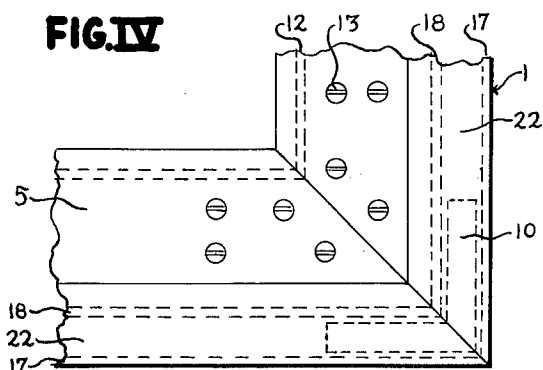


FIG. IV



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ROOFING STRUCTURE

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This invention relates to a structure adapted for use on roofs. More specifically the present invention resides in a novel gravel stop or edging member used on roofs and the like.

The device of this invention is adapted for use on the top marginal edges of the exterior, building-enclosing wall of structures. Generally a marginal wood nailing strip is provided on the peripheral portion of this enclosing wall to allow various types of fasciae and finishing to be attached thereto. The device of this invention correspondingly may be secured to this wood nailing strip. Also, the edging member or novel gravel stop of this invention is independent of any fascia and may be utilized together with any desired fascia; or may if desired be used without any fascia.

The prior art structures used as gravel stops usually consist of a device that extends vertically downward over the top terminal edge of a flat roof structure; and extends horizontally sideward over a flat horizontal portion of the roof. These prior art structures generally take the form of fascia gravel stops. When it is desired to remove or replace the fascia from the building structure the roofing itself must be torn up, especially that portion overlying the horizontal portion of the fascia. Thus it becomes an expensive practice to replace prior art fasciae in that as mentioned above the roofing also has to be replaced or at least repaired. The edging member of this invention provides a device independent of any fascia, a device to which any conventional fascia may be attached or secured, a device which allows the fascia member used together therewith to be replaced or removed without disturbing the roofing in any manner.

A second shortcoming of the prior art fasciae or edging members is that of substantial seepage of the roofing material down the exposed walls of the building. This results not only in an unsightly building structure, but also results in loss or shifting of roofing material from the original intended position. Many devices such as joint covers and pitch dams have been utilized in an attempt to prevent or minimize this seepage, however it is generally agreed that these expedients leave much to be desired. The edging member of this invention provides means integral therewith for preventing discharge or seepage of the normally employed built-up roofing material saturants and/or adhesives such as tar, pitch, and the like. Provided for in the present structure is a downwardly extending lip adapted to fit into a saw cut in the coping plate. This lip extends completely around the peripheral portion of a flat roof structure at a point inwardly of the outer edge of the roof. This feature will be explained and defined in greater detail in the ensuing discussion.

A further undesirable feature of prior art edging devices has been the fact that upon expansion or contraction of these edging devices (due to climatic conditions) seepage of roofing materials results together with disfiguration of the edging member and roofing structure. The most commonly used edging members fail to make any practical accommodation for expansion or contraction of the structures integral therewith. The problem is understandably a difficult one, since it is not easy to provide a rigid, structurally strong, edging member and yet provide for changes in configuration of the member. The device of

this invention comprises a hollow center portion adapted to tightly receive a bar means. This bar is inserted into the hollow portion of adjacent edging members at the point or points where they are joined together. Thus if the ends of the edging members where they are joined separate upon expansion the internal bar will still cover the space left by the separation of the ends. No seepage will result from expansion or separation of these end portions, nor will unsightly spaces be left between portions of these edging members. The use of these internal bars also facilitates easy installation of this structure on a flat roof, since alignment and attaching problems are easily solved thereby.

A still further problem encountered with prior art conventional edging means is the frequent bending of the gravel stop means caused by the necessitated structural configuration of the fasciae. The present structure provides a frame type gravel stop which makes it rigid and substantially resistant to bending.

The generally used procedure in installing conventional fascia means on a flat roof structure is first to attach fascia to the terminal edge portion and then to lay the roofing material. Because of the nature of the roofing material, it is at best unlikely that the fascia will not be soiled by the pitch, asphalt, tar or other material being used. The result is an unsightly finishing on the edge portion of the roof, which must be reinstated to its original condition by a cleaning operation. The present invention provides an expedient solution to this problem. The edge strip of this invention after being installed, allows all roofing to be completed. The fascia may then be installed with little or no danger of the fascia being soiled by the roofing material while the roofers are laying it before the fascia is installed.

Therefore as a summary of all the advantages of this invention it can be stated that the edging member contemplated within the concept of this invention includes a structurally strong, relatively inexpensive edging member for terminating the upper marginal edge of the exterior walls of a flat roofed building. This edging member not only prevents dripping and seepage but also is easily installed and maintained. If it is desired to modernize, replace, or remove the fascia which is used together with the edging member of this invention, it is not required to disturb the roofing or roofing material whatsoever. To add to the architectural appeal of the roofed structure, the edging member of this invention allows the roofing to be completely installed, before the fascia is installed. Any design or desired fascia may be used with the edging member of this invention.

The edging member of this invention is preferably constructed of aluminum, however other suitable materials may be used if desired. The expansion bars used internally of the edging member are preferably constructed of rubber or other resilient materials; however again, any suitable material may be used. The edging members may be extended into any desirable lengths and widths, or into any size desired.

It is therefore an object of this invention to provide a roof edging member that allows a fascia used therewith to be replaced or removed without disturbing the roofing.

Another object is to provide an edging member that reduces to a substantial minimum, seepage or drippage of the roofing material.

A still further object of this invention is to provide an edging member that allows for expansion and/or contraction without any deleterious effect.

A yet further object is to provide a relatively inexpensive, rigid edging means having integral therewith a desirable gravel stop.

Another still further object of this invention is to

provide a novel edging means having thereon means for attaching any fascia thereto.

Still a further object is to provide an edging means easy to install yet structurally sounder than most presently used edging means.

The edging strip also provides for means whereby the roofing may be completed before the fascia is installed, thereby reducing soiling of the fascia by the roofing materials to practically nil.

Other objects of this invention will become apparent to those skilled in the art upon a further reading of this disclosure. The invention will be more easily understood with reference to the enclosed drawing. It should be understood that the drawing is meant to illustrate and not limit the invention.

FIGURE I illustrates a fragmentary perspective view of an outer building wall structure and roof including an edging member of this invention.

FIGURE II illustrates a cross-sectional elevation taken along the plane of line A—A of FIGURE I.

FIGURE III is a cross-sectional view of an alternate structure of the edging member of this invention.

FIGURE IV is a fragmentary top plan view of a corner portion of the edging member of this invention.

Referring first to FIGURE I, edging member 1 is positioned on an outer building wall structure 2. This outer wall 2 comprises a brick, concrete or the like lower structure 3 together with a substantially level marginal wood nailing strip or coping plate 4. Wood nailing strip 4 is permanently secured to lower wall structure 3 by any conventional or convenient means. Generally a plurality of layers of tar and felt is positioned between the inwardly extending base flange 5 and coping plate 4, however for the sake of clarity these layers are not illustrated in the drawing. The edging members are cut into predetermined lengths as shown by pieces 6 and 7. Lengths 6 and 7 of the edging members are aligned adjacent each other at their end terminal portions 8 and 9 respectively. An insert bar 10 fits into hollow portions 11 of the edging member 1 at the point of the juncture of end portions 8 and 9, or where they are joined. Upon any change of length of pieces 6 and 7 due to climatic conditions or changes, no separation between end portions 8 and 9 (at their point of junction) will allow an opening to result. Bar member 10 will remain extending across the point of junction thereby closing any gap or opening that ordinarily would be caused by separation of this junction. Extending longitudinally along the entire length of each edging strip is a downwardly projecting lip 12 which is adapted to fit into a saw cut placed in wood nailing strip 4. This lip 12 prevents any pitch or tar from seeping from the roof, under the edging member, and down the vertical portion of the outer wall. Lip 12 also provides a bonus effect of preventing (together with screws and the like) any substantially lateral movement of the edging member.

FIGURE II illustrates a cross-sectional enlarged view of the edging member 1 of this invention. Edging member 1 comprises an inwardly (toward center of roof) extending base plate or flange 5 which fits adjacent to the wood nailing strip 4 (or more specifically adjacent to the layers of tar and felt that are used with structures of this nature). These tar and felt layers are not illustrated since the invention is more clearly illustrated without them. They would fit however between the bottom face of base plate 5 and the top face portion of wood nailing strip 4. Flange 5 is provided with a plurality of slotted apertures or holes for receiving screws or other securing means 13. Screws 13 are used to permanently secure and lock edging member 1 to wood nailing strip 4. Wood nailing strip 4 is permanently secured to brick wall structure 3 by bolts 14 or any other conventional means. A longitudinally disposed rib or lip 12 extends throughout the length of the edging means (or individual sections thereof) and fits into and locks with a saw cut 15 which

also extends throughout the length of wood nailing strip 4. If it is desired an adhesive may be used in saw cut 15 to more securely bond and lock lip 12 therein. The inner edge 16 of base plate 5 is tapered downwardly to a sharp edge even with or substantially even with the top surface of wood nailing strip 4. This insures that no drop or space occurs from the edge of flange 5 to the top surface of wood nailing strip 4, thus facilitating a more even spreading of material positioned over said flange. At the edge opposite tapered portion 16 are positioned two vertically disposed wall plate portions 17 and 18 substantially parallel to each other and connected at their upper most portions by horizontally disposed wall plate 19. Horizontally disposed wall plate 19 extends inwardly beyond the wall plate 18 thereby forming a plate flange 20. This projecting plate flange 20 provides a securing means whereby a desired fascia 21 (in dotted lines) may be easily attached thereto. Vertical wall plates 17 and 18 together with horizontal plate 19 provide an inner bar chamber 22 of substantially rectangular configuration. Inner bar chamber 22 is adapted to receive and house a resilient bar member 10. This bar member 10 may be constructed of any suitable material, however a rubber or resilient plastic material is preferred. This bar 10 may extend only through those portions of edging member 1 where they are connected to adjacent portions of edging members. If it is desired however bar 10 may extend through the entire length of the edging members.

FIGURE III illustrates a modified edging member 23 that may be used in lieu of edging member 1 of FIGURE II. In some instances it is desirable to use a beveled coping plate or nailing strip 24 around the peripheral portion of a flat roof. Because of the configuration of this coping plate, a variation in the structure of edging member 1 of FIGURE II is required. In this regard upwardly projecting wall plates 25 and 26 may extend upward and outward as they extend to and approach top plate 27. Both plates 25 and 26 may extend outward if desired, however it is preferred that only plate 25 be inclined outwardly as it approaches top plate 27. Plate 26 is, as is plate 18 in FIGURE II, substantially perpendicular to base plate 5. Plate flange 28 extends beyond the edge of plate 26 and, as plate 19 in FIGURE II, provides securing means for a fascia as shown by the dotted lines in FIGURE II. The insert bar 29 would be of a different configuration from the bar 10 shown in FIGURE I. It will be noted that the configuration of the bar takes the shape of the inner chamber 30. In both FIGURES II and III it is preferred that the bars 10 and 29 fit quite snugly into the chambers 22 and 30 respectively. The drawings for the sake of illustration show them to be very loose fitting. Although they may in certain circumstances be loose fitting, it is preferred that they fit quite tightly into the chambers. Beveled coping plate 24 may be attached to a wood nailing strip 4 by bolts 31 or by any other conventional means. The base plate 32 has a tapered edge portion 33 and slotted apertures therein to receive screws 34 by which roof edging member 23 is permanently secured to beveled coping plate 24. A longitudinally extending rib 35 is positioned on the bottom portion of base plate 32 as in the structure of FIGURE II. It fits into and locks with the longitudinally extending saw cut in coping plate 24.

If it is desired base plates 5 and 32 of FIGURES II and III respectively may extend beyond the inner edges of wood nailing strip 4 or coping plate 24.

FIGURE IV illustrates a top view of the corner configuration of the edging member 1 of FIGURE II. Base plate 5 is shown having therein screws 13 which secure the edging member 1 to the wood nailing portion or top of the brick wall. Rib or lip 12 is shown by dotted lines as it extends longitudinally of the edging member. Vertical walls 17 and 18 are shown (in broken lines) in a parallel fashion in spaced relationship thereby forming

a bar chamber 22. The drawings herein described, define the preferred embodiment of this invention.

This invention as described in the foregoing description and drawings have been given for purposes of illustration, not limitation. Many other modifications and ramifications will naturally suggest themselves to those skilled in the art, based on the disclosure of this basic discovery. These are intended to be comprehended with the scope of this invention.

I claim:

1. In a roof structure, the combination of a coping disposed on the terminal edge of a wall, said coping including a coping plate disposed on and secured to said terminal edge and a sectional roof-engaging gravel stop seated on and secured to said coping plate, each section of said gravel stop comprising a longitudinally extending base plate, said base plate having adjacent one edge thereof a depending, longitudinal, sealing rib; a pair of upwardly projecting, spaced longitudinal wall plates integral with said base plate, one of said wall plates extending along the other edge of said base plate and the other of said wall plates being spaced inwardly from said other edge; and a longitudinal connecting plate joining and integral with the upper ends of said wall plates; said base, wall and connecting plates forming at the outer edge of said gravel stop a continuous longitudinally extending chamber, said coping plate having a longitudinally extending groove and said base plate being secured to said coping plate with the lower face of said base plate substantially parallel with the top face of said coping plate and said sealing rib within said groove.

2. In a roof structure, the combination defined in claim 1 in which said connecting plate extends inwardly from the outer edge of said gravel stop beyond said other wall

plate and forms an inwardly projecting, longitudinally extending flange adapted for use in attaching a fascia to said gravel stop.

3. In a roof structure, the combination defined in claim 1 in which a resilient bar is provided in said chamber, said bar being located in part in at least two sections of said gravel stop.

4. In a roof structure, the combination defined in claim 2 in which a resilient bar is provided in said chamber, said bar being located in part in at least two sections of said gravel stop.

References Cited by the Examiner

UNITED STATES PATENTS

15	522,363	7/94	Davis	52—300
	1,743,492	1/30	Sipe	52—586 X
	2,041,929	5/36	Hitzman	52—96
	2,324,643	7/43	Phillips	52—300
	2,726,608	12/55	Ashley	52—95
20	2,855,776	10/58	Trostle	52—97
	3,016,546	1/62	Lerner	52—169 X

FOREIGN PATENTS

25	785,309	5/35	France.
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OTHER REFERENCES

Designing With Aluminum Extrusions, published by the Reynolds Metals Co., 1957; copy in Division 33, only pages 7 and 60 of interest.

HENRY C. SUTHERLAND, *Primary Examiner*.

JACOB L. NACKENOFF, WILLIAM I. MUSHAKE,
Examiners.