March 16, 1965 B. SUNSHINE 3,173,268

RAIN GUTTERS FOR BUILDINGS

Filed July 25, 1961

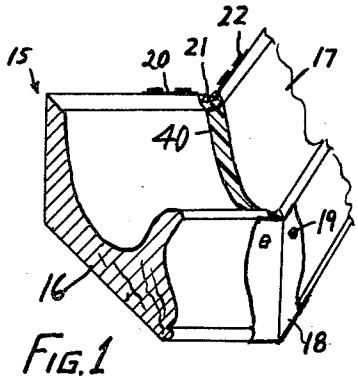


FIG. 1

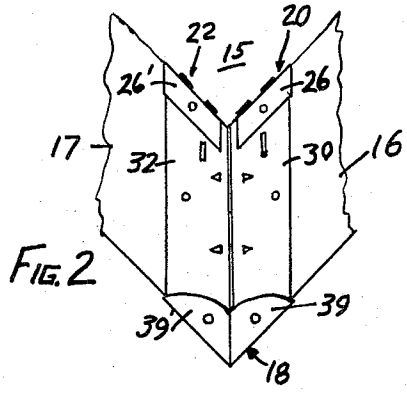


FIG. 2

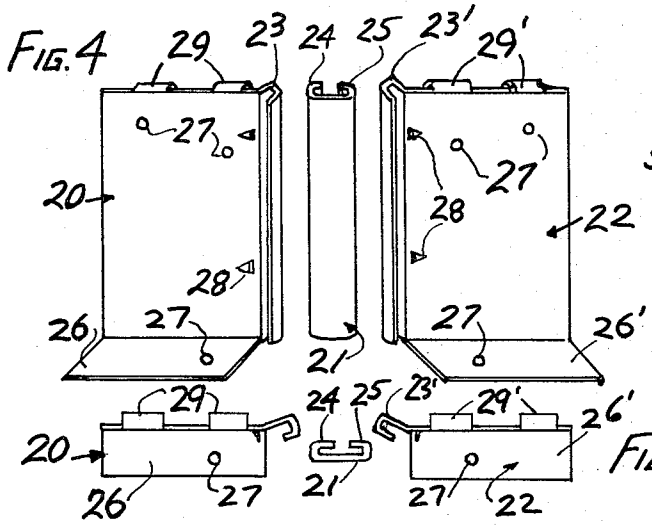


FIG. 4

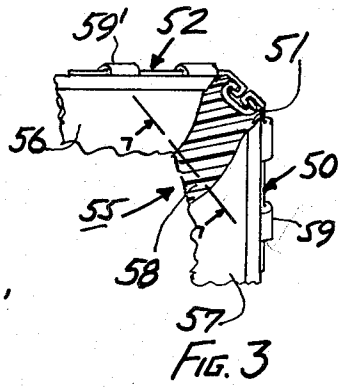


FIG. 3

FIG. 5

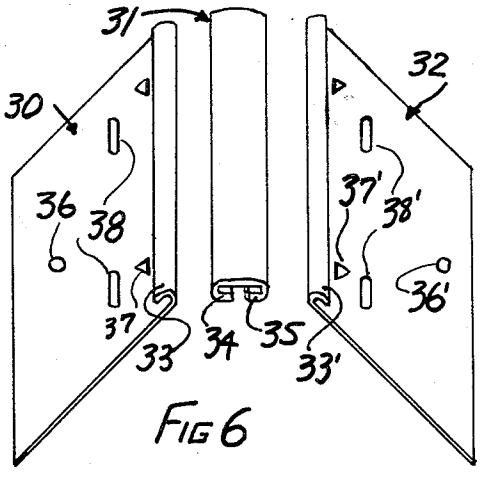


FIG 6

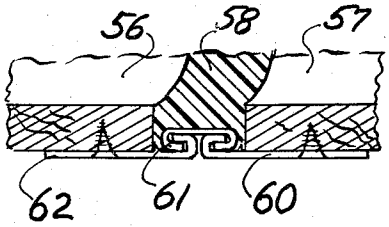


FIG. 7

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RAIN GUTTERS FOR BUILDINGS

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1 Claim. (Cl. 61—14)

This invention relates generally to rain gutters used on buildings, and more particularly relates to novel constructions and arrangements thereof that simplify their installation.

The invention construction is particularly suitable for wooden rain gutters, yet is applicable to the sheet metal type as well. The gutter sections are directly joined, end-to-end or at corners by the novel, economical and practical fasteners hereof. A predetermined spacing is provided through the joint hardware of the invention, to fill-in with suitable cement for securing the joint and render it leakproof.

These and other advantages, objects and features of this invention will become more apparent from the following description of an exemplary embodiment thereof, illustrated in the drawings, in which:

FIG. 1 is a perspective illustration of a 90° corner section of a rain gutter utilizing the invention fasteners, formed for a building "outside" corner.

FIG. 2 is a bottom view of the rain gutter corner of FIG. 1.

FIG. 3 is a plan view of the inner portion of an exemplary 90° corner section of a rain gutter, formed for use at a building "inside" corner.

FIG. 4 is a perspective view, enlarged of the exemplary vertical fastener set, shown in sections, for the rain gutters.

FIG. 5 is a top plan view of the fastener sections of FIG. 4.

FIG. 6 is a perspective view, enlarged, of the fastener, in sections, used at the bottom of the rain gutter corner of FIG. 1.

FIG. 7 is an enlarged cross-sectional view, taken along the line 7—7 of the gutter corner as shown in FIG. 3.

The rain gutter section **15** of FIGS. 1 and 2, is in a 90° corner form, composed of two wooden gutters **16**, **17** joined at their 45° mitred ends by the exemplary fastening structure. The fastener system comprises a vertical set **20**, **21**, **22**, shown in separated view in FIGS. 4 and 5; and the bottom set **30**, **31**, **32**, shown in FIGS. 2, 6 and 7. A metal front plate **18** is secured by screws **19**, as a decorative member. It is a 90° form, to fit thereon.

The vertical fastener set is composed of similar end members **20** and **22**, and a central locking channel **21**. End member **20** contains a vertical ribbed flange **23** for mating or latching with flange **24** of channel **21**; and end member **22**, a flange **23**, for mating with flange **25** of the channel. Flaps **26**, **26'** extend perpendicularly from member **20**, **21** respectively to aid in securing them to the gutters. Suitable apertures **27** and toothed upsets **28** enable such securement by simple wood screws.

The vertical end members **20**, **22** are secured along the "inside" vertical faces of the respective 45° mitered adjacent gutter ends of the corner **15**. Their flanges **23**, **23'** overlap the edges for latching engagement with the channel **21**, indicated in FIG. 1. The flanges **23**, **23'** are arranged to be inwardly of the joint, with the locking channel **21** positioned interiorly between the spaced gutter ends. By providing a predetermined end-to-end spacing of the gutters **16**, **17** through such interior latching of the vertical set **20**, **21**, **22**, and of the bottom set **30**, **31**, **32** to be described, an open region **40** of uniform dimensions results in corner **15**. An exemplary width or spacing for the potted region **40** is one-half inch.

The region **40** thus formed in the joint between the gutters **16**, **17** is filled with a suitable stay-soft roofing cement as indicated, see FIG. 1. This keeps the joint (**15**) both flexible and waterproof. It is noted that the vertical and bottom fasteners sets, together with the front plate **18** form a mold contour for the joint at region **40**. Simple filling-in of the region with bituminous or other roofing cement completes the corner **15** as an integrated joint. It is unnecessary to exercise precision in mitering the gutter ends, as the corner **15** remains moderately flexible, and firmly supported by the two fastener sets.

The bottom fastener set is composed of two similar end members **30** and **32**, each with a ribbed longitudinal flange **33**, **33'**. The central channel **31** has corresponding flanges **34** and **35** for latching engagement with the flanges **33**, **33'** respectively. The edges of members **30** and **32** adjacent flanges **33**, **33'** form a 45° angle therewith to conform with the mitered gutters and construct the 90° corner (**15**), as seen best in FIG. 2. Apertures **36**, **36'** and toothed upsets **37**, **37'** are for securing members **30**, **32** to their respective gutters. Slotted openings **38**, **38'** are for ease of securement of the bottom flaps **39**, **39** of front plate **18** to the gutter undersides, (see FIG. 2).

FIG. 3 is a partial view of a modified 90° gutter corner **55**, for use at an "inside" building corner. The vertical fastener set **50**, **51**, **52** is identical to set **20**, **21**, **22** of FIGS. 1 and 4. In corner **55** however, the relative position of the end members **50**, **52** is reversed on corresponding gutters **56**, **57**. In this manner their flanges **53**, **53'** properly establish the interior latching with channel **51** to form the potted joint region **58**. Their bottom flanges (not shown), corresponding to **26**, **26'** of members **20**, **22**, also properly mate in the "reversed" position. The bottom fastener set **60**, **61**, **62** is identical with the set **30**, **31**, **32** of corner **15**, and similarly used, in "reversed" mode, see FIG. 7.

Depending from the top edges of the vertical fastener end members **20**, **22** and **50**, **52** are integral hook-on flaps **29**, **29'** and **59**, **59'** respectively. These flaps are arranged to extend about the order of ⅛ inch from the body of its associated member, and parallel thereto. The hook-on flaps **29**, **29** and **59**, **59'** are for engaging with the hanging devices for mounting the assembled gutters, to be described hereinafter.

The splicing together of lengths of rain gutters, in and end-to-end or linear butt joint to form a long gutter is readily realized by using the fastener invention hereof. The vertical fastener set used is the same as for the corners (**15**, **55**). The bottom fastener set is similar to that of FIG. 6 (**30**, **31**, **32**) except that the longitudinal edges are parallel to the gutter sides, namely perpendicular to their flanges. A flush third plate completes the joint region, that is then suitably potted. Shorter and therefor cheaper gutter lengths may in this manner be used to construct any longer gutter assembly required, at the building site.

Although this invention has been set forth in conjunction with an exemplary embodiment, it is to be understood that it may assume other forms, and be modified, without departing from the broader spirit and scope of the invention, as set forth in the following claim.

I claim:

A rain gutter comprising two adjacent linear gutter sections of wood material, a fastener joining the adjacent ends of said sections with a predetermined spaced region therebetween, said fastener including a pair of flat end members each secured to one of said gutter sections adjacent its said end, said end members each having a reentrant flange extending beyond its associated section end and into said region, a channel member with recip-

rocal flanges engaging said end member flanges to maintain said two gutter sections at the predetermined spacing, said channel and the cojoined fastener flanges being arranged interiorly within said spaced region between the section ends, and cementitious material filling said region and encasing said engaged channel and flanges forming a firm weatherproof internal joint for the rain gutter.

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