Jan. 9, 1951 F. J. SWARTZ 2,537,243

RAIN GUTTER

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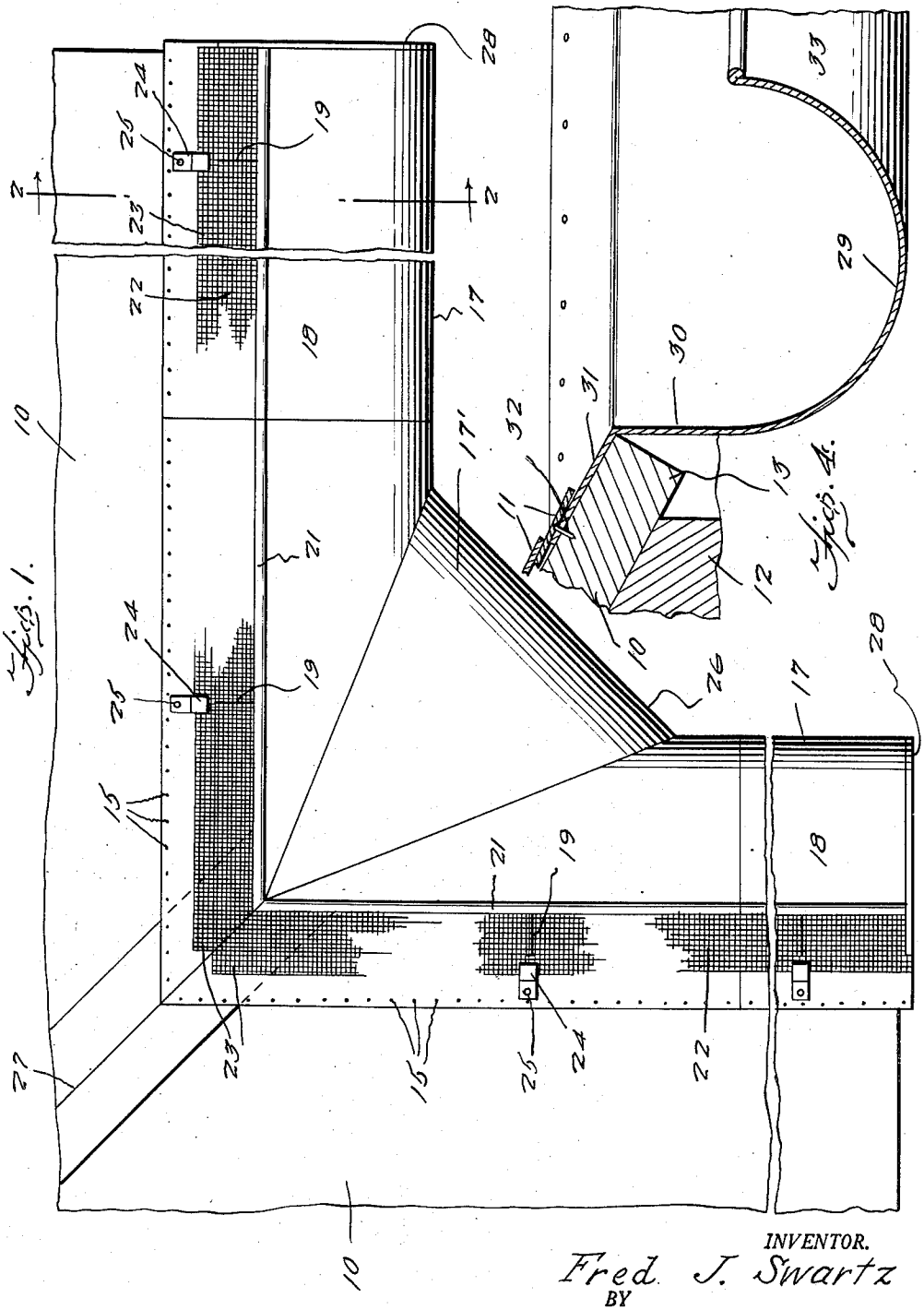


Fig. 1.

Fig. 4.

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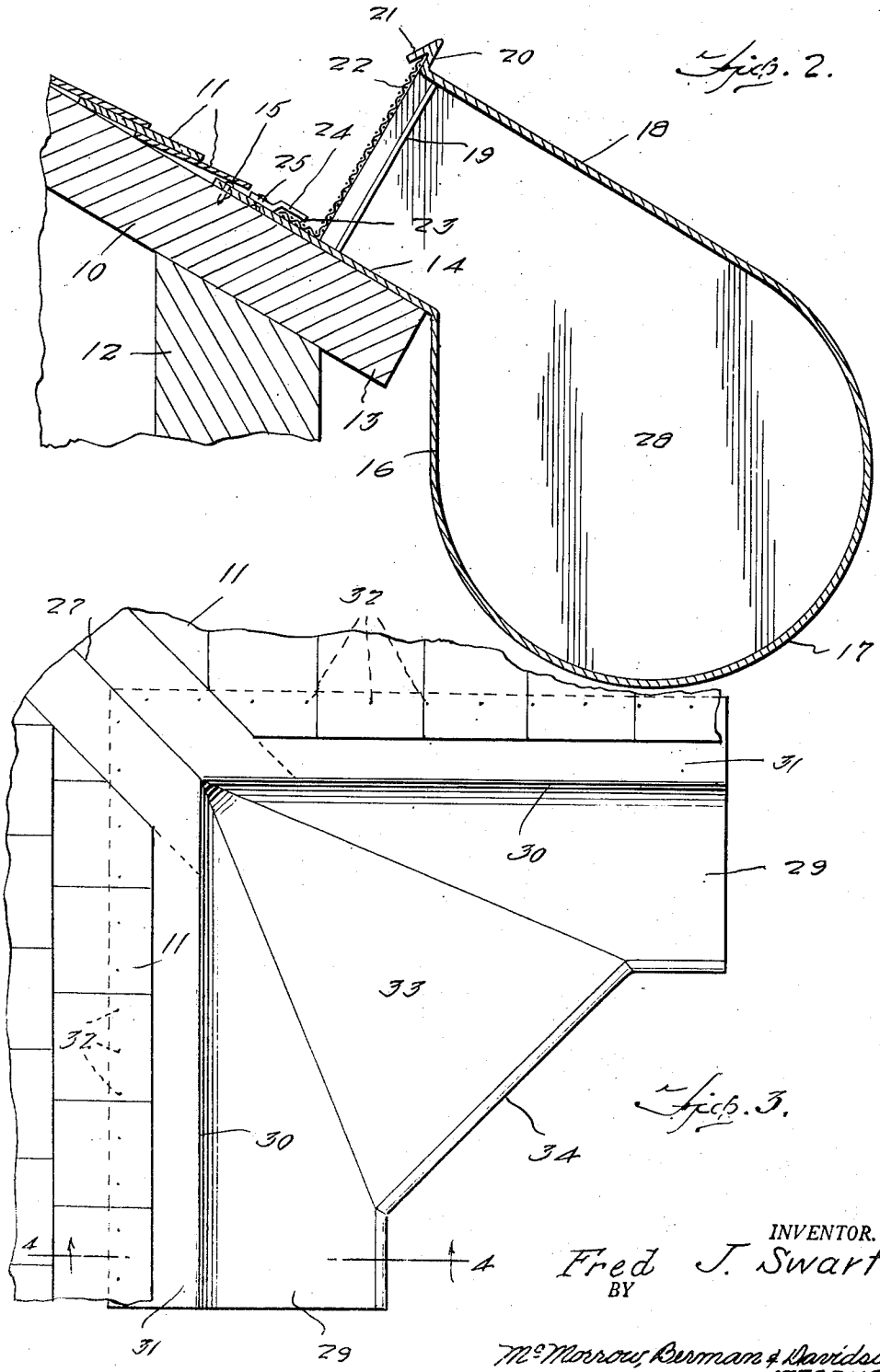


Fig. 2.

Fig. 3.

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RAIN GUTTER

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2 Claims. (Cl. 108—28)

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My invention relates to improvements in rain gutters and gutter miters.

A primary object of the invention is to provide a rain gutter for houses, and the like, designed so that all of the water running off the roof must enter the gutter, and no water will spill over the gutter to form icicles.

A further object of the invention is to provide a rain gutter having means to prevent foreign matter, such as sticks and leaves from entering the gutter to stop up the same.

A further object is to provide a rain gutter miter which will prevent the flooding of rain gutters during heavy rains.

A still further object of the invention is to provide a rain gutter of improved and simplified construction which is relatively inexpensive, and well adapted for installation on new or old houses.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a plan view of a rain gutter and gutter miter embodying my invention, as applied to the roof of a house,

Figure 2 is a transverse vertical section taken on line 2—2 of Figure 1,

Figure 3 is a plan view of a gutter miter as applied to a roof, and embodying a modification of my invention, and,

Figure 4 is a transverse vertical section taken on line 4—4 of Figure 3.

In the drawings, where for the purpose of illustration are shown preferred embodiments of my invention, attention is directed first to Figures 1 and 2, wherein the numeral 10 designates the inclined roof of a house, covered with shingles 11, or the like, and extending outwardly of the wall 12, to form the usual eaves 13.

I apply my rain gutter to the eaves 13, and a flat inclined longitudinal strip or plate 14 is arranged upon the eaves as shown clearly in Figure 2. This strip 14 extends from the outer edge of the eaves, upwardly, and its upper longitudinal edge is arranged beneath the bottom row of shingles 11, as shown. Suitable nails 15 are employed to secure the strip 14 in place upon the roof, and these nails are arranged near the upper edge of the strip 14 and beneath the shingles 11. The nails 15 extend longitudinally of strip 14, and may be covered with roofer's cement, or the like. Secured to the outer edge of strip 14, and integral therewith, is an inner vertical side 16 of a depending rain gutter 17, preferably cylindrically curved in transverse cross section, as shown, and including a top inclined flat longitudinal extension or cover 18. The cover 18 is

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parallel to the strip 14, and spaced upwardly therefrom, as shown. A plurality of stiffeners or braces 19 are arranged between the strip 14 and cover 18, near the upper longitudinal edge of the cover, and secured to the cover and strip, by soldering, or the like. The braces 19 are at right angles to strip 14 and cover 18, as shown, and are preferably spaced apart approximately four feet along the rain gutter. Upwardly of braces 19, the cover 18 is bent 90 degrees outwardly, or away from the roof, to form a short longitudinal flange 20, carrying an inwardly projecting longitudinal lip 21 bent at an acute angle to flange 20, and forming therewith an inverted V-shaped socket to receive the top longitudinal edge of an upstanding filter screen 22, as shown. The screen 22 is disposed at right angles to cover 18, and to the roof, and is bent upwardly at its bottom to form a bottom longitudinal inclined portion or strip 23, clamped in place by a plurality of pivotal lugs or clips 24, secured by rivets 25, or the like to plate or strip 14. The pivoted clips 24 may be spaced apart along the rain gutter approximately four feet, or as desired. The lip 21 may be pinched toward the flange 20 to secure the top edge of screen 22 in place.

It may be seen that a rain gutter is provided wherein all of the water on the roof must enter the gutter 17, and no water will tend to hurdle or spill over the gutter to form icicles upon the same.

At the corners or miters of the rain gutter, I provide a miter gutter section 17', having its outer longitudinal edge 26 arranged at 45 degrees to the adjacent gutter sections 17, with which it is connected. The length of the edge 26 of section 17' is preferably about twice the diameter of the gutter employed, or about 6 inches on a 3 inch gutter. This arrangement provides the necessary increased volume for the water running down the valley 27 of the roof. The miter section 17' also facilitates the flow of water at the corner or miter of the rain gutter.

The gutter 17 and miter section 17' may be formed of copper, aluminum, galvanized iron, or other suitable material. The joints between adjacent gutter section may be slip type, locked, or raw and soldered, as desired. The screen 22 is formed from a suitable mesh galvanized screening, or the like. Suitable end caps 28 are secured to the ends of the gutters 17, as shown.

In Figures 3 and 4 of the drawings, I have shown a modification of the invention, wherein a conventional type rain gutter is secured to the roof eaves 13. This rain gutter, as shown in Figure 3 comprises straight gutter sections 29, or troughs, which are U-shaped in transverse cross section, and open at their tops, as shown. The gutter sections 29 include inner vertical sides 30, which project up to the outer edge of the eaves

trough 13. The vertical sides 30 are provided with inner inclined attaching strips 31, disposed upon the eaves 13, and secured beneath the bottom row of shingles 11, by longitudinal rows of nails 32.

At the corner or miter between the two gutter sections 29, Figure 3, I provide a gutter miter section 33, connected to the sections 29, and arranged at 45 degrees to the sections 29, as shown. The outer edge 34 of the miter section 33 is preferably about twice the diameter of the diameter of the gutter sections 29, or approximately 6 inches for a 3 inch gutter. The effect of the miter section 33 is to provide for the increased flow of water down the valley 27 of the roof, so that the gutter will not overflow at the miter or corner. The flow of water through the miter section 33, from one gutter section 29 to the other is also facilitated by the construction.

It is to be understood that the forms of the invention herewith shown and described are to be taken as preferred examples of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the scope of the invention, or the scope of the subjoined claims.

Having thus described the invention, I claim:

1. A rain gutter to be mounted upon the eaves of a roof, comprising a longitudinal mounting strip arranged upon the eaves, a cylindrically curved gutter secured to the forward edge of the mounting strip and depending therefrom, an inclined cover carried by the outer edge of the gutter and spaced upwardly from the gutter and mounting strip and extending over the mounting strip, spaced braces arranged between the cover and mounting strip to maintain the same separated, a filter screen arranged between the inner edge of the cover and the mounting strip and including a bottom attaching strip, and pivoted clips secured to the mounting strip adjacent to the attaching strip and adapted to engage over the attaching strip to clamp the same against the mounting strip.

2. A rain gutter to be mounted upon a roof adjacent to the eave thereof, comprising a flat longitudinal mounting strip secured to the top of the eave, a generally U-shaped gutter secured to the forward longitudinal edge of the mounting strip and depending therefrom and having its bottom disposed a substantial distance below the bottom of the eave, a longitudinal inclined cover secured to the outer side of the gutter and integral therewith and extending transversely across the gutter above the same and over the longitudinal mounting strip, the cover being spaced a substantial vertical distance above the mounting strip in superposed relation therewith to form with the mounting strip a substantially horizontal longitudinal deep passage leading into the gutter, and a filter screen having its top edge secured to the cover and its bottom edge secured to the mounting strip and disposed substantially at right angles to the mounting strip and extending across the passage to prevent foreign matter from entering the same.

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