Nov. 7, 1967 C. H. WENNERSTROM 3,351,206

STRUCTURE FOR SECURING GUTTER SCREENING TO BUILDING GUTTERS

Filed Feb. 18, 1965

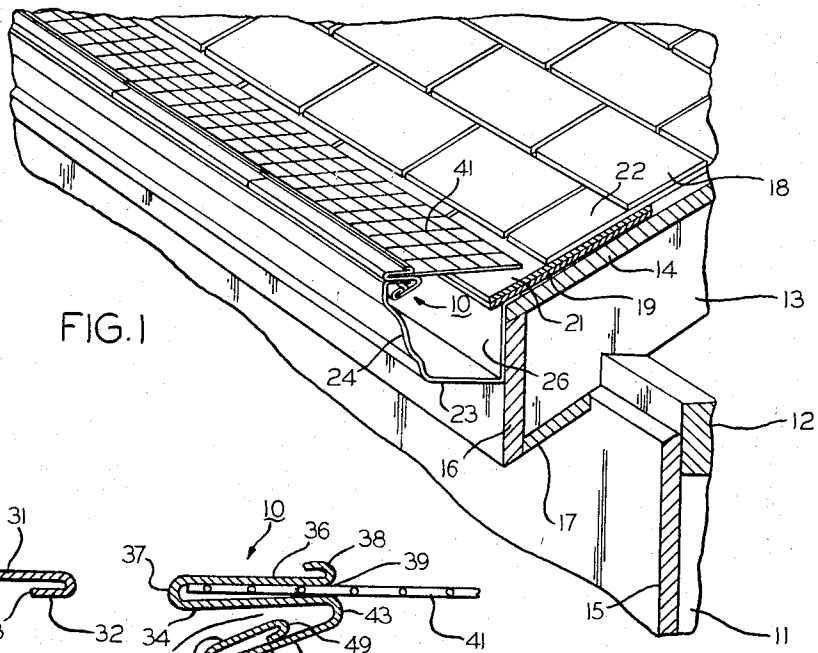


FIG. 1

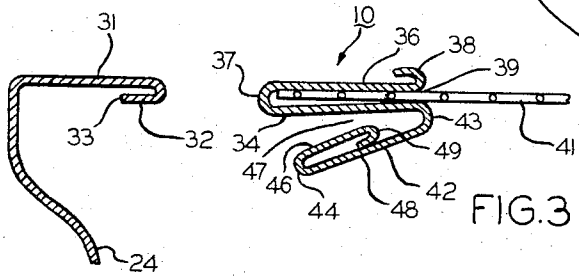


FIG. 3

FIG. 2

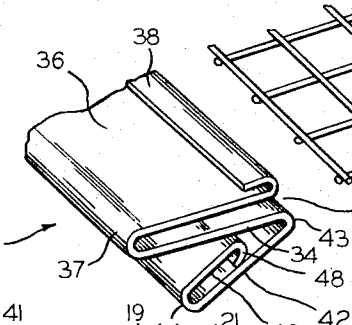


FIG. 4

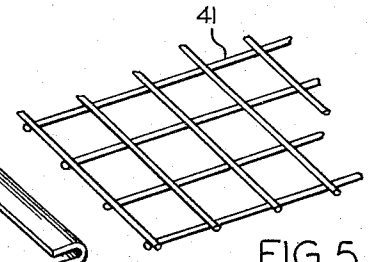


FIG. 5

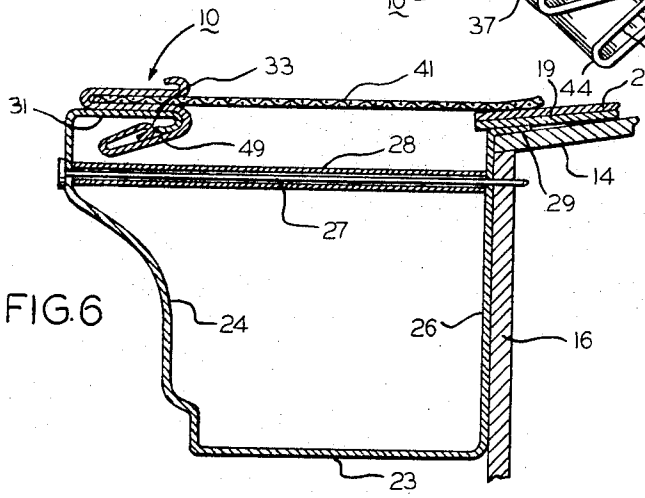


FIG. 6

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STRUCTURE FOR SECURING GUTTER SCREENING TO BUILDING GUTTERS

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This invention relates to improvements in structure for securing gutter screening to building gutters; more particularly, the invention relates to improvement in structure adapted for use with an "ogee" or box section type gutter having an inturned upper flange or rim.

The structure according to the present invention is particularly adapted for use with gutters of the so-called "ogee" or box type which have a horizontally extending stiffening flange formed by folding the gutter metal upon itself. The structure according to the present invention consists of lengths of resilient material so formed as to have a common central limb or element, with flanking resiliently biased limbs or elements presenting entrant jaws for engaging the gutter screen and the aforedescribed stiffening flange. One pair of such limbs defined by the central limb and one of the resilient limbs is provided with structure engaging the inturned flange of the gutter with a certain snap or detent action, while the other pair of limbs defined by the central limb and the other of the resilient limbs is adapted to engage the gutter screen with considerable frictional force by reason of the resiliency of such limbs so as to prevent the unintended removal of the gutter screen.

With the foregoing considerations in mind it is a principal object of this invention to provide a simple structure for securing gutter screen in position overlying the gutter trough, and to permit release of the gutter screen for removal of small debris from the trough or for painting of same.

Another object is to provide a simple structure for the purposes set forth which can be formed easily into short or other convenient lengths for ready placement on the gutter section for the subsequent placement of the gutter screen in position thereon.

Other embodiments and important features of the invention will be apparent from a study of the specification following taken with the drawing which together describe and illustrate a preferred embodiment of the invention and what is now considered to be the best mode of practicing the principles thereof. Other embodiments of the invention will be suggested to those having the benefit of the teachings herein, and such embodiments are intended to be reserved, especially as they fall within the purview of the subjoined claims.

In the drawing:

FIG. 1 is a perspective view of an eaves detail of a building showing the improved structure according to the present invention situate thereat;

FIG. 2 is a detailed transverse cross sectional view of a portion of a box type gutter adapted to receive the structure of the present invention;

FIG. 3 is a transverse sectional view through the structure according to the present invention;

FIG. 4 is an isometric view thereof:

FIG. 5 is an isometric view of a gutter screen adapted to be received in the structure of FIG. 4; and

FIG. 6 is a transverse section through a box type gutter showing the invention structure situate thereat.

Referring now to the drawing, the improved structure according to the present invention is denoted by the reference numeral **10** and is situate in the environment of an eaves detail shown in FIG. 1. The eaves detail is part of a building structure including a wall **11** surmounted by a wall plate **12** having inclined rafters **13** secured thereto in a well known manner. Roof sheeting **14** is secured to the rafters **13** and the exposed ends and bottom of the rafters **13** are closed by a fascia **16** and a soffit plate **17**, which bears against an upper fascia part of the wall **11**. The roof sheeting **14** may be covered by a conventional composition shingle roof **18** consisting of a starter course **19**, and a first shingle row **21** and subsequent rows of shingles **22** in a manner well known.

As seen in FIGS. 1 and 6 the fascia **16** supports a box type gutter **23** having a front "ogee" flange **24** and a back flange **26**. Gutter **23** is adapted to be secured to the fascia **16** by long nails **27** guided in a tube **28** having its ends bearing against the front flange **24** and the back flange **26**, the tube **28** operating as a spacer to maintain the contours of the box gutter section **23** during installation. The back flange **26** may, if desired, have a flange **29** extending a short distance beneath the starter course **19**.

The front flange **24** of the box gutter **23** has an upper generally horizontally extending inturned flange **31** which is stiffened by a lower flange element **32** formed by bending of the metal of the flange **31** upon itself as seen in FIG. 2. The lower flange element **32** together with the upper flange element **31** define a step **33** for a purpose as will appear.

Referring particularly to FIG. 3, the structure **10** according to the present invention comprises a central limb **34** adapted to overlie the upper flange element **31** when it is in place on the gutter **23**. The central limb **34** is resiliently connected to an upper limb **36** by means of a bight **37**, the upper limb **36** being curled as seen in FIG. 3 at **38** to define an open jaw **39** for the reception of gutter screen **41** which overlies the box gutter section **23** seen in FIGS. 1 and 6.

The structure **10** also comprises a lower limb **42** which is resiliently connected to the central limb **34** by means of an integral bight **43**. The lower limb **42** is turned back upon itself as at **44** to provide an element **46** which together with the central limb **34** provides an open jaw **47** adapted to receive the flange elements **31** and **32** therebetween. As seen also in FIG. 3, the element **46** is turned back upon itself to provide an element **48** which bears against the inner face of the lower limb **42**.

The structure comprising the lower limb **42** the elements **46** and **47** together provide a detent latch **49** adapted to engage the step **33** on the flange elements **31** and **32** to prevent the unintended removal of the structure according to the present invention. As seen in FIG. 6, the detent latch **49** is shown in position against the step **33** formed by the upper and lower flange elements **31** and **32**, the gutter screen **41** being held in position by the structure **10** so as to overlie the box gutter **23**.

While the structure **10** has been shown as being made of metal which may be formed in a progressive die operation, it is evident to those skilled in the art that the same can be formed in an extruding operation from certain kinds of metal such as aluminum, for example. Alternately, and if desired, the material from which the structure **10** is formed may be of certain kinds of organic resins having memory and resilient properties.

In commercial practice the structure **10** may be sold in short lengths adapted to be placed at proper intervals throughout the length of the gutter section **23**. After being so placed the gutter screen **41** can be inserted into the jaw **39**, and the screen **41** may be removed from the section for cleaning of the gutter of those particles which pass through the gutter screen **41**.

Having thus described this invention in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains to make and use the same, and having set forth the best mode contemplated of

carrying out this invention, the subject matter regarded as being patentable is particularly pointed out and distinctly claimed in what is claimed, it being understood that equivalents or modifications of, or substitutions for, parts of the above specifically described embodiment may be made without departing from the scope of the invention as set forth in what is claimed.

I claim:

In combination with a gutter, a resilient locking device of the class described holding a gutter screen in position to a longitudinally extending eaves gutter having a front wall with an integral stiffening flange comprised of an upper flange element bent upon itself to form a lower flange element integral with said upper flange element so as to provide a step; said resilient locking device being unitary in construction and extending longitudinally of the gutter and comprised of relatively thin flat resilient material consisting of a central limb substantially overlying said upper flange element for substantially the total width thereof and extending lengthwise thereof and in contact therewith, an upper limb coterminous with said central limb and substantially overlying said central limb and resiliently connected thereto and presenting with said central limb an open elongated jaw opening receiving the gutter screen and resiliently gripping the same, a lower limb integral and coterminous with said central limb and presenting with said central limb an open elongated jaw receiving the gutter stiffening flange therein, said lower limb being turned back upon itself to form a detent latch, said detent latch engaging the step of the gutter thereby preventing unintended removal of the locking device from the gutter, said element yielding upon engagement of said central limb and said lower limb with the horizontal flange of said gutter and thereafter moving to locking position with the step of said gutter to prevent the unintended removal of said article of manufacture from said gutter.

References Cited

UNITED STATES PATENTS

817,508	4/1906	Niele	52—530 X
1,519,350	12/1924	Belding	52—530 X
2,365,845	12/1944	Schweda	52—12
2,636,458	4/1953	Harris	52—12 X
2,734,467	2/1956	Steele	52—12
2,805,632	9/1957	Couture	52—12
2,807,222	9/1957	Fry	52—61
3,067,881	12/1962	Goosmann	52—12 X

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