J. SCHAD.

DETACHABLE EAVES TROUGH.

APPLICATION FILED JUNE 30, 1919.

1,313,742. Patented Aug. 19, 1919.

Fig. 1.

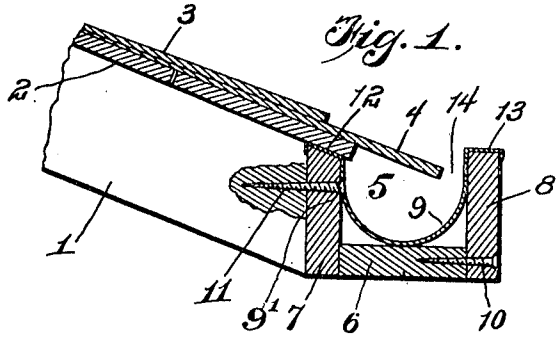


Fig. 2.

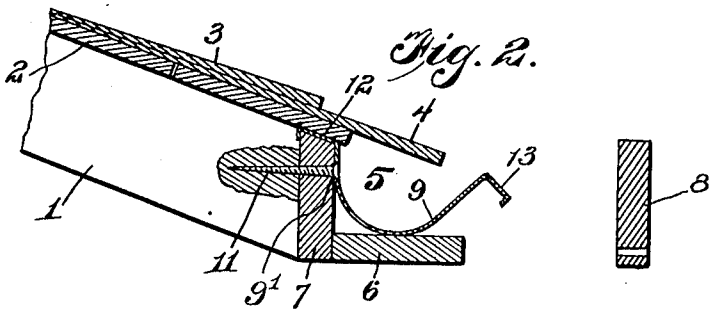
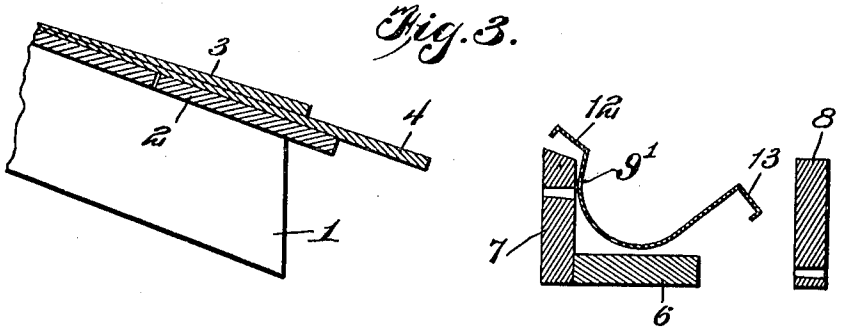


Fig. 3.



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DETACHABLE EAVES-TROUGH.

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To all whom it may concern:

Be it known that I, JACOB SCHAD, a citizen of the United States, residing at Bloomington, in the county of McLean and State of Illinois, have invented new and useful Improvements in Detachable Eaves-Troughs, of which the following is a specification.

This invention relates to eaves troughs, one object of the invention being to provide a trough, containing a gutter of sheet metal or other suitable material, and which is so arranged with relation to the projecting edges of the shingles or other covering of the roof as to permit water to freely flow into the gutter, while at the same time presenting such a small entrance space as to prevent the entrance and nesting of birds in the gutter and further to cause leaves and other refuse to pass over instead of lodging in the gutter.

A further object of the invention is to provide a construction whereby the trough and gutter as a whole may be readily applied and removed, or whereby the outer side of the trough may be detached to free the outer edge of the gutter, allowing all accumulated deposits to be removed in a ready and convenient manner.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a vertical section through the edge of a roof showing the eaves trough in position.

Fig. 2 is a similar view showing the outer board or plate of the eaves trough removed for the purpose of freeing the outer edge of the gutter.

Fig. 3 is a view showing the parts of the trough removed from the building and disconnected but in proper relative position.

Referring to the drawing, 1 designates one of the roof rafters, 2 the roof sheathing and 3 the shingles or other roof covering having the eaves projection beyond the roof line, as indicated at 4.

5 designates, as a whole, my improved eaves trough. This consists of the trough proper consisting of a bottom board or plate 6, an inner vertical board or plate 7 and an outer vertical board or plate 8, together with an inclosed gutter 9 of sheet metal or other suitable material inclosed within the trough so formed. The board or plate 7 fits against the outer ends of the rafters 1 beneath the marginal edge of the sheathing 2 and takes the place of the usual cornice board. The bottom board 6 is secured at its inner edge to the lower portion of the board 7 in any suitable permanent manner, while the outer vertical board or plate 8 is detachably secured to the outer edge of the board 6 in a removable manner, as by the use of screws or other suitable fastenings 10.

The gutter 9 is, as usual, of channeled or U-form and its inner wall is pierced as at 9′ for the passage of screws or other suitable fastenings 11. The screws 11 are arranged at proper intervals apart corresponding to the spacing of the rafters 1, and said screws extend through the board or plate 7 and enter the rafters 1, thus detachably securing the gutter to the trough and the trough as a whole to the rafters.

The upper edge of the inner wall of the gutter 9 is bent into hooked form, as indicated at 12, to embrace the upper edge of the board or plate 7 and is arranged to lie between the same and the projecting edge of the sheathing 2, thus closing the space between the parts at such point against the entrance of moisture, while the upper edge of the outer wall of the gutter 9 is similarly bent into hooked form, as indicated at 13, to embrace the outer edge of the board or plate 8, whereby such edge of the gutter is detachably connected with said board or plate.

As shown, the parts are arranged in such relative position that the eaves projection 4 of the shingling or covering 3 extends downwardly at an angle into the mouth of the gutter below the plane of the upper edge of the board or plate 10, but terminates on a line between the vertical center of the gutter and the outer wall thereof, leaving a comparatively narrow entrance space or passage 14. This space or passage is of sufficient size to admit of the free flow of water, in any volume, to the gutter, but may be sufficiently narrow to prevent sparrows or other birds from having access to the gutter and nesting therein. The arrangement is also such that leaves falling on the roof will, on account of the restricted size of the passage 14, be generally blown over and beyond the trough instead of being deposited there-

in and choking or clogging the trough, as commonly occurs with troughs or gutters of ordinary construction.

In practice, the trough and gutter are applied in position by fitting the terminally connected parts 6 and 7 of the trough in position with the gutter 9 and then applying the screws 11 to secure the same in place, after which the outer removable board or plate 8 is engaged with the hook 13 and placed in position and secured by means of the screws 10. Whenever it is desired to remove any deposits from the gutter, this may be accomplished by simply detaching the board or plate 8, whereupon the outer edge of the gutter 9 will be free to drop down, as shown in Fig. 2, allowing of the free removal of the deposits, after which the board or plate 8 may be reapplied in an obvious manner. The entire trough and gutter may be removed at any time by first detaching the board or plate 8 and then removing the screws 11, so that a new trough or new gutter may be applied at any time without the expenditure of any considerable amount of time and labor and without in the least disturbing either the sheathing or shingles or other form of roof covering. The advantages of the invention will be readily understood by those versed in the art without further description.

Having thus fully described my invention, I claim:

1. The combination with a roof structure, of an eaves trough comprising a bottom wall, an inner wall and an outer wall, the latter being detachably connected with the bottom wall, a gutter disposed in said trough and having its sides provided with bent edge portions engaging the upper free edges of said inner and outer walls, and fastening members for connecting the inner wall of the gutter and inner board or plate of the trough with the roof rafters.

2. The combination with a roof structure, a channeled eaves trough comprising a bottom wall, an inner vertical board or plate, an outer vertical board or plate, the latter being detachably connected with said bottom wall, a sheet metal gutter inclosed within the channeled trough, said gutter having its outer wall engaging but free from fastening connection with the outer board or plate, and fastening devices for detachably securing the inner board or plate of the eaves trough and the inner wall of the gutter to parts of the roof.

3. The combination with a roof structure having a covering provided with an eaves projection beyond the wall line, and supporting rafters, of a channeled trough comprising a bottom wall, an inner vertical wall disposed beneath and lying inwardly of said eaves projection of the covering and abutting against said rafters, an outer vertical wall detachably connected at its lower edge with the bottom wall, a sheet metal gutter lying in the channeled trough, and having the edge of its inner wall hooked for engagement with the free upper edge of the inner vertical wall and lying between the same and the roof covering and having the edge of its outer wall formed with a hook detachably embracing the upper edge of the outer vertical wall, and fastening members passing through the inner vertical wall of the trough and inner wall of the gutter and detachably securing the trough and gutter to the rafters.

In testimony whereof I affix my signature.

JACOB SCHAD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."