Feb. 15, 1938. H. T. RICHARDSON 2,108,612

CLIP FOR SECURING CORRUGATED ROOF OR SIDING SHEETS

Filed Jan. 23, 1937

Fig. 1.

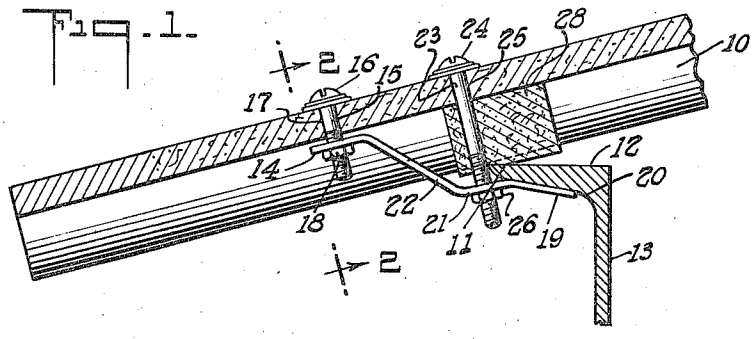


Fig. 2.

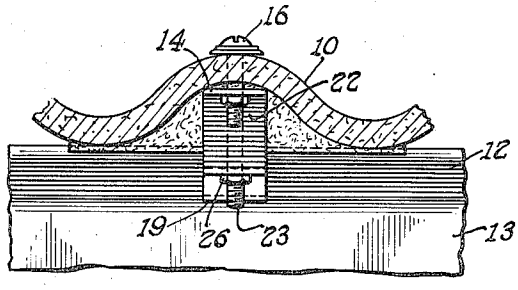
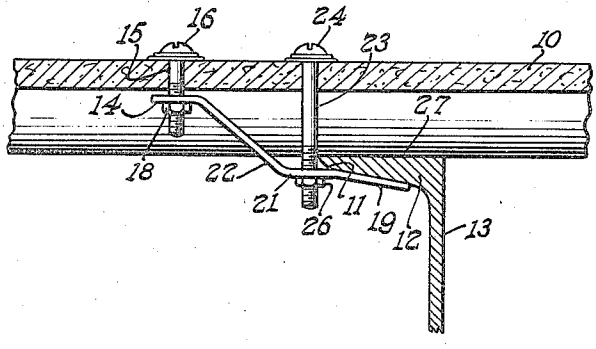


Fig. 3.



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CLIP FOR SECURING CORRUGATED ROOF OR SIDING SHEETS

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3 Claims. (Cl. 108—33)

The present invention relates to clips for securing corrugated roof or siding sheets to a supporting strut or other structural element. Particularly, the invention relates to clips more specifically intended as sheet fasteners at the eaves of buildings; it being understood, however, that such clips may be used to attach the sheets to any cross-piece or purlin of roof or wall.

A strut, consisting of a vertical channel having horizontal flanges, is usually found at the eaves of steel structures. The clips which hold the covering to this strut are seated against the under face of the upper horizontal flange of the channel. Such channels are usually so fabricated that this under face is inclined upward and outward. Any roof covering having a pitch will be supported only on the edge of the flange. All this has made for difficulty in effecting secure attachment of the covering sheet to the flange against wind shocks and other strains. The tendency has been for the clip to yield and permit itself to be pulled, bent or rocked around the edge of the flange, thus releasing the covering.

Certain clips heretofore in use have been so designed as to be bolted to the covering sheet only at the part of the clip on which the sheet is seated, and this has been so remote from the seat for the clip on the support as to present an arm therebetween, which by reason of its length is not only structurally weak, but serves as an effective lever for prying or bending the clip from its seat when the covering is subjected to wind or other shocks.

An object of the present invention is a clip designed so as to be attachable to the covering not only where the covering is seated thereon, but also adjacent the edge of the supporting flange, thus providing a strong reenforcement for the clip-reach between the clip seat on the flange and the seat for the covering on the clip, exactly where it is most needed, and also effectively precluding any functioning of such intermediate clip-reach as a lever tending to rock or bend the clip from its seat on the flange.

Other objects and features of the invention will appear in connection with the accompanying drawing, in which:

Figure 1 is a view in longitudinal cross-section through a fragment of corrugated sheet covering and supporting channel or angle, showing the fastener connecting the two;

Fig. 2 is a view in cross-section on the line 2—2 of Figure 1; and

Fig. 3 is a longitudinal sectional view through a corrugated covering sheet showing a modification of the clip for a flat roof or siding.

Referring to Figure 1, a corrugated covering sheet 10 for an inclined roof is shown as resting upon the edge 11 of the flange 12 of an angle or channel bar 13. The clip has a leg 14 parallel to the covering sheet and upon the edges of which the covering sheet rests, as seen in Fig. 2. A bolt 15 having its head 16 on the outerface of the covering passes through a hole 17 in the covering and through a hole in the leg 14 of the clip, and carries a nut 18 which is tightened against the under face of the clip leg 14.

At its other end the clip has a leg 19, inclined to match the incline 20 of the under face of the flange 12, and which is seated on the inclined face. Forward of its seat on the flange, the clip is turned to have a part 21 extending substantially parallel to the covering sheet. The part 21 is connected to the leg 14 by an intermediate inclined portion 22. A bolt 23 having its head 24 on the outside of the covering, passes through a hole 25 in the covering and through a hole in the clip portion 21. A nut 26 on the bolt 23 is tightened against the under face of the clip portion 21, and firmly holds the clip leg 19 to its seat on the flange 12. It will be noted that the bolt 23 is set against the edge 11 of the flange, or closely adjacent thereto.

It will be apparent that in the above described structure the clip, between its seat on the flange and the seat of the covering thereon at the part 14 is reenforced by the bolt 23, which is located just where reenforcement is most needed; and that because of the bolt 23, the reach 22 cannot act as a lever whereby to rock the clip leg 19 from its seat on the flange.

In the modification of the device shown in Fig. 3, the covering 10 does not rest merely upon the edge 11 of the flange 12 of the support 13, but lies horizontally upon the upper flat face 27 of the flange. This change in angle of the covering with respect to the support involves a corresponding change in angle of the clip leg 19 with respect to the clip portion 21. Otherwise the parts are as shown in Figure 1. The two bolts 15 and 23 are present and engage the same parts of the clip as in Figure 1. The support 13 of Fig. 3 may be considered as any cross-piece or purlin of a roof, or sidewall, and this figure will serve to illustrate the use of the invention for fastening covering sheets to such cross-pieces or purlins.

Fillers or plugs such as indicated at 28 are ordinarily used at the eaves to prevent inlet to the structure of rain, dirt or air, and in the use of the

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present invention the fillers or plugs are conveniently so located and perforated that the bolts 23, by being passed therethrough, may serve to hold the same in place.

What I claim is:

1. A structural assembly, comprising a support for an inclined corrugated covering sheet, an inclined covering sheet resting on the outer end of said support, clips for securing the covering sheet to the support, each clip having a leg parallel to the covering sheet and upon which the covering sheet rests, another leg parallel to the under face of the support for seating the clip on the support, and an inclined reach connecting the two legs, a bolt passing through the covering sheet and the leg in contact therewith to hold the sheet to the clip at one point, and another bolt contiguous to the outer end of the support and passing through the covering sheet and the leg which seats the clip on the support to hold the clip and sheet to the support.

2. A structural assembly, comprising a support for an inclined corrugated covering sheet, an inclined covering sheet resting on the outer end of said support, clips for securing the covering sheet to the support, each clip having a leg parallel to the covering sheet and upon which the covering sheet rests, and another leg rearward of the first mentioned leg for seating the clip against the under face of the support, and an inclined reach connecting the two legs, a bolt passing through the covering sheet and the leg in contact therewith to hold the sheet to the clip at one point, and another bolt adjacent to the outer end of the support and passing through the covering sheet and the leg which seats the clip on the support to hold the clip and sheet to the support.

3. A structural assembly, comprising a support for a corrugated covering sheet, a covering sheet on said support, clips for securing the covering sheet to the support, each clip having a leg parallel to the covering sheet and upon which the covering sheet rests, another leg parallel to the under face of the support for seating the clip on the support, and an inclined reach connecting the two legs, a bolt passing through the covering sheet and the leg in contact therewith to hold the sheet to the clip at one point, and another bolt adjacent to the outer end of the support and passing through the covering sheet and the leg which seats the clip on the support to hold the clip and sheet to the support.

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