

Jan. 2, 1940.

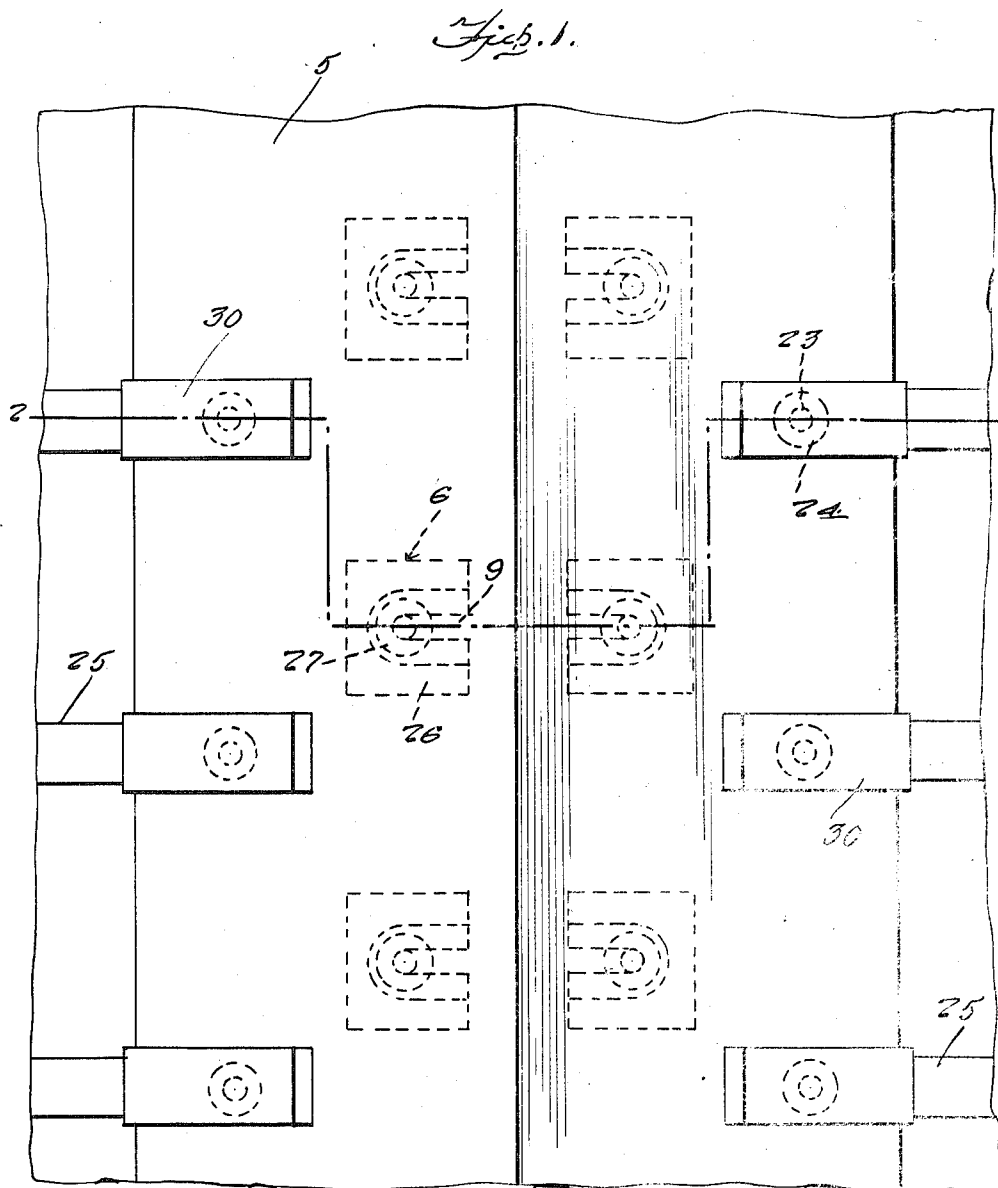
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2,185,274

SHEET METAL FASTENING MEANS

Filed March 30, 1939

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

Fig. 2.

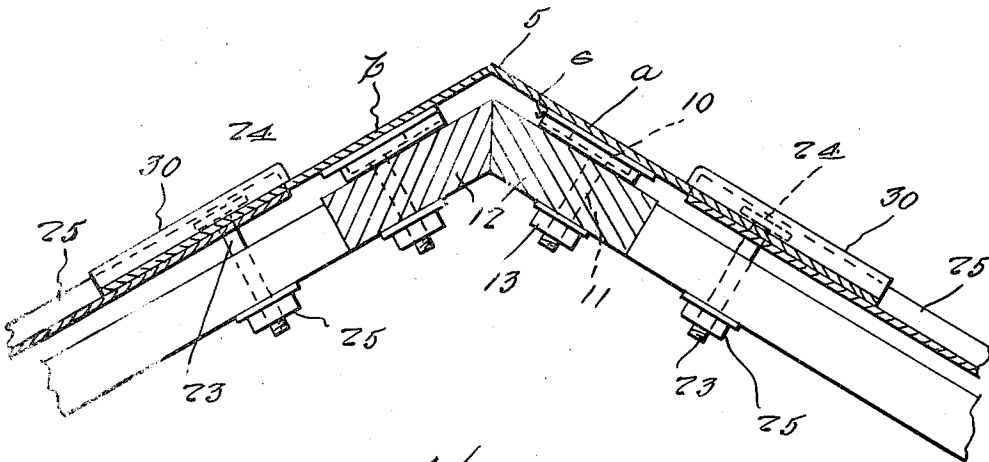


Fig. 6.

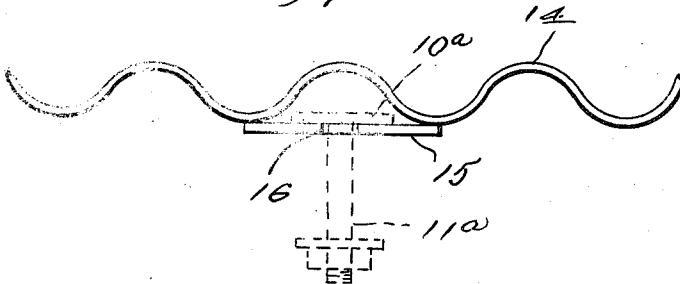
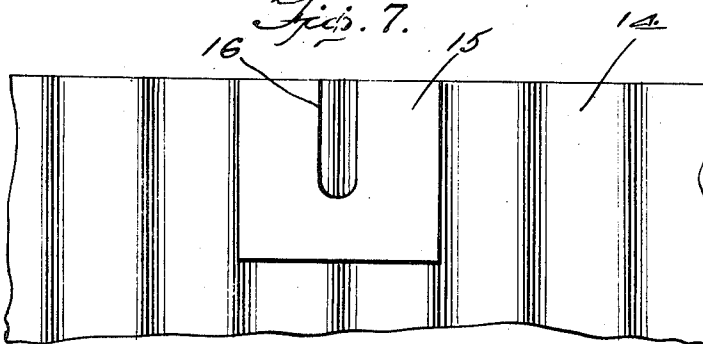


Fig. 7.



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3 Sheets-Sheet 3

Fig. 3.

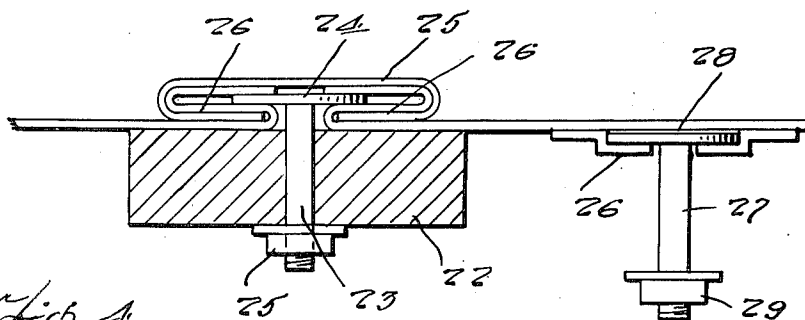


Fig. 4.

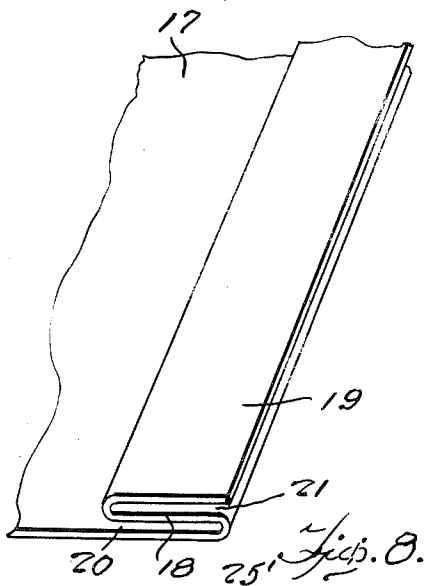


Fig. 5.

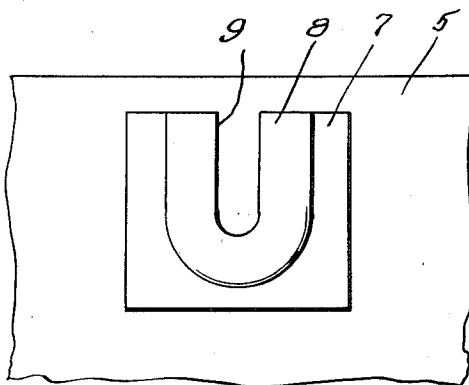
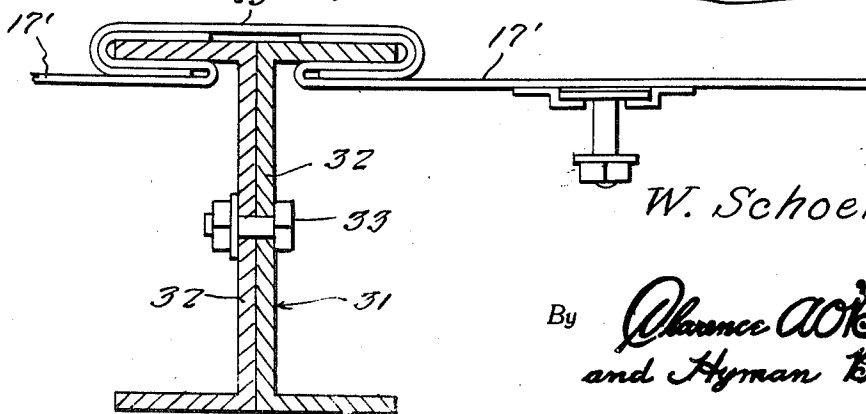


Fig. 6.



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UNITED STATES PATENT OFFICE

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SHEET METAL FASTENING MEANS

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Application March 30, 1939, Serial No. 265,032

2 Claims. (Cl. 108—13)

This invention appertains to new and useful improvements in means whereby the sheet metal can be placed on buildings such as the roofs thereof and securely fastened in place with a great saving in both time and materials.

Another important object of the invention is to provide means whereby sheet metal can be secured in place on buildings without likelihood of the sheets becoming displaced under the force of wind or otherwise, and furthermore to the end that no fastening means will be visible above the top of the metal sheets and to the end that the securing means will not penetrate the metal sheets.

These and other objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:

Figure 1 represents a top plan view fragmentarily showing the top portion of a gable roof.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Figure 3 is a fragmentary sectional view through a roof showing how the strips are secured in place.

Figure 4 is a fragmentary perspective view of one strip.

Figure 5 is a fragmentary bottom plan view showing one of the pockets.

Figure 6 is an edge elevational view of a corrugated sheet showing how one of the pockets are formed.

Figure 7 is a fragmentary bottom plan view showing a pocket on a corrugated sheet.

Figure 8 is a fragmentary detailed sectional view through a modified form of the invention.

Referring to the drawings wherein like numerals designate like parts, it can be seen in Figures 1 and 2, that the numeral 5 denotes the angular plate having the sloping side portions *a—b*. This cap plate is intended to cover the ridge portion of a gable type roof.

Pocket structures 6 are provided on the bottom sides of the side walls *a—b* for holding this cap plate 5 in proper position. Each of these pocket structures 6 is as constructed in Figure 5, the same consisting of a plate 7 having a bulged portion 8 defining a space between itself and the cap plate 5, with this bulged portion 8 extending to one edge of the plate 7 and having the slot 9 extending inwardly from said edge to a point adjacent the opposite end thereof. Thus it can be seen, that the pocket can receive the head 10 of a bolt member 11, the bolt member being disposed through the slot 9 and through an opening in the roof supporting timber 12 with the lower ends of the bolt members 11 equipped with nuts 13.

When corrugated sheets 14 are used, a plate 15 is disposed to straddle a pair of adjacent

humps and to these humps the adjacent end portions of the plate 5 are welded. This plate 15 has a slot 16 extending inwardly from one edge thereof to receive the shank 11a of a bolt which will have its head 10a interposed between the plate 15 and the corrugated sheet 14.

As shown in Figures 3 and 4, the down sheets 17 of the roof each has its longitudinal edge portion bent backwardly as at 18 and then outwardly again as at 19 defining the channel-ways 20 and 21. These thusly bent edge portions are disposed on the roof supporting timbers 22 as shown in Figure 3. Vertically disposed through the timber 22 are bolt members 23 which has a flat head 24 at its upper end and a nut 25 at its lower end.

A channeled connector strip 25 is employed and has inwardly turned flange portions 26—28 which engage into the channels 20 of the afore-described bent edge portions of the sheet 17. Thus, this serves as a lock strip while the flat head portions 24 of the bolts 23 engage into the channels 21 of the adjacent bent strip edge portions. Thus, the sheets or metal plates are securely fastened in place and to prevent any likelihood of slipping, pockets 26 constructed in accordance with the pockets 6 are provided and used in conjunction with bolts 27 having heads 28 and nuts 29.

As disclosed in Figures 1 and 2, at each of the seams shown in Figure 3, the cap plate 5 is formed with raised deformations 30 which accommodate the upper ends of the seams.

A further modification of the invention is shown in Figure 8, wherein a special type of roof supporting beam is provided. This beam is generally referred to by numeral 31 and consists of a pair of channeled members 32—32 placed back to back and bolted together as at 33. The adjacent edge portions of the sheets 17'—17' are constructed as shown in Figures 4 and 3 with the outwardly disposed upper flanges of the studs constructed beam disposed into the channels 21. The fastening strip 25' constructed in accordance with the strip 25 (see Figure 3) is used in conjunction with the above structure so as to prevent any likelihood of displacement of the bent end portions of the sheets 17'—17' from the said specially constructed beam 31.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that various changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

1. A plate securing means comprising a pair of plates having their edges in closely spaced relation, said edges being folded upon themselves to form inner and outer channels, an anchoring

member having flanged outer portions for disposition in the inner channels, and a connecting strip having inwardly disposed flanges for disposition in the outer channels of the plate edge
5 portions.

2. In a roof construction, backing members, a cap structure, roofing sheets disposed over the said backing members, said roofing sheets being formed with corrugations, said cap structure be-

ing formed with upwardly bulged portions extending inwardly from its edge portions and adapted to receive the adjacent end portions of the corrugations of the roofing sheets, and headed members disposed through the backing
5 members and having their heads disposed within the confines of the said bulged portions of the cap structure.

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