Oct. 13, 1931. W. E. WHITE ET AL 1,826,913

FASTENING FOR METAL DECKING

Original Filed May 18, 1929

Fig. 1.

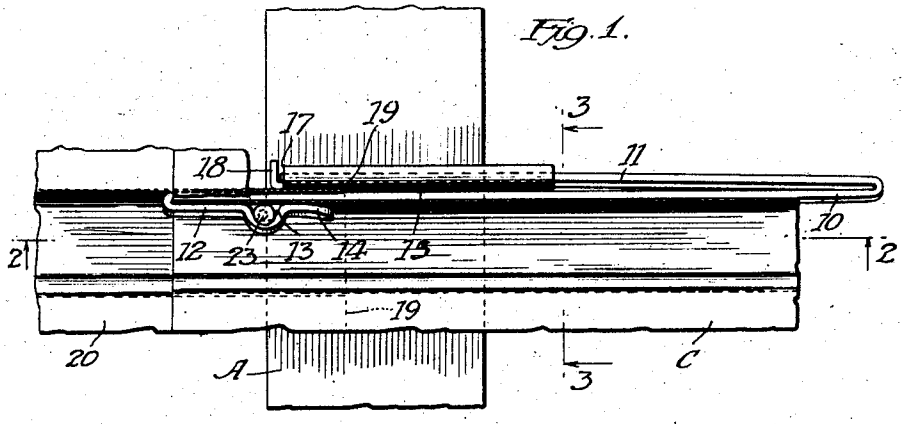


Fig. 2.

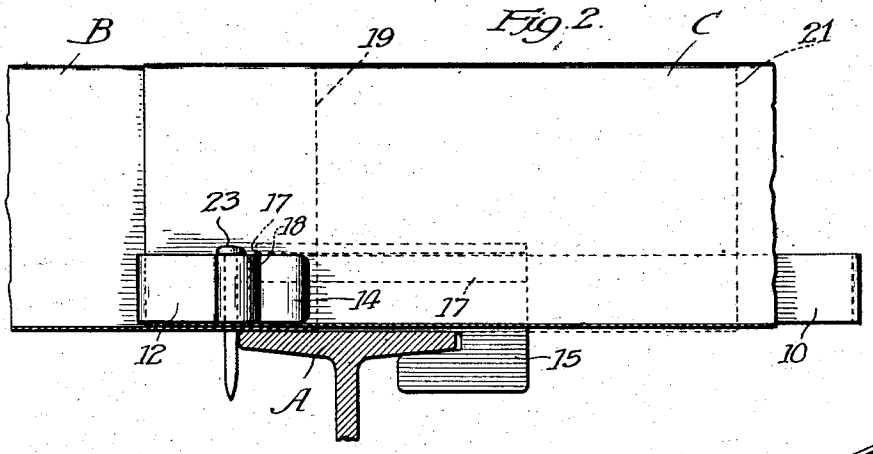


Fig. 3.

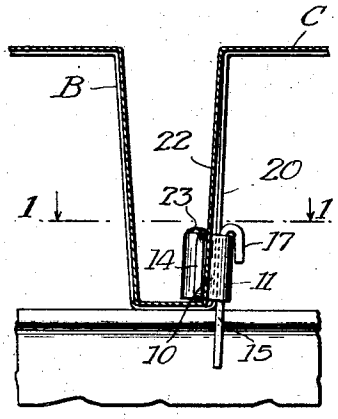


Fig. 4.

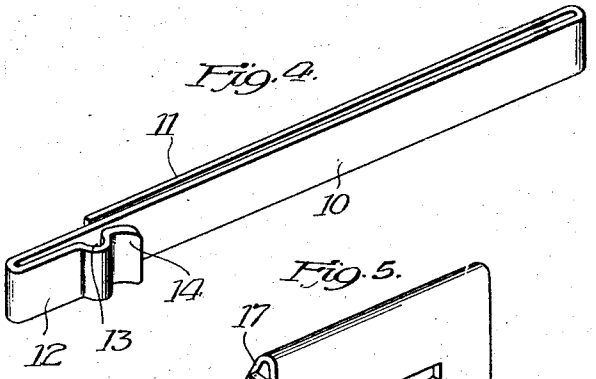


Fig. 5.

Witness
R. B. Davison.

Inventors
William E. White
Percival C. Monjar
By Murray & Murray
Attys.

Patented Oct. 13, 1931 1,826,913

UNITED STATES PATENT OFFICE

WILLIAM E. WHITE AND PERCIVAL C. MONJAR, OF CHICAGO, ILLINOIS, ASSIGNORS TO KALMAN STEEL COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE

FASTENING FOR METAL DECKING

Application filed May 18, 1929, Serial No. 364,238. Renewed March 4, 1931.

Our invention relates to roofing and particularly to means for securing metal decking to metal rafters or supports.

It is desirable not only during installation but subsequently thereto, to provide means for securely fastening the metal decking to the supports. Where wood supports are used, this is easily accomplished by nailing the decking thereto, but where channeled metal members are used as supports, much difficulty is encountered in providing any simple and economical method of fastening. Bolts or wires have been employed for this purpose but their use involves relatively great difficulty, as holes for the reception of the bolts or wires must be punched and as the punching must be done from above it is difficult, if not impossible, to accurately locate the point where the punching is to be done.

Our invention is of extremely simple character and adapts itself to all variations in overlap of the sections, requires no accurate punching and may be applied with facility.

The invention will be more readily understood by reference to the acompanying drawings, in which

Fig. 1 is a sectional plan view taken on the line 1—1 of Fig. 3;

Fig. 2 is a sectional elevation on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view on the line 3—3 of Fig. 1;

Figs. 4 and 5 are perspective views of the two parts of the clip which we employ.

In the drawings, the parts are shown full size and it will be understood that the metal decking is composed of thin gauge sheet metal which is ribbed or channeled, the channels extending longitudinally of the sheet and occurring at approximately six-inch intervals. Such decking is commonly employed as a basic roof covering, suitable water-repellant substances being applied thereover.

The supports or rafters may be of I-beam form as indicated at A and the sections B—C of decking are overlapped at a point immediately above the support.

The fastening device of my invention comprises a looped member and a clip. The clip member consists of a body portion 10, and rebent parallel ends 11—12, the ends lying parallel to the body portion and spaced therefrom a suitable distance to receive the sections of metal of the nested and looped channels of the decking. In the part 12 we provide a socket 13 to receive a nail, whereas the terminal portion 14 is curved to facilitate the entrance of the interfitting channel. The rebent end 11 is of considerable length in order to accommodate the device to varying overlap or overhang of the section B relative to the support.

The clip, best shown in Fig. 5, consists of a body 15 having a depending portion providing a notch 16 and having its top edge bent over as at 17. The left hand end 18 is bent at right angles to form a stop to abut the terminal portion of the rebent end 11 when the clip and looped members are assembled.

With the looped member and clip assembled as shown, that is, with the body portion 15 of the clip in the space between the end 11 and the body 10 and the stop 18 limiting movement of the clip relative to the looped member, the parts are in position for use. On the assumption that the roof section B has been laid and terminates at the point 19, the assembled fastening device is slipped into the position shown in Figs. 2 and 3, with the sections 20 of the metal of the channel of the decking B in the space between the rebent end 11 and the body portion 10 of the looped member. In this position a flange of the support A will occupy the notch 16 of the clip. It will be seen that even though the overhang of the sections B of decking be much greater, it will not interfere with the operation of the fastening device.

In fact, the overhang may be up to the point indicated by the dotted line 21 in Fig. 2, the long looped end 11 adapting itself to this variation.

With the parts in the described position, an additional section of decking is placed in nested position, with the section 22 of metal sliding into the space between the rebent end 12 and the body 10 of the looped member, the decking being forced firmly into the end of the space thus securely setting the clip on the supporting member A. With the parts

in this position, a nail 23 is placed in the socket 13 and driven through the two sections of overlapping metal, the protruding end of the nail lying alongside of the flange of the support A. In this position the lapped sections of the decking are firmly held against movement in any direction, and the only mechanical operation necessary to accomplish the result is the driving of the nail.

The exact form and arrangement of the parts is not essential to the accomplishment of the desired result, and we do not wish to be limited except as indicated in the appended claims.

We claim:

1. In means for securing ribbed decking to flanged metal supports, the combination of a looped strip, a retaining clip adapted to interfit with a free end of the looped strip, said clip having a tongue adapted to underlie a flange of said support, the loops of said strip being adapted to receive the respective ends of the nested ribs of overlapped portions of said decking, and means on said strip adapted to form a socket to receive a nail passing through the overlapped portions of said decking.

2. In means for securing channeled decking to a flanged metal support, the combination of a strip, both ends of which are doubled back to lie parallel to the body portion of the strip, one of said bent back portions having a socket for a nail, a clip adapted to interfit with the other bent back portion, said clip having a lip adapted to underlie a flange of the support, said bent back portions adapted to receive respective ends of nested and overlapped channels of said decking.

3. A fastening for overlapped and nested sections of channeled decking, comprising in combination, a strip having a body and rebent, parallel ends, the space between the rebent portions and the body being adapted to receive portions of the nested channels of respective overlapped sections of decking, and a notched clip interfitting with one rebent end with the notch engaging a flange of a support and means on the strip for defining a point at which a nail may be passed through the overlapped sections of decking to lie immediately alongside the support.

4. A fastening for overlapped and nested sections of channeled decking, comprising in combination a strip having a body and rebent parallel ends, the space between the rebent portions and the body being adapted to receive portions of the nested channels of respective overlapped sections of decking, and a notched clip interfitting with one rebent end and having a stop for limiting movement of the strip, and a lip for interlocking the clip to a metal support, and means providing a socket in said strip to receive a nail adapted to pass through the overlapped sections of decking, the socket being positioned relative to the strip and the stop on the clip so that the nail shall lie alongside of the support

5. A fastening for nested and overlapped sections of metal decking comprising in combination, a looped member bent to provide spaces open in opposite directions to receive sections of metal of overlapped decking, means on said member for defining a socket for a nail, and a clip having a notch adapted to engage a flange of a support and slidingly interfitting with said member.

In testimony whereof we have affixed our signatures.

WILLIAM E. WHITE.
PERCIVAL C. MONJAR.