June 16, 1931. R. C. MAHON ET AL 1,810,287

DECK PLATE CLIP

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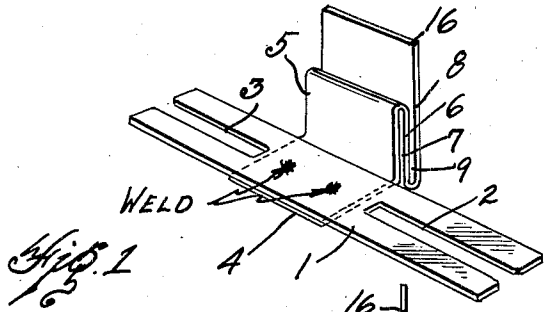


Fig. 1

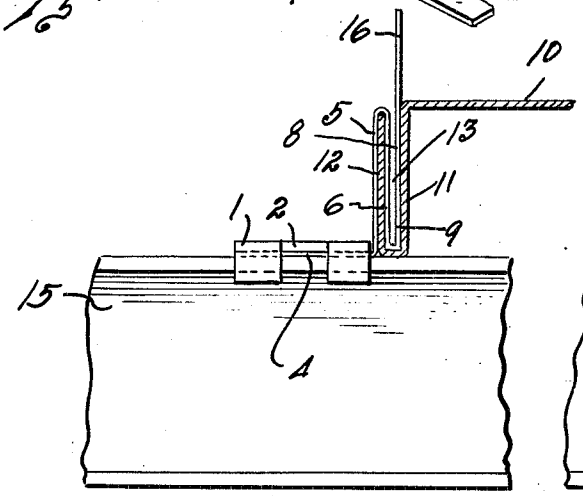


Fig. 2

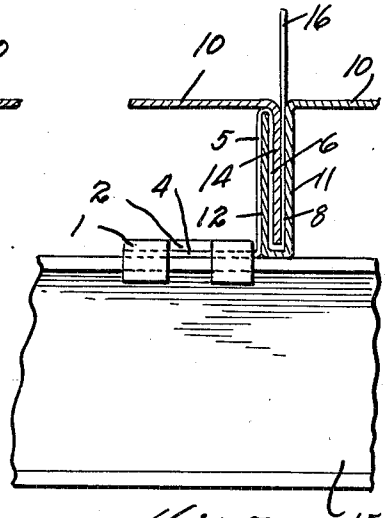


Fig. 3

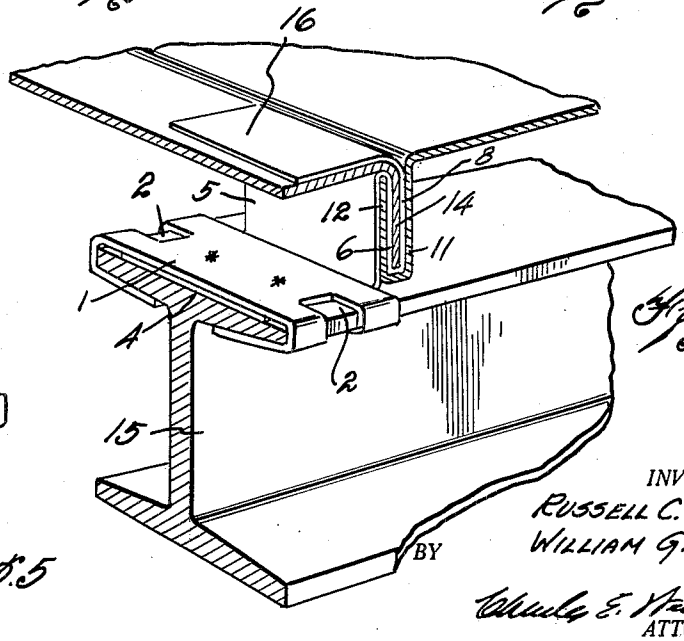


Fig. 4

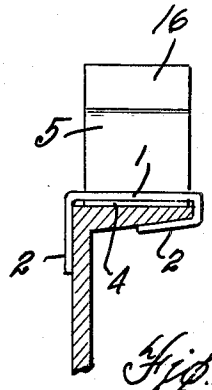


Fig. 5

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UNITED STATES PATENT OFFICE

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DECK PLATE CLIP

Application filed May 16, 1929. Serial No. 363,619.

This invention relates to deck plate clips and the object of the invention is to provide a clip for securing a deck plate to a purlin or supporting beam.

Another object of the invention is to provide a deck plate clip which secures the deck plates together and to the purlin or supporting beam.

A further object of the invention is to provide a device for securing the deck plates together so that the surface of the deck plates extend in the same plane, the device being arranged to secure the deck plates to the purlins at their interlocking edges.

These objects and the several novel features of the invention are hereinafter more fully described and claimed and the preferred form of construction by which these objects are attained is shown in the accompanying drawings in which—

Fig. 1 is a perspective view of a deck plate clip embodying our invention.

Fig. 2 is a section showing the deck plate clip engaged in the edge of one deck plate.

Fig. 3 is a similar view showing the deck plate clip engaging the interlocking edges of two adjacent deck plates.

Fig. 4 is a sectional perspective showing the clip in locking engagement with the deck plates and purlins.

Fig. 5 shows the deck plate clip as secured to an angle or channel beam.

The clip, as shown in Fig. 1, comprises a base member 1 having slots 2 and 3 in the opposite ends thereof which form double ends adapted to be bent under the top flange of an I beam as shown in Fig. 4. This member 1 is spot welded intermediate the slots 2 and 3 to a sheet metal clip member 4 and this member 4 is provided with an upwardly bent flange 5 having a return bent portion 6 forming a channel 7. The end of the member 4 is again return bent to form the vertical portion 8 thus providing a channel 9. The device is intended for use with roof deck plates 10 which are provided at one edge with a depending flange 11 which is return bent at 12 to form a channel 13 and at the opposite edge each plate 10 is provided with a depending flange 14 adapted to be positioned in the channel 13 formed by the return bent flange 12 as shown in Fig. 3. In order to secure the deck plates to the supporting purlin or I beam 15 the clip is first positioned as shown in Fig. 2 so that the return bent flange 12 of the deck plate engages in the channel 7 of the clip and the portion of the clip forming the channel 9 engages in the channel 13 in the deck plate as shown in Fig. 2. The ends of the base member 1 are then bent under the flanges of the I beam as shown in Fig. 4 thus securing the deck plate to the I beam.

The depending flange 14 of the adjacent deck plate is then inserted in the channel 13 of the adjacent deck plate and in the channel 9 in the clip as shown in Fig. 3 and the upwardly extending end 16 of the clip is then bent over the adjacent deck plate having the depending flange 14 as shown in Fig. 4 thus securing the two deck plates together and to the purlin. By this arrangement the surface of the adjacent deck plates is brought to the same level and as the depending flanges of the deck plates rest on the I beam the deck plates are firmly supported at this point. It will also be noted that by this arrangement the clips are entirely concealed beneath the deck plates with the exception of the ends 16 thereof and these are readily covered with the roof insulation and surfacing and waterproof coating to provide a smooth continuous roof without breaks or joints. While we have shown the supporting beam as an I beam it may be a channel beam, angle beam or similar purlin and in the case of angle or channel beam one end of the base member is bent under the flange while the other end of the base member is bent down the side of the beam as shown in Fig. 5.

From the foregoing description it becomes evident that the device is very simple and efficient in operation, may be applied continuously to the deck plates as the deck plates are assembled on the supporting beams, will not easily get out of order and provides a device which accomplishes the objects described.

Having thus fully described our invention, its utility and mode of operation, what we

claim and desire to secure by Letters Patent of the United States is—

1. In a deck plate clip for deck plates in which a depending flange at the edge of one deck plate engages in a return bent flange at the edge of another deck plate, a sheet metal base member having bifurcated ends adapted to be bent about a supporting beam, a sheet metal clip member extending from the base member and formed to engage over the return bent flange of one deck plate, the clip member extending into the channel formed by the said return bent flange and being adapted to receive the depending flange of the adjacent deck plate when inserted in the said channel, the clip member being also provided with an extending end adapted to be bent over the adjacent portion of the deck plate having the depending flange.

2. In a deck plate clip for deck plates in which a depending flange at the edge of one deck plate engages in a return bent flange at the edge of another deck plate, a base member having extending ends adapted to be bent about a supporting beam, a clip member attached to the base member and formed to engage over the return bent flange of one deck plate, the clip member being return bent to provide a portion extending into the channel formed by the return bent flange of the deck plate, said portion of the clip being adapted to receive the depending flange of the adjacent deck plate and the clip member being formed to secure said depending flange therein.

3. In a deck plate clip for deck plates in which a depending flange at the edge of one deck plate engages in a return bent flange at the edge of another deck plate, a base member adapted to be bent about a supporting beam, a clip member attached to the base member and formed to engage over the return bent flange of one deck plate, the clip member also extending into the channel formed by said return bent flange and being adapted to receive the depending flange of the adjacent deck plate, the clip member being provided with an upwardly extending end adapted to be bent over the adjacent portion of the deck the plate having the depending flange.

4. In a deck plate clip for deck plates in which a depending flange at the edge of one deck plate engages in a return bent flange at the edge of another deck plate, a sheet metal clip positioned between the flanges and holding them in interlocking engagement, one end of the clip being arranged for attachment to a support and the other end being bent over the plate having the depending flanges.

5. In a deck plate clip for deck plates in which a depending flange at the edge of one deck plate engages in a return bent flange at the edge of another deck plate, a sheet metal clip interlocking with both flanges and arranged to be secured to a supporting beam.

6. In a deck plate clip for deck plates in which a depending flange at the edge of one deck plate engages in a return bent flange at the edge of another deck plate, a sheet metal clip bent to fit between the interlocking flanges of the deck plates and having an upwardly extending end adapted to be bent over one of the deck plates.

In testimony whereof we sign this specification.

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