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W. M. GOLDSMITH

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MOUNTING STRIP FOR METAL TILES

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2 Sheets-Sheet 1

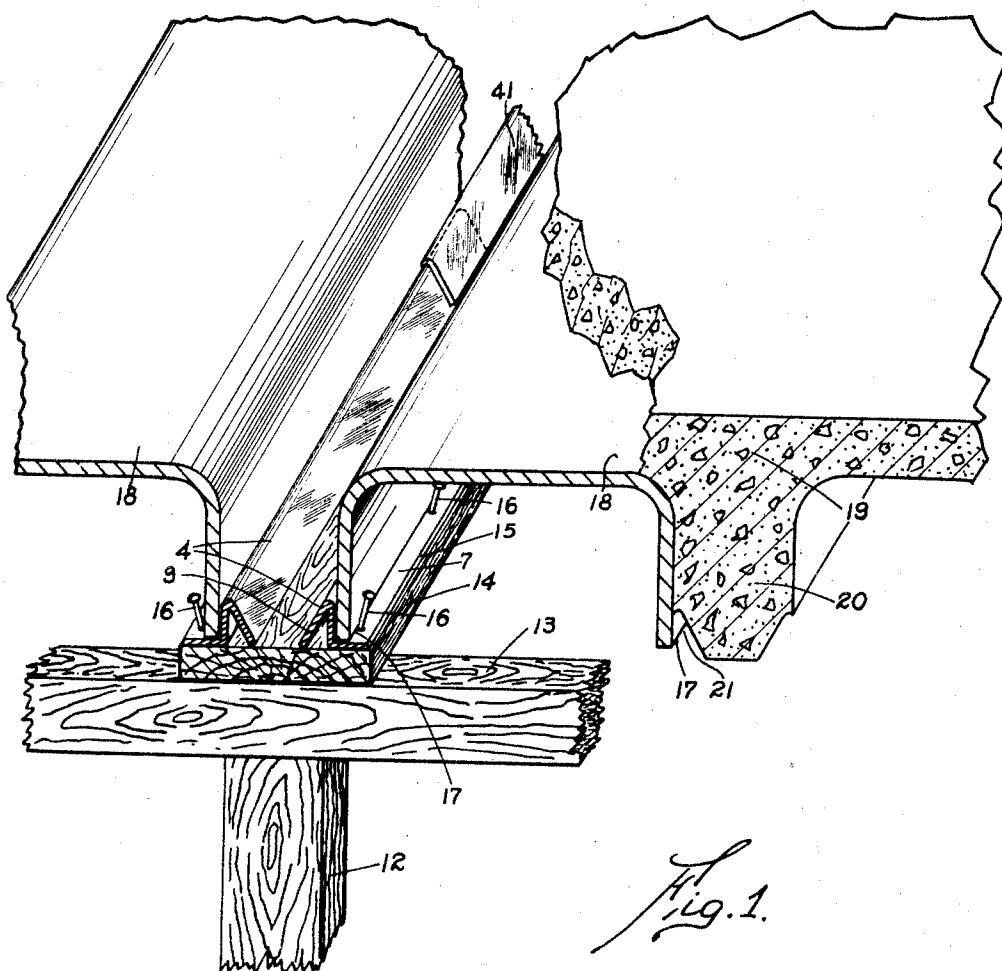


Fig. 1.

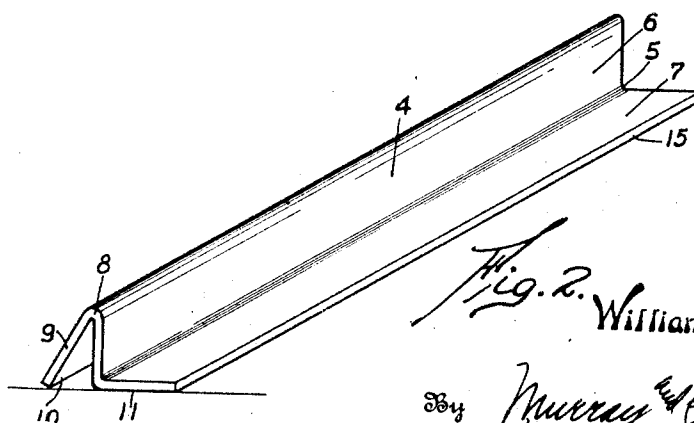


Fig. 2.

Inventor  
William M. Goldsmith

By Murray & Guggenberger

Attorneys

Feb. 23, 1932.

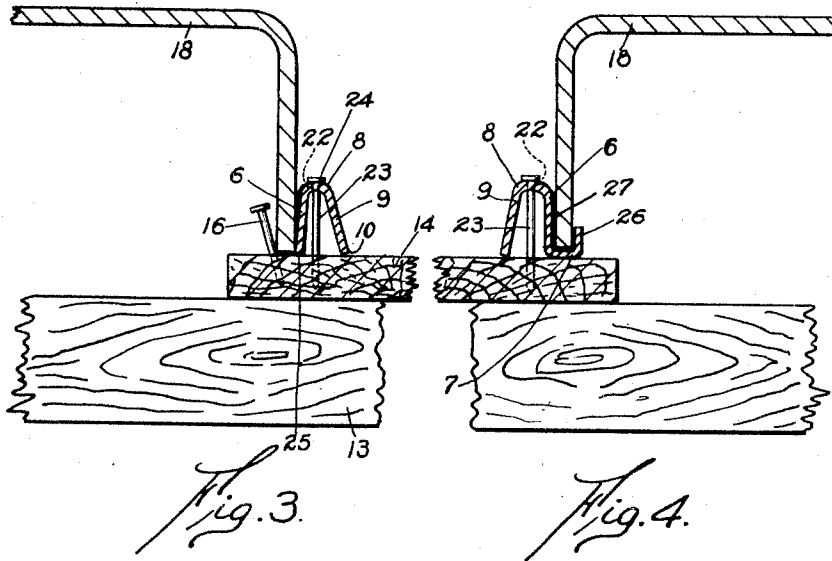
W. M. GOLDSMITH

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Inventor  
William M. Goldsmith,

By *Murray & Ziegler*  
Attorneys

## UNITED STATES PATENT OFFICE

WILLIAM M. GOLDSMITH, OF CINCINNATI, OHIO, ASSIGNOR TO THE GOLDSMITH METAL LATH COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO

## MOUNTING STRIP FOR METAL TILES

Application filed January 4, 1927. Serial No. 158,990.

This invention relates to mounting strips for metal tiles and has for an object the provision of a strip which may be expeditiously mounted with a great saving of time and labor.

Another object is to provide a strip of the class referred to which is easy to align and upon which metal tiles may be set with great rapidity and without skilled labor.

Another object is to provide a strip the use of which obviates the necessity for flanged metal tiles so that a uniform straight edged tile may be used for constructing various kinds of floors.

Another object of this invention is to provide a strip which may be economically manufactured and which may be nested so that it occupies a minimum of space during storage or shipment.

Another object is to provide a mounting strip of the class referred to which is readily removable and which, when removed exposes the longitudinal straight edges of the tile so that they may be readily gripped for removing and re-use.

These and other objects are attained by the means described herein and disclosed in the accompanying drawings in which:

Fig. 1 is a perspective view of the device of the invention in operative form in a concrete floor under construction, the proportions of the view being somewhat exaggerated in order to clearly set forth the invention.

Fig. 2 is a perspective view of the mounting strip of the invention.

Fig. 3 is a fragmental end elevation of a concrete floor construction having embodied therein a modified form of the device of the invention.

Fig. 4 is a fragmental end elevation of a concrete floor construction having embodied therein another modified form of the device of the invention.

The mounting strip 4 of the invention comprises a strip of sheet metal bent longitudinally upon itself as at 5 for providing a body 6 having flange 7 extending at right angles thereto on one side of the body. The body 6 is bent at 8 in longitudinal parallelism to the bend 5 for providing a flange 9 disposed

at an acute angle to the body 6 and terminating in a straight longitudinal edge 10 which lies in a common plane with the bottom flat face 11 of the flange 7.

In constructing a concrete floor the usual shoring 12 and stringers 13 are set up for supporting soffits 14. The mounting strips 4 may be simply and expeditiously positioned upon the top of soffits 14 with the free edge 15 of the flange 7 of the strips aligned with the edges of the soffits, or with a suitable guide line on the top face of said soffits. The strips 4 are secured to the soffits by toe-nailing. Nails 16 are driven through the flange 7 and for a distance into the soffits 14. A portion of each nail 16 is permitted to extend above the flange 5 so that the straight edge 17 of the metal tile 18 may be seated upon the flange 5 and in abutment with the body 6 of the strip. The nails 16 are slightly spaced from the body 6 so that the side members of the tiles are securely positioned against lateral movement.

It should be noted that the strips 4 are practically self aligning, since, as shown at the left of Fig. 1, strip 4 may be secured and a second strip 41 slightly over-lapped and nested over the body 6 and flange 9 thereof. Additional strips may likewise be nailed and set with little difficulty by over-lapping adjacent edges thereof and toe-nailing said strips with the nails 16.

After the strips 4 have been secured in aligned rows upon soffits 14 workmen may very rapidly seat the straight edged metal tiles 18 upon the strips 4, at the edges of adjacent soffits. This labor requires no skill or painstaking effort, and the tiles are immediately ready to receive the concrete 19. The concrete is spread over the tops of the tiles and enters the spaces between the sides of adjacent tiles 18 to provide the usual concrete beams 20. It will be readily understood that reinforcing rods of any suitable type may be positioned above the soffits by any suitable or approved method. When the floor comprising the concrete 19 and beams 20 is intended to have a ceiling suspended therefrom, any approved type of hanger or suspending means may be positioned upon the soffits 14

prior to the pouring of the concrete. When the wet concrete in a plastic state covers the tiles and soffits, any tendency toward outward spreading of the side walls of a given tile is transmitted to the body 6 of the strip and downwardly against the edge of the soffit through the flange 9. This pressure causes the longitudinal edge 10 of the flange 9 to cut into the face of the soffit and thus prevent slippage of the strip transversely of the soffit. This gripping action of the edge 10 of the strip on the soffit renders it unnecessary to drive the nails 16 home through the flange 4 so that the protruding portions of the nails 16 may serve to position the strips and at the same time effectively hold the side walls of the tiles against movement toward one another. When the concrete 19 has set, the shoring 12 and stringers 13 are removed whereupon the soffits 14 may be very easily pulled down. The strips 4 are removed with the soffits while the tiles 18 are exposed along the bottom straight edges 17. As will be noted at the right hand side of Fig. 1, the concrete beam 20 is tapered off slightly at its bottom edges so that a longitudinal way 21 is formed between the side wall of the tile and the bottom of the beam 20. The way or space 21 provides ready access to the bottom edges of the tiles so that they may be easily gripped and pulled from the floor without damaging the tiles.

The nails 16 may be removed from the soffits after which both the strips 4 and the tiles 18 may be nested for convenient storage or removal and subsequent re-use.

In the modified form of strip shown in Fig. 3, the flat flange is omitted, so that the strip comprises a V shaped element having a body 6 and flange 9. Perforations 22 are provided at intervals along the top edge 8 of the strip for receiving nails 23 which are driven into the soffits 14. The heads 24 of nails 23 serve to bind the strips securely to the soffits with the free longitudinal edges 10 and 25 abutting said soffits. When these strips are positioned as shown in Fig. 3 with the body 6 in a substantially vertical position, the side wall of straight edged metal tile 18 is positioned in abutment with the body 6 of the strip and rests upon the top face of soffits 14. Nails 16 may be employed for toe-nailing the side wall of the metal tile against lateral movement away from the body 6 of the strip. After a concrete mass has been poured and has set over a structure such as is shown in Fig. 3, the supporting structure may be removed, whereupon the soffits 14 may be pulled down together with the strips attached thereto.

In the modification shown in Fig. 4, the flat flange 7 is turned upwardly to provide a rib 26 substantially parallel with the body 6. This structure provides a U shaped groove 27 in which the bottom straight edge of a

metal tile 18 may seat. In this form there is also provided the perforations 22 at spaced intervals along the top edge 8 of the strip for receiving securing nails 23. This structure obviates the necessity for toe-nailing and is otherwise similar in application to the forms heretofore described.

It will be noted that straight edged metal tiles may be conveniently and expeditiously used with each of the strips shown herein, and that such strips are removed with the soffits. After the removal of the soffits and strips the free edges 17 of the metal tiles 18 are exposed and readily accessible for convenient removal.

It will be understood that the mounting strip as shown in Fig. 1 may have the securing nails passed through suitable perforations provided along the apex at the junction of the body and flange in the manner disclosed in Figs. 3 and 4.

What is claimed is:

1. In a concrete floor structure the combination with spaced suitably supported soffits, of mounting strips disposed in parallel rows upon said soffits, each mounting strip comprising a flange for seating on the soffits, a body extending upwardly from said flange, and a second flange disposed at an acute angle to the body and resting edgewise upon the soffits, means extending through the first mentioned flanges into the soffits and extending above the flanges in spaced relation to the bodies of the strips and straight edged metal tiles spanning the spaces between soffits and having the straight edges thereof resting upon the first mentioned flanges of the strips and positioned against lateral displacement by the securing means and the bodies of the strips.

2. In a concrete floor structure the combination of a soffit, a sheet metal strip comprising an upright body and longitudinal flanges extending from opposite edges of said body, one of said flanges being adapted to rest flat upon the soffit the other of said flanges extending at an acute angle from the top of the body and having its free longitudinal edge resting upon the soffit, nails extending through the first mentioned flange and extending thereabove in spaced relation to the body of the strip and a straight edged tile having a longitudinal edge seating upon the top face of the flange, with its opposite sides in abutment with the body of the strip and the nails.

3. In a concrete floor in the course of construction, the combination of a temporary support structure, parallel rows of mounting strips on the temporary support structure, the mounting strips comprising inclined walls, the rows of strips being paired, with the inclined walls of each of said pairs of strips opposed to one another, and tiles between and abutting adjacent mounting strips of adjacent

pairs of rows of such strips and forming with said inclined walls, joist molds spacing the lower ends of joists formed in the molds, from the lower edges of the tiles.

4. The combination with a temporary support structure of spaced pairs of mounting strips, on said support structure, the mounting strips comprising opposed inclined walls, and tiles between adjacent pairs of mounting strips and forming with said inclined walls and support structure, a mold for a concrete floor structure.

5. In a concrete floor structure the combination with a temporary supporting structure, of mounting strips disposed in parallel rows upon said structure, each mounting strip comprising a flange for seating upon the supporting structure, a body extending upwardly from said flange and a second flange disposed at an acute angle to the body and resting edgewise upon the supporting structure, means extending through the first mentioned flanges into the supporting structure and extending above the flanges and in opposed relation to the body of the strips, and straight edged metal tiles spanning the space between the bodies of the alternate mounting strips and having the straight edges thereof resting upon the first mentioned flanges of the strips and positioned against lateral displacement by the securing means and the bodies of the strips.

6. The combination of a temporary support structure, parallel rows of mounting strips disposed on said temporary support structure, each mounting strip comprising an upstanding portion and a contact portion, the contact portion contacting upon the support structure, abutment means at the edges of said mounting strips remote from the upstanding portions of the strips, and inverted U shape tiles having the ends of their arms received between the upstanding portions of the strips and the abutment means.

7. The combination of a temporary support structure, tiles spaced from one another and supported by the temporary support structure, and mounting strips between adjacent tiles and having inclined walls, the upper ends of which inclined walls are disposed adjacent the tiles and the lower ends of which inclined walls engage the temporary support structure for providing a mold on the temporary support structure.

8. The combination with a temporary support structure of spaced pairs of mounting strips arranged in parallel rows on the supporting structure, the mounting strips each comprising a pair of upwardly converging arms, tiles between pairs of the mounting strips, the tiles having side walls in contact with and in substantial parallelism with an arm of each of the mounting strips between which the tiles are disposed, and means for holding the mounting strips and tiles in as-

sembled positions on the temporary structure.

9. In a mounting for inverted U-shaped tiles the combination of a supporting surface extending continuously beneath the edges of said tiles, a metal mounting strip comprising an elongated sheet metal body having a longitudinal flange extending at right angles thereto from one face of the body, a second flange extending at an acute angle from the opposite face of said body, the last mentioned flange having a supporting straight edge disposed in a common plane with the bottom face of the right angled flange and adapted to position and support the body upon the supporting surface and holding means extending between the body and second flange and into said supporting surface the body and second mentioned flange of the mounting strip being disposed along the exterior face of the tiles.

10. In a concrete floor structure the combination with spaced suitably supported soffits, of mounting strips disposed in parallel rows upon said soffits, each mounting strip comprising a flange for seating on the soffits, a body extending upwardly from said flange, and a second flange disposed at an acute angle to the body and resting edgewise upon the soffits, securing means extending through the first mentioned flanges into the soffits and extending above the flanges in spaced relation to the bodies of the strips and elongated U-shape metal tiles spanning the spaces between soffits and having the longitudinal edges thereof resting upon the first mentioned flanges of the strips and positioned against lateral displacement by the securing means and the bodies of the strips.

11. The combination of a supporting structure, rows of spaced parallel strips, each strip comprising an upwardly extending body portion, an inclined flange extending divergently downward from the upper edge of the body portion, a flange extending laterally from the lower edge of the body portion and an upwardly extending rib on the last mentioned flange for providing a groove or recess along said rib and last mentioned flange, means for attaching the strips to the supporting structure and inverted U-shape tiles extending between adjacent rows of strips and having their free longitudinal edges received in the grooves along the ribs, the outer surface of the tiles and the inclined flanges together providing a mold, surface for establishing the contour of a plastic to be formed thereover.

12. The combination of a temporary support structure, spaced pairs of mounting strips on said support structure, the mounting strips comprising upwardly converging members, means carried by the support structure along the lower edge of one of said converging members and forming with said converging member, a pocket for the edges of inverted U-shape tiles, means for securing the

mounting strips on the support structure, and inverted U-shape tiles having their free edges received in the pockets and spanning the spaces between adjacent pockets, the second of said converging members cooperating with the tile for providing a substantially continuous mold wall.

13. In a concrete floor structure in the course of construction, the combination of suitably supported soffits, a sheet metal mounting strip comprising a pair of spaced flanges, one of said flanges resting flat upon the soffit, the other of said flanges resting upon the soffit and providing an upwardly exposed inclined face on the mounting strip, securing means extending through the mounting strip and into the soffit for precluding displacement thereof, and an inverted U-shape tile having each of its exterior side walls adjacent to and extending below the upper edge of an inclined face on a mounting strip and supported by the soffit, whereby concrete may be molded over the inclined face of the mounting strip and along the side wall of the tile extending above the mounting strip.

In testimony whereof, I have hereunto subscribed my name this 28th day of December, 1926.

WILLIAM M. GOLDSMITH.