Feb. 23, 1932. W. M. GOLDSMITH 1,846,197

METAL TILE STRUCTURE

Filed June 16, 1930

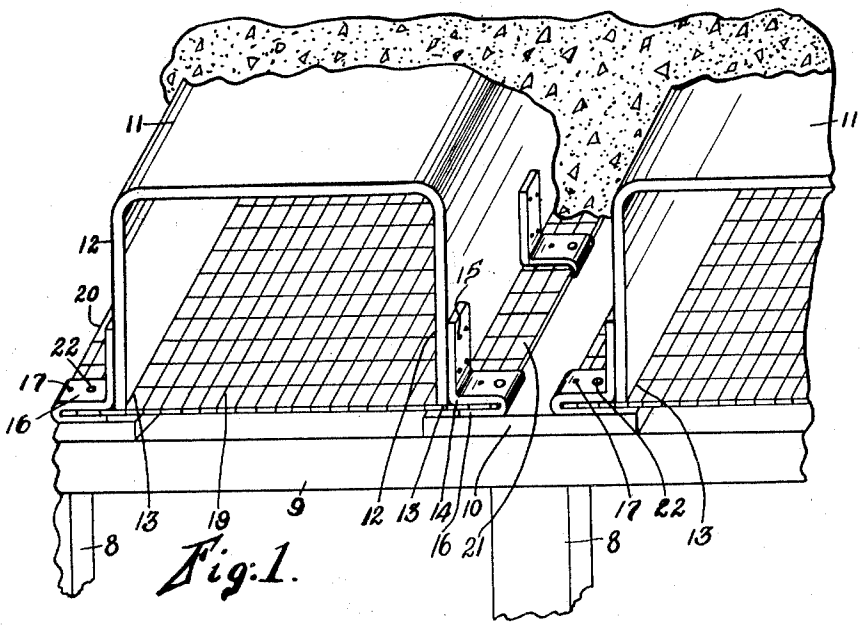


Fig. 1.

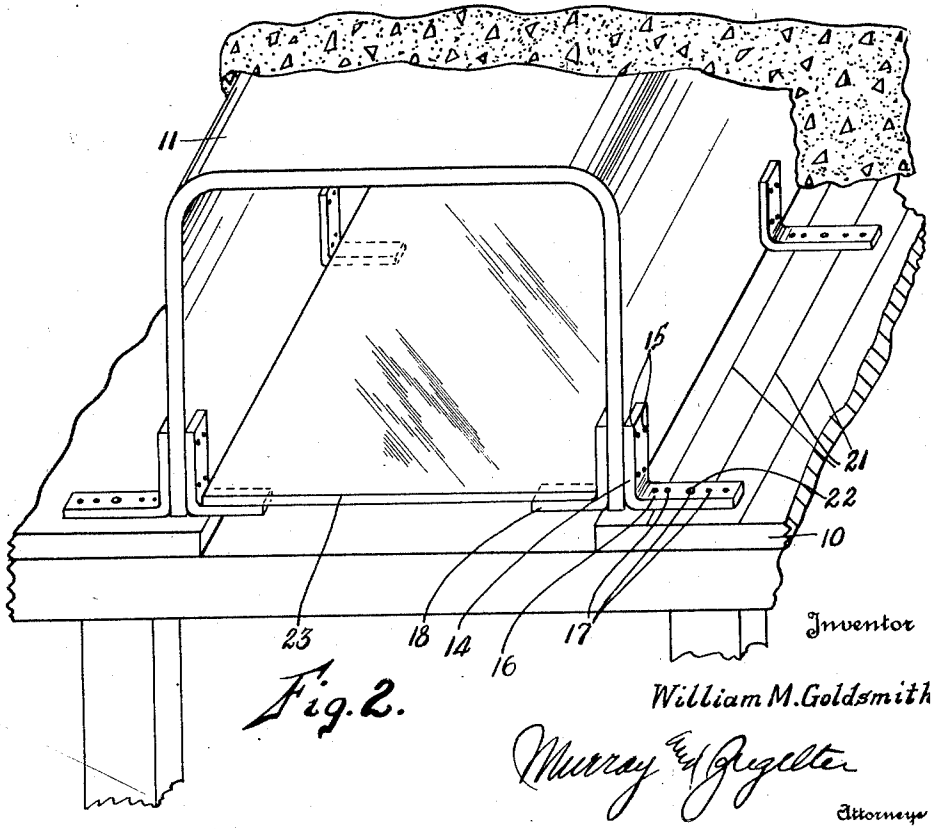


Fig. 2.

Inventor

William M. Goldsmith

Murray and Flynn

Attorneys

Patented Feb. 23, 1932 1,846,197

UNITED STATES PATENT OFFICE

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

METAL TILE STRUCTURE

Original application filed February 11, 1926, Serial No. 87,661. Divided and this application filed June 16, 1930. Serial No. 461,426.

This application is a divisional of my application Serial No. 87,661, filed February 11, 1926, and which matured into Patent No. 1,764,042 on June 17, 1930.

This invention relates to metal tile structures for use in concrete flooring construction and has for an object the provision of a tile provided with means whereby said tiles may be assembled with strips of metal lath or other ceiling forming material on the ground and prior to positioning of the tiles upon a temporary support structure.

Another object is to provide a structure of this kind which is simple and inexpensive of manufacture.

Another object is to provide a structure of this kind which is easy to assemble and position.

Another object is to provide a tile unit of the class described by the use of which the usual concrete beams and floor may be provided and wherein the ceiling for the floor below in condition for receiving plaster, will be provided with the same operation.

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 a flooring structure embodying tile units of my invention, parts being broken away.

Fig. 2 is a modified form of the tile unit of my invention.

As shown in Fig. 1 a supporting structure comprising shoring 8, stringers 9 and soffits 10, is erected and upon the soffit boards are positioned the units of my invention. Each unit comprises a metal tile 11 having usual side walls 12 provided with longitudinal straight edges 13. Upon each of the outer faces of the side walls 12 are provided a plurality of spaced lugs or mounting strips 14 spot welded, riveted or otherwise secured to the side walls as at 15. The mounting strips or lugs 14 have a portion 16 extending beyond the longitudinal straight edges 13 of the tile to provide a securing means each of which may be provided with a plurality of spaced perforations 17 aligned at right angles to the sides 12 of the tile. The tiles 11 having mounting strips 14 thereon may be prepared at the factory and are readily nestable so that they may be conveniently packed and shipped.

In the modification shown in Fig. 2, a second series of lugs 18 may be provided on the inner faces of the sides 12. The mounting strips 14 and lugs 18 may be of a comparatively light gauge metal and are therefore flexible so that they may be left to extend in parallelism with the sides 12 when the tiles are nested.

When it is desired to construct a floor and ceiling, the supporting structure, as heretofore, described, has positioned thereon a plurality of the tile structures of my invention to which strips of metal lath 19 have been secured. The securing of the metal lath or other ceiling material is performed upon the ground prior to positioning the tile and is accomplished by bending the portions 16 of the mounting strips about the longitudinal edges 20 of the sheets of ceiling material 19. When metal lath or other reticulated ceiling material is used, the soffits 10 may be provided with guide lines 21 and given ones of the perforations 17 in the portion 16 may be positioned along the guide line 21 thereby materially facilitating positioning of the tiles and accurately determining the width of the beam to be formed between the sides of adjacent tiles. Nails 22 are then driven through the perforations 17 for retaining the tiles in their adjusted positions during the pouring of the concrete. This feature is shown and claimed in my copending application, Serial No. 87,130, filed February 9, 1926.

In the modification shown in Fig. 2 the strip of ceiling material is cut to a width substantially equal to the distances between the inner opposite faces 12 of the tile and the inner lugs 18 are bent inwardly to support said ceiling material. As shown in Fig. 2 the ceiling material comprises a sheet of gypsum board or other solid material, although either solid or reticulated ceiling material may be used with either of the modifications shown. In the modification shown in Fig. 2, the mounting strips 14 are used solely for accurately positioning the tiles 11 with guide lines 21 on the soffits 10.

After a floor has been poured and has become set, the support structure comprising shoring 8 and stringers 9 may be removed whereupon the soffits 10 are pulled down. The underside or ceiling which is thus formed presents a true plane surface ready to be plastered without further preparation, since the plaster may be applied to the bottom surfaces of the beams and to the lath or ceiling board spanning the spaces between beams.

What I claim is:

1. A structural form of arched sheet metal comprising side walls, lugs at spaced intervals along the walls, internally and externally of the walls, and ceiling material supported by the internal lugs, the external lugs adapted for attachment to a supporting structure for mounting the form.

2. In combination a structural form of sheet metal comprising spaced side walls, lugs on the outer faces of said side walls and adapted to receive temporary fastening means to mount the form and other lugs on the inner faces of said side walls for supporting a ceiling forming member between the said side walls.

3. A metal tile structure comprising a U-shaped tile having spaced walls with straight edges and lugs on said wall spaced along each face of each wall along said straight edges.

4. In combination an inverted U-shaped metal form having spaced straight edged side walls, a sheet of ceiling material extending between said walls, means on the inner faces of said walls to support the ceiling material and spaced perforate mounting lugs on the outer faces of said walls.

In testimony whereof I have hereunto subscribed my name this 14th day of June, 1930.

WILLIAM M. GOLDSMITH.