June 26, 1923. 1,460,014

H. D. CONWAY

FLOOR AND CEILING CONSTRUCTION

Filed Sept. 1, 1920 2 Sheets-Sheet 1

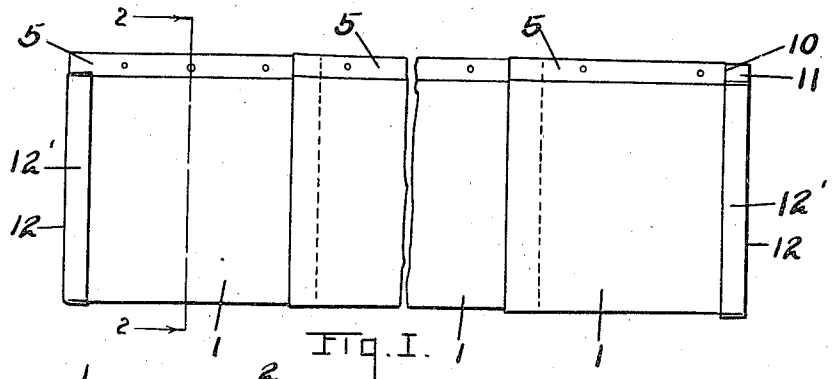


Fig. I.

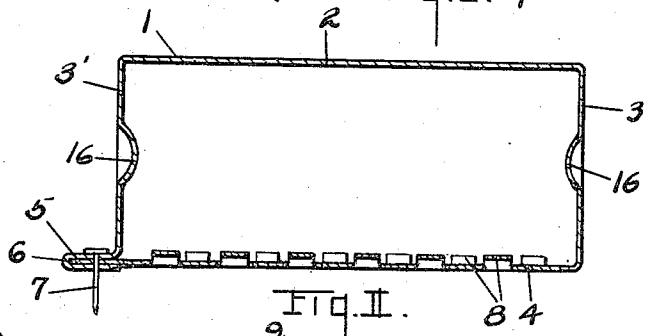


Fig. II.

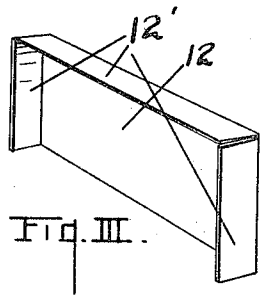


Fig. III.

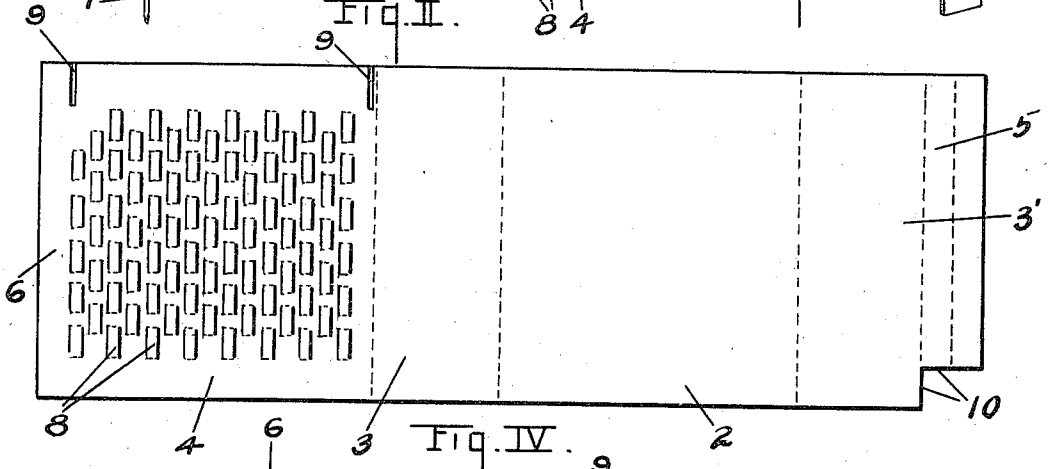


Fig. IV.

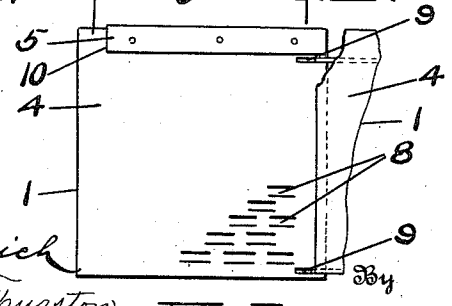


Fig. I. A

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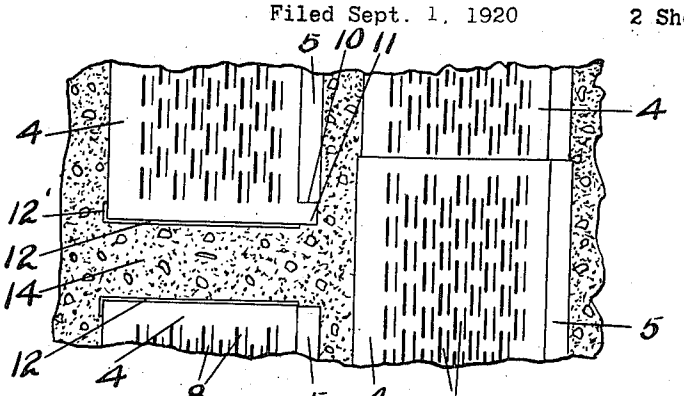


Fig. VII.

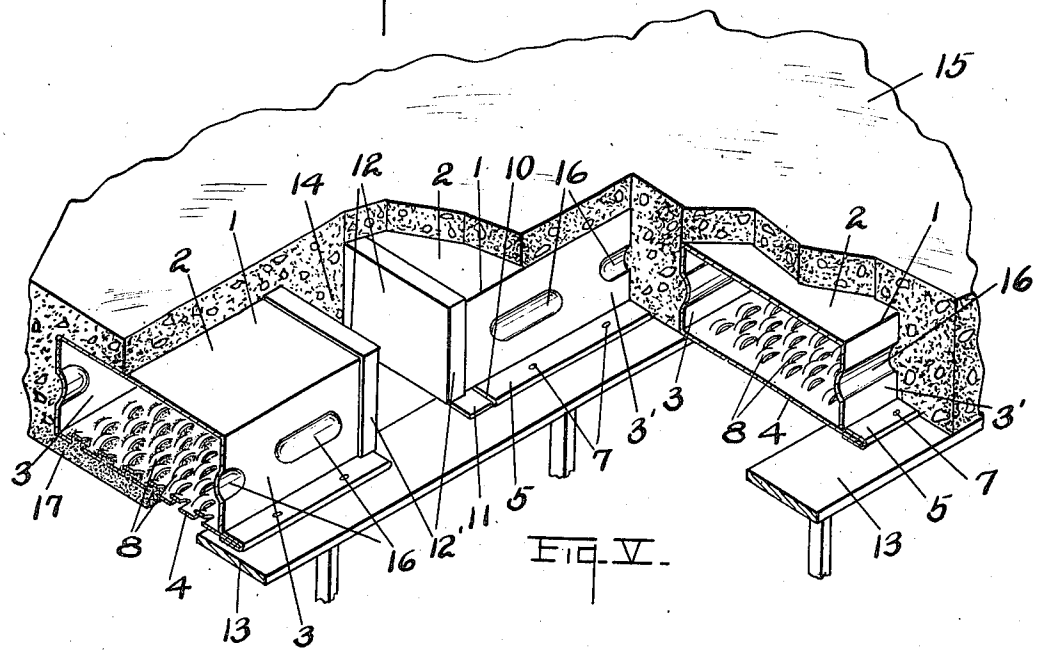


Fig. V.

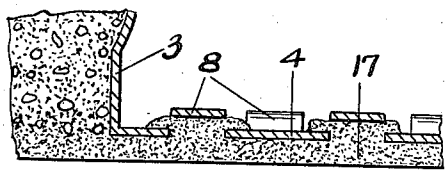


Fig. VI.

Witnesses

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UNITED STATES PATENT OFFICE.

HENRY D. CONWAY, OF DETROIT, MICHIGAN.

FLOOR AND CEILING CONSTRUCTION.

Application filed September 1, 1920. Serial No. 407,470.

To all whom it may concern:

Be it known that I, HENRY D. CONWAY, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented certain new and useful Improvements in Floor and Ceiling Constructions, of which the following is a specification.

This invention relates to improvements in floor and ceiling constructions.

The main objects of this invention are:

First, to provide in floor and ceiling constructions an improved metal tile member or unit which may be easily assembled in spaced rows as desired and the bottoms of which constitute lathing units.

Second, to provide an improved metal tile member for floor and ceiling constructions which is very economical to produce and is easily assembled or arranged in position to receive the concrete.

Further objects, and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing forming a part of this specification, in which:

Fig. I is a plan view of a row or series of my improved tile members or units in assembled relation.

Fig. I^A is a bottom view of one of the tile members or units.

Fig. II is a vertical transverse section through one of the units on a line corresponding to line 2—2 of Fig. I.

Fig. III is an inside perspective view of one of the end members.

Fig. IV is a plan view of the sheet metal blank from which my improved tile members are formed.

Fig. V is a detail perspective view of a floor and ceiling construction illustrating the method of using the same and also the relation of the tile members in the completed structure.

Fig. VI is a detail vertical section through the completed structure illustrating the lathing feature of my improvements.

Fig. VII is an inverted detail view of the ceiling prior to the application of the plaster.

In the drawing similar reference characters refer to similar parts throughout the several views.

Referring to the drawing, I provide a plurality of sheet metal tile members or units designated generally by the numeral 1, each having a top 2, sides 3 and 3′ and bottom 4. These uits are preferably formed of an integral folded blank of sheet metal as shown in Fig. IV, the folding points being indicated by the dotted lines.

One end of the blank constitutes the bottom 4 and the other the side 3′ which terminates in the flange 5 which is folded upon itself providing a seam member engaging the edge 6 of the bottom 4. The flange 5 in addition to being a securing means for the ends of the blank also constitutes a flange adapted to receive nails 7 by means of which the tile members may be secured in their adjusted position or assembled relation in the construction to receive the concrete.

The bottom 4 has portions 8 struck up therefrom so that the bottom of each tile member constitutes a lathing unit to receive plaster in the completed structure. The members are arranged in rows with their ends in telescoping engagement to permit telescoping without the necessity for varying the diameters of the several units. One end of the bottom of each member is slotted at 9 adjacent its side wall to receive the edges of the side walls of the member telescoped therewith.

The flanges 5 are also cut away at one end at 10 so that the flange of the member telescoped therewith may telescope with the projecting end 11 of the portion 6 embraced by the flange 5. I also provide end closures 12 having flanges 12′ at the top and sides thereof adapted to telescope with the ends of the tile members so that the ends of a row of the tile members may be conveniently closed.

In Figs. V, VI and VII, I illustrate one method of using my improved tile members. The "false" work or supports 13 are arranged in suitable spaced relation so that the tile members may be arranged thereon with their ends in telescoping engagement as illustrated, the tile members being secured to these supports by the nails 7 indicated conventionally.

If desired to provide bridging between the beams, the members are spaced in the rows as shown at 14, the closures 12 being provided at this point. The concrete 15 is poured or spread over and between these tile members forming the floor and its beams. The sides of the tile members are indented at 16 so that the tile members are firmly supported in the concrete. The "false" work 13 is then removed, the nails 7 being cut off below the flanges, and the plaster 17 may be applied as indicated, the plaster being effectively supported by the tile members and the exposed portion of the beams to which it will effectively adhere.

The units of my improved floor and ceiling construction are very economical to produce, may be rapidly and easily assembled in the structure, and the "false" work or supports quickly removed, and when removed, the structure is ready for the plaster or coating.

I have used the term "tile" herein as such term is quite generally used by the building trade although the term "domes" and other terms are also used to designate these devices.

I have illustrated and described my improvements without special regard to the proportion of parts and more or less in conventional form as the portions may be greatly varied and will no doubt be considerably varied in adaptations to particular work or requirements. I believe, however, that the disclosure made will enable those skilled in the art to which my invention relates to embody or adapt the same as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A metal tile member for floor and ceiling structures comprising a top, sides and bottom formed of an integral folded blank of sheet metal, one end of which constitutes the bottom and the other a side terminating in an outwardly projecting flange folded upon itself and embracing the free edge of the bottom and constituting an attaching flange, the bottom being slotted at one end adjacent the sides to receive the edges of the sides of a coacting tile member telescoped therewith, the bottom having portions struck up therefrom whereby it constitutes a lathing unit.

2. A tile member for floor and ceiling structures comprising a top, sides and bottom formed of an integral folded blank, the bottom being slotted at one end to receive the edges of the sides of a coacting tile member telescoping therewith, the bottom being foraminated whereby it constitutes a lathing unit.

3. A sheet metal tile member for floor and ceiling structures comprising a top, sides and a foraminated bottom constituting a lathing unit, the bottom being slotted at one end to receive the edges of the sides of a coacting tile member telescoped therewith.

4. A floor and ceiling construction comprising tile members each having a top, sides and a foraminated bottom constituting a lathing unit and a securing flange at one longitudinal edge adapted for attachment to a support, said members being disposed in spaced rows with their ends in telescoping engagement, their bottoms being slotted at one end to receive the edges of the sides of a coacting member telescoped therewith.

5. A metal tile member for floor and ceiling structures comprising a top, sides and bottom formed of an integral folded blank of sheet metal, one end of which constitutes the bottom and the other a side terminating in an outwardly projecting flange folded upon itself and embracing the free edge of the bottom providing a horizontal flange disposed in the plane of the bottom and adapted for attachment to a supporting form or false work upon which the tile member is resting.

6. A sheef metal tile member for floor and ceiling structures comprising top, sides and bottom, the bottom being slotted at one end to receive the edges of a coacting member telescoped therewith.

7. A floor and ceiling construction comprising tile members each having a top, sides and a foraminated bottom, the face of the bottom being free from projections permitting plastering directly thereon, the bottoms of said tile members being slotted at one end to receive the edges of the sides of a coacting tile member telescoped therewith.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

HENRY D. CONWAY. [L. S.]

Witnesses:

HELEN L. CONWAY,

ANNA CONWAY.