

May 28, 1935.

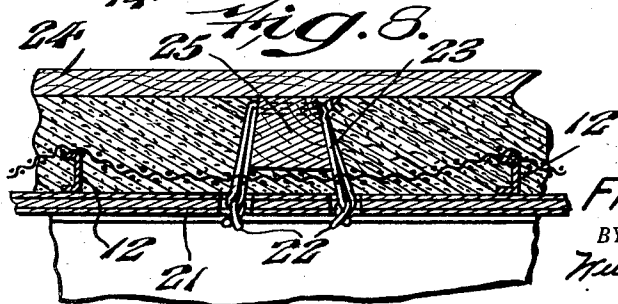
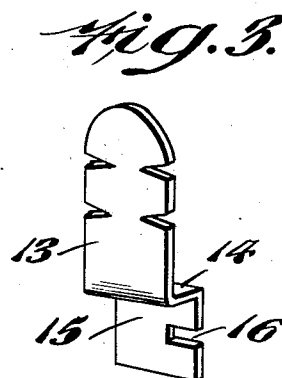
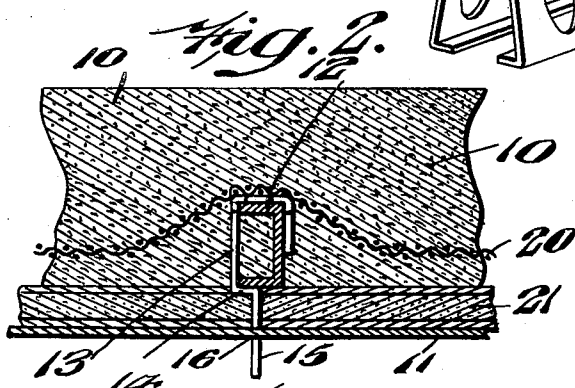
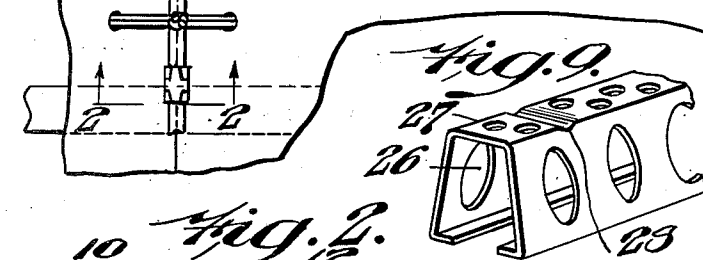
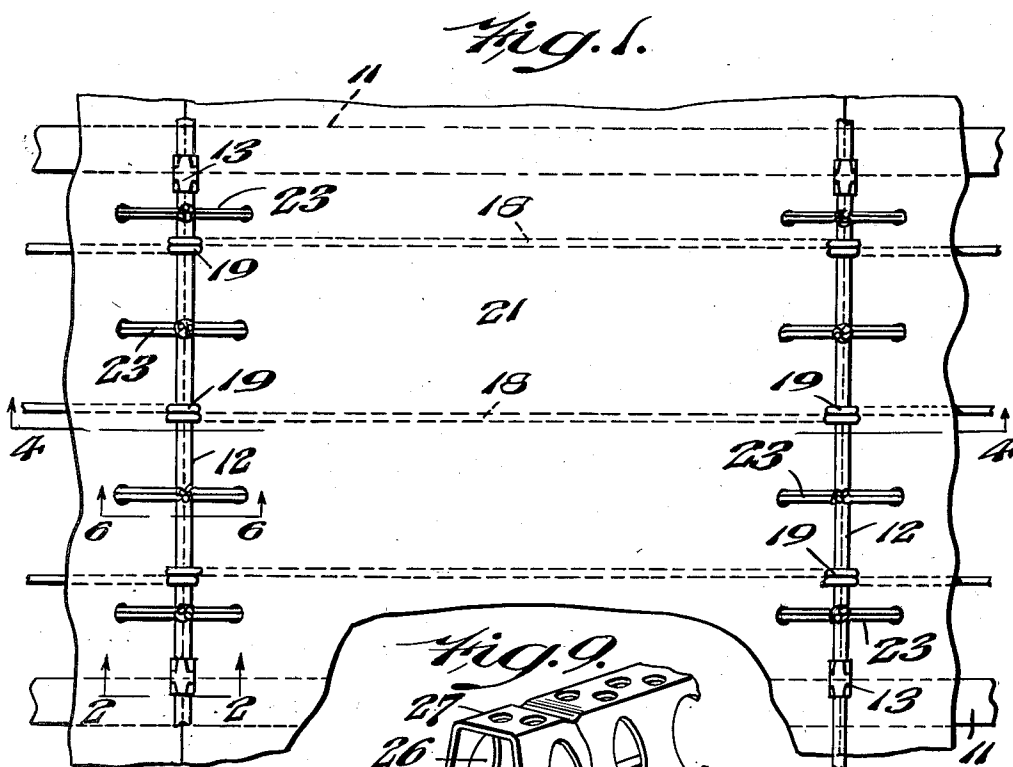
F. M. VENZIE

2,002,927

BUILDING CONSTRUCTION

Filed June 24, 1931

2 Sheets-Sheet 1



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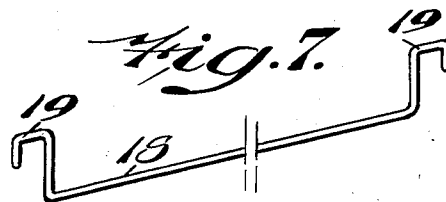
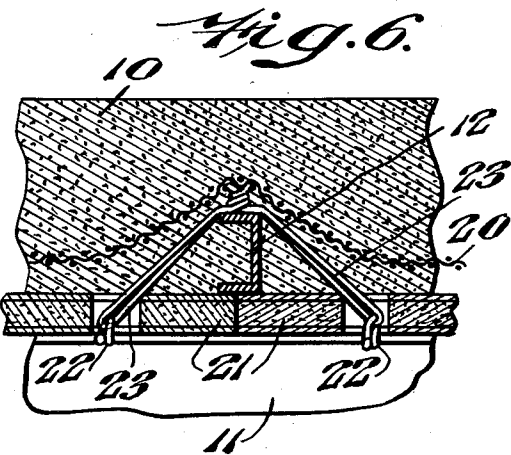
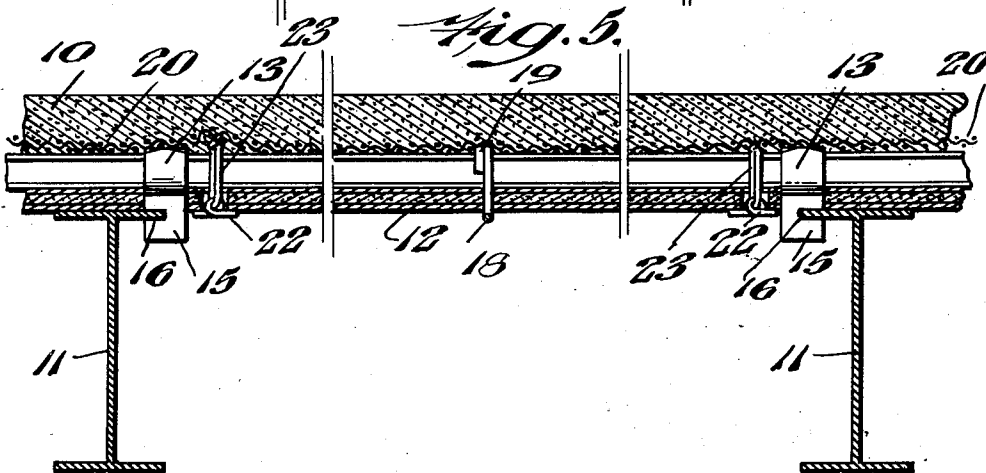
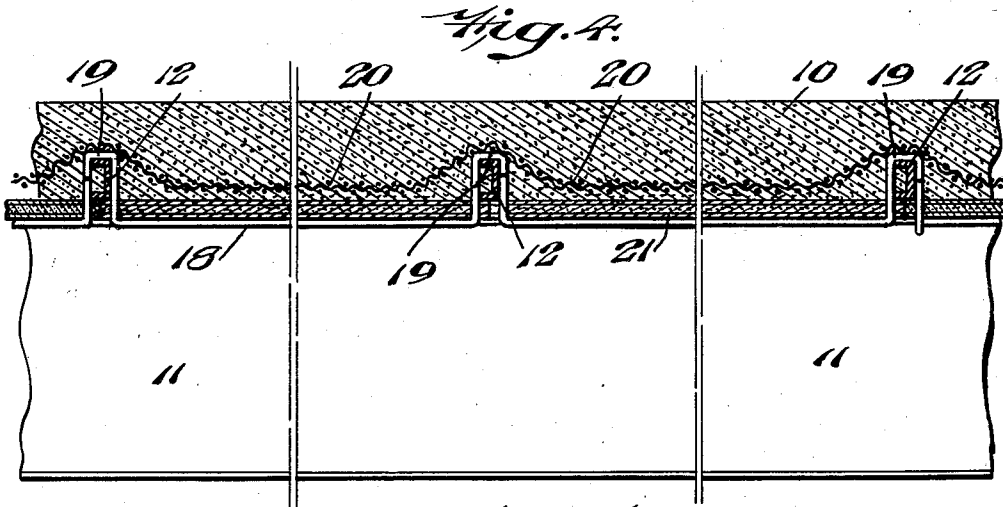
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BUILDING CONSTRUCTION

Filed June 24, 1931

2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

2,002,927

## BUILDING CONSTRUCTION

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Application June 24, 1931, Serial No. 546,436

## 11 Claims. (Cl. 72-71)

This invention, generally stated, relates to building constructions and has more particular relation to flooring.

As at present practiced in the art, a floor construction of cementitious material is usually formed in one of the following manners: (1) A temporary scaffold is erected beneath the cementitious floor to be formed, which scaffold, after having served its purpose for the workmen erecting the flooring, is discarded. (2) On the other hand, a metallic reinforcement commonly called a centering is introduced, which in practice has demonstrated that it sags or bulges so that a plane ceiling surface is not obtained.

The principal object of the present invention is to overcome these disadvantageous features and provide a flooring construction in which not only is the temporary scaffolding done away with but the disadvantageous feature of having the concrete reinforcing bulge so as to preclude a plane surface is also done away with.

A further object of the present invention is to support channel irons above the floor beams by means of clips, which channel irons are arranged at right angles with respect to the floor beams.

A further object of the present invention is to tie together adjacent channel irons by means of rods having hooked ends.

A further object of the present invention is to support from channel irons plaster boards by means of wire ties.

A still further object of the present invention is to introduce in a concrete floor metal mesh arranged in different planes with portions of said mesh passing over the tops of the channel irons.

A still further object of the present invention is to provide sleepers both of wood and metal covered wood, whereby wooden flooring may be nailed to the sleepers above the concrete floor.

Other and further objects of the present invention reside in the providing of general details of construction and arrangement of parts as will hereinafter more fully appear.

The invention consists of the novel construction hereinafter described and finally claimed.

The nature, characteristic features and scope of the invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, and in which:

Fig. 1 is a plan view of the underside of a flooring embodying the invention;

Fig. 2 is a view in section taken upon the line 2-2 of Fig. 1;

Fig. 3 is a perspective view of a clip shown in the foregoing figures;

Fig. 4 is a view in section taken upon the line 4-4 of Fig. 1;

Fig. 5 is a view in cross-section of Fig. 1;

Fig. 6 is a view taken upon the line 6-6 of Fig. 1;

Fig. 7 is a view in perspective of one of the wire clips shown in Fig. 1;

Fig. 8 is a fragmentary view in section illustrating a wooden sleeper construction; and

Fig. 9 is a view in perspective of a metal cover for a sleeper.

For the purpose of illustrating my invention I have shown in the accompanying drawings several forms thereof which are at present preferred by me, since the same have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring now to the drawings in detail, the reference numeral 10 designates a flooring which may be concrete supported upon I-beams 11 and channel irons 12. The latter are arranged at right angles to the former and are supported with respect to the I-beams by means of clips best seen in Fig. 3. Each clip is stamped from a single piece of metal and comprises a flat body 13 the lower end of which is bent over to form a ledge 14 after which a tongue 15 is formed and slotted at 16. The slots 16 are caused to engage over the top flanges of the I-beams, see Fig. 5, and the channel irons are caused to seat upon the ledges 14 of the clips. I tie together the channel irons 12 by means of the wire clip best seen in Fig. 7. Each clip is preferably formed from a single piece of wire to provide an elongated spanner 18 provided at each end with a hook 19. In erecting the ceiling beneath the concrete floor I make use of plaster boards 21 which are caused to abut against the under sides of the channel irons 12, see Fig. 6. I make a snug abutment by means of wire ties the lower parts 22 of which penetrate apertures in the plaster boards, and of which the upper parts 23 of adjacent ties are twisted together above a channel iron, as clearly illustrated in Fig. 6. With channel irons tied together, I stretch metal mesh 20 or the like over the tops of the channel irons and

permit the said mesh to be depressed intermediate the channel irons, as is clearly illustrated in Fig. 4. It is sometimes desirable to place a flooring 24 of wood or the like upon the concrete floor, see Fig. 8. In such case I embed in the concrete floor sleepers 25 which may be of wood, as shown in Fig. 8, or metal covered sleepers as shown in Fig. 9 may be employed. In either event the wood flooring may readily be nailed to the sleepers. The sleepers may be utilized to support the plaster boards 21 by making use of the ties previously described. By employing metal covered sleepers, as shown in Fig. 9, openings 26 may be provided to permit swell of lumber sleepers. The top of such metal cover is provided with nail holes 27 which are preferably staggered. The top is also provided with a cross-groove 28 to more readily accept a wire tie.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

The wooden sleepers may be omitted when the casing is allowed to be filled with a porous, cementitious mixture. This mixture must be consistent enough to accept nails when driven through holes 27.

What is claimed is:

1. In a floor construction of cementitious material, floor beams; channel irons arranged at right angles to said floor beams; means, including metal clips, for engaging the flanges of said floor beams and said channel irons; conventional wire mesh stretched across said channel irons in varying planes; means, including wire spanners, for connecting said channel irons; plaster boards forming a ceiling; and means, including ties which penetrate said plaster boards, for supporting said boards from said channel irons.

2. In a floor construction of cementitious material, floor beams; channel irons arranged at right angles to said floor beams; means, including metal clips, for engaging the flanges of said floor beams and said channel irons; conventional wire mesh stretched across said channel irons in varying planes; means, including rods having hook-shaped ends, for tying said channel irons together; plaster boards forming a ceiling; and means, including wire ties which penetrate said plaster board, for supporting said plaster boards from said channel irons.

3. In a floor construction of cementitious material, floor beams; channel irons arranged at right angles to said floor beams; means, including metal clips, for engaging the flanges of said floor beams and said channel irons; conventional wire mesh stretched across said channel irons in varying planes; means, including wire spanners, for tying together said channel irons; plaster boards forming a ceiling; means, including wire ties, for supporting said plaster boards

from said channel irons; a sleeper embedded in said cementitious material; and a flooring of wood nailed to said sleeper.

4. In a floor construction of cementitious material, floor beams; channel irons arranged at right angles to said floor beams; means, including metal clips, for engaging the flanges of said floor beams and said channel irons; conventional wire mesh stretched across said channel irons in varying planes; means, including wire spanners, for tying together said channel irons; bays forming a ceiling; and means, including said spanners, for supporting said bays from said channel irons.

5. In a floor construction, primary supports lying in a substantially horizontal plane, secondary supports, means for spacing said secondary supports above said primary supports and positioning them against movement in a vertical plane, said secondary supports being spaced one from the other, and means for positioning said secondary supports against movement in a horizontal plane.

6. In a floor construction, supports lying in a substantially horizontal plane, a plurality of metal members forming a reinforcement for a cementitious material carried by and spaced above said supports, common means for forming a ceiling surface and form for cementitious material, and means engaging said metal members for carrying said last named means.

7. In a floor construction, primary supports lying in a substantially horizontal plane, a plurality of subsidiary supports carried by and spaced above said primary supports, means for forming a ceiling surface, and means engaging said subsidiary supports for carrying said last named means.

8. A floor construction comprising primary supporting means, ceiling surfacing units, means for supporting said units, and means for supporting said last named means by and above said first named means and out of contact therewith.

9. A floor construction comprising primary supporting means, ceiling surfacing units, means for supporting said units, and means forming a seat for supporting said last named means above said first named means and out of contact therewith.

10. A floor construction comprising supporting members, a plurality of metal members carried by and spaced above said supporting members and adapted to be embedded in a cementitious floor, ceiling surfacing units, and means for positioning said ceiling surfacing units in a common plane and in abutting relationship between said supporting members and said metal members.

11. A floor construction comprising supporting members, a plurality of metal members carried by and spaced above said supporting members and adapted to be embedded in a cementitious floor, ceiling surfacing units, and means for connecting said ceiling surfacing units to said metal members.

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