July 21, 1936. F. M. VENZIE 2,048,236

BUILDING CONSTRUCTION

Original Filed Dec. 20, 1930

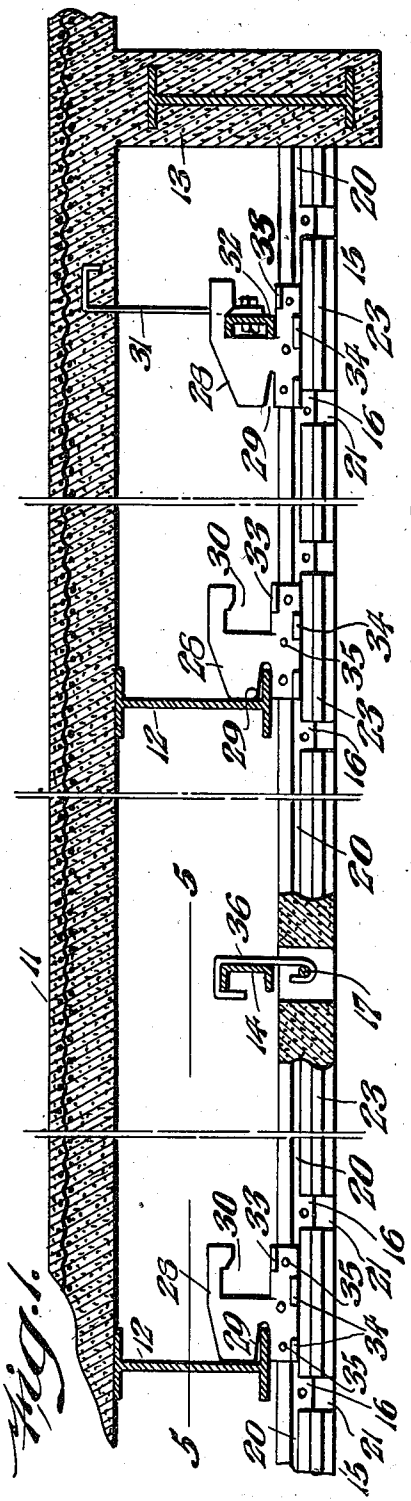


Fig. 1.

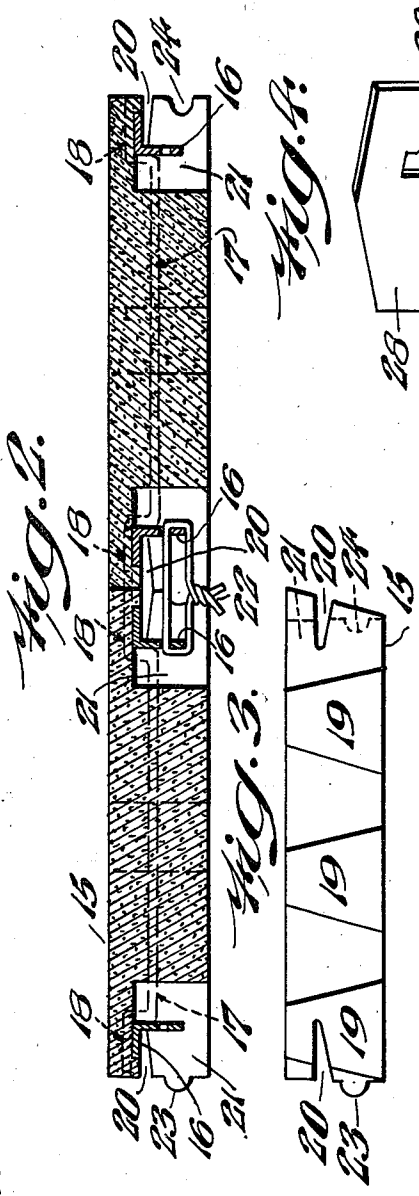


Fig. 2.

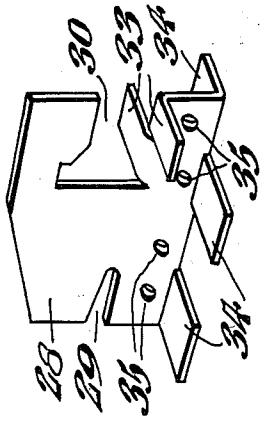


Fig. 4.

Fig. 3.

INVENTOR
FREDERICK M. VENZIE,
BY
William J. Jackson
ATTORNEY

Patented July 21, 1936 2,048,236

UNITED STATES PATENT OFFICE

2,048,236

BUILDING CONSTRUCTION

Frederick M. Venzie, Philadelphia, Pa., assignor to National Gypsum Company, Buffalo, N. Y., a corporation of Delaware

Original application December 20, 1930, Serial No. 503,635. Divided and this application June 16, 1932, Serial No. 617,542

6 Claims. (Cl. 72—118)

The following is a specification, the same being a division of my co-pending application for Letters Patent Serial No. 503,635, filed December 20, 1930.

This invention, generally stated, relates to a building construction and has more especial relation to a metallic clip adapted for engagement over either the lower flange of an I-beam or over a plasterer's channel.

One object of the present invention is to provide a metallic clip of the character stated composed of a flat plate stamped from a single blank and having bent outwardly therefrom upon opposite sides thereof at right angles thereto spaced fingers arranged in different planes for engaging ceiling slabs.

A further object of the present invention is to provide a clip of the character stated the plate of which is notched along each of its vertical edges in a plane above the spaced fingers, one of which notches is adapted to engage over the lower flange of an I-beam and the other over a plasterer's channel.

Other and further objects of the present invention reside in the provision of a clip of the character stated in which are arranged a combination of parts for attaining the results sought by the foregoing objects.

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 drawing forming part hereof, and in which:

Fig. 1 is a view principally in longitudinal section of pre-cast ceiling slabs as supported from floor members;

Fig. 2 is a view in cross section of a pair of the ceiling slabs shown in Fig. 1, as tied or coupled together;

Fig. 3 is a view in end elevation of one of the ceiling slabs; and

Fig. 4 is a view in perspective of one of the ceiling slab supporting clips shown in Fig. 1.

For the purpose of illustrating my invention I have shown in the accompanying drawing one form thereof which is at present preferred by me, since the same has 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 drawing in detail, and with more especial relation first to Figs. 1 to 4 inclusive, the reference numeral 11 designates a floor supported upon usually I-beams 12 which may be or may not be equally spaced apart, and which as practice dictates are not usually found equally spaced. This is particularly true when it becomes necessary to introduce a girder designated 13 in connection with the flooring. It also happens that it sometimes becomes necessary to introduce a plasterer's channel 14 between a pair of floor members. Having these conditions in mind it is of the essence of the present invention that means be provided to properly suspend, with respect to the flooring 11, pre-cast ceiling slabs 15 of cementitious material. Each slab 15 has embedded therein a reinforcement comprising a ladder-like structure made up of angle-irons 16 connecting which are cross-members 17, the terminus of each cross-member being bent over the tops of the angle-irons as at 18, see Fig. 2. Each slab 15 is provided at each end with spaced fingers 19 slightly bevelled. Each ceiling slab, longitudinally considered, is grooved as at 20 to accept the fingers of metal clips best seen in Fig. 4. Each slab is also provided along its longitudinal edges with spaced, vertically disposed slots 21, across which the angle-irons 16 extend, as best seen in Fig. 2. When the ceiling slabs are positioned side by side and end to end as clearly shown in Fig. 2, the wires 22 are employed for coupling together adjacent slabs, thus providing an interlock of reinforced parts throughout the width of the building. The tie-wires 22 are passed through apertures formed in the vertical bars of the angle-irons 16, best seen in Fig. 2. The longitudinal edges of the slabs are also provided with ribs 23 and grooves 24 to complete an interlock of parts laterally.

The ceiling slabs are suspended from the floor members by means of a reversible clip, best seen in Fig. 4. Each clip is stamped from a single blank and comprises a vertically disposed plate 28 having opposed notched portions 29 and 30. In use the notched portion 29 of a clip is caused to engage over the lower flange of an I-beam 12, as best seen in Fig. 1. However, in case it is necessary, because the floor supports are not properly spaced, to make use of an auxiliary floor member 31 to support a small channel 32, then the notched portion 30 of a clip is caused to engage over the channel 32. In either case the fingers 33 of plate 28 are caused to engage over

the upper surface of a ceiling slab and the fingers 34 are caused to engage the grooves 20 of adjacent slabs for suspending the latter from a floor member. It is to be observed that the fingers 33 and 34 are arranged at right angles to the plate 28 and are disposed in different horizontal planes. The plate 28 of a clip is provided with opening 35 whereby the latter may be nailed to place with respect to a ceiling slab. In some instances it may be advisable to employ small channel-irons 14 between the floor members in order to suspend adjacent ends of the ceiling slabs. In such case I make use of metal, hook-like members 36 for engaging over the channel-irons and beneath wires 17 embedded in the slabs 15.

What is claimed is:

1. A clip of the character stated comprising a flat plate stamped from a single blank, said plate having bent outwardly therefrom from opposite sides thereof at right angles thereto spaced fingers arranged in different planes for engaging ceiling slabs, said plate being notched along its vertical edges in a plane above said fingers, of which notches optionally one is adapted to engage over the lower flange of an I-beam and the other over a plasterer's channel.

2. A clip of the character stated comprising a flat plate stamped from a single blank, the upper edge of which is bevelled, said plate having bent outwardly therefrom from opposite sides thereof at right angles thereto spaced fingers arranged in different planes for engaging ceiling slabs, said plate being notched along its vertical edges in a plane above said fingers, of which notches optionally one is adapted to engage over the lower flange of an I-beam and the other over a plasterer's channel.

3. A clip of the character stated comprising a flat plate stamped from a single blank, said plate having bent outwardly therefrom from opposite sides thereof at right angles thereto spaced fingers arranged in different planes for engaging ceiling slabs, said plate being horizontally notched along its vertical edges in a plane above said fingers, of which notches optionally one is adapted to engage over the lower flange of an I-beam and the other over a plasterer's channel.

4. A clip of the character stated comprising a flat plate stamped from a single blank, said plate having bent outwardly therefrom from opposite sides thereof at right angles thereto spaced fingers arranged in different planes for engaging ceiling slabs, said plate being notched along its vertical edges in a plane above said fingers, of which notches optionally one is adapted to engage over the lower flange of an I-beam and the other over a plasterer's channel, said plate being provided with nail receiving openings.

5. A clip of the character described comprising a flat plate stamped from a single blank, spaced pairs of fingers projecting outwardly from said plate in parallel planes normal to said plate and extending in opposite directions with respect thereto, said fingers providing means for supporting the edges of two adjacent surfacing units, and nail receiving openings in said plate between vertically spaced fingers.

6. A clip of the character stated comprising a flat plate stamped from a single blank, spaced pairs of fingers projecting outwardly from said plate in parallel planes normal to said plate and extending in opposite directions with respect thereto, said fingers providing means for supporting the edges of two adjacent surfacing units, a slot in said plate adapted to engage supporting means, said slot being formed in an edge of said plate which is normal to the planes of said fingers, and means on the metal edge of said slot for preventing accidental disengagement of said clip.

FREDERICK M. VENZIE.