March 29, 1932. F. M. VENZIE 1,851,741

BUILDING STRUCTURE

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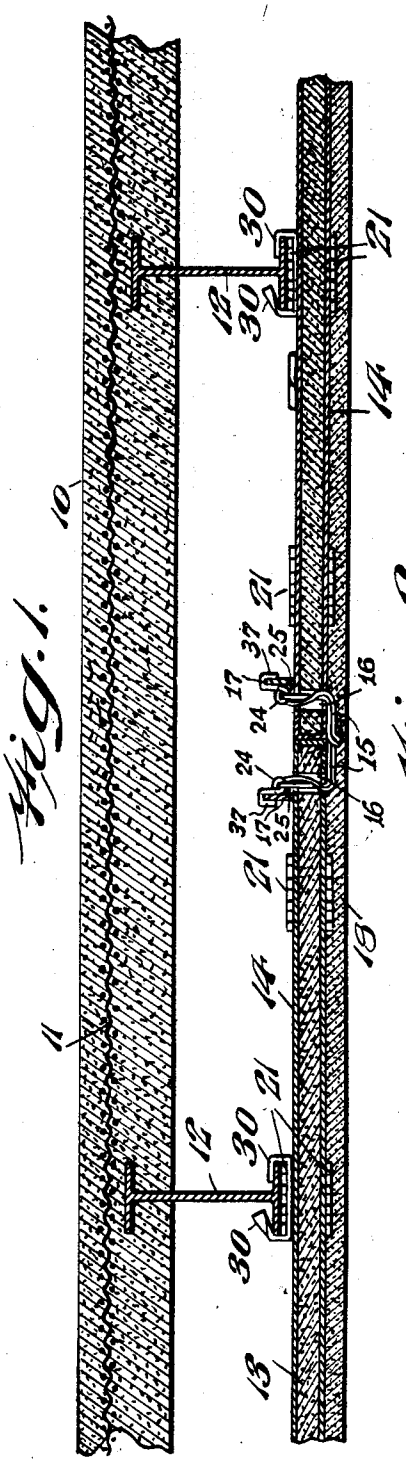

Fig. 1.

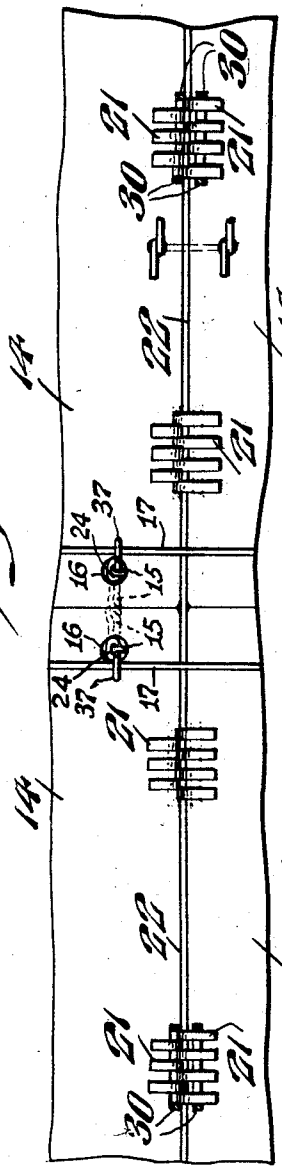

Fig. 2.

Fig. 4.

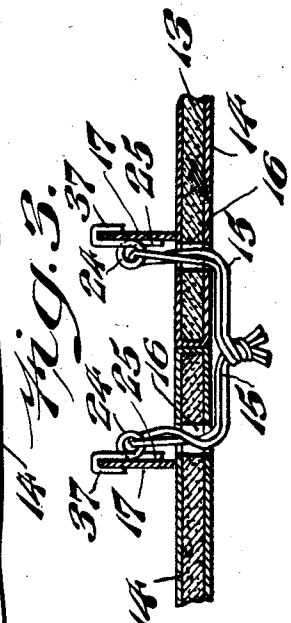

Fig. 3.

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Fig. 5.

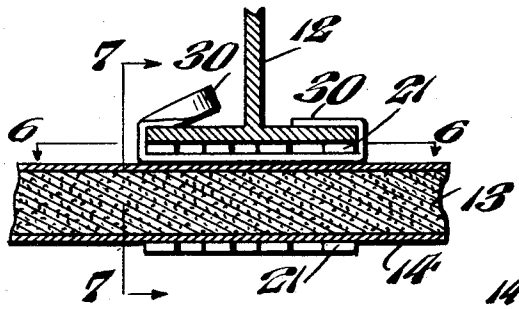


Fig. 6.

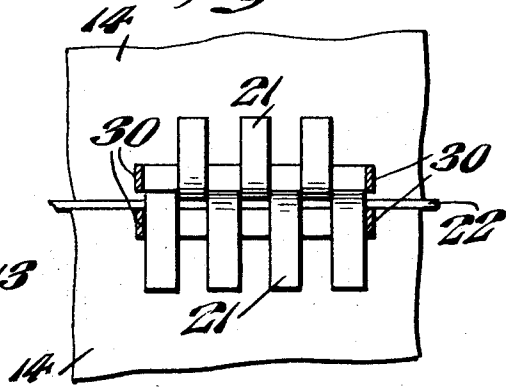


Fig. 7.

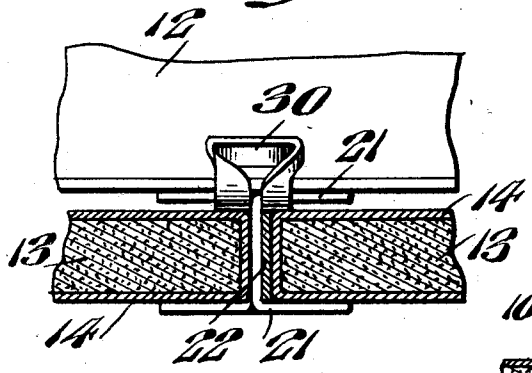


Fig. 8.

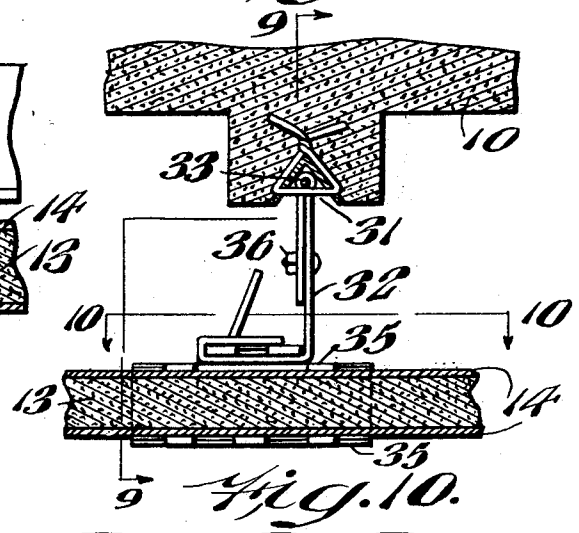


Fig. 9.

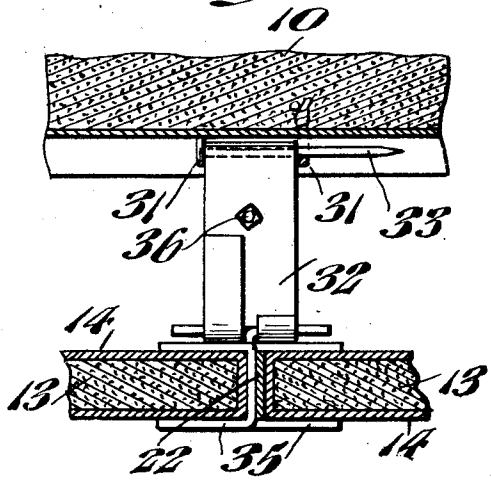
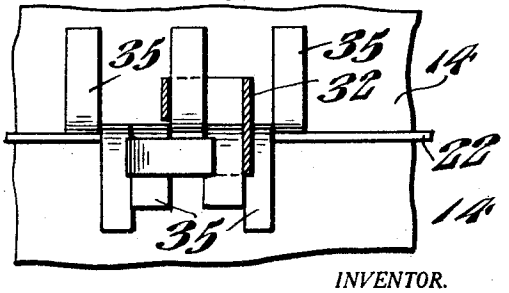


Fig. 10.



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UNITED STATES PATENT OFFICE

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BUILDING STRUCTURE

Application filed December 20, 1929. Serial No. 415,521.

The present invention has relation to a building construction and has more particular relation to formation of a ceiling of precast slabs.

One object of the present invention is to provide a novel construction of parts which may be assembled by unskilled labor in an efficient manner to provide a comparatively inexpensive structure.

A further object is to provide a plaster board ceiling construction which in assembled condition is relatively rigid throughout its longitudinal extent.

A still further object of the present invention resides in a novel mode of plaster board ceiling attachment.

Other and further objects of the present invention resides in the provision of general details of construction and arrangement of parts of attaining the results sought by the said leading objects.

With these and other objects in view, 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 view in longitudinal section of a building structure embracing my novel invention.

Fig. 2 is a view in plan, of the plaster boards shown in Fig. 1, with the flooring and I-beams omitted.

Fig. 3 is a fragmentary sectional view hereinafter referred to.

Fig. 4 is a view in elevation of a tie bar hereinafter referred to.

Fig. 5 is a fragmentary view in section, hereinafter referred to.

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 5.

Fig. 7 is a view in section taken on the line 7—7 of Fig. 5.

Fig. 8 is a fragmentary view in section of a modified form of construction.

Fig. 9 is a view in section taken upon the line 9—9 of Fig. 8.

Fig. 10 is a section on line 10—10 of Fig. 8.

For the purpose of illustrating my invention I have shown in the accompanying drawings two forms thereof which are 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 drawings in detail, and with more especial relation to Fig. 1, the reference numeral 10 designates a flooring which may be concrete or other fireproofing material. Extended throughout the length of the floor is a reinforcement 11. Depending from the flooring 10 and embedded therein are spaced I-beams 12 from which I suspend my novel form of plaster board, a description of which follows. 13 designates a plaster composition having a covering of paper 14. These plaster boards are rectangular in shape and are arranged end to end in abutting relation, and are secured or coupled together by means of metal clips 21 which marginally engage the plaster boards. In order to provide relative rigidity, a backing strap 22 is provided which parallels the plaster boards and is arranged so as to seat between the prongs of the clips 21. It sometimes happens that the plaster boards sag adjacent their meeting edges and to assist in preventing this I make use of tie rods best seen in Figs. 3 and 4. Upon the plaster board tops I arrange parallel cross-piece 17 of metal, serving as stiffeners, and fit thereover the hooked ends 37 of members 25 with which prongs 15 have swivel relation at 24. The prongs 15 are extended downwardly through the apertures 16 in the plaster boards and the free ends twisted together beneath adjacent plaster boards, as clearly shown in Fig. 3, it being understood that a coat of plaster 18, see Fig. 1, covers the under surfaces of the plaster boards, thus concealing the twisted ends of the prongs of the tie rods. Thus, general rigidity of plaster boards is provided.

To the bottom rails of the I-beams 12 I at-

tach the clips 21 by means of the clip 30, see Figs. 5 and 7. The clips 30 are shaped upon an angle so as to wedge over the tops of the lower rails of the I-beams 12 and secure the plaster boards 13, clips 21, and clips 30 in an efficient coupling which may be attached by unskilled labor.

Taking up now the modified form of attachment shown in Figs. 8, 9, and 10, the floor 10 of concrete or the like has embedded therein a twisted wire having a loop 31 depending from which is a strap 32 secured with respect to the loop 31 by means of a conventional wire nail 33. Bolted at 36 to the strap 32 is an L-shaped member 34 the lower end of which supports the clips 35 which are similar in all respects to the clips 21, seen in Figs. 5, 6, and 7.

By the above described arrangement and construction of ceiling parts, a very efficient, relatively inexpensive lay-out may be effected by unskilled labor, thus materially reducing the cost of building construction.

What I claim is:

1. In a building structure a floor of concrete or the like, spaced I-beams depending from said floor, a series of abutting plaster boards to form a ceiling, said boards being apertured adjacent their ends and arranged with their end edges abutting, clips for engaging around the meeting marginal edges of said abutting boards to maintain the same in alignment, and an auxiliary clip for engaging over the lower rail of an I-beam to suspend said boards, and means passing through said apertures for tying said boards together.

2. In a building structure, a floor of concrete or the like, spaced I-beams depending from said floor, a series of abutting plaster boards to form a ceiling, said boards being apertured and arranged with their edges abutting, clips for engaging around the meeting marginal edges of said abutting boards to maintain the same in alignment, an auxiliary clip for engaging over the lower rail of an I-beam to suspend said boards, and metal tie rods extended through the apertures of said plaster boards to a position therebeneath and twisted together to provide plaster board stability.

3. In a building structure, a floor of concrete or the like, spaced I-beams depending from said floor, a series of abutting plaster boards to form a ceiling, said boards being apertured and arranged with their edges abutting, clips for engaging around the meeting marginal edges of said abutting boards to maintain the same in alignment, an auxiliary clip for engaging over the lower rail of an I-beam to suspend said boards, metal tie rods extended through the apertures of said plaster boards to a position therebeneath and twisted together to provide plaster board stability, and spaced vertically arranged metal members positioned adjacent said apertures in said boards, said tie rods having swivel relation with said vertical members.

4. In a building structure a floor of concrete or the like, a wire loop embedded therein and depending therefrom, a hanger suspended from said wire loop by means of a conventional wire nail, plaster boards arranged to have their marginal edges abut, clips engaging said marginal edges of said boards, and means carried by said hanger for engaging said clips to suspend said plaster boards.

FREDERICK M. VENZIE.