March 22, 1932. F. M. VENZIE 1,850,735

CEILING CONSTRUCTION

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Fig. 1.

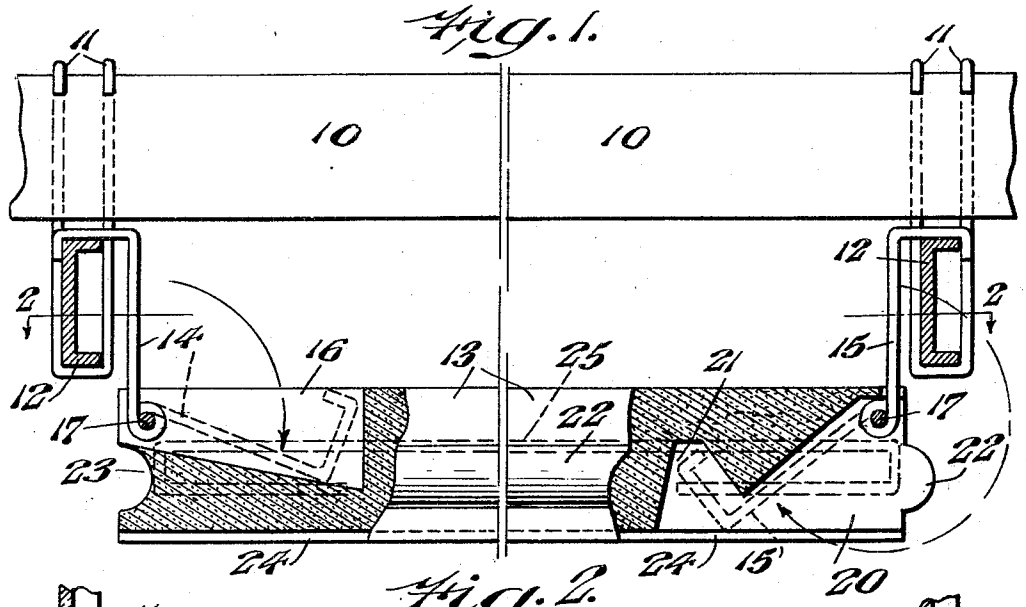


Fig. 2.

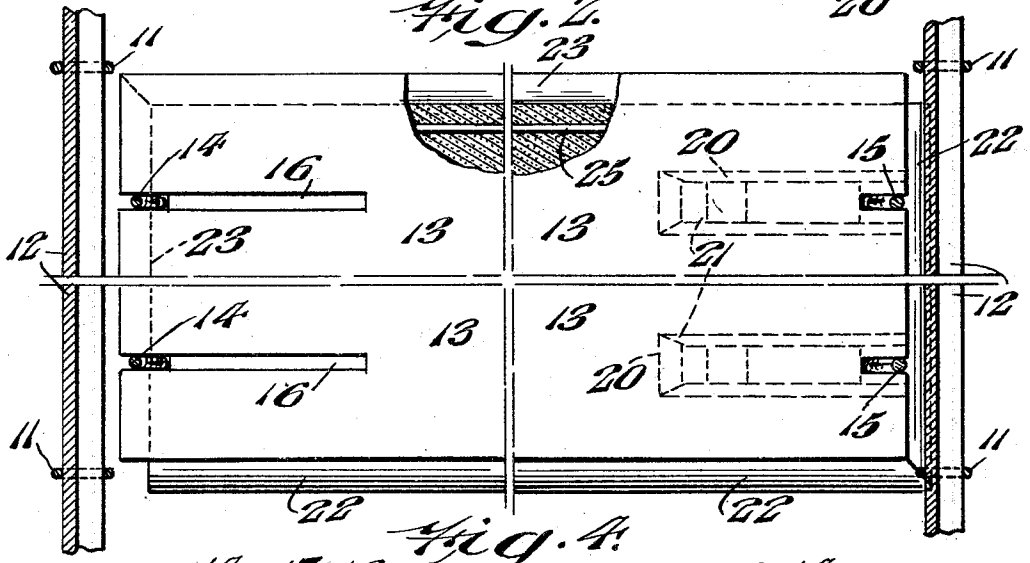
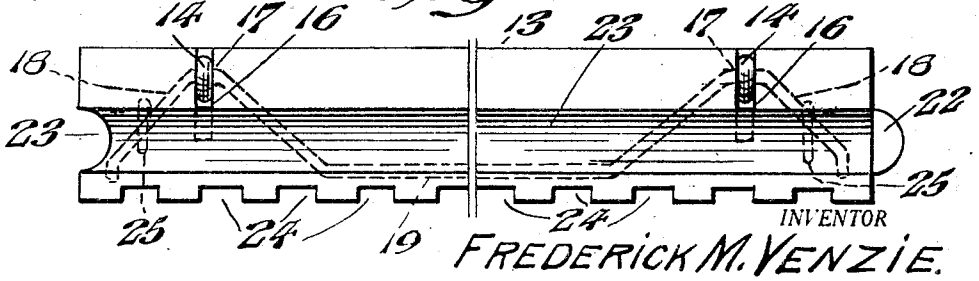


Fig. 4.



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Fig. 3.

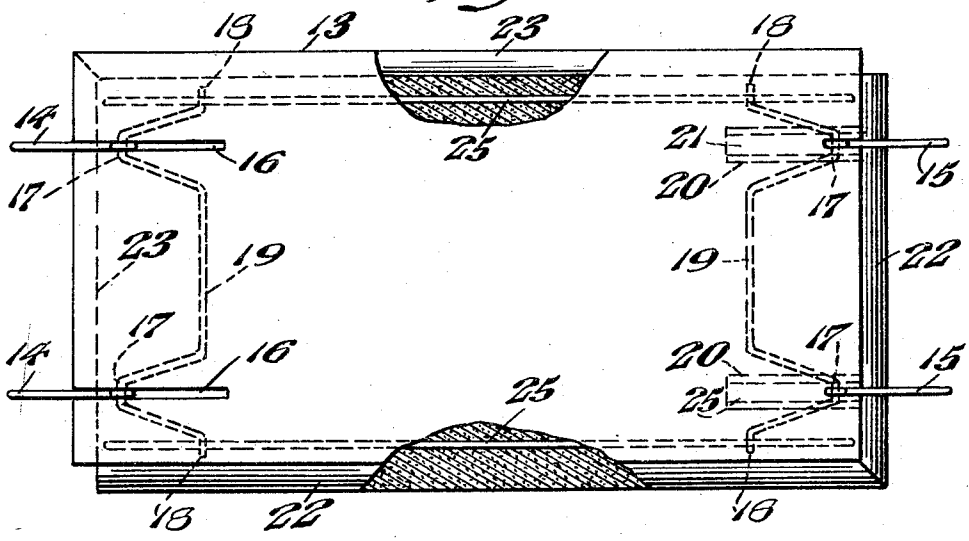
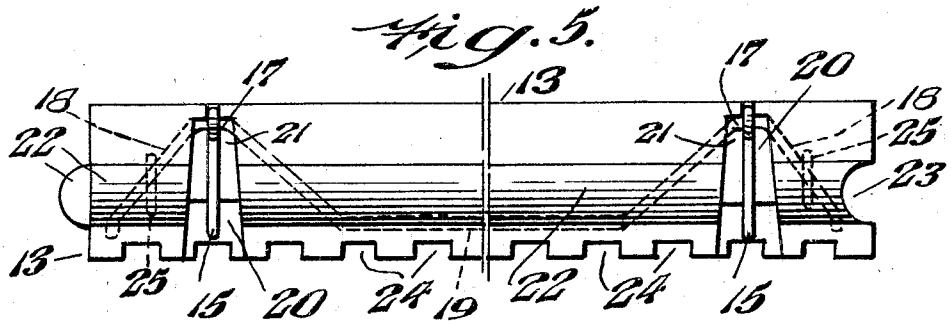


Fig. 5.



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Fig. 8.

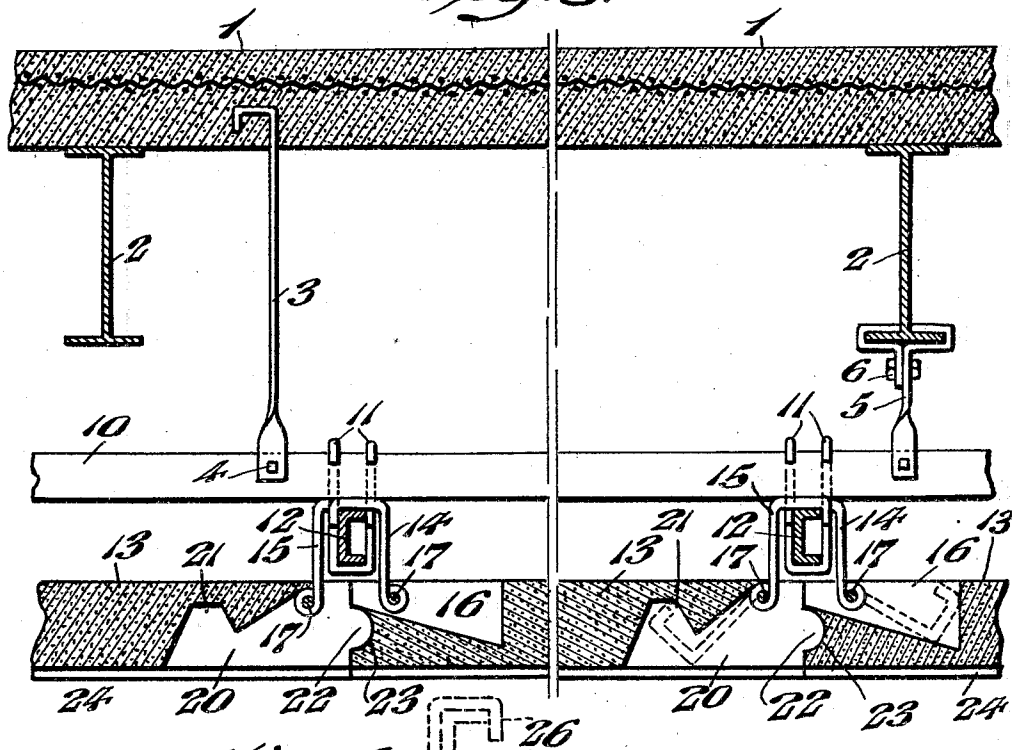
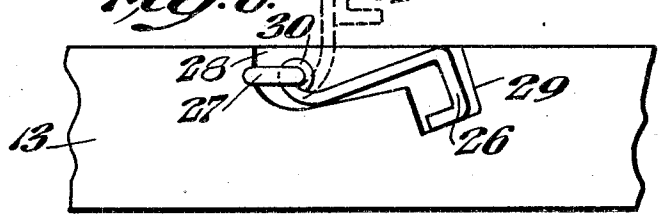


Fig. 6.



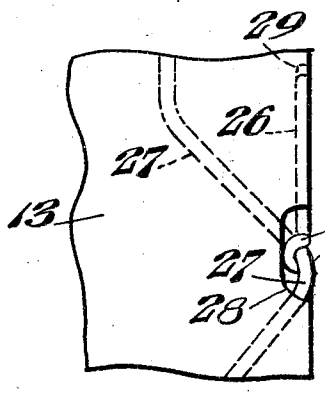


Fig. 7.

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UNITED STATES PATENT OFFICE

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CEILING CONSTRUCTION

Application filed February 27, 1930. Serial No. 431,682.

This invention, generally stated, relates to building structures and has more particular relation to a ceiling construction embodying so-called plaster blocks.

It is another object of the present invention to provide a plaster block designed for ceiling use requiring but the services of one workman or mechanic to suspend it, operating from a scaffold erected beneath channel irons forming part of the ceiling structure.

As at present practiced in the trade, it is customary to suspend plaster blocks direct from what are technically known as floor members going to make up the building structure. By this method of suspension of plaster blocks the latter are positioned prior to the laying of the floor upon the floor members, which is a very expensive procedure. For example, it frequently happens that after the plaster blocks are positioned with respect to said floor members it becomes necessary to take up and relay at least part of the floor in order to gain access to the space between the floor and the plaster blocks for certain purposes as, for example, the laying of pipes or the stringing of electrical wires, and this requires the services of at least two mechanics or workmen and also the provision of a temporary scaffold, which cannot be used for any other plasterer's purpose.

According to the present invention I propose the adoption of the method of suspending fire proofing plaster blocks not directly from the floor members but from plasterer's channels, which in turn may be supported by the floor members or by the floor itself, and this may be said to be the leading object of the present invention.

A further object of the present invention is to provide a plaster block of this character which is provided at one end with what may be termed pivotal gravity hooks and which is provided at its opposite end with what may be termed pivotal self-supporting hooks, whereby a single workman may first adjust to place the gravity hooks and thereafter position the self-supporting hooks with respect to a channel iron.

A further object of the present invention is to provide a plaster block of the character stated which is of simple construction, adding little or nothing to the cost of conventional ceiling plaster blocks which, taken in connection with the fact that installation costs are reduced, makes for a most desirable commodity in the plasterer's trade.

A further object of the present invention resides in the provision of general details of construction and in the arrangement, connection, and combination of parts for attaining the results sought by the foregoing objects.

With these and other objects in view hereinafter to 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 fragmentary view in elevation, partly sectioned, illustrating a pair of ceiling plaster blocks in suspended position from channel irons.

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

Fig. 3 is a top or plan view of one of the plaster blocks shown in Fig. 1 detached.

Fig. 4 is an end view of Fig. 3 looking at the left hand end thereof.

Fig. 5 is an end view of Fig. 3, looking at the right end thereof.

Fig. 6 is a view in elevation illustrating a plaster block provided with a pivotal hook arranged for side-wise movement with respect to a block.

Fig. 7 is a top or plan view of the parts shown in Fig. 6, and

Fig. 8 is a view partly in elevation and partly in section illustrating the manner of suspending plaster blocks from plasterer's channels as carried by floor members and the floor itself.

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 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, and referring first more particularly to Fig. 8, the reference numeral 1 designates a floor which may be concrete or other suitable material and is shown as being supported upon conventional technically known floor members 2. According to the present invention I propose erecting a ceiling of plaster blocks, below such floor, but instead of supporting said plaster blocks from the conventional floor members 2, as is commonly practiced, I propose suspending my plaster blocks from plasterer's channels in a manner to presently appear. At any desired height below the floor 1, I may therefore arrange plasterer's channels 10 which are relatively heavy for the support of other plasterer's channels 12 which are relatively light. These heavy plasterer's channels 10 may be supported directly from the concrete floor by embedding the hooked end of a strap 3 in said concrete and bolting the other end of said strap 3 to said channel 10, as at 4, see left hand side of Fig. 8. These channels 10 may also be supported from a floor member 2, if desired, by means of a strap 5, bolted at 6 with respect to said floor member and bolted at 7 to said channel 10, see right hand side of Fig. 8. Suspended from the channel 10 by means of hook-like members 11 are the relatively light plasterer's channels 12, from which I suspend the plaster blocks 13 which have a particular arrangement of pivotal hooks, about to be described. These hooks are arranged in pairs and in Figs. 1, 2, 3, 4, 5, and 8 one pair 14 being what may be termed pivotal gravity hooks and the other pair 15 being what may be termed pivotal self-supporting hooks. A description will be given first of the pivotal gravity hooks 14, best seen at the left hand end of Figs. 1 and 2. Each hook 14 is arranged within a longitudinally arranged slot 16 which is open at its top and closed at its bottom. These hooks 14 are pivotally supported so that normally or prior to use they assume the horizontal position within the slots 16, as shown by dotted lines in Fig. 1. In practice good results have been obtained by pivoting the hooks 14, which are of a heavy grade of wire, upon a special supporting member, also of heavy wire, arranged across the slots 16 at 17, whereby not only is a very cheap pivot arrangement provided, but the plaster block 13 is amply supported at each end by the parts 18 and the bottom by the part 19, it being understood that the supporting member inclines from the top of the plaster block toward the block bottom, see Fig. 4. The self-supporting hooks 15 are pivoted at that end of a plaster block 13 within cut-away or slotted parts 20, closed at their tops and open at their bottoms, best seen in Fig. 1. The slots are also longitudinally arranged and each is provided upon its under face with a recess 21 which in the normal or unworking position of the hooks 15 accommodates the same as shown by dotted lines in Fig. 1 to maintain the hooks in lowered position. The hooks 15 are pivoted within the slots 20 upon members similar to those supporting the hooks 14 and the same reference numerals designate similar parts in each case. The plaster blocks are provided with beads 22 and grooves 23 which are arranged to cooperatively engage one with another when the plaster blocks are in suspended position and the parts 18 of the supporting members add strength and rigidity to these parts.

A description will now be given of the manner of a single workman erecting a plaster block 13 in accordance with the invention. The single workman upon a scaffold erected beneath the channel irons takes the plaster block with the hooks 14 in the position shown by dotted lines in Fig. 1 and swings the block around its pivot point in the direction of the arrow to cause the hooks 14 to engage over the channel iron 12 in which position the plaster block is left to remain pending the workman disengaging the inner ends of the hooks 15 from the position shown by dotted lines in Fig. 1 and swinging outwardly the same to vertical position for engagement over the channel iron 12, as shown in full lines in said Fig. 1. In this fashion that end of a block 13 having hooks 14 can be temporarily positioned whilst a workman adjusts the hooks 15 to suspend the block, it being understood that the pivotal connection of block 13 with respect to the hooks 14—15 readily permits a single workman to first adjust one end of a block and then move over the scaffold to adjust the other end of the block with respect to the channel irons 12. The under face of the block is provided with depressions 24 to readily accept a coat of plaster. The ends of the parts 18 are connected together by means of hook-like rods 25 embedded in this block 13.

In the block 13 shown in Figs. 6 and 7 the hook 26 is shown as having pivotal relation with a wire or rod 27 extended across an opening 28 in the block, and the hook is normally retained in a cavity 29 so that before it can be moved about its pivot point it is necessary to first swing outwardly or side-wise the hook 26 and thereafter swing the latter about its pivot point for engagement over the channel iron 12, see Fig. 6 in dotted lines. The space or cavity 28 permits of movement of the hook about its pivot point. Thus, the hook 26 in the position shown in Fig. 6 is self-supporting in cavity 29 and can only be caused to engage over a channel iron 12 by first swinging the same in a side-wise direc-

tion, and thereafter swinging the same upwardly around the supporting wire 27 forming the pivotal connection with respect to the eye 30 of the hook. It will of course be understood that gravity hooks, as previously described, are used in conjunction with the hooks 26.

What I claim is:

1. A plaster block for ceilings comprising a body portion having at one end slots to accommodate spaced gravity hooks and having at its opposite end slots to accommodate spaced self-supporting hooks, said hooks being arranged to engage over channel irons for suspending said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

2. A plaster block for ceilings comprising a body portion having at one end slots to accommodate spaced pivotal gravity hooks and having at its opposite end slots to accommodate spaced pivotal self-supporting hooks, said hooks being arranged to engage over channel irons for suspending said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

3. A plaster block for ceilings comprising a body portion having at one end slots to accommodate spaced gravity hooks and having at its opposite end slots to accommodate spaced self-supporting hooks, said hooks being arranged within slotted portions of said block and being adapted to engage over channel irons for suspending said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

4. A plaster block as described in claim 2 characterized by supporting wires forming the pivotal connection for said hooks.

5. A plaster block as described in claim 3 characterized by the slots for the gravity hooks extending through the upper face of the block and the slots for the other hooks extending through the lower face of the block.

6. In a ceiling construction of the character stated, a pair of channel irons, a plaster block arranged therebelow, and spaced pivotally disposed hooks carried by said block at each end thereof and engaging over the tops of said channel irons, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

7. In a ceiling construction of the character stated, a relatively heavy channel iron, a pair of relatively light channel irons supported by said heavy channel irons, a plaster block arranged therebelow, and spaced pivotally disposed hooks carried by said block at each end thereof and engaging over the tops of said light channel irons, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

8. In a ceiling structure of the character stated, a pair of channel irons, a plaster block arranged therebelow, spaced pivotally disposed hooks carried by said block at each end thereof and engaging over the tops of said channel irons, a bead upon one side of said block, and a groove upon an opposite side of said block, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

9. In a ceiling construction of the character stated, a pair of channel irons, a plaster block arranged therebelow, spaced pivotally disposed hooks carried by said block at each end thereof and engaging over the tops of said channel irons, a bead upon one side of said block, a groove upon an opposite side of said block, and supporting rods for said block, said rods being arranged adjacent said bead and groove, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said blocks in folded position of said hooks.

10. In a ceiling construction of the character stated, a pair of channel irons, a plaster block arranged therebelow, spaced pivotally disposed hooks carried by said block at each end thereof and engaging over the tops of said channel irons, a bead upon one side of said block, a groove upon an opposite side of said block, supporting rods for said block, said rods being arranged adjacent said bead and groove, and a plurality of plaster receiving ridges upon the under face of said block, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

11. A plaster block for ceilings comprising a body portion having at one end spaced gravity hooks and having at its opposite end spaced self-supporting hooks, said hooks being arranged to engage over channel irons for suspending said block, at least one pair of hooks being arranged for side-wise as well as end-wise movement, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

12. In a ceiling construction of the character stated, floor members, a floor supported by said floor members, a relatively heavy channel iron arranged beneath said floor members at right angles thereto, a pair of relatively light channel irons arranged in parallelism with the floor members and sup-

ported by said heavy channel iron, and a plaster block suspended from said light channel irons, by means of pivotally arranged hooks, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

13. In a ceiling construction of the character stated, floor members, a floor supported by said floor members, a relatively heavy channel iron arranged beneath said floor members at right angles thereto, a pair of relatively light channel irons arranged in parallelism with the floor members and supported by said heavy channel iron, and a plaster block suspended from said light channel irons by means of pairs of pivotally arranged hooks, one pair of said pairs of hooks being gravity hooks and the other of said pairs of hooks being self-supporting hooks, said hooks being accommodated in slots in said block, said slots being so arranged as to confine said hooks within the boundary of said block in folded position of said hooks.

In testimony whereof I have hereunto signed my name.

FREDERICK M. VENZIE.