No. 645,325. Patented Mar. 13. 1900.

J. McNAMEE.

APPARATUS FOR MAKING PLASTIC OR CONCRETE WALLS.

(Application filed July 21, 1899.)

(No Model.)

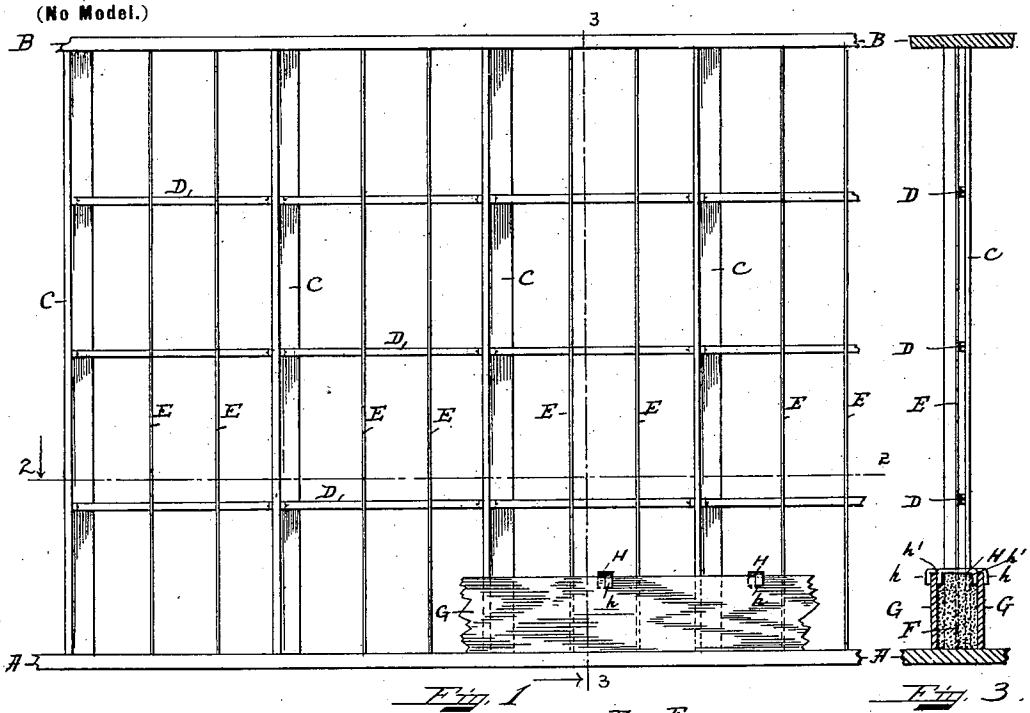


Fig. 1.

Fig. 3.

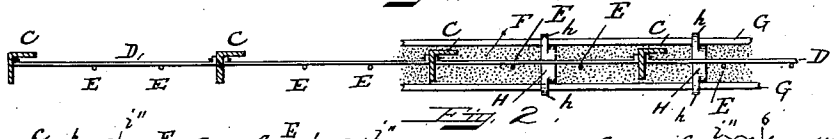


Fig. 2.

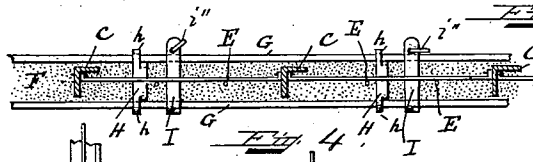


Fig. 4.

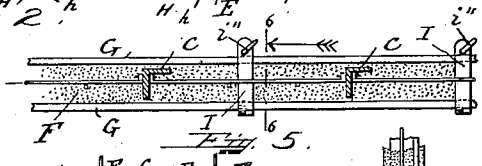


Fig. 5.

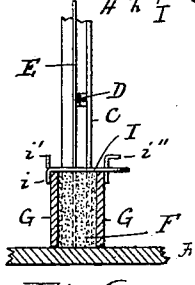


Fig. 6.

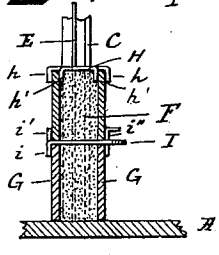


Fig. 7.

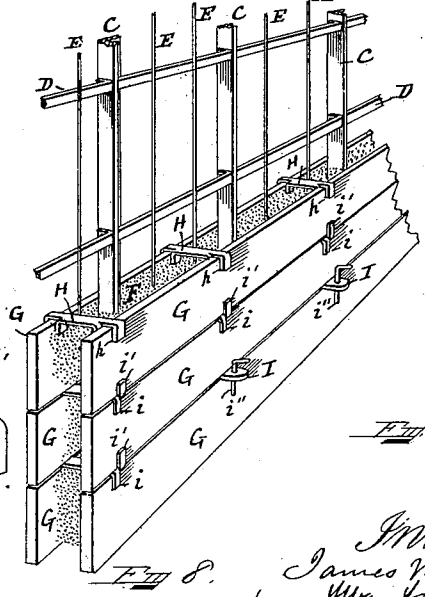


Fig. 8.

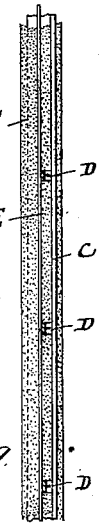


Fig. 9.

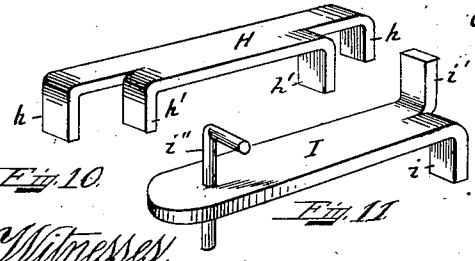


Fig. 10.

Fig. 11.

Witnesses,
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Inventor,
James McNamee
by Wm. Andrews his atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES McNAMEE, OF CAMBRIDGE, MASSACHUSETTS.

APPARATUS FOR MAKING PLASTIC OR CONCRETE WALLS.

SPECIFICATION forming part of Letters Patent No. 645,325, dated March 13, 1900.

Application filed July 21, 1899. Serial No. 724,609. (No model.)

To all whom it may concern:

Be it known that I, JAMES McNAMEE, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Apparatus for Making Plastic or Concrete Walls, of which the following is a specification.

This invention relates to improved apparatus for making concrete or plastic walls, particularly adapted for making interior or division walls in buildings; and in carrying out this my invention I use a skeleton metal frame composed of vertical metal T or angle irons secured in a suitable manner at their lower and upper ends, respectively, to the floor and ceiling of the room or to metal beams forming parts of or supports for such floor and ceiling. Such metal uprights are held at proper distances apart by means of horizontal metal straps or bands riveted or otherwise secured to the uprights, and between the latter I arrange a series of metal rods, which, in combination with the metal parts above mentioned, constitute the metal skeleton frame, within which the concrete or plastic wall is embedded by means of my improved apparatus, as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

Figure 1 represents a front elevation of the metal skeleton frame, showing a portion of the lower mold or spacer boards in position. Fig. 2 represents a horizontal section on the line 2 2, shown in Fig. 1. Fig. 3 represents a vertical section on the line 3 3, shown in Fig. 1. Fig. 4 represents a sectional view similar to Fig. 2, showing the main and auxiliary board spacing and holding hooks or clamps in position. Fig. 5 represents a view similar to Fig. 4, showing the main hooks removed preparatory to placing a secondary row of mold or spacer boards above the first row of such boards. Fig. 6 represents a vertical section on the line 6 6, shown in Fig. 5. Fig. 7 represents a cross-section similar to Fig. 6, showing a secondary row of mold or spacer boards in position above the bottom or base boards. Fig. 8 represents a perspective view showing the concrete or plastic wall in process of construction. Fig. 9 represents a vertical section of the finished wall, showing the mold or spacer boards removed. Fig. 10 represents a detail perspective view of one of the main spacing and board-holding hooks, and Fig. 11 represents a similar detail perspective view of one of the auxiliary hooks.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings, Figs. 1 and 3, A represents the floor or floor-beam, and B represents the ceiling or beam supporting the same, as is common in the interior of buildings. To such floor and ceiling is attached the metal skeleton frame, which is composed of vertical T or angle irons C C, to which are secured in a suitable manner the horizontal metal stays or braces D D. Between the vertical uprights C C, I prefer to locate one or more metal rods E E, the whole of such skeleton metal frame being adapted to be embedded in the plastic or concrete mass F, as shown.

In making the plastic or concrete wall I make use of mold or spacer boards G G, the first row of which are placed upon the floor A and secured at a proper distance apart on opposite sides of the said skeleton metal frame by means of the main spacing and holding hooks H H, each of which is provided at its outer ends with downwardly-projecting lips *h h*, adapted to fit outside the boards G G, and provided with additional downwardly-projecting lips *h' h'*, adapted to fit inside of the said boards, and by this arrangement said boards G G are held plumb and at a proper distance apart, according to the thickness to be given to the plastic or concrete wall, as shown in the drawings. After the said first row of spacer-boards have been placed in position, as above set forth, I fill the space between said boards with the plastic or concrete mass F up to about the upper edge of said spacer-boards and place on the top edges of the latter the auxiliary hooks I I, each of which is provided at one end with a downwardly-projecting lip *i*, adapted to fit outside of the one of the previously-arranged spacer-boards, and provided at the same end with an upwardly-projecting lip *i'*, adapted to serve as an external guide for the next row of boards placed upon the first or original row. The

other end of the auxiliary hook I is provided with a detachable pin *i''*, fitted in a perforation, as shown in detail in Fig. 11, and said pin serves as an external guide for the next row of boards placed upon the original row of boards, as shown in Figs. 4, 5, 6, 7, and 8. After the auxiliary hooks I have been placed in position upon the upper edges of the first rows of spacer-boards I remove the main hooks H H and place upon the first row of boards G G a second and similar row of spacer-boards and confine their upper ends in position relative to each other by means of main hooks H H, after which I fill the space between such second row of boards with plastic material or concrete F, as before, leaving the auxiliary hooks I I in position so as to hold the spacer-boards in position at a proper distance apart relative to the skeleton metal frame, which is thus caused to be embedded in the mass of the wall. By successively placing auxiliary hooks I I on top of each new row of spacer-boards and removing the main hooks H H and filling the space between each successive row of boards the plastic wall may be extended to any desired height, width, or shape, as may be desired. After the entire wall has thus been completed I allow the spacer-boards G G and auxiliary hooks I I to remain in position until the wall is set or dry, after which I remove the pins *i''* on the hooks I and withdraw the latter from the wall and remove the spacer-boards G G, leaving the plastic or concrete wall, as shown in Fig. 9, surrounding and inclosing the metal skeleton frame, thus producing a very strong, durable, and fireproof wall, which is made at a very reduced cost in labor and material as compared with other methods of making plastic or concrete walls.

The main and auxiliary spacing-hooks, as well as the spacer-boards above described, may be used from time to time in the construction of other concrete or plastic walls, and consequently add very little to the cost of making such walls.

The herein-described apparatus is applicable to making angular walls for inclosing rooms, elevator-wells, &c., equally as well as making straight or continuous walls, without departing from the essence of my invention.

What I wish to secure by Letters Patent and claim is—

1. An apparatus for making plastic or concrete walls, comprising two parallel series of superimposed boards, the boards of one series being connected to the boards of the adjacent series by removable transverse clips arranged between the meeting edges of the boards and constructed to engage the outer sides of the boards, substantially as described.

2. An apparatus for making plastic or concrete walls, comprising two parallel series of superimposed boards, the boards of one series being connected to the boards of the adjacent series by removable transverse clips arranged between the meeting edges of the boards and each consisting of a metallic strap provided at one end with two lateral lips projecting in opposite directions and at its opposite end with a transverse removable pin, substantially as described.

3. In an apparatus of the character described, a clip comprising a metallic strap provided at one end with two lips bent in opposite directions at right angles to the strap, and provided at its opposite end with a transverse removable pin, substantially as described and for the purpose specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES MCNAMEE.

Witnesses:
ALBAN ANDRÉN,
JOHN F. MCNAMEE.