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A. WEISS

METHOD AND APPARATUS FOR MAKING BUILDING BLOCKS

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Fig. 1.

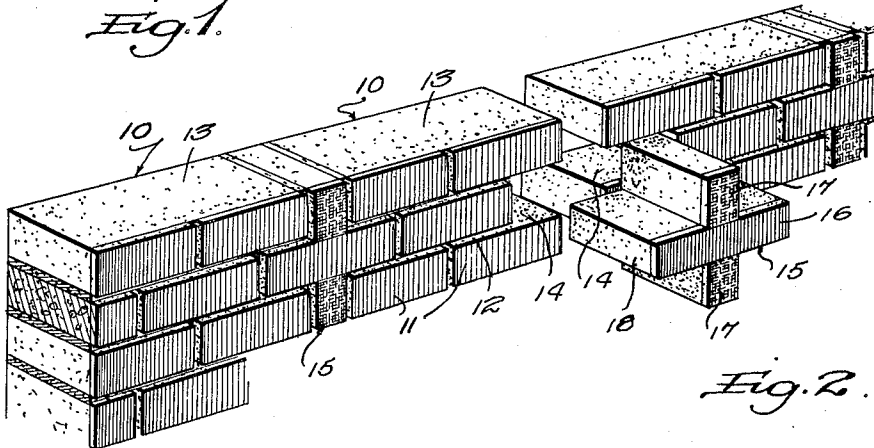


Fig. 2.

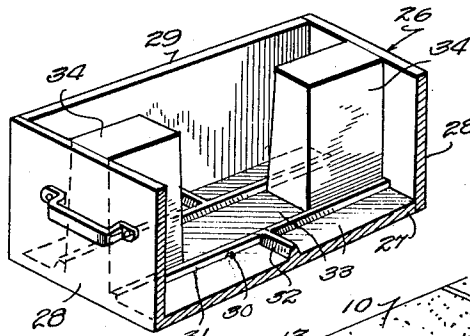


Fig. 5.

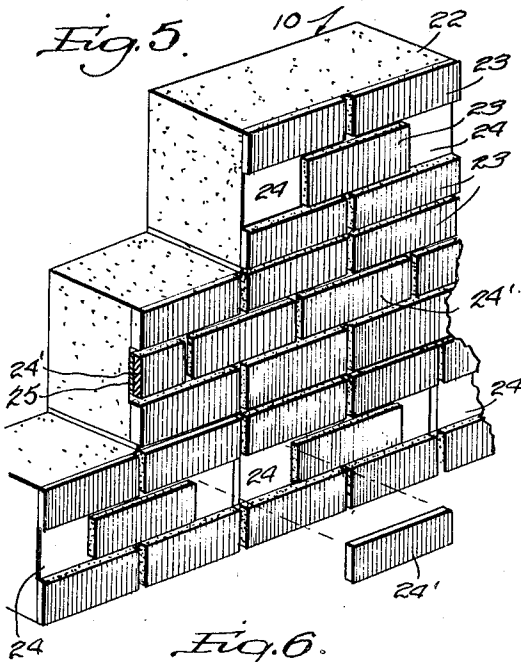


Fig. 6.

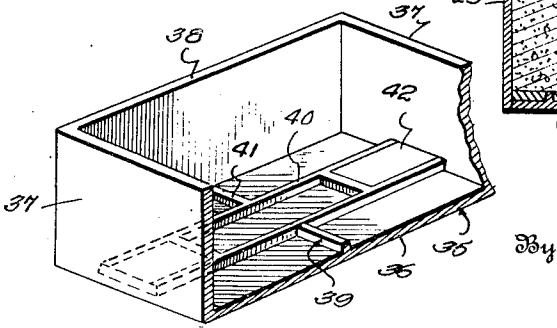
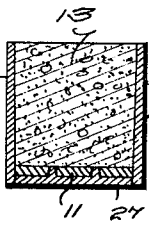


Fig. 3.



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METHOD AND APPARATUS FOR MAKING BUILDING BLOCKS.

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This invention relates to a method and apparatus for making building blocks.

An important object of the invention is to provide a method and apparatus for making building blocks which are adapted to be assembled into a complete wall structure to closely simulate a brick wall in appearance.

A further object is to provide a method and apparatus for making a building block of the character outlined wherein the portions of each block which represent the bricks may be made of any suitable color, and the spaces between the bricks may be made to present the appearance of mortar.

A further object is to provide a method and apparatus of the character mentioned wherein the individual blocks readily may be assembled in such a manner as to preserve the continuity of the simulated brick structure.

A further object is to provide a method of making a concrete or similar block having a facing simulating assembled bricks arranged in staggered relation, and to form spaces in the ends of the blocks to receive an imitation brick or brick facing element adapted to bridge across the blocks to preserve the staggered appearance of the simulated brick structure.

A further object is to provide a mold for making the blocks wherein a frame is arranged in the bottom of the mold and provided with open spaces adapted to receive colored material which is adapted to simulate bricks in the finished block, the colored material being poured relatively shallow and not extending above the upper limit of the frame whereby cement or other material may be poured into the mold to bind the brick-like colored elements together to form a monolithic block.

A further object is to provide a mold of the character mentioned wherein certain of the open spaces in the framework adjacent the ends of the mold are filled whereby blank spaces will be left in the ends of the finished block to receive separate relatively small pieces to permit the continuity of the simulated brick structure to be preserved.

Other objects and advantages of the invention will become apparent during the course of the following description.

In the practice of the present method, a substantially rectangular mold box is employed, and a rigid framework is arranged in the bottom of the mold or formed inte-

gral with the bottom, the framework being provided with substantially rectangular spaces divided by ribs, and these spaces preferably correspond in size and arrangement to ordinary bricks. As is well known, a brick wall is constructed by arranging the bricks of successive layers in staggered relation to each other, and the spaces in the block which correspond to half bricks at the end of the block are provided by filling the spaces between the ribs whereby spaces will be left in the ends of the blocks to permit separate pieces to be inserted in the open spaces in adjacent blocks whereby the continuity of the simulated brick wall may be preserved. In carrying out the method, any suitable colored cementitious material is poured into the spaces between the ribs of the framework, and the colored material is poured to a depth not exceeding the depth of the frame whereby the material in the spaces will be wholly separated. After the colored material is thus formed, ordinary cement may be poured into the mold to fill the same, and since the cement covers the colored material previously poured, it will be apparent that the cement will bond with the colored material to form a monolithic block. The block thus formed presents a surface wherein the colored material simulates bricks, and these brick-like portions of the block are separated by the spaces provided by the ribs of the framework whereby the cement will be visible therethrough to present the appearance of mortar.

In the drawings I have shown several embodiments of the invention. In this showing,

Figure 1 is a portion of a wall constructed of blocks made in one form of mold,

Figure 2 is a perspective view of one form of mold, parts being broken away,

Figure 3 is a transverse sectional view through the mold, showing the poured block in position therein,

Figure 4 is a view somewhat similar to Figure 1 showing a different method of forming a wall with the same form of block,

Figure 5 is a perspective view of another form of wall, and,

Figure 6 is a detail perspective of a mold adapted to form blocks for making the wall illustrated in Figure 5, a portion of the mold being broken away.

Referring to Figure 1, the numeral 10 designates the individual blocks which are

employed for forming the finished wall, each of these blocks is provided with facing portions 11 which are arranged to simulate bricks and are divided by spaces or recesses 12. The material which is employed for making the facing portions of the block is preferably suitably colored, as will be apparent. The body of the block is made up of preferably ordinary cement as indicated at 13, and the spaces 12 are of such depth as to extend entirely through the brick-like portions to render the cement body 13 visible whereby it will be apparent that the finished wall is adapted to simulate a brick wall. For the purpose of illustration, I have shown each block as apparently including five bricks, two at the top of the block, two at the bottom of the block, and a single brick in the center whereby spaces 14 will be provided in each end of the block. It will be apparent that the spaces 14 of one end of a block will be arranged adjacent the space 14 of the next adjacent block, and these spaces are adapted to receive separate blocks 15 as shown in Figure 1. The blocks 15 may be formed in a somewhat similar manner to include a simulated brick 16 which is similar in color to the bricks 11 previously described. Upper and lower brick-like extensions 17 may be provided, and these extensions may be differently colored if desired to present an ornamental appearance. The block 15 is also provided with a preferably plain cement backing 18. It will be apparent that each of the blocks 15 may be inserted in position, the ends of the block being arranged in adjacent spaces 14 with the upper and lower projecting portions arranged between the adjacent ends of a pair of the blocks 10. In the form of the wall just described, the spaces 14 extend entirely through the wall. Instead of employing the block 15 as illustrated in Figure 1, a single rectangular block 19 may be employed, this block having an outer brick-like facing 20 which corresponds in size to an ordinary brick. The block 19 also includes a rear cement portion 21 of natural color. When the block 19 is employed, adjacent blocks 10 may be arranged relatively close together and the block 19 inserted as suggested in Figure 4. It will be apparent that ordinary mortar may be applied to the adjacent faces of the blocks 10 and either of the blocks 15 and 19. The mortar employed is preferably arranged with its outer surface flush with the inner surfaces of the openings or recesses 12.

In Figure 5 of the drawings I have shown a somewhat modified form of block. In this form, a block 22 is employed which is substantially rectangular instead of having the openings 14 provided in the ends thereof. Brick facing members 23 are also provided on the block 22 and are arranged simi-

lar to the facings 11 previously described. In this form of the invention, however, I provide relatively shallow recesses 24 corresponding in position to the openings 14. In order to bridge across the adjacent openings 24 of two adjacent blocks, I employ a shallow facing member 24', preferably of any suitable brick color and these facing members may be secured in position by mortar 25. It will be apparent that each of the facing members 24' is similar in size to the brick facings 23 whereby the finished wall will closely simulate a brick wall.

In Figure 2 of the drawings I have shown a form of mold adapted for making the blocks 10. This mold is indicated as a whole by the numeral 26 and includes a bottom 27, ends 28 and front and back walls 29. The end, front and back walls are preferably made separately from the base to permit them to be removed therefrom. A frame 30 is arranged against the bottom 27, as shown, and this frame includes longitudinal ribs 31 and transverse ribs 32. The ribs are arranged to form staggered rectangular spaces 33 corresponding in size and arrangement to the bricks of an ordinary brick wall.

Filler blocks 34 are arranged between the outer ends of the longitudinal ribs and extend throughout the depth of the mold. The filler blocks extend inwardly along the longitudinal ribs substantially one-half the length of a brick, as will be apparent.

In Figure 6 of the drawings I have shown a modified form of mold adapted for making the blocks shown in Figure 5 of the drawings. This mold is indicated as a whole by the numeral 35 and similarly includes a bottom 36, end walls 37 and front and rear walls 38. A frame 39 somewhat similar to the frame previously described is also arranged in the bottom of the mold 35. This frame includes longitudinal ribs 40 and transverse ribs 41 arranged similar to the ribs 31 and 32. The spaces between the outer ends of the longitudinal ribs 40 are filled with blocks 42 which may be formed integral with the ribs, the upper faces of the blocks 42 preferably being flush with the upper faces of the ribs. Each block 42 also extends inwardly along the ribs 40 a distance substantially equal to one-half the length of a brick.

The operation of the apparatus is as follows:

In making blocks with the mold 26, a suitable cementitious material is mixed with any desired coloring, preferably a brick color and the material is poured into the spaces between the ribs 31 and 32. As shown in Figure 3, the colored material does not extend above the upper limits of the ribs whereby the colored facing elements will be entirely separated from each other. A body of cementitious material is then

5 poured into the mold substantially to the top thereof, and for this material I preferably employ uncolored cement. As shown in Figure 3, the cement 13 fills the mold box and bonds with the facing elements 27 to form a monolithic block 10, as previously described. When the block hardens, it is removed from the mold, and it will be apparent that the cement 13 will be visible between the brick-like facing elements to simulate mortar. The blocks 34 form the spaces 14 which extend entirely through the block to permit either of the blocks 15 or 19 to be employed in making the finished wall. The latter blocks preserve the continuity of the wall and render the ends of the individual blocks 10 invisible. When the block 18 is employed it will be apparent that the finished wall closely simulates an ordinary undecorated brick wall, while the blocks 15 may be employed for creating a decorative effect.

25 The operation of the mold 35 is substantially the same as that previously described, the colored material being poured to a depth not exceeding the depth of the ribs 40 and 41. The cement 22 is then poured into the mold to substantially fill it, whereby a monolithic block will be obtained. The blocks 42 form relatively shallow recesses in the faces of the blocks to receive the facing elements 24'. In applying the latter elements, the blocks are assembled in the position shown in Figure 5, whereupon the mortar 35 may be placed upon the inner faces of the elements 24' and the latter applied in position and centered between the adjacent brick-like facing elements of the blocks.

The elements 24 also cover the adjacent end portions of the blocks whereby the latter will be hidden from view. It will be apparent that the method described, permits the building of a wall of concrete blocks in such a manner as to very closely simulate a brick wall.

It is to be understood that the forms of the invention herewith shown and described are to be taken as preferred examples of the same and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

I claim:

1. The method of forming building blocks which consists in placing a plurality of ribs in the bottom of a mold with blocks approximately equal in depth to the depth of said ribs arranged between portions of certain of the ribs, pouring a colored facing material in the mold to a depth not exceeding the depth of the ribs and blocks, and filling the mold with a body of cementitious material whereby such material will bond with the facing elements.

2. Apparatus of the character described comprising a mold box, a plurality of integral relatively shallow transverse and longitudinal ribs arranged in the bottom of said box to provide staggered openings between said ribs, and blocks arranged between portions of certain of said ribs, said blocks being approximately equal in depth to the depth of said ribs.

In testimony whereof I affix my signature.
ALBERT WEISS.