

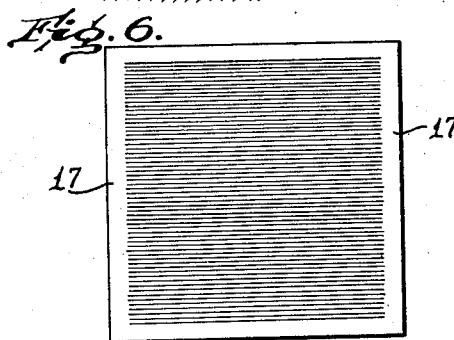
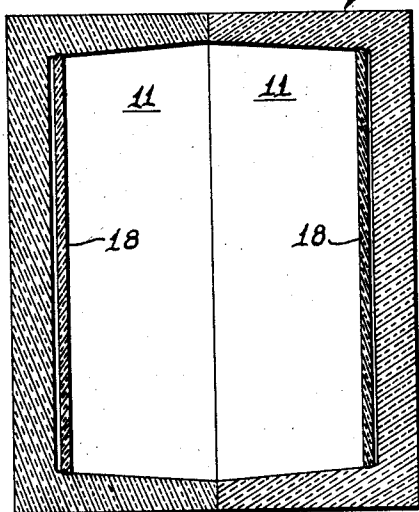
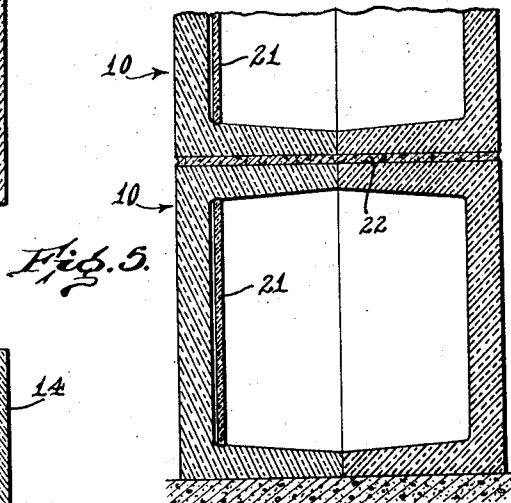
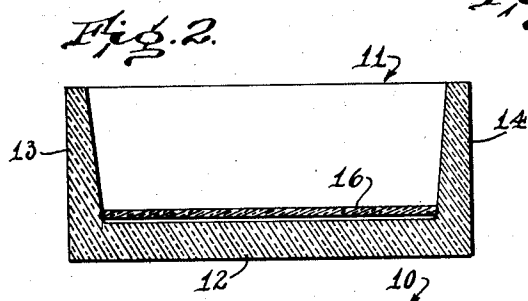
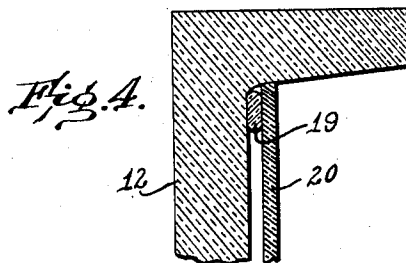
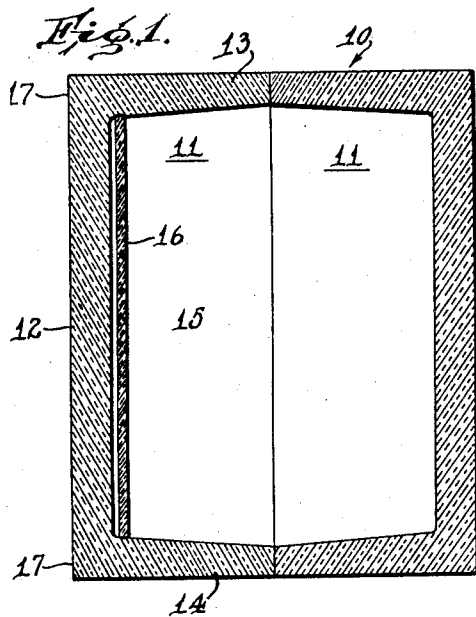
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2,107,994

HOLLOW GLASS BUILDING BLOCK

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HOLLOW GLASS BUILDING BLOCK

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7 Claims. (Cl. 72-41)

The present invention relates to improvements in hollow glass building blocks and more particularly to means for coloring or otherwise decorating the exposed surfaces.

5 An object of the present invention is the provision of means for coloring or otherwise decorating hollow glass building blocks without necessitating the embodiment of coloring material in the glass from which the blocks are originally
10 formed and in such fashion that the color will not be affected by weather and/or atmospheric conditions. To this end the invention contemplates the arrangement within a hollow block, of a translucent colored plate or sheet which
5 functions to tint or color the exposed walls of the block.

Another object of the present invention is the provision of simple means whereby any of an infinite number of colors may be imparted to the
20 exposed walls of a building block. In accomplishing this, any desired color may be obtained by arranging two or more plates or sheets of different color in substantially parallel relation within the hollow block and different shades of
25 any given color may be obtained by increasing or decreasing the number of plates of one color used in a single block.

A further object is the provision of novel means for assembling a building block and plates or
30 sheets of colored material whereby the plates will be securely held in the necessary position. To this end the invention provides for construction of the building block from two cup-like pressed glass sections, arranging one or more
35 preheated colored translucent sheets within one or both of the block sections while the latter are still hot and in a more or less semiplastic state, uniting the edge portions of the sections in a fashion to create a sealed chamber and anneal-
40 ing the completed block. In this fashion a glass-to-glass bond between the marginal surfaces of the colored plates or sheets and the cup-like sections is obtained.

A still further object is the provision of means
45 for securing the block and sheets together, involving more or less the equivalent of a "spot welding" process in that the colored plate or sheet is attached to one wall of the building block by the use of small drops of molten glass placed
50 near the corners and/or edge portions of the plate.

It is also an object of the present invention to so assemble hollow glass blocks and colored plates or sheets that they will be free to expand and
55 contract more or less independently of each other.

To this end the bond between the glass plates and blocks is restricted to a comparatively small area such that any ordinary differential in the coefficient of expansion will not detrimentally
5 affect the structure.

Other objects will be in part apparent and in part pointed out hereinafter.

In the drawing:

Fig. 1 is a vertical transverse sectional view of a hollow glass building block within which a single colored plate has been arranged. 10

Fig. 2 is a sectional view of one of the cup-like sections showing the manner in which the colored plate is placed therein during the manufacturing operation. 15

Fig. 3 is a sectional view similar to Fig. 1 showing two plates arranged therein, said plates being of the same or different colors depending upon the effects desired.

Fig. 4 is a fragmentary sectional view illustrating the so-called spot welding method. 20

Fig. 5 is a fragmentary sectional view showing blocks arranged in superposed relation as in the formation of a building wall.

Fig. 6 is a front elevational view of a block indicating the deeply colored area, which in this instance is lined to indicate blue. 25

As indicated above, my invention is particularly concerned with hollow glass building blocks, comprising at least two parts adapted to be
30 welded together and providing means whereby prior to assembly, one or more plates or sheets of colored material may be placed within and securely attached to the block.

In Fig. 1, the block 10 is shown as comprising two substantially rectangular cup-like sections 35 11, each consisting of a vertical front wall 12, a pair of horizontal upper and lower walls 13 and 14 respectively and vertical end walls 15. Each of these sections preferably is formed of clear
40 transparent glass (although the glass may be translucent) and is molded from a measured quantity or gob of molten glass in the customary or any preferred manner. Immediately after the sections are removed from their respective molds
45 and prior to assembly in the fashion shown in Fig. 1, a colored translucent sheet or plate 16 is placed within one of the sections substantially as indicated. The plate is preheated to some
50 extent and owing to the fact that the glass forming the cup-like section is quite hot and in a more or less semiplastic state, there is effected a permanent bond between the edge portions of the plate and the inner surfaces of the walls 13, 14 and 15 in proximity to the front wall 55

12. Owing to the comparative softness of the glass constituting the block section, the marginal portions of the plate may be embedded in the inner surfaces of said walls 13, 14 and 15. Preferably the plate is disposed in parallel spaced relation with respect to the front wall 12. Consequently, any differential in the coefficient of expansion of the two elements will have no detrimental effect upon the structure.

10 In Fig. 2 I have shown one of the block sections and a colored plate united preparatory to the final assembly of the two sections in completing a block. As stated above, the block section is in a more or less semiplastic condition and the plate is preheated to a comparatively high temperature.

With the arrangement above described, the front wall 12 will be tinted or colored due to the location of the colored plate in close proximity thereto, the tinting being of a considerable deeper shade within the area defined by the walls 13, 14 and 15. The marginal areas 17 (Figs. 1 and 6), although tinted, will be of a somewhat lighter shade than the remaining surface for obvious reasons.

25 In Fig. 3, I have shown the block 10 as including two cup-like sections 11 assembled with two opposed colored translucent sheets 18 or plates. These plates may be of two different colors, which together produce a third, or may be the same color and combined for the purpose of producing a comparatively deep shade of a given color. The plates may well be secured in the block sections in the manner described above with reference to Figs. 1 and 2.

30 In Fig. 4, I have shown what has been referred to heretofore as the "spot welding" process involving placing a few drops 19 of low melting glass about the inner surface of the front wall 12 and immediately thereafter, pressing the colored plate or sheet into firm contact therewith. Thus the several drops of glass and block section and plate will form a permanent union in which the front wall 12 and plate are held in spaced relation at least in part by the drops 19 of glass. It is understood that as in the preceding forms, the block section is in a more or less plastic state and the colored plate 20 or sheet is preheated to a comparatively high temperature.

35 In Fig. 5 the superposed glass blocks 10 which are provided with colored plates 21 or sheets, are united by mortar 22 including a coloring material of a character to deepen the shade of the marginal areas 17 (Fig. 6) to substantially correspond with the shade of the remaining portions.

55 In view of the above, it is understood that the basic principle involved in the present invention

contemplates the arrangement within a hollow clear glass building block, of one or more colored translucent sheets which will tint or color the exposed surfaces of blocks built into a wall structure so that the desired coloring or decorating effects may be obtained.

Modifications may be resorted to within the spirit and scope of the appended claims.

I claim:

1. A hollow building block including a pair of opposed glass walls and a colored translucent sheet interposed between and disposed in substantial parallelism with at least one of said walls.

2. A hollow building block including a pair of opposed glass walls, a colored translucent sheet interposed between and disposed in substantial parallelism with at least one of said walls and means for effecting a glass-to-glass bond between the sheet and block.

3. A hollow building block including a pair of opposed glass walls, a colored translucent sheet interposed between and in parallel spaced relation with at least one of the walls and means for securing the sheet in fixed relation to said walls.

4. A hollow building block consisting of a pair of substantially rectangular cup-like glass elements secured together and having opposed substantially parallel walls, a colored translucent sheet substantially corresponding in shape and dimensions with the inner surface of one of said walls and means permanently securing the sheet in proximity to and in parallel relation with the inner surface of said one wall.

5. A hollow glass building block including a pair of opposed walls adapted, when constituting part of a building wall, to form a part of the interior and exterior surfaces of the latter and colored translucent sheets supported within the block in substantial parallelism with said walls to tint said opposed surfaces.

6. In combination, a plurality of hollow glass building blocks arranged in superposed relation to form a wall of a building structure, colored translucent sheets arranged within the blocks to tint portions of at least one surface of the building wall, means securing the sheets in position and mortar uniting the blocks and including a coloring material for imparting the desired color to portions of the structure.

7. A hollow building block including a pair of opposed glass walls, a translucent sheet of one color supported in parallelism with and in proximity to the inner face of one wall and a translucent sheet of a different color or shade than the first sheet supported in parallelism with an in proximity to the inner face of the other wall.

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