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E. R. CORNEIL ET AL

2,742,777

BUILDING WALL OF HOLLOW BLOCKS

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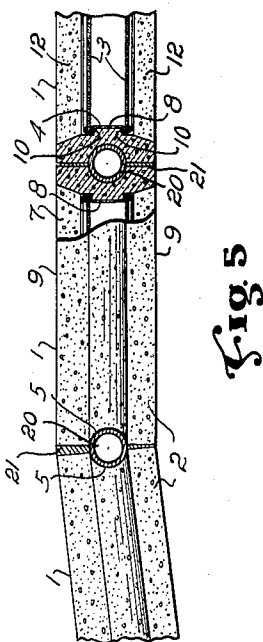


Fig. 1

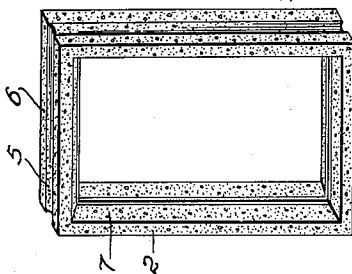


Fig. 2

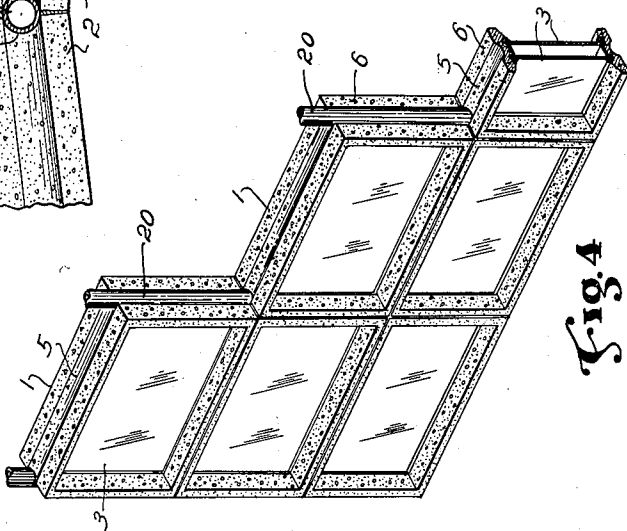


Fig. 3



Fig. 4

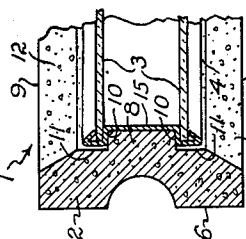


Fig. 5

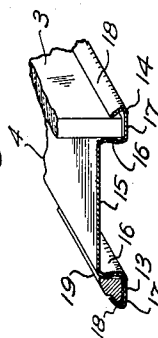


Fig. 6

INVENTORS:
Ernest R. Corneil and Carmen S. Corneil

BY
Alec. E. Kachar
Attorney.

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BUILDING WALL OF HOLLOW BLOCKS

Ernest R. Corneil and Carmen S. Corneil,
Stamford Centre, Ontario, Canada

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1 Claim. (Cl. 72-42)

This invention relates to building blocks and structures made therefrom.

Concrete blocks are now commonly used in building construction but are subject to many disadvantages. Although the weight of these blocks has been greatly reduced by the use of porous aggregates and cellular construction it is still necessary to restrict the dimensions of the blocks to permit ease of handling. In the erection of walls from such blocks the fitting of wooden or steel window frames requires more than ordinary skill. Furthermore differential expansion and contraction between the window frames and the concrete blocks requires that a special sealing device or material be inserted therebetween. In addition, other tradesmen are required to install the window sash and glass thus creating the overall construction costs. Furthermore the conventional masonry blocks are not now widely used for partitions in industrial offices since it has been found that composite steel, glass and pressed board partitions can be erected more rapidly, have good fire resistance and high salvage value.

The object of this invention is to provide a composite building block for use in wall construction which is inexpensive, simple to erect, free from joint forming difficulties, and provides a large ratio of surface area to weight.

Another object of this invention is to provide a building block having therein opaque or transparent sheets or panels of glass or like material, the sheets or panels being readily replaceable.

A further object is to provide a wall constructed of such blocks which may be readily formed and which, if necessary, may be easily and quickly dismantled and the blocks recovered.

The invention will be described with reference to the accompanying drawings, in which

Figure 1 is a perspective view of a building block in accordance with the invention with panels removed,

Figure 2 is a partial perspective section view of a panel retaining means;

Figure 3 is a partial perspective section view of a panel retaining means with part of a panel in place,

Figure 4 is a pictorial view of a wall section composed of a number of the building blocks,

Figure 5 is a cross-sectional view through a wall section, and

Figure 6 is an enlarged cross-sectional view of a portion of a building block.

In the drawings the composite block 1 consists of a rectangular frame 2, panels of glass or other material 3 and a panel clamping or retaining means 4. The frame 2 preferably has a semi-circular groove 5 extending completely around its outside edge surface 6. The inside edge surface 7 is provided with a flat rib 8 located substantially midway between the side faces 9 of the frame 2. This rib provides a shoulder 10 on each side thereof. Surfaces 11 parallel to the outside edge surface 6 extend from the shoulders 10 and join surfaces 12 which slope

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outwardly therefrom to the side faces 9. It will be observed that the masonry frame 2 is completely symmetrical.

The panel clamping or retaining means 4 which may be of sheet metal, plastic or any like resilient material comprises a pair of parallel channels 13 and 14 connected by a web 15. It will be observed that the web 15 engages the rib 8 with the channels 13 and 14 each engaging a shoulder 10. Each channel comprises a side wall 16 depending from the web 15, a bottom wall 17 at an angle less than 90° to the side wall 16 and a side wall 18 inwardly inclined towards the side wall 16. The panels or sheets 3 may be pressed into the panel retaining clamps 4 and in such operation the side walls 16 are forced against the shoulders 10 and the bottom walls 17 against the surfaces 11 thus permitting the panel to slip over the side walls 18. As shown in Figure 3 the panel 3 is gripped and retained by the side walls 16 and the edge of side walls 18. A panel 3 may be provided on either or both sides of the frame 2. If a panel is placed in only one side of the frame a hoop or filler piece 19 is placed in the vacant channel section in order to hold the clamping means taut.

It will be observed that the panels may be of glass, transparent or opaque, as required, as for example, in partitions where light is required but yet transparency not desired. On the other hand the panels may be of any other sheet material such as plastic, plywood, metal or the like. The blocks are of such size that one or more of same may be readily employed as a window of any desired or standard size. The blocks may be employed in the construction of a wall in the ordinary manner. However as shown in Figures 4 and 5 a tube 20 of suitable size to fit the grooves 5 is preferably used to position and retain the blocks thus greatly simplifying the erection of a wall. Mortar 21 may or may not be used when tubes are used. The use of such not only simplifies the wall erection thus reducing cost but provides a means of supporting a wall which may be used as a temporary readily removable partition and also permits a pivot point for curving a wall. It will also be observed that the use of glass panels in the masonry frames provides for windows at any location in the wall and that no extra window frames, sash or glass are required. The workmen required for erecting the building blocks can complete the entire wall without additional professional services. Furthermore it will be observed that since the channels are in sealing engagement with the panels 4 and the shoulders 10 by reason of the resilient nature of the clamping means, no special additional sealing means is required.

There is thus provided a composite building block which is much lighter in weight than the ordinary concrete block which may provide the necessary window area and in which the panels whether of glass or other material can be readily replaced.

What is claimed is:

A building wall comprising a plurality of building blocks of uniform size in edge to edge alignment, each said block comprising a rectangular masonry frame having integral therewith a rib extending completely around the inner edge surface and in spaced relation to the side surfaces thereof, a continuous preformed panel clamping strip of resilient material freely seated upon said rib, said strip having a web portion engaging and extending longitudinally along the outermost edge surface of the rib and a channel portion extending along each longitudinal side edge of said web portion, each said channel portion having an inner continuous side wall extending longitudinally along a side surface of the rib and seated thereagainst, a bottom wall spaced from the inner edge surface

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of the frame, and an outer continuous side wall inclined inwardly towards said inner side wall, a panel removably mounted in each said channel portion, the edge of said outer side wall of each channel portion bearing resiliently upon the side of the panel in said channel portion, at least one of said pairs of panels being of glass to constitute a window, and others of said pairs of panels being opaque.

1,584,196
2,164,815
2,166,870
2,176,213

5

682,358
485,294

References Cited in the file of this patent

UNITED STATES PATENTS

10

1,542,564 Liese ----- June 16, 1925

4

Shields ----- May 11, 1926
Hadjisky ----- July 4, 1939
Livesay ----- July 18, 1939
Duffy ----- Oct. 17, 1939

FOREIGN PATENTS

France ----- May 27, 1930
Great Britain ----- May 17, 1938