

May 21, 1940.

D. MARTIN

2,201,298

METHOD OF MAKING BUILDING BLOCKS

Original Filed Nov. 13, 1936 2 Sheets-Sheet 1

Fig. 1

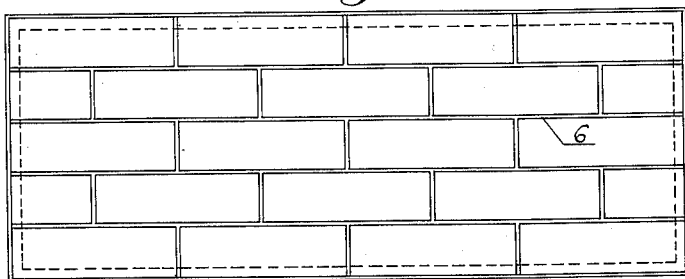


Fig. 2

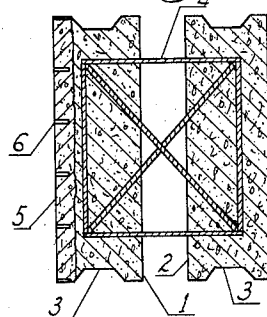


Fig. 3

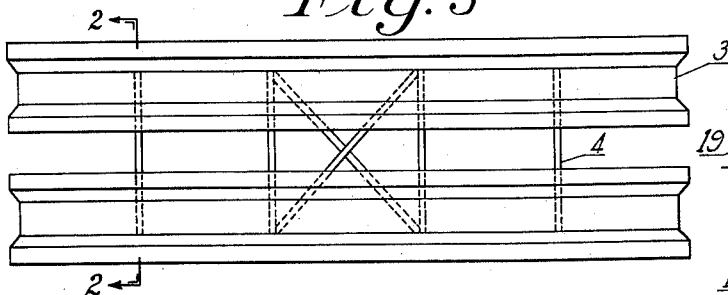


Fig. 4

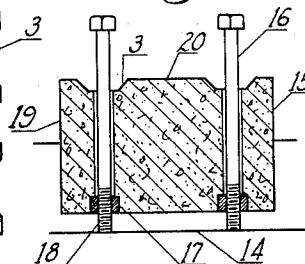
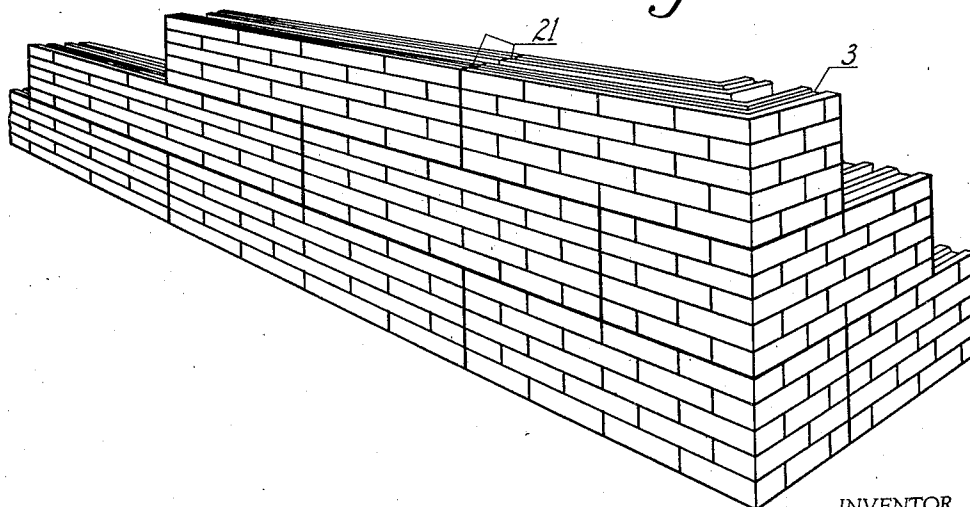


Fig. 5



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Fig. 6

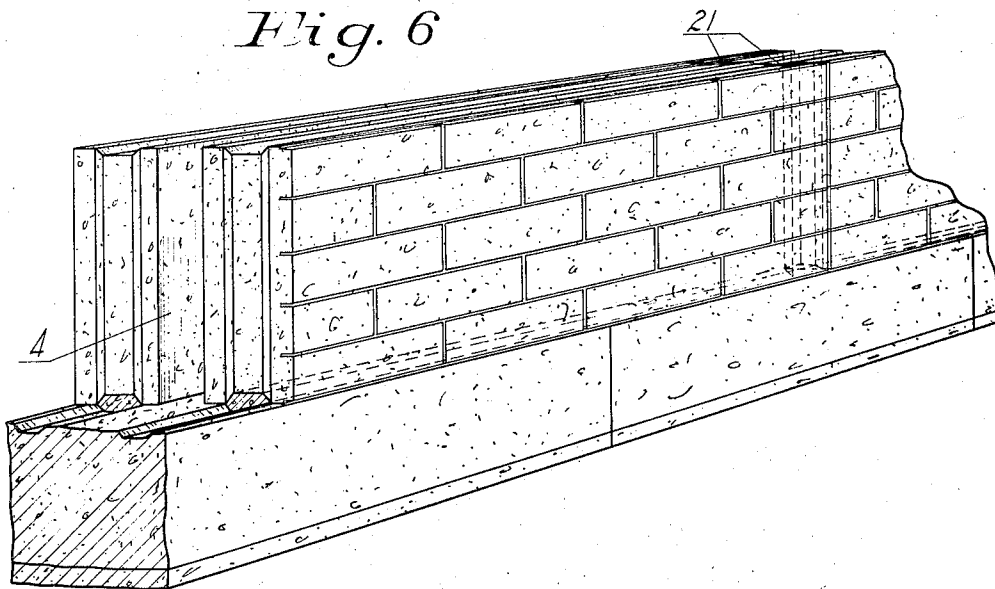


Fig. 7

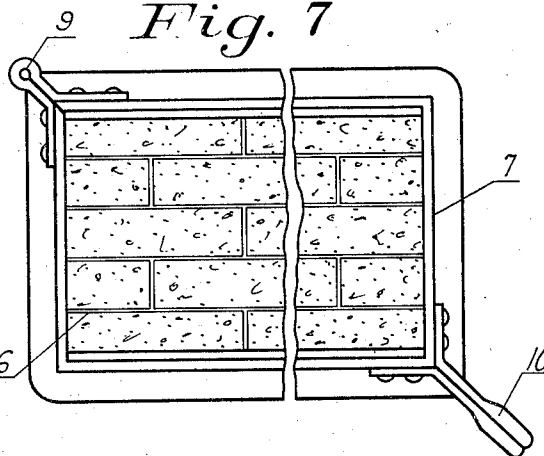
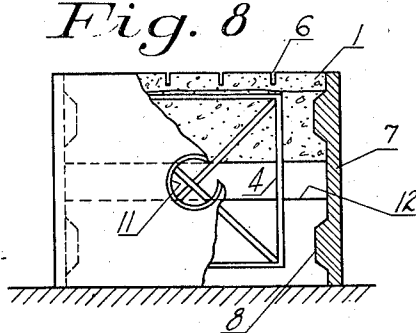


Fig. 8



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UNITED STATES PATENT OFFICE

2,201,298

METHOD OF MAKING BUILDING BLOCKS

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Original application November 13, 1936, Serial No. 110,679. Divided and this application July 19, 1938, Serial No. 219,996

1 Claim. (Cl. 25—155)

This invention relates to new and useful improvements in building blocks and wall structures in which such blocks are employed and it has for its object the making of concrete blocks having an ornamental surface simulating brick or stone which is produced by the employment of colored glass inserts to simulate mortar joints, the present application being a division of my application serially numbered 110,679, filed November 13, 1936.

A further object of the invention is the provision of a building block of accurate dimensions permitting the block to be laid dry and which shall be provided with grooves to receive wet mortar after the blocks have been placed, to form interlocks with adjacent blocks.

Another object of the invention is a method of forming such blocks with air space between by casting individual half-sections thereof, one at a time, to obtain even and square surfaces of the blocks, and still a further object of the invention is a novel means of laying the base course of blocks in a level horizontal plane to assure accurate alignment of succeeding blocks in a building wall. These and other objects of the invention will become more apparent from a consideration of the accompanying drawings constituting a part hereof in which like reference characters designate like parts and in which:

Fig. 1 is a front elevational view of a building block embodying the principles of this invention;

Fig. 2 a cross-sectional view thereof taken transversely of the block of Fig. 1;

Fig. 3 a plan view of the building block shown in Fig. 1;

Fig. 4 a form of block and method of mounting it to form a base course for the building blocks shown in Figs. 1 to 3;

Fig. 5 a view in perspective of a partial wall constructed of the block shown in Fig. 1;

Fig. 6 a view in perspective of a portion of a wall showing the manner of engaging and interlocking adjacent blocks;

Fig. 7 a plan view of a mold for making the block shown in Fig. 1; and

Fig. 8 a side view of the mold with one wall partially broken away for the purpose of illustration.

As shown in Figs. 1 to 3 inclusive of the drawings, a building block is cast of concrete or the like in two parts or slabs designated by reference characters 1 and 2, each of which is provided with a peripheral groove 3 extending entirely around the top, bottom and side edges of the blocks, the sections 1 and 2 being joined by a reenforcing ma-

terial such as metal strips 4, which secure the slabs against horizontal, vertical and lateral displacement. The outer face of the block designated by the numeral 5 may be of a relatively fine texture plain or colored concrete and is provided with insert glass strips 6 simulating staggered mortar joints as shown in Fig. 1, the insert 6 being of different colors as desired, and may be preformed as a glass grille.

The blocks are manufactured by mold equipment, as shown in Figs. 7 and 8, consisting of metal or glass walls 7, having inwardly projecting ribs 8 corresponding to the dimension of the grooves 3, the wall 7 being hinged at 9 and provided with handles 10 to permit removal of the finished blocks by merely swinging the mold frames 7 on the hinges 9 to open the mold. The blocks are cast individually, i. e., the two parallel slabs constituting the block are separately formed to obtain extreme accuracy in the dimensions and outer surfaces of the block, Fig. 8 of the drawings, showing the mold with block 1 completed and in position to form block 2 in the lower portion thereof. Fig. 7 shows the mold placed over a support on which the glass inserts 6 are placed. The facing mortar of a suitable depth is charged in the mold to cover the insert 6 and the reenforcing material 4 is then placed on the facing mortar and a coarser concrete mix is charged in the mold to a depth corresponding to the desired thickness of the block section. The charge is permitted to set in the mold, and without opening the mold frame it is inverted as shown in Fig. 8 with the finished block 1 in the upper position. One or more of the mold walls 7 is provided with an opening 11 through which the mortar is poured to cast the bottom block to a depth shown by the line 12, Fig. 8. After the second block has been permitted to set, the mold is opened by swinging the mold frames on their hinge 9 and the finished building block is removed.

By the aforementioned method of casting the block in two operations, the dimensions and surfaces of the blocks are accurately formed and maintained to assure proper alignment in the subsequent laying of the blocks which is done in the following manner. As shown in Fig. 4, a base course is laid on a concrete or other base surface 14, the blocks 15 forming this course being especially constructed to receive levelling bolts 16 which abut the foundation 14. Blocks 15 at the top and ends are provided with the same grooves 3 as the building blocks 1 and 2 and are further provided with inserts 17 that are threaded for

receiving the threaded ends 18 of the bolts 16 that extend through perforations 19 in the blocks. By adjusting bolts 16, the upper surface 20 of blocks 15 can be leveled and concrete is then poured in the space between the blocks 15 and the support 14. After the concrete has set, bolts 16 are removed and the building blocks of Fig. 1 are then layed dry, without intervening mortar, directly on the surface 20 of the base course. When the blocks have been so layed with the ornamental facing surface 5 extending outwardly, mortar is poured in the vertical openings 21, Figs. 5 and 6, constituted by the abutment of the grooved end faces of adjacent blocks, the mortar flowing downwardly through the grooved portions and horizontally beneath the blocks, there being no mortar between the juxtaposed faces of adjacent blocks.

When all of the concrete has been poured to secure the grooves 3 of the blocks on the base course to interlock said blocks with the base course and with each other, the next layer of building block is placed on the first layer, as shown in Fig. 5, Fig. 6 illustrating the first layer as mounted on the base course and Fig. 5 a plurality of layers as assembled. The corners may be formed in the same manner as the parallel blocks by providing them with peripheral grooves 3 for receiving the mortar. Wall structures of the character hereinbefore described may be economically built to produce a strong and durable wall of pleasing ornamental effects, and because of the accurate plain side surfaces of the blocks, the inner wall need not be leveled as is necessary in conventional forms of walls, that is to say, the

leveling coat of plaster on the inner wall may be omitted and the surface coat directly applied to the wall.

While I am aware that grooved blocks have been heretofore proposed for building wall structures, these prior art blocks are not intended to be laid dry on each other, and then have the wet mortar cast in the peripheral grooves of the blocks to form interlocking keys.

Although one embodiment of the invention has been herein illustrated and described, it will be apparent to those skilled in the art that various modifications may be made in the details of construction without departing from the principles herein set forth.

I claim:

The method of making building block consisting of a pair of parallel slabs spaced apart and having reenforcing material integrally formed therewith, which comprises providing a mold having the inner surface of the sidewalls thereof provided with projecting ribs, said walls being hinged to render them separable, placing the mold on a surface constituting the matrix portion for a face of the block to be formed, pouring a plastic material in said mold, placing a reenforcing material in said plastic material and allowing it to project above the plastic material, inverting the mold after said material has set and pouring the other of said pair of blocks in the bottom thereof, then separating the mold by moving the frames on their hinge, the ribs of the mold walls forming peripheral grooves in each of said pair of slabs.

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