Jan. 6, 1953 W. A. LARSON 2,624,193

WALL OF HOLLOW BUILDING BLOCKS

Filed Aug. 30, 1949 2 SHEETS—SHEET 1

Fig. 1.

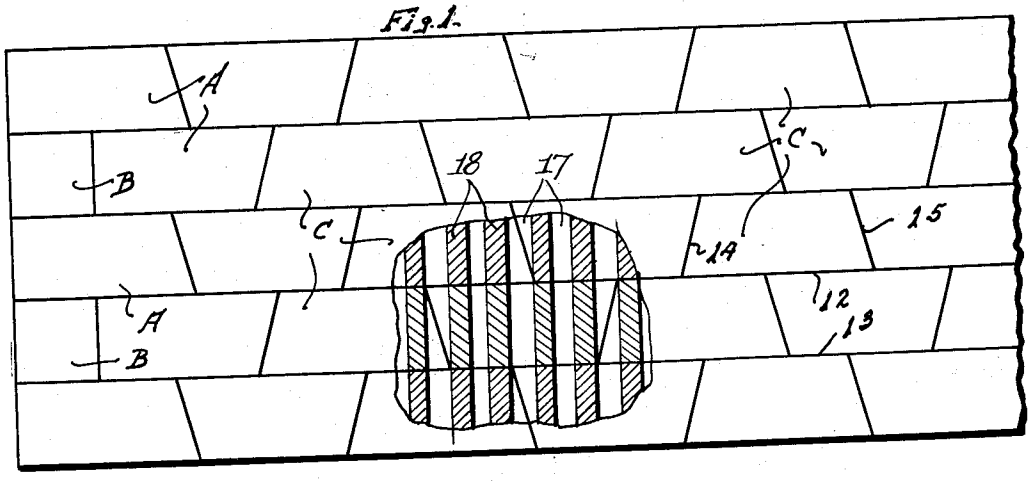


Fig. 2.

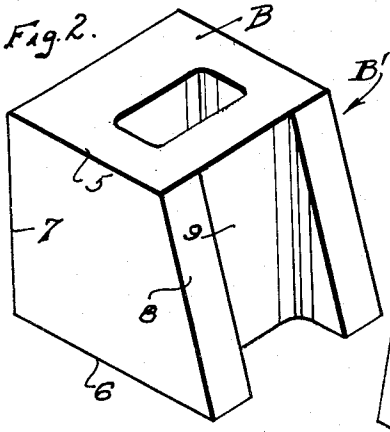


Fig. 4.

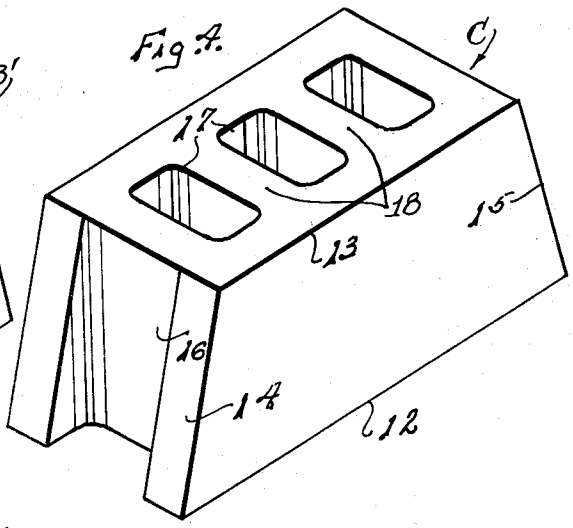
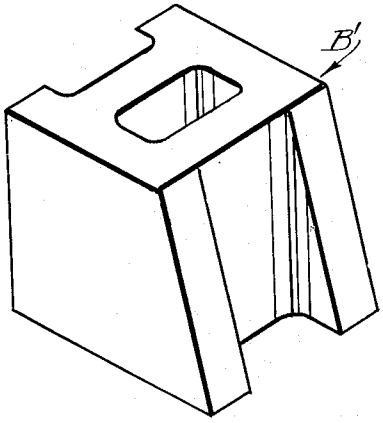


Fig. 3.



INVENTOR.
Willard A. Larson
BY Bacon & Thomas
Attorneys.

Jan. 6, 1953 W. A. LARSON 2,624,193

WALL OF HOLLOW BUILDING BLOCKS

Filed Aug. 30, 1949 2 SHEETS--SHEET 2

Fig. 5.

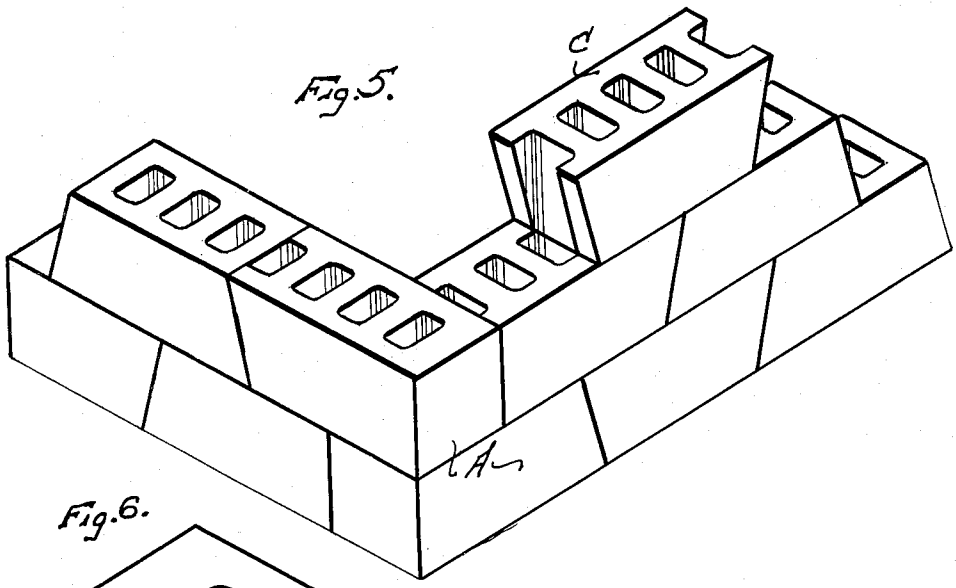
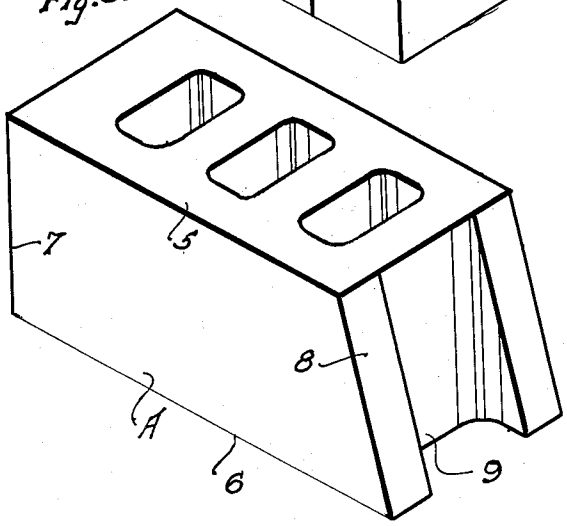


Fig. 6.



INVENTOR.
Willard A. Larson
BY Bacon & Thomas
Attorneys

Patented Jan. 6, 1953

2,624,193

UNITED STATES PATENT OFFICE

2,624,193

WALL OF HOLLOW BUILDING BLOCKS

Willard A. Larson, Preston, Idaho

Application August 30, 1949, Serial No. 113,136

2 Claims. (Cl. 72—41)

1

This invention relates to the forming and laying of building blocks, and has for its object to provide the forming of a block with one horizontal surface longer than the parallel surface of the opposite side of the block, and placing these blocks into walls so that one block, with its longer side down, is bordered on both ends by blocks with their longer sides up, thus the joints made between the ends of the blocks are sloped from the vertical in opposite directions.

In order that the ends and corners of walls may be made vertical and that the openings in walls may have vertical sides some of the blocks are formed of one sloping end and one end at right angles to the horizontal sides. Each block has cores within and one or two semi-cores at the ends of the blocks, and when laid together such ends form complete cores and these along with the complete cores within the blocks are aligned with cores of blocks in tiers above and below in the wall.

Some whole blocks and some half blocks are formed with no semi-cores at the vertical ends. These are used where the ends of the blocks form part of the wall surface.

The blocks are laid into walls in very much the same manner as ordinary blocks so that the joints between the ends of the blocks on a lower tier meet close to the center of the blocks comprising the tier above.

The primary advantages of my block over those in other constructions is that the wedge shape of the blocks when they are placed into a wall allow for horizontal distribution of strain to the left and to the right, as well as transmitting pressure downward. Thus pressure is distributed horizontally and vertically. These actions not only press or squeeze the motor tightly between the tiers of blocks, as ordinary blocks do, but the motor is held firmly under pressure while it is setting between ends of the blocks. This makes for firmer, tighter bonds between all surfaces of the blocks where they meet. Concentrated loads, such as beams, placed upon the walls constructed of my blocks are carried by a greater number of blocks than by using ordinary blocks. This is accomplished because of the wedge shape of the block structures. The load placed on one block is not only transferred to an ordinary pyramid of blocks below but the load is also distributed horizontally as well, and a greater pyramid support for the load is provided.

A further object of this invention is to provide a new method of concrete block structure and building of walls so that the weight of the wall,

2

or any weight placed on the top of the walls such as girders and the like, will be distributed horizontally and longitudinally as well as vertically. This distribution carries pressure or strain over a greater number, or into the greater number, of blocks than is possible with normal types of structure. This is made possible due to the inherent form of my concrete blocks in which the ends are not vertical or at right angles to the horizontal sides and walls.

These and many other objects I accomplish with the device illustrated in the accompanying drawings in which similar numerals and letters of reference indicate like parts throughout the several views as described in the specification forming a part of this application and pointed out in the appended claims.

In the drawings

Figure 1 is an elevation partly in section of a wall formed with my blocks.

Figure 2 is a view of an end short block.

Figure 3 is a view of a short block showing a channel, or partial core, on both ends of the block.

Figure 4 is a perspective view of a full sized block.

Figure 5 illustrates a manner of laying the blocks into a corner of a building, this view is perspective and shows how the blocks interlock and overlap.

Figure 6 is a perspective view of a full length block with one end made without a core and shows the semi or partial cored opposite end.

In the drawings in which I have shown my blocks, the blocks are shown as A, B, and C. The blocks A being those blocks which are formed with one end vertical, or at right angles to the horizontal planes on top and bottom, and with one end at a slope thereto, or at an acute angle with the longer side. The blocks B are end views of blocks forming parts of the wall surface. The blocks C are the blocks which really constitute the principle of this invention, in which the top and bottom are parallel and the two ends slope in opposite directions.

All the blocks are provided with vertical cores, or core openings for the usual purposes in concrete or composition blocks for ventilation, pipe installation and other like features.

The half block B′ as shown in Figure 3 of the drawings is used in construction where the end of the block does not form a part of the wall surface.

The block A is formed with the top and bottom surfaces 5 and 6 parallel to each other and with

one end 7 at right angles to the top and bottom surfaces, the other end of the block 8 forms an obtuse angle, as considered with the shorter horizontal surface, or forms an acute angle with the longer side and has a partial core, or opening, 9 therethru, as shown in Figure 6 of the drawings.

The block B is of a like form except that it is a short block for use in construction where the vertical end forms part of the wall surface and where a half block is needed.

The block C consists of a flat surface 12 and flat surface 13 with the ends of this block 14 and 15 sloping toward each other when viewed in relation to the shorter side as shown in Figure 4 of the drawings. This block is provided with the usual vertical cores 17 separated by webs 18 and with the end cores cut diagonally to form half cores, as shown in the drawings at 16.

When the blocks are laid into walls, the cores within the blocks and the matched partial cores at the ends of the blocks are aligned with the cores of blocks in tiers above and below in such a manner that the edges of inner webs substantially overlie the horizontal junction lines of adjacent blocks thereunder, as may best be seen in Figure 1. The planes of adjacent end faces of succeeding blocks diagonally intersect the inner webs of overlying and underlying blocks providing a cleavage plane in the webs of a length substantially greater than the thickness of the webs.

Having thus described my invention I claim:

1. A wall composed of layers of cored blocks in superposed relation, said blocks having horizontally disposed top and bottom surfaces and having end faces disposed in converging planes at acute angles from verticality, succeeding blocks in a layer being respectively reversely disposed so that the planes of adjacent end faces are parallel, said blocks being vertically cored to provide in each block a plurality of vertical passageways defined by vertical side walls and by transverse webs perpendicular thereto, said ends of said blocks being partially cored so that said vertical side walls extend triangularly beyond the outermost webs to form with the corresponding side walls and webs of adjacent blocks vertical passageways between adjacent blocks, succeeding layers of blocks being so arranged that said passageways are axially aligned and extend uninterruptedly through said wall, said succeeding layers being further so arranged that edges of inner webs substantially overlie the horizontal junction lines of adjacent blocks thereunder whereby the planes of adjacent end faces diagonally intersect the said inner webs.

2. A wall composed of layers of cored blocks in superposed relation, said blocks having horizontally disposed top and bottom surfaces and having vertical side walls in the shape of isosceles trapezoids, successive blocks in a layer being relatively reversely disposed so that long edges of said trapezoids alternate with short edges in a horizontal line, said blocks being vertically cored to provide in each block a plurality of vertical passageways defined by said vertical side walls and by transverse webs joining said side walls, angular ends on said blocks, said ends being partially cored so that said vertical side walls extend triangularly beyond the outermost webs to form with the corresponding side walls and webs of adjacent blocks vertical passageways between adjacent blocks, succeeding layers of blocks being so arranged that said passageways are axially aligned and extend uninterruptedly through said wall, said succeeding layers being further so arranged that edges of inner webs substantially overlie the horizontal junction lines of adjacent blocks thereunder whereby the planes of adjacent end faces diagonally intersect the said inner webs, to provide a cleavage plane in the webs of a length substantially greater than the thickness of said webs.

WILLARD A. LARSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,269,674	Bacigalupo	June 18, 1918
1,649,780	Robbins	Nov. 15, 1927
1,675,243	Beasley	June 26, 1928
1,751,272	Forman	Mar. 18, 1930
2,315,418	Haaker	Mar. 30, 1943
2,540,349	Reed	Feb. 6, 1951

FOREIGN PATENTS

Number	Country	Date
449,454	France	Dec. 24, 1912
449,649	Great Britain	1936