Aug. 4, 1931. J. T. SENTROP 1,816,916

BUILDING BLOCK

Filed Feb. 11, 1928

Fig. 1.

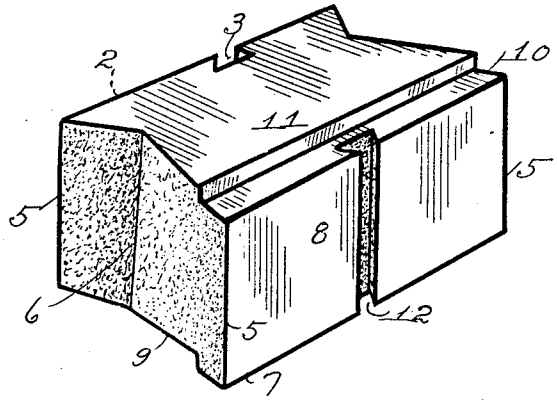



Fig. 5.

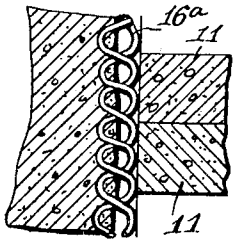



Fig. 4.

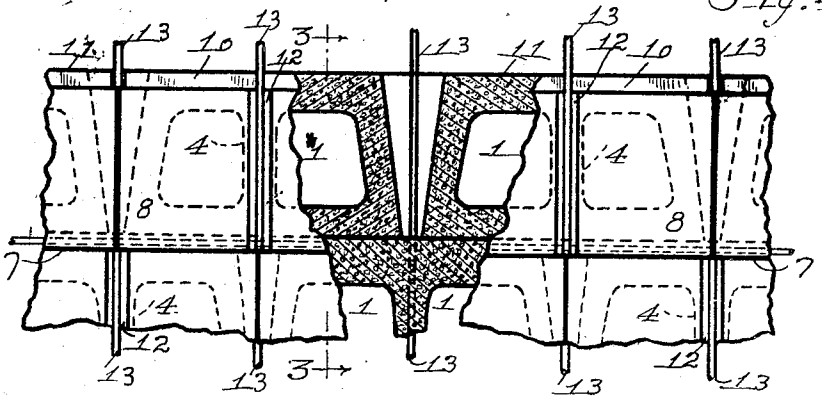
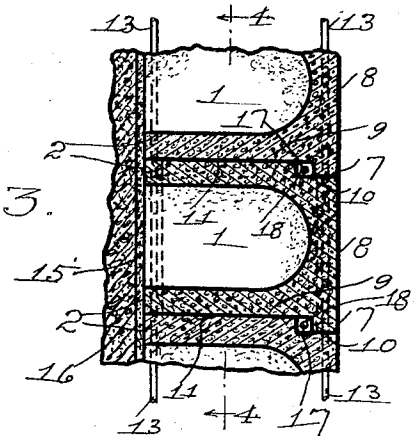



Fig. 3.



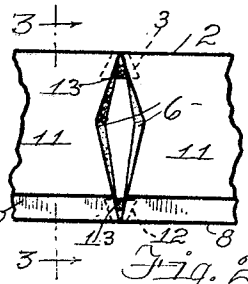




Fig. 2.

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Patented Aug. 4, 1931 1,816,916

# UNITED STATES PATENT OFFICE

JOHANNES T. SENTROP, OF GRAND RAPIDS, MICHIGAN

## BUILDING BLOCK

Application filed February 11, 1928. Serial No. 253,555.

The present invention relates to building blocks; and its object is to provide such blocks having improved means for securing them together when laid in position and having means for providing air passages between recesses therein. The present invention is an addition to, or improvement over, that shown in my Patent No. 1,661,739.

This object is attained by, and the invention finds preferable embodiment in, the building blocks hereinafter particularly described in the body of this specification and illustrated by the accompanying drawings, in which:—

Figure 1 is a view in perspective of a building block;

Figure 2 is a top plan view of the meeting ends of a horizontally adjacent pair thereof;

Figure 3 is a vertical sectional view of courses of such blocks, taken on line 3—3 of Figures 2 and 4;

Figure 4 is a front view of courses of such blocks partially sectioned on line 4—4 of Figure 3; and

Figure 5 is an enlarged detail view of a portion of Fig. 3, showing the lathing with portions thereof left unfilled with plaster to provide open spaces between the recesses of the block.

In the drawings approximately rectangular building blocks made of molded concrete or the like are shown, said blocks being hollow, i. e., having spaces or recesses 1 extending inwardly from one, 2, of their vertical sides, two of such recesses being, as illustrated, formed in each block and spaced apart by a vertical partition wall 4. The ends of these blocks are concave, having vertical corners 5, the middle portions 6 of said ends being inclined downwardly and outwardly, so that the ends of the blocks are more deeply concave at the top than at the bottom. By this construction mortar or cement may be more readily applied between the meeting ends of horizontally adjacent blocks when laid in a wall.

Each of the blocks has a longitudinal flange 7 at its other vertical side 8 which flange extends vertically from one—the lower—of its horizontal sides 9 and is seated in a correspondingly shaped longitudinal rabbet 10 formed in the other—the upper—horizontal side 11 and in the vertical side 8 of the vertically adjacent block, i. e., the block in the next lower course.

Each of the blocks has in its vertical sides 2, 8, vertical grooves 3, 12 respectively extending inwardly in the direction of the partition 4. Reinforcing rods 13 extend vertically in the concaved ends of the blocks and in their grooves 3, 12 respectively, the spaces around such rods being filled with mortar or cement to bind the blocks together.

Lathing 15 may be applied to cover the mouths of the recesses 1 and plastering 16 may be applied to the lathing.

It will be seen that a wall of great strength is provided by blocks of this character, laid and connected in the manner described.

It will also be seen that, although these blocks be made of concrete and the like, a dry and warm wall will be provided by reason of the air spaces or recesses 1 therein; and that there may be some air circulation between these recesses 1, the air passing from one recess to another through spaces $16^a$ in the lathing not completely filled by plaster; also that the courses of blocks are so laid that the ends of the blocks of one course are directly above the partitions 4 of the blocks of the adjacent course, so that such wall will not crush or break by its own weight or the load carried thereby.

A reinforcing rod 17 may be laid in mortar or cement 18 between the inner side of flange 7 and the opposite side of the rabbet 10 as seen in Figure 3.

I claim:

1. An approximately rectangular building block having concave ends, and made hollow by recesses extending inwardly from one of its vertical sides and spaced by a vertical partition, and having also a vertical groove in its opposite vertical side extending inwardly therefrom in a direction parallel with the partition, a longitudinal flange at its second-mentioned vertical side extending vertically from one of its horizontal sides, and a longitudinal rabbet in its opposite horizontal side and in its second-mentioned vertical side

adapted to receive the flange of a vertically adjacent block, the concave ends of horizontally adjacent blocks and the vertical groove of a vertically adjacent block being adapted to receive a reinforcing rod.

2. A wall composed of building blocks having a longitudinal flange extending vertically from one of the horizontal faces of the edge block and a longitudinal rabbet in the opposite longitudinal face of each block, the flanges of the blocks fitting in the rabbets and the latter being of greater width than the flanges to provide spaces in rear of the said flanges, longitudinal reinforcing rods arranged in the said spaces, and plastic material filling the said spaces around the reinforcing rods and having the latter embedded in it.

3. A wall composed of building blocks provided at one face with inwardly extending recesses closed at the inner end and open at the outer end and having top, bottom and side walls, lathing applied to the building blocks at the open ends of the recesses, and plastering supported by the lathing and covering the open ends of the recesses and spaced from the same by the said lathing, leaving empty spaces between the plastering and the blocks extending between the open ends of the recesses to provide air passages therebetween.

4. A wall structure composed of building blocks provided with recesses extending inwardly from one face of the wall structure and open at their outer ends and closed at their inner ends and having top, bottom and side walls, lathing applied to the wall structure and extending over the open ends of the recesses, and plastering supported by the outer portion of the lathing, the inner portion of the lathing spacing the plastering from the open ends of the recesses, leaving empty spaces extending between adjacent recesses and providing air passages therebetween.

5. A wall structure having recesses extending inwardly from one face of the wall structure and open at their outer ends and closed at their inner ends, said recesses being separated by partitions and having top, bottom and side walls, lathing applied to the outer ends of the said partitions and extending over the open ends of the recesses, and plastering supported by the lathing and spaced outwardly from the open ends of the recesses to avoid sealing the same and to provide air passages extending between adjacent recesses.

In testimony whereof I have hereunto set my hand at Grand Rapids, Michigan, this 4th day of February, 1928.

JOHANNES T. SENTROP.