E. R. BRAINERD.

WALL CONSTRUCTION.

APPLICATION FILED MAR. 24, 1921.

1,428,470. Patented Sept. 5, 1922.

Fig. 1.

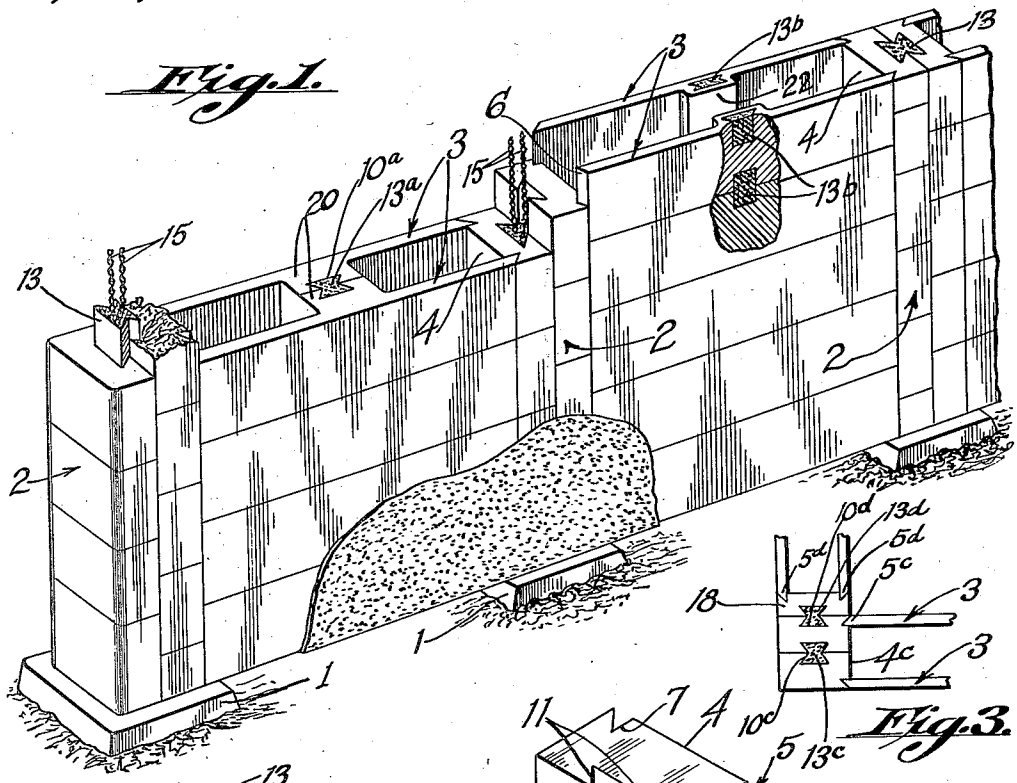

Fig. 3.

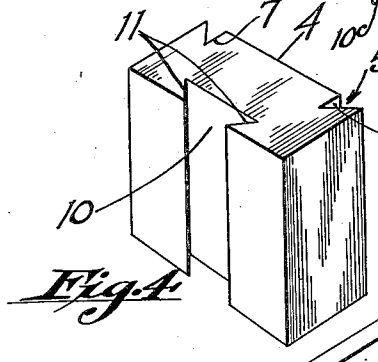

Fig. 4.

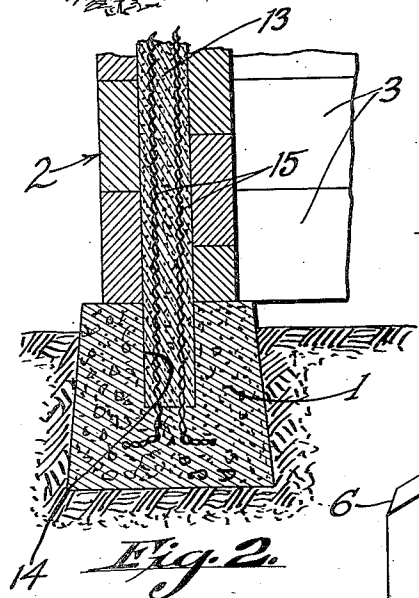

Fig. 2.

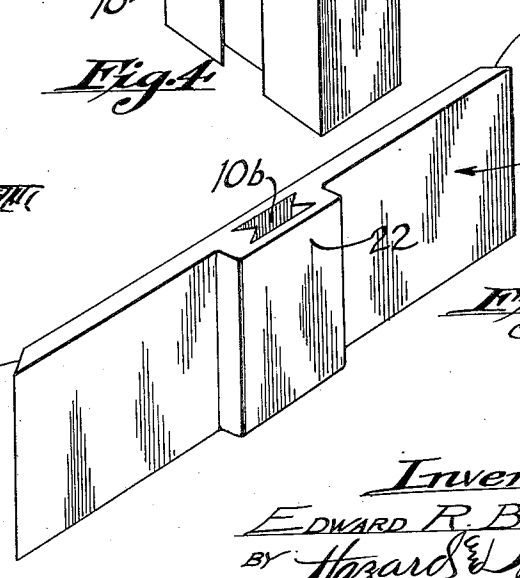

Fig. 5.

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EDWARD R. BRAINERD, OF LOS ANGELES, CALIFORNIA.

WALL CONSTRUCTION.

Application filed March 24, 1921. Serial No. 455,003.

To all whom it may concern:

Be it known that I, EDWARD R. BRAINERD, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Wall Constructions, of which the following is a specification.

It is the object of this invention to provide means for interlocking the parts of a building construction, such as the walls thereof.

The improved interlocking connection may be employed between the portions of studs supporting wall panels, or between the panels of a wall, where the latter is enlarged to provide auxiliary studding, or the improved interlocking joints may be arranged between the various superimposed members forming the panels of walls.

The invention will be readily understood from the following description of the accompanying drawings, in which—

Figure 1 is a perspective view of a wall employing the improved interlocking joints.

Fig. 2 is a vertical section through one of the studs of the wall.

Fig. 3 is a plan view showing the method of turning a corner of the wall.

Fig. 4 is a perspective view of one of the building blocks employed for wall construction and having the improved interlocking means.

Fig. 5 is a similar view of one of the members forming the panels of the wall construction and provided with the improved interlocking means whereby superimposed members are connected.

In the drawings I have illustrated a wall construction including foundation members 1 having studs 2 extending upwardly therefrom with spaced wall panels 3 between adjacent studs.

The studs comprise blocks built up upon one another and arranged in series provided with co-operating interlocking means adapted to receive a plastic binding material in order to form rigid structures of the studs. The studs may be formed of blocks, such as shown in Fig. 4, and including a surface 4 adapted to have members 3 forming the respective panels of a hollow wall structure connected thereto, as by providing grooves 5 at the edges of surface 4 receiving co-operating ends 6 of members 3 in said grooves.

The co-operating grooves and ends received in the same, preferably include surfaces 7 perpendicularly disposed with relation to surface 4, and surfaces 8 extending therefrom and angularly disposed with relation to surface 4. By this arrangement the panels of the side walls may be readily connected to the blocks forming the studs and will be rigidly held with relation to said stud blocks.

As previously stated, the stud blocks are arranged one upon another with the side walls extending from surfaces 4 of the stud blocks, and two series of the stud blocks are arranged along side of one another, in order that the side walls extend in opposite directions from the studs thus formed. The two series of stud blocks are connected by the improved interlocking means and are also secured to the foundation members 1 by means of the plastic binding material forming a part of the interlocking connection.

As an instance of this arrangement the surface of a stud block opposite surface 4 is provided with a recess 10 which is formed with undercut side edges 11 extending from said surface of the block. The recess is preferably formed as a dovetail recess, as clearly shown in Fig. 4. When the two series of stud blocks are positioned adjacent one another, the recesses 10 co-operate to form an opening extending vertically through the stud as thus formed, and said opening is adapted to receive a suitable plastic binding material as shown at 13. This plastic binder preferably extends downwardly below the stud blocks into a suitable recess 14 provided in the foundation block 1 upon which the stud is supported. Suitable reinforcing elements 15 may be embedded in the plastic binder in usual manner.

The corner stud for a wall construction may also be formed with the improved locking joint. For this purpose instead of forming the two series of studs of blocks, such as shown in Fig. 4, I employ blocks such as shown in Fig. 3. These blocks are arranged in two series alongside of one another with surfaces 4^c of the blocks provided with recesses 5^c adapted to receive wall panels 3. The meeting surfaces of the adjacent

series of blocks are arranged at right angles to the surfaces 4^c and are provided with co-operating dovetail recesses 10^c in order that a plastic material 13^c may be received in the opening formed by said recesses.

The surface of the stud thus formed, which is angularly disposed with relation to surfaces 4^c, is adapted to have a series of blocks 18 received against the same with wall panels 3 extending from said series of blocks. For this purpose the blocks 18 are provided upon their outer surface with recesses 5^d adapted to engage the wall panels, and the adjacent surfaces of the studs and the blocks 18 are provided with co-operating dovetail recesses 10^d arranged to receive a plastic binder 13^d. By this arrangement the parts forming a corner stud may be interlocked by means of the improved locking connection, and wall panels may extend angularly from the respective sides of the corner studs.

In forming walls, as thus described, it is sometimes desirable to provide additional supports in the way of studs between the spaced panels forming the hollow wall construction and intermediate of the length of said panels. For this purpose inwardly projecting block structures 20 may be provided upon panel members 3 so that the block members upon the respective spaced panels of a wall construction will abut against one another in order to form a stud extending the height of the wall between the spaced panels thereof. The adjacent surfaces of block members 20 are provided with dovetail recesses 10^a, such as previously described, and the opening formed by the co-operating recess is adapted to receive the plastic binding material 13^a, as previously described.

The superimposed panels 3 forming the respective spaced wall structures may also be provided with an interlocking connection. For this purpose the panels 3 may be provided intermediate of their ends with inwardly extending enlargements 22 having openings through the same arranged as two of the co-operating dovetail recesses, such as previously described, and as shown at 10^b. These openings preferably extend within enlargements 22 only a short distance from the upper and lower edges of the panels 3, and are thereby so arranged that when the panels are superimposed, the adjacent edges of the panels will form co-operating recesses adapted to receive the plastic material 13^b.

It will thus be seen that I have provided an extremely practical interlocking means adapted to be employed in building construction and arranged for use wherever it is desired to rigidly unite various elements of the structure. Although in the practical embodiment of the invention illustrated, such an interlocking means has been shown as arranged for several practical uses, it will be understood that the scope of usefulness and the method of using the interlocking joint is not limited to the present exemplification of the invention.

Various changes may be made without departing from the spirit of the invention as claimed.

What is claimed is:

1. A building block having one surface provided adjacent to its edges with substantially V-shaped grooves that are adapted to receive the wedge-shaped ends of wall panels, and there being a dovetail recess formed in another surface of said block adapted to receive plastic binding material in order to form an interlocking joint with an adjacent similar block.

2. A building block having formed in one of its vertical faces a dovetailed recess that extends from the top to the bottom of said block, and there being a substantially V-shaped groove formed in another one of the faces of said block adjacent to one of the corners thereof.

3. A building block provided on one of its vertical faces with a centrally arranged dovetailed recess that extends from the top to the bottom of said block, which recess is adapted to receive plastic binding material to form an interlocking joint with an adjacent wall block, and the face of the block opposite to the face that is provided with the dovetailed recess being provided adjacent to its edges with vertically disposed V-shaped grooves that are adapted to receive the wedge shaped ends of wall panels.

In testimony whereof I have signed my name to this specification.

EDWARD R. BRAINERD.