

No. 893,471.

PATENTED JULY 14, 1908.

C. W. FELLGREN.
BUILDING CONSTRUCTION.
APPLICATION FILED DEC. 2, 1907.

Fig. 1.

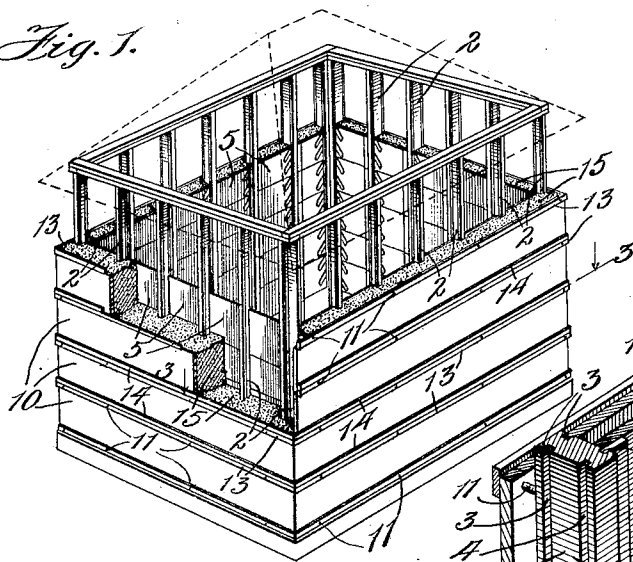


Fig. 2.

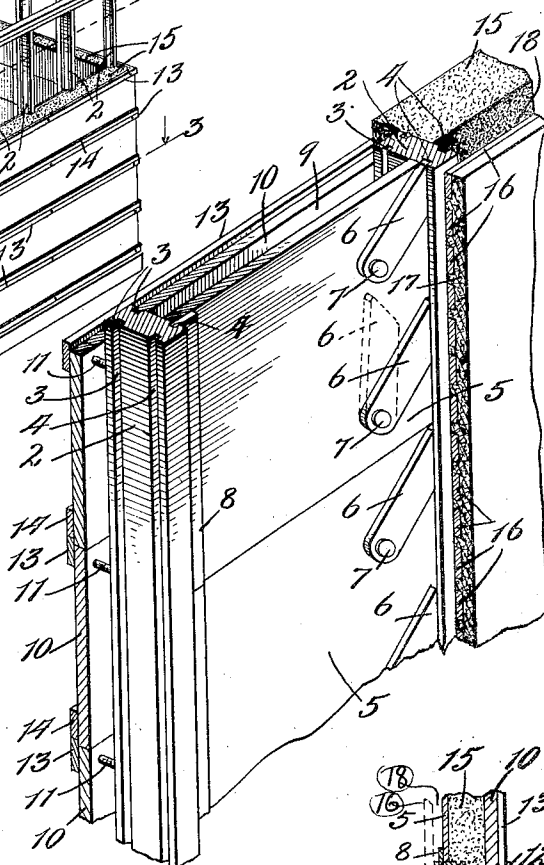
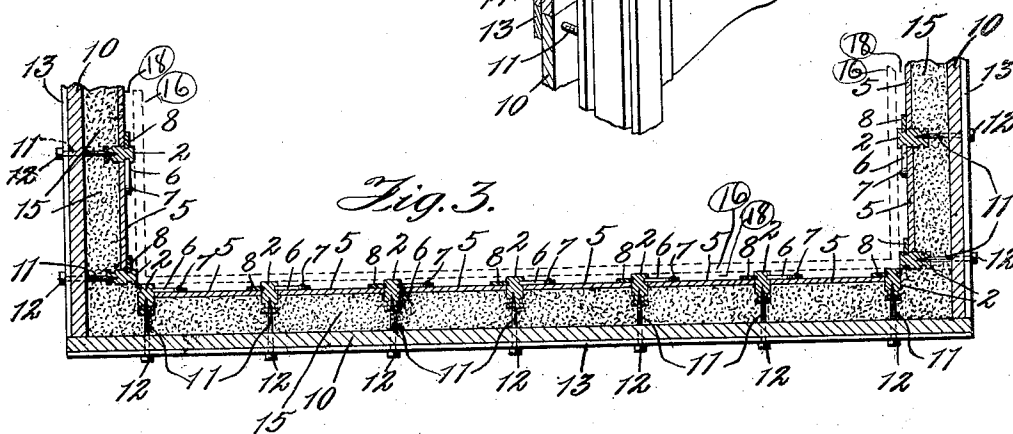


Fig. 3.



Witnesses:

Paul Perry
J. M. Nelson Jr.

Inventor:

Charles W. Fellgren
By *Warner Pedstrom*
Atty.

UNITED STATES PATENT OFFICE.

CHARLES W. FELLGREN, OF CHICAGO, ILLINOIS.

BUILDING CONSTRUCTION.

No. 893,471.

Specification of Letters Patent.

Patented July 14, 1908.

Application filed December 2, 1907. Serial No. 404,676.

To all whom it may concern:

Be it known that I, CHARLES W. FELLGREN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Building Construction, of which the following is a specification.

My invention relates to methods of constructing buildings and its object is to combine wood and concrete in such a manner as to save the advantages of both as to cheapness, strength, convenience, etc. and with this general object in view my invention consists in the novel construction, combination and arrangement of parts hereinafter described in detail, illustrated in the drawing and incorporated in the appended claims.

In the drawing—Figure 1 is a perspective view of a building in course of construction. Fig. 2 is an enlarged perspective view representing a section of finished building wall and the appliances with the aid of which the wall is molded. Fig. 3 is a section taken substantially on line 3—3 of Fig. 1 and enlarged.

In carrying out my invention I employ the ordinary frame-work of a frame building, consisting of upright studs and the like, 2, 2, which are spaced apart in the usual manner to adapt them to receive the laths. In the sides of these studs I make two pairs of grooves 3 and 4, which work may be done upon the studs at a trifling cost. The oppositely disposed grooves 3 are near the inner edge of the studs, which edge is embedded in the concrete and the grooves 3 filled with plastic material forming keys which support or bind the studs and concrete wall together. The grooves 4 near the outer, or exposed, edge of the stud I utilize to support inner moldboards 5 which span the space between two adjacent studs and are each provided near one of its edges with one or more latches 6 which swing on pivots 7.

Vertical battens or cross-pieces 8 are secured to the opposite vertical edge of each mold-board 5 and these cross-pieces project beyond the edge of each board to the depth of the groove 4 which it engages. The latches and cross-pieces or strips 8 being on the same side of the mold-board the latter is held parallel with the vertical planes of the edges of the studs. The projecting edges of the pieces 8 form tongues adapted to engage the grooves 4 facing in one direction while the beveled free edges of the latches 6 engage the

grooves 4 facing in the opposite direction, as shown clearly in Fig. 2. The mold-boards 5 thus form a series of doors for one side of the mold-space 9. The opposite side of this mold-space is closed by a series of long mold-boards 10 each of which is preferably made to extend the full length of the wall when the latter is not too long to make this practicable. In Fig. 1 two of the long boards are partly cut away to more clearly disclose the general construction. The long mold-boards 10 are shown as forming the outer wall of the mold and are spaced away from the outer edges of the studs according to the thickness of concrete wall desired. On account of the rigid support which the studs lend the concrete wall may be made considerably thinner than would otherwise be necessary.

The mold-boards 10 are supported by lag screws 11 which pass through the mold-boards and are turned into the studs by means of a wrench applied to the square heads 12. A strip 13 is secured to the upper edge of each mold-board 10 and is caused to project above the edge of the mold-board so as to form a lateral support for the lower edge of the superposed mold-board against the outward pressure of the concrete when same is filled into the mold-space. The lower edge is provided with a similar strip, 14, but the latter strip is secured to each board 10 as high above the extreme edge of the board as the upper strip 13 projects, as shown in Fig. 2. The strips 13 and 14 also keep the boards 10 in true alinement at their meeting edges and obviate the necessity of providing each board with two horizontal rows of lag screws, the row of screws passing through each board near its upper edge also supporting the lower edge of the board above with the aid of the strip 13. Of course the lowest board 10 requires a row of screws for its lower edge in the absence of other support, as shown in Fig. 1.

When the boards 5 and 10 have been placed in position to form a mold-space of convenient height this space is filled with concrete and additional boards mounted thereabove to form the next mold-space, and so on until the wall 15 is finished, or one side to the full height of the wall may be boarded up with mold-boards and the other boards inserted by degrees as the molding progresses upward.

When the concrete wall has been finished

laths 16 are nailed on the studs in the usual manner and plastered, which leaves an air-space 18 from the key-grooves 4 to the lathing.

5 In the above-described construction a concrete outer wall is substantially substituted for the outside sheathing and siding without interfering with the usual advantages of all wood construction, especially as to the interior wall finishing and also saves for the exterior of the building all of the advantages of concrete without the dangers of collapse to which all concrete walls have heretofore been subject, because the studs take care of all lateral strains absolutely.

15 I claim as new and desire to secure by Letters Patent—

1. In combination, the studs 2 having key-grooves 3 to be engaged by a concrete wall structure, the mold-boards 10, the strips 20 13 which project above the edges of said boards 10, means for supporting the mold-boards 10 upon, and spacing them apart from, said studs to form one wall of a mold-space 9, and the mold-boards 5 provided with removable tongues adapted to temporarily engage the grooves 4 and form the opposite wall of said mold-space.

2. In combination, the studs 2 having concrete-key-grooves 3 and mold-board key-grooves 4, the mold-boards 5, the strips 8 30 which project from one edge of each of said mold-boards and form tongues adapted to engage grooves 4, the latches 6 pivoted at the opposite edges of the mold-boards 5 35 and adapted to engage opposed key-grooves 4 as set forth, the long mold-boards 10, means for supporting the meeting edges of said mold boards laterally relative to each other, and the lag screws 11 which pass through said 40 mold-boards 10 and engage said studs, whereby said mold-boards may be adjustably spaced apart from and supported by said studs to form a wall for a mold-space 9.

In testimony whereof I have hereunto set 45 my hand in the presence of two subscribing witnesses.

CHARLES W. FELLGREN.

Witnesses:

CHARLES R. CLAUSON,
M. C. ALLEN.