F. R. HAHN.

BUILDING CONSTRUCTION.

APPLICATION FILED JAN. 17, 1916.

1,213,188.

Patented Jan. 23, 1917.

2 SHEETS—SHEET 1.

Fig. 2.

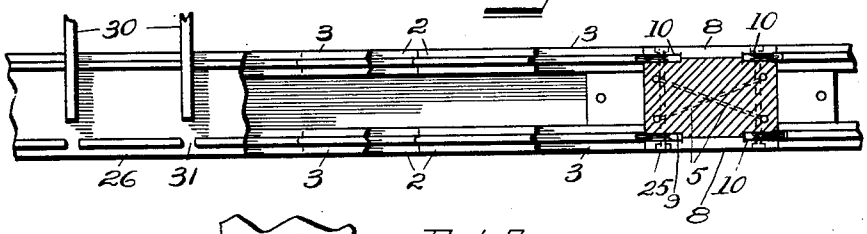


Fig. 3.

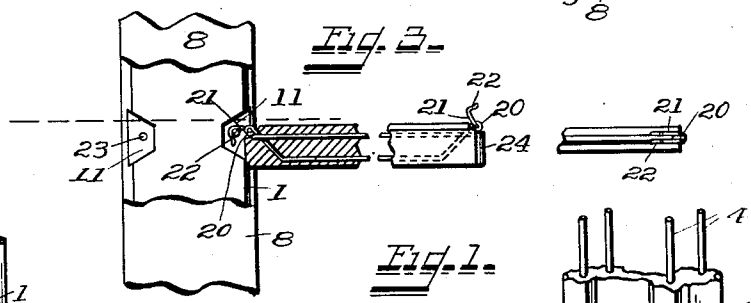
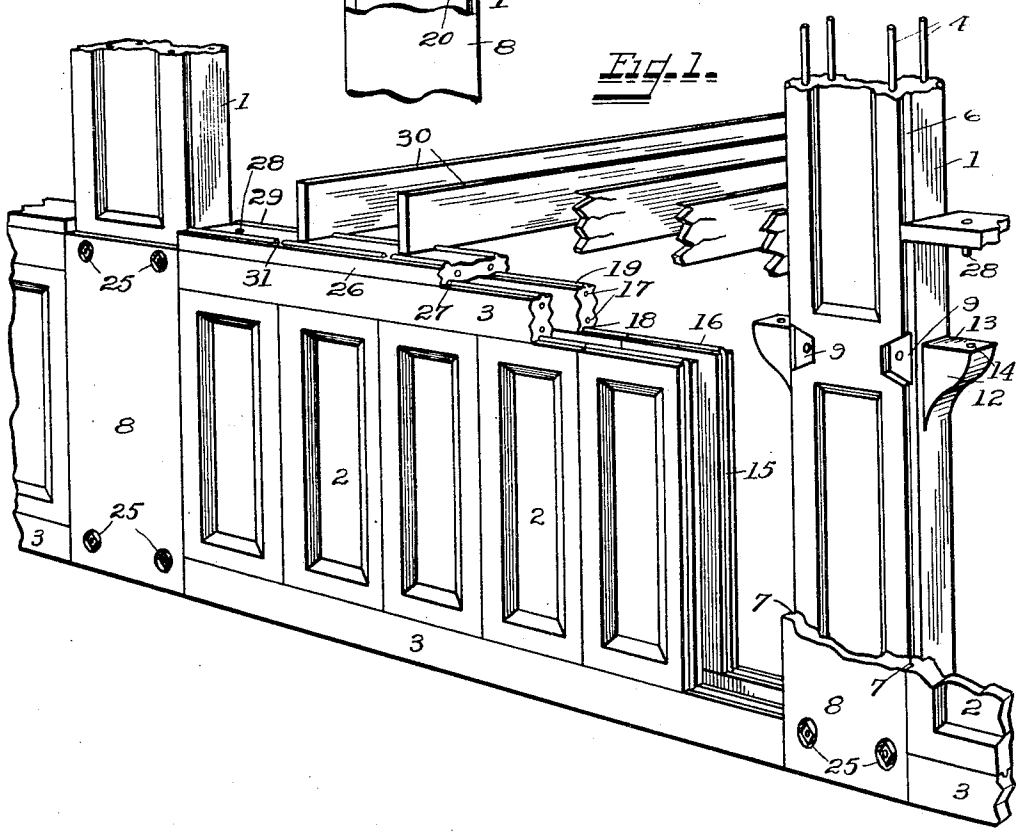


Fig. 1.



Witnesses.

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2 SHEETS—SHEET 2.

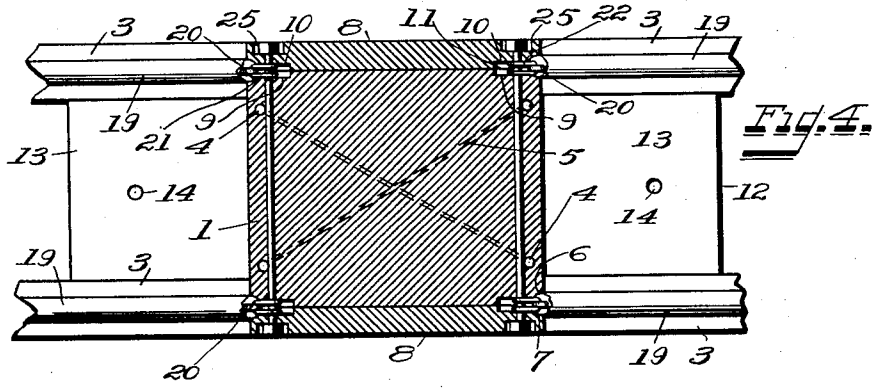


Fig. 4.

Fig. 6.

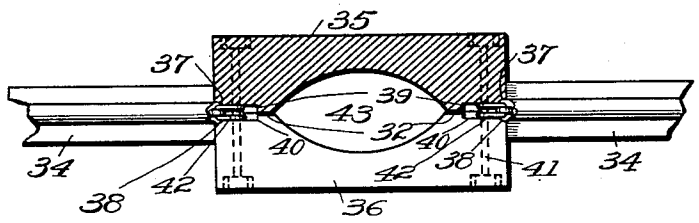
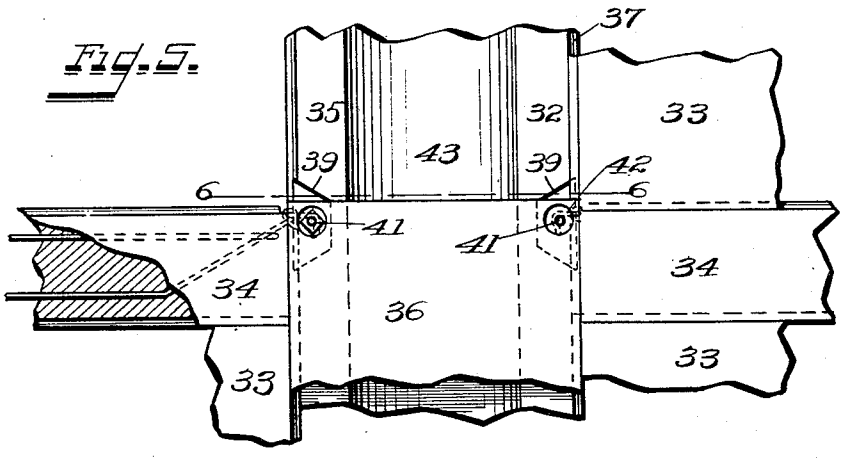


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

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BUILDING CONSTRUCTION.

1,213,188. Specification of Letters Patent. Patented Jan. 23, 1917.

Application filed January 17, 1916. Serial No. 72,453.

To all whom it may concern:

Be it known that I, FRANK R. HAHN, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Building Constructions, of which the following is a specification.

My invention relates to improvements in building construction and particularly to that type of construction utilizing cement or other plastic units which are molded or cast and then set or assembled in position to form a structure.

The principal object of my invention is the provision of suitable units forming the studs or supports and other units forming the blocks or tiles and also additional assembling units, all suitably reinforced, if desired, and so constructed that a wall, partition or other structure may be built up and held together securely without the necessity of the use of a liquid cement or other binder.

A further object is the provision of a suitable form of fastening means whereby the assembling units are connected to the studs or supports, so that the units are all held securely together to provide a complete and practically integral wall, partition or other structure.

Further objects include improvements in details of construction, arrangement and appearance whereby an attractive and useful building adjunct is provided.

To the accomplishment of the foregoing and such other objects as may hereinafter appear, my invention consists in the construction, combination and arrangement of parts hereinafter described and then sought to be defined in the appended claims, reference being had to the accompanying drawings forming part hereof and which show merely for the purpose of illustrative disclosure a preferred embodiment and also a modification of my invention, it being expressly understood, however, that various changes may be made in practice within the scope of the claims without digressing from my inventive idea.

In the drawings, Figure 1 represents a perspective view of one form of a wall or partition constructed according to my invention, parts being shown broken away to facilitate disclosure. Fig. 2 is a top plan view of part of the structure shown in Fig. 1. Fig. 3 is a detail sectional view showing the manner of connecting the assembling units to the studs or supports, an elevation of one end of the assembling unit being shown to the right. Fig. 4 is an enlarged vertical section through the stud or support to show the locking arrangement more clearly. Fig. 5 is a side elevation of a slightly different form of construction. Fig. 6 is a horizontal cross section taken on line 6—6 of Fig. 5.

A structure built according to my invention includes, broadly speaking, studs or supports, tiles, blocks or panels and also assembling units of members, the parts being adapted to interlock and having means for locking and holding them together securely.

Referring now to the drawings, the numeral 1 designates the studs or supports, 2 the blocks, tiles or panel units, and 3 the assembling units or members. In the form shown in Figs. 1, 2 and 4 the studs or supports are molded or cast in separate parts and assembled together in building the structure being so fashioned as to provide the double wall structure. In other figures of the drawing I show these studs or supports made for a single walled structure.

The body of each stud or support 1, as seen in Figs. 1, 2 and 4 of the drawing, is substantially rectangular in cross-section and provided with the longitudinal reinforcing means 4 and the diagonal reinforcing means 5. Each corner or edge of the body of the stud or support for the corner of the wall or structure, is formed with the groove or elongated recess 6 which corresponds to and coöperates with the complementary grooves or recesses 7 formed on the inside edges of the slabs or facing members 8, to provide a complete groove or recess extending the length of each stud or support. These slabs or facing members 8 are substantially rectangular in shape but are not as long as the stud or support 1, being made in sections and extending only to the floor line as indicated in Fig. 1. Each stud or support 1 is formed with a plurality of cut out portions or sockets 9 opening into the grooves 6 and said slabs or facing members 8 are similarly formed with complementary cut out portions or sockets 10 which coöperate when the parts are assembled to form the locking recess or socket 11. The studs or supports 1 may also be provided with the projecting stud or bracket member

12, at or about the floor line having the horizontal bearing face 13 on which a stringer, to be referred to later, is adapted to rest, and also having the recess or socket 14 therein, the purpose of which will be described later.

The blocks or tiles 2 may be of practically any size and shape but are shown in the form of large rectangles in the drawing having a paneled effect. Each of these units is provided with a groove 15 on two edges and a corresponding rib or projection 16 on the other two edges whereby they interlock with each other and with the studs and supports and assembling units. The end block or tile in each series should have one more of its edges provided with a rib or projection to fit the groove of the stud or support.

The assembling units 3 are in the form of elongated members or bars having suitable longitudinal reinforcing means 17 and formed with a bottom groove 18 to fit the ribs or projections 16 on the top edge of the blocks or tiles and having the ribs or projections 19 to interlock with the stringer member or unit. The longitudinal reinforcing means 17 ends adjacent the corner of the assembling unit and is formed with a terminal eye 20 through which a suitable fastening means in the form of a hook 21 may be passed having the engaging portion 22 to embrace or engage the bolt or rod 23 which connects the slabs 8 to the stud or support 1 and which bolt or rod 23 passes through said socket 11 as shown particularly in Fig. 3, it being understood that the ends of said assembling unit are formed with ribs or projections 24 and fit the grooves 6, 7 in the studs or supports 1 and the slots 8. The heads of the bolts or rods 23 are positioned or countersunk in the recesses or sockets 25 in the slabs 8. These assembling units therefore hold the blocks or tiles together and to the studs or supports thereby making the structure practically integral.

I also provide "stringer" members 26 which are in the form of flat slabs preferably reinforced as shown and having the bottom grooves 27 to fit the ribs or projections 19 on the assembling units. These stringer members are adapted to rest upon and be supported by the projecting studs or brackets 12 and have the suitable pin or stud 28 to fit the recess or socket 14 therein. These "stringer" members also have the ribs or projections 29 to interlock with the grooves in the next tier or series of blocks or tiles and are adapted to support the usual joists 30, the ribs 29 being cut away as at 31 to receive them or vice versa.

In the disclosure made in Figs. 1 to 4 of the drawing, I show a double wall construction. While this is advantageous in numerous instances and for various structures, it is within the purview of my invention to provide a single wall structure, such as illustrated in Figs. 5 and 6. In these figures, the numeral 32 designates the stud or standard, 33 the block or tile, and 34 the assembling unit or member. These units or members are all constructed as disclosed in Figs. 1 to 4 and described in connection therewith, with the exception of the stud or standard 32. This latter member comprises the body portion 35 and the slab or facing members 36, the latter preferably being made in sections. These members are provided with the corresponding grooves 37 and 38 which complement each other to form a groove to receive the ribs or tongues on the blocks or tiles 33. The body portion 35 and the slab or facing members 36 are also provided with the corresponding sockets 39 and 40 which complement each other to provide a complete socket through which the rod or bolt 41 passes, this rod or bolt providing the means for securing the slab or facing members onto the body portion. As in the other form, the locking means 42 is provided on the ends of the assembling members or units to engage the portion of rod or bolt in the socket. The body portion and slab or facing members may be so molded that when assembled an air space 43 is left therein, or this space may be filled with cement, as desired.

It is seen therefore that I have provided a building construction wherein units may be molded or cast and then secured in position when assembled, making a neat, strong and attractive structure. Numerous variations of design and size will be readily apparent from a consideration of this disclosure and with a knowledge of the fundamental principles of my invention.

What I claim is:—

1. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets.

2. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues correspond-

ing to and adapted to fit the grooves in said supporting studs or standards, and assembling units in the form of elongated bars, their ends adapted to fit in the grooves in said supporting studs or standards and having locking means adapted to engage the bolt, rod or bar in said sockets, said assembling units being grooved and ribbed to interlock with said tiles or blocks.

3. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets, said locking means being in the form of a pivoted hook.

4. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets, said supporting studs or standards having projecting brackets or supports, and stringer members supported thereon for supporting joists.

5. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets, said supporting studs or standards having projecting brackets or supports, and stringer members supported thereon for supporting joists, said stringer members being ribbed on one side and grooved on the other to interlock with said other parts.

6. A wall or partition construction including supporting studs or standards having longitudinal grooves provided therein and having sockets provided in said grooves each having a bolt, rod, or bar in each socket, a plurality of tiles or blocks having corresponding and complementary grooves and tongues whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, and assembling units having locking means adapted to engage the bolt, rod or bar in said sockets, said supporting studs or standards having projecting brackets or supports, and stringer members supported thereon for supporting joists, each of said brackets or supports having a recess therein and said stringer members having a pin or projection adapted to fit said recess.

7. A wall or partition construction including supporting studs or standards said studs or standards comprising a body portion provided with longitudinal grooves and facing or slab members having grooves corresponding to and complementing said grooves of the body portion, said studs or standards also having sockets provided therein, rods or bolts for securing said facing or slab members to the body portion of said studs or standards, said rods or bolts passing through said sockets, tiles or blocks having corresponding and complementary grooves and tongues whereby they may interlock with each other and fit the grooves in said studs or standards, and assembling units having grooves to fit the tongues on said tiles or blocks and also having locking means adapted to engage said rods or bolts in said sockets so as to hold the parts in assembled relation.

8. A wall or partition construction including supporting studs or standards, said studs or standards comprising a body portion provided with longitudinal grooves and facing or slab members having grooves corresponding to and complementing said grooves of the body portion, said studs or standards and said facing or slab members having corresponding cut out portions which complement each other when the parts are assembled to provide sockets, rods or bolts for securing said facing or slab members to the body portion of said studs or standards, said rods or bolts passing through said sockets, tiles or blocks having corresponding and complementary grooves and tongues whereby they may interlock with each other and fit the grooves in said studs or standards, and assembling units having grooves to fit the tongues on said tiles or blocks and also having locking means adapted to engage said rods or bolts in said sockets so as to hold the parts in assembled relation.

9. A wall or partition construction including supporting studs or standards having facing or slab members, complementary grooves in said studs or standards and facing or slab members, said parts also having corresponding cut-out portions which com-

plement each other when the parts are assembled to provide sockets, securing means for fastening said facing or slab members to said studs or standards, said securing means passing through said sockets, bracket members projecting from said studs or supports adjacent said sockets, a plurality of tiles or blocks having corresponding and complementary grooves and tongues on their edges whereby they may be secured in interlocking relation, said tongues corresponding to and adapted to fit the grooves in said supporting studs or standards, assembling units adapted to extend between adjacent studs or supports and having grooves and ribs thereon corresponding to the grooves and tongues on said blocks or tiles and also having ribs adapted to fit the grooves in said studs or supports, said assembling units also having hook members adapted to engage said securing means in said sockets, and stringer members for supporting joists having longitudinal grooves and ribs adapted to fit the ribs and grooves on said assembling units and said tiles or blocks, said stringer members being supported on said brackets.

In testimony whereof I sign my name.

FRANK R. HAHN.