Dec. 18, 1923. 1,477,632

M. J. DONER

WALL CONSTRUCTION

Filed Aug. 25, 1922 2 Sheets-Sheet 1

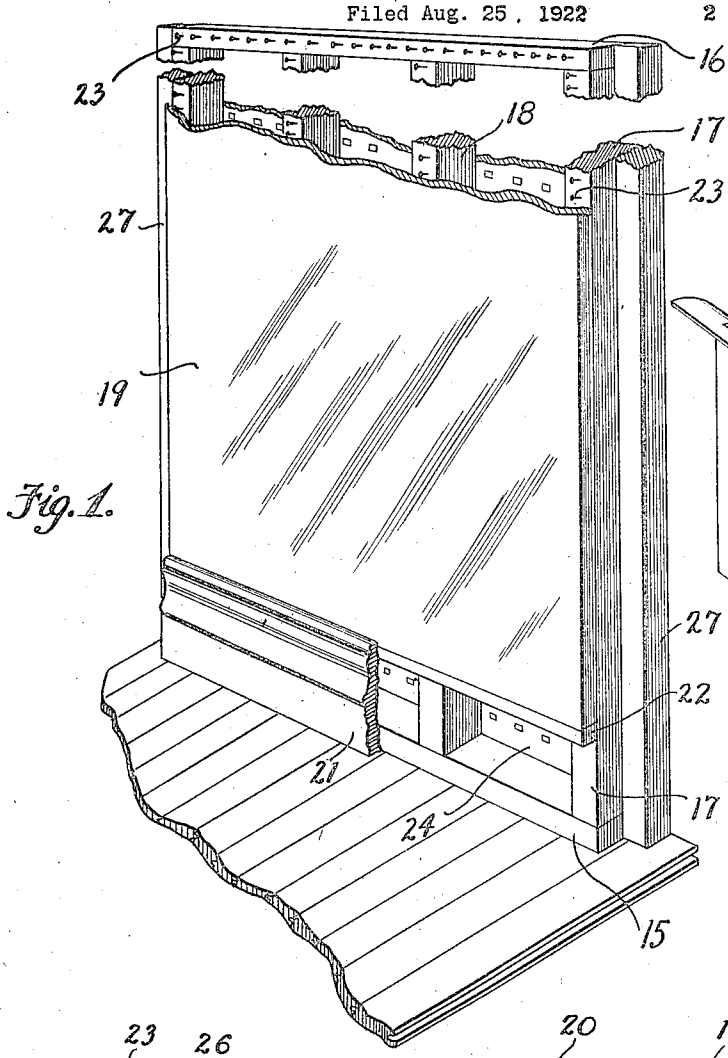


Fig. 1.

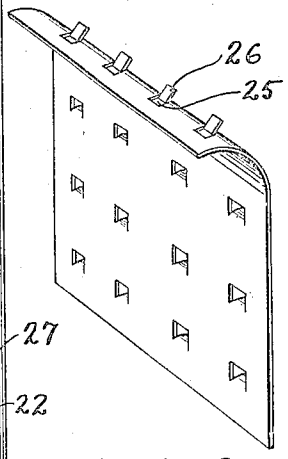


Fig. 3.

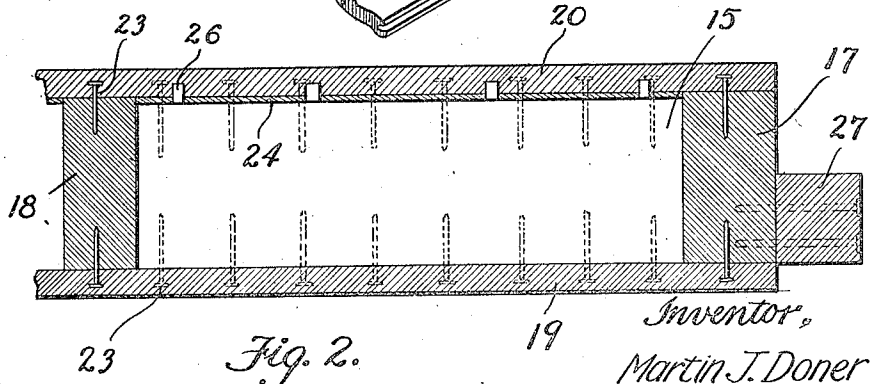


Fig. 2.

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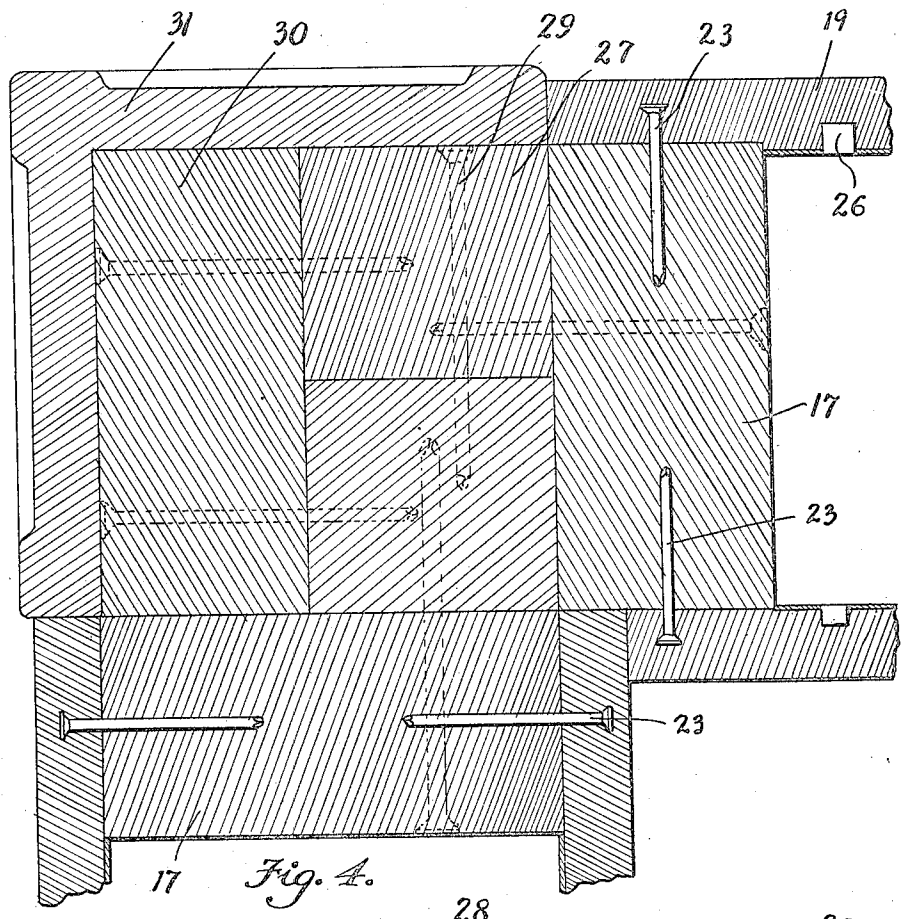


Fig. 4.

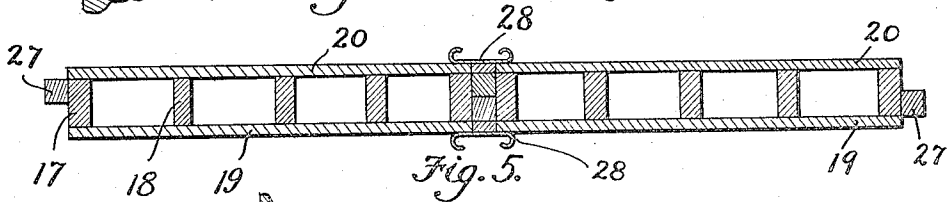


Fig. 5.

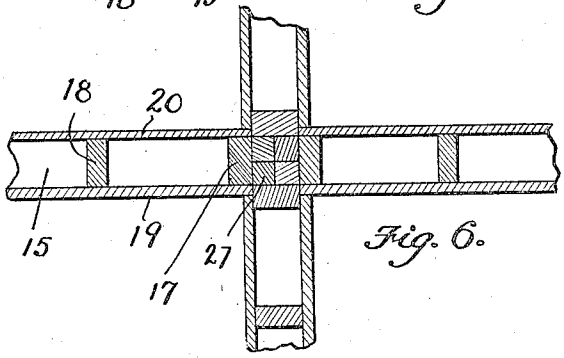


Fig. 6.

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Patented Dec. 18, 1923. 1,477,632

UNITED STATES PATENT OFFICE.

MARTIN J. DONER, OF VENICE, CALIFORNIA.

WALL CONSTRUCTION.

Application filed August 25, 1922. Serial No. 584,271.

To all whom it may concern:

Be it known that I, MARTIN J. DONER, a citizen of the United States, residing at Venice, 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.

My invention relates to building walls, and the purpose of my invention is the provision of a complete building wall composed of a plurality of units, each of which is formed independently of the other so as to render it of the ready-cut type in that it can be made and sold to the consumer for use in the formation of a strong, durable and waterproof building wall.

It is also a purpose of my invention to provide a building wall unit which includes slabs of plaster or other suitable material sustained in spaced relation to each other and upon a frame to provide an air chamber between the two, and securing means for the slabs to prevent disintegration and to securely retain the slabs upon the frame.

Although I will describe only one form of building wall embodying my invention and point out the novel features thereof in claims, it is to be understod that various changes and modifications may be made herein without departing from the spirit of the invention or the spirit and scope of the appended claims.

In the accompanying drawings,

Figure 1 is a view showing in perspective, with portions thereof broken away, one form of building wall unit embodying my invention;

Figure 2 is a transverse sectional view of the unit shown in Figure 1;

Figure 3 is a detail view showing in perspective the waterproof sheet embodied in the building wall unit shown in the preceding views;

Figure 4 is an enlarged view showing in horizontal section a corner of a building wall and one means of connecting the wall units;

Figure 5 is a horizontal sectional view of two parallel wall units and the manner of connecting same;

Figure 6 is a view similar to Figure 5 showing one manner of connecting intersecting wall units.

Similar reference characters refer to similar parts in each of the several views.

Referring specifically to the drawings, my invention in its present embodiment comprises a building wall made up of a plurality of wall units, each of which comprises a rectangular frame formed of wood or other suitable material and including a base beam 15, a top beam 16 and side beams 17, secured to each other in any suitable manner. The beams 15 and 16 are connected at regular spaced intervals by means of vertically extending beams 18 which constitute partitions for dividing the wall unit into a plurality of chambers as will be more fully described hereinafter.

Secured to the opposite sides of the unit frame are slabs 19 and 20 of plaster or other suitable material. As clearly shown in Figure 1, the inner slab 19 terminates at its lower end in spaced relation to the lower end of the frame for the purpose of accommodating a base board 21. A strip 22 of wood or other suitable material is secured to the frame and in contacting relation to the lower edge of slab 19. This strip is designed for the purpose of providing securing beams for the upper edge of base board 21, it being particularly noted that the upper edge of the base board is disposed in overlapped relation with respect to strip 22.

The slabs 19 and 20 as previously stated are preferably formed of plaster, and incorporated in this plaster are fibers such as manila fiber, hair, or the like which are adapted to co-operate with securing members 23 for securely retaining the slabs in vertical position upon the frame. The fiber also serves to prevent disintegration of the slabs, it being understood that by in corporating the fiber in the plaster during the molding operation, the fiber serves to securely bind the particles of plaster to each other. The fastening members 23 are shown as comprising nails driven into the vertical beams of the frame so that their heads project a suitable distance from the beams to permit of their being imbedded into the slabs of plaster.

As the slab 20 constitutes the outer side of the building wall unit, it is necessary that this slab be rendered waterproof, and to this end the inner side of the slab is covered with a sheet 24 of waterproof material which, as clearly shown in Figure 3, is punched at intervals to provide openings 25 and tabs 26. In the application of the sheet 24 to the slab 20 the tabs 26 are imbedded within the plaster as clearly shown in Figure 2 so that they serve to permanently retain the sheet as a unit upon the slab. It will be understood that in the formation of the wall unit, a plurality of sheets 24 are employed, one between any two vertical beams 17 and 18.

In the formation of a building wall with the building units constructed as described, connecting ribs or strips 27 are secured to the vertical beams 17. As shown in Figure 5, the strip 27 at one end of the wall unit is reversely disposed with respect to the strip at the opposite end of the unit so that in the assembling of two units in edge to edge relation as shown in Figure 5, the strips 27 will cooperate to provide a solid connection between the two units. In such an arrangement, a gap is left between the slabs 19 and 20 of one unit with respect to the slabs of the other unit, and in order to fill these gaps and provide a continuous outer and inner wall, strips of plaster are molded after the units have been assembled by placing molding strips 28 in spanning relation to the gaps so as to permit of the pouring of the plaster downwardly between the units. The plaster having been poured into position, the plates 28 are allowed to remain until the plaster has become set when they can be removed.

In the case of connecting a plurality of building wall units in right angular relation to each other as shown in Figure 6, the connecting strips cooperate as shown to completely fill the space between the units and to thereby allow the compact arrangement of the units in providing the intersection between any two building walls.

Referring now to Figure 4, I have here shown one means of connecting the two corner units of the building wall. In this instance, the connecting strips 27 are secured to each other by nails 29, and an additional beam or strip 30 is secured to the strips so as to cooperate with the latter in forming an angular support for a right angular slab of plaster 31. This slab 31 is adapted to be secured to the elements 27 and 30 in any suitable manner, and is preferably ornamental and rendered waterproof as it is disposed exteriorly of the buildings.

Although I have described and specifically shown vertical and horizontal beams or studding for the wall units, it is to be understood that diagonal beams may be employed in conjunction with the vertical beams without departing from the spirit of the invention. Furthermore, manila fiber, burlap, and metal laths can be used as reinforcing means for the slabs of plaster.

What I claim is:

1. A building wall unit comprising a frame including spaced vertically disposed beams, slabs of plastic material arranged at opposite sides of the beams and spanning the same to provide chambers between the beams, and securing means driven into the beams and imbedded in said slabs for the purpose described.

2. A building wall unit comprising a frame including vertically disposed and spaced beams, plastic slabs arranged at opposite sides of the beams, and nails driven into the beams and having their heads imbedded in said slabs.

3. A building wall unit comprising a frame, securing members carried by the frame, slabs of plastic material having fiber incorporated therein, said slabs being arranged at opposite sides of the frame and having said headed securing members imbedded therein.

4. A building wall unit comprising a frame, securing members carried by the frame, slabs of plastic material having fiber incorporated therein, said slabs being arranged at opposite sides of the frame and having said securing members imbedded therein, and sheets of waterproof material secured to the inner side of one of said slabs.

5. In a building wall unit, a frame, slabs of plastic material secured to the opposite sides of the frame, and a sheet of waterproof material arranged at the inner side of one of the slabs, said sheet being punched at intervals to provide tabs which are adapted to be imbedded in said slab.

6. A building wall unit comprising a frame including vertical beams arranged in spaced relation to each other, slabs of plastic material secured to the opposite sides of the beams, one of said slabs terminating short of the lower end of the frame, a strip secured to the frame and contacting with the lower edge of the last mentioned slab, and a sheet of waterproof material secured to the inner side of the other slab.

7. A building wall unit comprising a frame including vertical beams arranged in spaced relation to each other, slabs of plastic material secured to the opposite sides of the beams, one of said slabs terminating short of the lower end of the frame, and a strip secured to the frame and contacting with the lower edge of the last mentioned slab.

8. A building wall unit comprising a frame including vertical beams arranged in spaced relation to each other, slabs of plastic material secured to the opposite sides

of the beams, one of said slabs terminating short of the lower end of the frame, and a strip secured to the frame and contacting with the lower edge of the last mentioned slab.

9. A building wall comprising a plurality of units arranged edge to edge, each unit including a frame formed of vertically and horizontally disposed beams, slabs of plastic material secured to the opposite sides of the frame, connecting ribs secured to the outermost vertical beams and with the ribs of any one unit reversely disposed with respect to the ribs of an adjacent unit, and strips of plastic material supported on the ribs for spanning the space between the slabs of any two adjacent units.

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

MARTIN J. DONER.