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E. MARTIN.  
METHOD OF MAKING COMPOSITE WALLS.  
APPLICATION FILED NOV. 19, 1906.

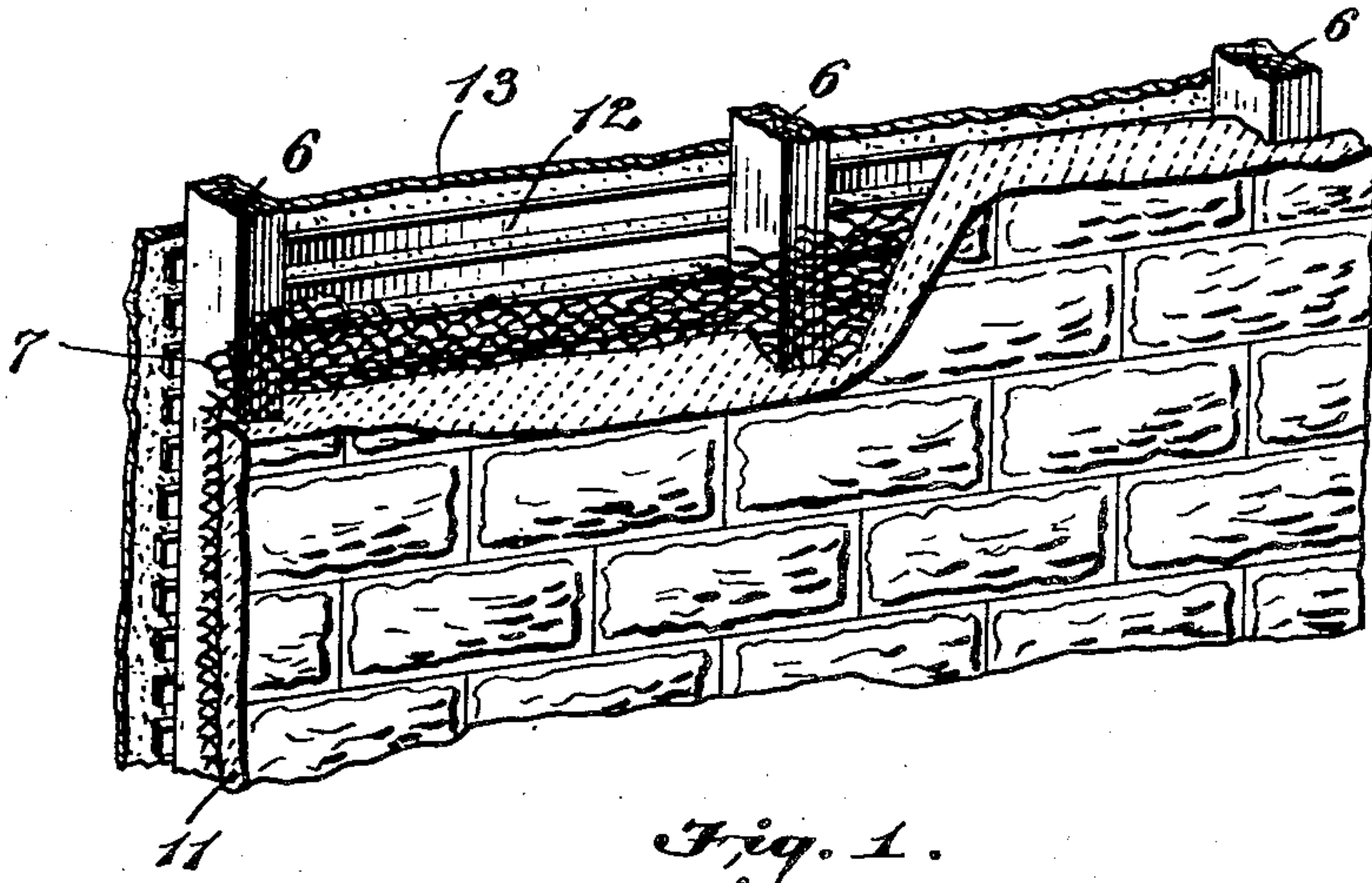


Fig. 1.

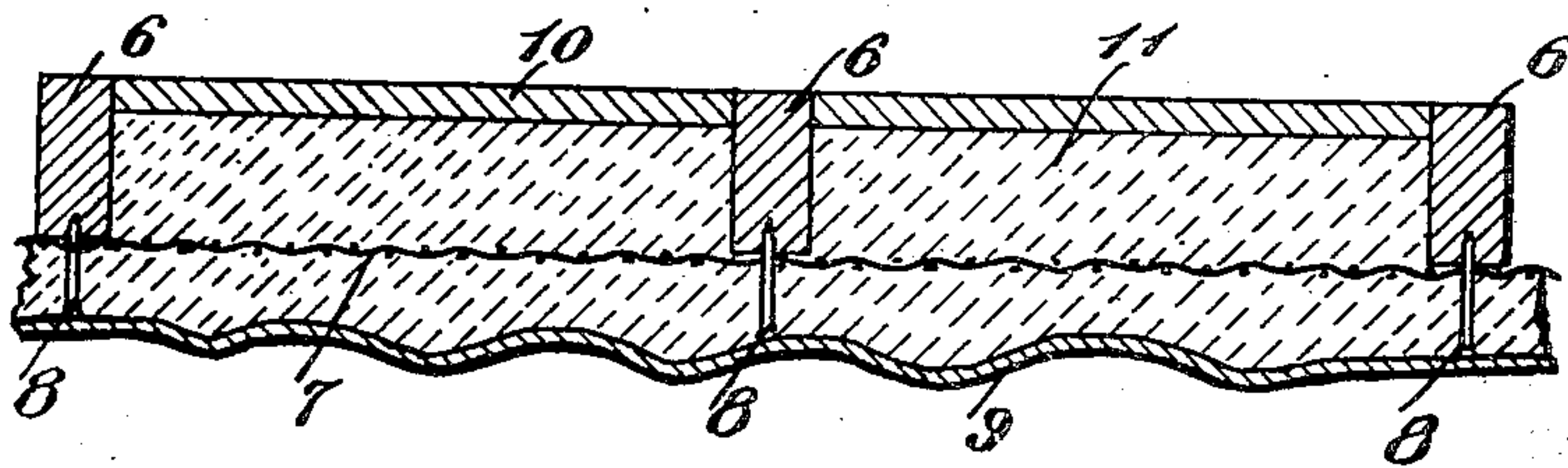


Fig. 2.

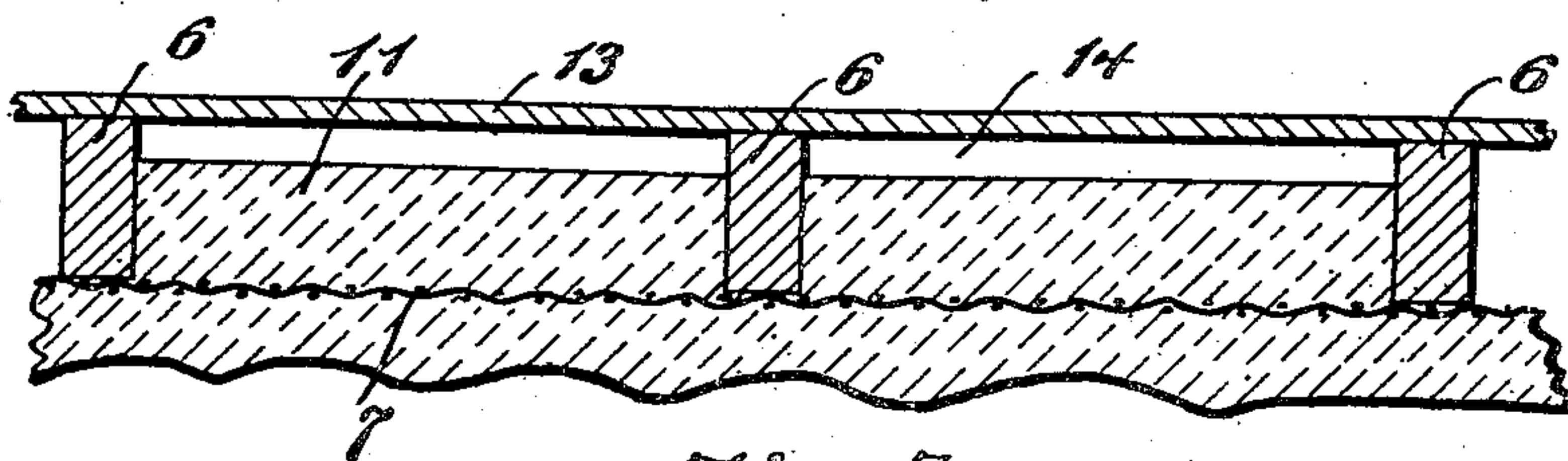


Fig. 3.

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# UNITED STATES PATENT OFFICE.

ELI MARTIN, OF DETROIT, MICHIGAN.

## METHOD OF MAKING COMPOSITE WALLS.

No. 843,956.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed November 19, 1906. Serial No. 344,088.

*To all whom it may concern:*

Be it known that I, ELI MARTIN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Method of Making Composite Walls, of which the following is a specification.

This invention relates to an improved composite wall and method of making the same.

The object of the invention is to produce a fireproof composite wall which is built or molded at the place where it is to remain, the concrete or fireproofing structure being applied to a wooden frame to cover and protect the same.

A further object of the invention is to form such a wall with an imitation of rock, brick, or other pattern face.

The invention further provides a continuous air-space extending from the top of the wall to the bottom, which will serve to exclude heat, cold, and dampness.

A further object of the invention is to provide a means or method of producing such a wall in a simple and cheap manner capable of being practiced by unskilled persons and requiring no special apparatus for its performance.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, partly broken away, of the invention. Fig. 2 is a horizontal sectional view illustrating the method of molding the wall. Fig. 3 is a similar view of the completed wall, the mold backing and facing having been removed.

In constructing the wall the frame is first made of the usual sills and corner-posts and cross-beams, as in constructing a frame house, together with studding, as indicated at 6, extending vertically in the usual manner and set, if desired, closer together than ordinary. To the outer side of this studding is secured, by nailing or otherwise, wire fabric, expanded metal, or other lathing, as indicated at 7. A series of nails are then driven part way into the studding with their heads or outer ends left projecting an inch or two, as indicated at 8. The distance may be varied according to the thickness of wall desired. Then a facing mold-section 9, of sheet metal or the like, is tacked or otherwise secured in place at the front, resting against the heads of the nails or pins 8. It may be conveniently held in place by a few nails driven

through the same into the studding. The sheet is preferably made of thin metal, such as tin, having the design of the wall impressed on its inner face. Thus it may be imitation of rock face, brick, stone, or any other design. Boards or planks 10 are then set up endwise at the back between the studding 6, these boards being used to form a backing for the mold and also to produce air-spaces within the wall when they are finally removed. They are tacked or otherwise fixed in place temporarily between the studding. Into the mold or form thus produced the cement or cementitious filling 11 is then poured and tamped, so that it fills the spaces in the lathing and also the design in the face-plate 9. After the filling hardens the face-plate 9 is removed and also the back boards 10. Then the interior lathing 12 and plaster 13 is applied to finish the wall. This leaves the wooden studding 6 completely embedded in and covered by fireproof material.

The expanded metal or woven wire 7 forms a tie which holds the parts of the wall together and prevents uneven settling and separation or cracking incident thereto. The removal of the boards 10 leaves a vertical air-space 14, with its known advantages. By making the face-plate of large size a large part of the wall can be molded at each operation, and the wall is built up by successive courses or parts, and the face-plate and backing-boards being moved as the work progresses.

The method of construction described is much cheaper and easier than molding blocks and laying the same. A ceiling can be molded in the same manner by attaching the face-plate under the joists and pouring in the cement or concrete at the top, the woven wire then serving the usual purpose of supporting the weight of the cement filling, which in such case can be made lighter than in a wall.

I claim—

1. The method of building a composite wall consisting in erecting a frame including studding, attaching lathing to the face thereof, supporting a design face-plate at a space in front of the lathing, placing back boards between the studding at the inside, filling the space between the face-plate, back boards and studding with cementitious material, and removing the face-plate and back boards after said material sets.

2. The method of building a composite wall consisting in erecting a frame including studding, attaching lathing to the face thereof, driving nails partly into the face of the  
5 studding, placing a design face-plate against the heads of said nails and supporting the same temporarily in place, placing a temporary backing at the back of the studding, filling between the face-plate and backing  
10 with cementitious material, and removing

the face-plate and backing after said material sets.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELI MARTIN.

Witnesses:

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