M. J. DAWKINS.

FIREPROOF BUILDING.

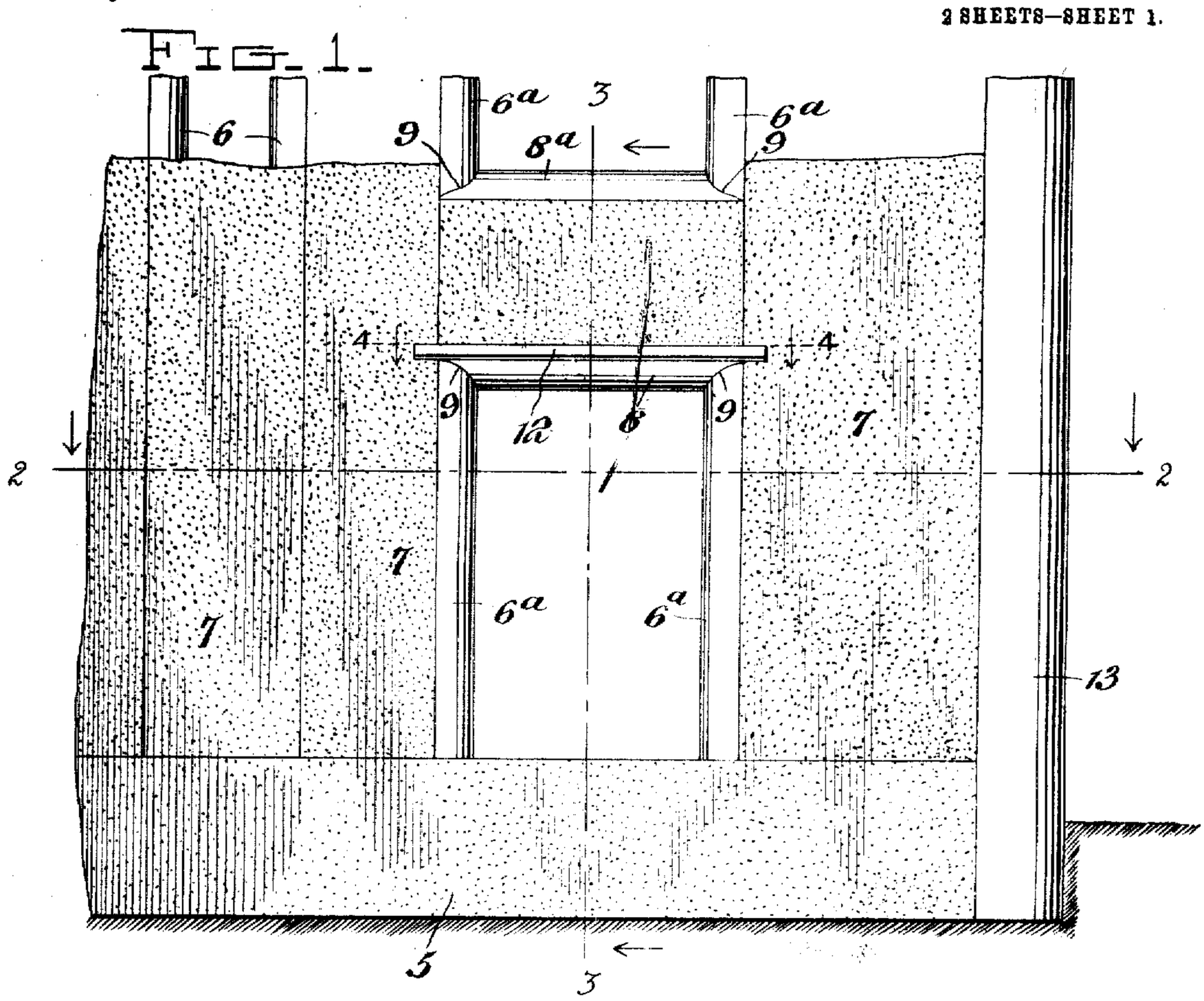
APPLICATION FILED JULY 10, 1907.

916,276.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.

FIG. 1.



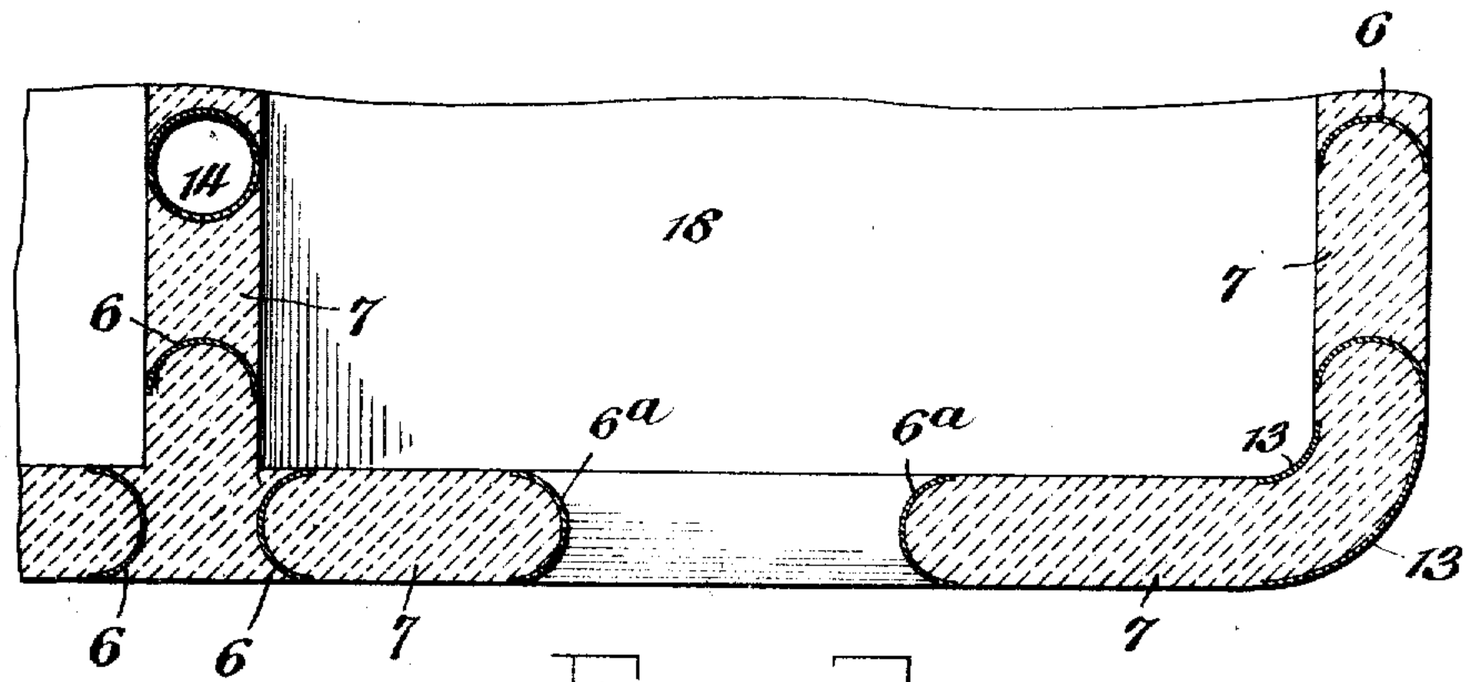


FIG 2

Witnesses

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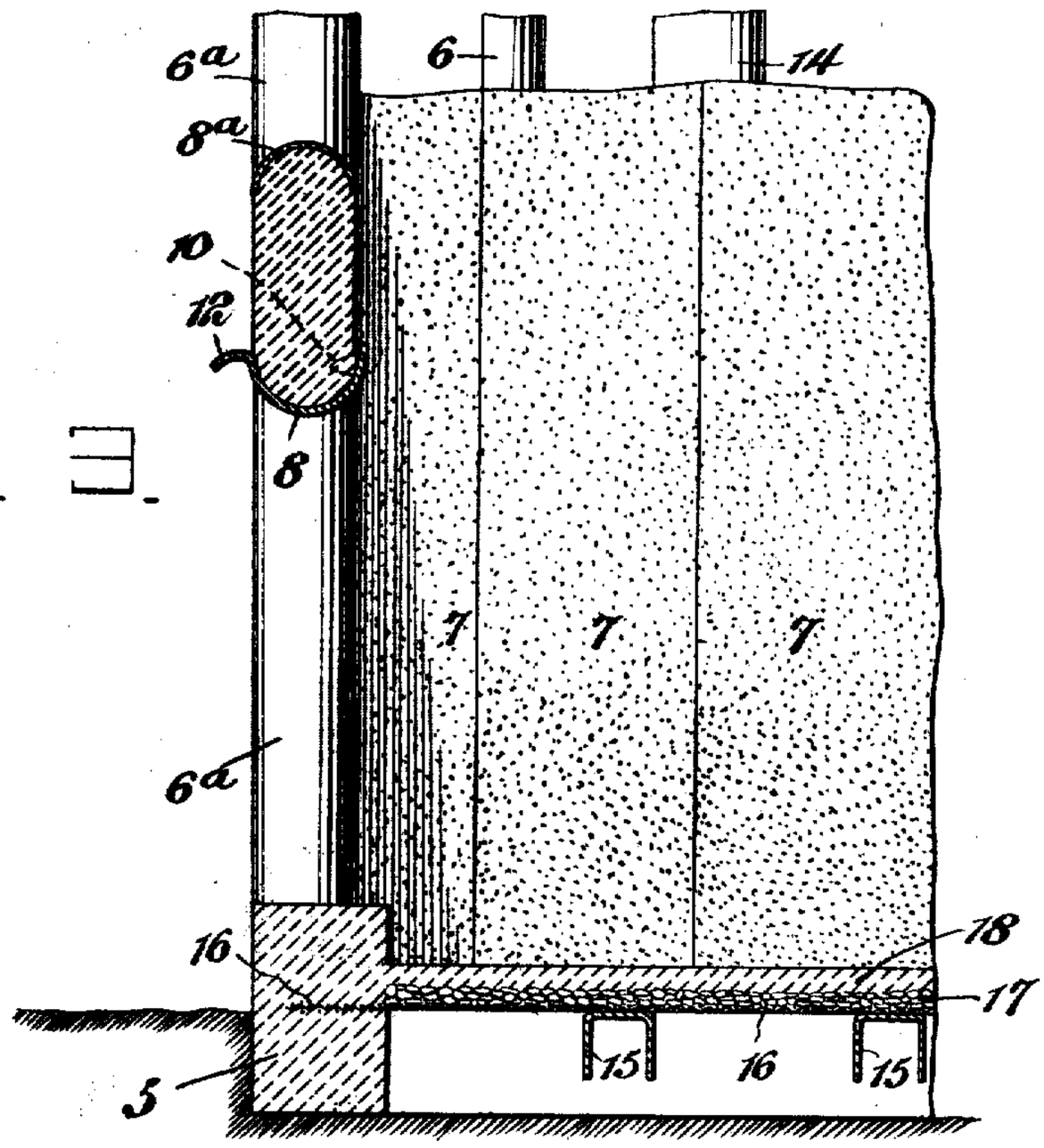
2 SHEETS—SHEET 2.

FIG. 3.



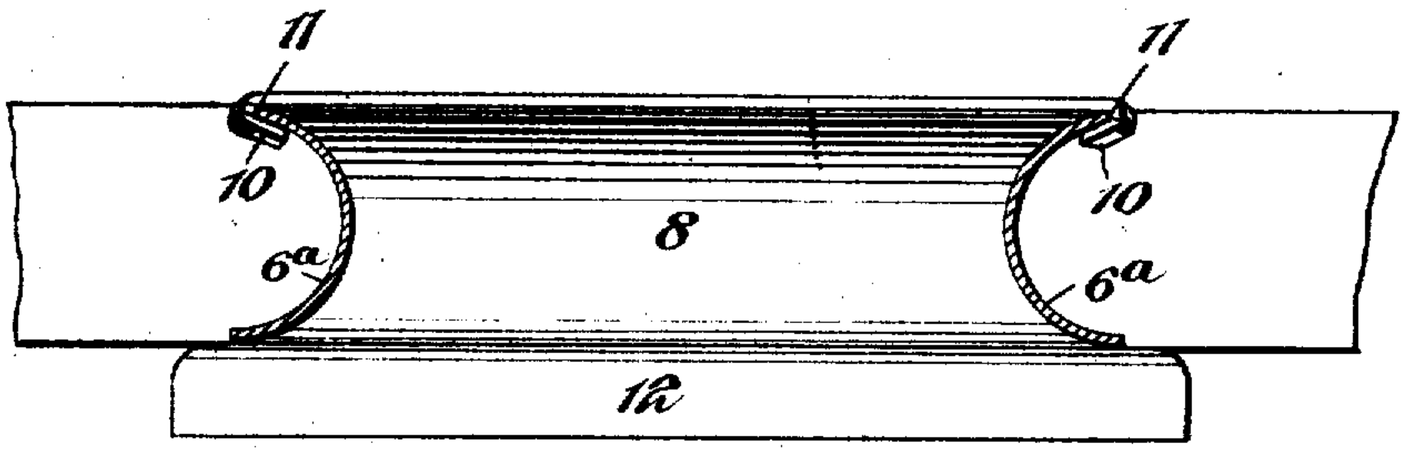


FIG. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

MATTHEW J. DAWKINS, OF RIVERSIDE, CALIFORNIA.

FIREPROOF BUILDING.

No. 916,276. Specification of Letters Patent. Patented March 23, 1909.

Application filed July 10, 1907. Serial No. 383,054.

To all whom it may concern:

Be it known that I, MATTHEW J. DAWKINS, a citizen of the United States, residing at Riverside, in the county of Riverside and State of California, have invented a new and useful Fireproof Building, of which the following is a specification.

The object of the present invention is to provide a novel, simple, durable and strong structure, which is completely fire-proof, can be readily constructed, and is so arranged that certain of the wall elements thereof will constitute fire-proof door and window frames.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a front elevation of a portion of a building constructed in accordance with the present invention. Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1. Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 1. Fig. 4 is a detail sectional view on the line 4—4 of Fig. 1.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a foundation 5 of cement, stone or other suitable material is formed in the ordinary manner, and erected thereon are the walls of the building. In the construction of said walls, upright studs 6 are provided, each being concaved on one side and convexed on the other, said studs being preferably constructed of sheet metal. The spaces between these studs, with the exception of the door and window openings, are filled with cementitious material 7, which may be plaster, concrete, adobe or other substance of an analogous nature. It will be observed, particularly by reference to Fig. 2, that the material, engaging the concaved and convexed sides of the studs, is effectively engaged therewith, and consequently, a strong durable wall is produced. Certain of these studs, as for instance, those designated 6^a constitute the opposite side walls of the door and window openings, and it will be observed that said studs have their convexed sides disposed in opposing relation. The end walls of the door and window openings are formed of transverse strips 8 and 8^a, which have concaved and convexed sides, and furthermore are provided with recessed seats 9 in their ends that receive the convexed sides of the upright studs 6^a. The upper transverse strips are preferably provided with terminal tongues 10, which are engaged in sockets 11 formed in the inner margins of the studs 6^a, and these upper transverse strips furthermore are provided with outstanding downwardly inclined longitudinal flanges 12 that project beyond the outer edges of the studs 6^a, and constitute water tables above the doors and windows.

Where angularly disposed walls terminate in corners, outer and inner corner pieces 13 are employed, said corner pieces having their inner faces concaved and their outer faces convexed, the material of the walls filling the spaces between said corner pieces, as illustrated in Fig. 2. If smoke or other flues are desired in the wall, pipes, as 14 may be embedded at the places desired.

For floors, substantially U-shaped joists or rafters 15 are provided, said joists or rafters having substantially flat upper faces. Placed upon said upper faces and bridging the spaces between the joists or rafters is wire netting 16, the margins of which are embedded in the walls or foundation. Upon this wire netting, gravel, stone or the like, in the form of grouting 17 is placed, and this grouting is covered with a finishing coat 18 of cement.

It will be evident that this structure is thoroughly fire-proof, and is strong and durable. Moreover, it can be cheaply and expeditiously manufactured and it will be understood that fire proof doors and windows may be employed in connection therewith.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In a fire proof structure of the character set forth, a wall comprising a body of cementitious material having door and window openings, and a plurality of spaced studs embedded in the wall, and each comprising a single metallic member, said members having corresponding concaved faces, and opposite corresponding convexed faces, said studs being located at intervals in the body and cer-

ain of the same having their convexed faces disposed in opposition and located on opposite sides of the door and window openings, forming the sides of the frames for said openings.

2. In a fire proof structure of the character set forth, a wall comprising a body of cementitious material having door and window openings, a plurality of spaced studs embedded in the wall and each comprising a single metallic member having a concaved face and an opposite convexed face, said studs being located at intervals in the body and certain of the same having their correspondingly shaped faces disposed in opposition and located on opposite sides of the door and window openings, forming the sides of the frames for said openings, and transverse strips located between the latter studs and having their ends formed to the shape of and abutting against the opposing faces of the studs, said strips constituting the ends of the frames of said openings.

3. In a fire-proof structure of the character set forth, the combination with spaced metallic members having outstanding sides located in opposition, of a cross strip extending between the members and having an outstanding flange projecting beyond the outer edge thereof, forming a water table, and cementitious material located against the rear sides of the members and against the cross strip.

4. In a fire proof structure of the character set forth, the combination with spaced upright studs having rear concaved sides and opposing convexed sides, of a cross strip extending between the sides and having a convexed under side and an outstanding downwardly inclined flange that projects beyond the outer edges of the studs, forming a water table, and cementitious material located in the concaved sides of the studs and upon the cross strip.

5. In a fire proof structure of the character set forth, the combination with angularly disposed upright walls having a curved connection and formed of cementitious material, of transversely disposed upright studs located at intervals in the body and comprising metallic members having opposite concaved faces and convexed faces, and inner and outer spaced corner reinforcements curved concentrically to each other and to the curvature of the corner, said corner reinforcements being embedded in the cementitious body and having their exposed faces flush with the inner and outer surfaces of the walls, said corner reinforcements furthermore being spaced from the studs.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MATTHEW J. DAWKINS.

Witnesses:
RENA E. SMITH,
GLENN PAPINEAU.