No. 615,696. Patented Dec. 13, 1898.

C. C. GILMAN.

MEANS FOR HINDERING SPREAD OF FIRE TO AND FROM ROOMS.

(Application filed Jan. 26, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

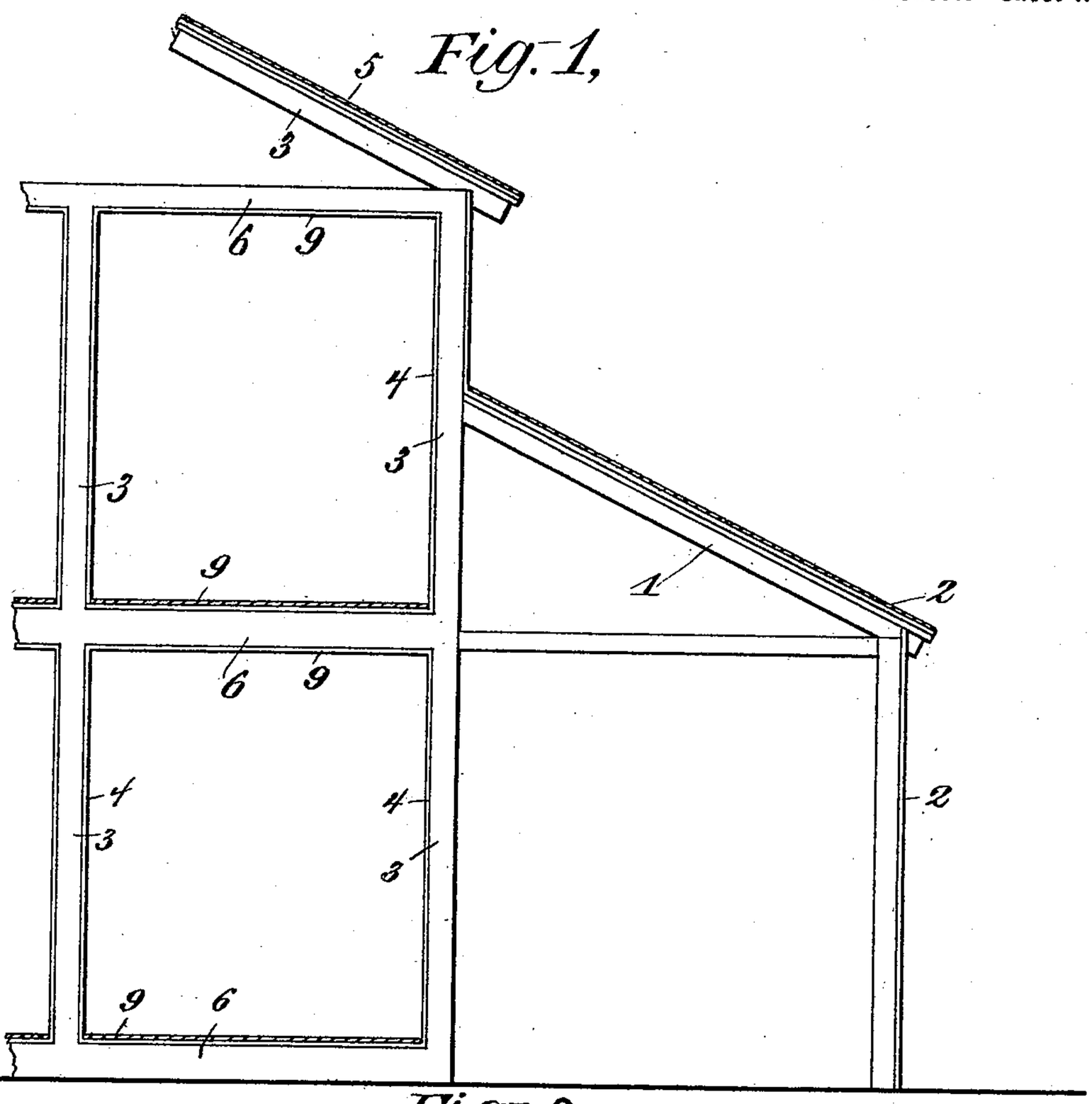
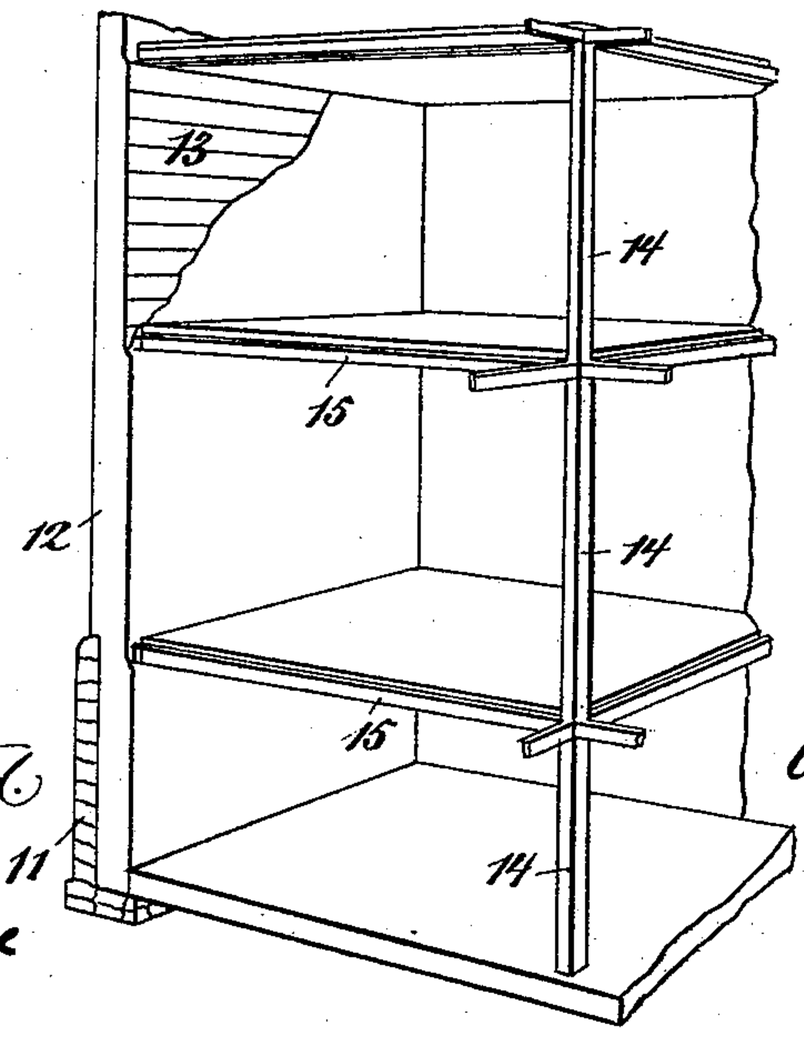


Fig. 2.



WITNESSES:

O. F. Maynard

Geo. E. Crane

INVENTOR

Charles C. Gilman

BY

E. N. Dickerson

HIS ATTORNEY

No. 615,696. Patented Dec. 13, 1898.

C. C. GILMAN.

MEANS FOR HINDERING SPREAD OF FIRE TO AND FROM ROOMS.

(Application filed Jan. 26, 1898.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 3,

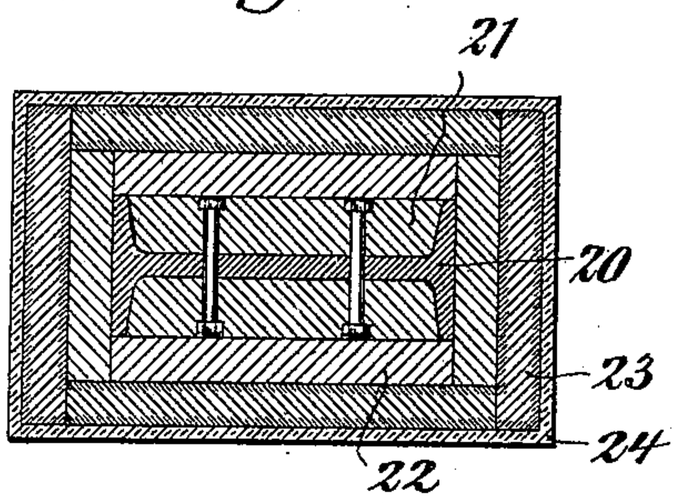


Fig. 4,

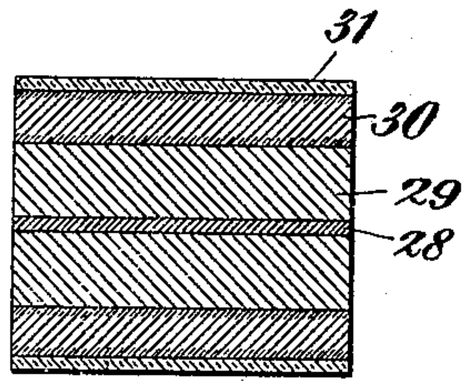


Fig. 5,

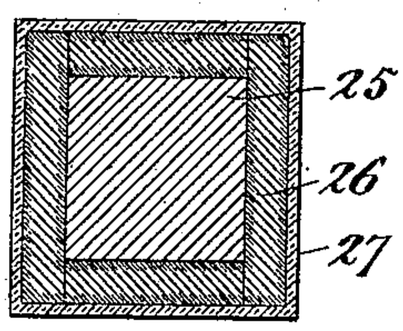


Fig. 6

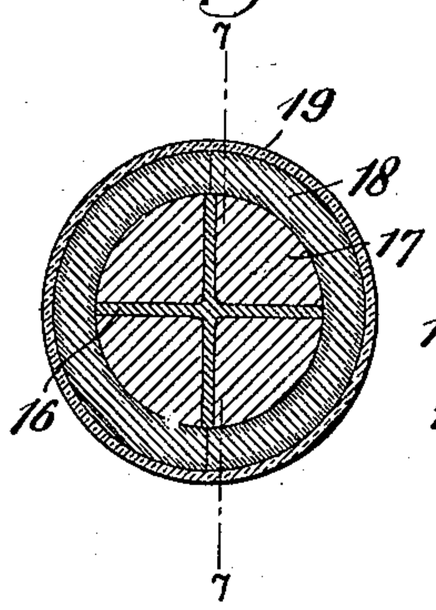


Fig. 7

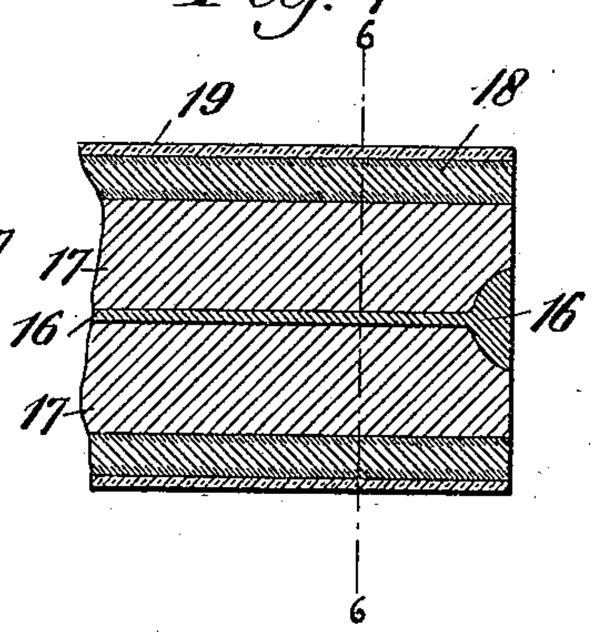


Fig. 8,

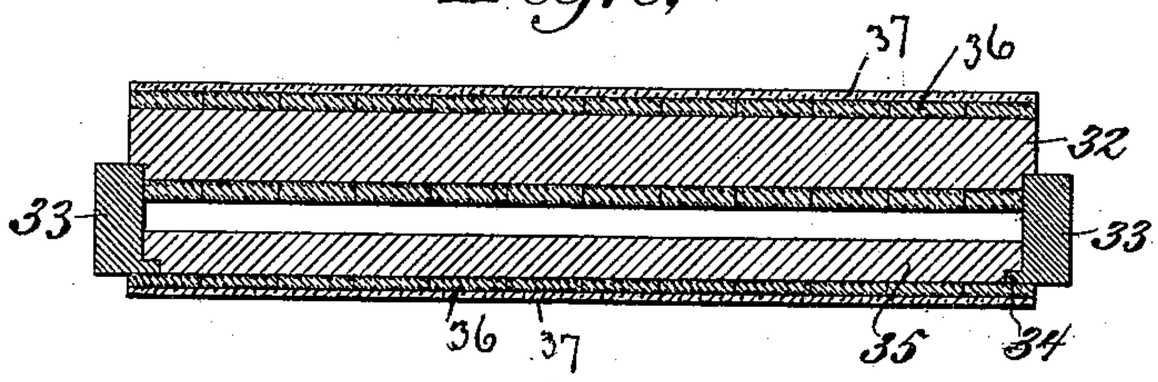
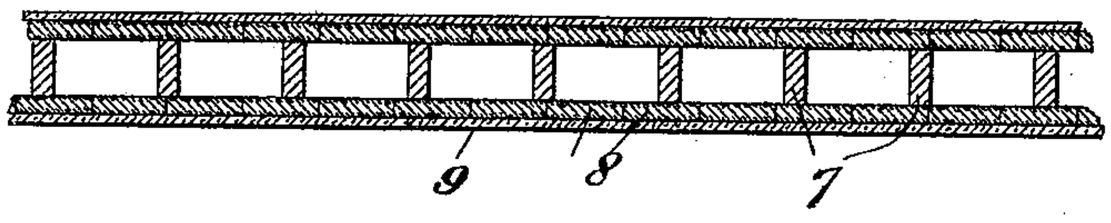


Fig. 9,



WITNESSES:

D. F. Hayford.

Geo. C. Crum

INVENTOR

Charles C. Gilman

BY

E. V. Dickerson

HIS ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES CARROLL GILMAN, OF ELDORA, IOWA, ASSIGNOR TO THE GILMAN'S EARTHENWARE HOUSE COMPANY, OF IOWA.

MEANS FOR HINDERING SPREAD OF FIRE TO AND FROM ROOMS.

SPECIFICATION forming part of Letters Patent No. 615,696, dated December 13, 1898.

Application filed January 26, 1898. Serial No. 667,951. (No model.)

To all whom it may concern:

Be it known that I, CHARLES CARROLL GILMAN, a citizen of the United States, and a resident of Eldora, in the county of Hardin and State of Iowa, have invented certain new and useful Improvements in the Construction of Fireproof Structures, of which the following is a specification.

My invention relates to fireproof walls, partitions, floors, ceilings, &c., and I will describe a construction embodying my improvements and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a vertical section of a two-story house and portion of the roof and also of a shed adjacent thereto. Fig. 2 is a perspective view of a portion of three floors of a building construction. Fig. 3 is a cross-section of one of the beams used in the construction of a fireproof building. Fig. 4 is a modified form of beam, and Fig. 5 is a modified form of post or support. Fig. 6 is a cross-section of a post or vertical support, taken on the line 6 6 of Fig. 7; and Fig. 7 is a longitudinal sectional view taken on the line 7 7 of Fig. 6, showing a portion of the post. Fig. 8 is a detail vertical sectional view of a portion of a double floor construction, and Fig. 9 is a similar view of a single floor construction.

In constructing the walls, ceilings, floors, beams, supports, &c., I employ incombustible material—such, for example, as wood treated with sal-ammoniac, soapsuds, and alum, as covered by my Patent No. 560,580, of May 19, 1896, which renders the same incombustible, brick-board, or planks of clay and sawdust in suitable proportions, as covered by my Patents Nos. 353,629, 353,630, and 353,631, of November 30, 1886, or a brick or plank made in accordance with my Patent No. 405,028, of June 11, 1889, and rock-veneer, which is placed on the brick-boards. The brick-boards or brickstuffs are porous and are first water-soaked and then covered with a plastic mortar composition of hydraulic cement and sand, which forms a rock-veneer and which is covered by my Patent No. 566,751, of September 1, 1896. These materials are combined one with the other in any desired manner or arranged in connection with iron cores, as will hereinafter more particularly appear.

In the construction of sheds or porches—as, for example, in Fig. 1—the framework of wood is treated with sal-ammoniac, soapsuds, and alum to render it incombustible, and to the framework I secure the brick-board or planks 2, which are provided with a single coat of rock-veneer to form the roof and the vertical walls. This construction is sufficient to render it fireproof against sparks, &c. In the construction of the house proper the same plan is used—that is, the framework 3, forming the vertical supports, is treated to render it fireproof in the manner hereinbefore stated and to have secured to it the brick-boards 4, coated with rock-veneer for forming the walls and also the roof 5. The floors 6 are of a particular construction and are shown in Fig. 9. This arrangement consists of the joists 7, treated so as to render them fireproof, the brick-boards 8, and the rock-veneer facing 9. 10 represents an ordinary clapboard wall, which need not be fireproof.

In Fig. 2 I have shown a construction designed for use in large building structures. In this arrangement 11 represents the ordinary masonry-work, 12 the exterior wall, and 13 the interior finishing-wall, which may be of brick-board and rock-veneer. 14 represents the composite posts, and 15 the composite beams for supporting the ceiling and floor-framing. The composite post or column (shown in detail in Figs. 6 and 7) consists of the iron core 16, timber-sections 17, the brick-board coating 18, and the rock-veneer 19. The beams 15 (shown more particularly in Fig. 3) consist of the iron I-beam 20, the wood-filler 21, bolted thereto, the wood-casing 22, the brick-board 23, inclosing the casing 22, and the rock-veneer covering 24. This form of beam and the hereinbefore-described form of post are used in the lower stories, where great strength is needed. In the upper stories a lighter form of beam and post is preferable. The form of post generally employed for this purpose is shown in Fig. 5, which consists of a wooden core 25, having the brick-board covering 26 and the rock-veneer 27. The form of beam is shown in

Fig. 4, which consists of a flat metal core 28, the wood-filler facings 29, the outer cover of fire-brick 30, inclosing the facings on all sides, and the usual rock-veneer covering 31.

In Fig. 8 I have shown a double flooring and ceiling. The floor-joists 32 are notched, so as to be supported on the beams 33, which may be of the composite construction hereinbefore referred to, and they are formed with a rib 34 for supporting the notched ends of the ceiling-joists 35. The upper and lower faces of the joists 32 are covered with the brick-board 36 and on their upper faces with the rock-veneer 37, while only the lower face of the joists 35 are treated in this manner.

I claim—

1. A composite post or support for use in building construction composed of an iron core, incombustible wood fitted to said core, brick-board inclosing said iron core and wood-filling and a rock-veneer for said brick-board, substantially as described.

2. A composite beam or support for building construction composed of an incombustible core, brick-board inclosing said core and a rock-veneer for said brick-board, substantially as described.

3. A composite beam for building construction comprising a core composed of iron and wood-filler blocks, an incombustible wood-casing inclosing said core, brick-boards for inclosing said casing, a rock-veener for said brick-board, substantially as described.

4. A fireproof construction for buildings consisting of an incombustible framework of wood for supporting the walls, floors and ceilings thereof, brick-boards applied to said framework to form the base of the walls, floors and ceilings, and a rock-veneer coating applied to said brick-boards, substantially as described.

5. A fireproof construction for walls and floors of buildings consisting of incombustible supporting-beams, brick-boards connecting said beams and located on opposite sides thereof, and a rock-veneer coating for said brick-boards, substantially as described.

Signed at Eldora, in the county of Hardin and State of Iowa, this 24th day of December, A. D. 1897.

CHARLES CARROLL GILMAN.

Witnesses:

N. L. MILLER,

GID JOHNSON.