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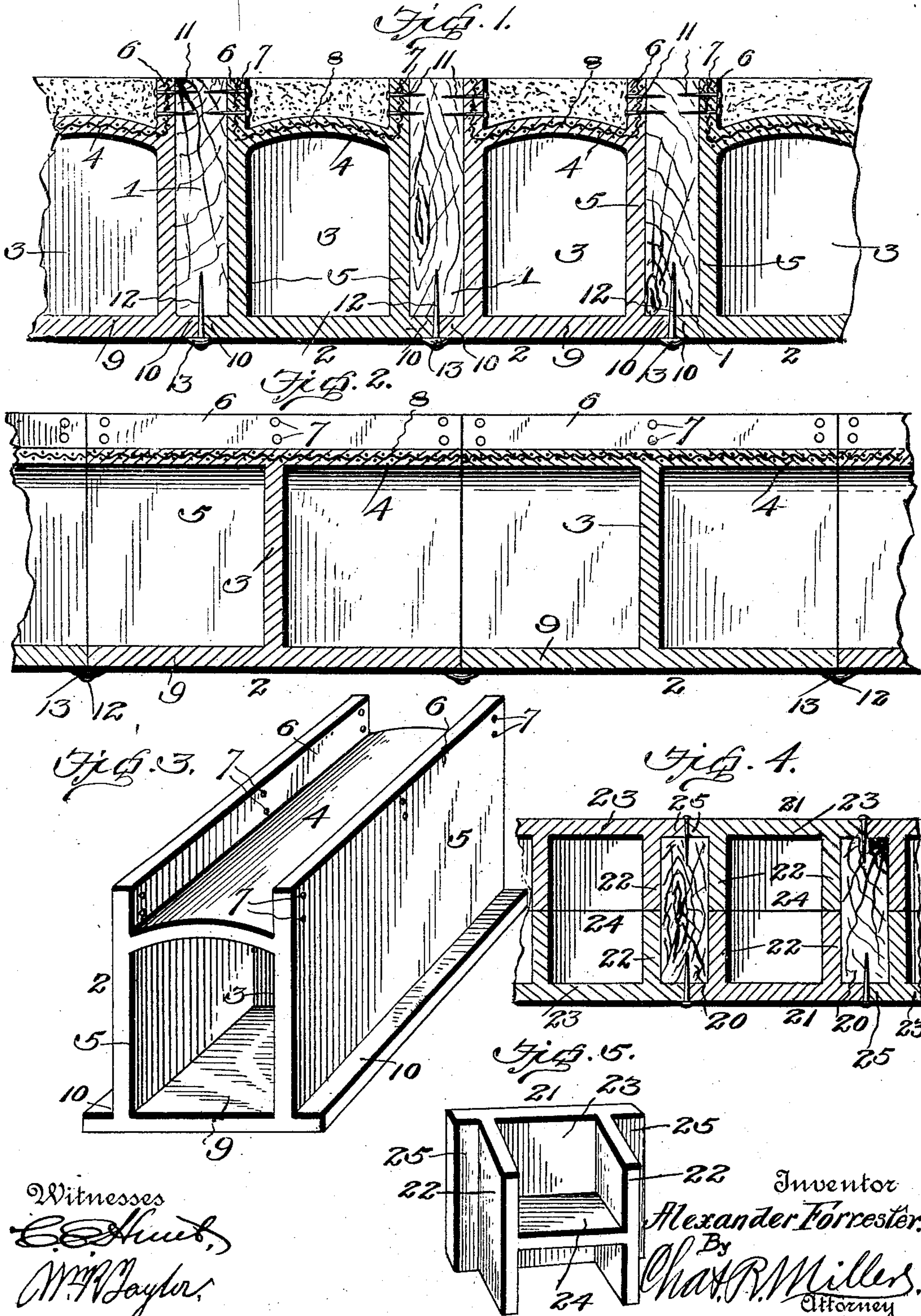
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A. FORRESTER.

FIREPROOF CONSTRUCTION FOR FLOORS, CEILINGS, &c.

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NO MODEL.



UNITED STATES PATENT OFFICE.

ALEXANDER FORRESTER, OF CLEVELAND, OHIO.

FIREPROOF CONSTRUCTION FOR FLOORS, CEILINGS, &c.

SPECIFICATION forming part of Letters Patent No. 774,512, dated November 8, 1904.

Application filed December 26, 1903. Serial No. 186,622. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER FORRESTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Fireproof Construction for Floors, Ceilings, Walls, and Partitions of Buildings, of which the following is a specification.

This invention relates to improvements in fireproof constructions for the floors, ceilings, walls, and partitions of buildings, and more particularly in fireproofing-blocks for covering joists and studding.

The object of the invention is to provide a simple, durable, and comparatively inexpensive covering for wooden joists and studding which will not only render them fireproof, but which will also brace them apart and divide or partition the spaces between them to prevent the circulation of air, fire, and vermin.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a vertical transverse sectional view through a floor and ceiling constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view through the same. Fig. 3 is a perspective view of one of the fireproofing-blocks. Fig. 4 is a horizontal sectional view through a wall or partition constructed in accordance with my invention. Fig. 5 is a perspective view of one of the fireproofing-blocks shown in Fig. 4.

Referring more particularly to Figs. 1, 2, and 3 of the drawings, the numeral 1 denotes the usual horizontally-disposed wooden joists arranged parallel a short distance apart and to which the floor and ceiling is secured, and 2 denotes my improved fireproofing-blocks secured between said joists or timbers 1 and adapted to cover and brace them and also to provide partitions or barriers in the spaces between them. Each of the said blocks 2, which

are constructed of composition, cement, terracotta, or any suitable fireproof material, comprises a hollow body of substantially rectangular-form having open ends intermediate which, preferably at the center of the block, is formed a transverse vertical partition 3. The top 4 of the body is preferably curved or arched, as shown, and the sides 5 project vertically above the same to form attaching-flanges 6 and to provide a trough-like recess in the top of the block to receive a floor-filling. The flanges 6 are formed with perforations or openings 7, through which nails or other fastening devices are adapted to be passed, and, if desired, I may mold or embed a web 8 of woven wire or expanded or reticulated metal in the top 4 and the flanges 6, as shown in Fig. 1. The bottom 9 of the block projects laterally beyond the sides 5 to form horizontal attaching-flanges 10. The blocks may be made of any suitable length; but their width corresponds to the distance between the joists 1, so that when the blocks are placed between the joists end to end their sides 5 will snugly engage the sides of the joists, and the flanges 10 will engage the bottom edges of the latter, as shown. The blocks are secured in place by nails, spikes, or other suitable fastening means 11, passed through the openings 7 in the flanges 6 and then driven into the joists, and also by fastening spikes, screws, studs, or the like 12, passed between the abutting edges of the flanges 10 of two adjacent blocks and into the bottom edge of the joist, a washer or head 13 being placed or formed on said spike or stud 12 to engage the flanges 10 of each two adjacent blocks. The said flanges 10 are preferably half as wide as the bottom edges of the joists, so that when a block is placed on each side of a joist its bottom edge will be entirely covered by said flanges, the edges of which contact. In the latter case said contacting edges of the flanges are formed with registering notches or recesses to receive the pins or studs 12. The under sides of the bottoms 9 and flanges 10 thus form a uniform horizontal ceiling; but, if desired, they may be covered in any suitable manner to form a

more finished or ornamental ceiling. The usual wooden flooring may be provided by nailing or securing the boards upon the top edges of the joist in the usual manner, the
 5 recessed tops of the blocks being preferably provided with a suitable filling; but when a cement flooring is preferred the cement, concrete, or other composition used is placed upon the tops 4 of the blocks and smoothed
 10 over to form a covering of any desired thickness for both the blocks and joists.

While the construction illustrated in the first three figures of the drawings is particularly adapted for floors and ceilings, it will
 15 be understood that the same may also be used for walls, partitions or the like; but for the latter work I preferably employ the construction shown in Figs. 4 and 5. In these figures the numeral 20 denotes the usual studs
 20 or timbers arranged vertically and parallel and a short distance apart. Secured upon both edges of these studs are my improved composition fireproofing-blocks 21, each of which, as clearly seen in Fig. 5, comprises
 25 two sides 22, connected along one of their ends by a front 23 and intermediate their top and bottom edges by a horizontal partition 24. The front 23 projects beyond the
 30 flanges 25, which are secured to the studs in a manner similar to that in which the flanges 10 on the blocks previously described are secured to the joists. These blocks 21 are inserted between the studs from opposite sides
 35 and are disposed back to back, so that the horizontal partitions 24 are disposed in the same horizontal plane and form practically one continuous partition between the fronts 23 of the
 40 front to rear of each block being equal to one-half the width of the studs, as shown. The blocks are placed one on top of the other between the studs and are fastened in place, as previously stated. The blocks 21 may
 45 also be used in a floor and ceiling construction; but they are better adapted for wall and partition structures, as previously stated.

It will be seen that by covering the joists and studding of a building by my improved
 50 fireproofing-blocks they will not only be effectively protected against fire, but also be braced and strengthened. Furthermore, the vertical partitions 3 in the joist-blocks 2 and the horizontal partitions 24 in the studding-
 55 blocks 21 form permanent barriers to circulation of vermin throughout the house or building and to check the spread of fire that would otherwise occur owing to the draft permitted by the open passages between the joists
 60 and studding. The partitions not only form air breaks or barriers, but also brace and strengthen the walls of the block.

From the foregoing description, taken in

connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a fireproof construction, the combination with spaced beams or timbers, of hollow blocks disposed between said beams to brace and cover them, and having partitions adapted to serve as barriers, and attaching-flanges to secure them to the beams, substantially as described.

2. In a fireproof construction, the combination with spaced parallel beams or timbers, of a hollow block disposed in the space between said beams to cover and brace the latter, and having a partition formed therein to provide a barrier in the space between said beams, and attaching-flanges to secure it to the beams, substantially as described.

3. In a fireproof construction, the combination with spaced parallel beams or timbers, of a hollow block disposed between said beams and having a transverse partition formed therein and attaching-flanges along one of its faces, and means for securing said flanges to said beams, substantially as described.

4. In a fireproof construction, the combination with spaced parallel beams or timbers, of a block disposed between said beams and comprising a hollow rectangular body having open ends, a transverse partition and projecting attaching-flanges on three of its faces, whereby it is secured between said beams, substantially as described.

5. A block of the character described comprising a hollow rectangular body having open ends, a transverse partition, projecting attaching-flanges formed along the upper edges of each of its side faces, and projecting attaching-flanges formed along each of the side edges of the bottom face, substantially as described.

6. A hollow building-block, open at its ends, having laterally-projecting flanges on one side, and having a partition at a point between its ends, uniting its side walls.

7. A building-block having parallel attaching-flanges on opposite sides, projecting from one of its faces, and a strengthening-web embedded in that portion of the block between the said flanges and also extending through and embedded in the said flanges.

8. In a fireproof structure, the combination with spaced parallel beams or timbers, of hollow blocks disposed between said beams

or timbers, said blocks having walls terminating short of the edges of the timbers at one side and provided with flanges extending to said edges and forming with said walls a
5 trough to receive a filling, substantially as described.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing witnesses.

ALEXANDER FORRESTER.

Witnesses:

CHAS. R. MILLER,
LOUIS B. SPANNER.