

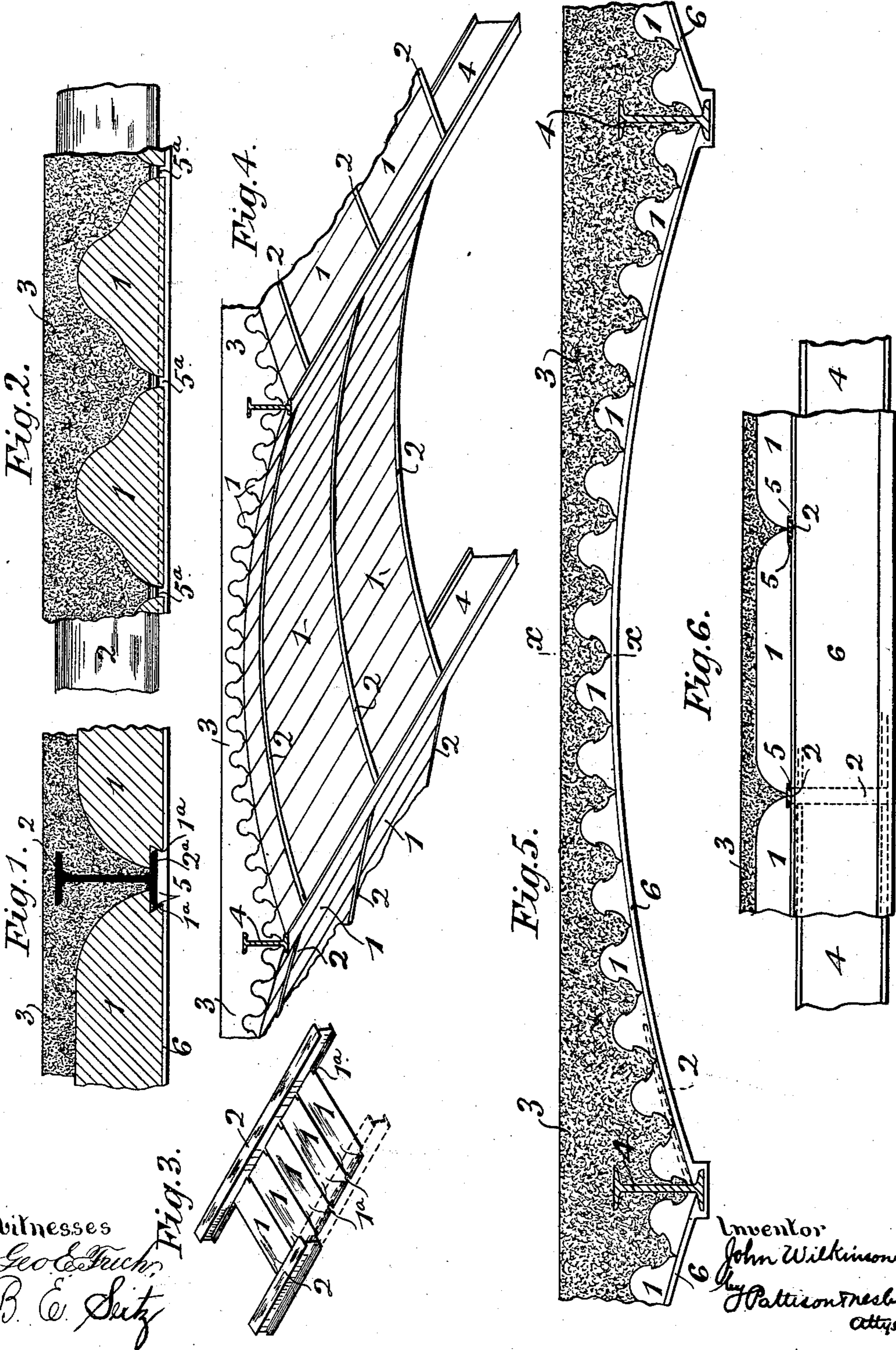
No. 661,832.

Patented Nov. 13, 1900.

J. WILKINSON.
FIREPROOF FLOORING.

(Application filed Dec. 23, 1897.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN WILKINSON, OF BIRMINGHAM, ENGLAND.

FIREPROOF FLOORING.

SPECIFICATION forming part of Letters Patent No. 661,832, dated November 13, 1900.

Application filed December 23, 1897. Serial No. 663,215. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILKINSON, a subject of the Queen of Great Britain and Ireland, residing at Birmingham, England, have invented Improvements in Fireproof Flooring, of which the following is a specification.

This invention has reference to improvements in fire and sound proof flooring; and it consists in certain novel features of construction and combinations of parts hereinafter more fully described, and pointed out in the claim.

Referring to the accompanying drawings, Figures 1 and 2 are sections taken in planes at right angles to each other, showing a portion of fireproof flooring constructed according to this invention; and Fig. 3 represents in perspective part of two supporting metal bars with blocks of fireproof material, constituting a portion of such flooring. Fig. 4 is a perspective view of a portion of a fireproof flooring according to this invention, the supporting-bars being shown arched and carried at the end by main supporting-girders. Fig. 5 shows in cross-section the finished flooring with ceiling below. Fig. 6 is a longitudinal section on line *x x*, Fig. 5, of a portion of the said flooring and ceiling, the concrete in front of the blocks 1 being omitted to show these blocks more clearly.

In constructing fireproof flooring according to this invention I employ a series of blocks 1 of fireproof material, which are arranged parallel to one another and supported at their ends by metal bars 2 and over which a mass of concrete 3 is laid to form a flooring of the desired thickness, the blocks being arranged at right angles to the bars 2. The blocks 1 are preferably made of the fireproof composition known in commerce as "adamant," preferring that manufactured by The Adamant Company, Limited, of Birmingham, England; but I do not limit myself to such adamant, as other kinds of adamant or fireproof cement may be used with nearly the same effect. The said blocks may be strengthened longitudinally by means of wood, iron, or steel laths embedded in them, as is shown at 1^b, Fig. 2, and may advantageously be made of a section that decreases in width from bottom to top—for ex-

ample, of the approximately triangular shape shown in Fig. 2; but they may be of the shape shown in Fig. 5, the top surface in each case being preferably curved or flat. The lower surface of each block is flat, and each end of each block at the lower side is formed with a flanged recess or rabbet 1^a to receive the adjacent supporting-bar 2 or a flange 2^a thereon, the depth of each recess or rabbet being usually such that the lower surface of the block will be at a lower level than the lower side of the bars 2, by which the block is carried.

The supporting-bars 2 may be of various sections. In Figs. 1, 2, and 3 they are shown as straight girders of I-section, the bottom flanges 2^a thereof entering the recesses 1^a in the adjacent ends of the blocks and so supporting such ends. In Figs. 3, 4, and 5 the supporting-bars 2 are shown as flat bars of light rectangular section, these bars being arched and having their ends bedded against and carried by the lower flanged ends of girders 4, that are arranged at right angles to the bars 2 and may be supported in any desired or convenient manner. The girders 4 instead of being of I-section, as shown, may be of L-section when girders of less strength are required.

In constructing my fireproof flooring the supporting-bars 2 are first placed in position, after which the fireproof blocks 1 are arranged transversely to and upon the said bars 2 with their adjacent lower edges near together, Fig. 2, or practically in contact with each other, Fig. 5. Concrete 3 is then placed over the blocks 1 to a suitable height and so as to cover the girders 4 when these are employed, as in Figs. 4, 5, and 6, the upper surface of the concrete being leveled to serve as the finished flooring or to support a wood or other floor. The spaces 5 between the recessed ends of the blocks 1 and their supporting-bars 2 and also the spaces 5^a, Fig. 2, between the long sides of the blocks when these are not placed close together are filled in with adamant or other suitable composition, which incloses the said bars and also forms a foundation for adamant or other suitable plastering material 6 applied to the lower surface of the flooring to form a ceiling for the room below. This plas-

tering material is also preferably arranged to cover the lower flanges of the girders 4, Figs. 4, 5, and 6, when these are employed.

Owing to the difference in density between 5 the adamant blocks 1 and the concrete 3, fireproof flooring made according to this invention is an imperfect conductor of sound, yet is practically solid, no air-spaces being left in which dirt can accumulate—an impor- 10 tant requirement in hospital construction—or through which heat can be conveyed to the supporting bars and girders, so that the construction is specially advantageous for limiting the effects of fire. Furthermore, by the 15 construction described a fireproof flooring of great strength can be obtained of much less weight than that of a fireproof flooring to serve the same requirement as ordinarily made.

Although I prefer to make the supporting- 20 bars of metal, they may in some cases be of other material—for example, wood.

What I claim is—

An improved fire and sound proof flooring comprising main supporting-bars, transversely-extending arch-supporting bars resting 25 upon the main supporting-bars and a plurality of blocks having their ends supported by the transversely-extending supporting-bars, the blocks at the center of the arch having their upper sides in a horizontal plane 30 above the upper edges of the main supporting-bars, and a filling of cement entirely enclosing the blocks and the supporting-bars, substantially as described.

In testimony whereof I have signed my 35 name to this specification in the presence of two subscribing witnesses.

JOHN WILKINSON.

Witnesses:

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