

(No Model.)

R. A. KINKELE & C. L. WOLFF.
FIREPROOF FLOOR.

No. 566,189.

Patented Aug. 18, 1896.

Fig: 1.

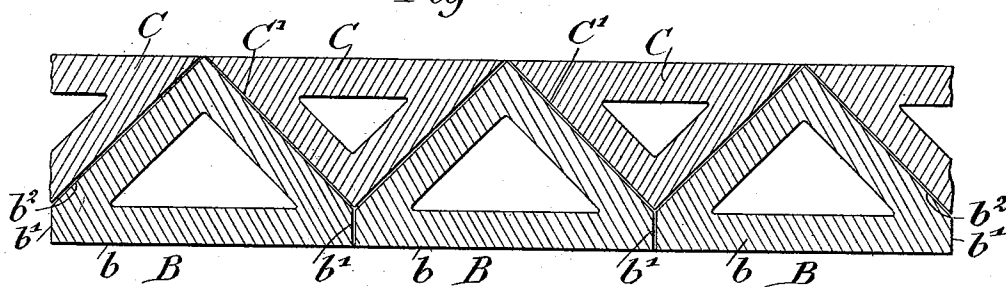


Fig: 2.

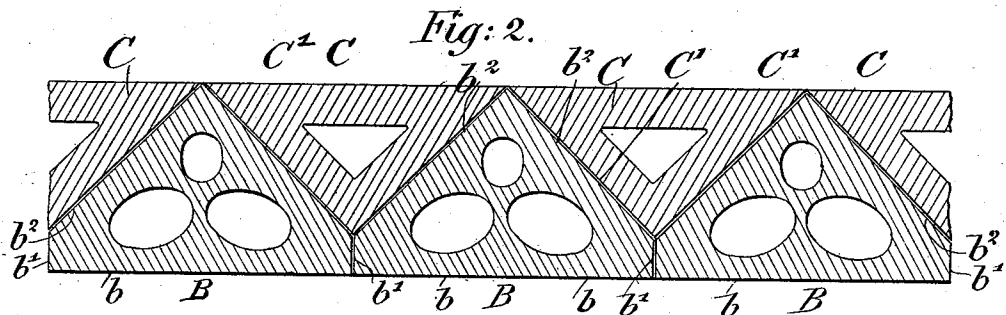
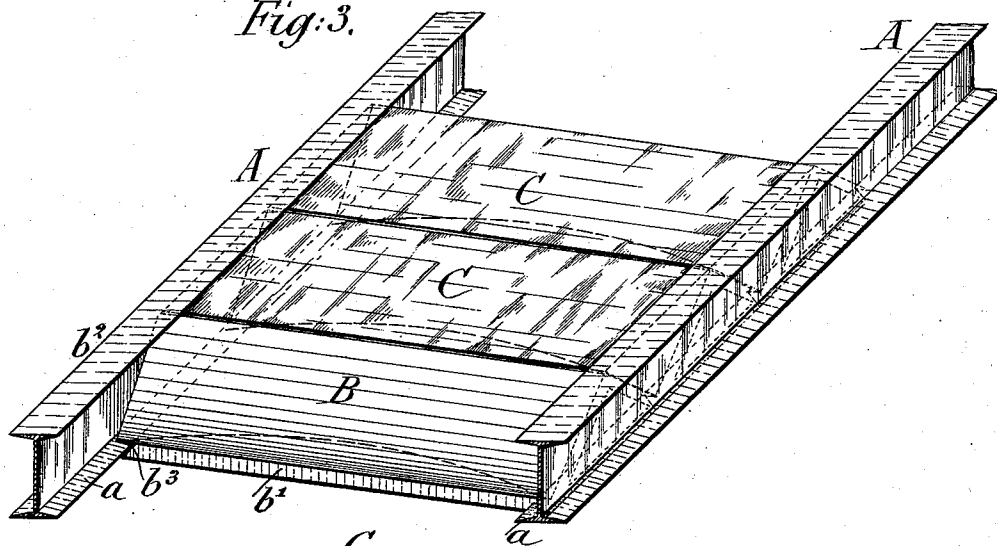


Fig: 3.



WITNESSES:
Carl Kable.
Geo. H. J. J. J.

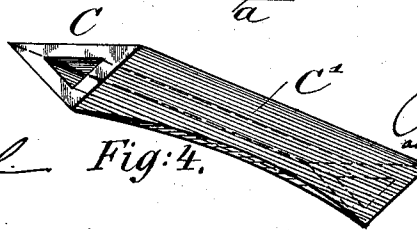


Fig: 4.

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UNITED STATES PATENT OFFICE.

ROBERT A. KINKELE AND CHARLES L. WOLFF, OF STAPLETON, NEW YORK.

FIREPROOF FLOOR.

SPECIFICATION forming part of Letters Patent No. 566,189, dated August 18, 1896.

Application filed March 17, 1896. Serial No. 583,511. (No model.)

To all whom it may concern:

Be it known that we, ROBERT A. KINKELE and CHARLES L. WOLFF, citizens of the United States, residing in Stapleton, county of Richmond, and State of New York, have invented certain new and useful Improvements in Fireproof Floors, of which the following is a specification.

This invention relates to a fireproof floor of the flat-arched type; and the object of the same is to furnish a strong, durable, and comparatively light floor of said type; and the invention consists of a fireproof floor comprising a series of supporting blocks or tiles arranged transversely between the I-beams of the floor, each supporting-block being of polygonal form, in which the lower portion of each is provided with parallel sides, while the sides of the upper portion of each converge from the parallel sides of the lower portion, and a filling consisting, preferably, of filling-blocks triangularly-shaped in cross-section, the inclined sides of which lie in contact with the inclined sides of the supporting-blocks, as will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a transverse section of a fireproof floor constructed in accordance with the principles of our invention. Fig. 2 is a modified form thereof. Fig. 3 is an isometrical view showing portions of two I-beams and some of the blocks supported between the same, and Fig. 4 is a modified form of filling-block.

Similar letters of reference indicate corresponding parts.

A A indicate the I-beams of angle-irons, on the flanges a of which the tiles or blocks composing our improved floor are supported. Our improved fireproof floor consists of a series of similar supporting blocks or tiles B B, made of suitable material, and a series of alternate filling blocks or tiles C C. The supporting blocks or tiles B are each of polygonal form in cross-section—that is to say, each has a flat bottom b , parallel sides b' b' at right angles to the bottom, and at the upper part of the same converging or inclined upper sides b^2 b^2 . These supporting blocks or tiles B B may be either entirely hollow, as shown in Fig. 1, or provided with a number of bores or hollows, as shown in Fig. 2. The lower

or base portions of the supporting blocks or tiles are provided at their ends with angular recesses b^3 , which receive the lower flanges a of the I-beams A when the supporting-blocks are placed in proper position between the beams. To place the supporting-blocks between the beams, they are first lowered between the same and then turned transversely thereof to such an extent that the end recesses b^3 of the same will receive the flanges a of the I-beams, the length of the supporting-blocks with respect to the distance between the I-beams being such that when the same are fitted tightly between the beams they will be arranged at a slight obtuse angle to the same, as shown in Fig. 3. As the parallel sides b' of the supporting-blocks B are arranged in close contact with each other the supporting-blocks are thus adapted to prevent lateral thrust.

The spaces between the inclined surfaces b^2 of the supporting-blocks B, which surfaces meet at an angle, are filled in by means of the triangularly-shaped filling-blocks C C, the inclined surfaces C' of which fit snugly against the inclined surfaces b^2 of the supporting-blocks, the latter thereby, through the medium of the filling-blocks C, supporting the superposed weight, and by reason of the contact of the inclined surfaces also receiving the lateral thrust imparted by the weight, so that thereby the weight and the lateral thrust are uniformly distributed throughout the floor. The filling-blocks instead of having a straight lower edge may have a broad arched one, as shown in Fig. 4 and in dotted lines, Fig. 3, so that their weight will be transferred more directly upon the flanges of the beams. Instead of using the filling-blocks, which may be too costly for some buildings, they may be replaced by a filling of ashes or other suitable material between the upper parts of the supporting-blocks.

The flooring and ceiling or other finish can be applied to the upper and lower surfaces of our improved fireproof floor in any evident and suitable manner.

Having thus described our invention, we desire to secure by Letters Patent—

1. A fireproof floor, consisting of a series of supporting blocks or tiles, each of polygonal form having approximately parallel sides

at its lower part and converging upper sides, and a series of filling-blocks arranged to alternate with the supporting-blocks, and having their inclined surfaces in contact with the inclined surfaces of the supporting-blocks, substantially as set forth.

2. A fireproof floor, consisting of flanged beams, supporting-blocks arranged at an angle between said beams and provided with end recesses receiving the lower flanges thereof, said supporting-blocks being provided with converging upper surfaces, and a series of filling-blocks of triangular shape arranged

alternately between the supporting-blocks with their inclined surfaces in contact with the inclined surfaces of the supporting-blocks, substantially as set forth.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

ROBT. A. KINKELE.
CHAS. L. WOLFF.

Witnesses:

GEO. L. WHEELOCK,
GEORGE W. JAEKEL.