G. B. POST.

Fire-Proof Ceiling and Floor.

No. 163,248. Patented May 11, 1875.

Fig: 1.

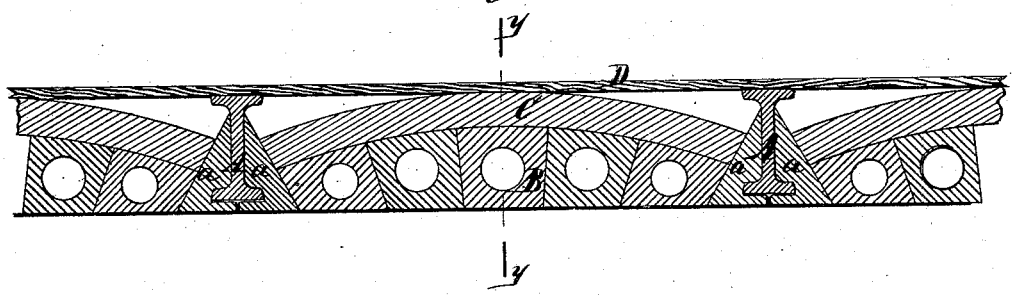
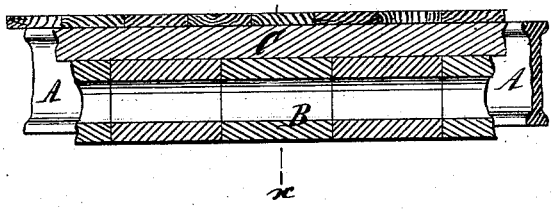



Fig: 2.




Witnesses:
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# UNITED STATES PATENT OFFICE.

GEORGE B. POST, OF BERNARDS, NEW JERSEY.

## IMPROVEMENT IN FIRE-PROOF CEILINGS AND FLOORS.

Specification forming part of Letters Patent No. **163,248**, dated May 11, 1875; application filed March 13, 1875.

*To all whom it may concern:*

Be it known that I, GEORGE B. POST, of Bernards, New Jersey, have invented a new and useful Improvement in Fire-Proof Buildings, of which the following is a specification:

This invention is illustrated in the accompanying drawing, in which Figure 1 represents a vertical section in the plan *x x*, Fig. 2. Fig. 2 is a similar section in the plan *y y*, Fig. 1.

Similar letters indicate corresponding parts.

This invention consists in combining a flat-bottomed hollow-tile arch and a solid arch of brick, concrete, or other strong material with the floor-beams of a building, both said arches being made to abut against skew-backs placed against the sides of the beams, so that the hollow-tile arch forms the support for the brick or cement arch during the formation of the latter, while the brick or cement arch, when finished, forms the support for the floor above, and at the same time, by the flat-bottomed hollow-tile arch, a level ceiling is obtained, and the beams, as well as the solid arch, are protected against fire.

In the drawing, the letters A A designate the floor-beams of a building, which may be of metal, wood, or any other suitable material. Against the sides of these floor-beams are placed skew-backs *a a*, which are, by preference, made of fire-clay or other fire-proof material, and which extend beneath the bottom surfaces of the beams, so as to protect the same against the action of fire. These skew-backs form the abutments for a hollow-tile arch, B, and for a solid arch, C. The hollow tiles which compose the arch B are composed of fire-clay or other fire-proof material, and they are made as light as possible, and in such a shape that the bottom of the arch B, when the same is completed, is flat or level. After the hollow-tile arch has been completed, I form on it the solid arch C, which is made of brick, concrete, or other strong material, and which during the time of its formation is supported by the arch B; but after said arch C has been completed it forms the support of the floor D overhead, the hollow-tile arch B simply serving as a filling, which, however, is not in any way connected to or suspended from the solid arch C.

By means of the hollow-tile arch a level ceiling is produced beneath the beams A, and at the same time said beams are protected against fire, and a permanent center is formed for the solid arch C, which carries and supports the real load.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of a flat-bottomed hollow-tile arch, B, and a solid arch, C, with each other, and with the floor-beams, the hollow-tile arch B forming a permanent center for the solid arch C, which supports the load above, while at the same time a level ceiling is produced, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 10th day of March, 1875.

GEO. B. POST. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.