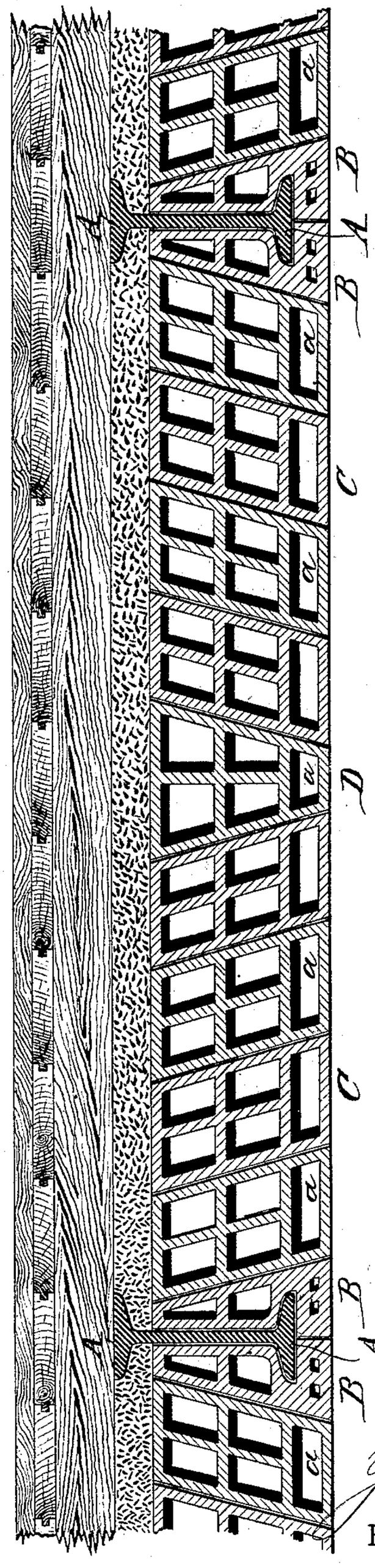
(No Model.)

J. E. WARE.

FIRE PROOF CEILING.

No. 277,814. Patented May 15, 1883.



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FIRE-PROOF CEILING.

SPECIFICATION forming part of Letters Patent No. 277,814, dated May 15, 1883.

Application filed February 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. WARE, of the city, county, and State of New York, have invented certain new and useful Improvements in Fire-Proof Ceilings, of which the following is a specification.

This invention has reference to an improved fire-proof ceiling, by which the iron floor-beams are fully protected against warping and injury by fire and a stronger and more durable flat arch formed between the beams; and the invention consists of the combination, with the iron floor-beams, of skewbacks that extend below the bottom of the beams and support a flat arch composed of hollow arch-blocks, which are extended downward to a level with the bottom and provided with hollow bottom portions below the arch portions proper, so as to form a protection to the body or main part of the arch.

The accompanying drawing represents a vertical transverse section of a fire-proof ceiling made according to my improved construction.

A in the drawing represents the I-shaped iron floor-beams, B the skewbacks, C the hollow rhombic arch-blocks, and D the key-blocks, which form together a so-called "flat-arch," that is well known in architecture. The skewbacks B are extended to a suitable distance below the bottom of the beams, and form a joint below the center of the same. The hollow arch-blocks C and the key-block D are extended to the same extent, so that their bottoms are on a level with the bottom of the skewbacks B. This is done by providing the arch-blocks C and D with hollow bottom cavities, *a a*, below the level of the base of the beams and main arch. This construction has the advantage that not only the iron floor-beams are fully protected against warping by the skewbacks, but also that whenever one or more of the hollow bottom portions of the arch-blocks are injured, either in forming and burning or by careless handling, during the construction of the building, the main portion of the arch will always remain intact and will not be weakened, as the broken and injured bottom parts of the arch-blocks are filled up solidly with plaster, so that the arch proper is strengthened and protected and the continuity of the ceiling preserved, as no portion thereof is liable to drop owing to flaws or weaknesses in the arch-blocks, as has been the case heretofore.

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

1. In fire-proof ceilings, the combination, with the floor-beams, of skewbacks extending around and meeting below the base of the beams, and of hollow arch-blocks that are provided with hollow bottom parts below the main portions, that form the body or main part of the arch, substantially as specified.

2. In fire-proof ceilings, the combination of skewbacks that extend around and meet below the base of the beams, and hollow arch-blocks that are provided with hollow bottom portions below their main portions, said bottom portions being on a level with the bottom portions of the skewback, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JAMES E. WARE.

Witnesses:

A. B. SMITH,

HALCYON M. CLOSE.