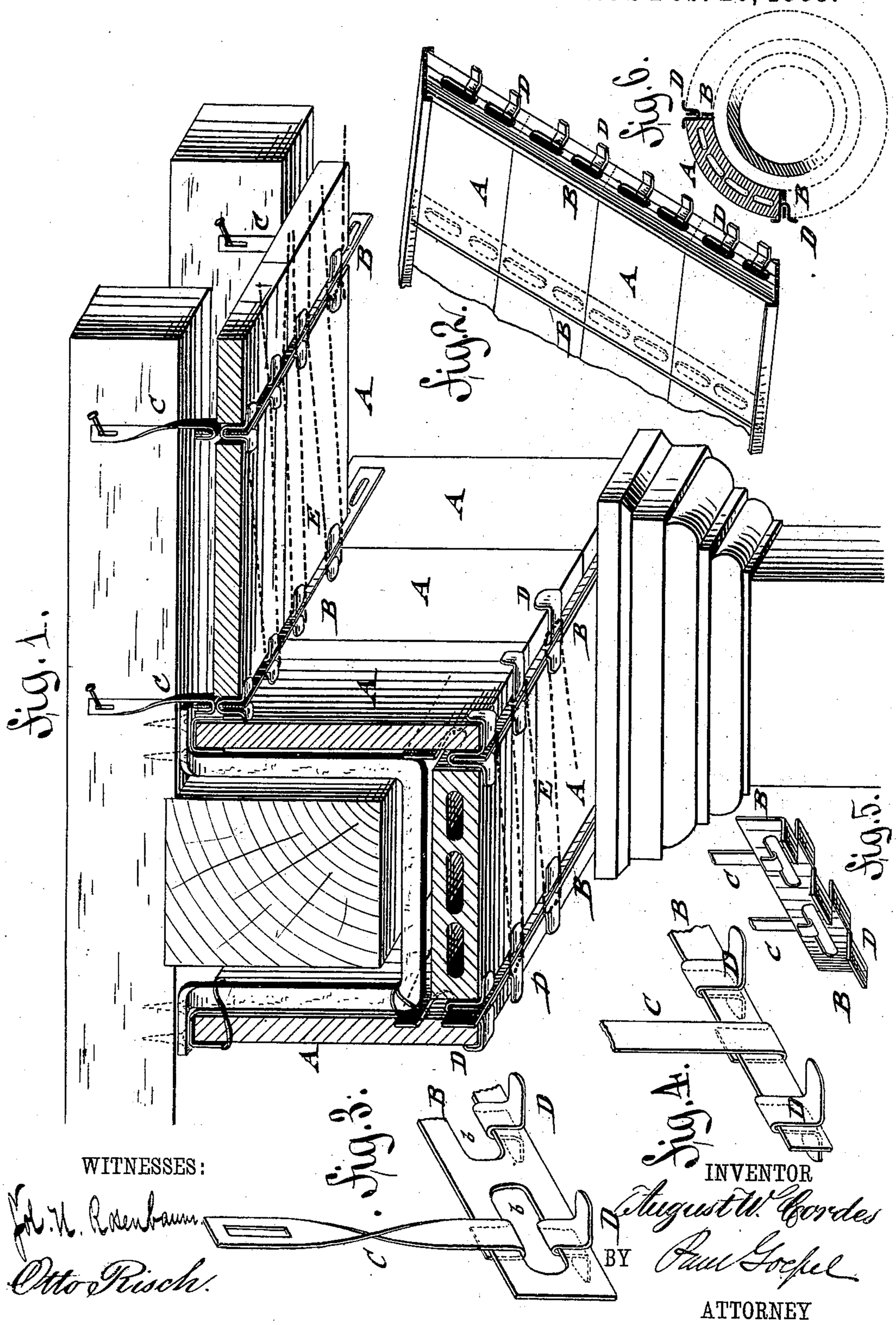
(No Model.)

A. W. CORDES.

FIRE PROOF CEILING.

No. 272,657. Patented Feb. 20, 1883.



WITNESSES:

F. H. Rosenbaum

Otto Risch.

INVENTOR

August W. Cordes

BY Paul Gossel

ATTORNEY

UNITED STATES PATENT OFFICE.

AUGUST W. CORDES, OF NEW YORK, N. Y.

FIRE-PROOF CEILING.

SPECIFICATION forming part of Letters Patent No. 272,657, dated February 20, 1883.

Application filed November 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, AUGUST W. CORDES, 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 relates to certain improvements in the fire-proof ceiling for which an application for Letters Patent has been filed by me heretofore, under date of June 6, 1882, and Serial No. 63,432, so that the construction is made simpler, cheaper, and stronger; and the invention consists of fire-proof plates or tiles supported by intermediate sheet-metal strips having openings, and by sheet-metal hooks suspended from said strips. The sheet-metal supporting-strips are suspended from the beams by hook-shaped straps, as will be more fully described hereinafter.

In the accompanying drawings, Figure 1 represents a perspective view of my improved fire-proof ceiling, shown as applied to the beams of a building. Fig. 2 is a perspective view of the wall of a Mansard roof built on the same principle. Figs. 3, 4, and 5 are detail views of the means by which the fire-proof plates are suspended, and Fig. 6 is a horizontal section of an iron column inclosed by fire-proof tiles.

Similar letters of reference indicate corresponding parts.

A in the drawings represents hollow or solid fire-proof plates or tiles. These plates or tiles are supported when they are used for ceilings, by means of interposed sheet-metal strips B, so as to protect the wooden or other beams, which strips are suspended transversely to the beams by hook-shaped sheet-metal strips C, as shown clearly in Fig. 1. The hook-shaped straps C are hung by the slotted upper ends to nails of the beams, and applied by their lower hook-shaped ends to openings *b* of the sheet-metal strips B, as shown in Fig. 3, or to the lower part of the strips, as shown in Fig. 4. The plates or tiles A rest upon detachable bracket-hooks D, which are bent of sheet metal, with a U-shaped middle part and lateral extensions or seats. The pieces struck out from the strips B in forming the openings *b* can be utilized for the hooks D. These hooks are applied to the strips B through the openings of the same, as shown in Fig. 3, or so as to ride the top of the strips, as shown in Fig. 4; or they may be made integral with the strips, so as to project at opposite sides of the same, as shown in Fig. 5. To secure stiffness to the entire ceiling, the bracket-hooks are connected by means of wire E, which forms a kind of lacing below the plates, as shown in Fig. 1. By this construction the plates or tiles are suspended at some distance below the beams, also independent of the distance between the beams and of the shrinkage or warping of the same. The perforated strips B, when used for hollow tiles, are rigidly embedded between the meeting edges by means of the mortar, which passes through the openings in the strips from one tile to the other. The same construction may be used for the interior walls of Mansard roofs, partitions, for protecting iron columns, and for other purposes, the same being simply modified to suit the circumstances. In Mansard roofs hollow plates or tiles of porous terra-cotta are used, which make the roof fire-proof and reduce the weight and expense of the same. The porous terra-cotta allows the direct driving in of nails used for applying the covering-slates.

Partition-walls constructed in this manner have the advantage of taking up but little space and being very strong and durable. The construction is applicable to the protection of wooden beams in buildings already erected, as well as to those of new buildings. In partition-walls the supporting-hooks may be dispensed with, though it is preferable to use them, so as to give the required degree of strength to the wall, which is still more increased when the hooks are connected by wire lacing, as before described.

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

1. As an improvement in fire-proof ceilings and walls, the combination of fire-proof plates or tiles, with sheet-metal strips interposed between the meeting edges of the plates or tiles, and provided with laterally-extending bracket-hooks for supporting the tiles, and with suspension-straps, the upper ends of which are applied to the beams and the lower ends to the strips, substantially as set forth.

2. As an improvement in fire-proof ceilings and walls, the combination of fire-proof plates or tiles, interposed sheet-metal strips carrying bracket-hooks, suspension-straps applied to the beams and strips, and a wire lacing that

extends around the bracket-hooks and across the plates, substantially as set forth.

3. As an improvement in fire-proof ceilings and walls, the combination of hollow fire-proof plates or tiles, interposed sheet-metal strips having openings for the passage of the mortar and suitable bracket-hooks, and means for laterally connecting the strips and hooks, substantially as set forth.

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

AUGUST W. CORDES.

Witnesses:
PAUL GOEPEL,
SIDNEY MANN.