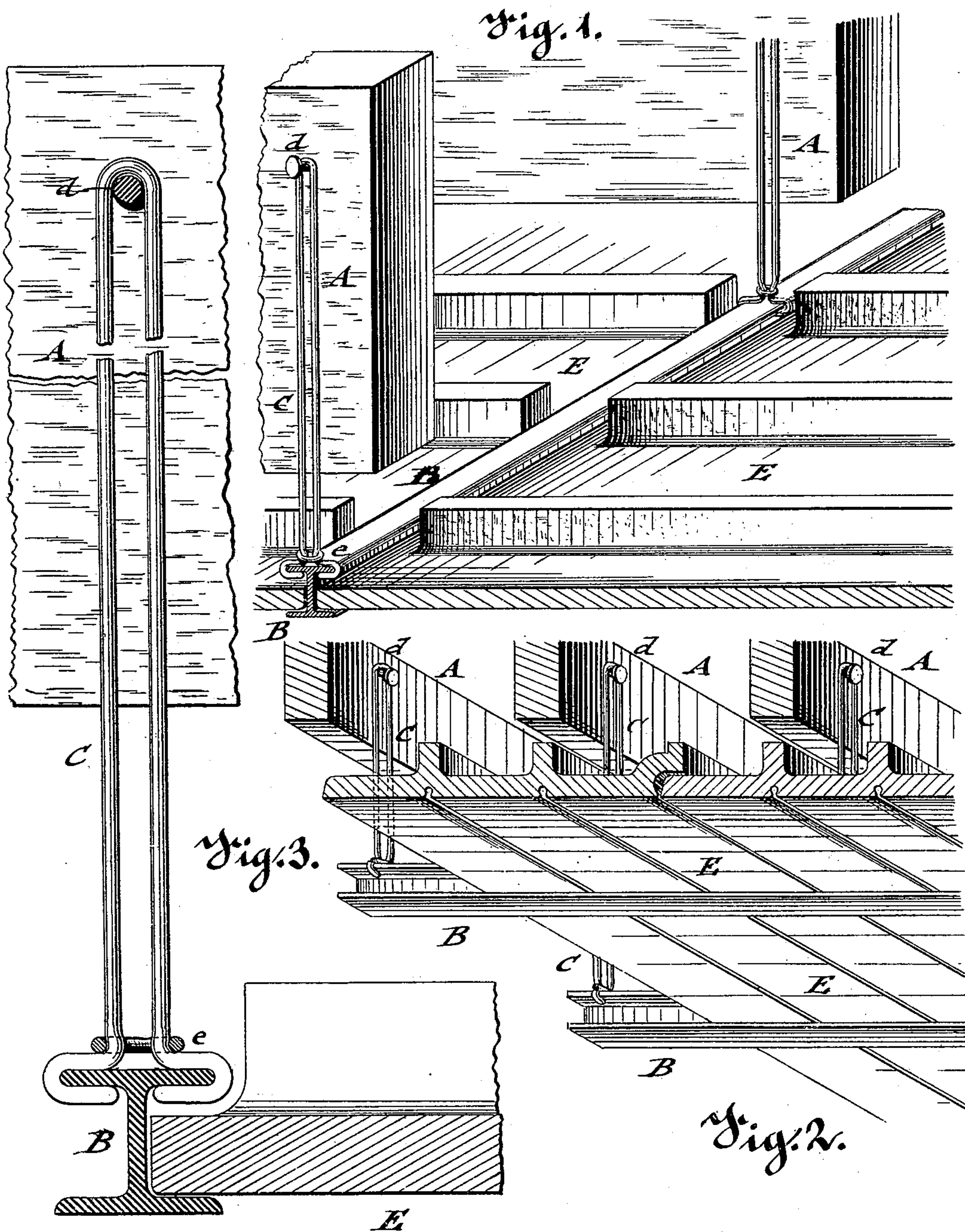


(No Model.)

A. W. CORDES.
FIRE PROOF CEILING.

No. 275,151.

Patented Apr. 3, 1883.



WITNESSES:

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

FIRE-PROOF CEILING.

SPECIFICATION forming part of Letters Patent No. 275,151, dated April 3, 1883.

Application filed June 6, 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 has reference to an improved fire-proof ceiling which is to be used in connection with wooden floor-beams, it being so constructed that the fire-proof plates forming the ceiling are suspended independently of the distance of the beams from each other, so that a uniform size of plates can be used, which could not be done heretofore, as the fire-proof plates forming the ceiling have to be specially made for the distance between the beams, and even then do not always furnish a good fit, owing to irregularities in the laying of the beams or in the shape of the plates.

My invention consists in suspending the fire-proof plates which form the ceiling, not directly from the floor-beams, but supporting them on intermediate I-shaped bearing-rails, which are suspended transversely to the floor-beams by wire clamps or other suspension devices applied to strong nails of the beams.

In the accompanying drawings, Figure 1 represents a perspective view of my improved fire-proof ceiling, shown as suspended from the floor-beams, and seen from above. Fig. 2 is a perspective view of the ceiling, seen from below; and Fig. 3 is a detail side view, partly in section, through one of the bearing-rails, showing the method of suspending the ceiling from the beams.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the floor-beams of a building, from which the fire-proof ceiling is suspended at some distance below the bottom surface of the beams by bearing-rails B, of I-shaped cross-section. In Fig. 3 one of the bearing-rails B is shown in detail section, said rails being preferably rolled of wrought-iron. The bearing-rails B are hung, transversely to the beams, to the lower ends of wire suspension-clamps C, of suitable length, which are attached to the beam by nails *d*, as shown in Figs. 1 and 3. The clamps C are made of a loop-shaped upper part, that readily slides along the fastening-nail *d*, and of laterally-bent lower ends that take hold of

the upper rail ends. The wire suspension-clamps are firmly secured to the bearing-rails B by sliding links *e*, which, when being moved up along the clamps C, allow them to spring apart, so as to be readily removed from the rails. On the lower parts of the bearing-rails B are supported the fire-proof plates E, which form the ceiling, and which are made of fire-clay or other suitable fire-proof material, and provided with strengthening and overlapping ribs at the upper side and dovetailed grooves at the under side for the plastering. Over the fire-proof plates E and the rails B is preferably laid a layer of cement, whereby the connection of the same is rendered more rigid.

My improved construction of fire-proof ceiling has the following advantages:

First. It protects the floor-beams absolutely against fire, as they are entirely separated from and protected by the fire-proof plates, and prevented from being charred by the filling of ashes between the ceiling and the beams.

Second. Only one size of fire-proof plates is required for all ceilings, whatever the distance of the floor-beams from each other, while the same suspension device is used throughout.

Third. After the ceiling is plastered the floor can be laid on the beams and nailed down without interfering in the least with the ceiling below, as even the strongest blows have no injurious effect upon the ceiling.

Fourth. The ceiling can be quickly suspended at an accurate level by simply running horizontal guide-strips along opposite walls, and placing on the same a supporting-frame at a height at which the plates are to be suspended. On this frame is placed a row of plates, which are connected at the edges by the I-shaped bearing-rails, that are then suspended by the wire clamps from the beam, after which the frame is moved forward for the next row of plates, and so on.

Fifth. As the ceiling is freely suspended from the beams, the shrinkage or warping of the beams has no influence on the ceiling and produces no cracks or inequalities therein, especially as the loops of the clamps move up along the nails whenever a settling in downward direction takes place.

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

1. The combination of the wooden floor-

beams A, bearing-rails B, suspension devices C, applied to the side of the beams near the upper part thereof and to the bearing-rails, and fire-proof plates supported by the bearing-
5 rails, substantially as set forth.

2. The combination of the floor-beams A A, I-shaped bearing-rails B B, wire suspension-clamps C C, hung to nails *d* of the clamps and applied by links *e* to the rails, and fire-proof
10 plates E, 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,
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