J. GILBERT.

FIRE-PROOF CEILING.

No. 191,135. Patented May 22, 1877.

Fig. 1.

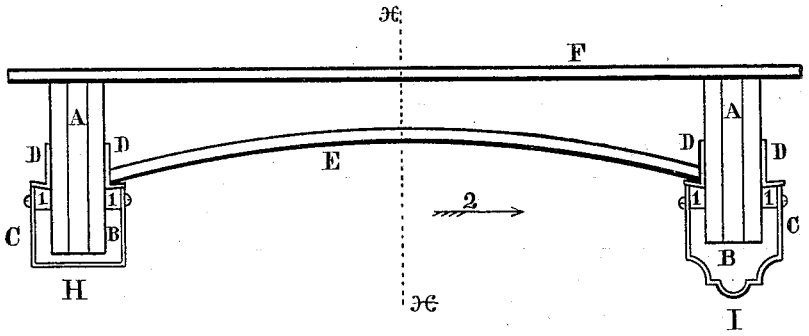
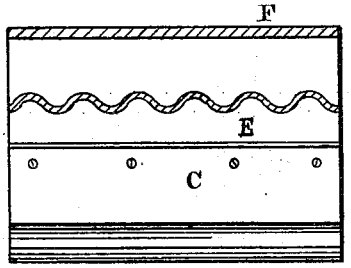


Fig. 2.



Attest:

J. H. Elliott

Ed. O. Gardner

Inventor:

Joseph Gilbert,

By G. L. Chapin

Atty.

UNITED STATES PATENT OFFICE.

JOSEPH GILBERT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN FIRE-PROOF CEILINGS.

Specification forming part of Letters Patent No. **191,135**, dated May 22, 1877; application filed November 7, 1876.

To all whom it may concern:

Be it known that I, JOSEPH GILBERT, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Fire-Proof Ceilings, of which the following is a specification:

The object of the present invention is to provide means whereby wooden joists in buildings may be protected from fire and buildings rendered more fire-proof, while at the same time the ceiling may have a neat and ornamental appearance.

The nature of the invention consists in the use of three or more joists bolted together and placed in spans of about four feet, and provided with angle-irons running longitudinally on them, for supporting corrugated iron arches. The angle-irons are supported by wooden or fire-proof strips, beneath which, and on the lower parts of the joists, is placed lath and plaster, or concrete, and over the latter is placed a thin iron casing, whereby the joists are excluded from fire, as the whole is hereinafter fully described and shown.

In the drawings, Figure 1 is a transverse section of two trebled wooden joists and a section of my improvement; Fig. 2, a longitudinal sectional elevation thereof, taken on line *x*, Fig. 1.

A A represent two sections of trebled joists, which are firmly secured together by any ordinary means—as, for instance, by bolts—and have attached longitudinally to their sides, near the lower edges, angle-irons D, which are firmly secured by bolts or nails, and support the ends of corrugated iron arches E. Beneath these angle-irons are fastened to the joists A A strips 1, which serve to support said irons and form straight edges for putting on the plastering or concrete B, which is placed over the lower parts of the treble joists A A as a protection against fire. Covering this concrete or plastering B is a sheet-metal casing, C, which is fastened to the joists, and may be plain, as at H, or ornamental, as at I. Other forms of ornament may be used corresponding to the style of other parts of the building, or a ceiling formed of lath and plaster may be attached to the joists A after they have been protected, as shown at H, Fig. 1. The top of the arches, between the joists, can be filled with concrete or other fire-proof substance, the same as when iron girders are used, and a tile floor may be laid thereon.

This improvement is designed to be used where iron girders are considered too expensive, and yet where it is desired that the building should be secure against fire.

I claim and desire to secure by Letters Patent of the United States—

The joists A A, angle-irons D, strips 1 1, plaster or concrete B, corrugated arch E, and casing C, as and for the purpose set forth.

JOSEPH GILBERT.

Witnesses:
JOHN H. ELLIOTT,
G. L. CHAPIN.