

(No Model.)

O. W. NORCROSS.
FIRE PROOF FLOOR.

No. 429,770.

Patented June 10, 1890.

FIG. 1.

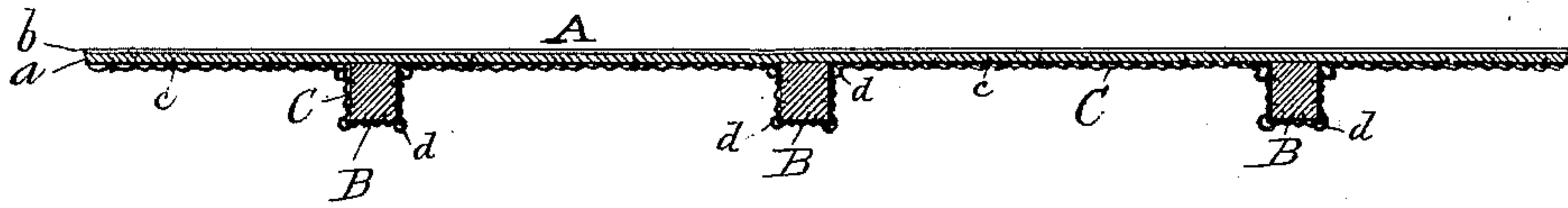
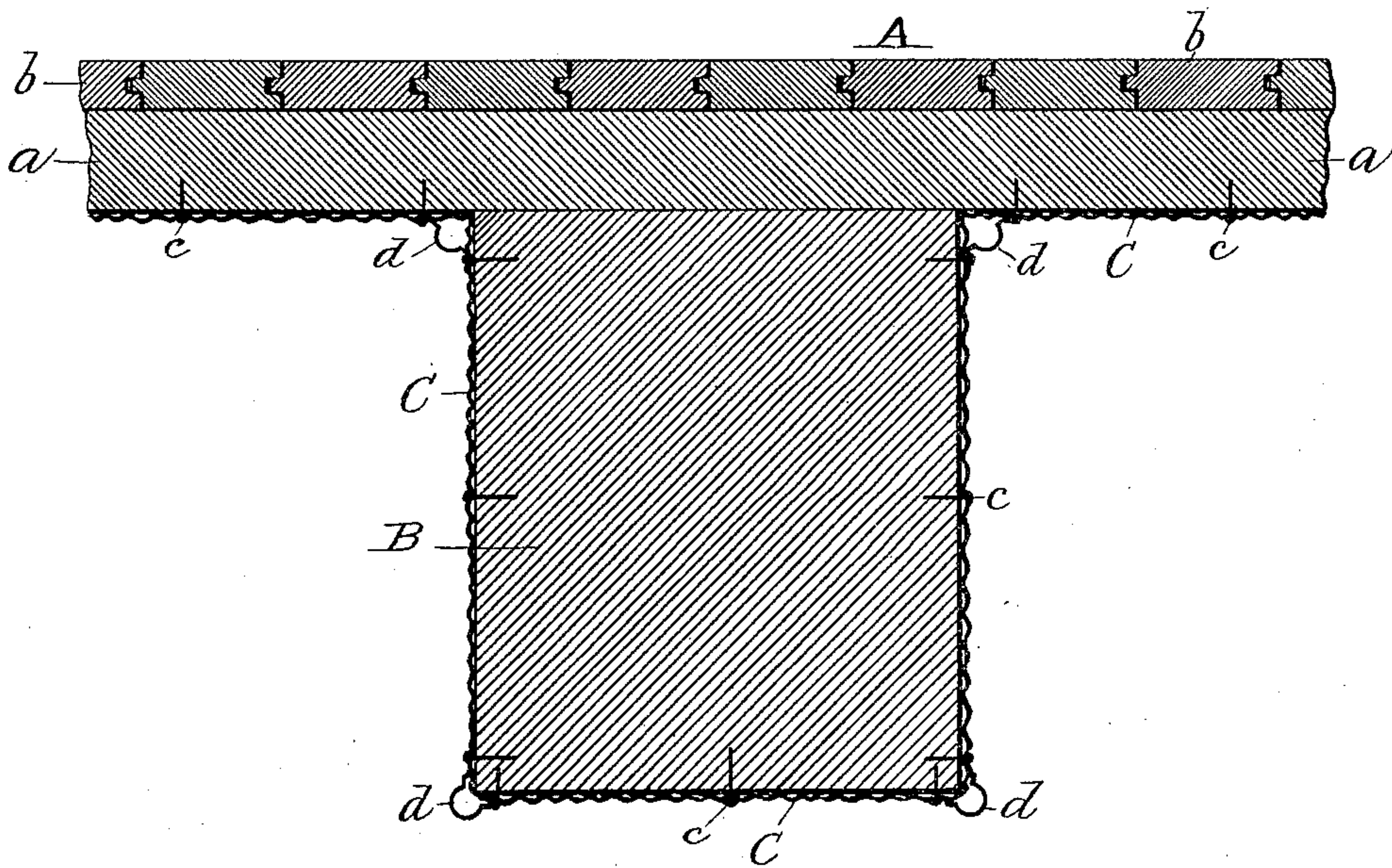


FIG. 2.



Witnesses;

Walter B. Nourse.
G. Forrest Hixon.

Inventor;

Orlando W. Norcross.

By A. A. Barker. Atty.

UNITED STATES PATENT OFFICE.

ORLANDO W. NORCROSS, OF WORCESTER, MASSACHUSETTS.

FIRE-PROOF FLOOR.

SPECIFICATION forming part of Letters Patent No. 429,770, dated June 10, 1890.

Application filed March 5, 1890. Serial No. 342,695. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO W. NORCROSS, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Fire-Proof Floors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a section of flooring made in accordance with my invention, and Fig. 2 represents upon an enlarged scale part of the flooring shown in Fig. 1.

My invention relates to what is commonly known as "slow-burning construction," its purpose when applied to practice being to retard rather than to effectually stop a fire in case of a general conflagration, and thus prevent the collapse of the building, with the accompanying disastrous results.

Although my improved flooring is not wholly proof against fire under the above circumstances, it is sufficiently so to arrest the progress of an ordinary fire.

Said invention consists of a floor, preferably made with its under flooring of plank and the supporting-timbers thereof of sufficient size in cross-section to admit of their being placed with safety at a considerable distance apart, in combination with a plate or plates of corrugated sheet metal secured to both the flooring and timbers, so as to form a complete fire-proof casing or cover over the whole under surface of the floor, as hereinafter more fully specified.

In order that others may better understand the nature and purpose of my said invention, I will now proceed to describe it more in detail.

In the drawings, A represents the flooring, preferably consisting of planking *a* underneath, covered on top with ordinary floorboards *b*, and B are the supporting-timbers, which are designed to be of sufficient size in cross-section to admit of their being placed about six to eight feet apart in practice, the size and distance apart of course varying according to the weight they are to sustain. The under side of said planking *a* between the timbers B, as well as the bottoms and

sides of the timbers, is inclosed completely with a covering of corrugated sheet metal C, preferably put on in sections and securely fastened in position by suitable nails or screws *c*. Each corner is also preferably provided with suitable metal moldings *d* for the purpose of ornamentation, as well as to more effectually exclude the fire from the wood-work at said points.

A building whose floors are constructed in accordance with my invention is comparatively safe against fire working its way up through the same where ordinary precautions are taken to suppress said fire before it gets under full headway, and the cost incurred in obtaining said result is not large, while at the same time the appearance of the ceiling is enhanced rather than detracted from by the use of said metal covering, especially when painted or otherwise similarly ornamented. Furthermore, by employing large supporting-timbers in place of the usual floor-joists the fire gains headway less rapidly, and the danger of the floor collapsing is correspondingly reduced—as, for example, assuming that a fire continues to burn a sufficient length of time to burn two to three inches into the wood-work, the usual thickness of floor-joists, the floor must necessarily give way, whereas if the large timbering were used, equivalent to four or more of said joists, sufficient wood will still remain intact to support the floor in the majority of cases. Said wood construction I of course do not claim. Neither do I claim, broadly, the use of corrugated sheet metal as a protection against fire, the same being in common use on the walls of buildings and similar places for a like purpose. In view of this fact I limit my invention to the specific construction and arrangement herein specified, and pointed out in the claims.

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

1. In slow-burning construction, a floor preferably made with the under flooring of plank and the supporting-timbers thereof of sufficient size in cross-section to admit of their being placed with safety at a considerable distance apart, in combination with a casing or cover of corrugated sheet metal extending

over the whole under surface of the floor and fastened to both said flooring and supporting-timbers, substantially as and for the purpose set forth.

- 5 2. In slow-burning construction, a floor preferably made with the under flooring of plank and the supporting-timbers thereof of sufficient size in cross-section to admit of their being placed with safety at a considerable
10 distance apart, in combination with a plate or plates of corrugated sheet metal secured to

both the flooring and timbers, so as to form a complete fire-proof casing or cover over the whole under surface of the floor, and suitable metal moldings secured over the corners of
15 said casing or cover, substantially as and for the purpose set forth.

ORLANDO W. NORCROSS.

Witnesses:

A. A. BARKER,
W. B. NOURSE.