

(No Model.)

J. B. CAREY.
Railway Crossings.

No. 229,865.

Patented July 13, 1880.

Fig. 1.

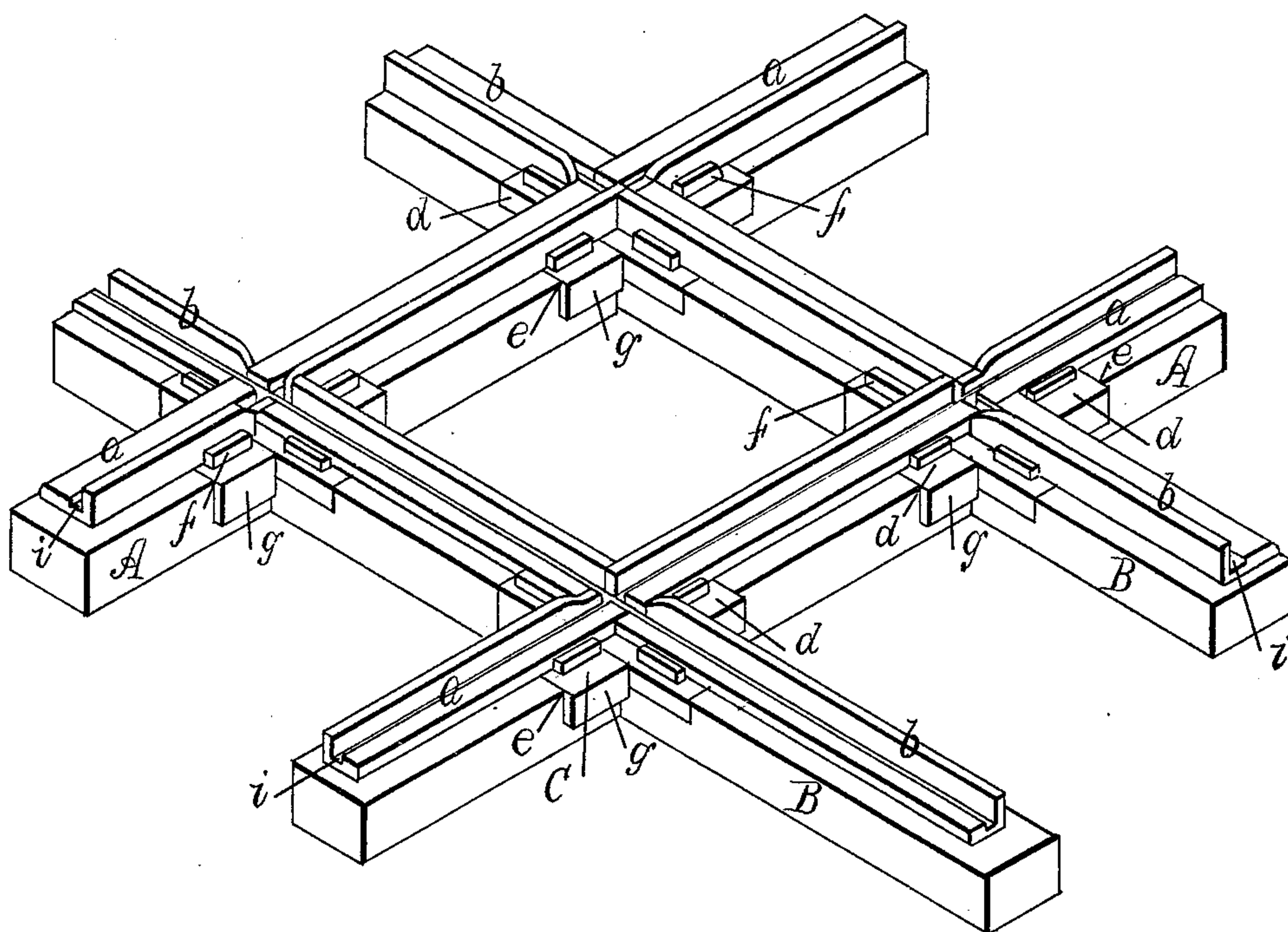
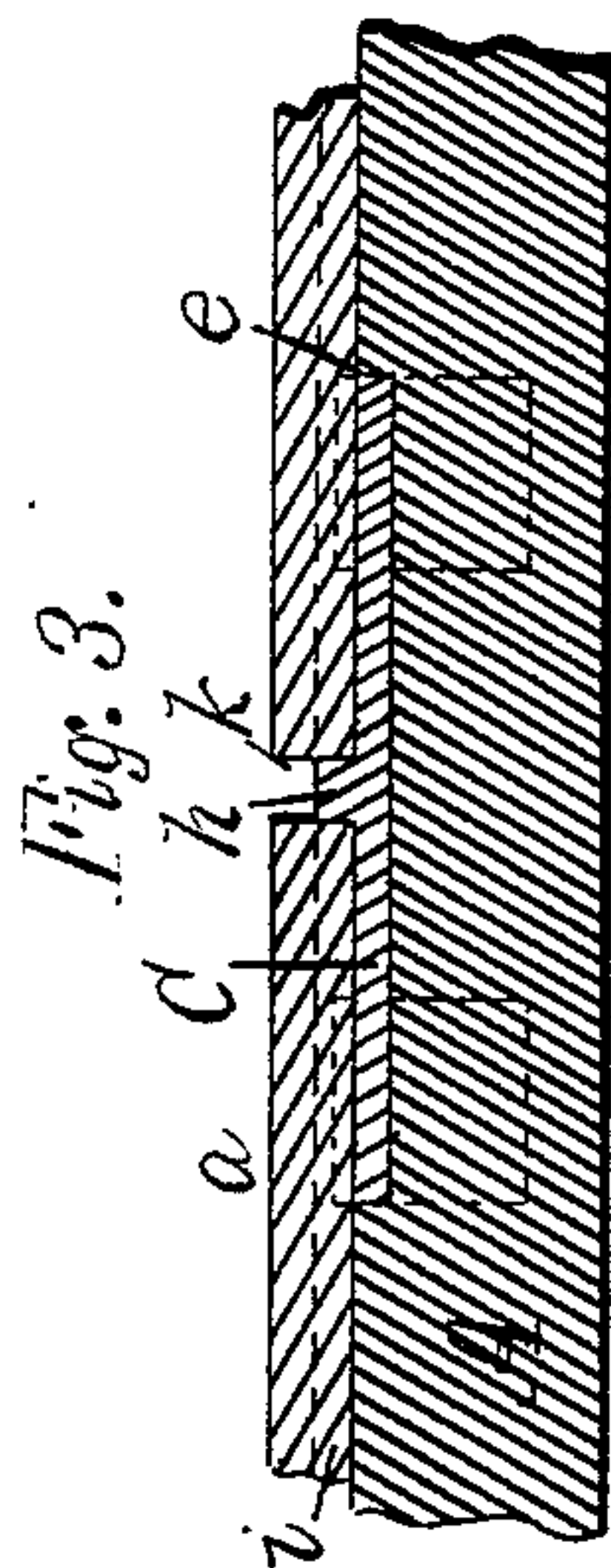
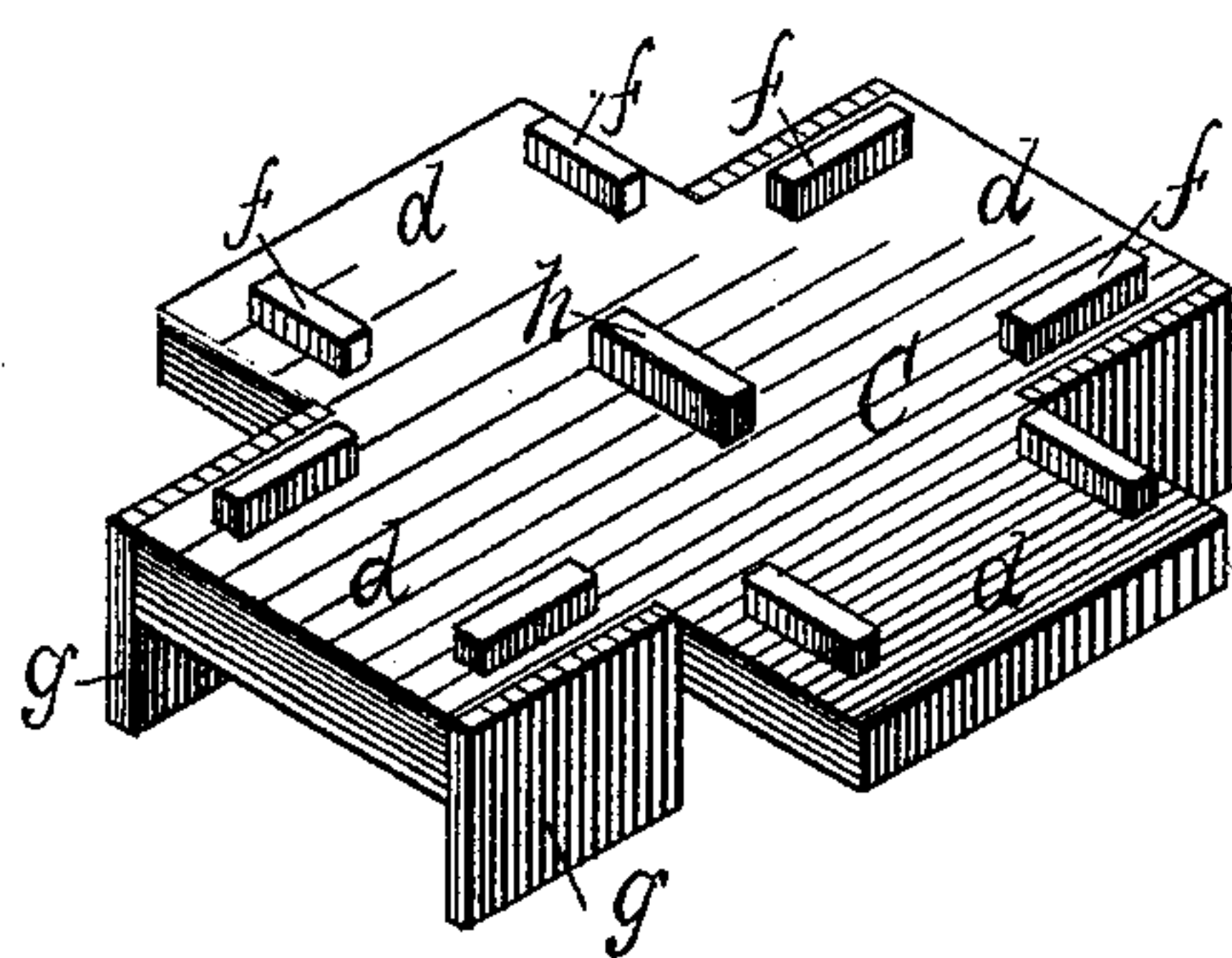


Fig. 2.



Witnesses.
Wm T. Andrews
P. S. Simpson.

Inventor.
John B. Carey.

UNITED STATES PATENT OFFICE.

JOHN B. CAREY, OF BOSTON, MASSACHUSETTS.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 229,865, dated July 13, 1880.

Application filed June 4, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CAREY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Railway-Crossings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to devices for connecting and bracing bed-timbers and rails at the intersection of lines of railway; and the nature of the said invention consists in the peculiar construction of the cruciform chairs employed for such purposes and their combination with the bed-timbers and rails, substantially as hereinafter set forth and claimed.

The drawings accompanying this specification represent, in Figure 1, a perspective view of a railway-crossing of two single tracks containing my invention. Fig. 2 is a like view of one of the chairs, and Fig. 3 a section of the chair and rails.

In the above-named drawings I have represented a crossing consisting of two single lines of railway intersecting each other at right angles; but my invention is applicable to railways having two or more tracks and crossing each other obliquely, and my invention, while represented as applied to a horse-railway track, is applicable to steam-railways with equal benefit.

A A B B represent the side timbers or stringers of two intersecting horse-railway tracks, the rails of such tracks being shown at *a a b b*, respectively. At each point of intersection of the timbers A A B B, I employ a chair, C, composed of a flat plate in the form of a Maltese cross, the central portion and each arm of such cross C *d d d d* being of a width equal to that of the stringers, the central portion covering the point of intersection of the stringers and the arms being let into rabbet *e*, &c., in the adjacent upper faces of the stringers, and being preferably securely bolted thereto.

Each arm *d* has side ledges, *f*, to provide a groove to receive the ends of a rail, and each arm, or so many of them as may be deemed advisable, has a vertical ear, *g*, depending from it to overlap the contiguous face of a stringer and aid in strengthening the joint between the stringers.

In addition to the ledges *f*, &c., before named, each chair has a ledge, *h*, crossing it at right angles, the upper surface of this ledge being flush with the bottom of the flange-groove *i* in the rail, and being so situated as to coincide with the flange-groove of each rail of one line of track, and serving to separate the ends of the rails of the other track sufficiently to form an intervening groove, *k*, which is a continuation of the groove of the rails. (See Fig. 3.)

In laying a crossing in accordance with my invention the stringers are first jointed and rabbeted and then laid in place. The chairs are now applied, as shown in the drawings, and the rails laid in place. In the present instance the intermediate ledge, *h*, is at right angles to the longest plane of the rails *a a*; hence it separates the meeting ends of these rails and provides the channel *k*, before named, to permit of passage of the flanges of the wheels which may be traveling upon the rails *b b*, such ledge *h* and channel *k* being coincident with the flange-grooves *i* of said rails *b b*. After the chairs have been applied and secured to the stringers, as stated, a short piece of rail is laid upon the stringers B, and between and abutting at opposite ends against the ledges *h h*, and the main rails of the track are then laid with their ends also abutting against the ledges. A short piece of rail is now laid upon each stringer A, and between and abutting at opposite ends against the inner faces of the rails *a*; and, finally, the main rails of this track are laid with their ends abutting, respectively, against the outer faces or edges of the rails *a*.

The chairs which constitute the subject of my invention are comparatively light, cheap, and easily transported, and in laying a crossing with them only the ordinary rail need be used.

I claim—

1. A chair for covering the point of inter-

section of the timbers of a railway-crossing, having channels to receive the ends of the rails of the various tracks, and with a ledge to separate the ends of the rails of one track to provide a flangeway for the wheels, substantially as explained.

5 2. A cross-shaped chair provided with pendent ears for embracing either or both sets of timbers, substantially as set forth.

10 3. In combination with recessed timbers A

B, the chairs C, countersunk in said timbers, and provided with ears or flanges *g*, for embracing said timbers and binding them in place, substantially as set forth.

In testimony whereof I affix my signature in 15 presence of two witnesses.

JOHN B. CAREY.

Witnesses:

H. E. LODGE,

WM. T. ANDREWS.