

(No Model.)

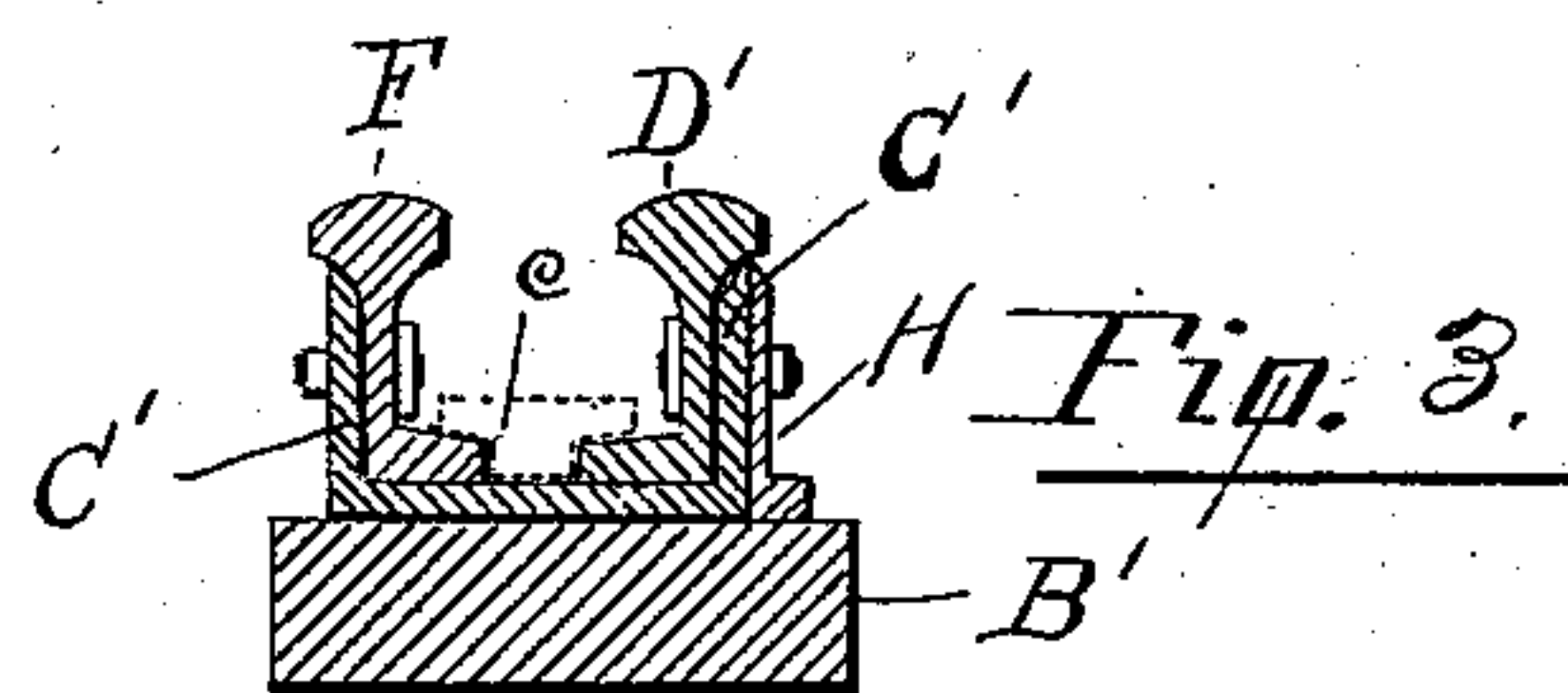
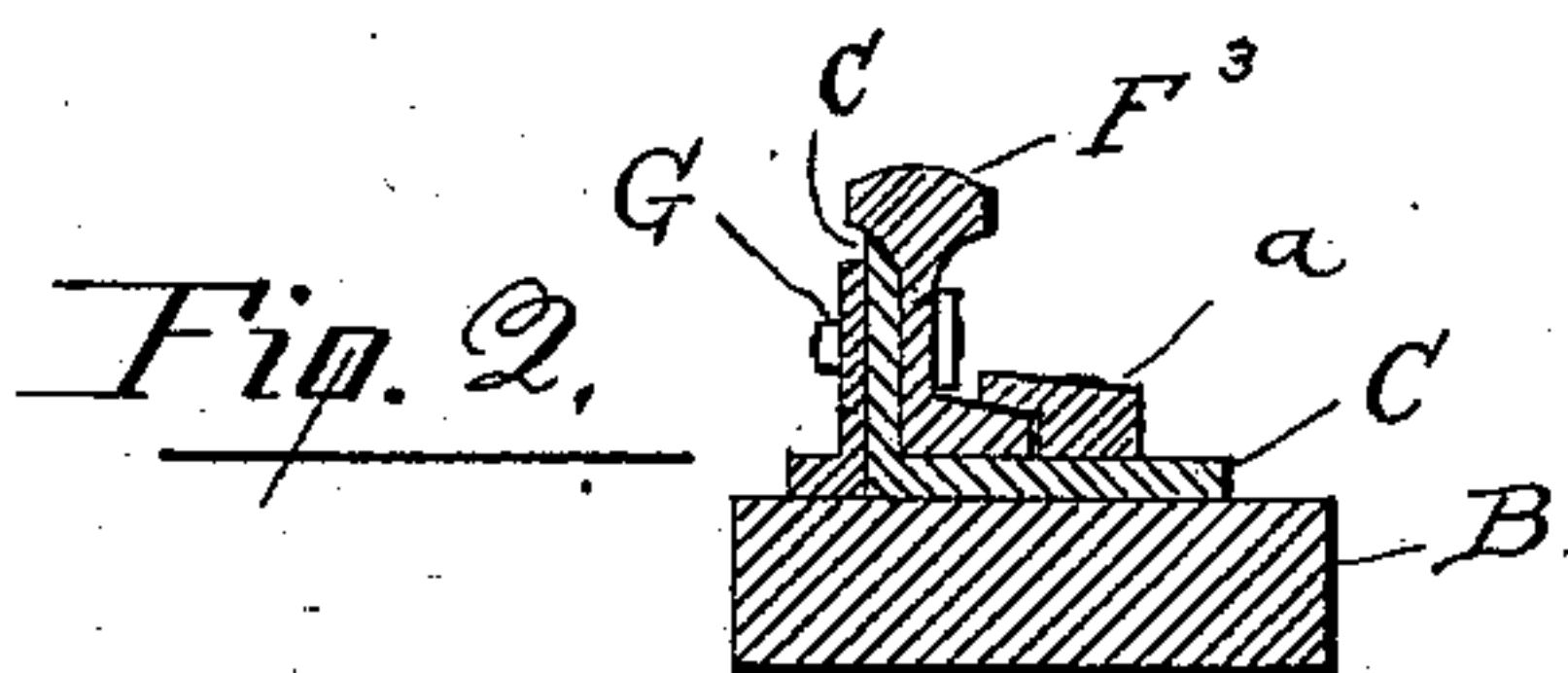
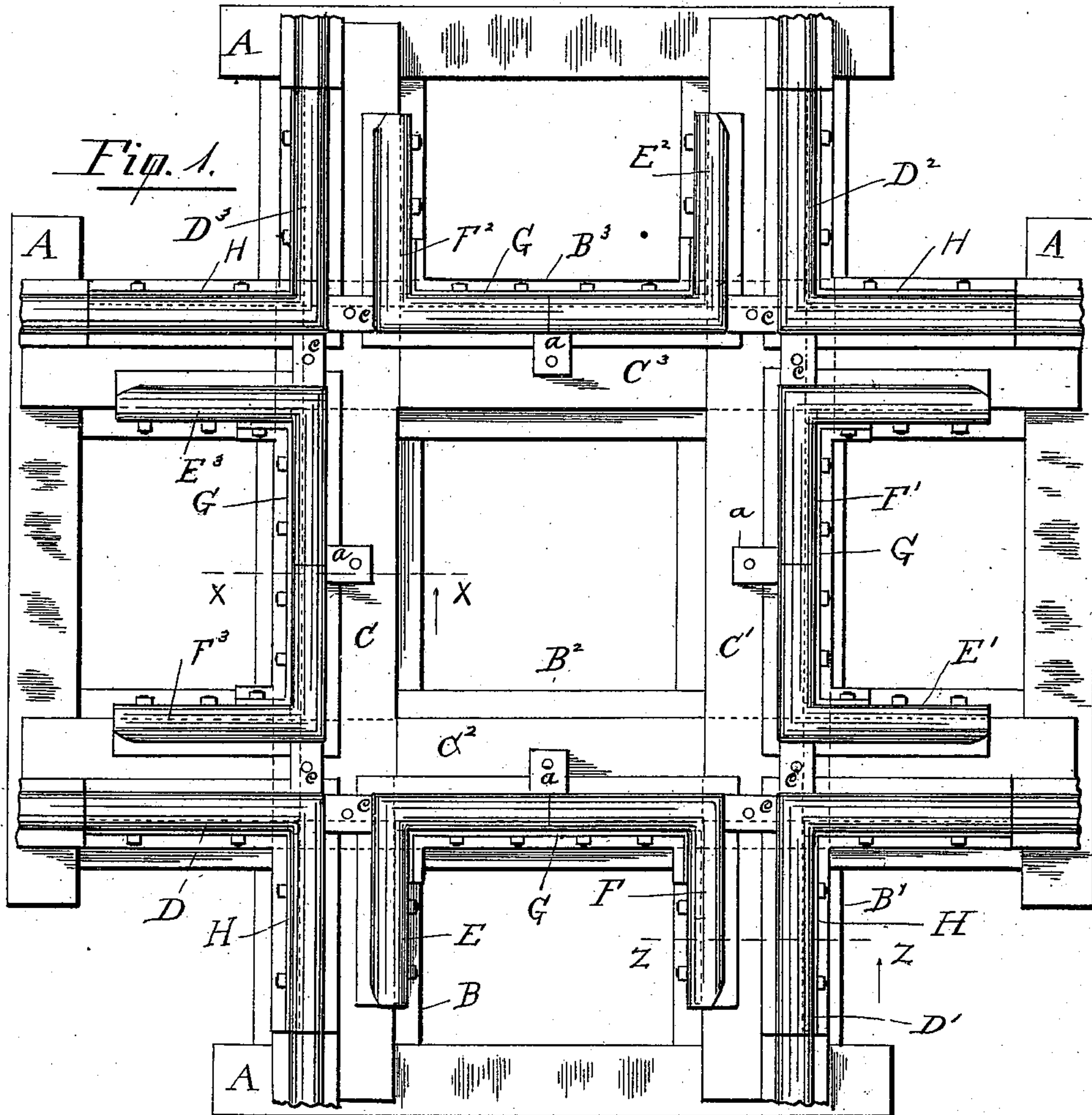
2 Sheets—Sheet 1.

W. H. & R. T. SHANNON.

RAILROAD CROSSING.

No. 376,756.

Patented Jan. 24, 1888.



Witnesses,  
Elihu B. Howe,  
Charles H. Wymann.

Inventors,  
William H. Shannon,  
and Robert T. Shannon  
By Joshua B. Webster, Atty.

(No Model.)

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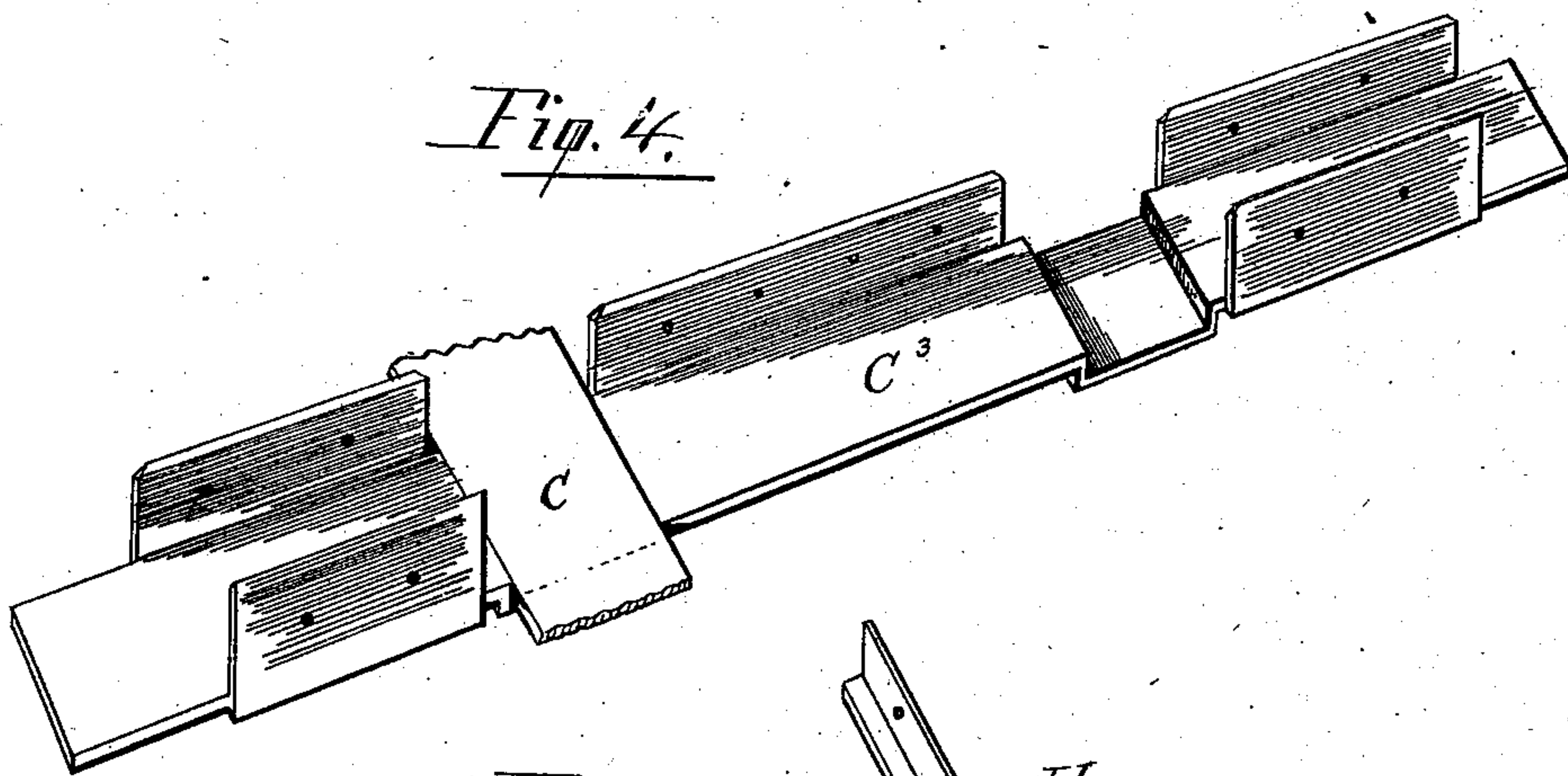
2 Sheets—Sheet 2.

RAILROAD CROSSING.

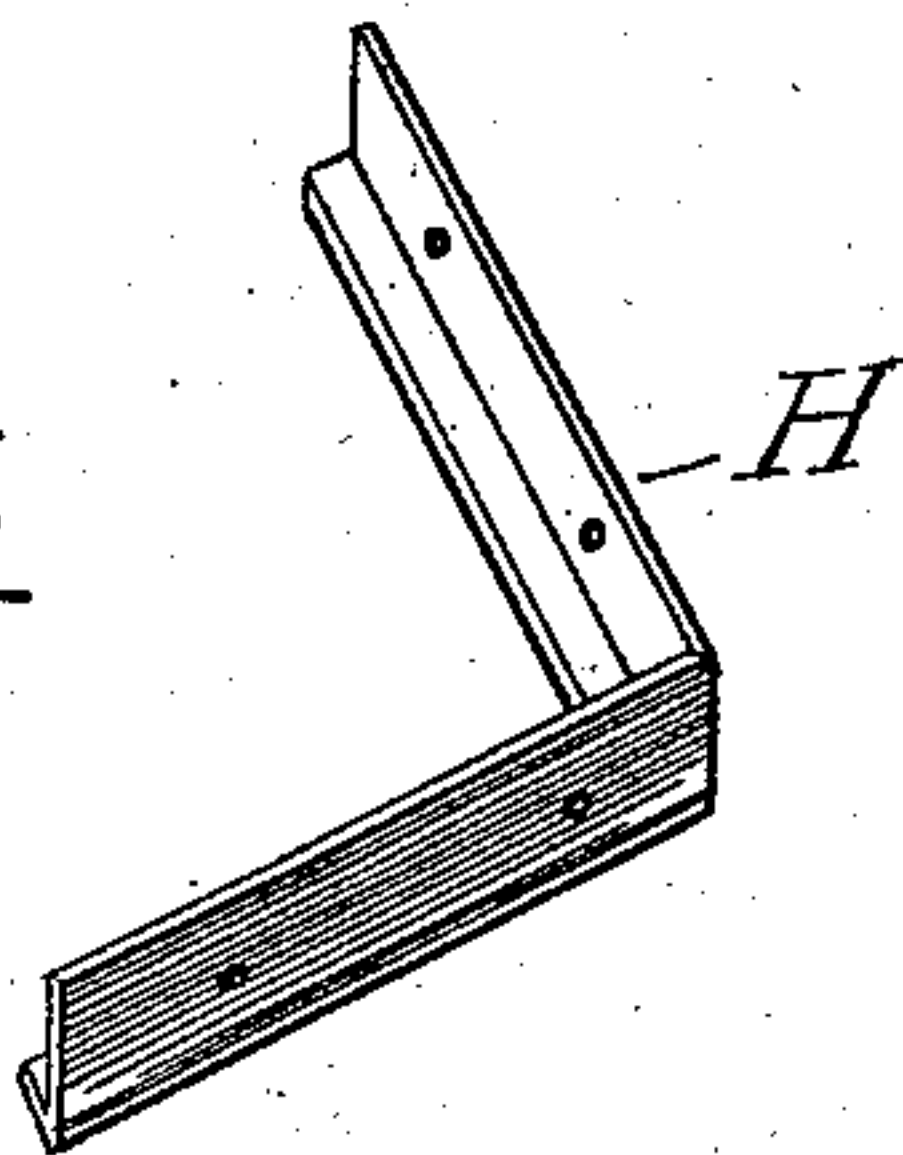
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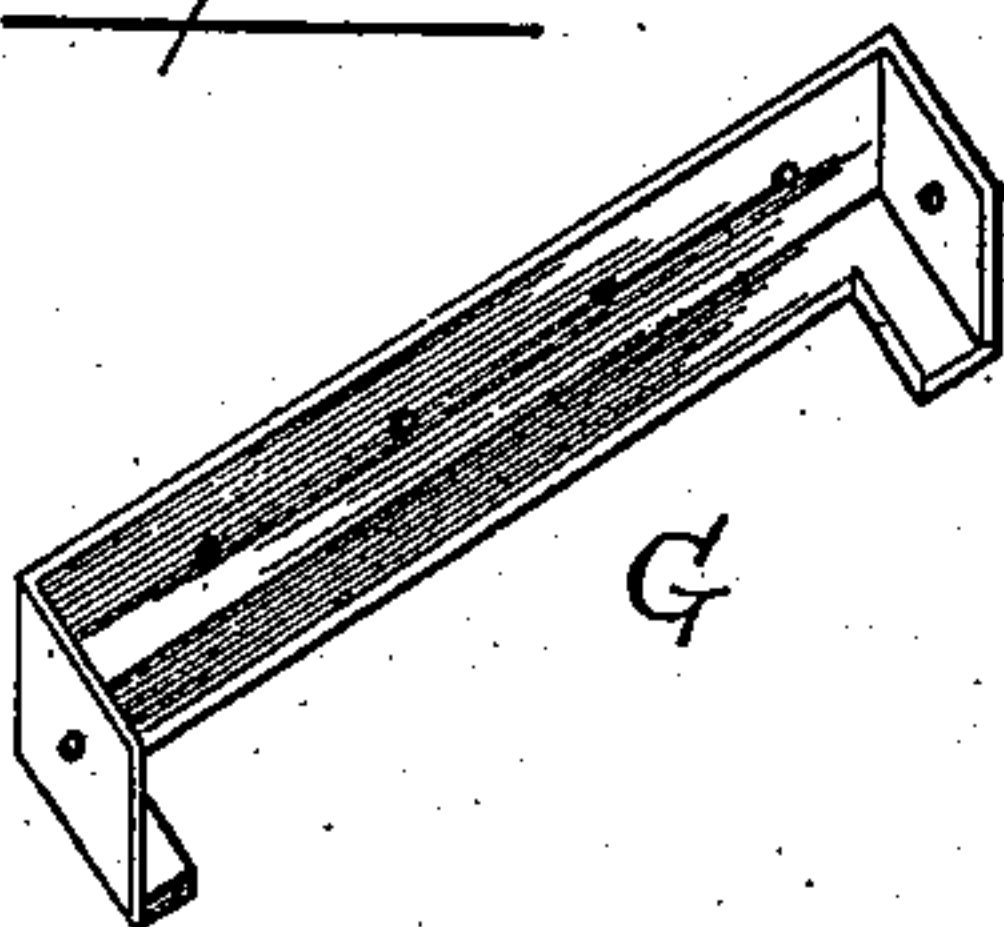
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

WILLIAM H. SHANNON AND ROBERT T. SHANNON, OF STOCKTON,  
CALIFORNIA.

## RAILROAD-CROSSING.

SPECIFICATION forming part of Letters Patent No. 376,756, dated January 24, 1888.

Application filed September 30, 1887. Serial No. 251,143. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM H. SHANNON and ROBERT T. SHANNON, citizens of the United States, residing at Stockton, in the county of San Joaquin, State of California, have invented certain new and useful Improvements in Railroad-Crossings, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a plan view of a railroad crossing, showing our invention. Fig. 2 is a section of the same through line *xx*, Fig. 1, and applies to any equivalent position of Fig. 1. Fig. 3 is a section through line *zz*, Fig. 1, and applies to any equivalent position of Fig. 1. Fig. 4 is a perspective of one of the bed-plates. Fig. 5 is a perspective of an angular connecting-plate. Fig. 6 is a perspective of a bench connecting-plate.

The object of our invention is to render the removing of broken and worn rails of railway-crossings and replacing of such with sound rails more expeditious and less expensive than the methods now in vogue. This we accomplish by connecting the wearing-ways to the bed-timbers by means of bed-plates and such needful devices for rendering such connections able to bear great strain, as will be hereinafter described, and pointed out in the claims.

The trackways may run toward each other at a right or any other suitable angle. In the drawings we have represented the trackways crossing at an exact right angle.

In order to more particularly designate each way, let *B* and *B'* represent the bed-timbers of one way, and *B<sup>2</sup>* and *B<sup>3</sup>* the bed-timbers of the other way, such timbers resting upon the road-bed.

*A* represents the ordinary ties of the continuous railway. A bed-plate, *C*, is secured to the timber *B*, and is in its position the equivalent of the bed-plate *C'* in its position and of the plates *C<sup>2</sup>* and *C<sup>3</sup>* in their respective positions, there being a groove or channel in the plates *C<sup>2</sup>* and *C<sup>3</sup>* where they are intersected by the plates *C* and *C'*. These plates are all provided with vertical flanges for the purpose of attaching, by bolts, the wearing

ways or shoes thereto, which are designated as *D D' D<sup>2</sup> D<sup>3</sup>*, the series of outside shoes, and *E E' E<sup>2</sup> E<sup>3</sup>* as one set of inside shoes, and *F F' F<sup>2</sup> F<sup>3</sup>* as a second set of inside shoes, acting coordinately with the *E* series. The *D* series of shoes form the outside corners and are angular, while the *E* and *F* series form the inside corners and comprise two sides and the front of a rectangle, the front only being employed as a wearing-surface.

*G* represents a bench-shaped plate, and is employed to secure the respective *E* and *F* series of shoes together on the outside, and is best represented in this feature in Fig. 2 of the drawings.

*H* are right-angle plates, and are attached to the outside of the *D* series of shoes, to stiffen the same and to secure greater rigidity to resist the necessary heavy pressure of passing trains. The same series of bolts secure the shoes of the *E* and *F* series and the plates *G* to the flanges of the plates *C C' C<sup>2</sup> C<sup>3</sup>*. The same series of bolts secure the shoes of the *D* series and the plate *H* to the flanges of the plates *C C' C<sup>2</sup> C<sup>3</sup>*. A clamp, *a*, is attached at the connection of each of the shoes of the *E* and *F* series to the plates *C C' C<sup>2</sup> C<sup>3</sup>*, its lip overlapping the lower edges of the shoes, thus forming a firm joint.

A small plate, *c*, having a bottom lug, is secured, one each, to the bed-plates *C C' C<sup>2</sup> C<sup>3</sup>* at the points of all the angles of the different series of shoes, and impinges upon their lower edges to prevent possible spreading, the lug fitting into the interstices formed by the lower edges of the shoes opposite to each other.

It will readily be seen that the above-described method of constructing a railroad-crossing is sufficiently substantial for constant use, and at the same time admits of detaching the broken and worn shoe-rails from the bed-plate, &c., by simply removing a few bolts.

Having thus described our invention, what we claim therein is—

1. In combination with the bed-timbers *B*, the bed-plates *C*, provided with flanges, the shoes *F<sup>3</sup> E<sup>3</sup>*, and the angular plates *G*, bolted together, substantially as described and shown.

2. In combination with the bed-plates attached to the bed-timbers and provided with



flanges, the shoes E F and the clamps *a*, such clamps being secured to the bed-plates and overlapping the lower edges of the shoes, substantially as described.

5 3. The combination, with the bed-plates secured to the bed-timbers, of the shoes E F and angular plates G, substantially as shown.

4. The combination, with the bed-plates C and shoes D and E, and equivalent points  
10 thereto, of the bracing-plates *c*, secured to the plates C and provided with lugs fitting into the interstices between the shoes D and E and impinging upon the lower edges of said shoes at the points of their angles, substantially as  
15 shown.

5. The combination, substantially as shown, of the bed-timbers B, the plates C, the shoes D, and the angular plate H.

20 6. The combination, substantially as described, of the timbers B and B<sup>2</sup> at right angles, the flanged plates C and C<sup>2</sup> at like right angles, the plate C<sup>2</sup> being provided with groove

or channel at its intersection with plate C, the shoes D and E, secured to the flanges of the plates C and C<sup>2</sup>, the angular plate H, attached 25 to the shoe D, and the lug-plate *c*, attached to the plate C.

7. Two trackways running toward each other at a right angle and composed of the bed-timbers B B' B<sup>2</sup> B<sup>3</sup>, the relative bed-plates C C' C<sup>2</sup> 30 C<sup>3</sup>, provided with flanges and secured to said bed-timbers, the series of angular shoes D D' D<sup>2</sup> D<sup>3</sup>, E E' E<sup>2</sup> E<sup>3</sup>, and F F' F<sup>2</sup> F<sup>3</sup>, such shoes being secured to the flanges of the bed-plate by removable bolts, the plates G H *a*, and lug 35 *c*, all substantially as shown.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM H. SHANNON.  
ROBERT T. SHANNON.

Witnesses:

JOSHUA B. WEBSTER,  
ELIHU B. STOWE.