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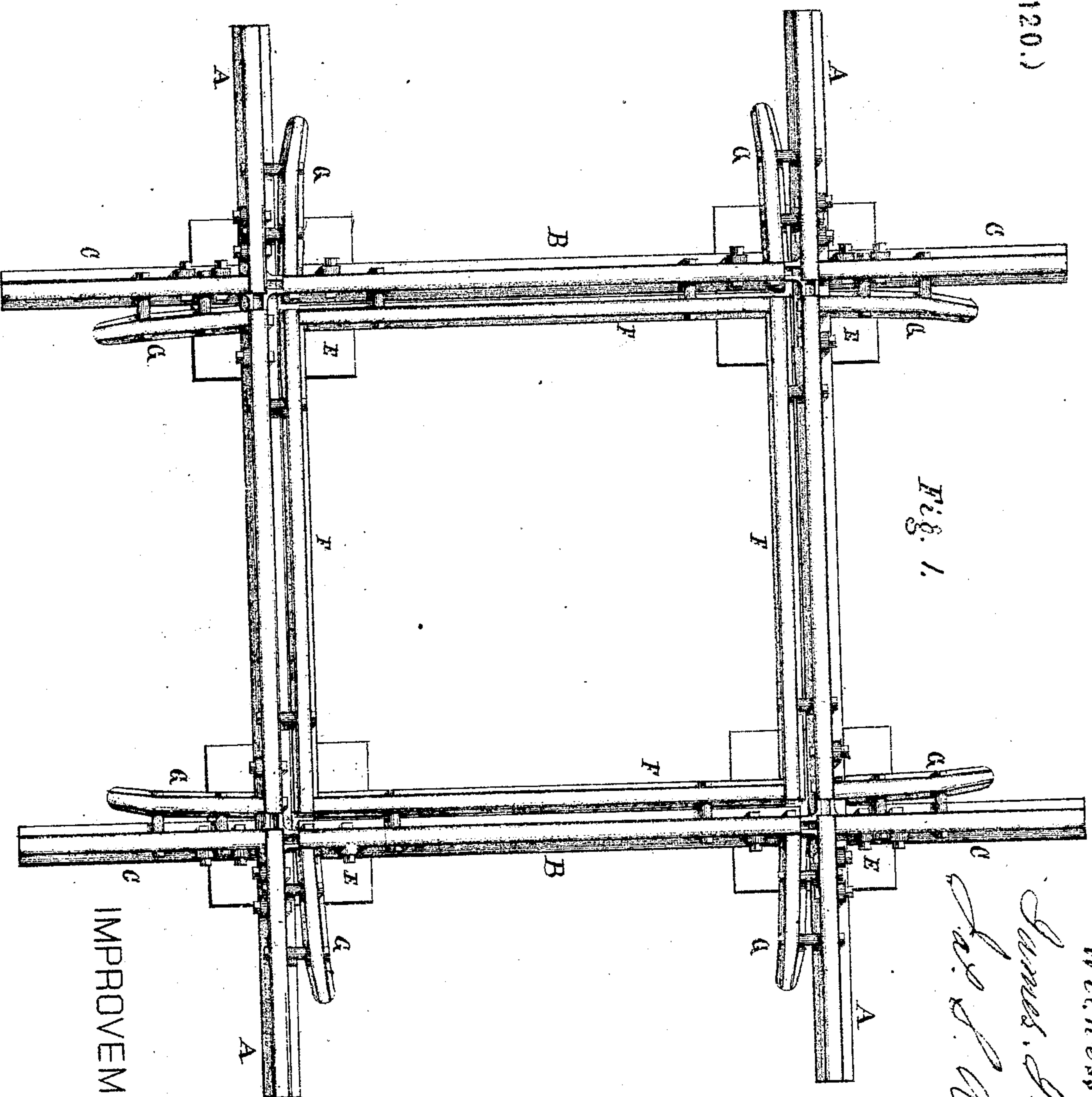


Fig. 1.

Witnesses.  
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Jas. J. Reed

Inventor.  
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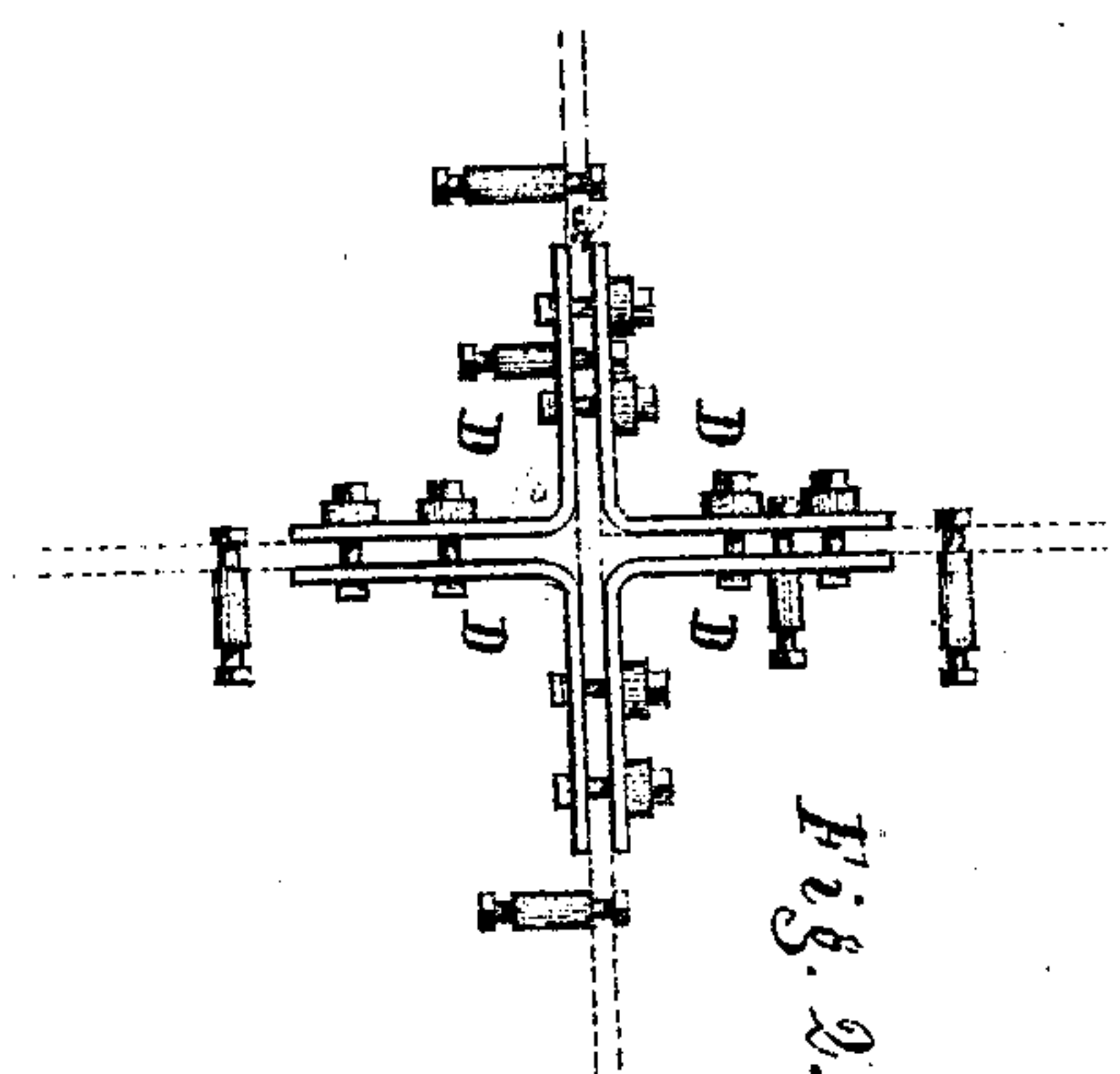


Fig. 2.



Fig. 3.

No. 121,836. Patented Dec. 12, 1871.  
JOS. WOOD'S  
IMPROVEMENT IN RAIL ROAD TRACK CROSSING



# UNITED STATES PATENT OFFICE.

JOSEPH WOOD, OF RED BANK, NEW JERSEY, ASSIGNOR TO HIMSELF AND  
EDWIN R. BENNET, OF NEW YORK CITY.

## IMPROVEMENT IN RAILWAY CROSSINGS.

Specification forming part of Letters Patent No. 121,836, dated December 12, 1871.

*To all whom it may concern:*

Be it known that I, JOSEPH WOOD, of Red Bank, county of Monmouth and State of New Jersey, have invented a new and useful Improvement in the Construction of Crossings for Intersecting Railroads; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the figures and letters marked thereon, and in which—

Figure 1 is a top view of the crossing, and Figs. 2 and 3 details thereof.

To enable others skilled in the art to make and use my invention, I will proceed to describe the manner in which I construct the same.

I take two long rails, A A, of the main or intersecting track, and fit in between them, at the required angle and proper gauge, the cross-track rails B, and abut against them, upon the outside of the rails A A, the track-rails C in continuation of the cross-track rails B. I also make or cut notches in the long rails A A, and at the ends of the short intermediate cross-rails B for the flanges of the wheels to pass through, as shown in Fig. 1 and at *a* in Fig. 3. I combine the intersecting rails A A and B together by means of the corner bottom plates E, Fig. 1, which bottom plates are of wrought-iron, and three-eighths of an inch, more or less, in thickness. These fish-plates I arrange in the manner shown: one outside and connecting the rails A and C; another outside and connecting the rails A and B; another inside and connecting the rails B and the intermediate sections of A, the two latter plates crossing the spaces left for the flange of the wheel, to which plates the rails are attached by bolts or rivets passing down through their flanges, thus permanently securing the angle of the tracks at the crossing, and also the several rails which compose the crossing to each other. I sometimes also use the corner fish-plates, shown at D, Fig. 2, at the junction of the intersecting rails in addition to the corner bottom plates E, when the service to which the crossing is subjected is un-

usually severe; but in most cases they are not used. The base-plates I also combine with the intersecting track-rails A A and B, the inside guide-rails F, and entering pieces G, which guide-rails and entering pieces are secured to the principal rails, and at a proper distance therefrom, by stay-bolts, as shown in Figs. 1 and 2. The principal rails, guide-rails, and bottom plates are secured to the road-bed by spikes driven into the cross-ties, or in any other approved manner; and I usually interpose plates of vulcanized India rubber or other elastic substance between the bottom plates and the cross-ties so as to give elasticity to the crossing at the points of junction.

In constructing my crossing I draw in the rails, making the gauge exactly equal to that of the wheels, and so arrange the intermediate sections as to leave only sufficient space for the passage of the flange of the wheel. I thus reduce the gap at the junction of the cross-rails over which the wheels must pass to the minimum, greatly lessening the jar felt in passing ordinary crossings.

Having thus described the construction of my improved railroad crossing, what I claim therein as my own invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of the intersecting rails of a railroad crossing with each other by means of the corner fish-plates, arranged in the manner and for the purpose substantially as described.

2. The combination of the intersecting rails of a railroad crossing with each other by means of the corner fish-pieces and bottom plates, all arranged in the manner and for the purpose substantially as described.

3. In a railway crossing, the contracted gauge and spaces for the wheel-flanges to pass, as shown and described.

JOSEPH WOOD.

Witnesses:

JAMES J. LANE,  
JAS. S. REID.

(120)