

(No Model.)

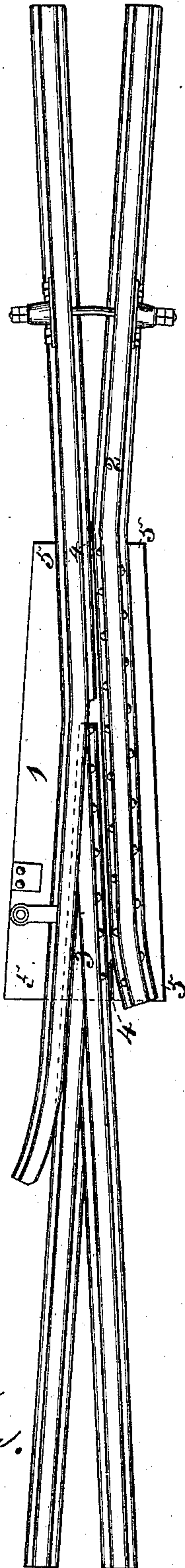
2 Sheets—Sheet 1.

H. ELLIOT.  
RAILWAY FROG, CROSSING, &c.

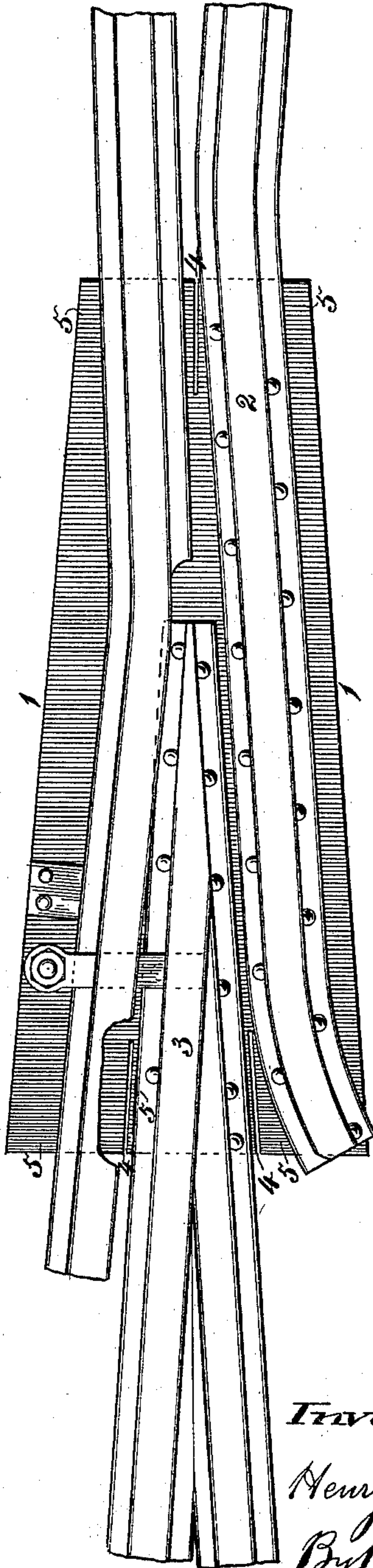
No. 474,727.

Patented May 10, 1892.

*Fig. I.*



*Fig. II.*



*Attest:*  
*Geo. E. Cruise*  
*Henry Cohen.*

*Inventor:*  
*Henry Elliot.*  
*By Knight Bros.*  
*Atty.*

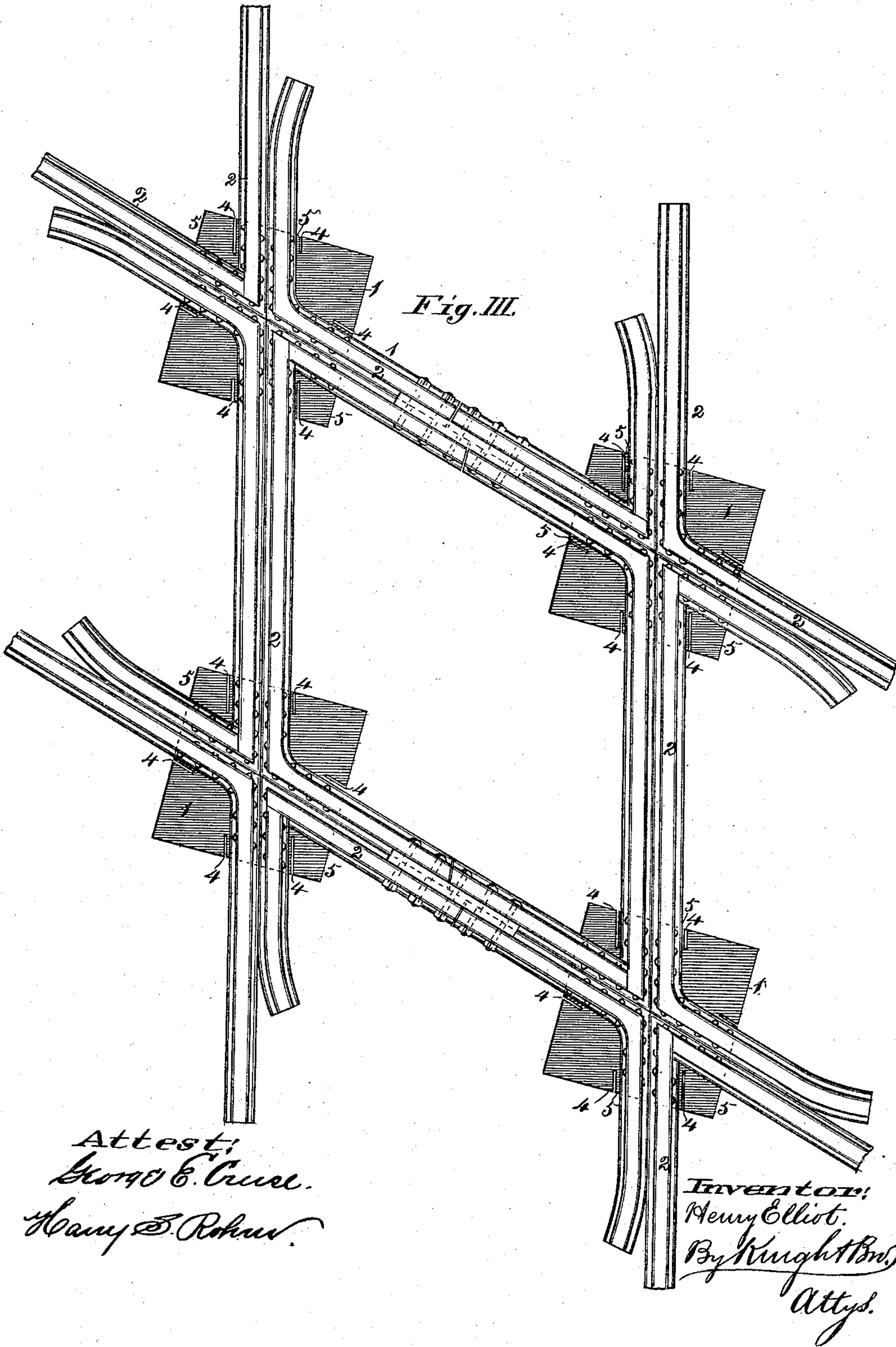
(No Model.)

2 Sheets—Sheet 2.

H. ELLIOT.  
RAILWAY FROG, CROSSING, &c.

No. 474,727.

Patented May 10, 1892.





# UNITED STATES PATENT OFFICE.

HENRY ELLIOT, OF EAST ST. LOUIS, ILLINOIS.

## RAILWAY FROG, CROSSING, &c.

SPECIFICATION forming part of Letters Patent No. 474,727, dated May 10, 1892.

Application filed December 16, 1891. Serial No. 415,279. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY ELLIOT, of East St. Louis, in the county of St. Clair and State of Illinois, have invented a certain new and useful Improvement in Railway Frogs, Crossings, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

It is very well known to practical mechanics that hard metals are liable to check and break at internal angles where subjected to transverse strain, the form causing the concentration of the strain at the angle. From this cause it has been found that steel rails are liable to snap at the edge of a heavy base-plate to which they are riveted, the connection making the rail and base-plate practically one piece in this connection. This has resulted in using plates so thin as to be flexible at the edge. It is desirable on other accounts to use plates of greater thickness, and to enable this I make slits or cut the plate from the edge inward, so as to give the edge at the point of attachment of the rail the required flexibility.

Figures I and II are top views of railway-frogs to which the invention is applied, showing the moving or spring rail in its normal and its outer position, respectively. Fig. III is a top view of a railway-crossing.

In the frogs the base-plate is shown at 1, with the fixed rail 2 and frog-point 3 riveted fast

to the plate and the spring or moving rail capable of moving transversely on the plate, as usual in spring rail-frogs.

4 are cuts made in the base-plate from the edge inward, thus forming flexible tongues 5 at the parts of the edges where the rails are made fast to the plate. These tongues will readily bend with the rails, and thus the strains will not be concentrated at the edge of the plate, but will be diffused for a safe distance along the rail.

In Fig. III the same device is used for a crossing, the same reference-numbers being used, and the description, so far as concerns the invention, being equally applicable to the frog or crossing.

The cuts 4 may be made in the plate by a saw or other suitable means.

I claim as my invention—

1. The combination, with a rail, of a base-plate 1, firmly secured to the rail and having cut or cuts extending from the edge inward, substantially as set forth.

2. The combination, with a railway-rail, of a base-plate fixedly attached to the rail and having cut 4 extending from the edge of the plate inward, substantially as and for the purpose set forth.

HENRY ELLIOT.

Witnesses:

SAML. KNIGHT,  
BENJN. A. KNIGHT.