

(No Model.)

F. C. WEIR.  
RAILROAD SWITCH.

No. 273,785.

Patented Mar. 13, 1883.

Fig. 1.

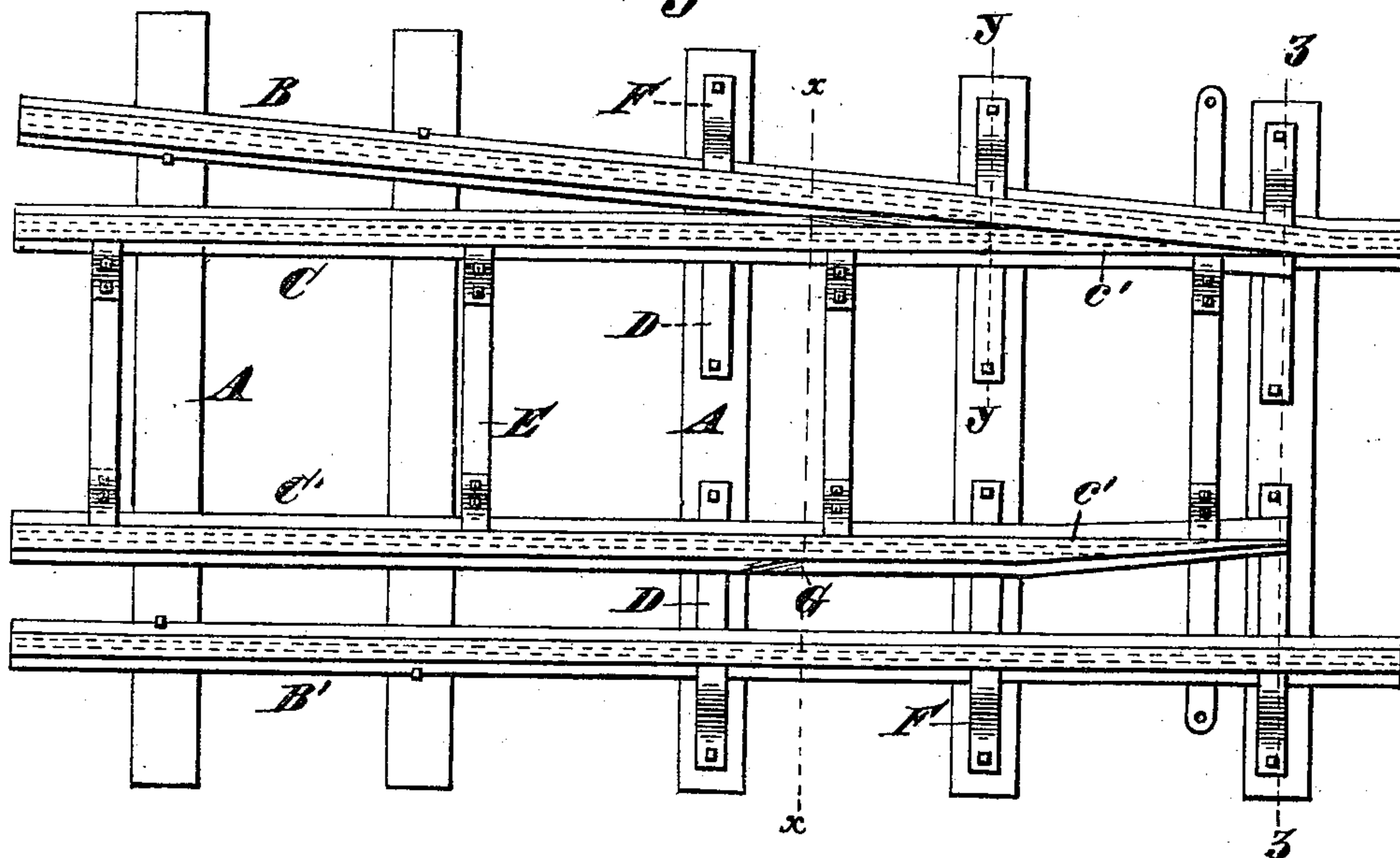


Fig. 2.

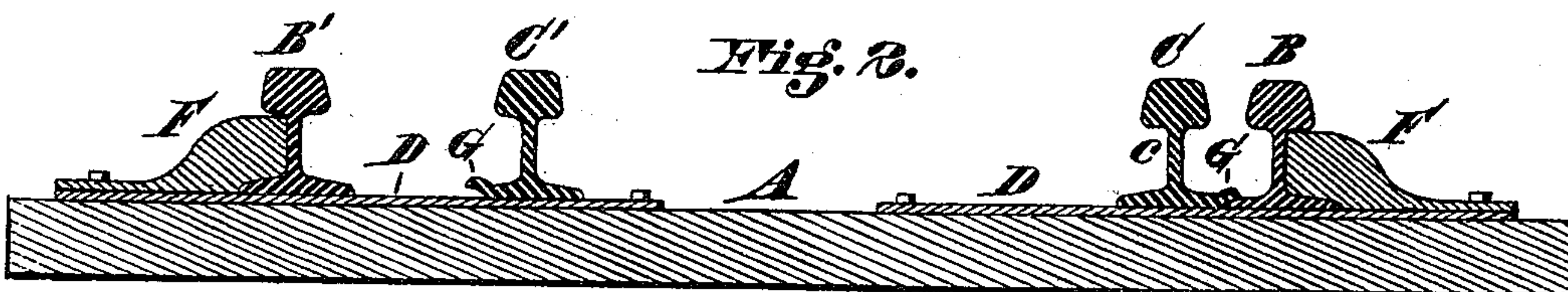


Fig. 3.

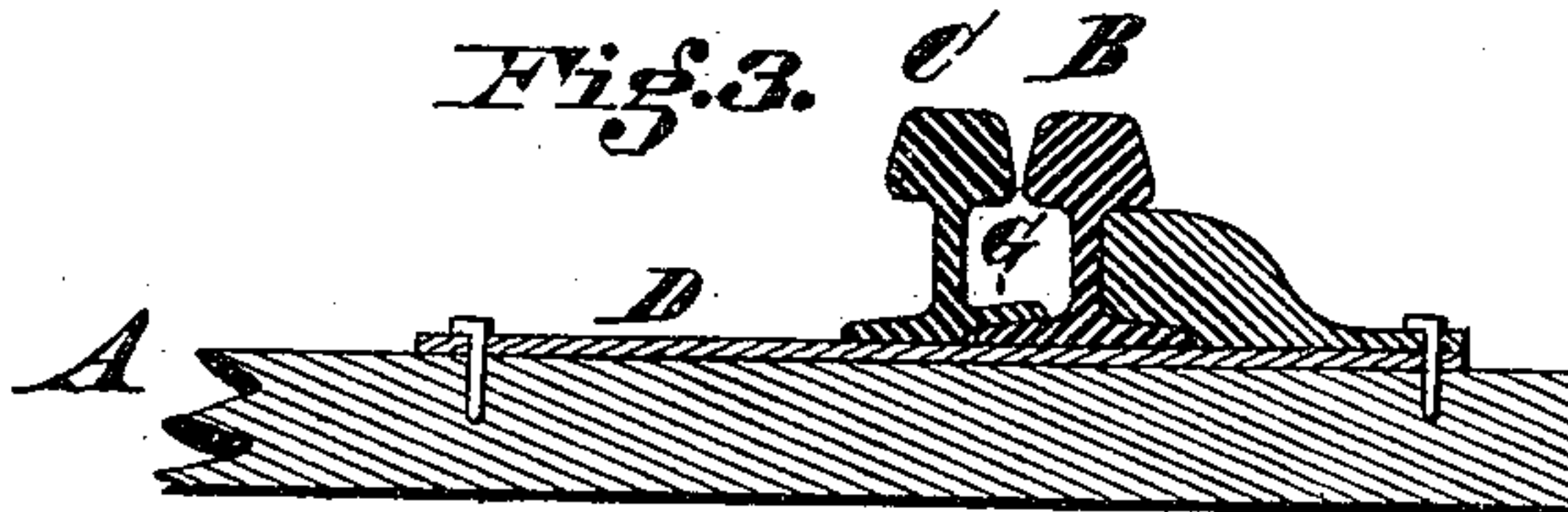


Fig. 4.

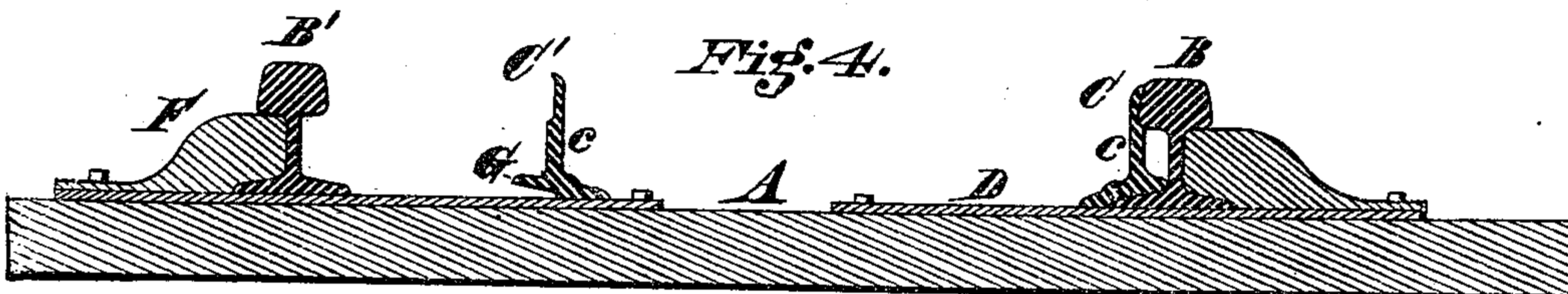


Fig. 5.

Attest  
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# UNITED STATES PATENT OFFICE.

FREDRIC C. WEIR, OF CINCINNATI, OHIO.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 273,785, dated March 13, 1883.

Application filed December 22, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRIC C. WEIR, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification.

My invention relates to improvements in railway-switches, and is designed particularly as an improvement on the switch shown and described in Letters Patent of the United States No. 241,260, granted me May 10, 1881.

It has been customary heretofore in order to have the respective outer flanges of the movable or tongue rails of a railway-switch fit and rest upon the respective inner flanges of the stationary or main rails to cut or plane away the bottom of the said tongue-rails, which greatly weakens that portion thereof, rendering them defective, and necessitates the use of friction-plates of unequal thickness.

To overcome this defect is the object of my invention, which consists in upsetting the flanges and web of the tongue-rails in suitable dies in such a manner that the said flanges will fit and rest snugly and firmly upon the flanges of the stationary or main rails, and also have a solid bearing in the usual manner on the friction-plates upon which both main and tongue rails are set and the same level maintained, thereby avoiding the employment of friction-plates of unequal thickness.

In the accompanying drawings, Figure 1 is a plan view of a railway-switch embodying my invention. Fig. 2 is an enlarged transverse section on line *x x*, Fig. 1, showing the manner in which the flanges of the movable rails are upset. Fig. 3 is a broken transverse section on line *y y*, Fig. 1. Fig. 4 is a transverse section taken at the point of the tongue-rails on line *z z*, Fig. 1; and Fig. 5 is an enlarged bottom plan view, showing the upset portion of one of the tongue-rails.

A A represent the cross-ties, upon which are set the stationary rails B B' and movable or tongue rails C C'.

D represents the customary friction-plates, upon which the movable rails C C' slide for adjustment.

E are the spacing bars or rods for connecting the said movable or tongue rails to move in unison.

F represents brace-blocks resting against the outer faces of the stationary rails B B', and secured in position on the outward extensions of plates D.

The webs *c* and flanges of the tongue-rails C C' adjoining the inner flanges of the stationary rails are by means of suitable dies shaped and upset from the point at which the stationary rails cross the path of the movable rails to the point ends of said movable rails. The heads *c'* of the tongue-rails are cut away but a short distance from their points, sufficient to accommodate the relative angles of the tongue and stationary rails. The full strength of the flanges of the tongue-rails is preserved throughout their length, as the metal is not cut away in any manner where the movable and stationary rails come in contact, but is shaped and upset in dies, as aforesaid, so that a part of the rail firmly rests on the plates D and the turned-up portion G rests on the flanges of the fixed rails.

It will be seen that the movable and stationary rails are on the same level, both being set on the friction-plates D and the web of the tongue-rails contracted in height by being upset together with the flanges at the turned-up portion thereof.

I claim—

In a railway tongue-switch, the combination, with the stationary rails, of the movable rails resting and sliding in the same plane as the plane in which the stationary rails rest, and having their respective outer flanges swaged and shaped to fit and rest upon the flanges of the stationary rails, whereby the cutting and planing away of the said movable rails is obviated, substantially as described, for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FREDRIC C. WEIR.

Witnesses:

JNO. E. JONES,  
JNO. E. WILES.