H. ELLIOT.

Railroad-Switch.

No. 208,802. Patented Oct. 8, 1878.

FIG. 1.

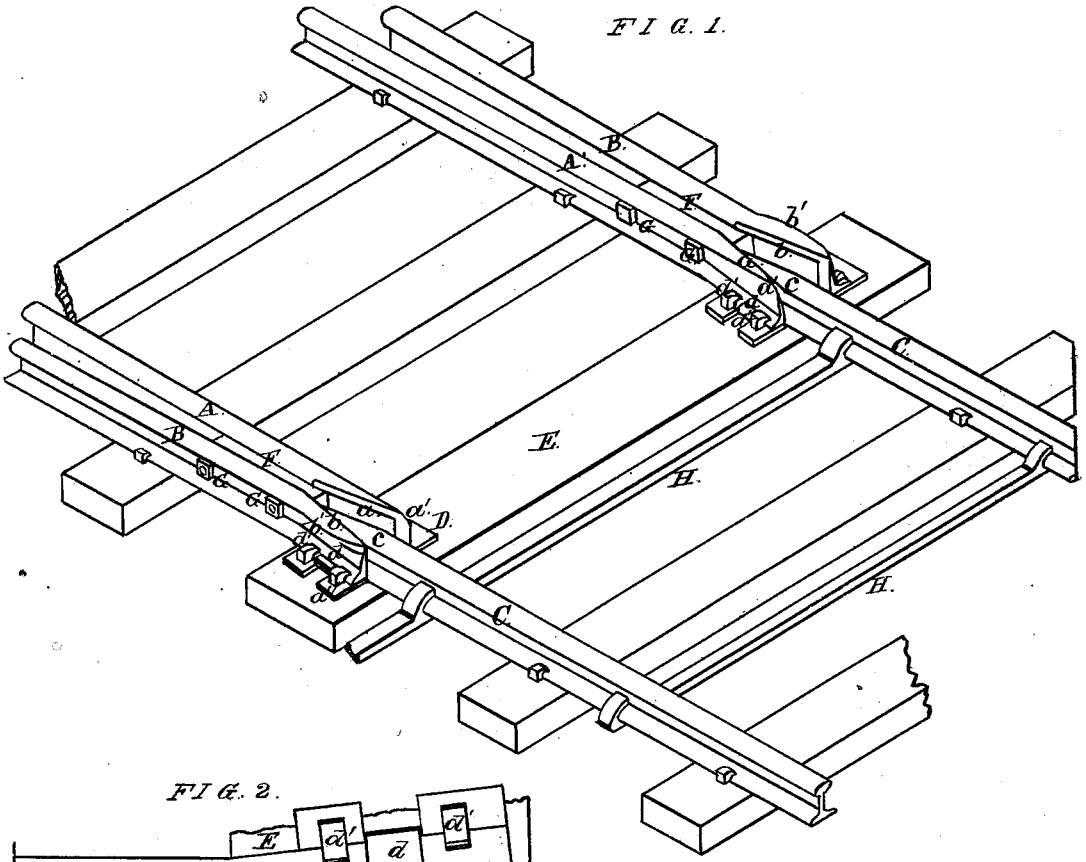
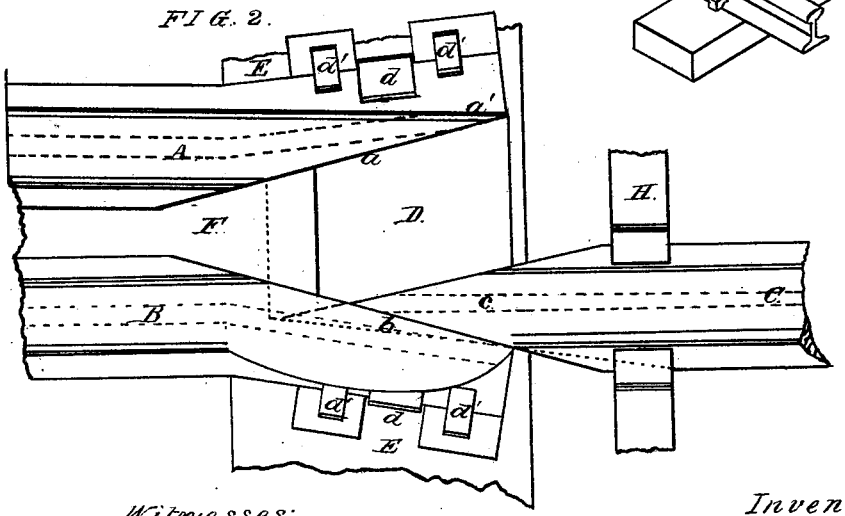


FIG. 2.



Witnesses:

Geo. H. Knight.

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UNITED STATES PATENT OFFICE.

HENRY ELLIOT, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **208,802**, dated October 8, 1878; application filed June 6, 1878.

To all whom it may concern:

Be it known that I, HENRY ELLIOT, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Railroad-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The improvement consists in beveling the inside of the ends of the fixed rails into the web at the inner side, and bending the end outward to give its inside the same inclination as the beveled end of the switch-rail, so that the whole strength of the web is carried to the point, and only one side of the base and cap is cut away, and nearly the whole strength of the rail is preserved.

The point of the switch-rail rests upon a chair-plate, to which the ends of the fixed rails are attached, in the usual way, by hook-headed spikes. The ends of the fixed rails are also connected together by a distance-block fitting between the rails and stay-bolts, passing transversely through the block and the webbing of the rails. The block is placed with its end so near the end of the switch-rail as to prevent the said rail crawling past the beveled end of the fixed rails, and destroying the alignment of the rails.

Figure 1 is a perspective view of my improvement. Fig. 2 is a detail top view enlarged.

The fixed rails are marked A B, and the switch-rails are marked C. The ends *a* and *b* of the fixed rails are beveled upon the side next to the wedge-shaped point *c* of the switch-rail, the whole side of the cap and base being cut away at the point down to the web, as shown in Fig. 2, the web being shown in dotted lines. The ends are also bent outward, so as to give to their beveled faces the same inclination as the bevel upon the sides of the point *c* of the switch-rail.

Thus it will be seen that nearly the whole strength of the rail is preserved to the point, and the construction is such that the switch-rail can be brought in line with either of the fixed rails, with a lap-joint that gives continuous bearing to the wheel.

The extreme end of the rail A is beveled a short distance at *a'*, to do away with all possibility of the flange of the wheel mounting it when running upon it from the point *c*. If it is desired that the point *c* should be lengthened, so as to give a longer lap, it may be done by extending it, as shown in dotted lines in Fig. 2, and receiving the outer rail, B, as thus shown; and the rail B may be re-enforced upon the outer side to give it the necessary strength, because the flange of the wheel does not pass on that side at any time, whereas it passes on both sides of the rail A.

D is a chair-plate resting on a broad tie, E, and serving to support the end *c* of the switch-rail. The ends of the plate D form chairs, to which the ends *a b* of the fixed rails are connected by hook-flanges *d* and spikes *d'*.

F is a block which fits the web of the rails A B, and G G are stay-bolts extending transversely and horizontally through the blocks and the web of the rail.

The two switch-rails C are connected by tie-bars H, one of which forms the bar, extending to a switch-lever or other suitable apparatus to move the switch.

I place the blocks F in such position that their ends are nearly in contact with the ends *c* of the switch-rails, when such rails are at their utmost expansion, so as to prevent the points *c* crawling past the beveled ends *a b*, and destroying the alignment of the rails.

I do not claim as of my invention the fixed rails with beveled ends, or the switch-rails having wedge-shaped ends, as I am aware that both features are old; but

What I do claim, and desire to secure by Letters Patent, is—

1. The combination of switch-rail having point *c* with plate D, and bent and beveled ends of the fixed rails *a b*, attached to the ends of the plate, substantially as set forth.

2. The combination, with the fixed rails A B and switch-rail C, of the block F, preventing the end *c* of the switch-rail moving endwise past the inclined ends *a b* of the fixed rails, and destroying the alignment of the rails.

HENRY ELLIOT.

Witnesses:
SAML. KNIGHT,
GEO. H. KNIGHT.