

WILLIAM H. MASTERMAN & ANDREW JACKSON.
(120.) Improvement in Railway Switches.

No. 122,327.

Patented Jan. 2, 1872.

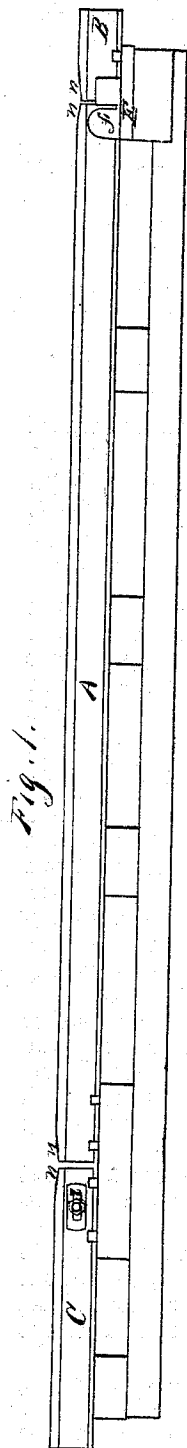


Fig. 1.

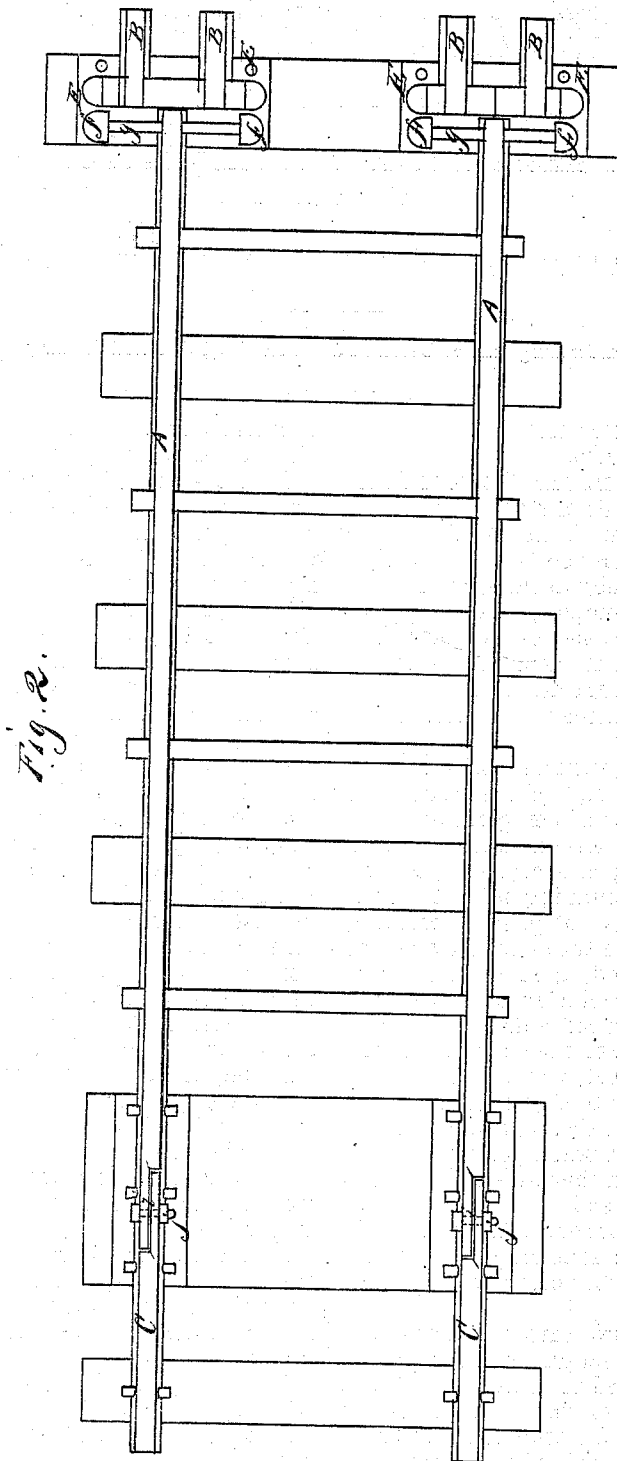


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM HENREY MASTERMAN AND ANDREW JACKSON, OF STOCKTON,
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IMPROVEMENT IN RAILWAY SWITCHES.

Specification forming part of Letters Patent No. 122,327, dated January 2, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that WILLIAM HENREY MASTERMAN and ANDREW JACKSON, of Stockton, county of San Joaquin, State of California, have invented an Improved Switch for Railroads; and we do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use our said invention or improvements without further invention or experiment.

The object of our invention is, first, to firmly secure the movable end of the throw-rails of a railroad switch from being moved from its proper position by the expansion or contraction of the metal; and secondly, to prevent the brooming or pounding out of the ends of the rails. This we accomplish by securing the movable end of the throw-rails by means of a fixed transverse rod, upon which the rails can move from side to side in order to make the connections. This rod holds the ends of the throw-rails close up to the ends of the rails with which they connect, while an expansion joint, which we employ to connect the pivoted or opposite ends of the throw-rails to the end of the rails of the main track permits them to expand and contract in that direction without affecting the movable end.

Our arrangements for remedying these evils are fully given in the following description, reference being had to the accompanying drawing, in which—

A A represent the two throw-rails of a railroad switch, and B B sections of the rails with which they are intended to connect. C C are sections of the rails of the main track, to which the throw-rails are attached. In order to secure the movable end of the throw-rails in a fixed position in relation to the end of the rails B we construct the chair E with strong lugs or standards *f* at each end, one upon each side of the throw-rails A. A rod, *g*, is supported and has its opposite ends fixed in these lugs, and passes through a hole in the ends of the throw-rails. The hole is large enough to allow the rails to move along the rod either way the desired distance without binding.

This transverse rod serves to hold the end of the rails A at the proper distance from the ends of the rails B, to permit of their being moved to connect with either without trouble; it also prevents the throw-rails from being crowded upon the ends of the rails B by the expansion of the track.

In order to connect the throw-rails with the rails C we halve the ends of each and unite them after the manner of making a square splice, as shown. We then slot the halved portion of the rails C longitudinally at *i*, and secure the two halved ends together by a bolt, *j*, which passes through a hole in the halved ends of the movable rails and through the slot *i* in the rail C. This allows both the rails C and A to expand and contract to their utmost without crowding upon each other, and forms an expansive joint similar to that formed when the fish-plates are used with all the advantages of a solid rail. This expansion connection or joint may be made of steel, or it may be faced or tipped with steel, if desired.

In order to prevent the pounding out or brooming of the ends of the rails we round them off, as shown at *n*, so as to reduce them below the general level of the rail, in which condition it will be impossible for the wheel to strike the ends.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The transverse rod *g* secured firmly to the chair E or to projections or lugs upon the chair, in combination with the switch-rail A, having a hole, *o*, substantially as and for the purpose above described.

2. The lap or splice joint above described, when one of the splices is slotted longitudinally, as at *i*, and the two are held together by a bolt, *j*, which passes through said slot, substantially as and for the purpose above described.

In witness whereof we have hereunto set our hands and seals.

WILLIAM HENREY MASTERMAN. [L. s.]
ANDREW JACKSON. [L. s.]

Witnesses:

H. W. GILLINGHAM,
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(120)