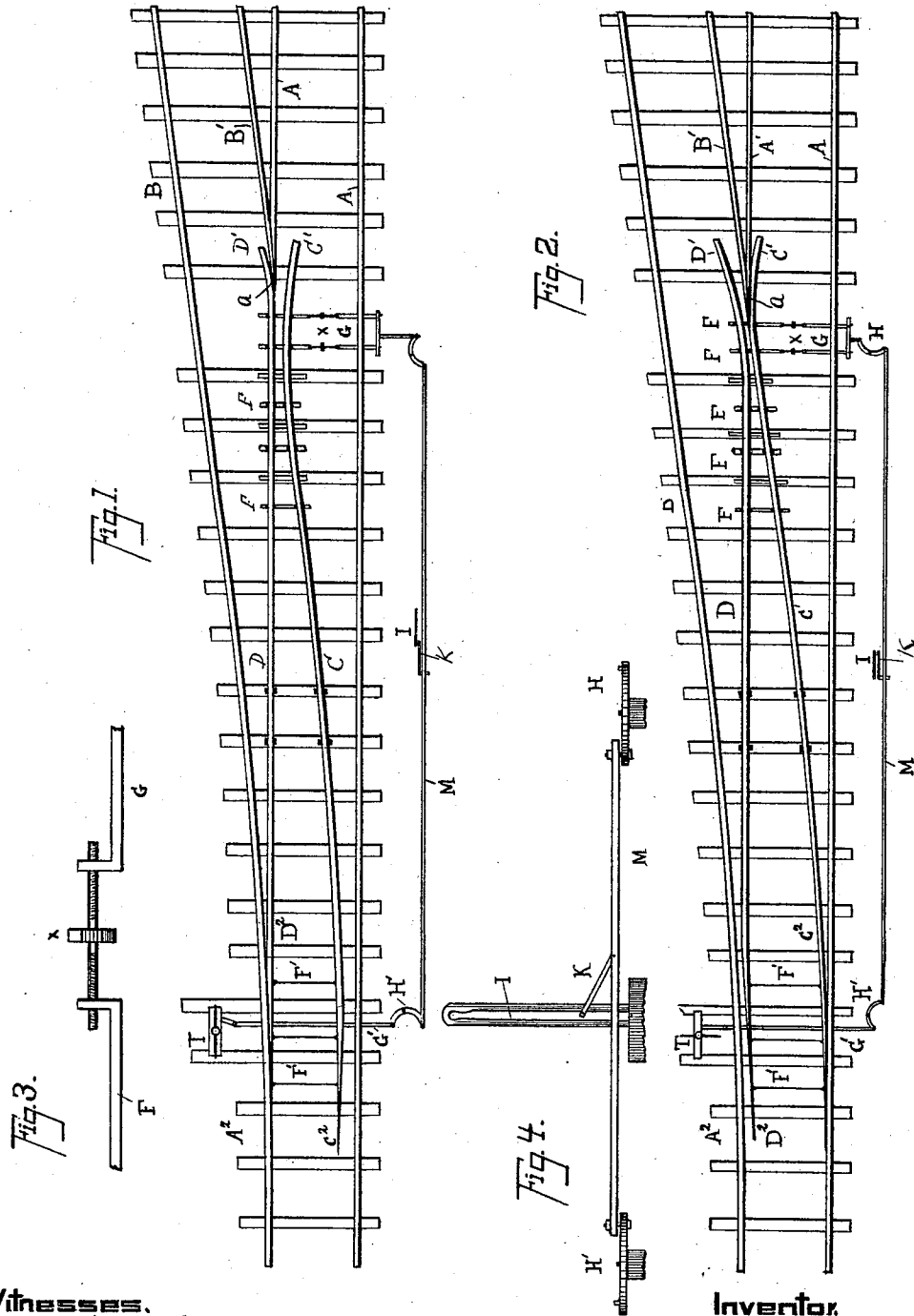


(No Model.)

J. W. MEADS.
RAILWAY FROG.

No. 580,983.

Patented Apr. 20, 1897.



Witnesses.
Chas. K. Davies,
J. W. Meads.

Inventor.
J. W. Meads
By W. A. Bartlett
att'y

UNITED STATES PATENT OFFICE.

JAMES W. MEADS, OF NORFOLK, VIRGINIA, ASSIGNOR OF ONE-HALF TO
EDWIN F. AYDLETT, OF ELIZABETH CITY, NORTH CAROLINA.

RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 580,983, dated April 20, 1897.

Application filed April 22, 1896. Serial No. 588,657. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. MEADS, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Railway-Frogs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to railway-frogs of the class known as "movable rail" frogs.

The object of my invention is to produce a simple, strong, and serviceable railway-frog with which no guard-rails are required and in which the objection of the locking of the switch by the expansion of a stub-joint is avoided.

Figure 1 is a plan of my frog with the rails in position to pass a train on the main line. Fig. 2 is a plan of the frog with rails in position to turn a train into the siding. Fig. 3 is a side elevation of the turnbuckle connection. Fig. 4 is a side or end elevation of push-bar, lever, and connections.

A A' indicate the fixed rails of the main line, the same being secured to the ties or road-bed in any usual manner. The rail A' forms a point *a* with the fixed rail B' of the siding. The other rail B of the siding curves into the main line at A² in usual manner.

The flexible rails C D are secured on the ties or sleepers near their mid-length. The ends C' D' of these rails form wings overlapping the point *a*. The ends C' D' of the two rails C D are connected together by the rods or braces F, so that both move together. A rod or rods G is connected to the wing-rails C' D' near their ends by means of braces F, and this rod, which may be jointed or not, is connected to a bell-crank lever H outside the main-track rail. The beveled or pointed ends C² D² of the flexible rails C D are connected by tie-rods F'. A rod G', which may be jointed, extends from rail to rail near the points and also extends to a bell-crank lever H' outside the main rail. The bell-crank levers H H' are connected by a draw-rod M in such manner as to throw the tie-rods G G' in opposite directions whenever said draw-rod M is shifted endwise. The rod M can be shifted by a lever I, connected by link K to said draw-rod, or it may be shifted by any

other suitable or usual connection, the lever or operating means being locked in any usual manner.

The rod G' may be extended at the side of the track and connected to a signal or target T of any usual construction to show the open or closed position of the switch.

The ties or road-bed under the wings C' D' are preferably faced with metallic plates or bars, and the ends C² D² may ride on metallic plates, or these ends, if desirable, can be connected as stub-rails to the main line.

One or more of the tie-rods F may be made extensible by means of a turnbuckle to adjust the position of the wing-rails, and the bend of the flexible rails and the rod G may be connected by one or more of the tie-rods, and this or these be extensible by means of turnbuckles X.

It will be understood that my device is capable of changes within the skill of the ordinary mechanic without departing from the spirit of my invention. Thus the tie-rods F will be in number equal to the requirements of the case and may be made to permit a slight yield of the rails in the rods. So the draw-rod M may be moved from any point or may even be operated by the target T.

I am aware of the patent of Berlin, No. 289,377, dated December 4, 1883, and in some respects that device resembles mine; but in that device the point is shifted instead of the wings, thus changing the gage of the railway when the point is shifted. Further, in such device no advantage is taken of the flexibility of the rails in shifting the frog.

What I claim is—

1. In a railway-switch, the fixed rails of the main line and siding, the interposed integral pointed flexible rails rigidly secured to the road-bed at their mid-length, the curved ends of these rails overlapping the point formed by the junction of the line and siding rail, the curved overlapping ends being rigidly connected to each other, as are the pointed ends of the rails, and means for simultaneously shifting the opposite ends of these rails relatively to the point and track rails by flexing said interposed rails, whereby guard-rails are dispensed with, all combined substantially as described.

2. In a railway-switch, the main-line and switch rails as described, the flexible rails secured to the ties at their mid-length, and having pointed ends adjacent to the fixed track
5 and curved ends adjacent to and overlapping the fixed point of the track, means for shifting the opposite ends of the spring-rails simultaneously, and means for adjusting the relation of the overlapping ends of the rails

relatively to the shifting means and to the fixed point, all combined substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES W. MEADS.

Witnesses:

W. A. BARTLETT,

CHAS. K. DAVIES.