

Guthrie & Pausch,

Railway Switch.

No. 106,480.

Patented Aug. 10. 1870.

Fig. 1.

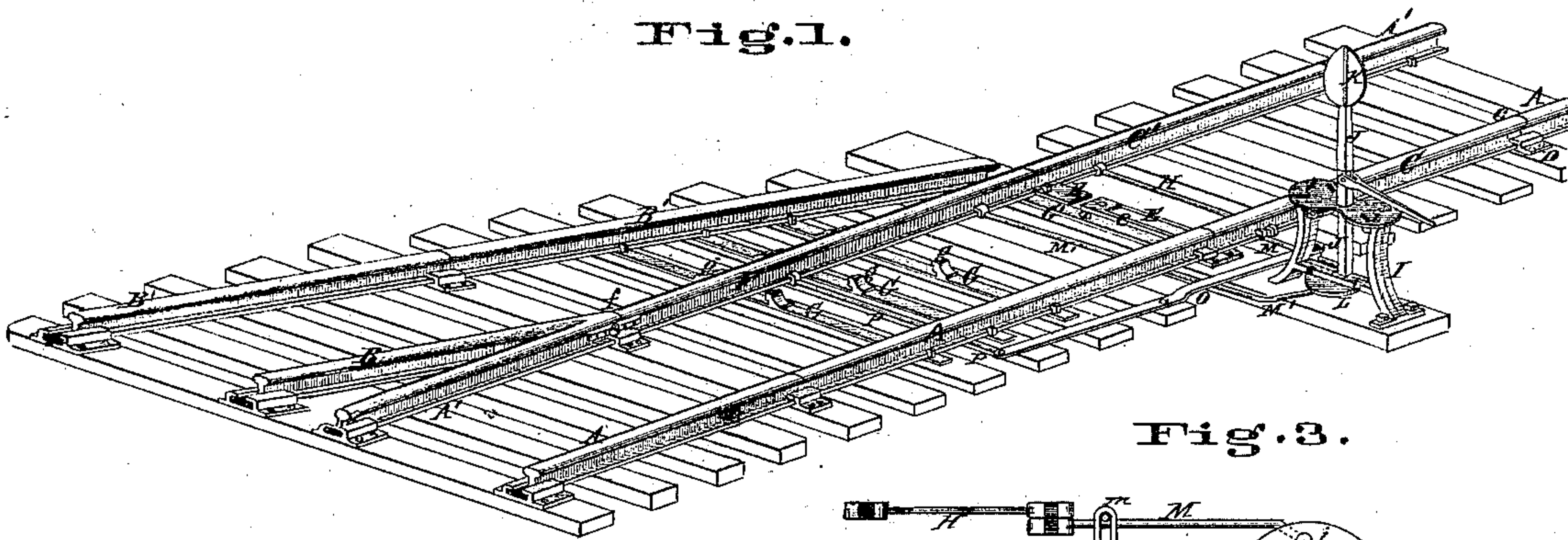


Fig. 3.

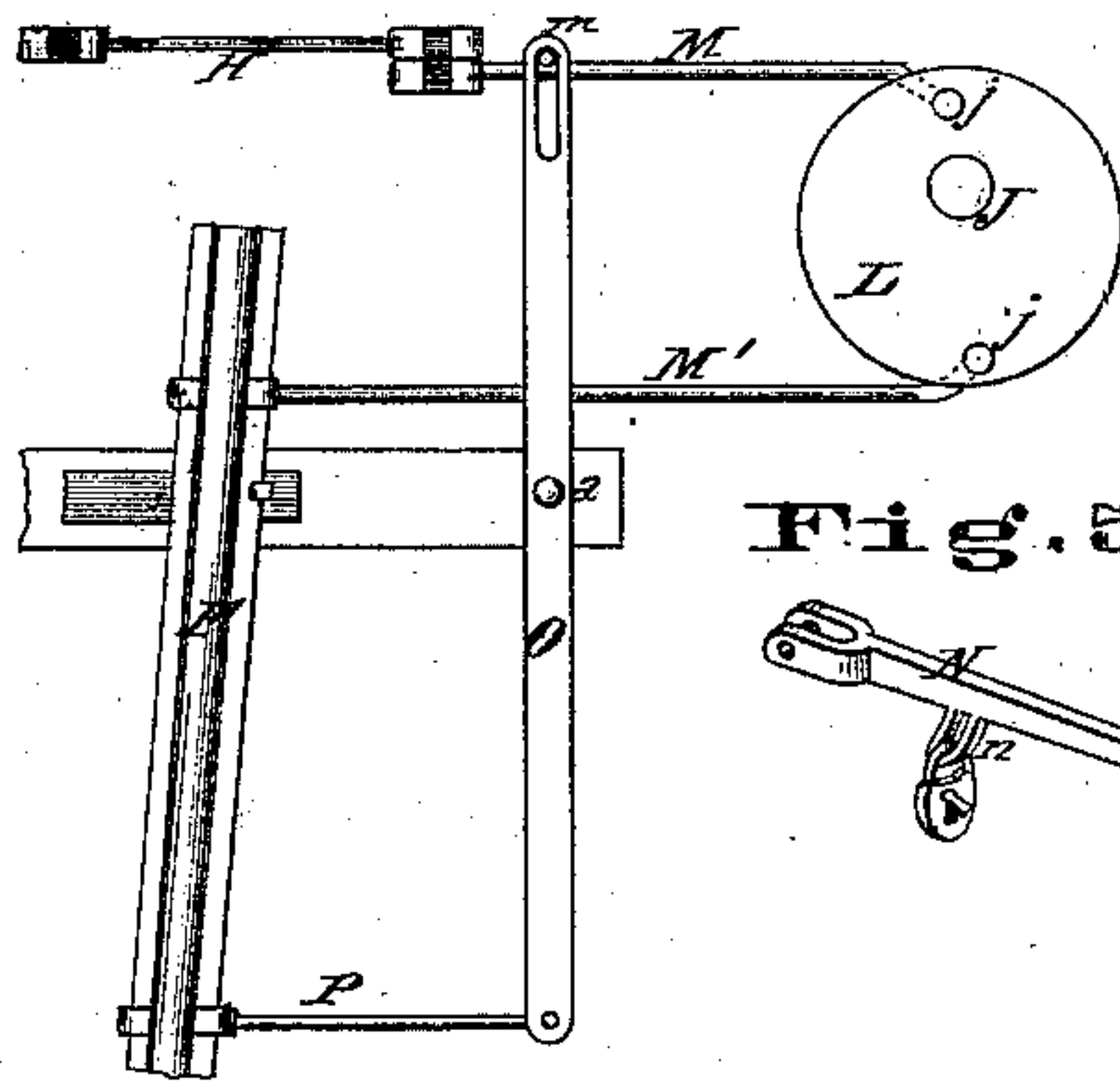


Fig. 4.

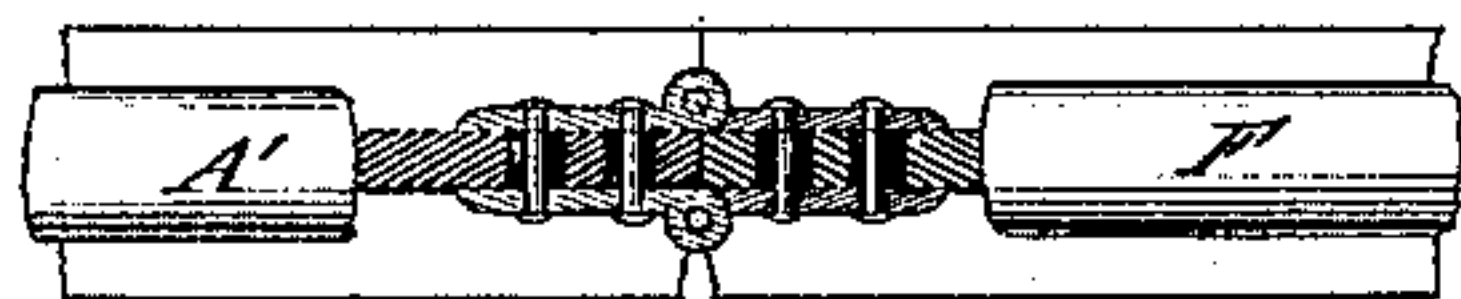
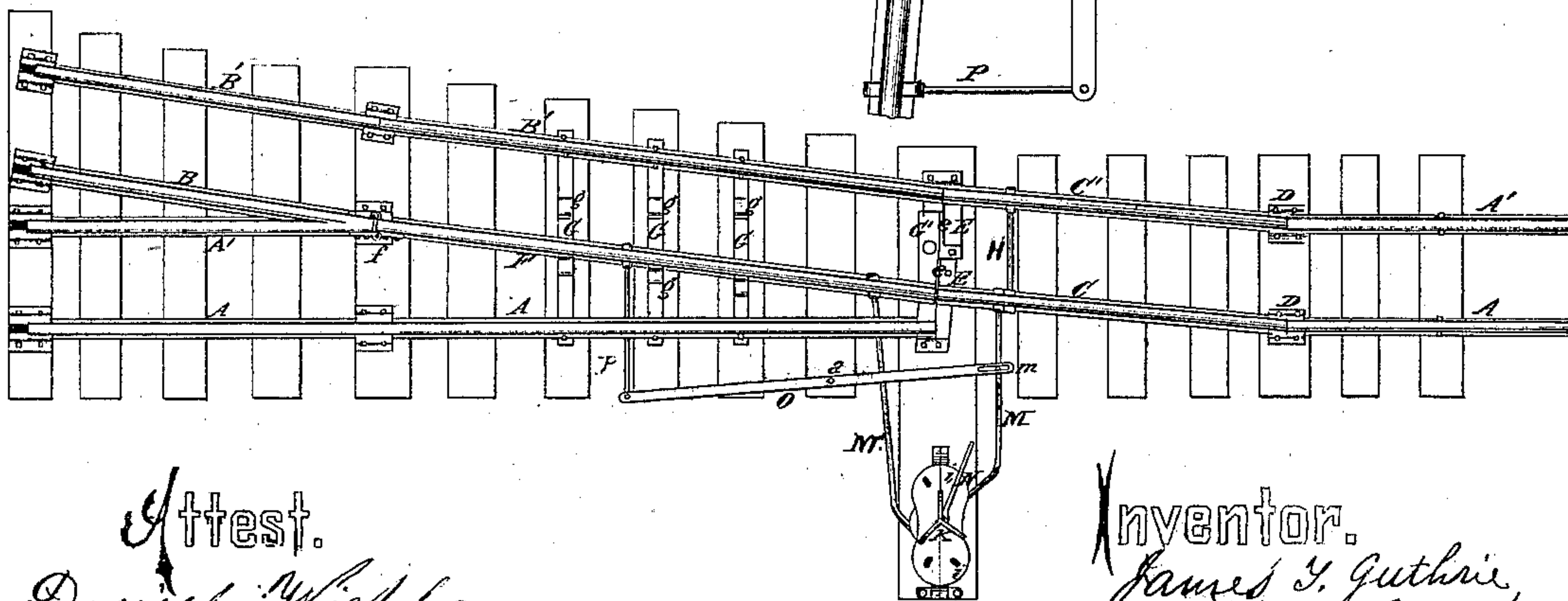


Fig. 2.



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JAMES T. GUTHRIE AND LOUIS PAUSCH, OF LEESBURG, OHIO.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. **106,480**, dated August 16, 1870.

To all whom it may concern:

Be it known that we, JAMES T. GUTHRIE and LOUIS PAUSCH, both of Leesburg, Highland county, State of Ohio, have invented certain new and useful Improvements in Railroad-Switches; and we hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which our invention appertains to make and use it, reference being had to the accompanying drawing, making part of this specification.

Our invention consists in devices for stiffening the movable rail of the main track.

In the accompanying drawing, Figure 1 is a perspective view of a switch embodying our invention. Fig. 2 is a plan of the same, with the movable rails changed so as to connect with the side track. Fig. 3 is an enlarged view of the devices for operating the rails. Fig. 4 is a sectional plan of the joint of the central swinging rail. Fig. 5 is a detached view of the lever of the switch-stand.

A A' are the permanent stationary rails of the main track, and B B' the stationary rails of the side track. C C' are short rails, pivoted at c c', which are adapted to simultaneously change position, occupying in one position (see Fig. 1) the line of the main track, and in the other position (see Fig. 2) the line of the side track. The rails at the opposite end slide over the plates E, which are provided with lips e, which serve to prevent the rails C C' being displaced endwise.

F is a single movable rail of considerable length. It slides over the plates G G G G', and stops against the projections g, which resist the side strain of a train in either position.

The rail F is hinged on both sides at f, (the junction of the side and main tracks,) as clearly shown in Fig. 4, the holes in the rails through which the hinge-bolts pass being slightly elongated, as shown.

It will be seen that when the rail F is moved to change from side track to main, or main to side, it is necessarily in the opposite direction

to the movement of the rails C C', which are connected by rod H for simultaneous action.

The combination and arrangement of these three movable rails C C' F, operating as described, dispense entirely with the customary frog, and necessitate the use of but little rail at the switch, very much less than in switches where a frog is necessary.

The switch-stand I is fitted with a rotating shaft, J, carrying the customary signal K.

The lower end of shaft J is secured to a disk, L, fitted with wrists j for reciprocating the rods M M', to which they are connected.

The rods M M' are connected to the rails F C C', in the manner shown, for the purpose of enabling the rotating shaft J to adjust the rails.

The shaft J is provided with a gravitating-lever, N, the tongue n of which, in either position of the switch-rails, falls into apertures i in the switch-stand, the tongue being slotted to provide for locking when in position.

The rail F, being of considerable length, is apt, in the operation of adjustment from side to side, to spring or sag. To provide against this we have designed and attached the lever O and rod P, the former being pivoted at a and linked to rod M at m, and the latter connected to the rail F at or near its mid-length.

In operation, the action of the rods M' and P prevents the sagging or springing of the rail F. The hinging of the rail F on both sides, at the junction f of the side and main tracks, serves to stiffen the joint laterally and prevent displacement of the rail in any direction.

We claim as new and of our invention—

In combination with the rod M' and movable rail F, the lever O and rod P, when constructed and arranged substantially as set forth.

In testimony of which invention we hereunto set our hands.

JAMES T. GUTHRIE.
LOUIS PAUSCH.

Witnesses:

FRANK MILLWARD,
J. L. WARTMANN.