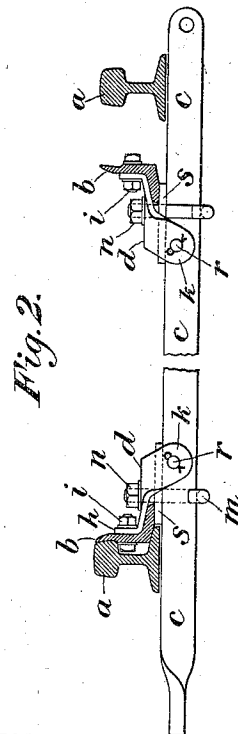
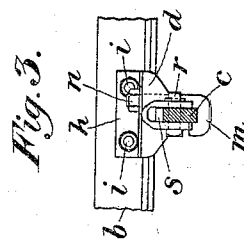
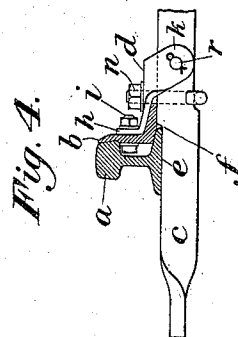
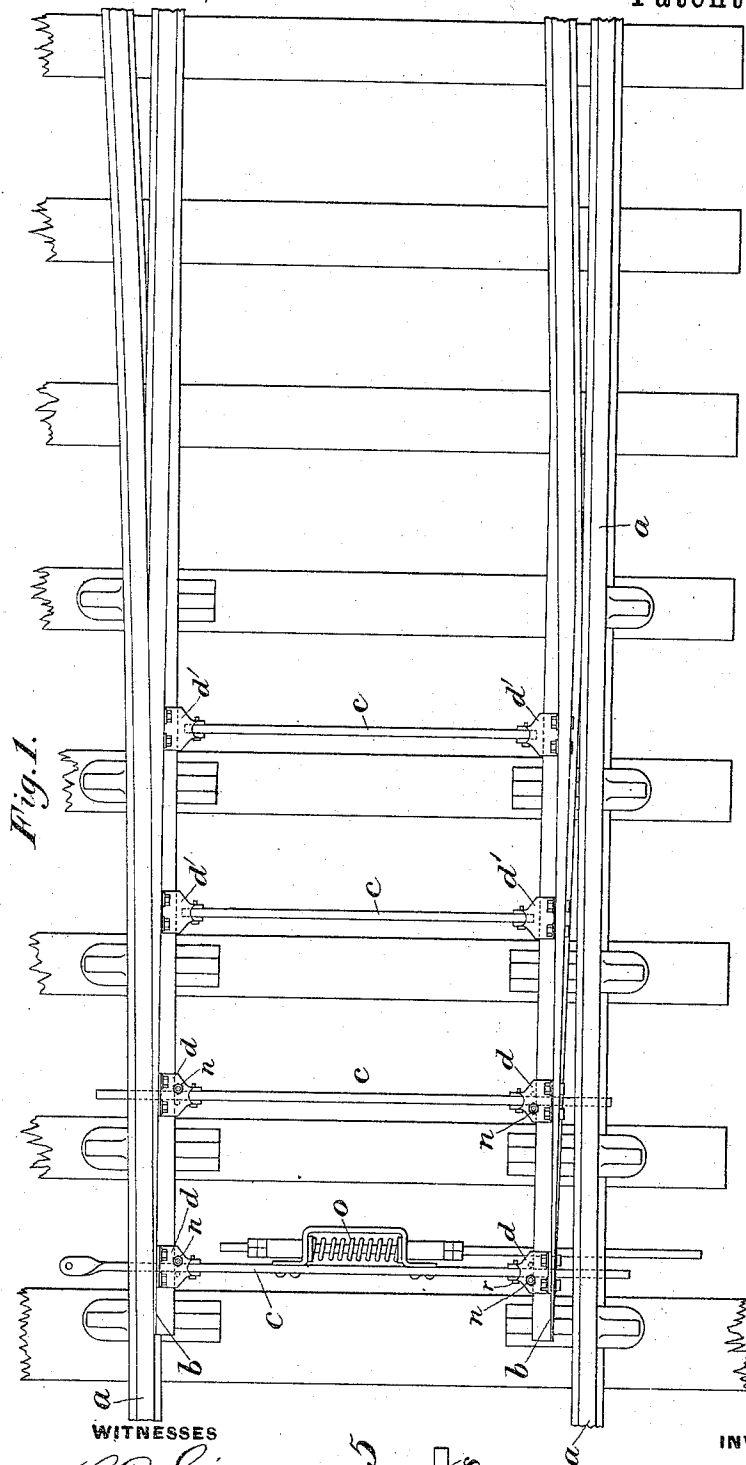


(No Model.)

A. P. AIKEN.  
RAILWAY SWITCH.

No. 547,316.

Patented Oct. 1, 1895.



WITNESSES  
*A. L. Gill.*  
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INVENTOR  
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his Attorneys

# UNITED STATES PATENT OFFICE.

ALBION PAUL AIKEN, OF PORT PERRY, PENNSYLVANIA.

## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 547,316, dated October 1, 1895.

Application filed February 28, 1895. Serial No. 539,540. (No model.)

*To all whom it may concern:*

Be it known that I, ALBION PAUL AIKEN, of Port Perry, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Railway-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a railway-switch, showing my improvement. Fig. 2 is a vertical cross-section through the points of the switch. Fig. 3 is a view, partly in section, showing the attachment of the switch-point to the bridle. Fig. 4 is a vertical sectional view of a modification. Fig. 5 is a detached view of the switch-point support.

Like symbols of reference indicate like parts in each figure.

In the drawings, *a a* represent the two rails of the main line of track, and *b b* the two switch-points, which are connected with each other by the bridles *c* and the clamps *d*. These bridles are preferably each formed of a flat bar of iron or steel running under the rail with their broad or flat faces on vertical lines, and they may be cut away, as at *e* in Fig. 4, to form a stop *f* under the flange of the switch-point. I prefer, however, to employ a separate stop-piece *s*, (shown in Fig. 5,) which lies under the switch-point and the clamp *d*, which clamp is provided with a lateral flange *h*, that fits against the side of the switch-point and is secured thereto by bolts *i* and a vertical yoke *k*, that incloses the bridle, and is secured thereto by a bolt and collar *r*.

In order to connect the bridle *c*, the clamp *d*, and the stop *s* more closely and to hold the bridle and stop firmly against the base of the switch-point and the clamp, so that the switch-point will not kick up its end from the rail or twist outwardly, I employ hooked bolts *m* at the clamp or clamps near the switch-point, the hook of each of which passes under and grasps the under edge of its bridle, while the upper part passes through the stop-piece *s* and the lug *d* and is tightly secured by the nut *n*. Owing to the bridles being edgewise, the spring *o* on the switch-rod may be placed at the side

of the bridle instead of below the same. The clamps *d' d'* at the rearward portion of the switch-point are not held in this manner, and the bridles are therefore connected pivotally to the clamps at those places. The consequence is that while the rails of the switch-point are held rigidly at the extreme ends they are flexibly connected to the rear thereof, can yield somewhat at these rear points, and are therefore much less apt to be injured if struck by the wheels of a car.

Although I have shown and described the bridles as being formed of flat bars set on edge, and while I prefer to employ bars of this shape, I do not desire to limit myself thereto, as other shaped bars may in certain instances be employed. These flat bars may be in the shape of an I-bar or other special shape.

The advantages of my improvement are that the bridles are held firmly to the switch-points and any twisting or bending or kicking up of the same is prevented, which insures a close joint between the rails and the switch-points. The position of the bridles on their edges also gives additional strength without increase in weight and prevents any kicking up at the point in case of a low joint.

What I claim is—

1. In a switch, the combination with switch-points, of bridles extending between the points and connecting them, the bridle or bridles near the ends of the points being connected rigidly to the points, and the bridle or bridles more remote from the ends being connected pivotally; substantially as described.

2. In a switch, bridles having their flat sides on a vertical plane, and having a cut-away portion forming a stop, substantially as described.

3. In a switch, the combination of a bridle, a clamp, a stop, and a hooked bolt passing under the bridle and secured to the clamp, substantially as described.

In testimony whereof I have hereunto set my hand.

ALBION PAUL AIKEN.

Witnesses:

H. M. CORWIN,  
F. E. GAITHER.