No. 865,163. PATENTED SEPT. 3, 1907

J. A. COPPOCK.

RAILWAY SWITCH.

APPLICATION FILED JUNE 11, 1907.

2 SHEETS—SHEET 1.

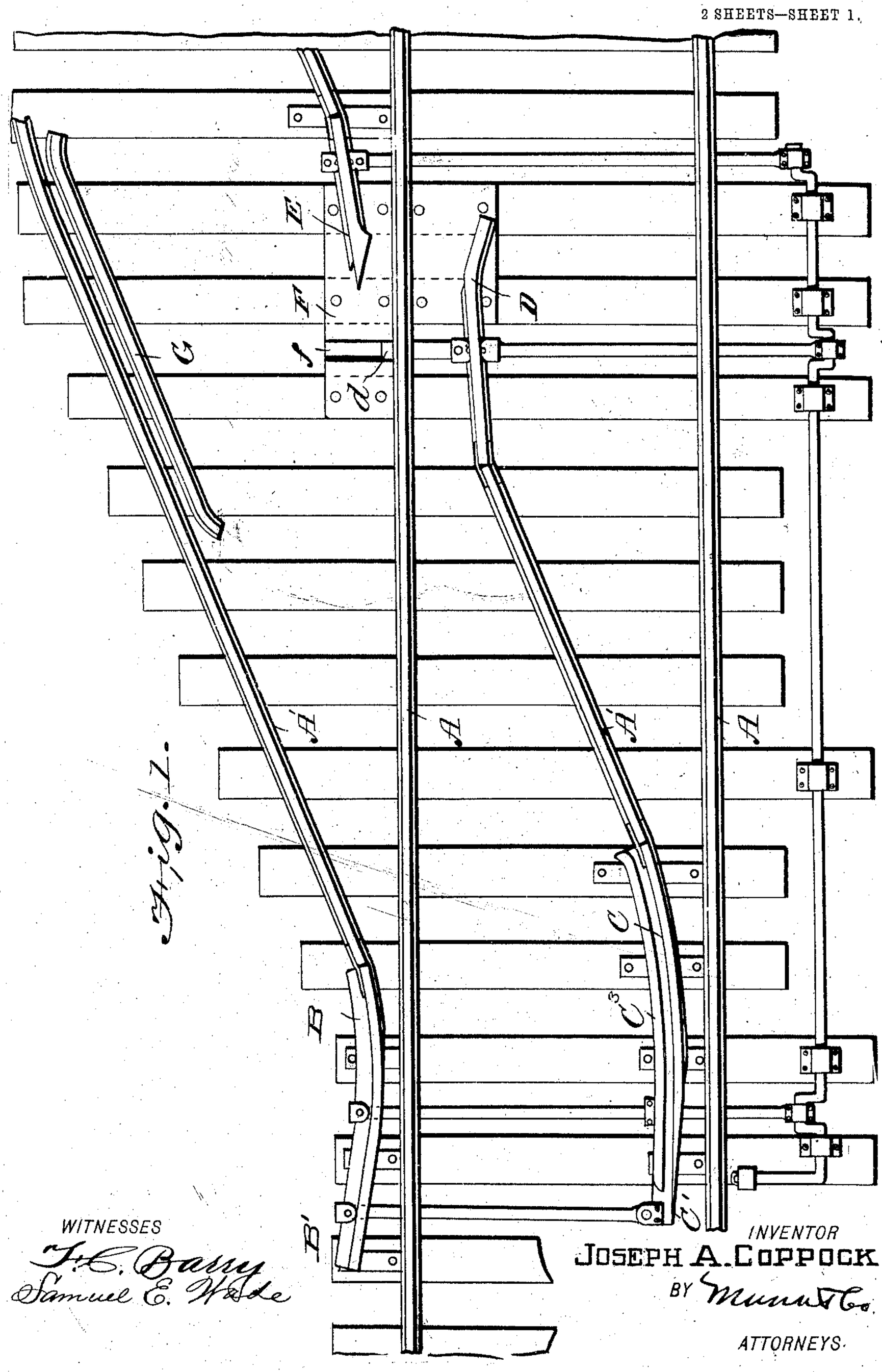

Fig. 1.

WITNESSES

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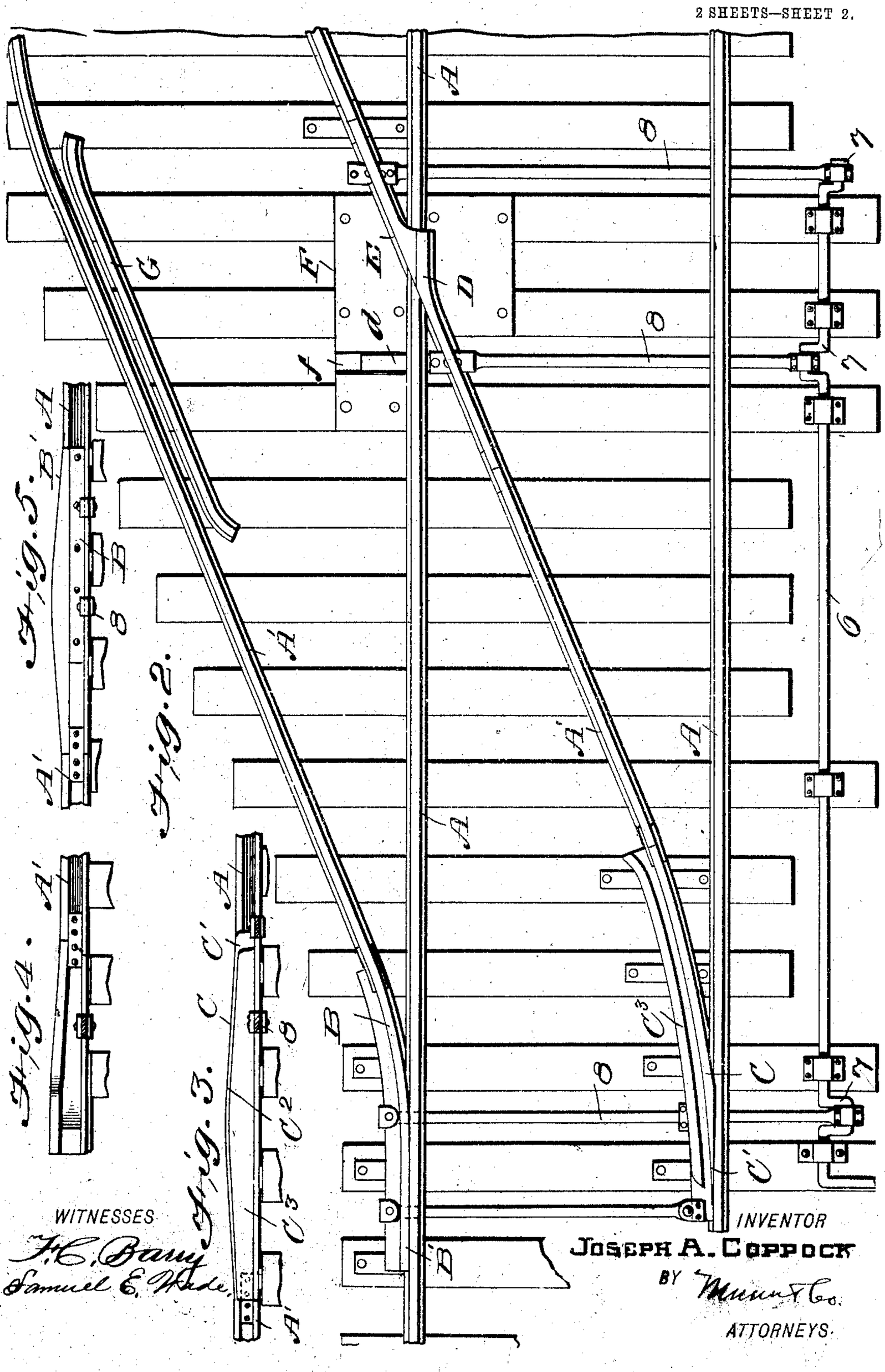

WITNESSES

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JOSEPH A. COPPOCK, OF PINEHURST, GEORGIA.

RAILWAY-SWITCH.

No. 865,163. Specification of Letters Patent. Patented Sept. 3, 1907.

Application filed June 11, 1907. Serial No. 378,375.

To all whom it may concern:

Be it known that I, JOSEPH A. COPPOCK, a citizen of the United States, residing at Pinehurst, in the county of Dooley and State of Georgia, have invented a new and useful Improvement in Railway-Switches, of which the following is a specification.

This invention relates to railway switches and particularly to that class thereof in which the points lap the head of the main rails on top, whereby the use of frogs or breaks in the main track is avoided, so that the danger incident thereto is eliminated, the track when the switch is open being continuous as to both rails, and the points being so constructed as to lift the wheels to cause the flanges thereof to clear the main tracks when the train is taking the switch.

The invention is illustrated in the accompanying drawings, in which

Figure 1 is a plan view of the switch, open. Fig. 2 is a plan view of the same, closed. Figs. 3, 4, and 5 are side views of the various points.

Referring to the drawings, A indicate the continuous main line rails, and A′ the side track rails. The outside switch point B closes against the side of the main rail, and has an incline B′ (see Fig. 5) of sufficient height to raise the wheel flange above the head of the rail. The inside switch point C, has a knife edge at C′ which closes against the side of the main rail, and also an incline C^2, corresponding to the incline B′, to keep the trucks level. Said point also has an inside guard C^3, forming a groove for the wheel flange, especially so that the exit of a track from the side truck will be guided safely to the main line rail. This guard is preferably integral with the point.

The cross-over or frog points D and E are each inclined or elevated so that when the switch is closed the heads thereof will overlie the head of the rail A, and swing to contact with a scarf or beveled joint thereover, forming a continuous cross-over rail of sufficient height to carry the wheel flanges over the main rail. These points are slightly different in shape, the inside point D having a slightly greater length and curve or splay than its fellow E, to bring the latter well out of the way of the flange of a wheel on the main track, but when the switch is closed they meet over the track, as stated.

Suitable bed plates are provided on the ties for the points to slide on, and, also, the point D has a bar *d* which slides in a groove *f* formed in the top of the frog plate F, under the rail A, which thereby serves to guide and strengthen said point D and to prevent the side pressure of the wheel flanges from forcing or turning same out of position. A guard rail G is also placed in the switch opposite the points D and E to prevent undue pressure or strain thereon.

The various points are operated by means of a rock shaft 6, set in bearings in the ends of the ties, the bearings being let in the ties sufficiently to bring the shaft on a level with the base of the rails, so that the rods can work thereunder. The shaft has cranks 7 connected by rods 8 to the respective points, the throw of the respective cranks being appropriate to the desired movement of the points; and the respective points are connected to the various rails by the usual loose bolts and bars.

The point B extends a sufficient distance in advance of the point C to raise the wheel on its incline enough to clear the flange over the rail before the truck is shifted toward the side track.

It will be seen that when the switch is open the main track is entirely clear, without break or frog, and free from the dangerous features incident thereto.

I claim

1. A railway switch having a pair of cross-over points located on opposite sides of the rail head, the heads of said points being raised and extended to close over the rail head, a plate, under the rail and points, having a groove extending across under the rail, and a bar fixed to one of the points and slidable in the groove, under said rail.

2. A railway switch having a pair of cross-over points located on opposite sides of the rail head, the heads of said points being raised and extended to close over the rail head, a bar fixed to one of the points, and extending beneath the rail, said bar being slidable thereunder for the purpose set forth.

JOSEPH A. COPPOCK.

Witnesses:
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