

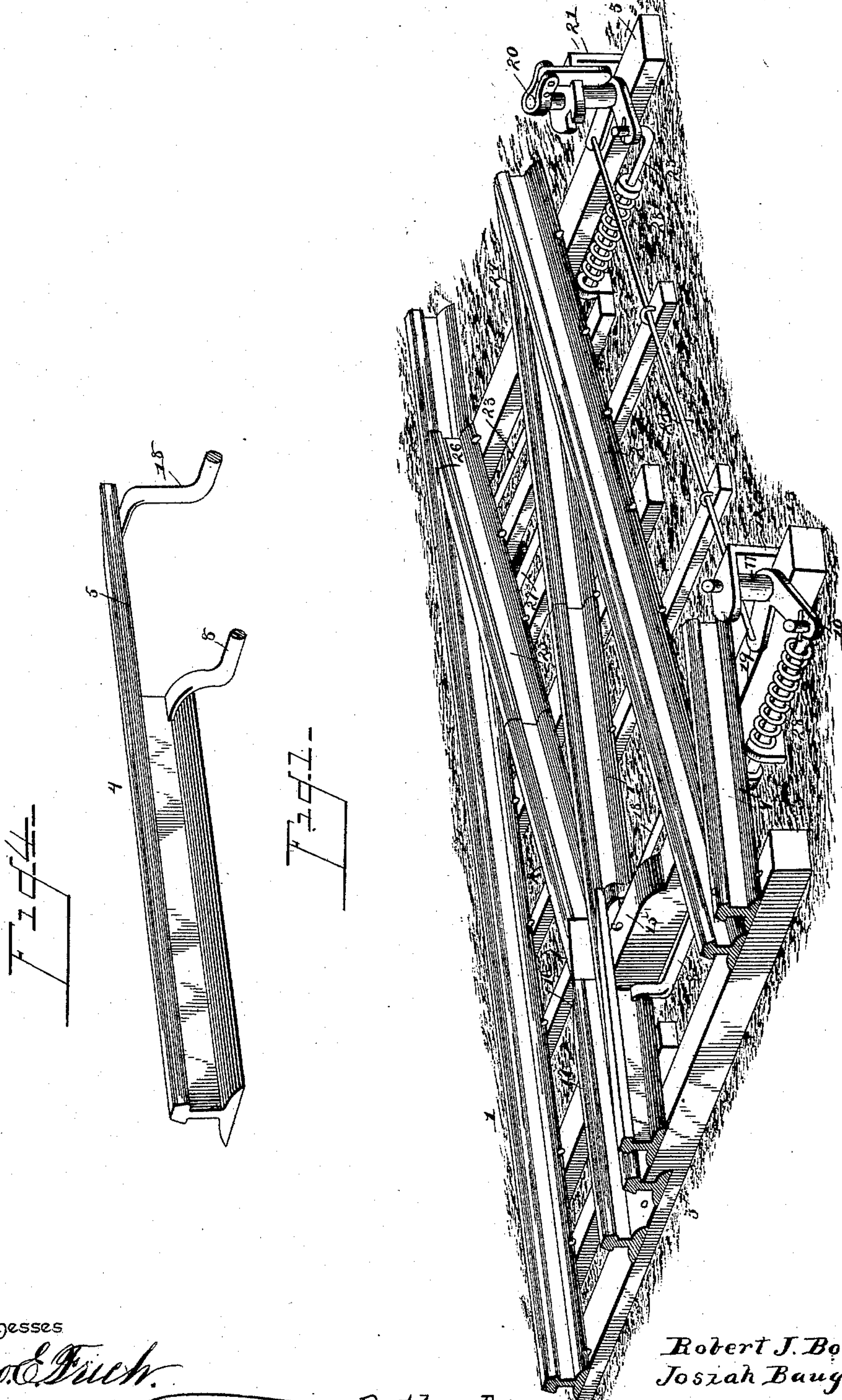
(No Model.)

2 Sheets.—Sheet 1.

R. J. BOOTH & J. BAUGHMAN.
RAILWAY SWITCH.

No. 442,096.

Patented Dec. 9, 1890.



Witnesses

Geo. E. French

J. G. Riley

By their Attorneys

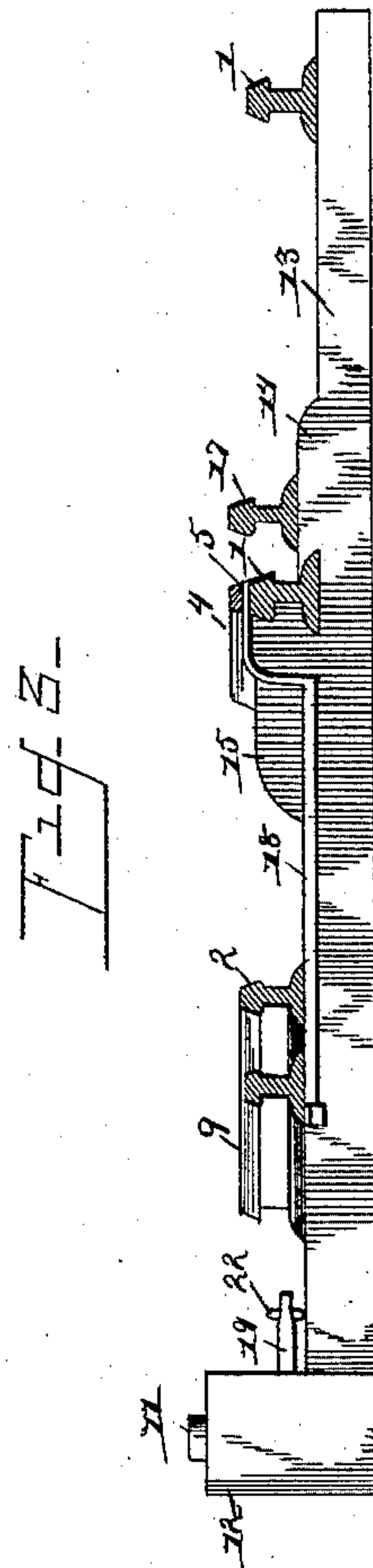
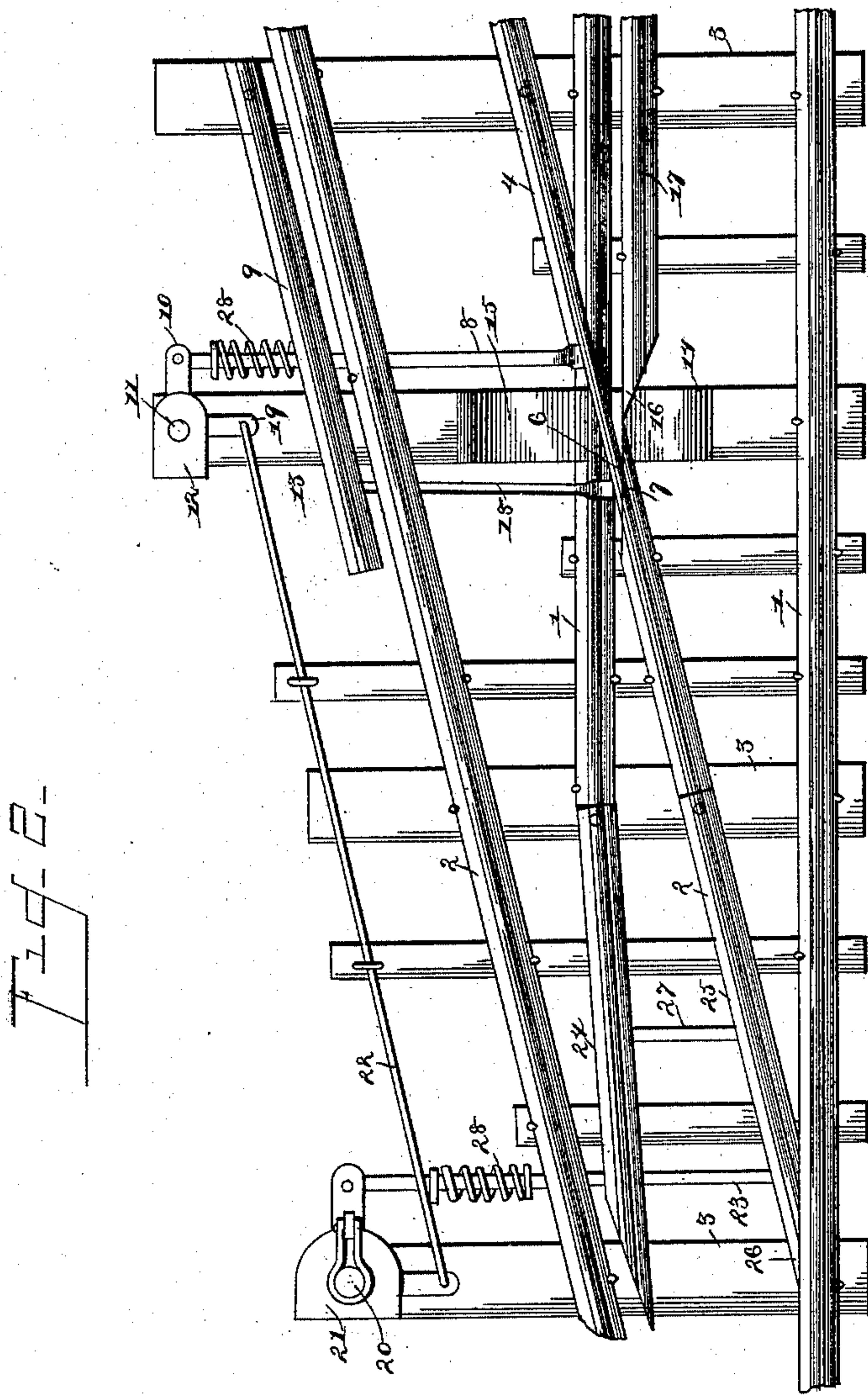
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

ROBERT J. BOOTH AND JOSIAH BAUGHMAN, OF GARNER, ARKANSAS.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 442,096, dated December 9, 1890.

Application filed May 22, 1890. Serial No. 352,721. (No model.)

To all whom it may concern:

Be it known that we, ROBERT J. BOOTH and JOSIAH BAUGHMAN, citizens of the United States, residing at Garner, in the county of White and State of Arkansas, have invented a new and useful Railway-Switch, of which the following is a specification.

The invention relates to improvements in railway-switches.

The object of the present invention is to simplify and improve the construction of railway-switches and enable the ordinary construction of frog to be dispensed with and to insure a continuous line both for the main line and the side track.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a frog constructed in accordance with this invention, the switch being open to the main line and the main line being shown continuous. Fig. 2 is a plan view showing the frog closed to the main line. Fig. 3 is a transverse sectional view on line *xx* of Fig. 2. Fig. 4 is a detail view of the frog-rail.

Referring to the accompanying drawings, 1 designate the rails of a main line, and 2 2 designate the rails of a side track, which rails are mounted upon ties 3 in the usual manner. The main rails 1 are arranged in the same horizontal plane, while the side rail 2, that crosses the main rail, is elevated sufficiently to bring the top flange of it above the tread of the main rail and enable the frog-rail 4 when closed to rest upon the main rail and form a continuation of the adjacent side rail 2. The frog-rail 4 has its web and bottom flange cut away at 5, and the end 6 of the frog-rail is beveled and matches the beveled end 7 of the side rail 2 and forms a continuous side rail and dispenses with the ordinary construction of frog usually employed at this point. The elevation of the frog-rail 4 and the adjacent side rail is only about two inches above the main rail at the highest point, or about the thickness of the top flange of a rail, and the rise is gradual and hardly perceptible and does not interfere in the least with the

passage of trains. The frog-rail is connected by a bar 8 with an idle-rail 9 and an L-shaped arm 10 of a vertical rock-shaft 11, that is mounted in a stand 12, and the stand is secured upon the end of a tie 13, that extends under the idle-rail and the main and side tracks, and has secured to its upper face chairs 14 and 15, the latter of which forms a bearing upon which the frog-rail 4 slides, and the former has secured to it the beveled end 7 of the side rail 2 and the beveled end 16 of a guard-rail 17, which protects the pointed end of the side rail 2. The connecting-bar 8, that extends from the frog-rail to the L-shaped arm 10 of the rock-bar 11, is connected with the frog-rail and idle-rail at points intermediate of their ends, and their free ends are connected by a bar 18. The arm 19 of the rock-shaft 11 is connected with a similar rock-shaft 20 of the main switch-stand 21, that operates the switches by a rod 22, and the shaft 20, which is mounted in the stand 21, is provided with an L-shaped arm having one end connected with a rod 22 and the other end pivoted to a bar 23, which is connected with hinged sections 24 and 25 of the main rail 1 and the siding-rail 2, and when the rock-shaft 20 is turned the hinged section 24 of the main rail is carried away from the side rail, and the hinged section of the side rail, which is beveled at 26, is brought into contact with and forms a continuation of the main rail, or vice versa, and simultaneous with the operation of the hinged sections the frog-rail is opened or closed, accordingly as the the side track of the main line is continuous. The hinged sections 24 and 25 are further connected and braced by a bar 27, that has its end pivoted to the hinged section about midway the length of the same, and the switch is normally held open and the main line maintained continuous by springs 28.

It will readily be seen that the switch is simple and inexpensive in construction and easily operated and dispenses with the frog usually employed.

What we claim is—

1. The combination, in a switch, of the main rails, the siding-rails 2, the one crossing the main rail being provided with the beveled end 7, the guard-rail having the beveled end 16,

arranged contiguous to the end 7, and the frog-rail having its web and lower flange cut away at 5 and provided with a beveled end 6, adapted to form a continuation of the adjacent siding-rail, substantially as described.

2. The combination, in a switch, of the main rails, the siding-rails, the one crossing the main rail being provided with the beveled end 7, the guard-rail having a beveled end arranged contiguous to the end 7, the frog-rail having its web and bottom flange cut away at 5 and provided with a beveled end 6, adapted to lap the main rail and form a continuation of the siding-rail, and the idle-rail connected to and moving with the frog-rail, substantially as described.

3. The combination, in a switch, of the main rails having the hinged section 24, the sid-

ing-rail provided with the hinge-section 25, the siding-rail crossing the main rail being arranged at a slight inclination and provided with the beveled end 7, the guard-rail, the frog-rail 4, provided with the beveled end 6, adapted to lap the main rail and form a continuation of the siding-rail, the idle-rail moving with and connected to the frog-rail, and means for operating the switch, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ROBT. J. BOOTH.
JOSIAH BAUGHMAN.

Witnesses:

A. S. CLAIBORN,
W. R. SAGE.