No. 640,617. Patented Jan. 2, 1900.

A. H. BURCHARD.

RAILWAY SWITCH.

(Application filed June 4, 1898. Renewed Oct. 25, 1899.)

(No Model.)

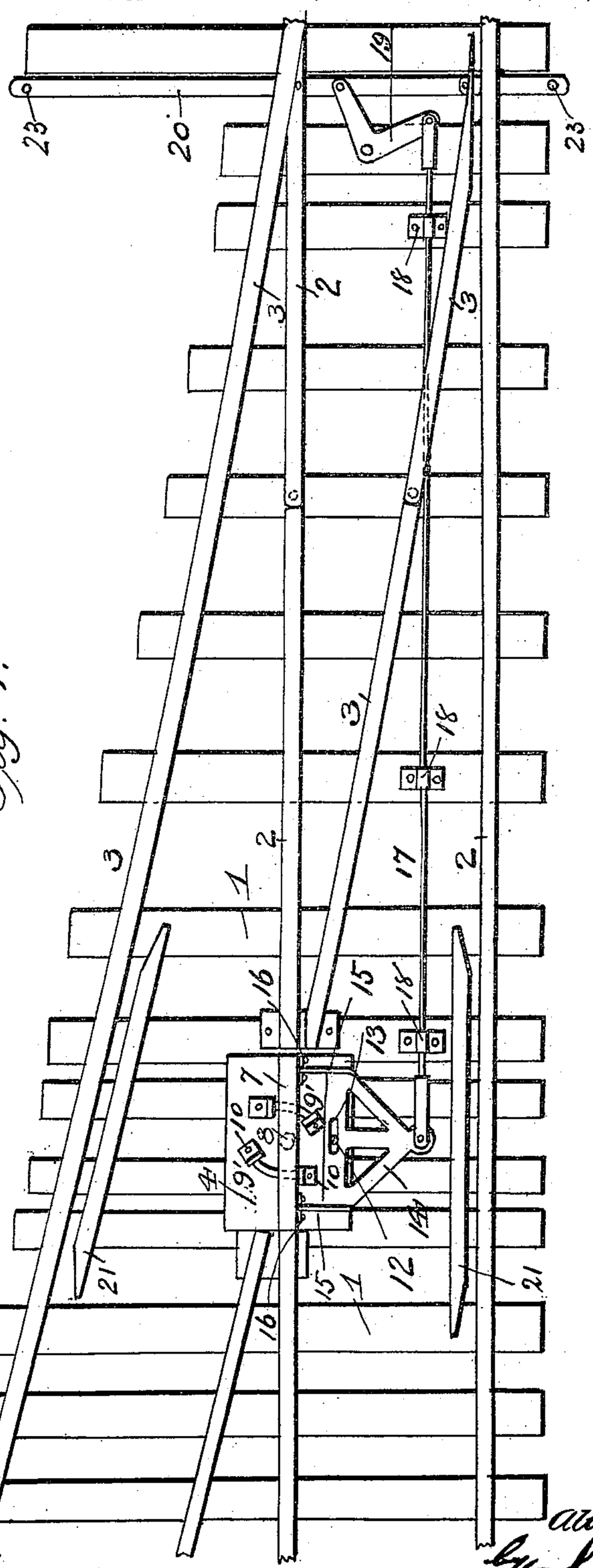

Fig. 1.

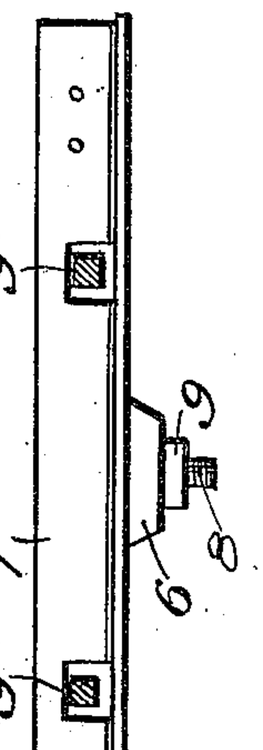

Fig. 3.

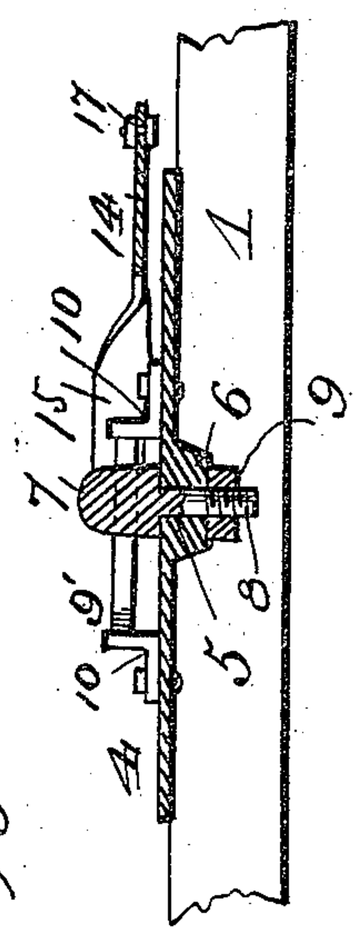

Fig. 2.

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UNITED STATES PATENT OFFICE.

ALONZO H. BURCHARD, OF COLORADO SPRINGS, COLORADO, ASSIGNOR TO CHARLES T. HUNN, OF DENVER, COLORADO, AND JOHN W. PATTON, OF MACON, MISSOURI.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 640,617, dated January 2, 1900.

Application filed June 4, 1898. Renewed October 25, 1899. Serial No. 734,779. (No model.)

To all whom it may concern:

Be it known that I, ALONZO H. BURCHARD, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented new and useful Improvements in Railway-Switches, of which the following is a specification.

My invention relates to devices for switching cars from the main rails of a railway to a siding, and vice versa; and its object is to provide an improved construction of the same to take the place of an ordinary frog, whereby the jars incident to the use of such frogs are avoided, greater security against accidents provided, and superior advantages with respect to efficiency in use obtained.

The invention consists, essentially, in a pivoted switch-rail adapted to be thrown into coincidence with the main or siding rails, as the case may be, curved guide-braces passing through said rail, a pivoted switching-bracket secured to said rail, and means for operating the same and one of the main and siding rails, as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view showing a portion of a railway with my improved shifting device applied thereto. Fig. 2 is a longitudinal sectional view taken longitudinally through the pivoted switch-rail. Fig. 3 is a detail view.

In the said drawings the reference-numeral 1 designates the ties of a railroad, and 2 the main rails, secured thereto. The numeral 3 designates the siding-rails. Secured to the said ties is a metal plate 4, provided with a central hole 5 and a depending strengthening or reinforcing boss 6 on its under side.

The numeral 7 designates the switch-rail, provided on its under side with a pivot 8, preferably formed integral therewith and screw-threaded at the lower end. This pivot passes through the said boss and is provided with a nut 9 or tap at the lower end, by which it is secured or held in place. Bolted to said plate 4 are two curved guide-braces 9′, passing through open slots in the lower sides of the switch-rails and provided with lugs 10, through which the bolts pass to secure them to the plate. The said braces consist of the curved horizontal portion and the lugs at the ends, made integral therewith. The said plate 4 is provided with a stop-pin 12 on its upper side, which passes through an elongated slot 13 in a shifting brace or bracket 14. This brace or bracket is approximately triangular in shape and at its inner side is formed with two arms 15, provided with oppositely-extending lugs 16, which are bolted to the switch-rail. Pivotally connected with the outer end of said brace or bracket is a horizontal reciprocating rod 17, which passes through guides 18, secured to the ties. At the opposite end said rod is pivoted to one arm of an elbow-lever 19, pivoted to one of the ties, the other arm of said lever being pivoted to a reciprocating transverse bar 20, provided with holes 23, by which it may be connected with an ordinary switch-lever (not shown) for operating it. One of the main rails 2 and one of the siding-rails 3 are connected with the bar.

The numeral 21 designates guard-rails opposite the switch-rail.

The operation is as follows: When the cars are to stay on the main rails, the parts are in the position shown in Fig. 1. It will thus be seen that the cars can run on said rails without any jar, as there will be no more obstruction than if the switching device were not employed. When, however, it is desired to switch the cars from the main rails to the siding, the brace or bracket is operated by the rod and bar connected therewith, so as to throw the switch-rail into the position shown, into alinement with the inner siding-rail, and also move the main and siding rails connected with the transverse reciprocating bar into position for the car to pass onto the siding-rails. The cars can now pass from the main rails to the siding or from the siding to the main rails, as the case may be, without the slightest jar. The guard-rails serve to relieve the switch-rail from strain or pressure.

Having thus fully described my invention, what I claim is—

In a railway-switch, the combination with the main and siding rails, the metal plate having a central hole and a reinforcing-boss and provided with a stationary pin, and the switch-

rail having a pivot on its under side passing through said boss, and formed with open slots in its under side, of the triangular shifting brace or bracket formed with an elongated slot near its inner edge and formed with two inwardly-extending arms bent upwardly at right angles thereto and the ends bent in opposite directions forming lugs which are bolted to the switch-rail, and the curved guide-braces formed with integral lugs bolted to said plate, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALONZO H. BURCHARD.

Witnesses:
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