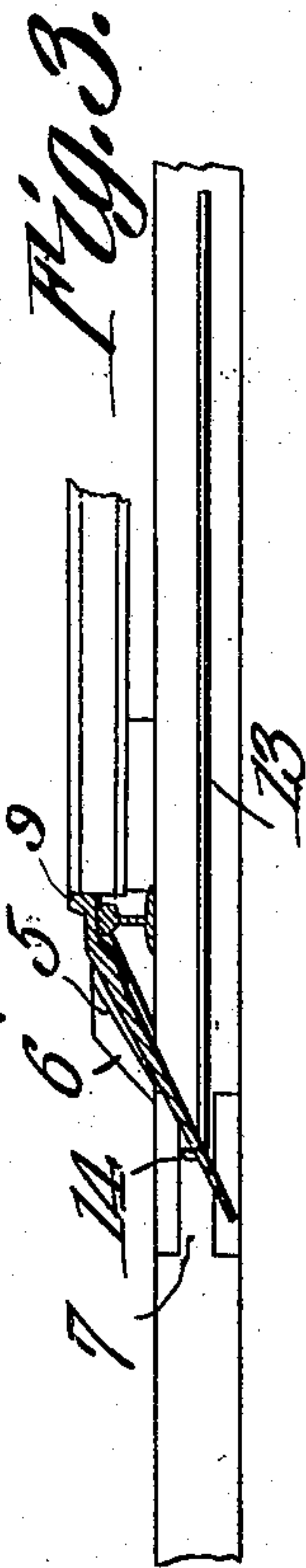
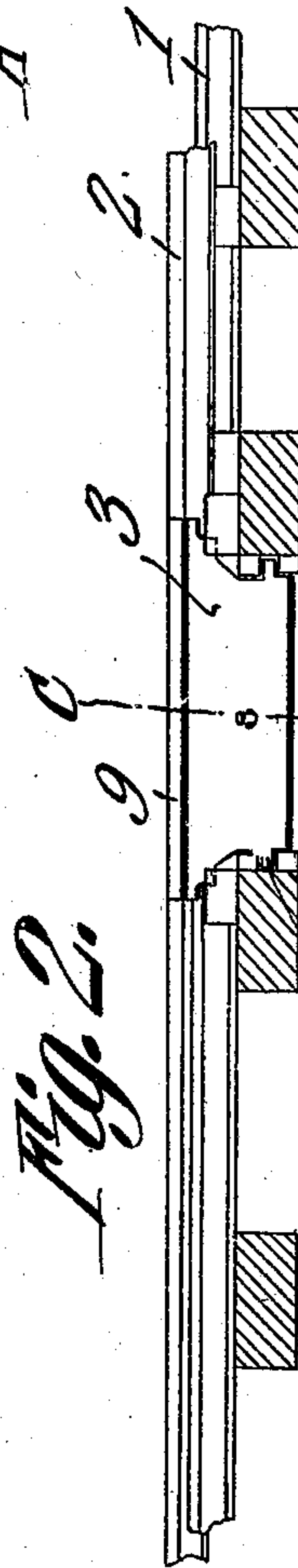
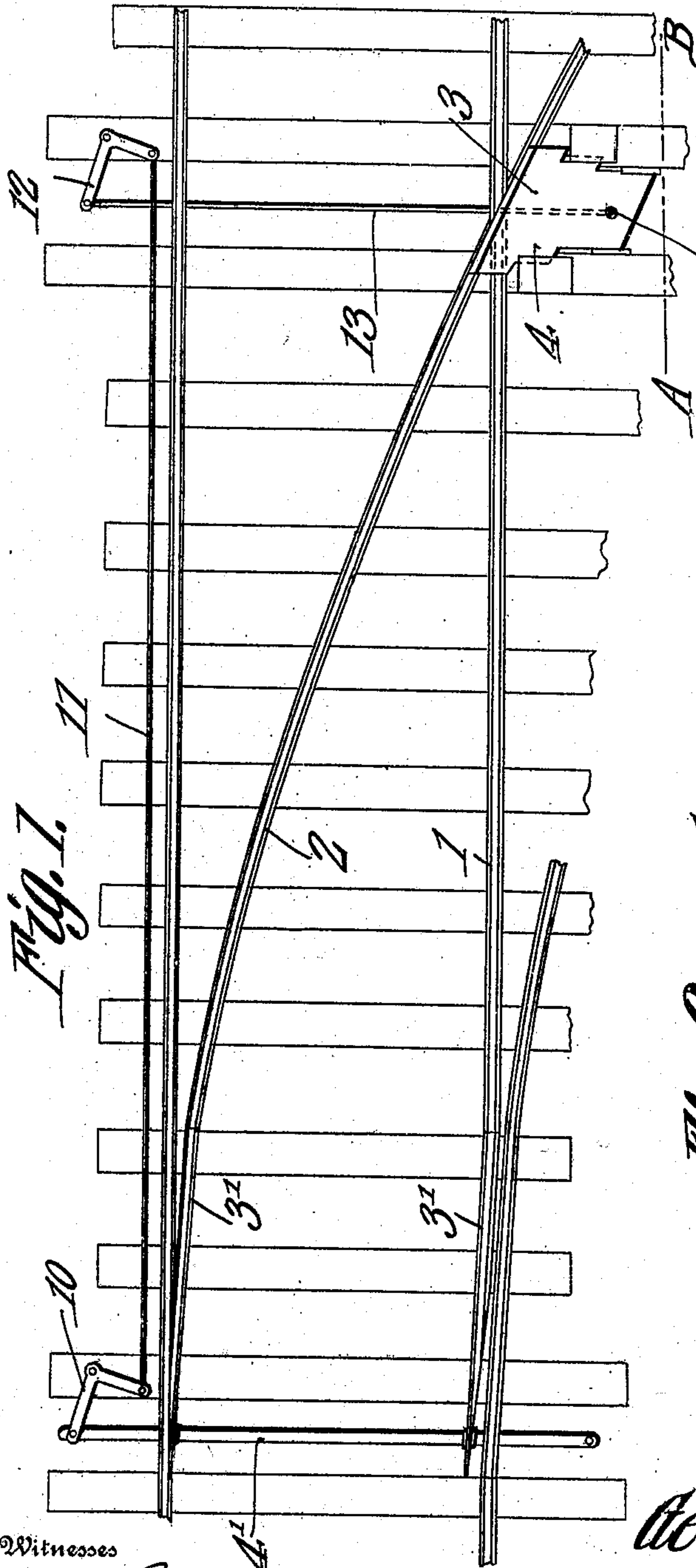


G. J. ABRY.
RAILWAY SWITCH.
APPLICATION FILED MAR. 11, 1909.

923,926.

Patented June 8, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE J. ABRY, OF VINCENNES, INDIANA.

RAILWAY-SWITCH.

No. 923,926.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed March 11, 1909. Serial No. 482,712.

To all whom it may concern:

Be it known that I, GEORGE J. ABRY, a citizen of the United States, residing at Vincennes, in the county of Knox and State of Indiana, have invented a new and useful Railway-Switch, of which the following is a specification.

This invention relates to railway switches of that type utilizing movable switching frogs, one of the objects of the invention being to provide a construction which obviates the necessity of cutting the rails of the main track but permits a perfectly smooth track to be maintained at all times when the switch is closed.

A further object is to provide means whereby the ordinary railway switch frog and the main track guard rail may be dispensed with.

Another object of the invention is to provide a bridging device for use in connection with one of the rails of the siding, this device being so mounted as to extend over the adjoining rail of the main track and to aline with the contiguous portions of the adjoining rail of the siding, said portions being elevated so as to direct a car across the rail of the main track at a point elevated thereabove.

Another object is to provide simple mechanism for causing the simultaneous actuation of the switch rails and the bridging device.

With these and other objects in view the invention consists in certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a plan view of a switch embodying the present improvements, the switch being shown open and the bridging device in position over one of the rails of the main track. Fig. 2 is an enlarged section on line A—B Fig. 1. Fig. 3 is an enlarged section on line C—D Fig. 2.

Referring to the figures by characters of reference 1 designates a rail of the main track and 2 designates a rail of the siding, there being shiftable switch rails 3' located as ordinarily and attached to a connecting rod 4' which is movable longitudinally beneath the rails of the main track. The siding rail 2 is inclined upwardly from its switch rail 3' to the main track rail 1 toward which it converges, the head of this siding rail being elevated above the rail of the main track a suffi-

cient distance to permit car wheels to pass along the siding rail and over the main line rail without bringing the flanges of the car wheels into contact with the rail of the main line. The siding rail 2 is cut at the proper point to permit the main track rail to extend therethrough, the head of the siding rail being removed for a considerable distance at the two sides of the main line rail, so that the web of said siding rail will cooperate with the head of the main line rail and constitute a rest for a bridging member 3, which member however is only in position across the main line rail when the switch is open.

The bridging member 3 is in the form of a plate having guide flanges 4 at the sides thereof and which are designed to slide within inclined guide grooves 5. These grooves are formed within opposed blocks 6 secured close to the main line and siding rails 1 and 2. Horizontal guide grooves 7 are also located below the blocks 6 at proper points to receive trunnions 8 extending laterally from the plate. A rib 9 is formed along the upper edge of the plate 3 and at such an angle as to aline with the spaced portions of the siding rail 2 when the bridging piece is in position across the main line rail 1.

A bell crank lever 10 is arranged at one side of the main track and is pivotally connected to the rod 4', this lever being also connected by means of a rod 11 with one arm of another bell crank lever 12 arranged opposite the bridging plate 3. The other arm of this lever 12 is connected by means of a rod 13 with the bridging plate as indicated at 14.

When the switch rails 3' are in closed position, the bridging plate 3 is located away from the main line rail 1 and with its flanges 4 located in the lower portions of the guide grooves 5 and with trunnions 8 disposed in those ends of the grooves 7 farthest removed from the main line rail. It will be apparent therefore that wheels traveling along the rails of the main line will not pound, when crossing the switch, because it is unnecessary to cut the rail, and there is sufficient space between the main line and the siding rails to permit the flanges of the wheels to pass. When the switch rails 3' are shifted into open position motion is transmitted through the bell crank levers and the rod 11 to rod 13, which pulls on the bridging plate and causes its flanges 4 to travel upwardly within the guide grooves 5, and the trunnions 8 to travel longitudinally within the grooves 7. The upper end

portion of the bridging plate will thus be elevated into position upon the main line rail 1 and between the alining portions of the siding rail 2, so that the rib 9 upon the bridging plate will constitute a continuation of the head of the siding rail and thus permit a car to travel smoothly along the rail 2 and over the main line rail 1, the elevation of the siding rail above the main line rail being sufficient to permit the flanges of the wheels to escape the main line rail. As soon as the switch has been closed the bridging plate will be returned to its initial position.

If desired the rod 11 may be eliminated and a switch stand placed at or opposite to the lever 12, this stand being used in addition to the one employed for throwing the switch point.

Obviously various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. The combination with a continuous main line rail, of a siding rail inclined upwardly toward the main line rail, said siding rail being cut away at opposite sides of and above the main line rail, a bridging member normally disposed at one side of and below the upper faces of the main line and siding rails, means for sliding said bridging member, and means for elevating the bridging member during its sliding movement and

into position within the cut-away portion of the siding rail, and into alinement with the head of said rail.

2. The combination with a main line rail and a siding rail having its head disposed in a line extending over the main line rail, said siding rail being cut away above and at opposite sides of the main line rail, of a slidable bridging member, inclined guides therefor, means upon the bridging member for engaging said guides, a tread portion upon the bridging member, and means for shifting the bridging member to position the tread portion thereof upon the main line rail and in alinement with the corresponding portion of the siding rail.

3. The combination with a continuous main line rail, of a siding rail inclined upwardly toward the main line rail and cut-away at opposite sides of and above the main line rail, a slidable bridging member having a tread portion, means for actuating said member, and means for guiding the bridging member into the cut-away portion of the siding rail and with its tread portion in alinement with the tread of said siding rail.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE J. ABRY.

Witnesses:

JACOB G. PURKY,
JOSEPH F. PURKY.