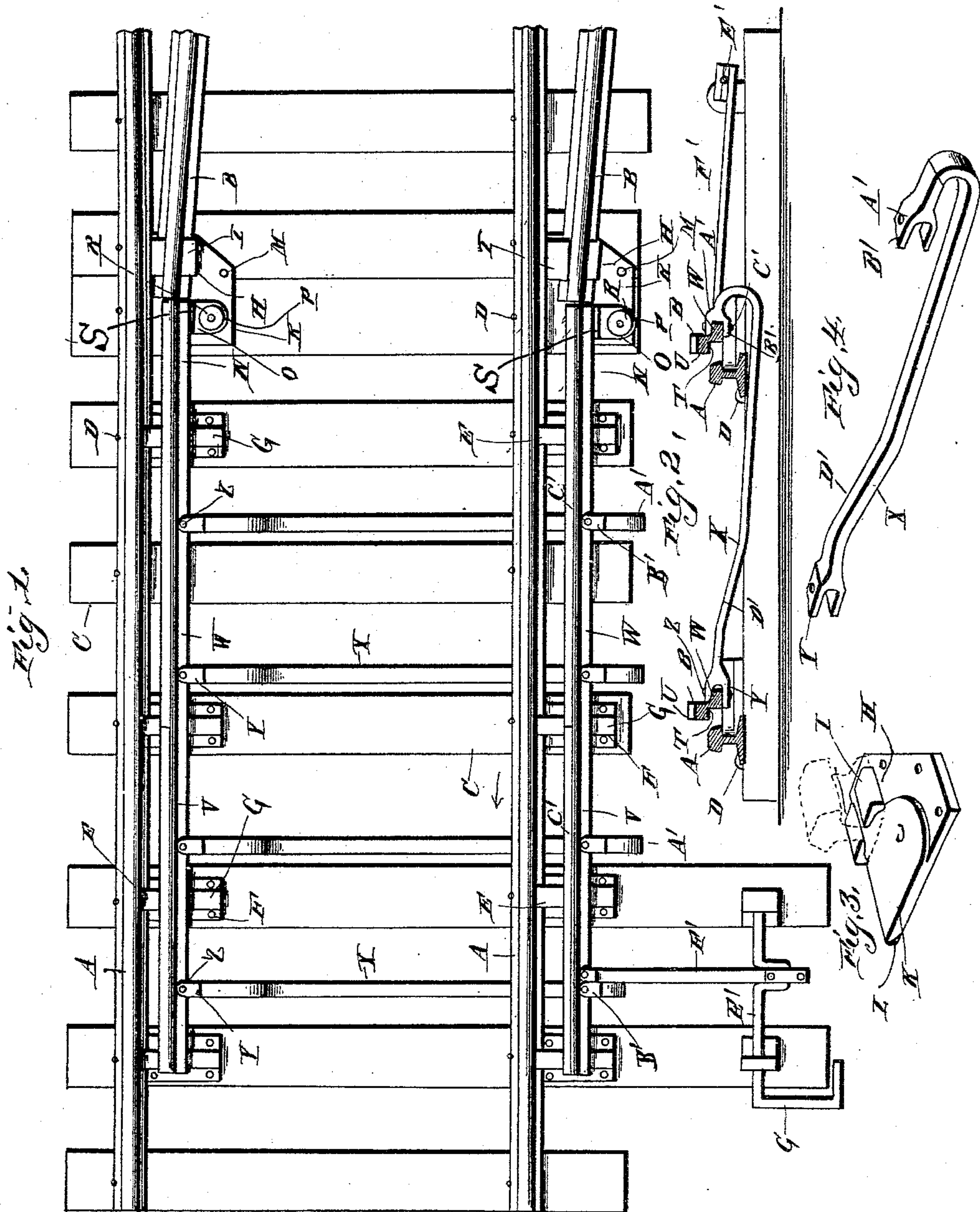


(No Model.)

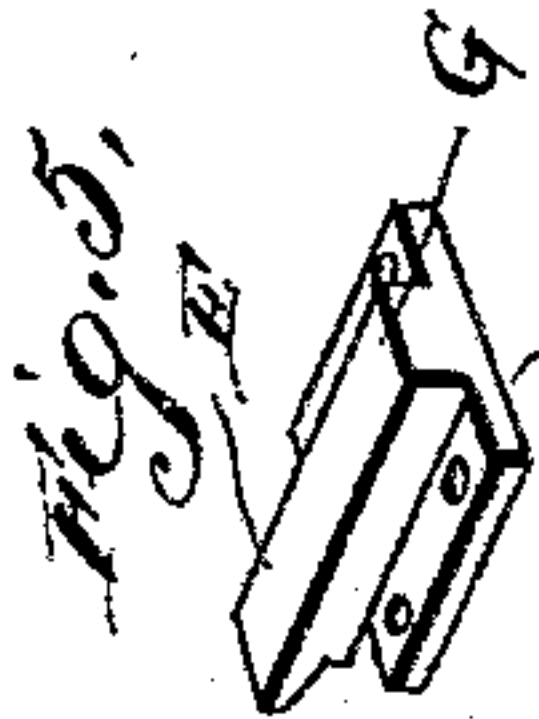
J. E. ROBINSON.
RAILWAY SWITCH.

No. 414,587.

Patented Nov. 5, 1889.



WITNESSES:
C. L. Taylor
H. C. Johnson



INVENTOR:
J. E. Robinson
By *Higdon & Higdon*
his Attorneys.

UNITED STATES PATENT OFFICE.

JAMES E. ROBINSON, OF COVINGTON, GEORGIA.-

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 414,587, dated November 5, 1889.

Application filed August 12, 1889. Serial No. 320,514. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. ROBINSON, of Covington, Newton county, Georgia, have invented certain new and useful Improvements in Railway-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improvement in railroad-switches; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of a railroad-switch embodying my improvements. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a detailed perspective view of one of the pivot-plates for the switch-rails. Fig. 4 is a similar view of one of the tie-rods.

A represents the rails of the main track.

B represents the side-track rails. At the location of the switch the main-track rails have one side secured to the ties C by means of the usual spikes D. The opposite sides of the main-track rails on the sides adjacent to the side-track rails have their base-flanges engaged by arms or lugs E, formed on the ends of slide-plates F. The said slide-plates are spiked to the ties and are arranged at right angles to the main-track rails, their lugs E being formed at the outer ends of central longitudinal webs or flanges G, formed on their upper sides.

The ends of the side-track rails where they approach the main-track rails are inserted in keepers H, formed by pairs of parallel lugs I, which lugs are formed on the upper sides of pivot-plates K. The said pivot-plates are of the shape shown, being substantially square, and have flanges L on their sides adjacent to the main-track rails, the said flanges bearing on the base-flanges of the main-track rails, as shown. The said pivot-plates are secured on the ties by spikes M.

The switch-rails N are supported their entire length on the slide-plates F and have their inner ends supported on chairs O, that bear on the pivot-plates, and are provided with outward-extending arms P, pivoted on

vertical trunnions R, with which the pivot-plates are provided. The confined ends of the switch-rails rest in recesses S in the chairs and are bolted therein. The said switch-rails, being supported their entire length on the slide-plates F, are in a higher plane than the main-track rails, and the free ends of the switch-rails are cut away, as at T, thereby forming extending arms or heads U, that are adapted to ride over the main-track rails and to lie lightly thereon when the switch is set for the side track. The said free ends of the switch-rails have their upper sides beveled to form inclines V, which serve to gradually raise the treads of the wheels of a passing train from the level of the main track to that of the switch-rails, so that the wheels pass over the main-track rails without touching them when on the switch. Each switch-rail is provided on the side facing from the adjacent track-rail with a base-flange W, the said base-flanges supporting the switch-rails on the slide-plates. Tie-rods X are employed to connect the switch-rails together and cause them to move in unison and preserve them in parallelism. The said tie-rods have one end bifurcated to form ears Y, which engage the base-flange of one of the switch-rails and are pivoted thereto by bolts Z, and the opposite ends of the tie-rods pass under the other switch-rail and are curved up under the same to form arms A', the said arms being formed with pairs of ears B', which engage the base-flange of the adjacent switch-rail and are pivoted thereto by means of bolts C'. Offsets or curves D' are formed in the tie-rods, as shown.

The switch-rails are connected to a crank-shaft E' by means of a link F', and the crank-shaft has a lever G', by which the switch-rails may be operated.

A switch thus constructed is advantageous, for the reason that it leaves the main-track rails unbroken, and for the further reason that a train on the main track running in the direction of the arrow in Fig. 1 may pass the switch when the latter is set for the side track without the danger of being derailed, the crank not being on a dead-center when thrown over.

It will be understood that the slide and pivot plates not only serve their purposes as

such, but also serve to fasten the main-track rails to the cross-ties.

Having thus described my invention, I claim—

5 1. In a railroad-switch, the combination, with the main and side track rails, of the pivot-plates K, having the keepers H for the ends of the side-track rails, the chairs O, piv-
10 oted on the pivot-plates and having the recesses S for the inner ends of the switch-rails, and the slide-plates F, supporting the switch-
15 rails, said slide-plates and pivot-plates having the projecting lugs or flanges bearing on the base-flanges of the main-track rails, substan-
tially as described.

2. In a railroad-switch, the combination, with the switch-rails, of the tie-rods X, having the offsets or curves D' and having their ends provided with ears pivoted to the base-flanges of the switch-rails, one end of each tie-rod being bent under and partly around one of the switch-rails, as at A', substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES E. ROBINSON.

Witnesses:

JNO. F. HENDERSON,
JOHN P. HARRIS.