(No Model.)

2 Sheets—Sheet 1.

R. PASKEL.

RAILWAY SWITCH.

No. 454,290. Patented June 16, 1891.

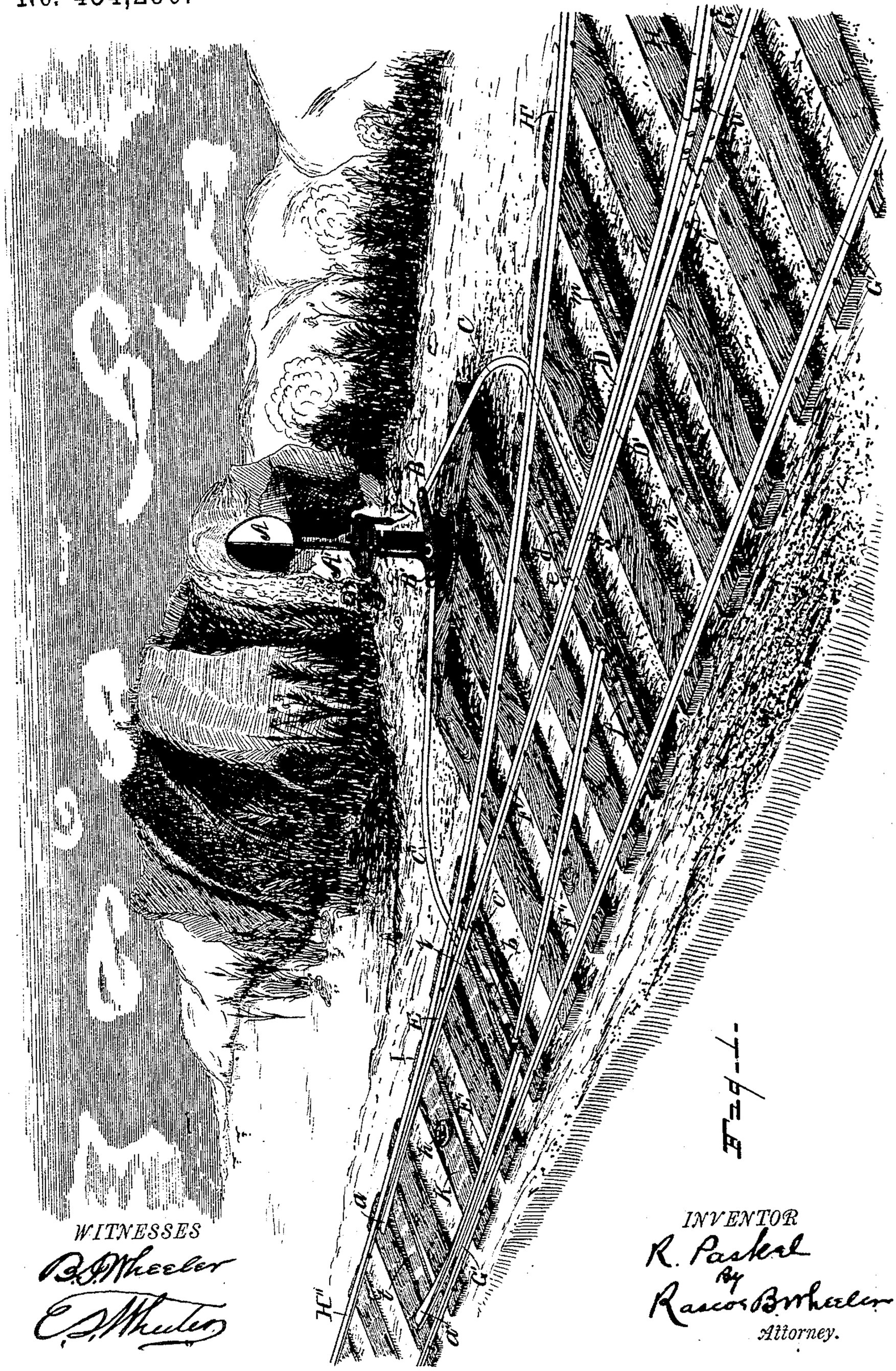

Fig. 1.

WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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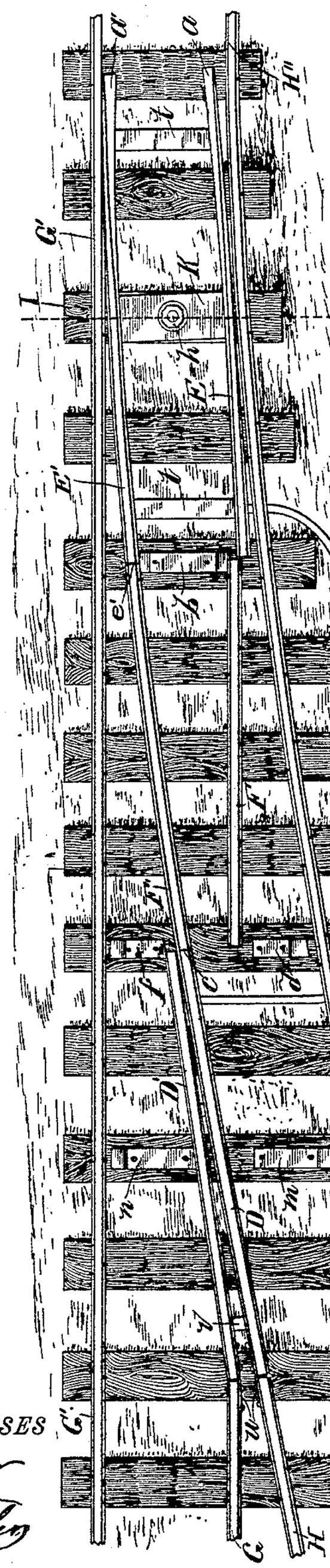

Fig. 2.

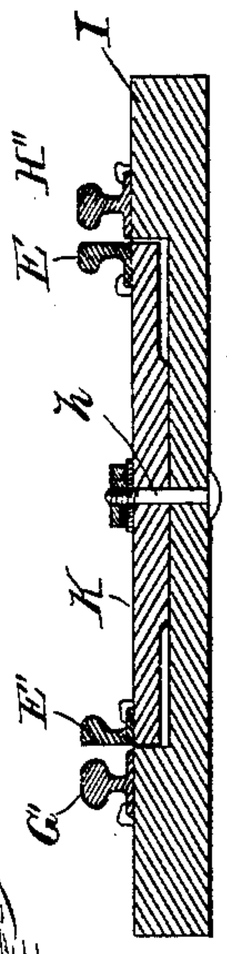

Fig. 3.

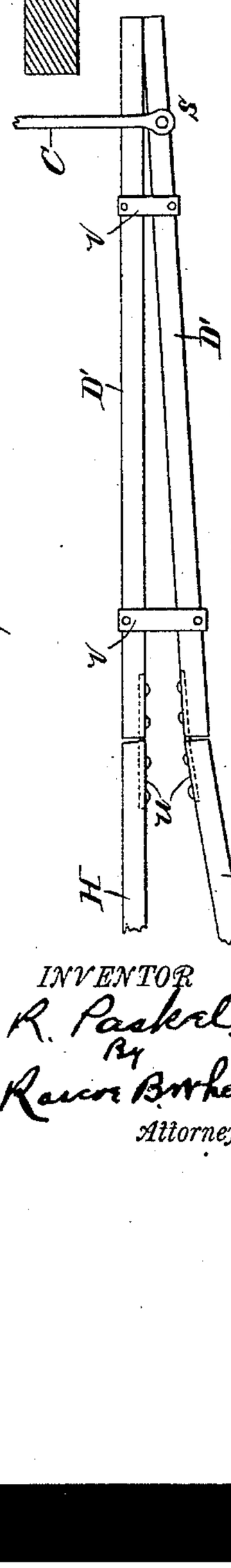

Fig. 4.

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UNITED STATES PATENT OFFICE.

RUSSEL PASKEL, OF BENTON HARBOR, MICHIGAN, ASSIGNOR TO HUGH KAYS.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 454,290, dated June 16, 1891.

Application filed October 16, 1890. Serial No. 368,271. (No model.)

To all whom it may concern:

Be it known that I, RUSSEL PASKEL, a citizen of the United States, residing at Benton Harbor, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Railway-Switches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in railway-switches; and it consists in a certain construction and arrangement of parts, as hereinafter more fully set forth, the essential features of which will be pointed out particularly in the claim.

The object of the invention is to do away with the use of the ordinary switch-frog and to afford a tight joint between the meeting ends of the rail-sections when the switch is set, thus obviating the pounding and jar incident to the open joints of switches in common use. This object is attained by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a railway-track provided with my improved switch. Fig. 2 is a plan view of same. Fig. 3 is a transverse section on dotted line of Fig. 2. Fig. 4 is an inverted plan of the two-rail section, the free end of which is adapted to swing in a transverse direction of the track, and to which one of the switch-rods is attached.

Referring to the letters of reference, A indicates an ordinary switch-stand, to the base of the vertical rod A′ of which is secured the radial arms B B′.

C and C′ indicate the curved actuating switch-rods, the outer ends of which are pivoted to the ends of the arms B B′, respectively. The inner end of the rod C is pivoted to the free ends of the two-rail section composed of the rails D D′, as shown at *s* in Figs. 1 and 4, the opposite ends of said rails being secured to the fixed rails G and H, respectively, by means of fish-plates *u* in such manner that the free ends of the rails D D′ may swing or oscillate transversely, said rails being connected by the cross-bars *v*, pivoted to the under face thereof, as shown in Fig. 4. The inner end of the switch-rod C′ is pivotally attached to the rail E of the two-rail section composed of the rails E E′, said rails being mounted on a swivel-head K, set into the upper face of the tie I and secured by the center-bolt *h*, as clearly shown in Fig. 3. The ends of the rails E E′ being coupled by the cross-bars *t t*, as clearly shown in Figs. 1 and 2, this form of construction permits said section to swing on the pivot *h* as the switch is operated.

Located between the adjacent ends of the rails D D′ and the rails E E′ of the two moving sections is a fixed section composed of the two diverging rails F F′. Said rails are permanently secured to the ties of the track, and are so set that the ends thereof will alternately register with the ends of the rails of the two moving sections, as said sections are swung in setting the switch.

G and G′ indicate the rails of the main track, and H H′ the rails of the side track, the rail H′ merging into the rail of the main track at H″.

The operation of the device is as follows: When the switch-lever Z is thrown to the right, as shown in Fig. 1, the movement of the arm D will draw upon the rod C, swinging the free ends of the rails D D′ of the oscillating section, so that the rail D′ thereof will register with the rail F of the fixed section, as shown at *e*. At the same time the movement of the switch-arm B′ will shove upon the rod C′ and swing the pivoted section, so as to bring the square end of the rail E thereof to also register with the rail F, as shown at *c′*, and the acuminated end *a* of said rail against the inner face of the rail H″, in which position of parts the switch is set for the main track, which consists of the rail G′ and the rail G continued through the rail-sections D′, F, and E to the rail H″. The stop-blocks *d* and *m*, secured to the ties, arrest the throw of the rails D D′, and form a brace therefor when shifted to the position

shown in Fig. 1, and the block *b* performs a like service for the ends of the rails E E′ of the pivoted section.

To set the switch for the side track the switch-lever Z is thrown in the opposite direction or to the position shown in Fig. 2, thus reversing the action of the rods C C′, whereby the rod C will swing the free ends of the rails D D′ of the oscillating section until said rails are arrested by the stop-blocks *n* and *f*, when the rail D thereof will register with the rail F′ of the fixed section, as shown at *c*. At the same time the rod C′ will draw upon the pivoted track-section, causing it to swing upon the pivot *h* and to bring the square end of the rail E′ thereof to also register with the fixed rail-section F′, as shown at *e′*, and the acuminated end *a′* of said rail to swing against the inner face of the rail G′ and the end *a* of the rail E to swing away from the rail H″, in which position of parts the switch is set for the side track, formed of the rail H′, and the rail H continued through the rail-sections D, F′, and E′ to the rail G′.

It will be seen that when this improved switch is set a tight joint is formed between the meeting ends of the rail-sections, thus obviating the pounding and jar incident to the open joints of switches in common use, and by the arrangement of the switch-rods C C′ the swinging sections of the track are moved simultaneously, enabling the switch to be quickly and perfectly operated.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with the fixed rails of a main track, the fixed rails of a side track, the pair of rails coupled together and having a common center on which said rails oscillate, the switch-stand, a rod leading therefrom and having a pivoted connection with the oscillating set of rails, the pair of rails adapted to move transversely of the track at their joined ends, the opposite end of one of said rails being coupled to a rail of the main track, the other rail having connection with a rail of the side track, a rod leading from the sliding ends of said rails to the switch-stand, and a pair of fixed rails located between the pair of oscillating rails and the pair of sliding rails, one of said rails forming a part of the main track, the other forming a part of the side track, substantially as specified.

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

RUSSEL PASKEL.

Witnesses:

THOS. FLOOD,

WILLIAM A. HOLLY.