No. 702,545. Patented June 17, 1902.

S. A. DOUGLAS & M. ALCORN.

RAILWAY SWITCH.

(Application filed Dec. 10, 1901.)

(No Model.)

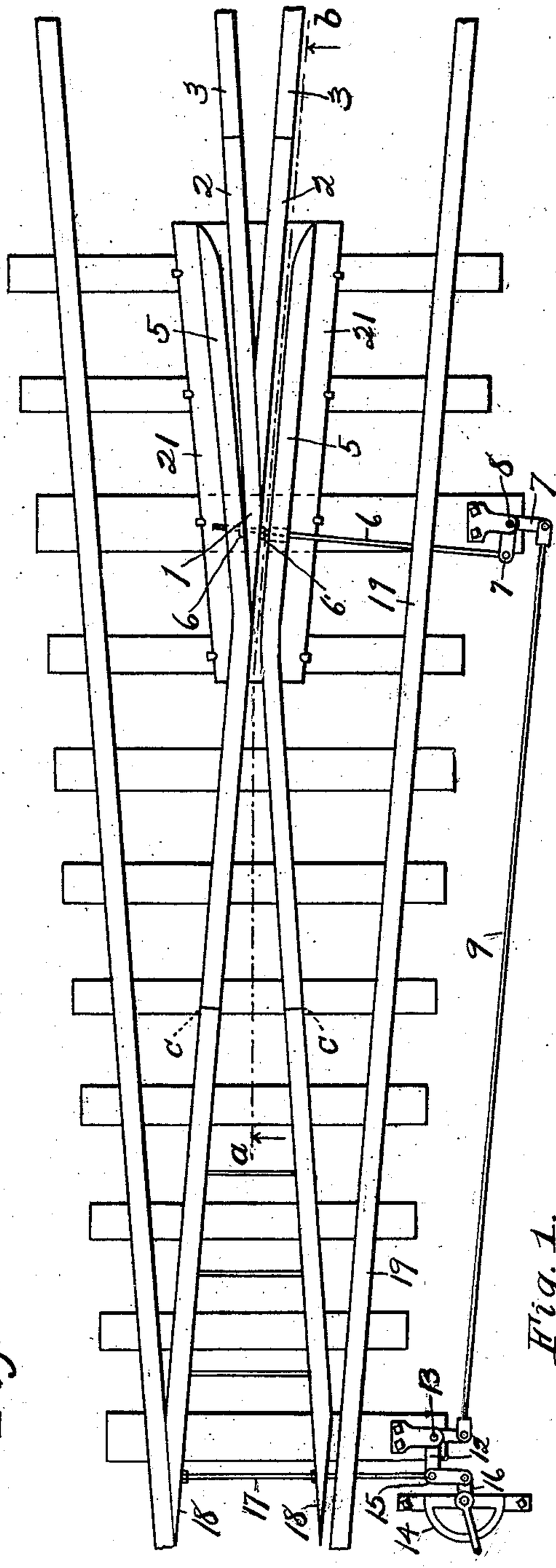

Fig. 1.

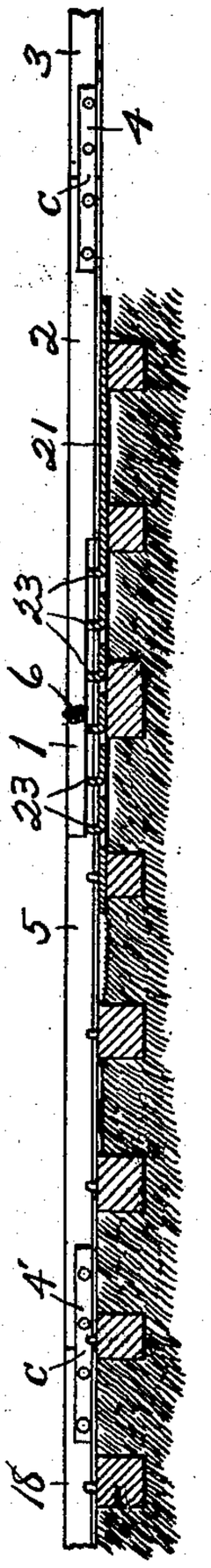

Fig. 2.

Fig. 4.

Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

STEPHEN A. DOUGLAS, OF LEAVENWORTH, AND MELVIN ALCORN, OF LEAVENWORTH COUNTY, KANSAS.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 702,545, dated June 17, 1902.

Application filed December 10, 1901. Serial No. 85,382. (No model.)

To all whom it may concern:

Be it known that we, STEPHEN A. DOUGLAS, a resident of Leavenworth, in the county of Leavenworth, and MELVIN ALCORN, a resident of Leavenworth county, State of Kansas, citizens of the United States, have invented new and useful Improvements in Railway-Switches, of which the following is a specification.

Our invention relates to railroad-switches; and the objects of our invention are, first, to dispense with the usual guard-rails; secondly, to provide a movable frog-point, with means for throwing it simultaneously with the throwing of the switch-rails. We attain these objects by the construction illustrated in the drawings, in which—

Figure 1 is a plan view of a switch constructed in accordance with our invention. Fig. 2 is a sectional view, taken on line *a b* of Fig. 1, for the purpose of showing the means of supporting the frog-point. Fig. 3 is a plan view of the frog-point-supporting plate detached. Fig. 4 is an enlarged section showing one of the ribs on said plate.

As shown, the switch is of a usual form, excepting that the frog-point 1, formed by two pieces of rail 2 2, is movable, and to permit this movement the rails 2 2 are connected loosely to the next rails 3 3 by loose fish-plates 4. The wing-rails 5 5 are formed by simply bending two pieces of ordinary rail into the shape shown in Fig. 1.

The point 1 is operated by a rod 6, which passes through holes in the webs of wing-rails 5 and is secured to the point with nuts 6′ at each side of the point. Said rod is connected to a bell-crank 7, pivoted at 8, and said bell is connected by a rod 9 to a bell-crank 12, pivoted at 13 near the switch-stand 14. This bell-crank is operated through a link 15 by the switch-arm 16. Also connected to link 15 is the switch-operating rod 17, secured to the switch-rails 18 18. The switch-rails are loosely connected at *c c* to the wing-rails 5 5 with fish-plates 4′, Fig. 2.

The wing-rails 5 5 and the switch-point 1 are mounted on a plate 21, which is spiked to the ties, as shown. The base or foot flanges of the point 1 are of course cut away, as shown in Fig. 2, so that the point may be thrown against either of the wing-rails 5 5. We prefer to support the point 1 by transverse ribs 23, struck up from the plate 21 integral therewith, as shown in Figs. 2 and 3.

It will be observed that the moving of the point 1 enables the car-wheels to pass in a straight line to or from either of the branch tracks, and hence the guard-rails usually employed are unnecessary when this movable point is used.

The operation of the switch will be clearly apparent from the foregoing description.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

A switch comprising a movable frog-point 1, a frog-plate 21 having upwardly-struck transverse ribs supporting said frog-point, a rod 6 secured to said point and passing through the wing-rails, a bell-crank lever 7 connected to said rod, a rod 9 having one end connected to said bell-crank lever, a switch-stand, a bell-crank lever 12 adjacent thereto, and connected to the opposite end of said rod 9, a switch-arm 16, a link 15, connecting said switch-arm to bell-crank lever 12, and a rod 17 connected to said link; substantially as and for the purpose described.

In testimony whereof we affix our signatures in the presence of two witnesses.

STEPHEN A. DOUGLAS.
MELVIN ALCORN.

Witnesses:
O. M. VAN DORSTON,
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