

No. 674,985.

Patented May 28, 1901.

W. E. PRINDLE.
GROUND THROW SWITCH.

(Application filed June 15, 1900.)

(No Model.)

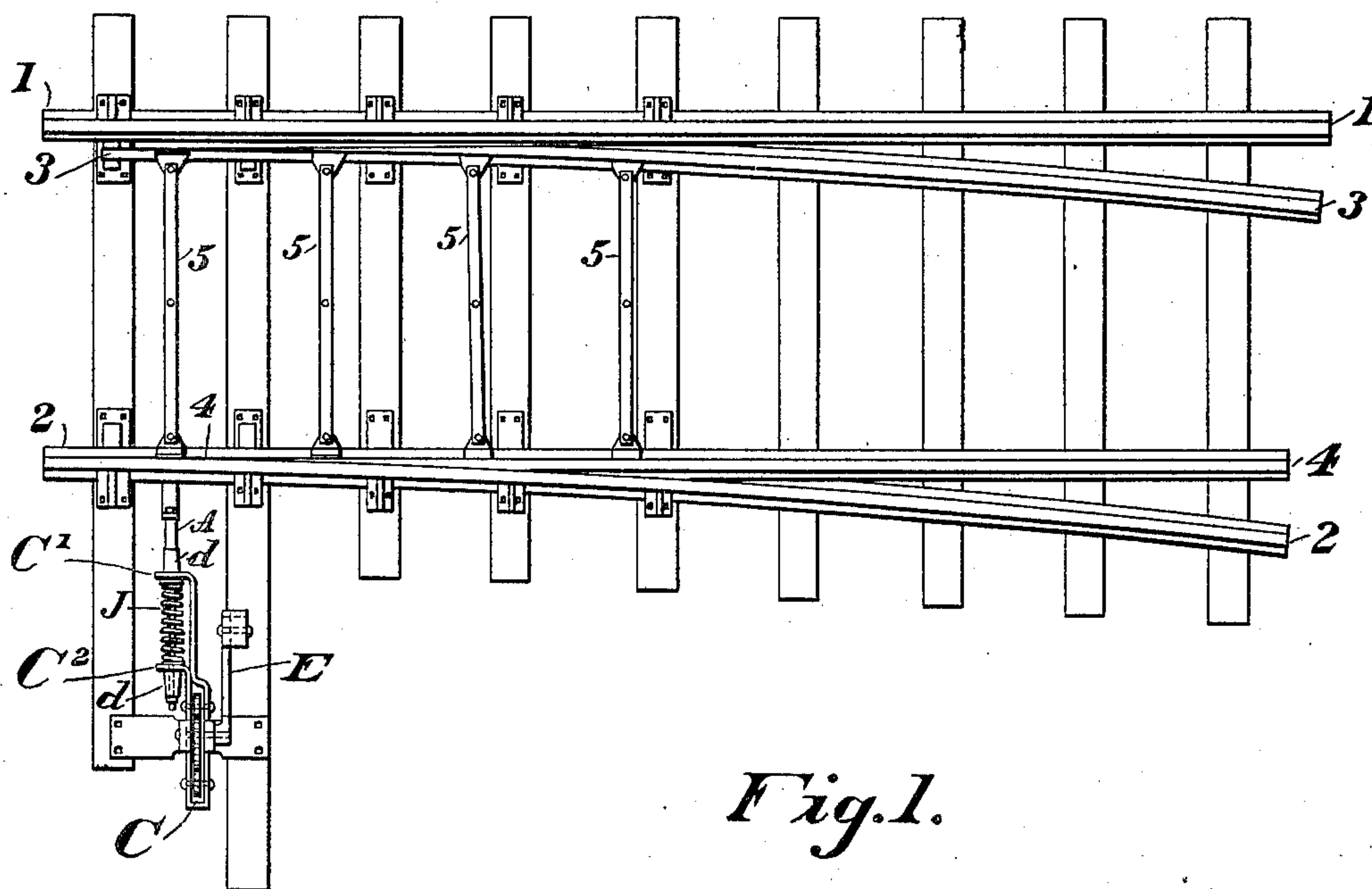


Fig. 1.

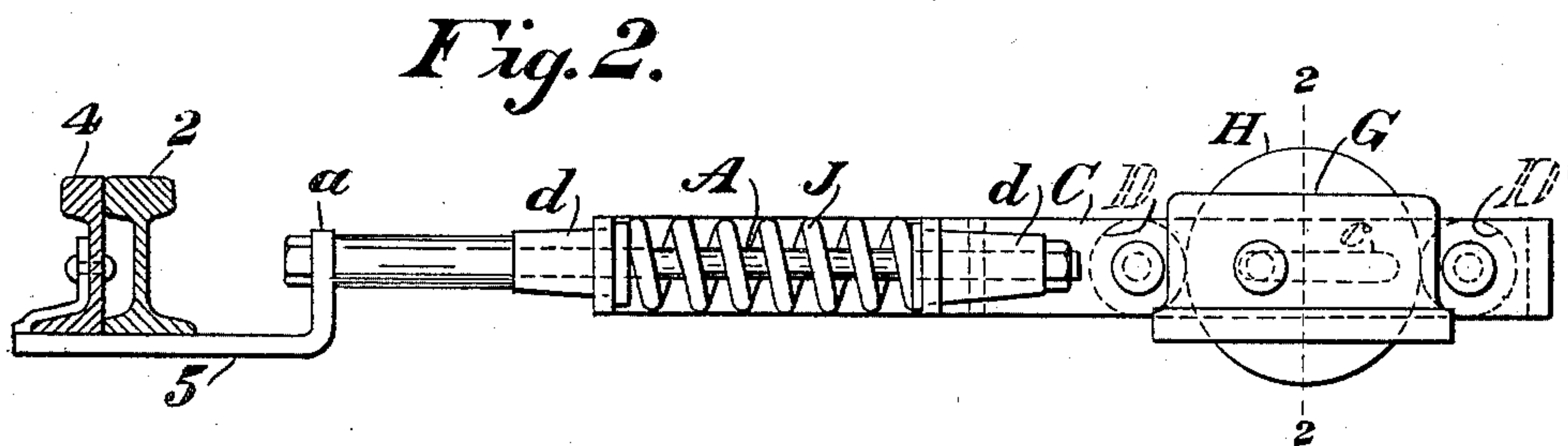


Fig. 2.

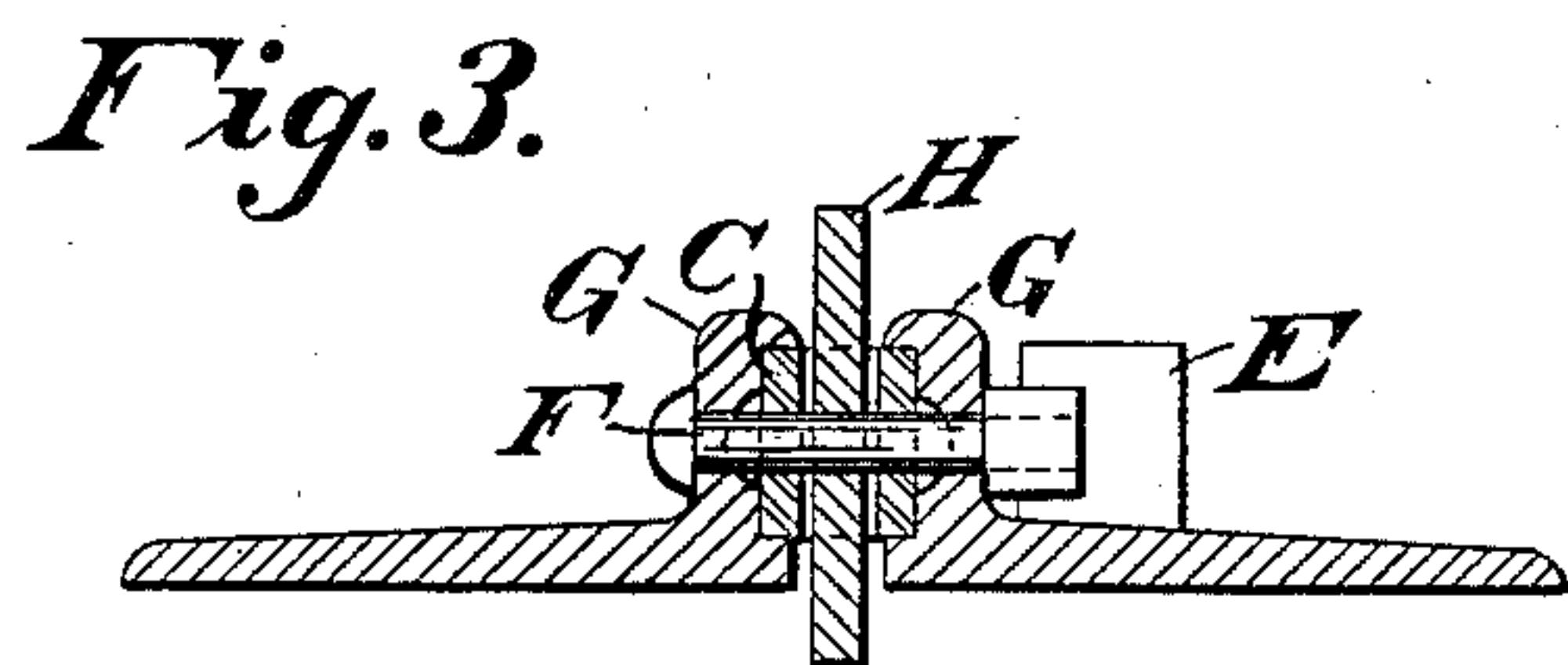


Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM E. PRINDLE, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
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GROUND-THROW SWITCH.

SPECIFICATION forming part of Letters Patent No. 674,985, dated May 28, 1901.

Application filed June 15, 1900. Serial No. 20,425. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. PRINDLE, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Ground-Throw Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to ground-throw switches of that class wherein the operating-lever is movable in a vertical plane toward and away from the track-rails and is designed to provide a simple, durable, and efficient device of this character.

My invention consists in the combination, with the movable switch-rails and a switch rod or bar connected thereto, of a yoke carried by the said rod, an operating-lever, and a cam moved by the said lever and engaging said yoke in a manner to reciprocate the same when the lever is oscillated or thrown.

My invention also consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings, forming a part of this specification.

In the drawings, Figure 1 is a plan view showing my invention applied. Fig. 2 is a side view of the same with the track and switch rail in cross-section. Fig. 3 is a section on line 2 2 of Fig. 2.

The numerals 1 and 2 designate the fixed track-rails, and 3 and 4 the movable switch-rails, which are cross-connected at 5 to move in unison. One of the cross-ties 5 is extended laterally of the track for connection with the switch-rod A, whose end portion passes loosely through an aperture in the upturned end *a* of said tie. On the other end of the rod and forming an extension thereof is a slotted yoke C, in which are journaled two antifriction disks or rollers D D'. E is the operating-lever, which is rigidly secured to a short shaft F, journaled in bearings G. Secured on said shaft within the yoke and between the two rollers D D' is an eccentric or cam member H. The arms of the yoke C are slotted at *c* to permit the yoke to reciprocate on the shaft F. The two arms of the yoke are extended at C' C² to engage loosely the rod A, their movement on said rod being limited

by the shoulders of collars *d*, and between the said arms is a spring J, which is coiled around said rod.

The operation will be readily understood. When the lever is thrown over from the position shown in Fig. 1, the cam member F, by its action on the roller D, moves the yoke C and switch-rod A in the opposite direction to that in which the lever is moved. This endwise movement of the rod A effects a compression of the spring J and the latter acts to throw the switch. Movement of the lever in the opposite direction acts through the roller D' upon the spring J to effect an opposite compression thereof, and thus throw the switch in the opposite direction. The said spring, it will be readily seen, will yield to permit the switch to open in case a car or train should trail through the switch on either track.

The invention is readily adapted for use with various types of switches, and I do not wish to limit myself to the exact construction, combination, and arrangement of parts which I have herein shown and described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a switch-rod, a reciprocable yoke forming an extension of said rod and connected thereto through the medium of a spring, a bed-plate in which said yoke is seated and guided, antifriction-rollers journaled transversely in said yoke, a shaft journaled transversely of the bed-plate, a cam or eccentric on said shaft between the said rollers and arranged to impinge the same, and means for actuating the said shaft.

2. The combination of a switch-rod, a yoke connected to the said rod, a bed-plate in which said yoke is seated, an antifriction-roller journaled at each end portion of the said yoke, a shaft journaled transversely of the bed-plate and extending through slots in said yoke, a cam or eccentric on said shaft arranged to impinge the said rollers, and a lever for actuating said shaft.

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

W. E. PRINDLE.

Witnesses:

BLANCHE M. SMITH,
H. W. SMITH.