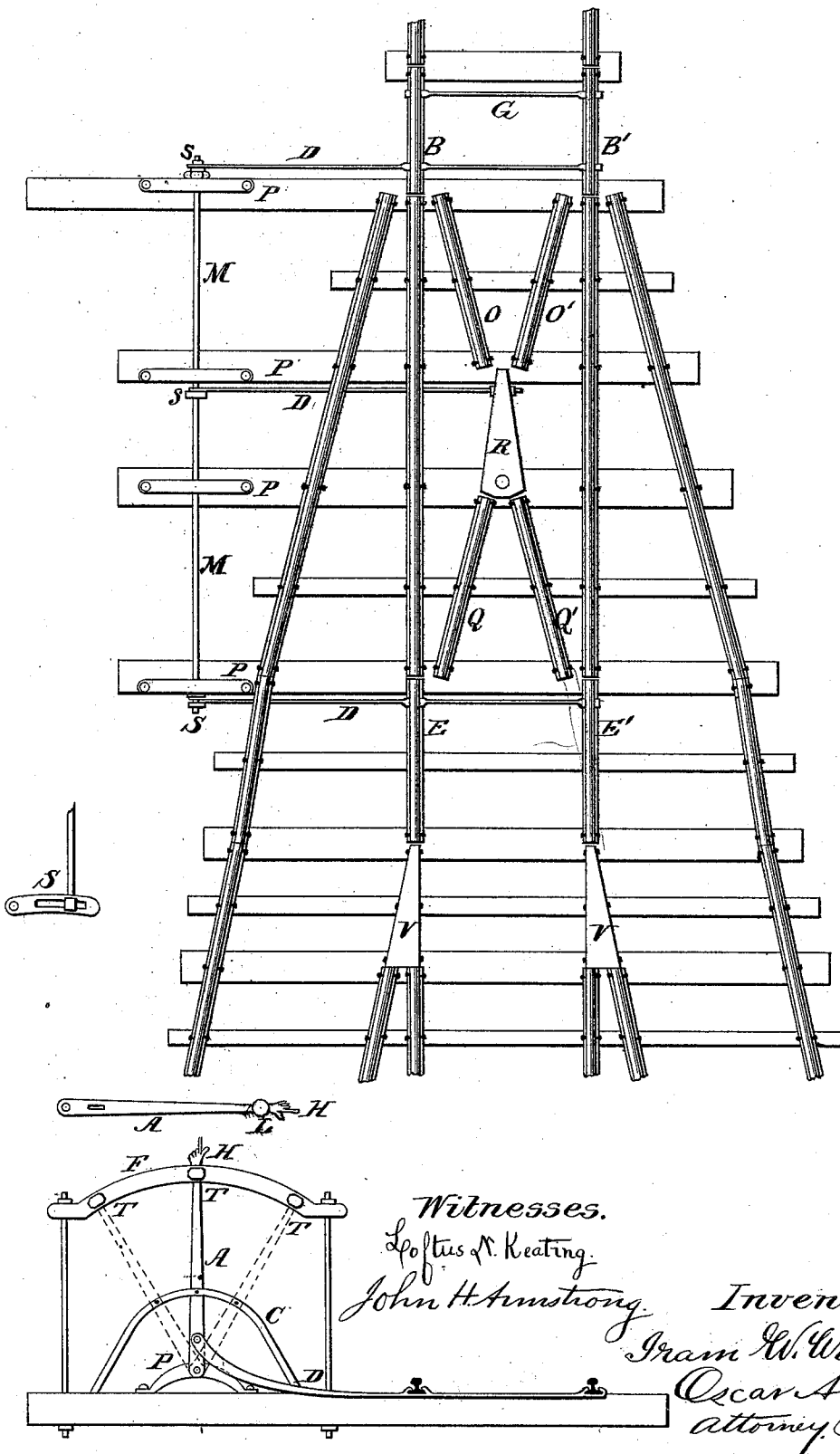


I. W. WILLARD.
RAILROAD SWITCHES.

No. 176,765.

Patented May 2, 1876.



UNITED STATES PATENT OFFICE.

IRAM W. WILLARD, OF HILLSDALE, ASSIGNOR OF ONE-HALF HIS RIGHT TO
CHOLETT C. BEACH, OF BATTLE CREEK, MICHIGAN.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **176,765**, dated May 2, 1876; application filed
August 9, 1873.

To all whom it may concern:

Be it known that I, IRAM W. WILLARD, of Hillsdale, Michigan, have invented a Railroad-Switch, of which the following is a specification:

The object of my invention is to shift the track from one to two or more tracks without the use of frogs or guard-rails.

C represents the circle to which the switch-lever A is fastened. P P P P are the pillow-blocks to which the parallel shaft M is fastened to the ties. D D D are the draw-bars, which are attached to the parallel shaft by the slots S S S, and also the movable rails and center point R, which center point is used for shifting two or more tracks. G is a cross bar. L is a bail, to which the target-light is suspended. V V are angle-points, movable or stationary, for shifting tracks, as in center point R.

The lever A, attached to the parallel shaft M, passing through the pillow-blocks P P P P,

and attached to the draw-bars D D D D, being moved to the right or left, the main slide-rails B B' E E' and the center point R are shifted simultaneously to two or more tracks, thus dispensing with the frogs and guard-rails, substantially as shown in accompanying drawing.

I claim as my invention—

1. The combination, with the triple-cranked rock-shaft M, of the vibrating center point R, the vibrating portions B B' of the main track, and the vibrating portions E E' of the main and side tracks, substantially as specified.

2. The combination, with the vibrating center point R, of the fixed converging inner rails O O' and the vibrating rails E E' and B B', substantially as specified.

IRAM W. WILLARD.

Witnesses:

ROBERT A. WEIR,
SAMUEL GILLET.