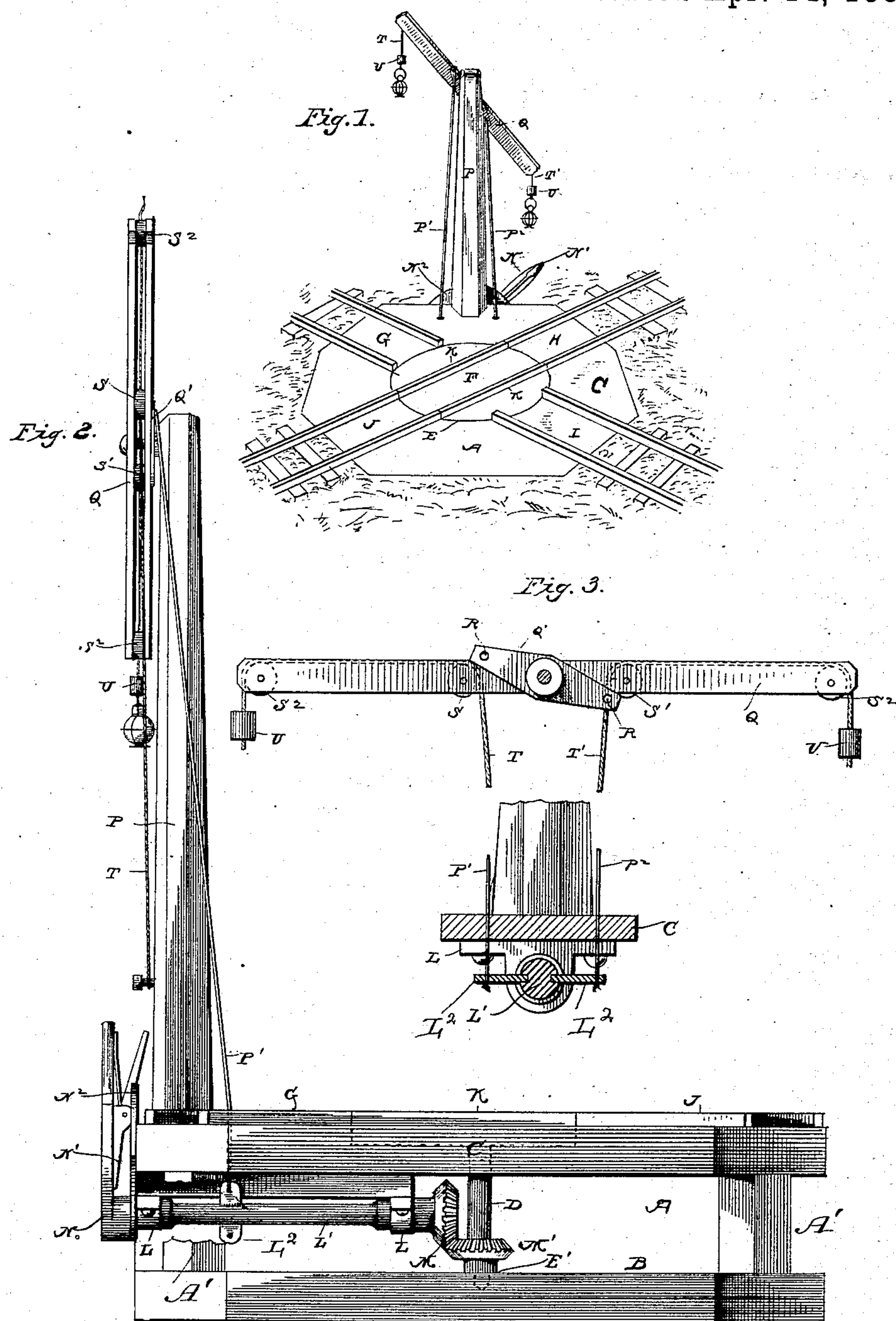


(No Model.)

J. W. KUGHLER.  
RAILROAD CROSSING AND TARGET.

No. 315,515.

Patented Apr. 14, 1885.



WITNESSES

*W. H. Mortimer.*  
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# UNITED STATES PATENT OFFICE.

JAMES W. KUGHLER, OF GREENVILLE, PENNSYLVANIA.

## RAILROAD CROSSING AND TARGET.

SPECIFICATION forming part of Letters Patent No. 315,515, dated April 14, 1885.

Application filed September 10, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. KUGHLER, a citizen of the United States, residing at Greenville, in the county of Mercer and State of Pennsylvania, have invented a new and useful Improvement in Railroad Crossings and Targets, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to railroad crossings and targets; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a view in perspective of a railroad crossing and target embodying my improvements. Fig. 2 is a side elevation, and Fig. 3 is a detail view.

Referring by letter to the accompanying drawings, A designates the frame-work of the crossing, which is composed of the bed-plate B, the top plate, C, and the knees A', which are interposed between the bed and top plates, and separate them for a suitable distance.

At the center of the frame-work A, I provide a vertical shaft, D, which is stepped in a bearing, E', at the middle of the bed-plate, and has its upper bearing at the center of the top plate, C. The top plate, C, is provided with a central annular depression, E, into which the turn-table F is let, the faces of the top plate and turn-table being brought into the same plane. G H I J are the track-sections of two intersecting roads. The turn-table F is secured within the central depression, E, upon the upper end of the vertical shaft D, and is provided with the track-rails K K.

Beneath and secured to the top plate, C, are the bearings L L for the horizontal shaft L'. A miter-gear, M, on the inner end of the horizontal shaft engages a miter-gear, M', on the vertical shaft D. At its outer end the horizontal shaft L' is provided with a lever, N, having a spring-actuated pawl, N', which engages a rack, N'', secured to the plate C of the turn-table to hold the turn-table in either of the two positions to which it can be turned and be operative.

Rising from the top plate, and directly over the horizontal shaft L', is the target-pole P. The target-pole may, however, be set any desired distance from the track, as the wires P'

P<sup>2</sup>, which operate the target-lever Q, can be readily conducted to said lever Q. The target-lever Q is fulcrumed at its middle to the face of the target-pole at its top, and is provided at its middle with a plate, Q', having one end projecting slightly above and the other end slightly below the target-lever, the projecting ends having holes R, through which the wires P P' are connected to the plate Q'. The target-lever Q is provided with four pulleys—two, S S', near its fulcrum, and one, S'', in each end. The cords T T', for raising and lowering the lanterns, run over the pulleys, and these cords are provided with weights U, which prevent the lanterns from swinging in the wind, and assist in lowering them.

The shaft L' has extending arms L<sup>2</sup>, which project at right angles to said shaft on opposite sides thereof, and these arms are connected to the ends of the plate Q' of the target-lever by cords or wires P' P<sup>2</sup>. When the turn-table is shifted so as to connect with the track H J, the end of the target-lever nearest the said track will be lowered, and the lanterns attached to the target-lever will indicate the fact to the engineer of a train on the track H J. When the turn-table is shifted so as to connect with the track G I, the target-lever will be reversed and the fact indicated to the engineer of a train on the track G I.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the bed-plate B and top plate, C, provided with the annular depression E, and connected by intermediate knees, of the vertical central shaft, with a miter-gear at its lower end and the turn-table at its upper end, the horizontal shaft, with a miter-gear engaging the miter-gear of the vertical central shaft, the lever, spring-pawl, and rack, the target-pole, target-lever having plate Q' and pulleys S S' S'', connecting-wires P' P<sup>2</sup>, and the cords and weights, substantially as specified.

2. The combination, with the bed-plate, connecting-knees, and the top plate having the annular depression in its upper face and the track-sections around said depression, of the vertical shaft having the miter-gear at its lower end, the horizontal shaft having the miter-gear at its inner end, and the lever,



spring-pawl, and rack at its outer end, the target-lever with plate Q', the connecting-wires, and the weighted cords, substantially as specified.

- 5 3. The combination of the turn-table, the horizontal shaft having projecting arms, gears connecting said shaft with the turn-table, and a lever for actuating the shaft, the target-pole, the target-lever pivoted thereto, and con-  
10 nected to the arms of the horizontal shaft,

whereby the target-lever will be moved when the turn-table is shifted, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 15 presence of two witnesses.

JAMES W. KUGHLER.

Witnesses:

R. MAXWELL,  
A. S. WICK.