3 Sheets—Sheet 1.

W. B. BERNARD & J. D. PERKINS.

Railroad Crossings.

No. 212,432. **Patented Feb. 18, 1879.**

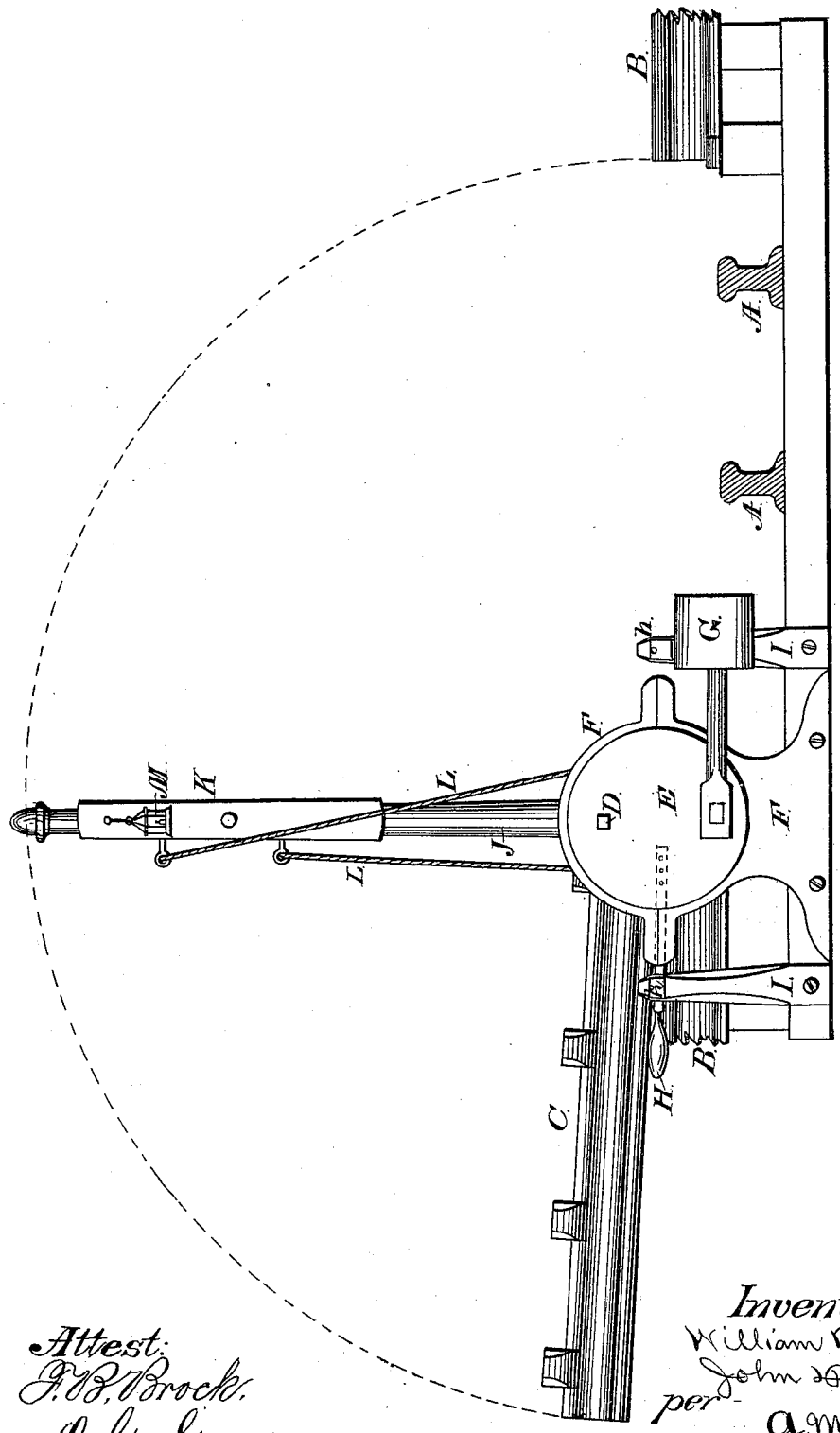

Fig. 1.

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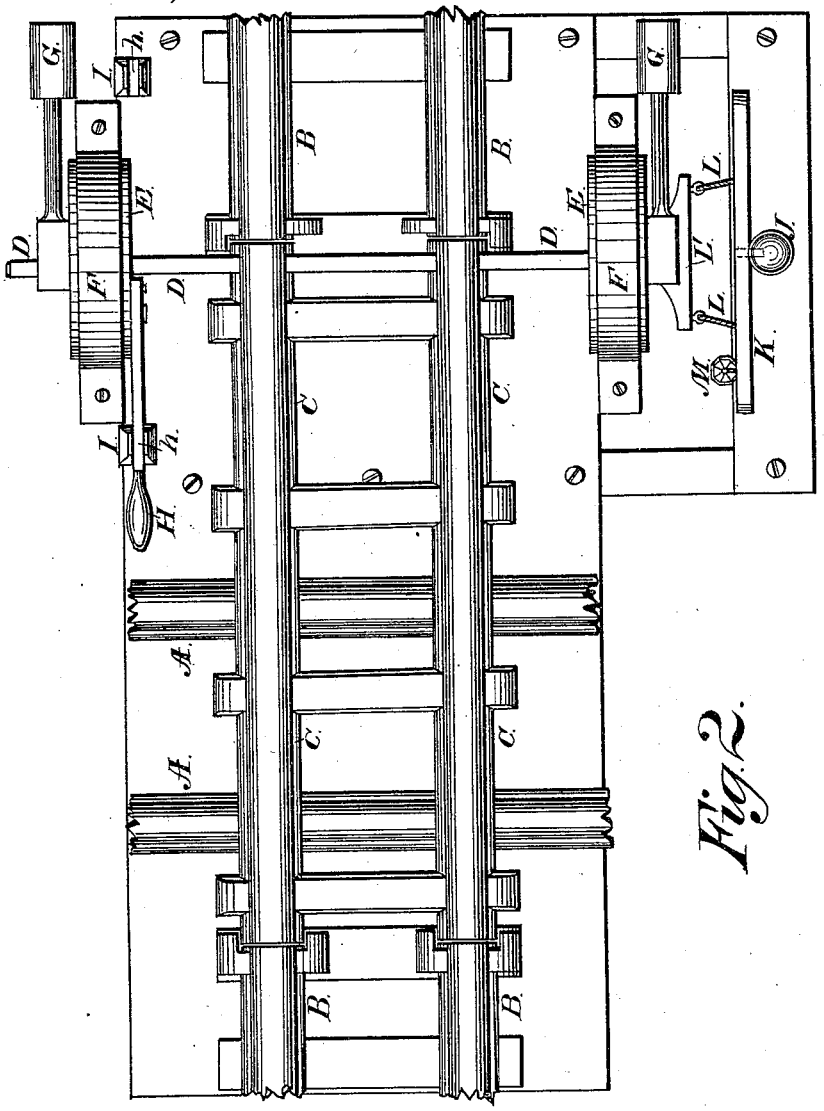

Fig. 2.

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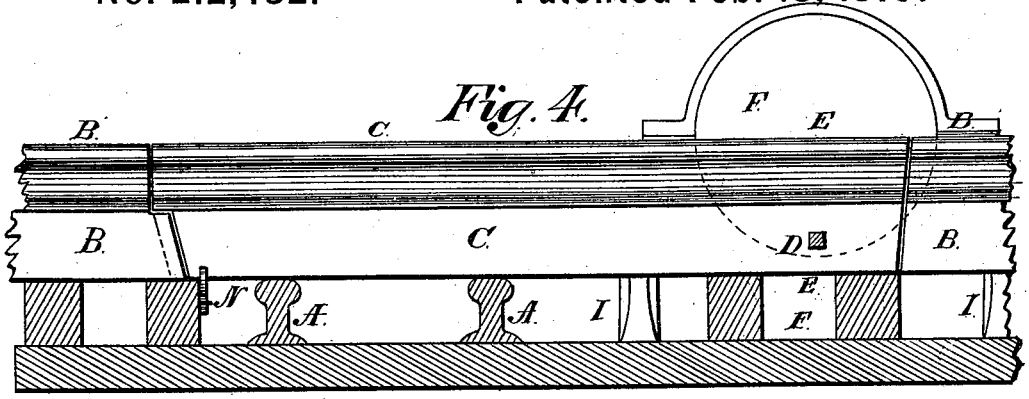
Fig. 4.



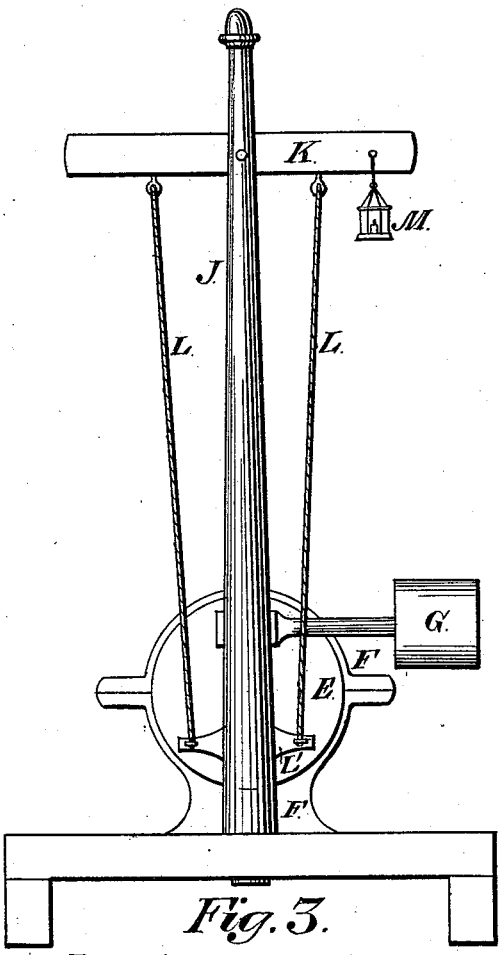


Fig. 3.

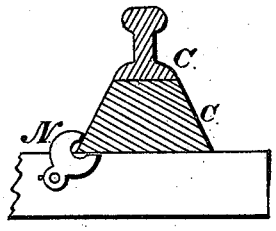


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM B. BERNARD, OF SACRAMENTO, CAL., AND JOHN D. PERKINS, OF ELYRIA, OHIO; SAID BERNARD ASSIGNOR TO SAID PERKINS.

IMPROVEMENT IN RAILROAD-CROSSINGS.

Specification forming part of Letters Patent No. **212,432**, dated February 18, 1879; application filed March 9, 1878.

To all whom it may concern:

Be it known that we, WILLIAM B. BERNARD, of the city of Sacramento, in the county of Sacramento and State of California, and JOHN D. PERKINS, of Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Railroad-Crossings; and we do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters of reference marked thereon, which form a part of this specification.

Our invention relates to railroad-crossings in which one track is arranged to pass over or above the other track; and the invention consists in a new and improved rail-section for the upper track, which is counterbalanced and arranged to swing in a vertical plane, to permit trains to pass on the fixed or lower track, in combination with mechanism, hereinafter described, for operating the same, the arrangement of the crossing dispensing with the use of the guide-rails, bed-plates, and all other of the expensive devices usually employed in the construction of crossings when the rails are arranged on the same level.

The invention further consists in connecting the mechanism for operating the movable rail-section with suitable connections for operating a signal device, which will indicate the position of the movable section, so that the engineer of a train approaching on the lower or permanent track will know whether or not the crossing is open for the passage of his train or is obstructed by the upper track, all as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a side elevation, illustrating our invention, with the movable section and signaling devices shown in position for the passage of a train on the permanent track. Fig. 2 is a plan view of a crossing, with the movable section in position for the passage of a train on the track to which it belongs. Fig. 3 is a detail view, showing the signaling apparatus. Fig. 4 shows a movable rail-section of modified form; and Fig. 5 is a cross-section of one of the rails shown by Fig. 4, and also showing the locking device for holding the movable section.

Referring to the parts by letters, A A represent the rails of the permanent track. B B are the permanent rails of the track which crosses the track A, and C is the movable rail-section pertaining to the track B. One end of this rail-section C is secured to a shaft, D, the outer extremities of said shafts being secured to wheels or disks E, eccentrically, and said disks are supported in journal-bearings F F.

G represents counterpoise-weights, which are secured to the disks E in any suitable manner and position, so as to counterbalance the weight of the movable rail-section C, and thereby render the operation of the latter easy. The operation of the movable section C may be accomplished by means of a lever, H, one end of which is secured to one or other of the disks E; or, the section being properly counterbalanced, it may be moved by the operator or keeper of the crossing by taking hold and moving the section C itself.

I I represent posts having notches in their upper ends, which operate as stops to limit the motion of the section C by the shank of the lever H entering the notches, as shown at *h* in the drawings. J represents a post to which is pivoted a semaphore or signal device, K, said semaphore operating by means of a rope or chain, L, the ends of which are secured to a cross-bar, L′, which is secured to or forms a part of the disk E. The semaphore K may also be provided with a lantern, M, for signaling at night.

N represents a catch device, which is pivoted to one of the sleepers at the point of connection between the permanent rails B and movable section C, so that by turning it on its pivot it locks the movable section in position.

Fig. 1 of the drawings shows the crossing in position for the passage of a train on the track A, and the signaling apparatus in the "safety" position for said track. Fig. 3 shows the signal device in the "danger" position for the track A.

With a device of this construction it will be seen that the tracks cross each other on different levels, the one above the other, the rails

of the lower track constituting the support for the upper or crossing track, as clearly indicated by Figs. 2 and 4 of the drawings; and the wedge-shaped rail-section shown by the latter figure is a construction we prefer, as it affords a better support for the rails; but, as will be obvious, the particular construction of this movable section C is a matter which may be left to the discretion of the road-builder.

It will also be seen that the relative arrangement of the movable rail-section and signaling apparatus is such that they move together, and thereby indicate the condition of the crossing to the engineer of a train approaching on the track A, and the signaling device may be so arranged as to further indicate the position of the crossing to the engineer of a train approaching on the track B, without departing from the spirit or scope of our invention.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of the vertically-swinging and counterbalanced section C with the disks E and lever H, substantially as and for the purpose specified.

2. In combination with the section C and disks E and lever H, the notched posts I, substantially as and for the purpose specified.

3. The combination of the movable section C, disks E, post J, ropes or chains L, and semaphore M, substantially as and for the purpose specified.

4. In combination with the movable section C, the pivoted catch N, substantially as and for the purpose specified.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

WILLIAM B. BERNARD.
JOHN D. PERKINS.

Witnesses:
WILLIAM W. AXTELL,
IRAL A. WEBSTER.