

L. C. POPE & O. N. TINCHER.  
Railway-Gate.

No. 216,886.

Patented June 24, 1879.

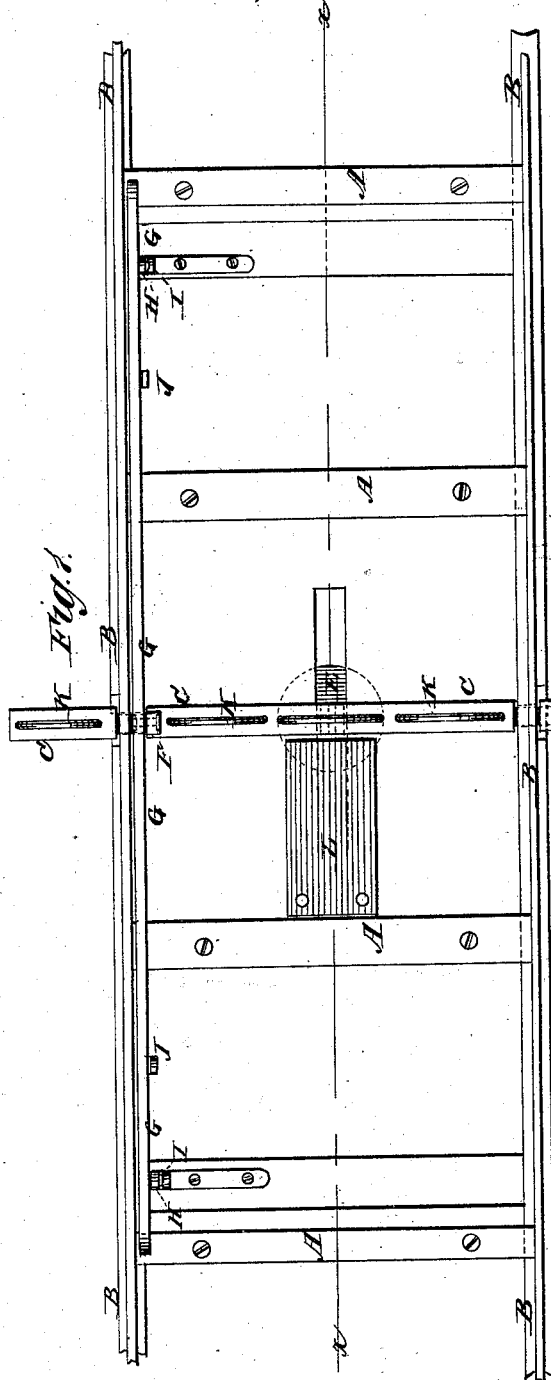


Fig. 1.

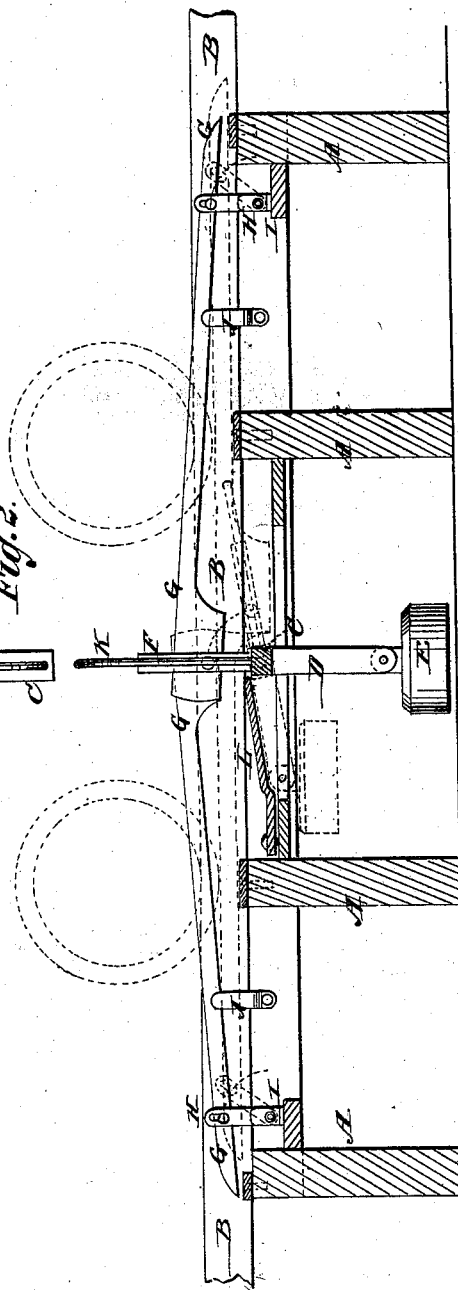


Fig. 2.

WITNESSES:

*Francis M. Apple*  
*C. Sedgwick*

INVENTOR:

*L. C. Pope*  
*O. N. Tinch*  
*Munroe*

BY

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

LEWIS C. POPE AND OBED N. TINCHER, OF PAOLA, KANSAS.

## IMPROVEMENT IN RAILWAY-GATES.

Specification forming part of Letters Patent No. **216,886**, dated June 24, 1879; application filed October 26, 1878.

*To all whom it may concern:*

Be it known that we, LEWIS C. POPE and OBED N. TINCHER, of Paola, in the county of Miami and State of Kansas, have invented a new and useful Improvement in Railroad-Gates, of which the following is a specification.

Figure 1 is a top view of a portion of a railroad-track to which our improved gate has been applied. Fig. 2 is a vertical longitudinal section of the same, taken through the line *x x*, Fig. 1.

The object of this invention is to furnish an improved railroad-gate, which shall be so constructed that it will be opened by an approaching train, and held opened until the train has passed, and will then close automatically, and which shall be simple in construction and reliable in use.

The invention will first be described in connection with the drawings, and then pointed out in the claim.

Similar letters of reference indicate corresponding parts.

A represents the ties, and B the rails, of an ordinary railroad-track. C is a shaft, which works in bearings in some suitable support beneath the rails B. To the lower side of the shaft C is rigidly attached an arm, D, which projects downward into a cavity or chamber formed in the road-bed, and to the lower end of which is hinged a weight, E, of sufficient size to raise the gate from a horizontal to a vertical position. To the upper side of the shaft C, at the inner side of one of the rails B, is rigidly attached an arm, F, to the side of which are pivoted the overlapped inner ends of two bars, G. The bars G incline downward toward their outer ends, and are loosely pivoted near their outer ends to the upper slotted ends of the arms H, the lower ends of which are pivoted to supports I, secured below the level of the rails B. The outer ends of the bars G are rounded or beveled upon their upper sides, and are held close against the inner sides of the rails B by guards

J, attached to some suitable supports, and projecting upward at the inner sides of the said bars G. To the upper side of the shaft C is attached the gate K, which may be made of iron bars or rods, or of other suitable material.

With this construction, as a train approaches the gate the flanges of the wheels pass upon the ends of the bars G, and force them downward and forward, turning the shaft C and gate K into a horizontal position, and holding them there until the entire train has passed, the bars G being made of such a length that the wheels of a second car or truck will pass upon the said bars before the wheels of the first car or truck have left them.

The cavity or chamber in which the arm D and the weight E swing should be covered to prevent the said cavity or chamber from being filled with dirt or snow, and the said cover should be slotted to allow the arm D to swing freely, the slots being covered by plates or valves L, hinged at their outer ends, so that they will be raised by the said arm as it swings upward, and will again drop down into place as the said arm swings downward.

We are aware that it is not new to hold a railroad-gate in erect position by a balance-weight, or to automatically depress it by pressure-bars supported on pivoted straps at the ends and intermediately fulcrumed to the gate; but while these are readily operated by the cars when at a high rate of speed, it is found that if the cars "slow up," as they should do in passing, the gates are struck before they are sufficiently depressed.

After numerous experiments to overcome this difficulty, we have ascertained that by causing the pivots of the outer ends of the pressure-bars G to work in slots near the upper ends of arms H the gates will be adequately depressed by the cars when going at a high or low rate of speed. The reason of this is that as soon as the advance wheel has passed beyond the point where the bar or lever G is caused to rest upon one of the timbers A

said wheel depresses the inner end of the bar or lever G, while the slot in arm H allows the opposite lever end to rise, the depression of the inner end carrying the gate below the track.

What we claim as new and of our invention is—

A weight-balanced railroad-gate whose pressure-bars G are pivoted near their outer ends in slots near the upper ends of bottom

pivoted arms H, as and for the purpose specified.

LEWIS C. POPE.

OBED <sup>his</sup> × N. TINCHER.  
mark.

Witnesses:

W. M. SPROCKETT,  
F. D. WELLER.