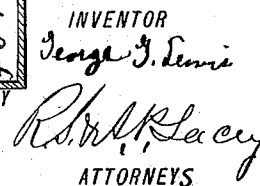


G. G. LEWIS.
AUTOMATIC RAILWAY GATE.

Patented Feb. 2, 1897.



UNITED STATES PATENT OFFICE.

GEORGE G. LEWIS, OF ATHENS, OHIO.

AUTOMATIC RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 576,459, dated February 2, 1897.

Application filed July 27, 1896. Serial No. 600,703. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. LEWIS, of Athens, in the county of Athens and State of Ohio, have invented an Improved Automatic Railway-Gate, of which the following is a specification.

The present invention relates to automatic railway-gates; and has for its object the provision of a device by means of which gates across railway-crossings may be opened and closed by the passage of the train along the track.

With this object in view the invention consists of the details of construction and arrangement, which will more fully appear hereinafter.

In the accompanying drawings, which form a part of this application, Figure 1 is a perspective view of my improved railroad-gate. Fig. 2 is a side elevation of the same, showing the gate in its normal position. Fig. 3 is a top plan view.

Like numerals and letters of reference indicate corresponding parts in the several views.

Referring to the drawings, A A represent the rails of the track, and B B represent the rectangular casing containing the gate-operating mechanism, which will be more fully described hereinafter. The said casing is composed of the two sides 2 and 3 and the ends 4 and 5. Upon the sides 2 and 3 and near the end 5 of the said casing B are situated riveted journal-boxes 6 6, in which is journaled a shaft 7, and it has eccentrically keyed thereto the disks 8 and 9. Notches 11 and 12 are located in the casing for the peripheries of the disks 8 and 9 to project through when operating. The disks 8 and 9 are provided with radial arms 13 and 14, which extend upwardly through the slots 15 and 16 and into the path of the wheels of a passing train.

D represents a transverse shaft journaled in bearing-boxes 2' 3', fixed to the casing, the said shaft having eccentrically keyed thereto the disks E and F.

The connecting-rods 4' and 6' are pivoted to the wrist-pins 5' and 6'' on the disks E and F and 8 and 9, the wrist-pins on the disks E and F being located close to the axis of the said disks, while the wrist-pins on the disks 8 and 9 are located as far from their axes as

the periphery of each disk will admit, the object of this arrangement being to convert the short movement of the disks 8 and 9 into an amplified movement of the disks E and F. Pivotaly attached to the disks E and F by the wrist-pins 6''' are the bent arms 7' and 8' of the gates G and H, which extend across the crossing I. A spring-catch J, comprising a lever b, having a notched head c, is pivoted to the end 4 of the casing and has connected to it at D the chain K. A stout spring f is secured to the side of the rail, and its free end g is in operative contact with the head c of the catch J to hold the latter in engagement with the pawl x to support the gate.

A pulley N, mounted in a bracket n', forms a corner-turn for the chain K, one end of which is connected to a pin r on a disk O, which is provided with a radial arm p, the outer end of which projects into the path of the car-wheels, and it is held in this position by the spiral spring f'.

The operation of my invention is as follows: The wheels of the approaching train strike the ends of arms 13 and 14, which project up through the slots 15 and 16, respectively, and operate the disks 8 and 9. The disks E and F are caused to turn through the media of the connecting-rods 4' and 6', which operate the angle-irons, to the upper ends of which are attached the said gates. When the gates are thrown forward, the angle-iron 8' is caught in the catch J, and is prevented from returning to its normal position. After the moving train has passed the crossing and the said crossing is safe it is desirable to lower the gates, which is done by the wheels of the train striking the operating-lever p, projecting upward from the disk O, thus operating the chain K, which is attached thereto and to the end d of the lever b. By this operation the catch is disengaged and the gates fall back into their normal position.

The gates G and H are situated at the top of the angle-irons 8' and 7' and are formed, in the present instance, integrally with the said angle-irons; in fact, are merely prolongations of the said angle-irons, the ends of which are doubled back upon themselves. The said gates G and H are raised up and thrown across the road, as has been described hereinbefore.

Modifications of the above may be made without departing from the spirit of my invention, such as modifications for street-railways, double tracks, &c.

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

A railway-gate comprising the shaft D, provided with the eccentrically-mounted disks
10 E and F, the shaft 7 provided with the eccentrically-mounted disks 8 and 9 having radial arms 13 and 14, the rods 4' and 6' connect-

ing said disks, in combination with the gate G H formed with bent arms 7' 8' pivoted to said disks D and E, the spring-catch J, the chain 15 K, and the disk O provided with radial projecting arm *p*, substantially as shown and described.

In testimony whereof I affix my name in the presence of two witnesses.

GEORGE G. LEWIS.

Witnesses:

O. E. DAVIS,

T. J. MORRIS.