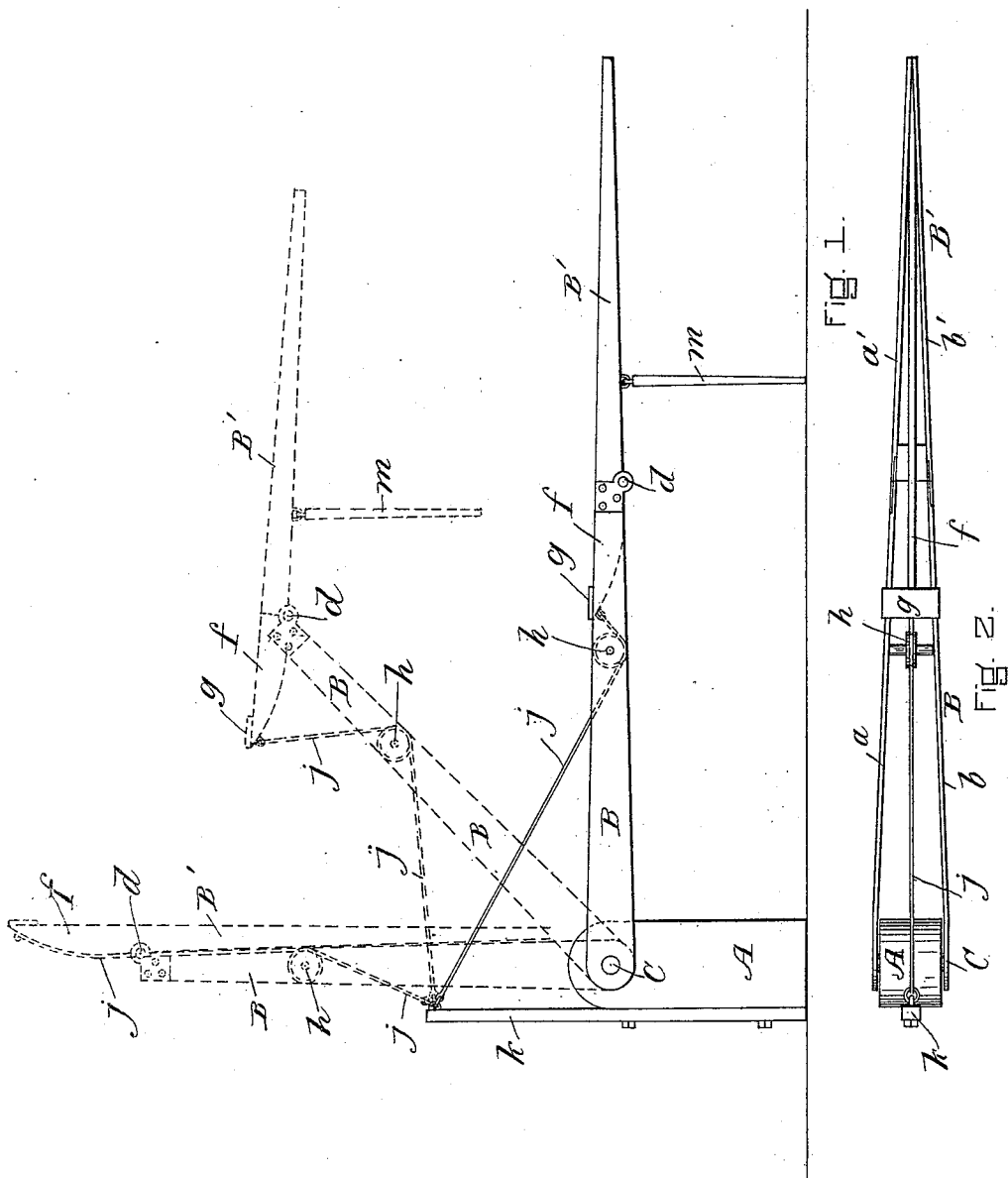


(No Model.)

G. E. MILLER.
RAILWAY CROSSING GATE.

No. 464,461.

Patented Dec. 1, 1891.



WITNESSES.

Robert Wallace,
Milan F. Stevens.

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UNITED STATES PATENT OFFICE.

GEORGE E. MILLER, OF LYNN, ASSIGNOR OF ONE-FOURTH TO WILLIAM D. NORTHEND, OF SALEM, MASSACHUSETTS.

RAILWAY-CROSSING GATE.

SPECIFICATION forming part of Letters Patent No. 464,461, dated December 1, 1891.

Application filed July 22, 1890. Serial No. 359,503. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. MILLER, of Lynn, county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Railway-Crossing Gates, of which the following is a specification, reference being had to the drawings accompanying and forming a part hereof, in which—

Figure 1 is a side elevation showing the gate-post, as also the arm or gate proper, in three different positions. Fig. 2 is a plan view of the gate when closed.

The object of my invention is a railway-crossing gate so arranged that when the gate is closed the arm will project or partially project across the street to close the same, and when raised or being raised will shorten or fold upon itself, so as not to interfere with overhead wires or other objects which may be over or near the street.

The invention consists in a hinged or jointed gate-arm pivoted to a post and having a pulley mounted in said arm, and a cable passing under said pulley and secured at one end to a fixed point near the post and at the other end to a projection from the forward portion of the gate-arm rearwardly of the hinge or pivot thereof for governing the movement of the forward portion of the arm as the gate is raised or lowered, all as hereinafter described, and as is more particularly pointed out in the claim appended hereto.

My invention will be readily understood from the following description:

A is a gate-post of ordinary construction.

B is the gate or arm which is pivoted at C to the post and extends, when the gate is closed, across the street and is usually parallel, or substantially so, with the railroad-track. The gate B is in two parts, the forward part B' being hinged to the part B at d.

The gate-arm B B' is constructed in the well-known manner—that is, of two or more pieces *a b a' b'*, which are braced and secured together, as shown, Fig. 2.

The forward portion B' of my improved gate is provided with a piece *f*, which projects rearwardly of the hinge *d* and which lies between the two side pieces *a b* of the part B

when the gate is down, as shown. At the rear end of the projection *f* I secure a block or cross-piece *g*, which projects on either side of the piece *f*, and when the gate is down rests on the part B. A grooved sheave or pulley *h* is journaled between the side pieces of the part B a short distance to the rear of the projection *f* when the gate is down. A cable or chain *j* passes under this pulley *h* and is secured at one end in any suitable manner to the rear end of the projection *f*, and at the other end is secured to an upright piece *k*, bolted firmly to the rear of the gate-post A. The piece *k* preferably projects above the gate-post, and when it is necessary—that is, where two gate-posts are set close together—its upper portion may be bent forward, so as to project directly above or even in front of the pivot C of the arm B B'. A pivoted rest of usual form is shown at *m*, which bears a part of the weight of the arm when the gate is down.

As will be clear, gates of the form now in use—that is, gates having a rigid arm—may be readily converted into gates embodying my invention by dividing the gate-arm into two parts, inserting the rearwardly-projecting piece *f* in the forward part and providing a sheave, chain, or cable and upwardly-projecting securing-piece. As will be clear, the piece *f* may be either added to the forward part B' of the gate or may be integral therewith.

When the gate is up, the portions B B' of the gate-arm are folded upon each other, as shown, the rear end of the chain *j* being secured at a sufficient distance above the pivot C to permit of this. As the gate is lowered, the portion *f* of the part B', as also the pulley *h*, is moved away from the upright *k*, and the chain exerts a strain on the rear end of said portion *f*, causing the forward portion of the part B' to move outwardly and upwardly, as will be clear, and this continues until the gate is down and the parts B and B' are in line with each other. In raising the gate the movement is reversed and the rear portion *f* of the part B' is brought nearer to the upright *k*. This slacks the chain and allows the forward portion of the part B' to fall by gravity until,

when the gate is in a vertical position, the parts B B' are folded upon each other, as shown, Fig. 1. As will be obvious, the length of the part B relatively to the length of the part B' may be varied considerably.

It will be noted that the forward end of the part B' of the gate-arm is ordinarily at its lowest position when the gate is down, and that in the act of raising or lowering the gate this end is in no danger of coming in contact with the ground. In case the forward end of the part B' extends below the pivot C when the gate is up the act of lowering the gate will cause that end to rise constantly until the gate is closed and the gate-arm assumes the horizontal position.

I am aware that railway-gates have been constructed with pivoted arms, the forward section of the arm being operated as the gate is raised by gravity, and, as the gate is lowered, by the strain of a rope or chain, which is secured at one end to a fixed point near the gate-post and at the other to the forward section of the gate-arm in front of its pivotal point. Such a construction is shown in Let-

ters Patent No. 345,239, dated July 6, 1886, and I do not claim the same.

What I claim is—

A railway-crossing gate consisting of the combination, with the standard or post A, provided with a support or upright *k*, of the gate proper consisting of the parts B and B', the former of which is pivoted at its rear end to the said post or upright A and the latter of which is pivoted at *d* to the forward end of the part B and is provided with the portion *f*, extending rearward of the pivot *d*, the said portion B consisting of the two side pieces or strips *a' b'*, the pulley *h*, journaled between the said side pieces rearward of the said piece or portion *f*, and the wire or chain *j*, attached to the said upright *k* at one end and to the rear end of the piece *f* at its other end and running between its ends about the said pulley *h*, substantially as set forth.

GEORGE E. MILLER.

Witnesses:

WM. A. MACLEOD,
ROBERT WALLACE.