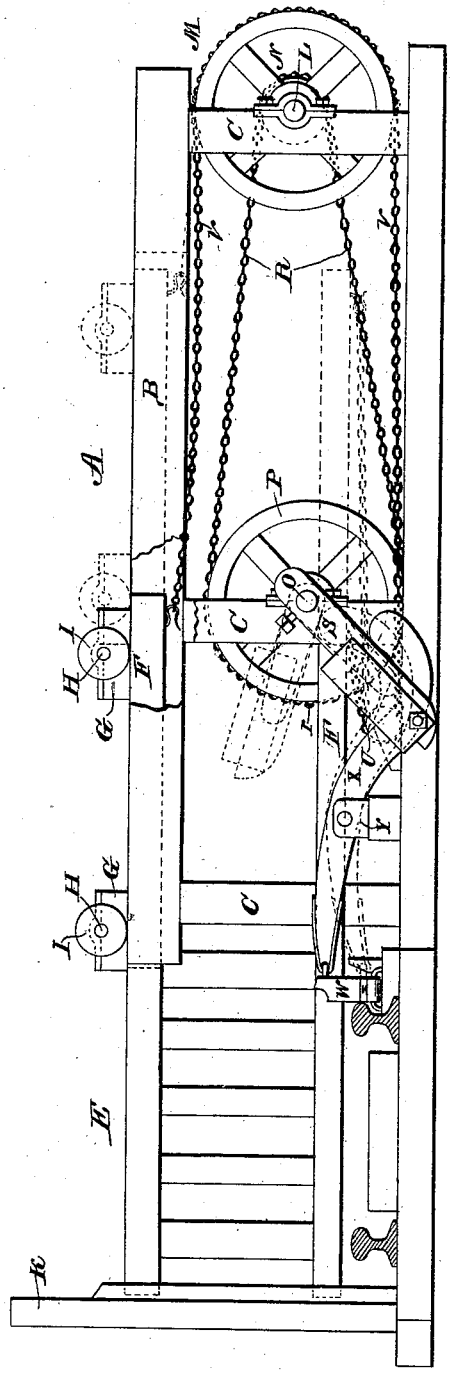
(No Model.) 2 Sheets—Sheet 1.

J. H. McDOWELL, R. W. HUDGINS & J. E. MOORE.

RAILWAY GATE.

No. 345,522. Patented July 13, 1886.

Fig. 1.



Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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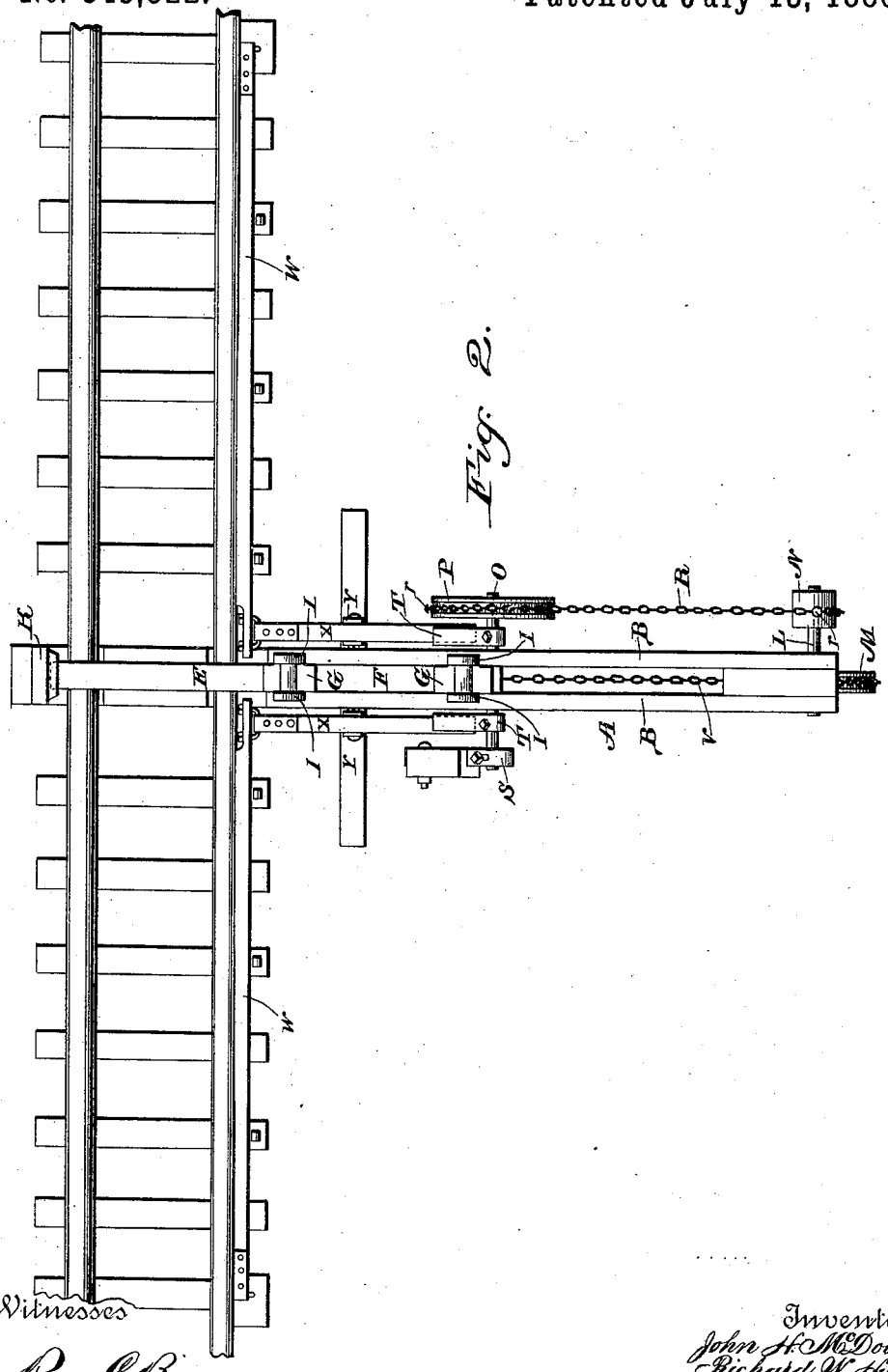

Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN HUGH McDOWELL, RICHARD WILKINS HUDGINS, AND JAMES E. MOORE, OF UNION CITY, TENNESSEE.

RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 345,522, dated July 13, 1886.

Application filed April 24, 1886. Serial No. 200,069. (No model.)

To all whom it may concern:

Be it known that we, JOHN HUGH McDOWELL, RICHARD WILKINS HUDGINS, and JAMES E. MOORE, citizens of the United States, residing at Union City, in the county of Obion and State of Tennessee, have invented a new and useful Improvement in Railway-Gates, of which the following is a specification.

Our invention relates to an improvement in railway-gates; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of our invention. Fig. 2 is a top plan view of the same, partly in section.

A represents the gate-frame, which is located on one side of the railway-track, and extends at right angles thereto. The gate-frame is composed of a series of vertical standards, C, arranged in pairs and parallel to each other, and horizontal upper beams, B, which are secured on the upper ends of the standards C, the said bars B being parallel with each other and at a suitable distance apart.

E represents the gate, which may be of any preferred construction, and is provided on one end with the extensions F, which fit between the opposing sides of the standards C and the beams B. On the upper side of the upper beam of the extension F is secured a pair of bearing-blocks, G, one being arranged near each end of the said extension, and in the said bearing-blocks are journaled transverse shafts H, to the ends of which are secured rollers I, that bear upon the upper sides of the beams B and support the gate in a horizontal position, and enable the same to be moved inwardly, so as to clear the track. On the opposite side of the track from the frame A is located a post, K, against which the gate closes, the said post, on its side opposing the gate-frame, being provided with a recess or recesses to receive the ends of the horizontal beams of the gate.

L represents a horizontal transverse shaft, which is journaled in blocks which are secured to the outer end of the gate-frame, and on the said shaft is rigidly secured a large drum-wheel, M, which extends between the standards C at the outer end of the frame, and on one end of the said shaft L is secured a small drum, N.

O represents a horizontal transverse shaft, which is journaled in blocks that are secured to the vertical standards near the center of the frame A. The said shaft, on one end aligning with the drum N, is provided with a large rigid drum-wheel, P, which is connected to the drum N by an endless chain or belt, R, the said chain or belt being secured to the drums N and P, as at *r*. To the opposite end of the shaft O is attached a weighted arm, S, and to the said shaft, on opposite sides of the frame A, are secured tappet-arms T, which align with the weighted arm S.

U represents a sheave or roller, which is journaled to the ground-sill of the frame A under the outer end of the extension F of the gate, and V represents a chain which is passed around the sheave U, and has one end attached to the under side of the extension of the gate, and the other end passed around the periphery of the drum-wheel M and firmly secured to the upper side of the gate.

To one of the rails of the railway-track, at suitable distances on each side of the gate, are pivoted the outer ends of bearing-rails W, the inner ends of which extend very nearly to opposite sides of the gate.

X represents lever-arms, which are fulcrumed in bearings Y, that are secured to the frame A, the said arms being arranged on each side on the frame A at the inner end thereof, and having one end attached to the free ends of the bearing-rails W, the opposite ends of the said lever-arms being arranged under the lower ends of the tappet-arms T.

The operation of our invention is as follows: The gate is normally closed in the position shown in Fig. 1 in solid lines, with the tappet-arms bearing on the outer ends of the lever-arms X, and the inner ends of the said lever-arms in an elevated position, thereby raising the free ends of the bearing-rails W above the level of the top of the track. When a train approaches the gate from either side, the pilot-wheels of the locomotive come in contact with one of the rails W and depress the same, thereby moving the lever-arms X, and causing the said lever-arms to raise the tappet-arms T, and

thereby raise the weighted arm S and partly rotate the shaft O. As the wheel P rotates with the shaft O, it imparts similar motion to the shaft L through the drum N, causing the drum M on the shaft L to draw upon the upper portion of the chain V and release the lower portion thereof, thereby opening the gate and leaving an unobstructed passage-way for the train. The length of the bearing-rails W is such that several of the wheels of the train will be constantly bearing thereon while the train is passing through the gateway, thus preventing the said rails from being released. When the last wheel of the train passes the outer pivoted end of the bearing-rail, after the train has passed the gateway, the weighted arm S by its gravity reverses the movement of the shaft O, thereby closing the gate to its original normal position, as will be readily understood.

A railway-gate thus constructed is simple and comparatively inexpensive, and automatically opens and closes for the passage of each train, thereby requiring no attendance.

Having thus described our invention, we claim—

1. The combination of the sliding or rolling gate, the shaft O, having the tappet-arms T, the weighted arms S, and means connecting the said shaft with the gate for operating the latter, the bearing-rails W, arranged on one side of the track, and the lever arms X, connected to the free ends of the bearing-rails at one end, and having their opposite extremities bearing under the tappet-arms T, substantially as described.

2. The combination of the frame A, the sliding or rolling gate secured thereto, the shaft L at one end of the frame, and having the drum-wheels M and N, the sheave U, the chain V, having one end attached to the lower side of the gate passed under the sheave U, around the drum M, and having its opposite end attached to the upper end of the gate, the shaft O, having the tappet-arms T and the weight, and provided with the drum-wheel P, the chain or belt connecting the said drum-wheel with the drum N, the bearing levers or rails W, extending in opposite directions from the gate and arranged upon one side of the track, and the fulcrumed levers X, having their outer ends attached to the free ends of the bearing-rails and their inner ends engaged with the tappet-arms T, for the purpose set forth, substantially as described.

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

JOHN HUGH McDOWELL.
RICHARD WILKINS HUDGINS.
JAMES E. MOORE.

Witnesses:
ALEX. N. MOORE,
CHAS. E. ELLIOTT.