

No. 740,658.

PATENTED OCT. 6, 1903.

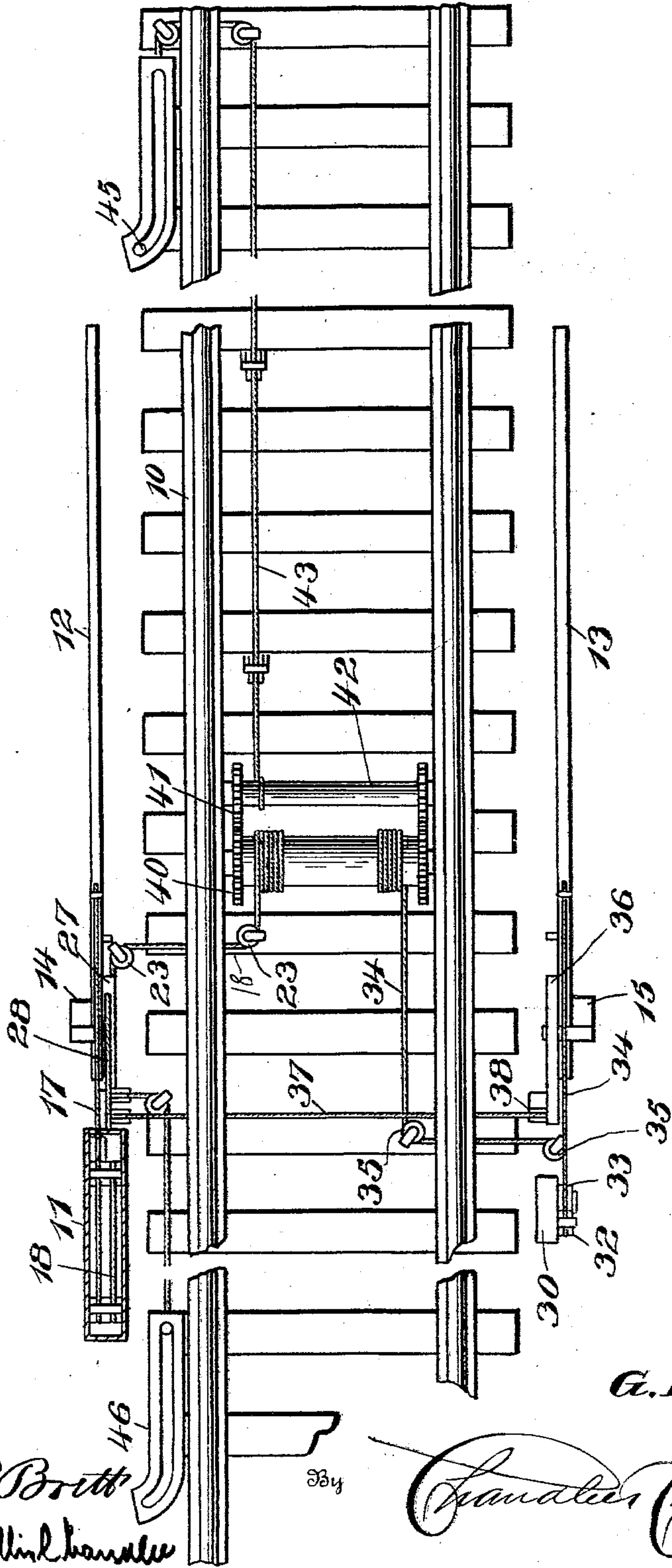
G. E. JACKSON.  
RAILWAY GATE.

APPLICATION FILED DEC. 10, 1902.

2 SHEETS—SHEET 1.

NO MODEL.

Fig. 1.



Witnesses  
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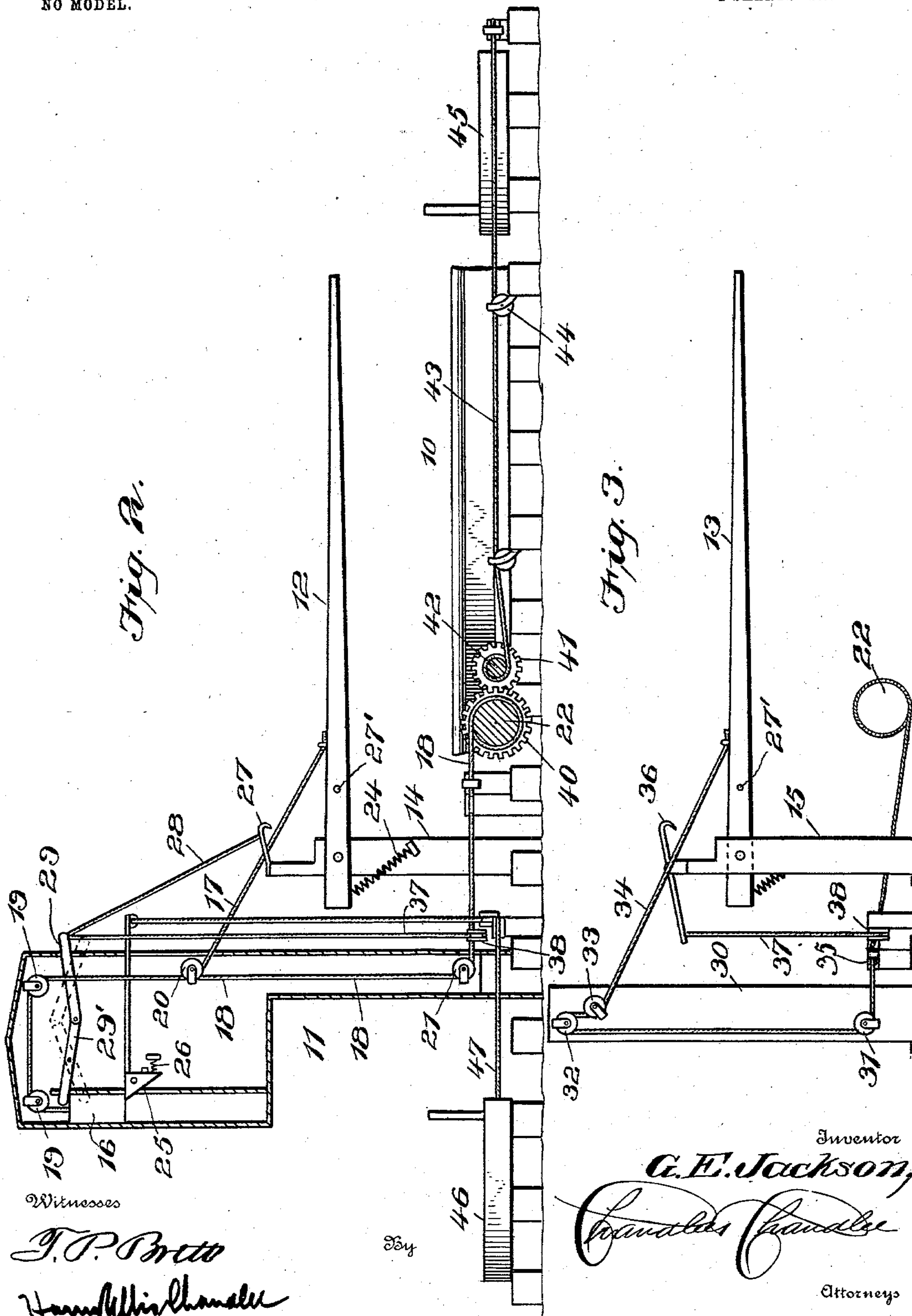
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2 SHEETS—SHEET 2.





# UNITED STATES PATENT OFFICE.

GEORGE E. JACKSON, OF SHERIDAN, ILLINOIS.

## RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 740,658, dated October 6, 1903.

Application filed December 10, 1902. Serial No. 134,680. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE E. JACKSON, a citizen of the United States, residing at Sheridan, in the county of La Salle, State of Illinois, have invented certain new and useful Improvements in Railway-Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railway-gates wherein the gates are mounted for pivotal movement into and out of position across a railway-crossing; and it has for its object to provide a construction wherein the gates will be automatically lowered when the approaching train has reached a predetermined point and will be similarly raised when the train has passed the crossing, a further object of the invention being to provide such a specific construction and arrangement of parts as will insure an efficient operation of the gates at all times.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view showing a railway-crossing equipped with gates embodying the present invention, the gates being in a raised position. Fig. 2 is an elevation showing one of the gates in lowered position and the attached mechanism for operating it, a part of the main post being in section to show the inclosed mechanism. Fig. 3 is a detail elevation showing the mechanism connected with a gate.

Referring now to the drawings, there is shown a railway comprising the rails 10, at one side of which is the main post 11, which is a housing and contains mechanism for operating the gates at that point of the trackway, two of the gates being shown at 12 and 13 pivotally mounted upon the short posts 14 and 15. Upon the post 11 is a guideway, in which is mounted the weight 16, having cables 17 and 18 attached thereto, which are passed upwardly and over the pulleys 19 at the top of the post and then downwardly and around the pulleys 20 and 21, the cable 17 being passed from the pulley 20 outwardly and attached to the gate 12 above its pivot. Transversely of the track is mounted a winding-

drum 22, and the cable 18 after passing under the pulley 21 and around direction-pulley 23 is attached to the drum 22, so that when the drum is rotated in one direction the cable 18 will be wound thereon, weight 16 will be raised, this upward movement of the weight permitting the gate 12 to move downwardly under conditions hereinafter described, while the downward movement of the weight serves to raise the gate. To aid in raising the gate 12, a helical spring 24 is attached thereto and to the base of the post 14, so that when the opposite or long end of the gate moves downwardly the spring will be put under tension, so that it may serve to assist in raising the gate.

In the path of upward movement of the weight 16 is a dog 25, having a lower slanting face, as shown, this dog being pivotally mounted, so that the weight will strike its slanting face and press the dog laterally until the weight has passed above it, after which the dog will be returned by the spring 26, so as to engage under the weight and support the latter in raised position. When the dog 25 is withdrawn from its engaging position, the weight will be permitted to drop and raise the gate.

Upon the post 14 is a latch 27, which engages the pin 27' on gate 12 when the latter is raised and holds it in raised position, and connected to this latch by means of the cable 28 is a pivoted lever 29, one end of which is pivoted to a pivoted lever 29', the opposite end of which lies in the path of movement of the weight 16 above the dog 25, so that the gate does not drop as soon as the weight moves upwardly, but not until the weight strikes the lever and by moving it upwardly causes it to draw upon the cable 28 and trip the latch 27. When the weight 16 moves downwardly, the lever 29 returns to its former position in readiness to again trip the latch when the weight next moves up, it being understood that when the lever 29 is released by the weight the latch returns to its normal position, as shown in dotted lines.

Adjacent to the post 15 is a post 30, on which are direction-pulleys 31, 32, and 33, over which is passed a cable 34, which is taken around certain other direction-pulleys 35 and is attached to the drum 22. The pulley 31 is at the bottom of the post 30, the pulley 32 is at



the top of the post, and the pulley 33 is on the side face near the top, and the cable 34 is taken around these pulleys in succession and then outwardly and attached to the gate 13, so that when the cable is drawn upon said gate will be raised. The gate 13 has a retaining-latch 36, similar to the latch 27, mounted upon the post 15, and attached to this latch is a cable 37, which is passed around direction-pulleys 38 and is then taken upwardly and then attached to the lever 29, so that when the weight actuates the lever 29 the latch 36 will be tripped in the same manner as latch 27. At the ends of the drum 22 are gear-wheels 40, which mesh with the pinions 41 at the end of the drum 42, on which is wound one end of a cable 43, which is taken over pulleys 44 toward the approaching train, the end of the cable being returned upon itself and attached to the block 45, which is arranged for engagement by the approaching train to move it and draw the cable to unwind it from the drum 42. As the cable unwinds from the drum 42 it rotates the latter, from which in turn the drum 22 is rotated to wind up the cables 18 and 34 to raise the weight, which when it reaches the limit of its upward movement trips the lever 29 and permits the gates to fall.

When the weight 16 has passed above the dog 25, it is held in such position by the dog until the latter is withdrawn against the tension of the spring 26. The weight must of course not be dropped until after the train has passed the crossing, and for this reason there is provided another track instrument or device 46, which is engaged and moved after the train has passed the crossing, the track instrument 46 being connected by a cable 47 with the dog 25 and passed over suitably-arranged direction-pulleys, so that when the instrument 46 is moved the cable will be drawn and the dog moved to its releasing position. When the dog releases the weight, the latter descends and in its descent not only raises the gate 12, but rotates the drum 22 to wind up the cable 34 and raise the gate 13 and at the same time rotates the drum 42 to wind the cable 43 and bring the track instrument 45 back into position for operation by the next train.

What is claimed is—

1. A railway-gate comprising a pivoted arm, a weight having a cable attached to the arm for raising the arm and holding it in raised position, a latch for holding the arm raised and means in the path of lowering movement of the weight connected with the latch for tripping the latter.

2. A railway-gate comprising a pivoted arm, a vertically-movable weight connected with the arm and adapted to raise and hold the arm in raised position when it moves downwardly, a latch for holding the arm in raised position, means in the path of upward movement of the weight for tripping the latch to release the arm, a latch for holding the weight in raised position, and a track instrument connected with the last-named latch and adapted for operation by a passing train to release the latch and permit the weight to drop.

3. A railway-gate comprising a pivoted arm, a weight connected to the arm for raising the arm and holding it in raised position when the weight moves to the lower limit of its motion, a latch for holding the arm raised, means in the path of upward movement of the weight and connected with the latch for tripping the latter, a latch arranged to engage and hold the weight in its tripping position, a track instrument connected with the last-named latch for moving it to release the weight, a winding-drum, a cable attached to the weight and the winding-drum and adapted to be wound upon the drum to raise the weight, and a second track instrument having operative connection with the drum to rotate the latter.

4. A railway-gate comprising a pivoted arm, a weight connected to the arm for raising the arm and holding it in raised position when the weight moves downwardly, a latch for holding the arm raised, means in the path of upward movement of the weight and connected with the latch for tripping the latter, a latch arranged to engage and hold the weight in its tripping position, a track instrument connected with the last-named latch for moving it to release the weight, a winding-drum, a cable attached to the weight and winding-drum and adapted to be wound upon the drum to raise the weight, a second track instrument having operative connection with the drum to rotate the latter, a second pivoted gate-arm, a latch for holding the second arm raised and connected with the tripping means which is in the path of the weight, and a cable connected to the second arm and to the winding-drum for operating the second arm.

In testimony whereof I affix my signature in presence of witnesses.

GEORGE E. JACKSON.

Witnesses:

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IVOR FISTER.