

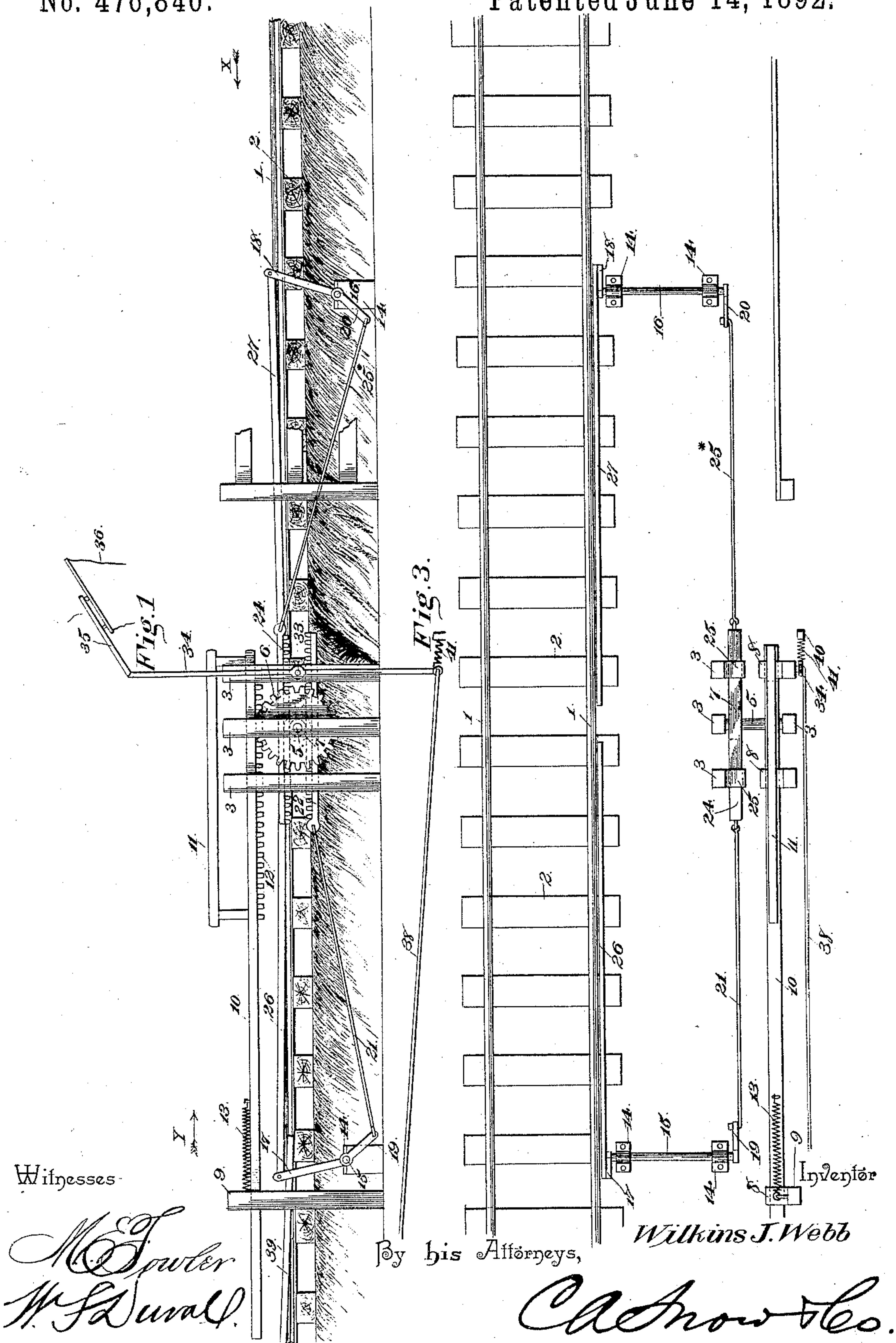
(No Model.)

2 Sheets—Sheet 1.

W. J. WEBB.
RAILROAD GATE AND DANGER SIGNAL.

No. 476,846.

Patented June 14, 1892.



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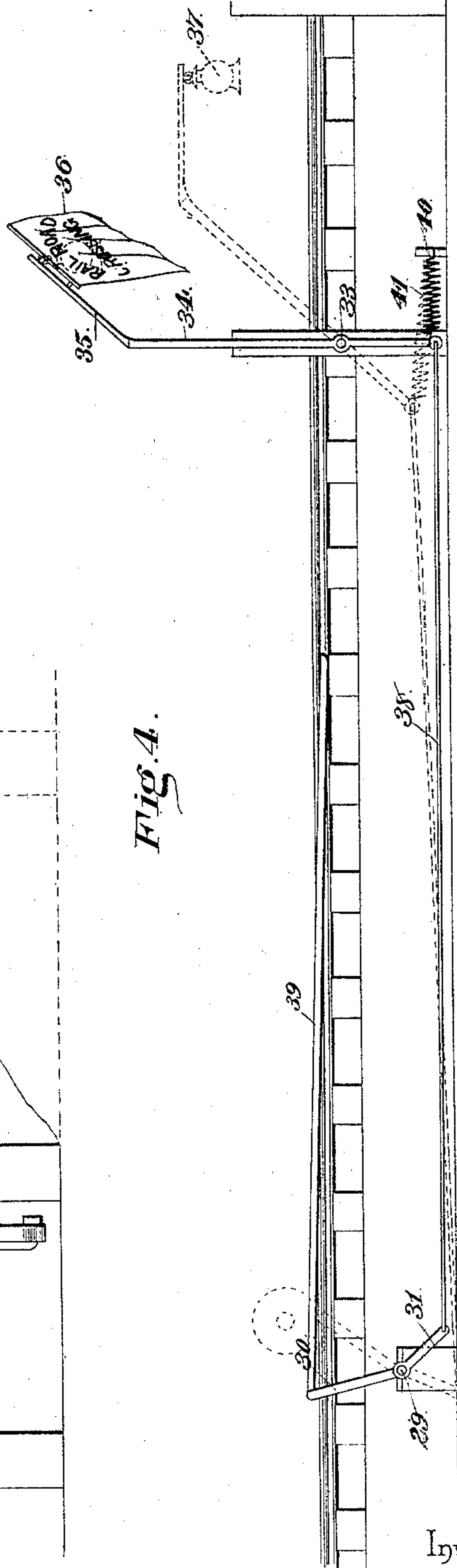
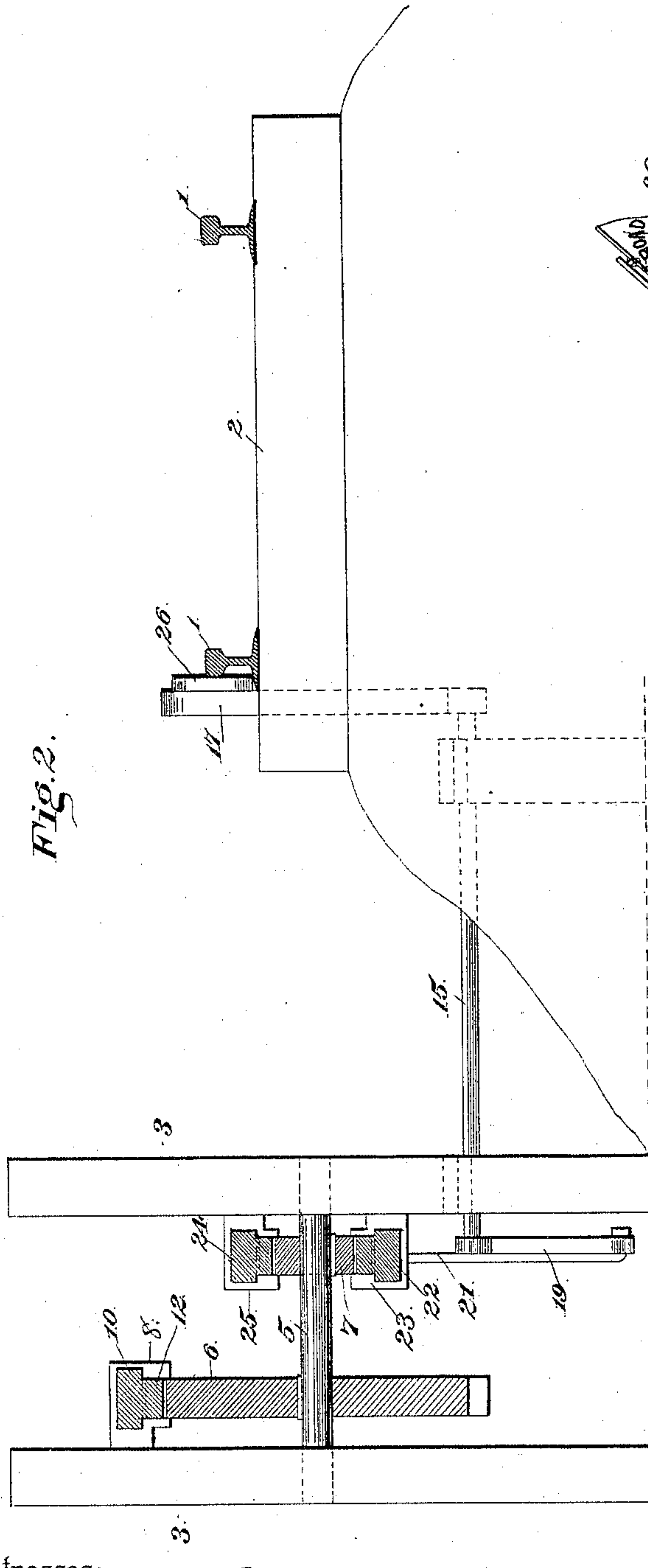
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Patented June 14, 1892.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILKINS J. WEBB, OF HILLSBOROUGH, ILLINOIS.

RAILROAD-GATE AND DANGER-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 476,846, dated June 14, 1892.

Application filed November 24, 1891. Serial No. 412,934. (No model.)

To all whom it may concern:

Be it known that I, WILKINS J. WEBB, a citizen of the United States, residing at Hillsborough, in the county of Montgomery and State of Illinois, have invented a new and useful Improvement in Railroad-Gates and Danger-Signals, of which the following is a specification.

This invention relates to railway-gates and danger-signals; and the objects in view are to provide a gate and danger-signal adapted to close crossings and a cheap and simple mechanism for operating the same and in turn to be operated by the passing train.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is an elevation of a railroad-gate constructed in accordance with my invention. Fig. 2 is a transverse section of the same. Fig. 3 is a plan. Fig. 4 is a detail of the signal and its mechanism.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the track-rails mounted upon the cross-ties 2. At one side of the crossing are located three pairs of posts 3, arranged a short distance apart, the central pair being provided with a pair of opposite bearings, in which is journaled the shaft 5. This transverse shaft carries a large or main gear 6 and a smaller gear 7, located at one side of the main gear. In keepers 8, located upon the inner sides of the outer posts and of the post 9, located some distance from the posts 3, there is mounted for reciprocation the lower longitudinal bar 10 of a gate 11, said bar being considerably longer than the gate and provided upon its under side with teeth 12, that engage with the teeth of the main gear 6. The gate is normally maintained open by means of a coiled spring 13, connected to the bar 10 and post 9.

In pairs of bearing-blocks 14, located at opposite sides of the crossings, there are journaled rock-shafts 15 and 16, said rock-shafts being provided with upwardly-disposed rock-arms 17 and 18, respectively, and with downwardly-disposed rock-arms 19 and 20. To the lower end of the rock-arm 19 there is connected by means of a connecting-rod 21 the

inner end of a rack-bar 22, which is mounted for reciprocation in keepers 23, extending from the inner faces of the posts 3, whereby said rack-bar is maintained in engagement with the teeth of the gear 7. A corresponding rack-bar 24 is located in keepers 25 above the gear 7, and a rod 25* serves as a means for loosely connecting the outer end of the rack-bar with the free end of the rock-arm 20. To the upper end of the rock-arm 17 a flat bar 26 is connected and extends along the rail of the track toward the gate, while a similarly-disposed bar 27 is loosely connected with the upper end of the arm 18 and likewise extends along the track at the opposite side of the gate.

In operation, the gate being in the position shown in Fig. 1, a train passing in the direction of the arrow X will force the upper end of the rock-arm 18 toward the crossing, drawing the companion rock-arm 20 to the rear or away from the crossing and through the medium of the connecting-rod 25 moving the rack-bar 24, the shaft 5, the small gear 7, and the large gear 6, thus throwing the gate over the crossing. The wheels of the train, passing upon the flat bar 27, connected to the arm 18, depress or maintain in a depressed position the bar 27, thus maintaining the gate closed until the train has passed beyond the same. As soon as released the spring 13 returns the parts to their normal position. The operation of closing the gate by a train moving in the opposite direction, or that indicated by the arrow Y, is exactly the same as that just described, the arm 17 being depressed, thus moving the shaft 15, arm 19, connecting-rod 21, and rack-bar 22. It will be noticed that as the bars 26 and 27 extend toward each other the train—for instance, when passing in the direction of the arrow Y—will rest upon the bar 27 before it leaves the bar 26, and thus the gate is locked until the train gets well by the crossing.

In Fig. 4 I have illustrated how the device may be applied to signals alone. In this figure I employ the rock-shaft 29, the arm 30, and the downwardly-extending arm 31 and pivot to one of the posts 3, as at 33, the staff or lever 34, having an extension 35 at its upper end, which supports a danger-signal flag 36 or a danger-signal lamp 37, as shown by dotted lines. The lower end of the lever 34

is connected to the lower rock-arm of the rock-shaft by a connecting-rod 38. To the upper end of arm 30 a flat bar 39 is loosely connected and extends along the rail of the track toward the crossing for the purpose of keeping the bar 34, with flag or lamp, over the crossing by the movement of the train over the same until the train takes action on the rock-arm for closing the gate. At the lower end of staff 34, at the place where it is connected with rod 38, is attached a coiled-wire spring 41, extending toward the crossing and fastened to post 40, to raise staff 34 to its normal position as soon as the train has taken action on the mechanism for movement of gate.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided a very simple and inexpensive mechanism for operating the signal and gate successively that may be applied to single or double tracks, the operation being positive and the gate being locked during the entire passage of the train.

The signal and gate may be used separately, if desired.

Having described my invention, what I claim is—

1. The combination, with the bearings, the rock-shafts mounted in the bearings, the upwardly and downwardly extending rock-arms, and the sliding bars 26 and 27, pivoted to the upper ends of the upwardly-extending rock-arms and inwardly disposed and located alongside the track, where they are adapted to be depressed by the wheels of a passing train, of a gate located at one side of the track and between the rock-shafts, mechanism for operating the gate, and devices connecting the lower ends of the depending rock-arms with the gate-operating mechanism, substantially as specified.

2. The combination, with the posts at one side of the track, provided with keepers, the rock-shafts at opposite sides of the posts, the bearings for the same, and the upwardly and downwardly extending rock-arms of the shafts, of the gate having an extended lower bar mounted for movement in the keepers, which lower bar is provided with teeth, a re-

tracting-spring for the gate, a shaft mounted in the bearings of the bars, a pair of gear-wheels mounted on the shaft, one of which engages with the teeth of the gate, rack-bars mounted at opposite sides of the companion gear-wheel, and connecting-rods loosely connected to the outer ends of the rack-bars and to the lower ends of the lower rock-arms, substantially as specified.

3. The combination, with the posts at one side of the track, provided with keepers, the rock-shafts at opposite sides of the posts, the bearings for the same, and the upwardly and downwardly extending rock-arms of the shafts, of the gate having an extended lower bar mounted for movement in the keepers, which lower bar is provided with teeth, a retracting-spring for the gate, a shaft mounted in the bearings of the bars, a pair of gear-wheels mounted on the shaft, one of which engages with the teeth of the gate, rack-bars mounted at opposite sides of the companion gear-wheel, connecting-rods connecting the lower ends of the arms 20 with the outer ends of the rack-bars, and bars mounted at the sides of the rails, said bars being inwardly disposed and pivotally connected at their outer ends with the upper ends of the upwardly-extending rock-arms, substantially as specified.

4. The combination, with the bearings, the rock-shafts mounted in the bearings, the upwardly and downwardly extending rock-arms, and the sliding bar pivoted to the upper end of the upwardly-extending rock-arm, inwardly disposed, and located alongside the track, whereby it is adapted to be depressed by the wheels of a passing train, of the protective device at the crossing and devices connecting the lower end of the depending rock-arm with the said protective device, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILKINS J. WEBB.

Witnesses:

DUNCAN D. GOOD,

HENRY H. KEITHLEY.