

No. 778,161.

PATENTED DEC. 20, 1904.

E. WHITAKER.  
RAILWAY GATE.

APPLICATION FILED SEPT. 27, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

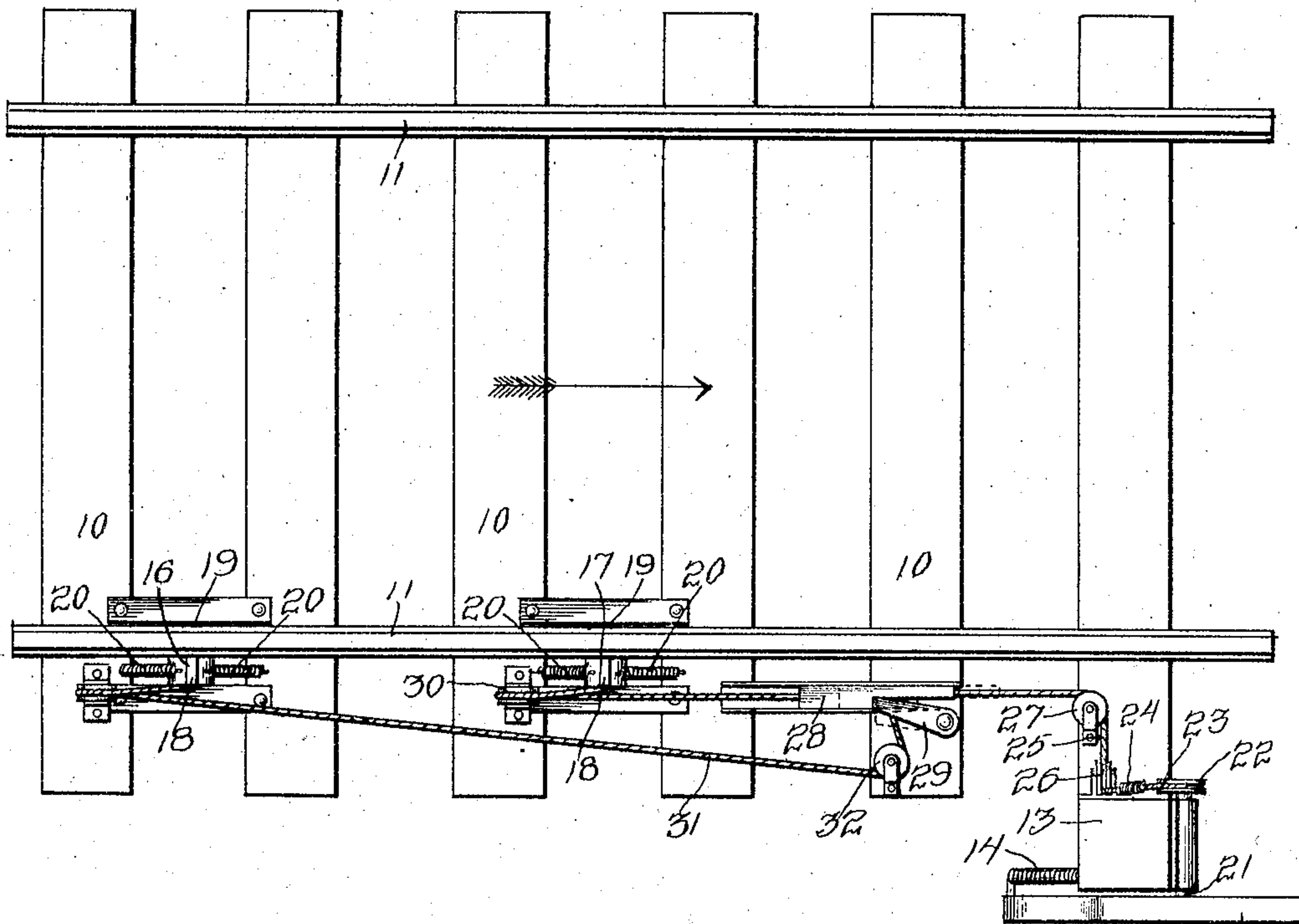
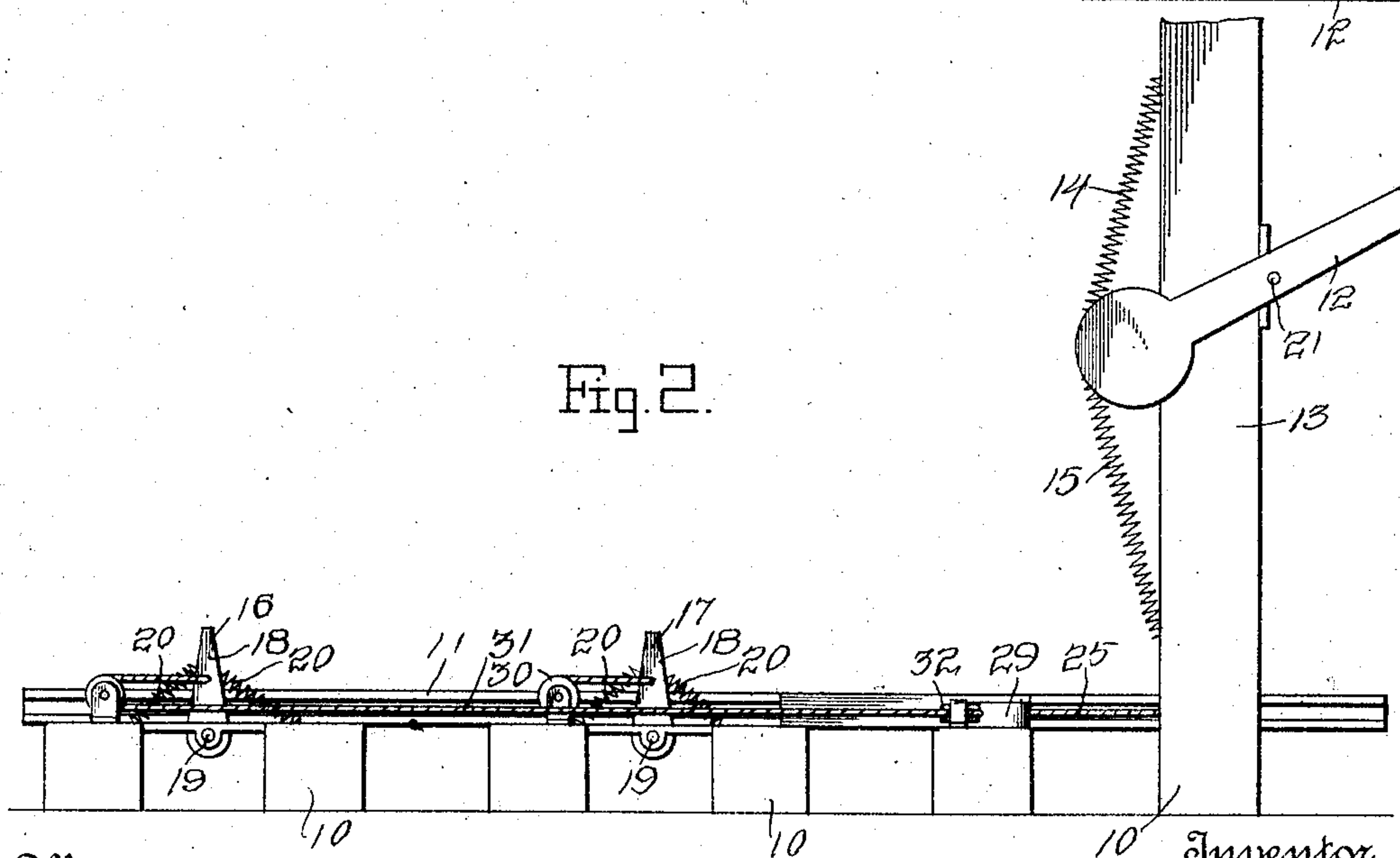


Fig. 2.



Witnesses  
O. K. Reichenbach.  
H. M. Baldwin.

Inventor  
E. Whitaker  
By  
Charles F. Chandler  
Attorneys

No. 778,161.

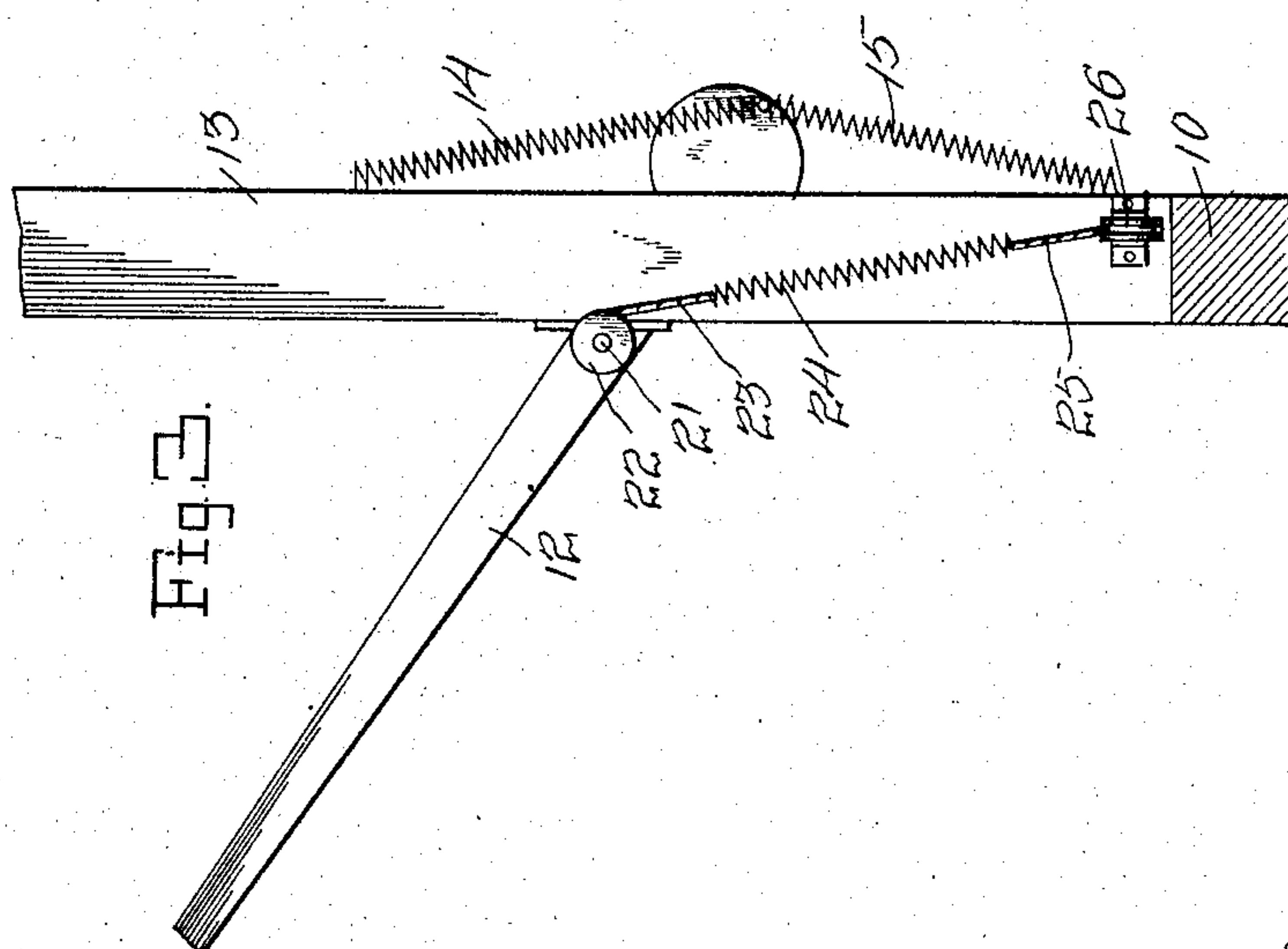
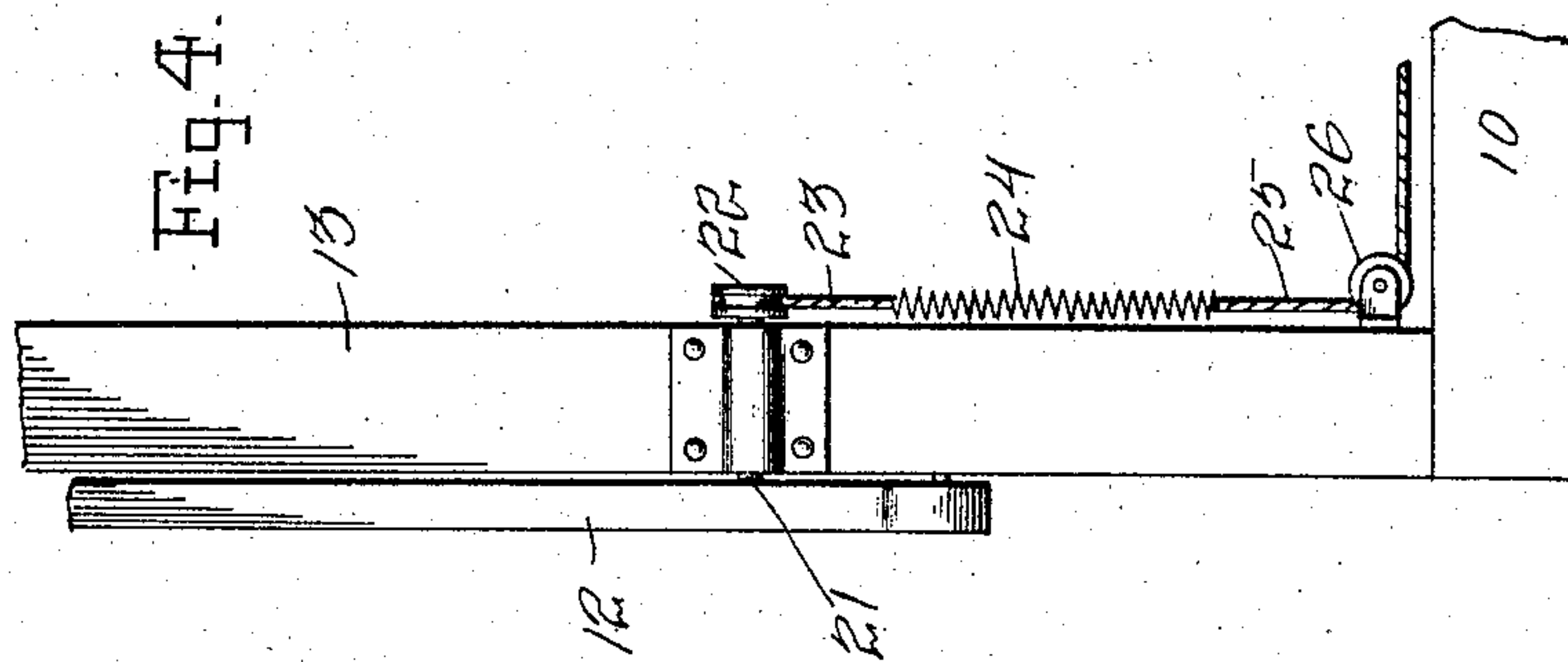
PATENTED DEC. 20, 1904.

E. WHITAKER.  
RAILWAY GATE.

APPLICATION FILED SEPT. 27, 1904.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses  
C. K. Reichenbach  
H. A. Baldwin.

Inventor  
E. Whitaker  
By  
C. H. Chandler  
Attorneys



# UNITED STATES PATENT OFFICE.

EDWARD WHITAKER, OF CUMBERLAND, IOWA.

## RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 778,161, dated December 20, 1904.

Application filed September 27, 1904. Serial No. 226,196.

*To all whom it may concern:*

Be it known that I, EDWARD WHITAKER, a citizen of the United States, residing at Cumberland, in the county of Cass, State of Iowa, 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 that class of railway-gates in which a bar (and it may be some connections of the same) pivoted upon a post is lowered across a railway-crossing so as not only to warn persons and passing teams of the approach of a train, but stop them from passing upon or crossing the track.

It is the object of the invention to provide simple, efficient, and practical improvements in this class of inventions in order to render them more simple and certain in their operations.

The drawings hereto annexed and forming a part of this specification are designed to show the invention as applied to the right-hand track, or the track on which a train would approach the crossing and gate, it being understood that the left-hand track will be equipped with similar means on the other side of the crossing.

Of the drawings, Figure 1 is a plan view of the invention, showing the gate as raised. Fig. 2 is a right-hand side view of the same. Fig. 3 is a left-hand side view of the post and its gate. Fig. 4 is a front view of the post.

In the drawings, 10 designates the railway-ties, upon which are laid the rails 11, forming the track.

12 designates the gate, consisting in the present instance of a bar pivotally supported on a post 13, firmly secured at its lower end to an extension of a tie 10 and having buffer or counterbalancing springs 14 and 15 secured to what may be called the "rear" end, so as to effect an easy working of the gate and obviate jar, due to the trains striking the operative parts.

In the present case the devices for operating the crossing-gate to close the same are placed outside of the rails or track, so as to

leave the space within the rails clear, and it is arranged to actuate a trip to close the gate before the train reaches the crossing, and then as the engine or train is on the crossing to actuate another trip so that after the train shall have passed the gate will have opened or will open slowly, leaving the crossing clear. With these statements it may be explained on reference to the drawings that the apparatus embraces two trips 16 and 17. The former is the first to be operated upon and is placed as far back on the track as may be deemed advisable, while the trip 17 will for the same reasons be arranged near the crossing-gate. Each trip consists of an upright 18, having lateral journals 19, supported in bearings sustained between two ties or in other suitable ways. Springs 20, connected with opposite sides of the trips, operate thereon, as is obvious, to maintain them normally in vertical position and as buffer-springs.

On the inside of the pivot 21 of the crossing-gate there is a pulley 22, which is adapted to wind upon it when it is turned in the proper direction the rope or cable 23, which has one end attached to the said pulley and the other end to the upper end of a helical spring 24. The construction and arrangement is such that when tension on the spring 24 is relaxed it will allow the crossing-gate to close by the tendency of its own gravity; but when stress is put upon said spring 24 it will cause the gate to open gradually. The lower end of the helical spring 24 is connected to one end of a cord or rope 25, which extends down under a pulley 26, properly supported on the gate-post 13, and thence inward around a pulley 27, supported on the gate-post tie, and thence to a catch 28, to the forward end of which it is connected. The catch 28 is provided with a notch or similar means which adapts it to be engaged by a latch 29, pivoted upon a tie, and be held against moving forward under the action of the helical spring 24, which operates to close the crossing-gate. At the rear end of the catch is attached one end of a cord or rope, which extends rearwardly, suitably guided around a pulley 30, supported on a tie, and then forwardly to the trip 17. The latch 29 has a cord or rope 31 attached to its catch-



engaging end, which cord extends outwardly around a pulley 32 and forwardly where it is connected with the trip 16.

5 In speaking of the movements and relationship of the parts herein it is intended that the terms shall have regard to the arrow marked on Fig. 1. Supposing now that all parts are in their normal position, the crossing-gate raised, and the catch engaged by the latch, as  
10 represented in Fig. 1. A train coming down the track in the direction of the arrow will have a suitable cam-like projection or other suitable means on the cow-catcher or elsewhere, which will strike the trip 16 before  
15 the train reaches the crossing, pressing said trip forward, drawing back the latch 29 to the dotted-line position, and allowing the catch to slide forward to its dotted-line position by the reaction of the spring 24, which allows the  
20 crossing-gate to close. As the train reaches the crossing the trip 17 will be struck and pressed forward, drawing back the catch 28, so that the latch will fall behind its notch, putting stress or tension on the spring 24 and  
25 causing it to open the gate slowly but certainly.

Of course such parts as require it may be housed in against the weather and other things that might harm their operations, and provision within the scope of mechanical knowledge 30 may be drawn upon to meet exigencies and circumstances in order to secure a well-adjusted and "smoothly-operating" apparatus.

What is claimed is—

In a crossing-gate the combination with a 35 post, a gate pivotally mounted on said post, a spring connected with the gate and adapted under tension to hold the gate open, cords and a catch connected with said spring to draw upon it to put it under tension, a spring-pressed 40 latch to engage said catch to hold it and maintain tension on the spring, spring-retained trips adapted to be engaged and moved by a passing train, and cords operatively connected with the catch and latch and respectively connected with said trips. 45

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

EDWARD WHITAKER.

Witnesses:

SHARP EDWARDS,  
HENRY TUPKE.