

No. 648,103.

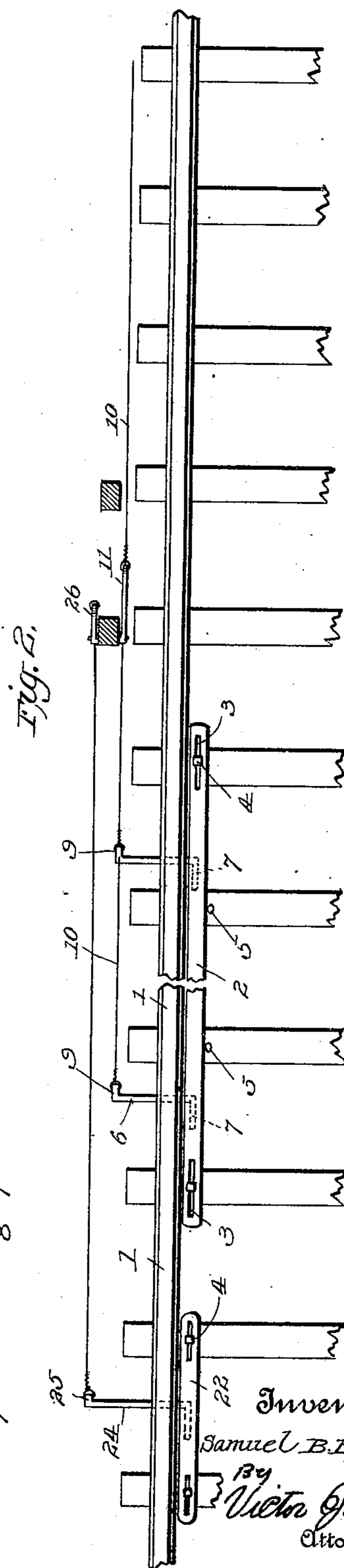
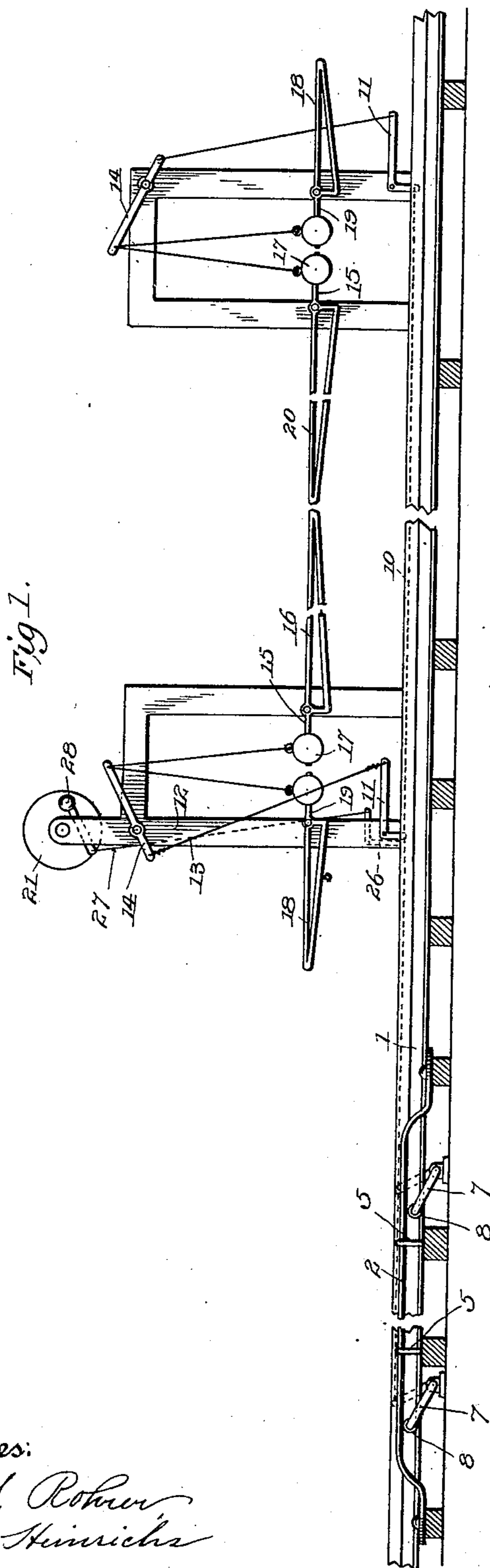
Patented Apr. 24, 1900.

S. B. FISHER.
AUTOMATIC GATE.

(Application filed Feb. 2, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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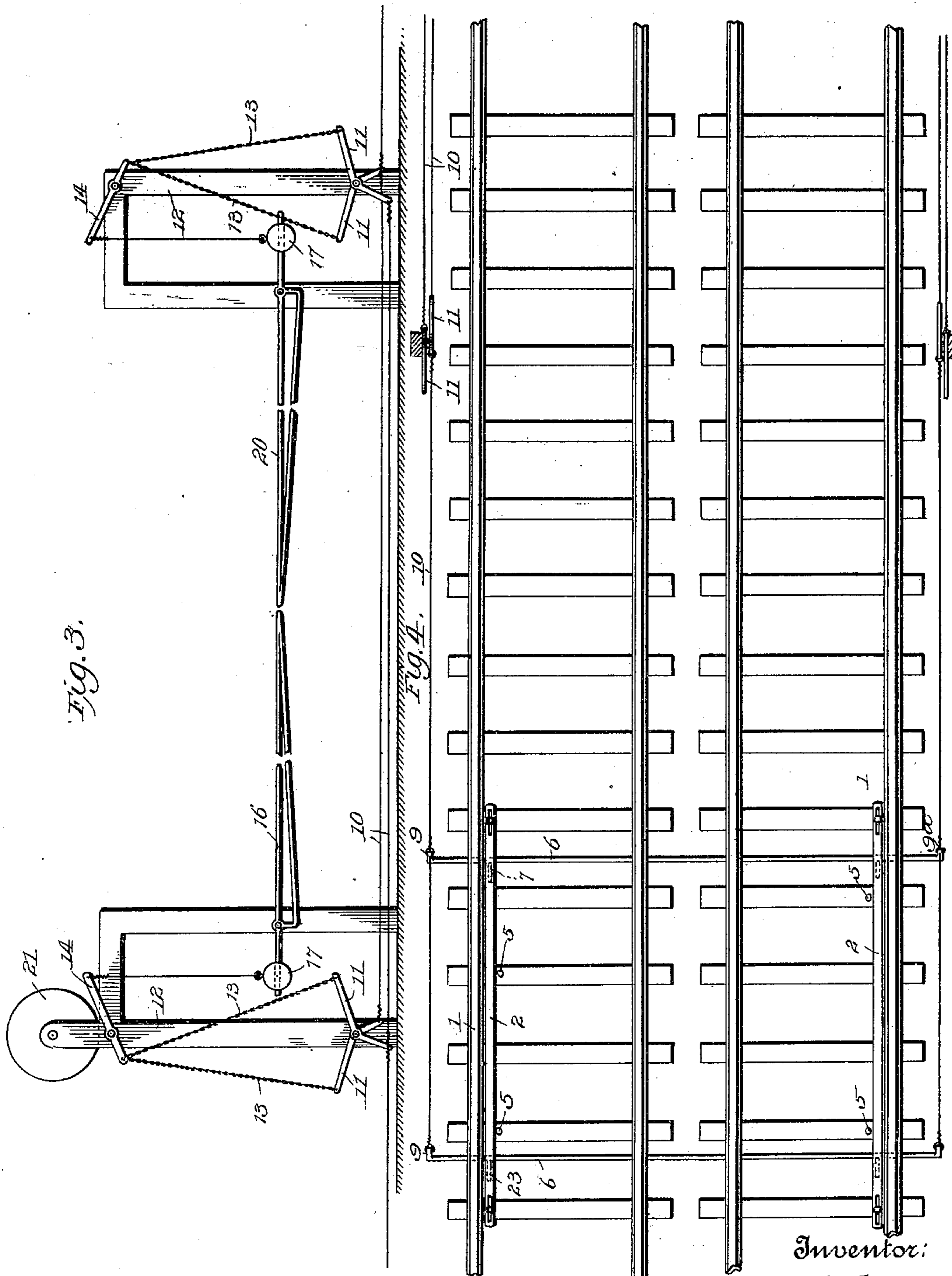
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

SAMUEL B. FISHER, OF UNITED, PENNSYLVANIA.

AUTOMATIC GATE.

SPECIFICATION forming part of Letters Patent No. 648,103, dated April 24, 1900.

Application filed February 2, 1900. Serial No. 3,723. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. FISHER, a citizen of the United States, residing at United, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Gates, of which the following is a specification.

This invention relates to new and useful improvements in automatic railway-gates; and its primary object is to provide a device of this character which is simple and durable in construction and effective in operation.

A further object is to provide an alarm adapted to be sounded automatically and continuously during the approach of a train.

To these ends the invention consists in the novel construction and combination of parts hereinafter described and claimed and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is an elevation showing a section of a railroad equipped with my improved device. Fig. 2 is a plan view of a section of said railroad and showing the gate-support in section. Fig. 3 is an elevation of gates adapted to be operated by a train coming from either direction, and Fig. 4 is a plan view showing means for operating gates on each side of the track at the same time.

Referring to said figures by numerals of reference, 1 is a rail of a track, and along the inner edge thereof at a suitable distance from the crossing is secured a spring-strip 2, provided at each end with a slot 3, adapted to receive a bolt or spike 4, secured to a tie of the track. This spring is so arranged as to be depressed by the flange of a car-wheel passing along the rail, the slots therein permitting the spring to extend in length when under such pressure. Pins or guides 5 may also be secured to the ties at suitable intervals. These bear upon the edge of the spring and prevent the same from being pressed aside by the car-wheel.

Projecting under the rail 1 is a rod 6, journaled in any suitable manner and provided at a point directly under spring 2 with an arm 7, preferably provided at its end with a roller 8, adapted to bear normally upon the lower surface of the spring. The opposite end of the rod 6 is also provided with an arm

9, to which is secured a chain, wire, or rope 10, which extends along parallel with the track to the crossing, where it is secured to the short arm of a bell-crank lever 11, pivoted to a standard of the gate-support 12. The opposite or long arm of the lever is connected, as by chains 13, to the short arm of the lever 14, pivoted to the upper portion of the support, and the opposite arm of said lever is connected in a similar manner with the weighted arm 15 of a mast-gate 16. This gate is preferably formed of a metal rod bent upon itself into triangular form, as shown, and pivoted to one of the standards of the support. The arm 15 is formed of an extension of said rod and is provided with a suitable weight, as 17.

Where it is desirable to have a small or side-walk gate to be operated at the same time with the larger gate 16, it is merely necessary to pivot one, as 18, within the support 12 and connect its arm 19 by a chain or similar means to the long arm of lever 14. A similar gate 20 may be placed at the opposite side of the crossing and on the same side of the track. These gates are operated together by simply continuing the wire 10 forward and connecting it to the lever 11 of said gate 20.

A gong, as 21, may be suspended from one of the supports 12. This is operated by a spring 22, similar to, but on a smaller scale than, spring 2. An arm 23 of a rod 24 is located thereunder and operated thereby when the same is depressed. A second arm 25 is formed at the opposite end of the rod, and this arm is connected by a wire or chain to a bell-crank lever 26, pivoted in the support 12 and connected by a wire 27 to the clapper 28 of the gong. It will be understood that as each wheel of a car depresses the spring in passing thereover the gong will be sounded.

The spring 2 of the gate-operating mechanism is of such length that a wheel of a car is on the same at all times when a train is passing. I preferably employ two rods 6 under this spring, one near each end, so that the pull upon the levers 11 will be approximately the same at all times.

In operation when the flange of a wheel strikes the spring 22 it will throw the rod 24 backward, drawing on the lever 26 and sounding the gong. As each wheel passes over the

spring the gong will be sounded. As the car continues forward its wheels bear upon and depress the spring 2, throwing the rods 6 backward, the levers 11 downward, and the short arms 15 of the gates upward, thereby closing the gates. As one wheel leaves the spring another comes into contact therewith, and in this manner the gates are held down until the train passes. As soon as pressure is removed from the springs the weights 17 of the gates will throw the same open, as is obvious.

In Fig. 3 I have shown a double gate adapted to be operated by trains coming from either direction. This merely necessitates the duplication of the mechanism hereinbefore described.

In Fig. 4 I show the rods 6 extended across under the tracks and provided at their opposite ends with arms 9 and 9^a, respectively, adapted to operate gates placed on both sides of the tracks.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An automatic railway-gate adapted to be

opened from either direction and comprising 35 a gate-support, a gate pivoted thereto and having a weight at its inner end, a lever pivoted to the support, oppositely-arranged bell-crank levers also pivoted thereto, a flexible connection between the opposite ends of the first-named lever, the weighted end of the gate, and the bell-crank levers, rods extending under a track at opposite sides of the gate and each rod having an arm connected to a bell-crank lever, a second arm on each rod, and a spring-plate adapted to partly rotate the rod when depressed. 40 45

2. In an automatic railway-gate the combination of a slotted spring-plate arranged parallel, and adjacent to a rail, fastening means within the slots, guide-pins arranged at the edge of the spring to prevent lateral movement thereof, a rod mounted beneath the spring and having an arm, a friction-roller upon the arm normally bearing upon the under surface of the spring, a second arm to the rod connected to a bell-crank lever, a gate-support, a lever pivoted therein, a gate also pivoted therein, a weight upon the inner end thereof, and a flexible connection between the bell-crank lever, the weight and opposite ends of the said lever. 50 55 60

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

SAMUEL B. FISHER.

Witnesses:

HENRY BARNHART,
C. L. MARKS.