No. 650,226. Patented May 22, 1900.

C. L. BLUBAUGH.

AUTOMATIC RAILWAY SIGNAL.

(Application filed Nov. 16, 1899.)

(No Model.)

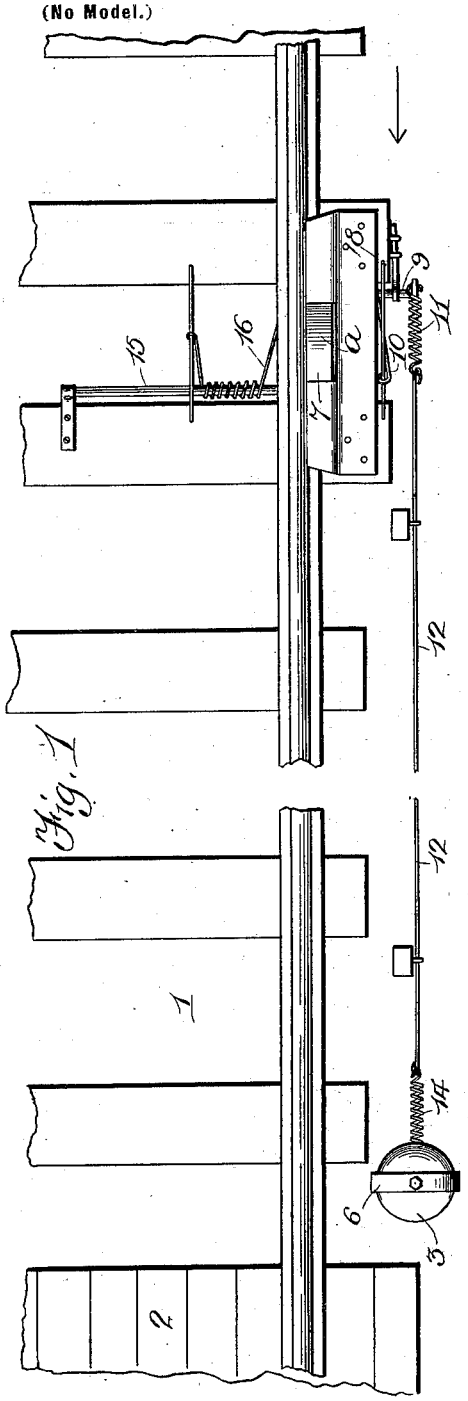

Fig. 1.

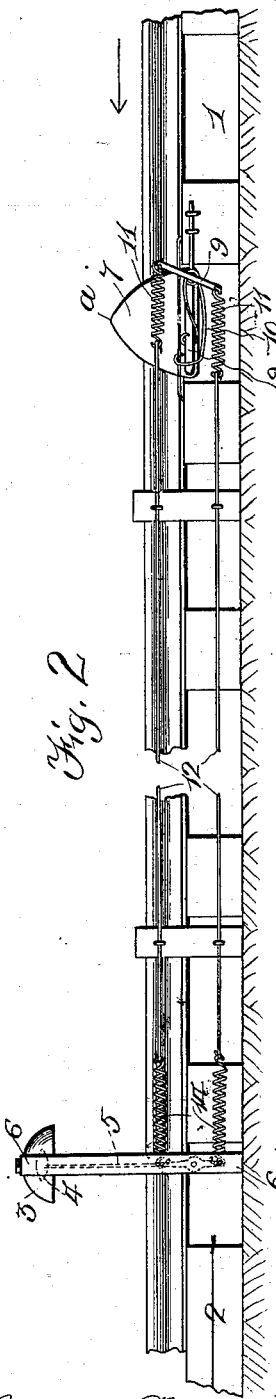

Fig. 2.

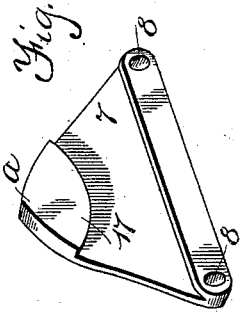

Fig. 3.

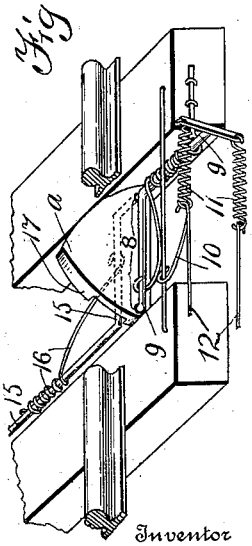

Fig. 4.

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UNITED STATES PATENT OFFICE.

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AUTOMATIC RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 650,226, dated May 22, 1900.

Application filed November 16, 1899. Serial No. 737,164. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. BLUBAUGH, a citizen of the United States, residing at Howard, in the county of Knox and State of Ohio, have invented certain new and useful Improvements in Automatic Railway-Signals; and I do 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.

The invention relates to automatic railway-signals, and more particularly to that class of audible signals operated by the approach of a train to notify persons at crossings thereof.

The object of the invention is to simplify the system and to provide one which will not get out of order and which will only sound an alarm on the approach of a train to a crossing in contradistinction to that class of systems in which the alarm is sounded both at the approach of the train to the crossing and after it has passed the crossing, and thus doing away with unnecessary noise.

To this end the invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a top plan view of a section of a railroad-track, illustrating the application of my invention. Fig. 2 is a side elevation of the same with a portion of the trip-casing removed to more clearly illustrate the details. Fig. 3 is a detail perspective view of the trip removed. Fig. 4 is a perspective view of the mechanism shown in Fig. 1, the cover-plate being removed to more clearly illustrate the parts.

In the drawings the same reference characters indicate the same parts of the invention.

1 denotes a line of track, and 2 the crossing. Arranged at the crossing is a gong 3, having a clapper 4, mounted upon a shaft 5, journaled in suitable uprights 6. Arranged some distance in advance of the crossing and to be actuated by trains moving toward the crossing is a trip 7, preferably triangular in form, and provided at its lower corners with apertures 8. A crank-lever 9 is pivoted to one of the ties and has one of its ends engaged with one of said holes in the trip. A spring 10 is connected with the crank-lever and the tie and exerts its energy to elevate the point *a* of the trip above the tread of the track. The outer end of the crank-lever is provided with two arms, and these two arms are connected by springs 11 to bell-actuating wires 12, which extend to and are connected with the gong 13 of the shaft 5 by springs 14. These springs compensate for the expansion and contraction of the wires and serve to keep them always taut. 15 denotes a second crank-lever pivoted to one of the ties, as shown in Fig. 1, and having one of its ends engaged with the other hole of the trip. A spring 16 is provided and exerts its energy to elevate the point of the trip above the tread of the track.

One side of the trip at its upper corner is provided with a reinforcing-head 17, which when the trip is depressed by the wheels of a passing train strikes against the base of the rail and prevents the trip being thrown too far downward. Below the reinforcing-head 17 is formed a horizontally-disposed shoulder or abutment to prevent the trip from rising too far upward under the action of its springs.

18 denotes a housing secured to the ties and adapted to cover and protect a part of the trip mechanism. This housing, however, is not absolutely essential.

In operation, assuming the train to be moving in the direction of the arrow in Figs. 1 and 2, the wheels of the engine and coaches will strike the upper end of the trip and force it downward. In the depression of the trip, as the train is passing in the direction indicated by the arrows, the crank-lever 15 serves as the axis or fulcrum upon which said trip turns, and the crank-lever 9 moves downward with the trip and through its connection with the gong of the bell sounds an alarm and warns persons at the crossing of the approach of the train. A train moving in an opposite direction to that indicated by the arrows, after having passed the crossing and having sounded an alarm through the instrumentality of a similar mechanism arranged on the other side of the crossing in passing over the trip will depress it, and in the depression of the trip the crank-lever 15 will be depressed, but not being connected to the bell-wires will not sound an alarm. In the depression of the trip while the train is moving in this direction the crank-lever 9 acts as the axis and has no body movement. There-

fore no alarm is sounded after the train has passed the crossing.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my improved automatic railway-signal will be readily appreciated without requiring an extended explanation.

It will be seen that the device is simple, that its construction permits of its manufacture at small cost, and that it is exceedingly well adapted for the purpose for which it is designed, and it will of course be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In an automatic railroad-signal, the combination with the signal; of a triangular trip, two spring-actuated crank-levers, one of which is connected to the signal and both of which are pivotally connected at opposite points of the base of the triangular trip, substantially as and for the purpose set forth.

2. In an automatic railway-signal, the combination with the signal; of a trip mounted in close proximity to the side of the track upon movable fulcrums and connected to the signal, said trip being triangular in form and having at its apex a reinforcing-head and at its base a horizontally-disposed shoulder, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES L. BLUBAUGH.

Witnesses:
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