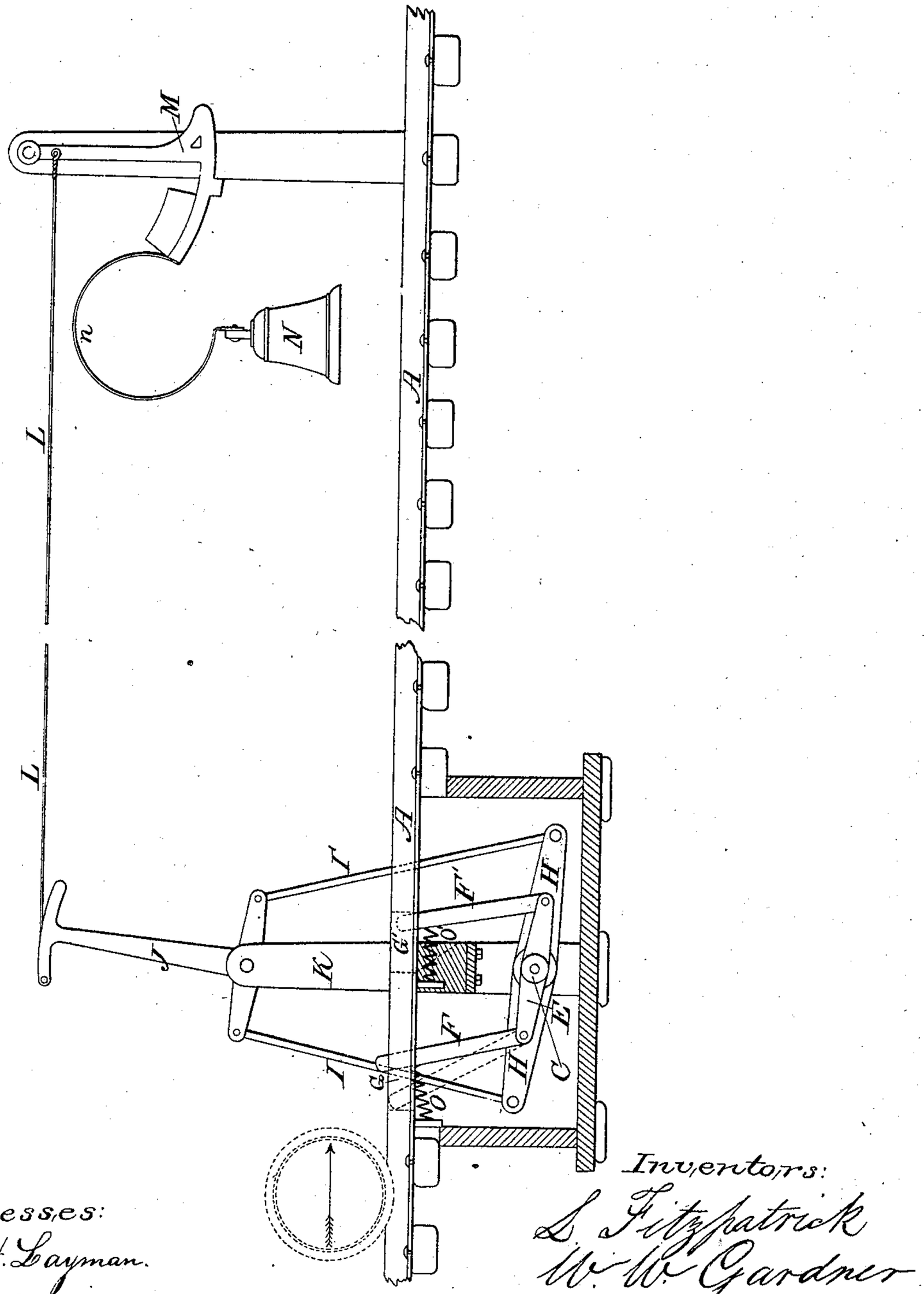
FITZPATRICK & GARDNER.

Railroad Signal.

No. 43,841. Patented Aug. 16, 1864.



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UNITED STATES PATENT OFFICE.

LEWIS FITZPATRICK AND WILLIAM W. GARDNER, OF NICHOLSVILLE, OHIO.

IMPROVEMENT IN RAILROAD-SIGNALS.

Specification forming part of Letters Patent No. **43,841**, dated August 16, 1864.

To all whom it may concern:

Be it known that we, LEWIS FITZPATRICK and WILLIAM W. GARDNER, both of Nicholsville, Clermont county, Ohio, have invented a new and useful Alarm for Railway-Crossings; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification.

Our invention relates to an automatic provision for giving notice or warning at railway-crossings of an approaching train.

A represents the track of a railroad. B represents a point where said track is crossed by a common road. C is a rock-shaft, journaled underneath and athwart the track in hangers D. Projecting rigidly from the rock-shaft C is an arm, E, to which is hinged a trigger, F, which extends upward through a slot, G, in the rail. The shaft C also carries a beam, H, to whose extremities are hinged rods I I′, which rods are hinged to a bell-crank, J, journaled in a standard, K. A wire, L, extending from the bell-crank J is attached to a second bell-crank, M, which is so weighted as to drop of its own accord to the position shown after being temporarily elevated by the pulling of the wire. A bell, N, attached by means of a spring, *n*, to the crank M, becoming violently agitated by these motions, affords notice of the approaching train while at the distance of half or three-fourths of a mile—more or less, according to the position at which the trigger F is placed.

In order to avoid the casualty of the trigger F becoming stuck fast in its depressed position so as to be incapacitated for returning by the stress of the weighted crank M alone, a supplementary trigger, F′, occupying a slot, G, may be employed, which will act to return the trigger F by a positive force at the passage of each and every wheel of the train. In their resting condition the triggers F F′ are pressed against the shoulders of the slots G G′ by means of springs O O′.

The most dangerous crossings are well known to be those approached by sharp curves which hide the approaching train. In such curves the wire does not require to follow the line of railroad, but may with more advantage be stretched along the chord of the arc.

Operation: A train approaching in direction of the arrow, the tread of each wheel on one side presses in succession on the top of the trigger F and causes a continuous and loud ringing of the bell N, which continues during the whole period of the passage of the train, and for sometime thereafter, thus anticipating and forming an additional warning to the locomotive whistle, and in the event of the latter signal being omitted by the engine-driver, either from inadvertence or otherwise, our automatic alarm will supply the necessary warning.

A train approaching our trigger from the crossing will act merely to deflect the trigger to the position indicated by red lines and will give therefore no false alarm.

An apparatus such as above described may be placed in each direction from a crossing so that a train approaching from either direction will operate the alarm.

We claim herein as new and of our invention—

The arrangement of the treadle or trigger F, connected by devices C H I I′ J K L M, or their equivalents, to a bell, N, suspended near a railway-crossing, by which the said trigger is depressed and the bell rung by all trains approaching the crossing and only deflected by trains leaving the crossing, substantially as set forth.

In testimony of which invention we hereunto set our hands.

LEWIS FITZPATRICK.
W. W. GARDNER.

Witnesses:
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