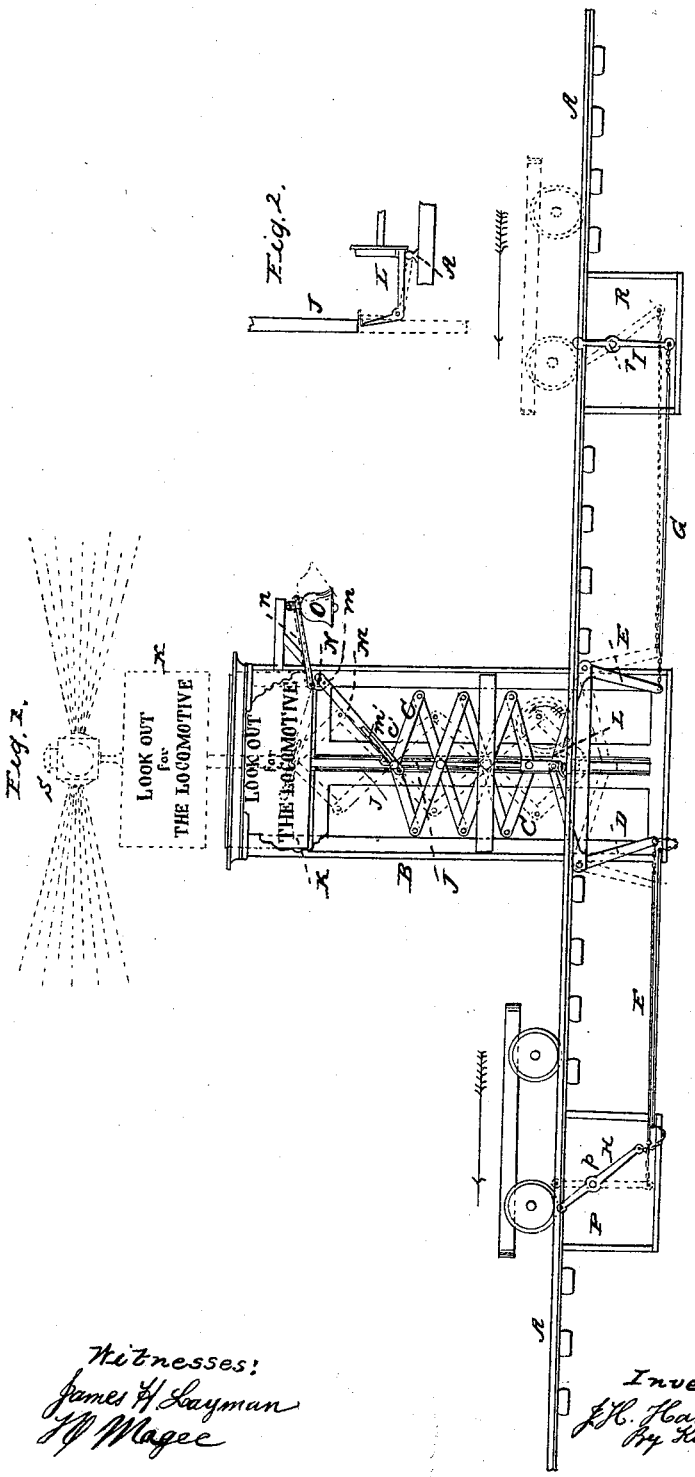
J. H. HARRIS.

Railroad Alarm Signal.

No. 52,710. Patented Feb. 20, 1866.



Witnesses:
James H Layman
J J Magee

Inventor:
J. H. Harris
By Knight Bros
Attys

UNITED STATES PATENT OFFICE.

JABEZ H. HARRIS, OF POINT ISABEL, OHIO.

IMPROVED RAILROAD ALARM-SIGNAL.

Specification forming part of Letters Patent No. **52,710**, dated February 20, 1866.

To all whom it may concern:

Be it known that I, JABEZ H. HARRIS, of Point Isabel, in the county of Clermont and State of Ohio, have invented a new and useful Railroad Alarm and Signal; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an automatic provision for giving warning at a railway crossing or station of an approaching train both by the ringing of a bell and the elevation of a signal-board with a suitable warning painted on it.

Figure 1 is a side elevation of my apparatus. Fig. 2 is a transverse elevation of the liberating mechanism.

A represents the track of a railroad, having a housing, B, for the protection of the signal apparatus at a point where the track is supposed to be crossed by an ordinary road or at a regular station.

The housing B incloses a series of compound levers, C, commonly called "lazy-tongs," pivoted to the housing at *c*, and being connected at their lower ends to two bell-cranks, D and E, from which proceed, in either direction from the signal-station B, two chains and rods, F and G, which connect with the triggers H and I.

J is a shaft, by which the signal board K is raised when the lazy-tongs C are extended, and the board K is maintained in its elevated position by means of the spring L, which is depressed by the train when it arrives at the station, thereby allowing the signal-board to drop and be concealed by the housing B.

The shaft J has a groove, *j*, which is traversed by a stud, *c'*, attached to the lazy-tongs C. This stud *c'* causes the elevation of the signal-board; but after it has been raised the stud simply traverses the groove *j* without communicating motion to the signal-board.

M is a slotted lever pivoted to the housing at *m*, and connected to a small bell-crank, N, which is attached to a short rod, *n*, for the ringing of the bell O.

The lever M is slotted at *m'*, which admits of the stud *c'* playing freely within it, and prevents ringing of the bell until the lever M is at its most elevated position, as shown by the red lines.

P and R are excavations under the track at any suitable distance from the station or crossing—say from one-fourth to one-half of a mile—and are provided with shafts *p* and *r*, on which the triggers H and I are hung. These triggers H and I extend upward through the rails a sufficient distance to receive a positive motion from the wheels of the cars as the train passes over them.

Operation: A train approaching in the direction shown by the red arrow, the tread of each and every wheel on one side of the train presses in succession on the trigger I and produces a continuous and violent ringing of the bell O during the passage of the entire train, thus anticipating and forming an additional warning to the locomotive-whistle.

The signal-board K, which may at night be surmounted with a lamp, S, is elevated the moment the first wheel of the train strikes the trigger I, and remains in that position until the train arrives at the station or crossing, when it is depressed by means previously explained. This raising of the signal-board only at the time when a train is approaching makes it more prominent to a careless person than it would be if the board was constantly in sight.

A train leaving the station in the direction of the black arrow simply depresses the trigger H, without producing any false alarm at the station or crossing.

What I claim herein as new and of my invention, and desire to secure by Letters Patent, is—

1. The mode of automatically raising and releasing a signal-board by means of an approaching train, substantially as set forth.

2. The arrangement of compound levers C, bell-cranks D and E, rods and chains F and G, triggers H and I, and spring L, for the automatic raising and lowering of the signal-board K by the impact of the approaching train, in the manner substantially as described.

3. The lever N, slotted lever M, in combination with the compound levers C, for the ringing of a bell, O, simultaneously with the elevation of a signal-board, K, as and for the purpose herein described.

In testimony of which invention I hereunto set my hand.

JABEZ H. HARRIS.

Witnesses:

GEO. H. KNIGHT,

JAMES H. LAYMAN.