

No. 750,264.

PATENTED JAN. 26, 1904.

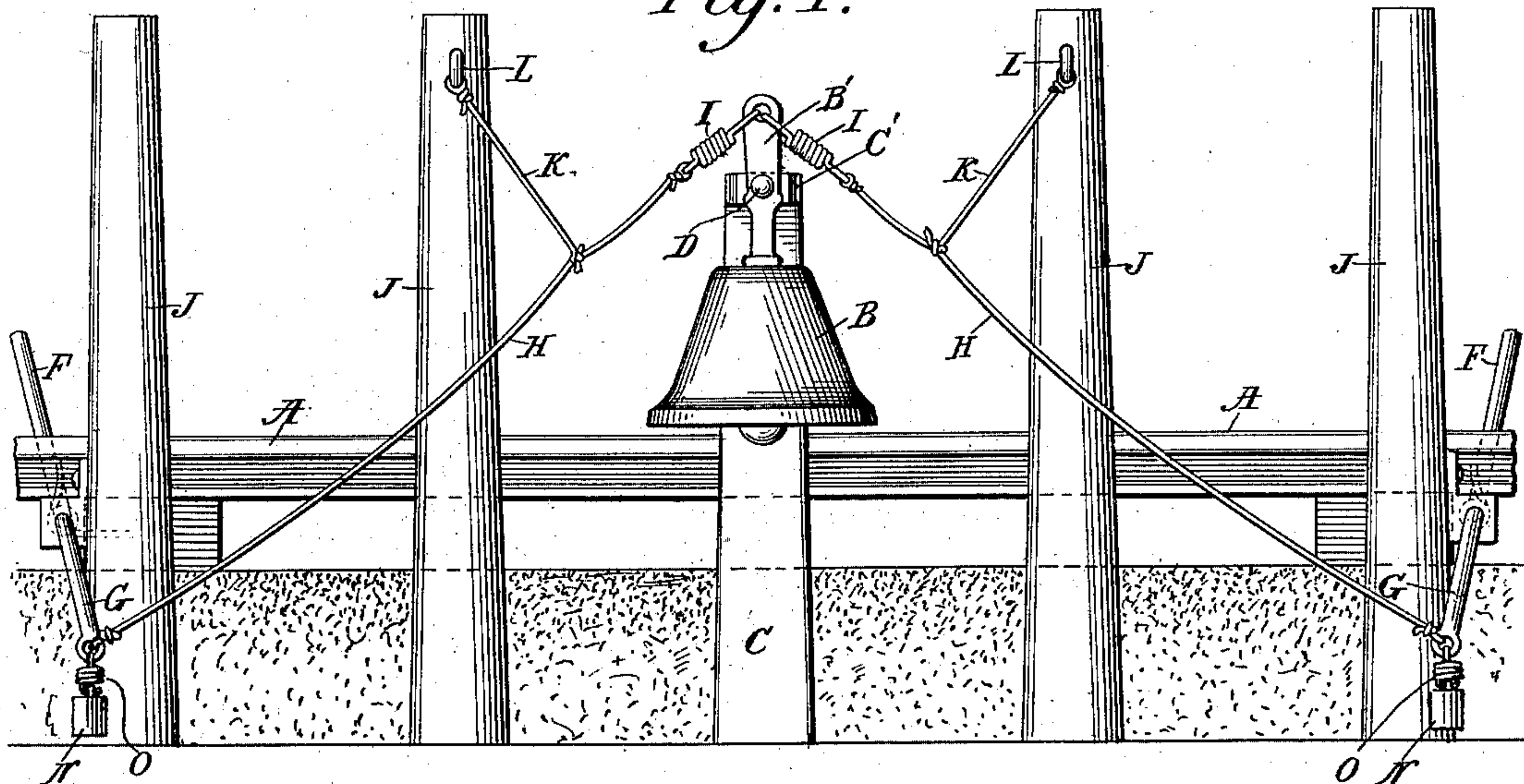
J. CRUMLEY.

WARNING SIGNAL FOR RAILROAD CROSSINGS.

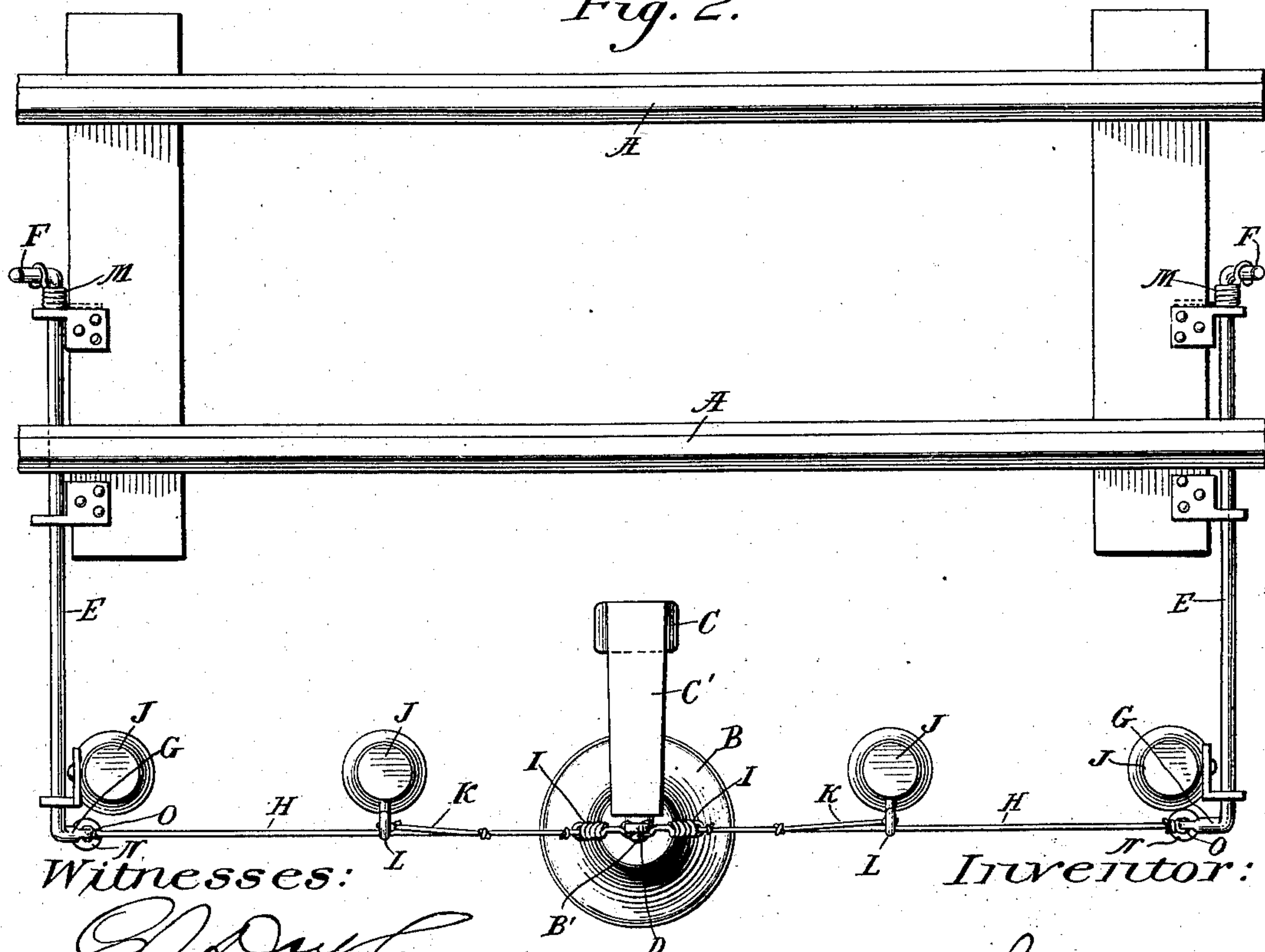
APPLICATION FILED APR. 4, 1903.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



Witnesses:

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Inventor:

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# UNITED STATES PATENT OFFICE.

JAMES CRUMLEY, OF GRAND RAPIDS, MICHIGAN.

## WARNING-SIGNAL FOR RAILROAD-CROSSINGS.

SPECIFICATION forming part of Letters Patent No. 750,264, dated January 26, 1904.

Application filed April 4, 1903. Serial No. 151,043. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES CRUMLEY, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Warning-Signals for Railroad-Crossings; 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.

My invention relates to improvements in warning-signals for railroad-crossings; and its object is to provide the same with certain new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a device embodying my invention, and Fig. 2 a plan view of the same.

Like letters refer to like parts in both of the figures.

A represents a railway-track; B, a suitable alarm-bell located at some convenient place near a crossing for the purpose of sounding an alarm whenever a train approaches said crossing. This bell is preferably provided with an upwardly-projecting portion or handle B', pivotally supported at D upon a horizontal arm C', projecting from near the top of a suitable post C. To operate this bell, I provide cords or wires H, connected to the upper end of the handle B' and extending at any convenient distance in opposite directions alongside the railway-track and supported upon posts J by means of pendent hangers K, rigidly attached at its respective ends to the cord or wire H and to suitable supports L, projecting horizontally from the posts J and adapted to oscillate with the cord or wire. The other ends of said cords or wires H are attached to downwardly-extending arms G on suitable rock-shaft E, journaled in suitable bearings attached to a tie. Said shaft extends horizontally beneath one of the rails A to near the middle of the track and is provided with an upwardly-projecting arm F. To hold these arms G and F in proper position, I provide a

suitable spring M, connected to the arm F at one end and fixed to any convenient point at the other end and adapted to yieldingly hold the arm F in a substantially vertical position. To the downwardly-extended arm G, I also attach a suitable weight N to assist in maintaining the proper position of the rock-shaft and arms.

To prevent breakage and to take the shock of the sudden operation of this device by rapidly-moving trains, springs I are interposed between the bell and operating-arms G, and also springs O are provided between the said arms and the weights N.

The operation of my device is as follows: An approaching train will engage the first upwardly-projecting arm F and turning the same toward the bell will turn the arm G in the opposite direction, and thus pull on the cord or wire H and swing the bell sufficiently to sound an alarm by ringing the bell. After the train has passed the bell it will engage the other arm F and turn the arm G toward the bell, which will slacken the other cord or wire H, and thus sound no alarm. Thus by the construction shown an alarm is sounded by an approaching train from either direction and is not sounded after the train has passed the crossing and is receding from the same.

It will be noted that my device is simple, durable, and not likely to get out of order, that the shock due to a rapidly-moving train is taken up by the springs I and O, and thus breakage is avoided, and in the event that either the weight N or spring M should fail the other will still be operative and the device will not be disabled.

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

1. The combination of a railway, a rock-shaft, means for operating the shaft by a passing train, an arm on the shaft, a bell mounted on a pivoted support, a longitudinally-movable cord or wire connected to the arm and to the bell-support, a series of posts, pendent hangers supported by the posts at their upper ends and rigidly attached to the cord or wire

at their lower ends and movable therewith, and a spring between the cord or wire and the bell-support.

2. The combination of a railway, a rock-  
5 shaft, an arm on the shaft extending upward between the rails, an arm on the shaft extending downward, a spring to yieldingly retain the arms in position, a bell, a pivoted support for the bell, a cord or wire connected to the  
10 downwardly-projecting arm, and to the bell-support, a series of posts, horizontally-projecting supports on the posts, pendent hangers attached to the supports and to the cord or wire, and a spring between the cord or wire  
15 and the bell-support.

3. The combination of a railway, a bell, a horizontal arm projecting from a post, a handle attached to the bell and pivoted on the arm,

a rock-shaft, an arm projecting upward from the rock-shaft and between the rails, an arm 20 projecting downward from the shaft, a spring attached to the arm, a weight attached to the spring, a spring attached to the upwardly-projecting arm, a cord or wire connected to the downwardly-projecting arm and to the 25 bell-handle, a spring between the cord and bell-handle, a series of posts and pendent hangers supported by the posts and connected to the cord or wire.

In testimony whereof I affix my signature in 30 presence of two witnesses.

JAMES CRUMLEY.

Witnesses:

GEORGIANA CHACE,  
LUTHER V. MOULTON.