

No. 676,092.

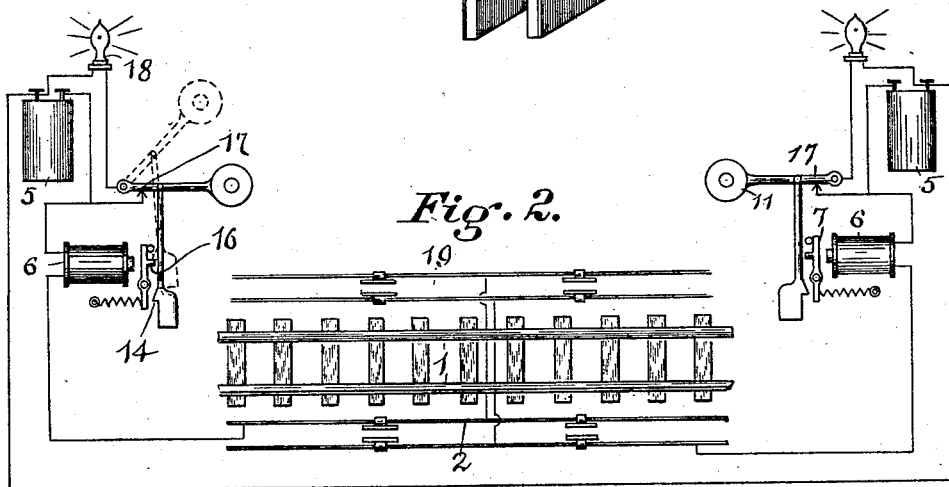
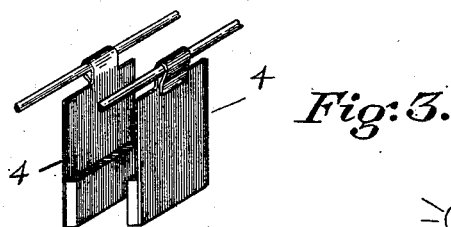
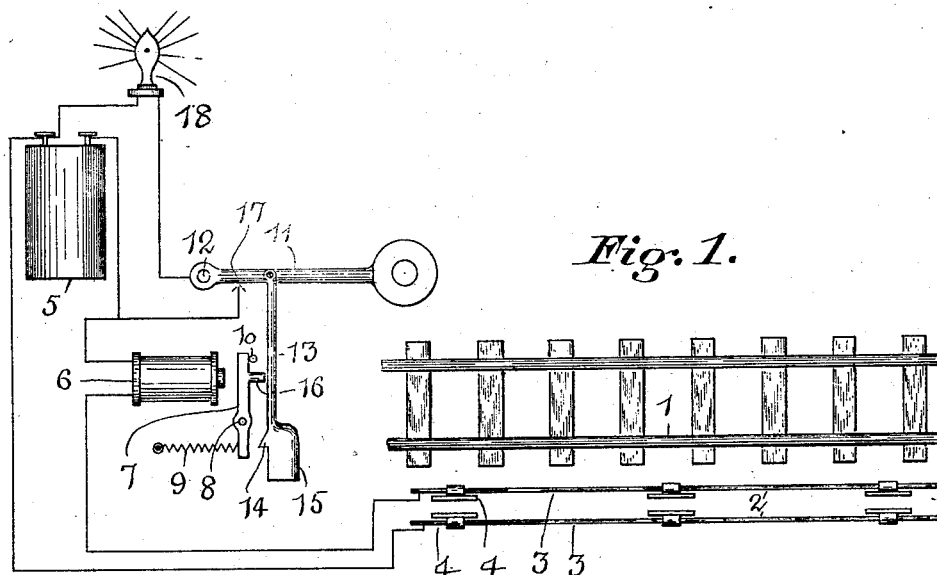
Patented June 11, 1901.

J. K. HODDINOTT.  
RAILROAD SIGNAL APPARATUS.

(Application filed Apr. 30, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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*Charles H. Hillikin*

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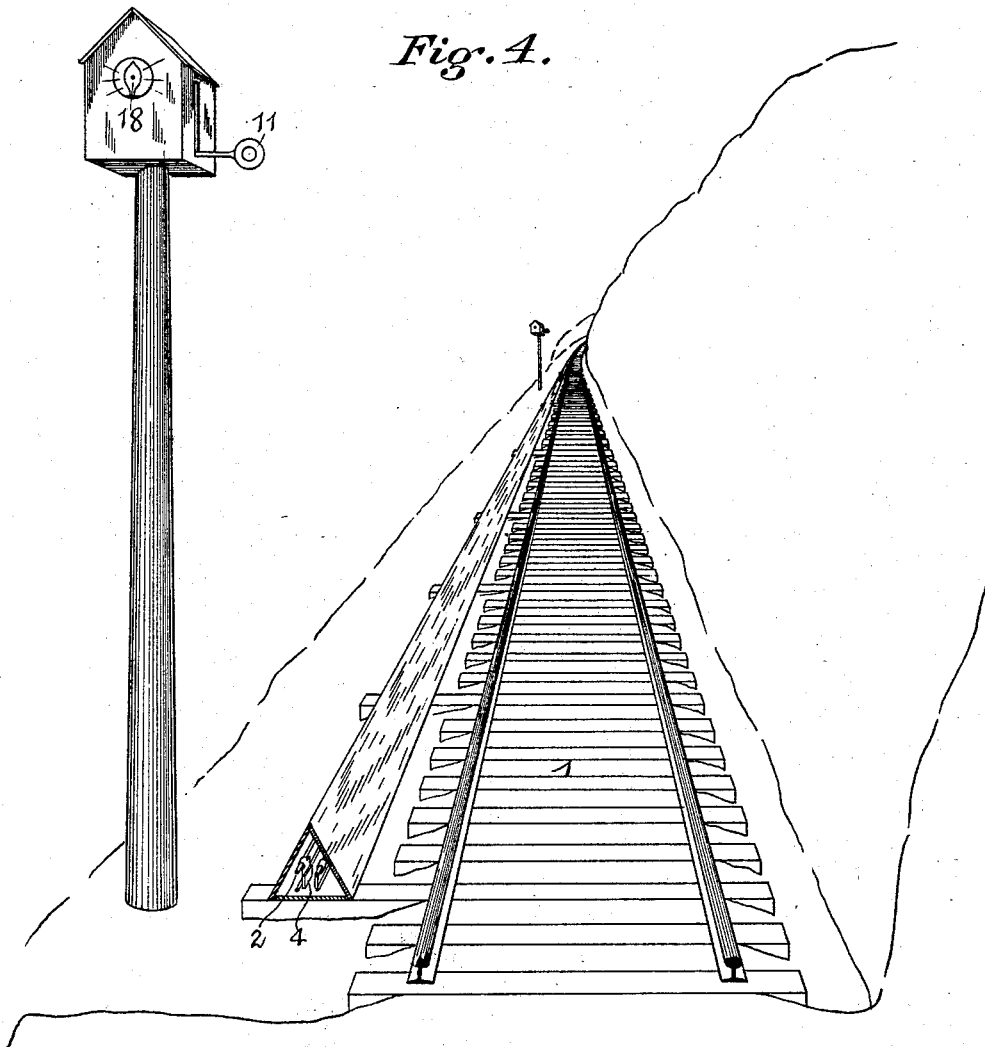
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2 Sheets—Sheet 2.

*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

JOHN K. HODDINOTT, OF BALTIMORE, MARYLAND.

## RAILROAD SIGNAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 676,092, dated June 11, 1901.

Application filed April 30, 1900. Serial No. 14,833. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN K. HODDINOTT, a citizen of the United States of America, and a resident of 1711 Thomas avenue, city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Railroad Signal Apparatus, of which the following is a specification.

My invention relates to a device for notifying approaching trains or distant stations of the fall of an avalanche upon a railroad-track; and it consists of an apparatus which is automatically set by the fall of an object upon the track which would obstruct the track, so as to make the passage of the train dangerous, and give to an approaching engineer a semaphore-signal and also a light-signal, so that a signal may be clearly seen both during the day and during the night.

In the drawings, Figure 1 is a diagrammatic view of a section of track, the contact device, and its connections with a semaphore and light. Fig. 2 is a diagrammatic view of a section of track with a contact device on both sides of the track and two semaphores and lamps intended to be located at suitable distances apart to warn trains approaching from opposite directions. Fig. 3 is a perspective view of a detail of the contact device. Fig. 4 is a perspective view of a section of track, showing a hill on one side, the avalanche-protectors beside the track, and the semaphore-towers suitably located beside the track.

Referring to Fig. 1, 1 is a railroad-track; 2, a contact device consisting of a number of insulated conductors 3 3, suitably maintained parallel to one another and parallel to the track and having suspended from them contact-plates 4 4. The conductors 3 3 are connected by suitable wires with a battery 5 and an electromagnet 6. 7 is an armature of the electromagnet, pivoted at 8 and having a spring 9 connected to the free end by which the armature is maintained in contact with a stop 10. 11 is a semaphore journaled at 12 and carrying a pendent bar 13, which is provided on one side with a latch 14 and a weight 15. On the side of the armature is a lug 16, adapted to be engaged by the latch 14. 17 is a contact device located in position to be closed by the action of the semaphore when

it reaches a horizontal position. 18 is a lamp. The battery 5 is preferably a storage battery having sufficient capacity to light and maintain lighted the lamp 18 when its circuit is closed. The switch 17 controls the circuit of the lamp and will maintain the lamp burning when the switch is closed. The contact devices 4 4, which are suspended from the conducting-wires 3 3, may be of any number, weighted on their lower ends, so as to maintain them in a vertical position and prevent their swinging too much from any cause other than that intended.

Referring to Fig. 2, 19 is a second contact device similar to 2 and connected in series therewith. Fig. 2 shows the position of the semaphores at both ends of a section of track desired to be guarded when both are down and in position to be seen and the switches 17 17 are closed and the lamps burning. The same figure shows in dotted lines the position of the parts when the semaphore is up and the contacts 2 and 19 are not closed. The semaphore will be held up by the latch 14 engaging the latch 16 of the armature.

By reference to Fig. 4 it will be seen that the contact device is covered with a light but weatherproof box and lies on sleepers beside the rails. When an avalanche falls upon the track of a size sufficient to obstruct it, it will certainly also strike the box containing the contact device and crush it, when the pendent contacts 4 4 will engage one another, the circuit will be closed, and the semaphores operated.

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

1. In a railroad signal apparatus, the combination of a pair of conductors mounted parallel to the track, and in such relation to one another as to be brought into contact by the crushing of their housing, a housing covering the conductors, and adapted to be crushed by the fall of a heavy body upon it, with a battery in circuit with the conductors, the circuit being open, and means for giving a signal actuated by the current when the circuit is closed.

2. In a railroad signal apparatus the combination of a pair of conductors mounted par-

allel to the track, and with a series of pendent contact-pieces secured to the conductors, and adapted to be brought into contact with one another when a body falls upon the conductors, a battery in circuit with the conductors, the circuit being open, but adapted to be closed by the contact of the pendent contact-pieces, and means operated by the

current when the circuit is closed to give a signal to an approaching train.

Signed by me at Baltimore city, State of Maryland, this 3d day of February, 1900.

JOHN K. HODDINOTT.

Witnesses:

J. HENRY STROHMEYER,  
W. W. POWELL.