L. B. EDGECOMB.

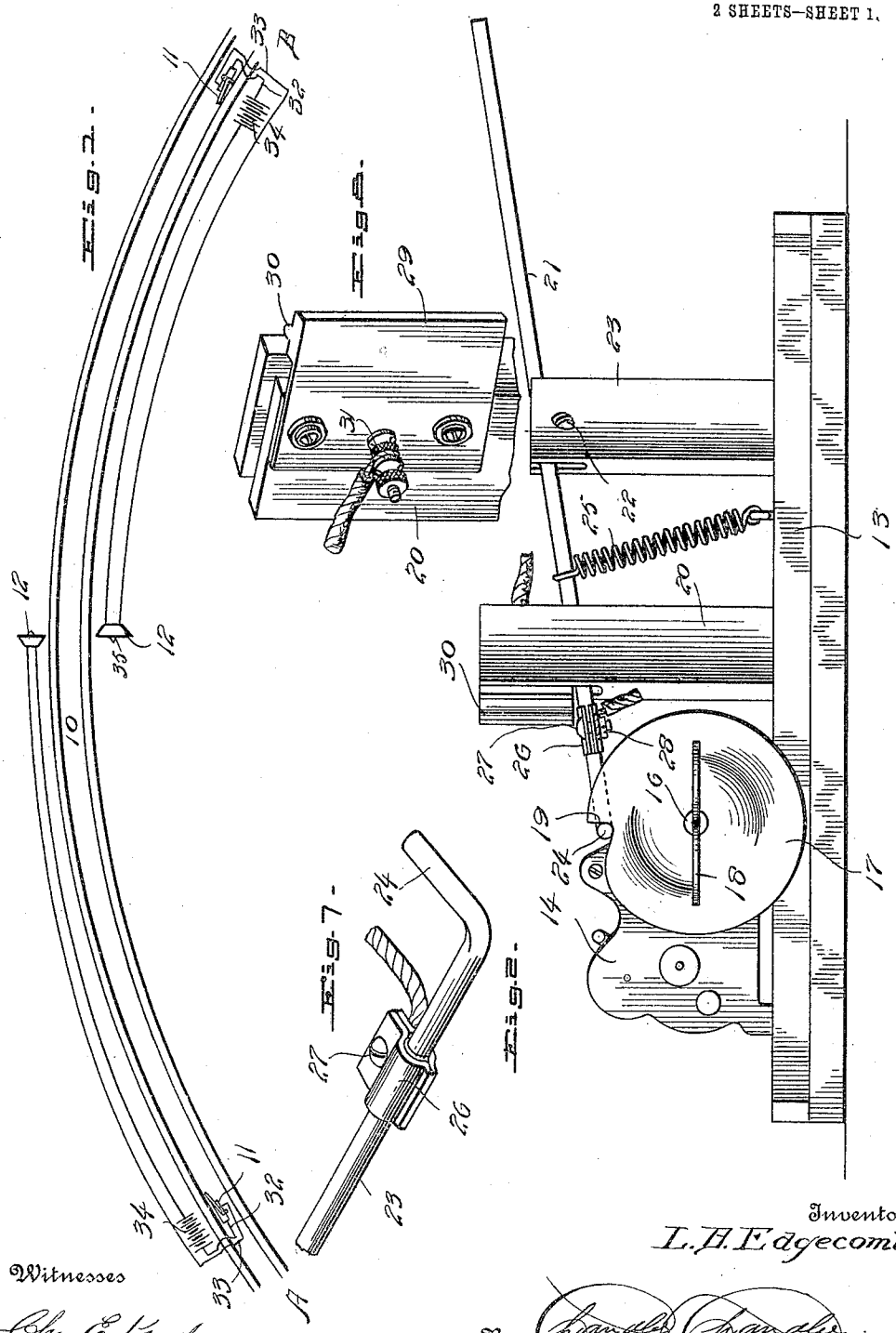
RAILWAY SIGNAL DEVICE.

APPLICATION FILED JUNE 24, 1913.

1,111,014.

Patented Sept. 22, 1914.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

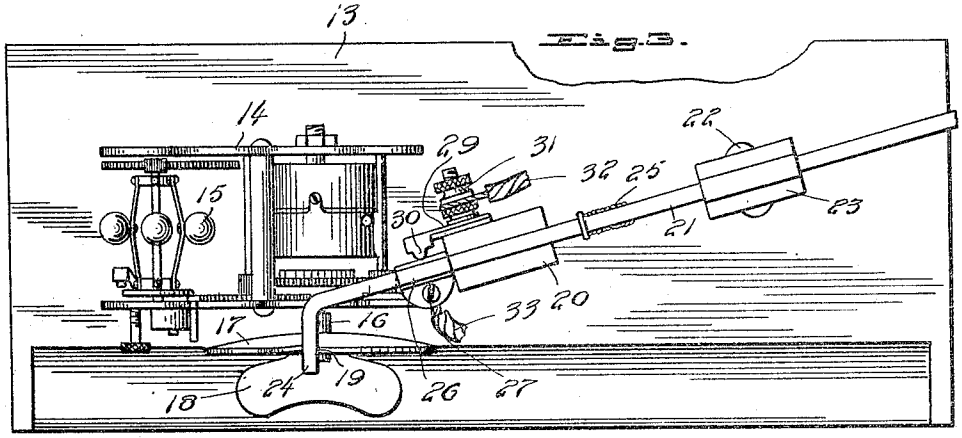


Fig. 4.

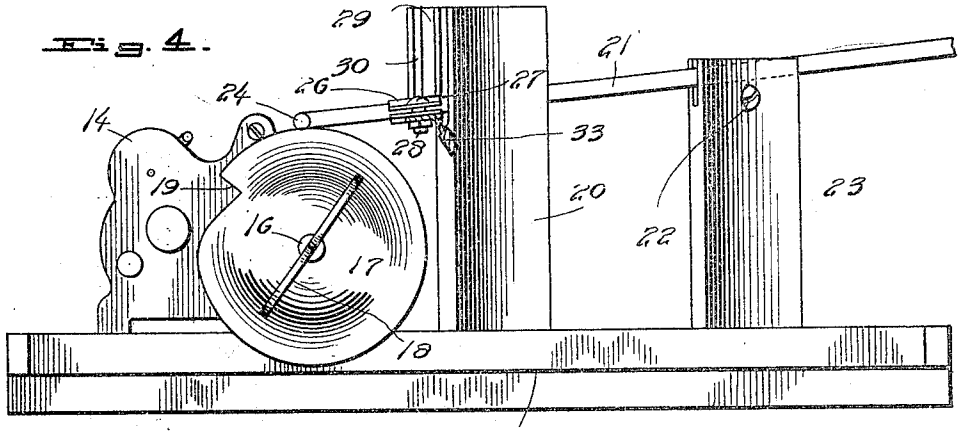


Fig. 5.

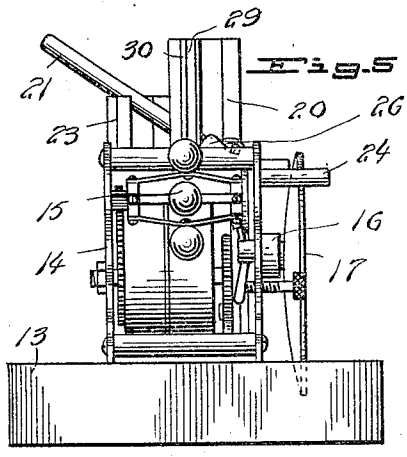
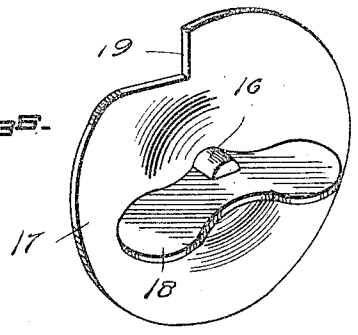


Fig 6.



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UNITED STATES PATENT OFFICE.

LUTHER B. EDGECOMB, OF TRAVERSE CITY, MICHIGAN, ASSIGNOR OF ONE-HALF TO BERNHARD SUNDEEN, OF TRAVERSE CITY, MICHIGAN.

RAILWAY SIGNAL DEVICE.

1,111,014. Specification of Letters Patent. Patented Sept. 22, 1914.

Application filed June 24, 1913. Serial No. 775,547.

To all whom it may concern:

Be it known that I, LUTHER B. EDGECOMB, a citizen of the United States, residing at Traverse City, in the county of Grand Traverse, State of Michigan, have invented certain new and useful Improvements in Railway Signal Devices; 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.

This invention relates to railway signals and has for an object to provide an apparatus which is train controlled to produce a signal such as a light through a predetermined length of time.

A further object is to provide a novel switch having the movable member adapted to be depressed into rubbing engagement with the stationary member by the engine, there being a novel clock work actuated cam which is released for rotation upon such depression of the movable member and holds the movable member in engagement with the stationary member through a predetermined length of time.

With the above objects in view the invention consists of certain novel details of construction and combination of parts hereinafter fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claim.

In the accompanying drawings illustrating this invention:—Figure 1 is a diagrammatic view showing the application of my invention to a curve in a railway track for preventing a head on collision. Fig. 2 is a side elevation of the device. Fig. 3 is a plan view. Fig. 4 is a side elevation showing the switch closed. Fig. 5 is an end elevation. Fig. 6 is a detail perspective view of the cam. Fig. 7 is a fragmentary detail perspective view of one end of the movable member of the switch. Fig. 8 is a detail perspective view of the fixed member of the switch.

Referring now to the drawings in which like characters of reference designate similar parts, 10 designates the curve in a railroad track, 11 a pair of engine controlled electric switch mechanisms at opposite ends of the curve, and 12 lamps corresponding to each switch mechanism and disposed with their reflectors turned in opposite directions at the middle of the curve in the track. Supposing that two trains are approaching head on from A and B, each train will actuate and cause its respective lamp 12 to glow as a danger signal to the other train. Thus both trains will have warning in sufficient time to slow down and stop. This illustration is simply one of the many uses to which the signal apparatus about to be described may be put.

In carrying out my invention I provide a base 13 upon which is mounted a clock work mechanism 14 of any preferred type, the present embodiment disclosing that type of clock work mechanism used in graphophones and controlled by a governor 15. On the winding shaft 16 of the clock work mechanism outside of the frame a disk 17 is fixed and of dish form, the winding key 18 that is carried on the end of the winding shaft being disposed within the concavity of the disk. The disk is provided in the edge with a notch 19 the purpose of which will presently appear.

A standard 20 is mounted on the base and is bifurcated at the upper end to receive a rod 21 that forms the movable member of a switch, the rod being pivoted as shown at 22 on a standard 23 and having a hook 24 at the forward end which rides upon the periphery of the disk, this hook normally being held in snug engagement with the disk by means of a helical spring 25 that is secured to the base and to the rod and exerts a downward pull on the rod between its pivot and the disk. Fixed to the rod is a U-shaped contact 26 that is secured in place by a screw 27 that has wire securing nuts 28 thereupon, this contact preferably being formed of copper. Also secured upon the standard 20 is a stationary contact 29 in the nature of a copper plate having a vertical rib 30 adapted for rubbing contact with the contact 26 carried by the rod. A binding post 31 is secured to the stationary contact.

A conducting wire 32 is connected with one of the contacts and with one pole of a suitable source of current 34, and a wire 33 is connected with the other contact and with one terminal of the lamp, the other terminal of the lamp being connected with the other

pole of the source of current, whereby a complete electrical circuit is formed when the contacts are brought together.

Upon depression of the free end of the rod, the latter is raised and the disk 17 immediately rotates carrying the notch past the hooked end of the rod whereby the latter rides upon the periphery of the disk during the remainder of the revolution, and finally drops again into the notch with a resultant locking of the disk against further rotation. During the period that the rod is raised out of the notch in the disk and is riding upon the periphery of the disk, the contact 26 carried by the rod is disposed in engagement with the stationary contact 29 with a resultant making of the circuit at this point. The circuit thus closed may be utilized to sound an alarm or energize any particular type of signal, the present embodiment showing an incandescent lamp 35 which is connected in series with the wires from the source of electricity as shown. Upon the notch arriving at the rod and the latter dropping thereinto, the contact 26 carried by the rod is moved out of engagement with the stationary contact 29 with a resultant breaking of the circuit.

To adapt the apparatus as a danger signal on a curve, an apparatus of the type described is disposed at each end of the curve as shown in Fig. 1 with the rod positioned so as to be engaged by the flange of one of the wheels of an engine and depressed thereby to make the circuit and cause the lamp to glow as the train passes thereover, the lamp continuing to glow during the rotation of the disk as above described, which period may be regulated to permit of the train advancing any desired distance before the lamp becomes extinguished, by regulating the governor which controls the clock work mechanism. It is now evident that should two trains approach each other from opposite ends of the curve, each train will actuate its own lamp at the center of the curve as shown in Fig. 1, whereby to warn the other train in time for slowing down and stopping before the trains meet head on.

From the above description it will be seen that I have provided an extremely simple and inexpensive signal device of the class described, which signal may be easily adapted for various desired uses, and which is formed of a few simple and durable parts that will not easily get out of order.

What is claimed, is:—

A night signal for dangerous curves in a railway track including in combination with an arcuate section of railway track, lamps disposed on opposite sides of said track, and a means operated by a train for actuating each lamp, said means including a clockwork mechanism, a cam carried by said mechanism having a notch in the periphery, a pair of standards, a rod pivoted on one of said standards and adapted to be depressed by a train and projecting through a slot in the other of said standards, and having a hooked terminal engaging in said notch, a helical spring exerting a downward pull upon said rod between said standards for normally holding said terminal engaged in said notch, an electrical stationary contact adjacent said slot, an electrical contact on said rod having a rubbing contact with said fixed contact upon release of said terminal from said notch by depression of said rod by a train, and a source of current connected with one terminal of the lamp and one of said contacts, the other contact being connected with the other terminal of the lamp.

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

LUTHER B. EDGECOMB.

Witnesses:

CHAS. A. EDGECOMB,

GLEN A. LANCASTER.