J. F. HOWARD.

SAFETY BRAKE DEVICE FOR RAILWAYS.

APPLICATION FILED JULY 13, 1908.

912,846. Patented Feb. 16, 1909

Fig. 1

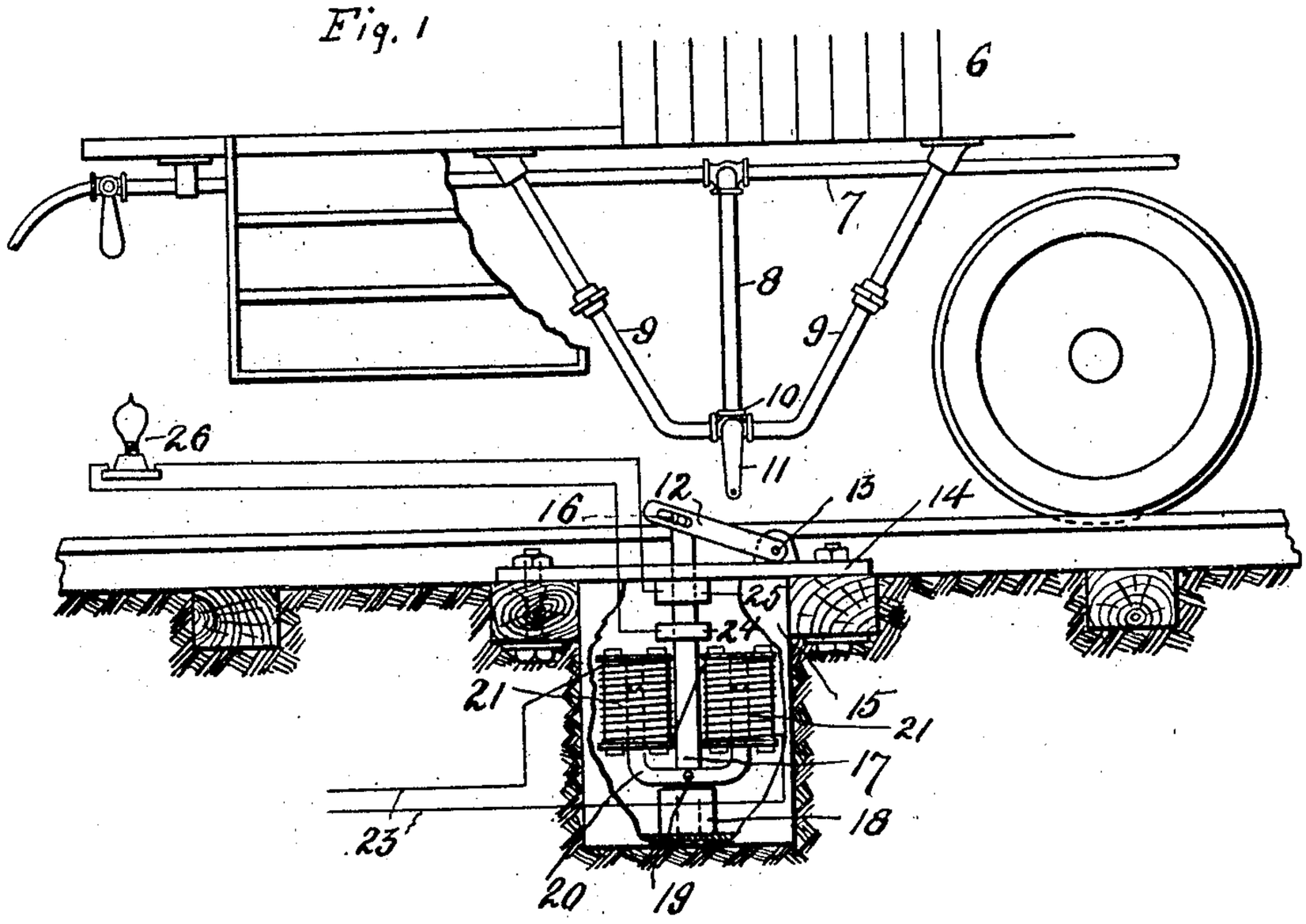
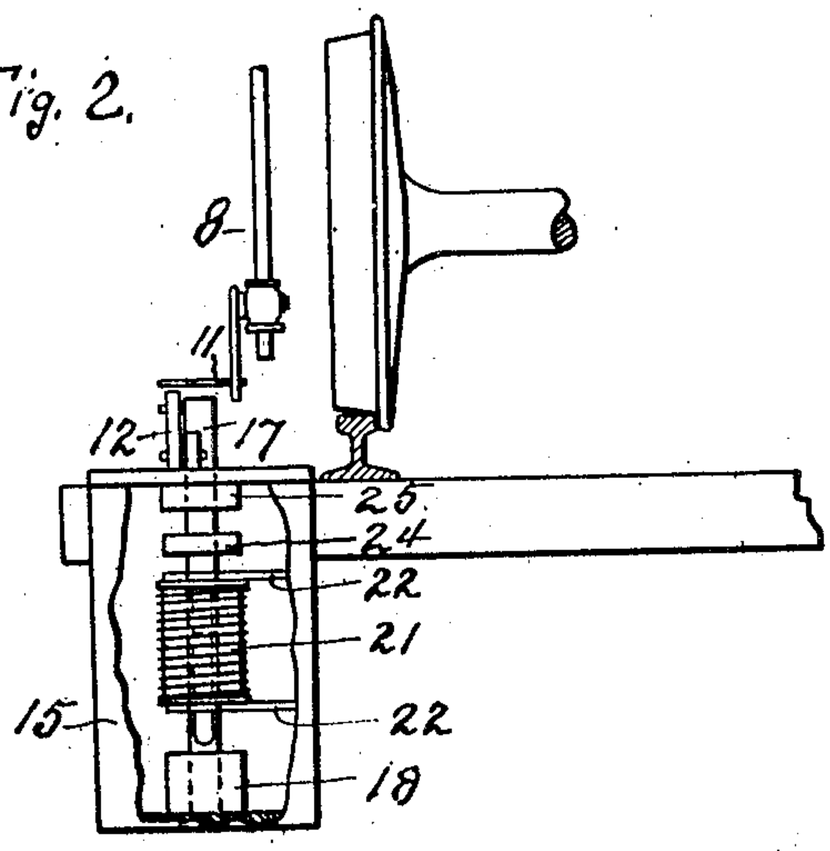


Fig. 2.



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JAMES FOLEY HOWARD, OF SPOKANE, WASHINGTON, ASSIGNOR OF ONE-THIRD TO GEO. CRYDERMAN, OF SPOKANE BRIDGE, WASHINGTON.

SAFETY-BRAKE DEVICE FOR RAILWAYS.

No. 912,846. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed July 13, 1908. Serial No. 443,286.

To all whom it may concern:

Be it known that I, JAMES FOLEY HOWARD, a citizen of the United States, residing at Spokane, Washington, have invented certain new and useful Improvements in Safety-Brake Devices for Railways, of which the following is a specification.

This invention relates to safety brake devices for railways, and particularly to that class thereof employing a trip beside the track, which is set when a switch or the like is opened, or other danger exists, to strike a cock in the train pipe of the brake system and open the same and thus stop the train.

The object of the invention is to form an improved device of the kind, as will more fully appear hereinafter.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly broken away, of the apparatus, Fig. 2 is a similar end elevation.

Referring specifically to the drawings, 6 indicates a car or the like with the train pipe 7 of its brake system having a depending branch 8, supported on opposite sides by the braces 9. At the lower end the branch pipe has a cock 10 with a crank arm 11 projecting outwardly from the stem thereof. This arm is located in position to strike an inclined trip 12 when the latter is lifted to operative position. The trip is pivoted at one end, as indicated at 13 to a plate 14 fixed to the ties, said plate forming the top of a box 15. At the other end the trip is connected by slot and pin 16 to a standard or upright 17 which works up and down in guides consisting of a hole in the top plate and a socket 18 on the bottom of the box. The standard is connected near its lower end, at 19, to the cross bar of the cores 20 of electro magnets 21, the coils being supported in the box by brackets 22. The coils are in circuit with line wires 23 leading to a push button, switch, or other circuit-closing device by means of which the magnets are energized. The standard carries a contact block or collar 24, which when the standard is lifted contacts with another conducting block 25 fastened to the under side of the top of the box. The parts 24 and 25 are in circuit with an electric lamp 26 or other signal device, located in any convenient position for inspection by the switch operator and also if need be by the engineer.

When the switch or the like is operated and the circuit 23 closed, the electro-magnets act to lift the cores and the standard and the latter raises the trip to position to strike and open the cock, thereby applying the brakes and stopping the train. At the same time, the signal-light 26 is operated, thereby indicating to the operator that the trip is in active position. When not in position, the light remains out. It is thus impossible for a train to run by a danger point. When the circuit 23 is opened, the trip and connected parts drop by the weight thereof. The device is simple and free from complicated parts, and hence quite certain of action.

I claim;

In an automatic trip brake for railways, the combination of a cock connected to the train pipe and having an operating crank arm projecting adjacent to the track, a trip pivoted at one end beside the track and arranged to strike the arm and open the cock when lifted, a box beside the track, having a guide opening in the top and a socket at the bottom, an electro-magnet in the box, and connected to an operating circuit, and a standard working in said guide opening and socket, and connected above the box to the trip and connected within the box to the core of the magnet.

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

JAMES FOLEY HOWARD.

Witnesses:
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