Dec. 30, 1930. A. G. HALE 1,786,534

SAFETY SIGNAL LIGHT FOR STREET CARS

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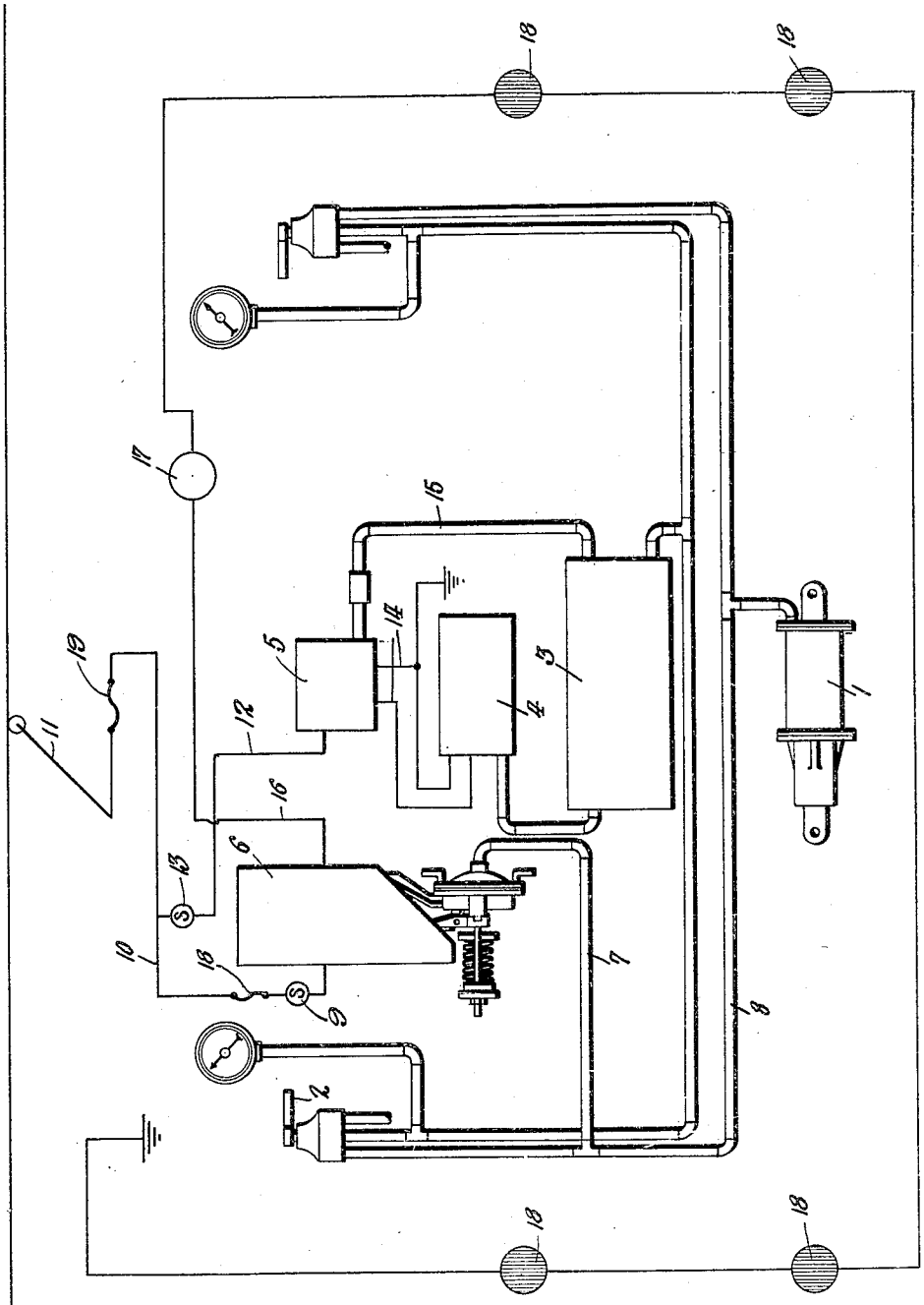

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SAFETY SIGNAL LIGHT FOR STREET CARS

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This invention relates to safety signals for street railway cars and more particularly to a signal system which will operate automatically to indicate the fact that the motorman of the car is about to stop.

One of the objects of the present invention is to provide means whereby the admission of any appreciable air into the air brake cylinder will effect the display of danger signals at the front and rear ends of the car so as to warn the drivers of on-coming and following automobiles, pedestrians, and others that the car is about to stop.

Another object of the invention is to provide a system which will be certain and efficient in its operation and entirely automatic.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:—

The figure of the accompanying drawing is a diagrammatic view of the system embodying the invention.

In the drawing the brake cylinder of the compressed air brake line is indicated by the numeral 1, and the usual brake control lever is indicated by the numeral 2, it being understood of course that the piping of the system is duplicated at each end of the car. The compressed air tank of the system is indicated by the numeral 3 and the air compressor by the numeral 4. The regulator for the air compressor is indicated by the numeral 5 and these units 3, 4 and 5 are connected by the usual piping system so that when the control lever 2 is operated, air will be admitted into the brake cylinder from the air tank 3. The numeral 6 indicated a pressure regulator of a well known type, namely the Cutler-Hammer pressure regulator, type C, catalogue No. 10001H3, which is preferable for use in this system, and air is transmitted to the regulator by a pipe 7 leading from and connected with the pipe 8, which is connected with the brake cylinder, so that when air is admitted under pressure, in any quantity, whatsoever, to the brake cylinder 1, it will be equally admitted to the pressure regulator 6, through the usual valve 7′.

The numeral 9 indicates a switch which is interposed in a conductor wire 10 connected with the main feed wire for the motors, and which wire leads from the trolley and a conductor wire 12 also leads from the wire 10 to the regulator for air control and the switch 13 is interposed in this wire. Wires 14 lead from the control 5 to the air control terminal in the air compressor 4, and the usual conductor pipe 15 leads from the air tank to the compressor regulator 5.

A conductor wire 16 leads from the pressure control unit 6 and in this wire are interposed, within the car, a white light bulb 17, and two pairs of red stop-indicating signal bulbs 18, a pair being located outside the car and upon each side of both dashes of the car.

A fuse 18 is preferably interposed in the wire 12 and a fuse 19 is likewise interposed in the wire 10 between the trolley 11 and the point of connection of the wire 12 with the said wire 10.

From the foregoing description and the drawing, it will be evident that upon the admission of any air under pressure into the brake cylinder 1, the signal lights 18 will be visible to the drivers of any oncoming and following automobiles, as they are located at both ends of the car, and therefore upon operation of the control lever 2 at either end of the car, to supply air to the brake cylinder 1, the circuits will be closed through the signal lights 17 and 18.

The purpose of the switch 9 is to permit of the current from the trolley being cut off from the system, and the valve 7′ is for the purpose of cutting off the supply of current to the compressed air regulator 5.

What I claim is:—

1. A signal apparatus for electric railway cars comprising, in combination with the air brake cylinder, of the car and the hand lever

for controlling the supply of air to the brake cylinder, an electric light signal, and a source of current supply in circuit therewith, and a pressure regulator in communication with the said air brake cylinder and embodying the usual switch in circuit with the signal and controlled by the pressure of air delivered to the brake cylinder, whereby to effect closing of the circuit through the signal upon operation of the hand lever to effect admission of air to the air brake cylinder.

2. A signal apparatus for electric railway cars comprising, in combination with the air brake cylinder, of the car and the hand lever for controlling the supply of air to the brake cylinder, electric light warning signals to be arranged at the opposite ends of the car, and a source of current supply in circuit therewith, and a pressure regulator in communication with the said air brake cylinder and embodying the usual switch in circuit with the signals and controlled by the pressure of air delivered to the brake cylinder, whereby to effect closing of the circuit through the signals upon operation of the hand lever to effect admission of air to the air brake cylinder.

In testimony whereof I affix my signature.

ASHLEY G. HALE.