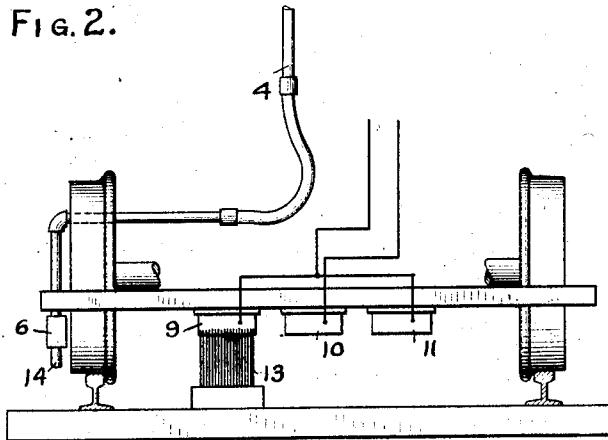
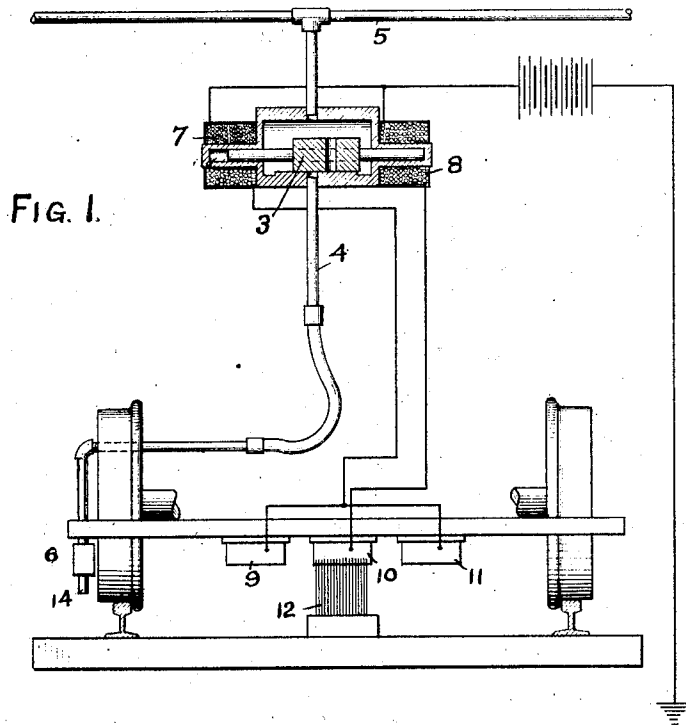


E. H. DEWSON.
 AUTOMATIC CUT-OUT FOR TRIP VALVES.
 APPLICATION FILED APR. 6, 1911.

1,037,454.

Patented Sept. 3, 1912.



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD H. DEWSON, OF NEW YORK, N. Y., ASSIGNOR TO THE WESTINGHOUSE AIR BRAKE COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

AUTOMATIC CUT-OUT FOR TRIP-VALVES.

1,037,454.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed April 6, 1911. Serial No. 619,341.

To all whom it may concern:

Be it known that I, EDWARD H. DEWSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Automatic Cut-Outs for Trip-Valves, of which the following is a specification.

This invention relates to trip valve mechanism for air brakes, and more particularly to such mechanism as employed on cars or trains that operate over two or more sections of track subject to different conditions, such as partly in a tunnel or subway; partly outside upon the surface, and partly upon an elevated structure. In this class of service it may be desirable to use automatic trip valve devices for venting the train pipe and applying brakes, over one section of the road as for instance, in the subway or on the elevated structure, while it might not be desirable to have such trip valve mechanism operating over another section, such as outside surface lines, on account of the liability of ice, snow, or other obstructions along the track, causing undesired and troublesome applications of the brakes.

My invention has for its object to overcome this difficulty, and to provide means for automatically cutting the trip valve mechanism into or out of operation, as the train passes from one section of track where its use is desired, to another where its use is not desired, and vice versa. For this purpose, I provide a controlling device adapted to cooperate with the trip valve mechanism located upon a car or other vehicle of the train, and operating in one position to cut the said mechanism into operation, and in another position to render said mechanism inoperative, the controlling device being governed by suitable contacts located along the track at the desired points.

In the accompanying drawing: Figure 1 is a diagrammatic view illustrating one form of such controlling device with one set of track contacts; and, Fig. 2, is a similar view illustrating the other set of track contacts for causing the shifting of the controlling device.

As shown in the drawing, the controlling device comprises a valve, 3, for opening or closing communication through a branch pipe, 4, leading from the train brake pipe, 5, to the trip valve mechanism, 6, together

with electro-magnets or solenoids, 7 and 8, and suitable circuits and contacts for shifting the valve from one position to the other. The contacts, 9 and 11, are located in the circuit with the solenoid, 7, and cooperate with one set of track contacts, 13, located at the desired point or points along the road, while contact, 10, is connected in the circuit with solenoid, 8, and cooperates with the other set of track contacts, 12.

The trip valve mechanism, 6, is usually provided with a trip lever, 14, adapted to engage a track contact usually connected with the signal or other system in order to open a vent valve to discharge air from the train pipe and apply the brakes in case the motorman should run past a signal set at danger. As these trip levers are exposed to dirt, snow, ice, and other obstructions along the track, many undesired applications of the brakes would be liable to occur upon outside surface road conditions. At the point where the track emerges from the subway or other protected section, a track contact, 12, is located and engages contact 10 to complete the circuit and energize the solenoid 8 to shift the valve or controlling device to its cut-out position, thereby rendering the trip valve mechanism inoperative. Other track contacts 13, are located at the entrance to the subway or protected portion of the road, and engage with the other contact 9 or 11, carried on the car to energize solenoid 7 and shift the controlling device or valve back to its open position to cut the trip valve mechanism into operation again. By this means, the safety and advantages afforded by the trip valve mechanism may be obtained throughout the protected sections of the road, while the difficulties and troublesome delays caused by undesired operation of trips and consequent brake applications along the exposed surface sections of the road will be avoided.

It will be apparent that various forms of automatic controlling devices cooperating with suitable track contacts for cutting the trip valve mechanism into or out of operation may be devised without departing from my invention.

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

1. The combination with a train brake pipe and a trip valve mechanism for venting

air therefrom to cause an application of
brakes, of track contacts and an automatic
controlling device, governed by said con-
tacts for cutting said trip valve mechanism
5 out of operation.

2. The combination with a train brake
pipe and a trip valve mechanism for vent-
ing air therefrom to cause an application of
brakes, of an automatic controlling device
10 for cutting the trip valve mechanism into
or out of operation, and track contacts for
governing said controlling device.

3. The combination with a train brake
pipe and a trip valve mechanism for vent-
ing air therefrom to apply brakes, of a con-
trolling valve for cutting out said trip valve
15 mechanism, track contacts, and means gov-
erned by said track contacts for operating
said controlling valve.

20 4. The combination with a train brake
pipe and a trip valve mechanism for venting
air therefrom to apply brakes, of a con-
trolling valve for cutting out said trip valve
mechanism, electrical means for shifting

said controlling valve, and track contacts 25
for governing the electrical means.

5. The combination with a train brake
pipe and a trip valve mechanism for vent-
ing air therefrom to apply brakes, of a con-
trolling valve for cutting out said trip valve 30
mechanism, a solenoid for shifting said con-
trolling valve, track contacts, and circuits
governed by said contacts for energizing
said solenoid.

6. The combination with a train brake 35
pipe and a trip valve mechanism for dis-
charging air therefrom to apply brakes, of a
controlling device for cutting said trip valve
mechanism into and out of operation, track
contacts, and electro-magnetic means gov- 40
erned by said track contacts for actuating
said device.

In testimony whereof I have hereunto set
my hand.

EDWARD H. DEWSON.

Witnesses:

A. S. FOWLER,

JAMES M. HOGAN.