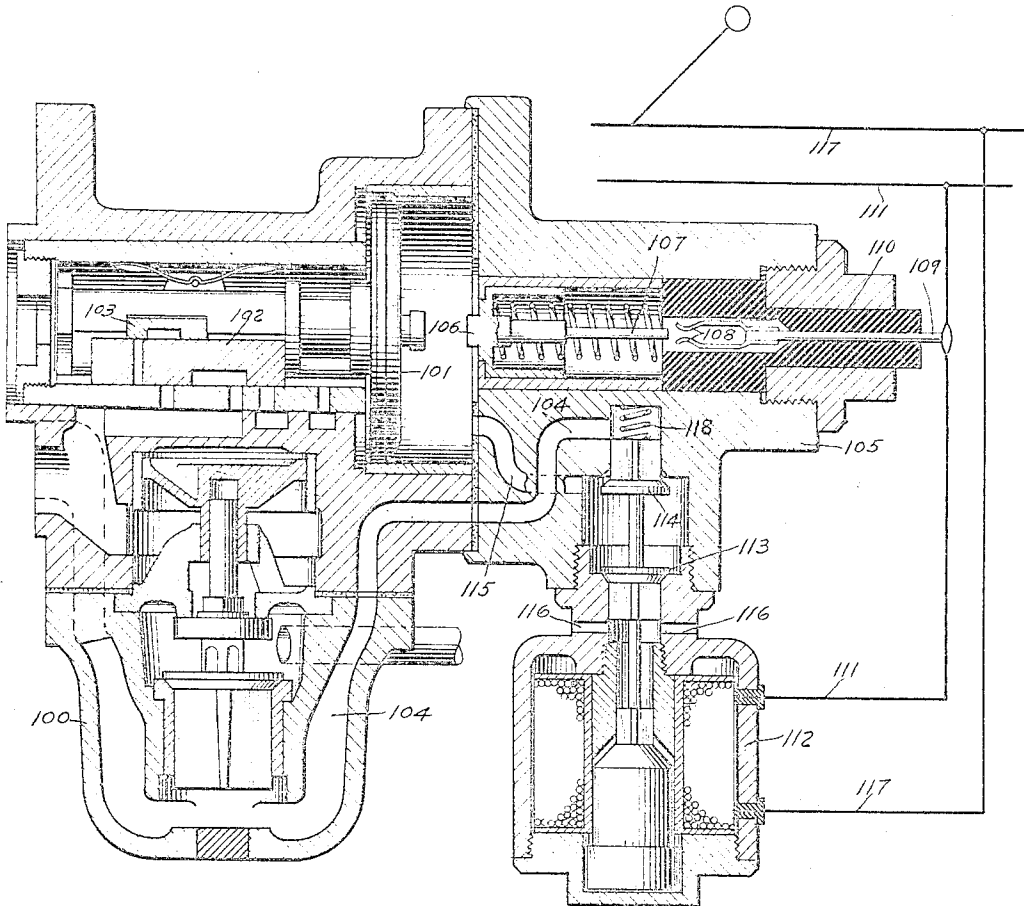


E. H. DEWSON & W. V. TURNER.
ELECTRICALLY CONTROLLED BRAKE MECHANISM.
APPLICATION FILED JUNE 21, 1912.

1,131,218.

Patented Mar. 9, 1915.



WITNESSES

Alfred J. [unclear]
A. M. Clements

INVENTORS

Edward H. Dewson
Walter V. Turner
by *Wm. M. Cady*
Att'y.

UNITED STATES PATENT OFFICE.

EDWARD H. DEWSON, OF NEW YORK, N. Y., AND WALTER V. TURNER, OF EDGEWOOD, PENNSYLVANIA, ASSIGNORS TO THE WESTINGHOUSE AIR BRAKE COMPANY, OF WILMERDING, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

ELECTRICALLY-CONTROLLED BRAKE MECHANISM.

1,131,213.

Specification of Letters Patent.

Patented Mar. 2, 1915.

Original application filed May 9, 1910; Serial No. 560,172. Divided and this application filed June 21, 1912; Serial No. 706,072.

To all whom it may concern:

Be it known that we, EDWARD H. DEWSON and WALTER V. TURNER, citizens of the United States, residents of New York, in the county of New York and State of New York, and Edgewood, in the county of Allegheny and State of Pennsylvania, respectively, have invented a certain new and useful Improvement in Electrically-Controlled Brake Mechanism, of which the following is a specification.

This invention relates to fluid pressure brakes, and more particularly to electrically controlled mechanism for effecting the simultaneous action of the triple valves or other brake controlling valves throughout a train, the present case being a division of application Serial No. 560,172, filed May 9, 1910.

The principal object of our invention is to provide an improved valve mechanism of the above character.

The single figure of the drawing is a sectional view of a triple valve device with our improvement applied thereto.

As shown in the drawing, a triple valve device 100 is provided, comprising the usual triple piston 101 for operating the main slide valve 102 and auxiliary valve 103 and having a train pipe passage 104 for supplying fluid to the triple valve piston chamber.

According to the preferred construction, we provide a cap 105 adapted to be applied to the triple valve device in place of the usual cap. The cap 105 contains a graduating stem 106 carrying a projecting contact member 107 which is adapted to engage spring contact clips 108 when the graduating stem is moved out by the triple valve piston upon an emergency application of the brakes. The contact clips 108 are connected to a conducting member 109 which passes through a suitable insulating block 110 and is connected in turn to a train wire 111 leading to one terminal of an electro-magnet 112. The electro-magnet 112 is preferably carried by the cap 105 and is adapted to operate a pair of oppositely seating check valves 113 and 114. The check valve 113 controls communication from a passage 115, leading to the triple piston chamber, to atmospheric ports 116

and the check valve 114 controls communication from the train pipe passage 104 to passage 115. The other terminal of the magnet 112 is connected to a train wire 117 which leads to a suitable source of current.

Normally the magnet 112 is deenergized and spring 118 maintains the check valve 113 closed and the check valve 114 open so that fluid from the train pipe may be supplied to and released from the triple valve piston chamber through the passages 104 and 115. When a triple valve device is moved to emergency position by a sudden reduction in train pipe pressure, the triple piston 101 moves out and causes the contact member 107 to engage the clips 108. The wire 111 is thus grounded through the triple valve and a circuit is established from the source of current through the magnets 112 of all the triple valves in the train, causing the magnets to be energized and thereby the check valve 114 on each car is shifted to close communication from the passage 115 to the passage 104 and the check valve 113 is opened, so that fluid under pressure is vented from the triple valve piston chamber. It will now be evident that all of the triple valves in the train equipped with this improvement are simultaneously operated upon movement of any one triple valve to emergency position to effect an emergency application of the brakes.

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

1. In a fluid pressure brake, the combination with a triple valve, brake cylinder, and train pipe, of an electrically controlled valve mechanism adapted to effect a reduction in pressure on the triple valve piston and cut off communication from the train pipe to said piston and a switch device controlled by said triple valve for governing the circuit of said mechanism.

2. In a fluid pressure brake, the combination with a triple valve, brake cylinder, and train pipe, of valve means adapted to effect a reduction in pressure on the triple valve piston and cut off communication from the train pipe to said piston, electrically controlled means for operating said valve means, and a switch device operating upon

a reduction in pressure on said triple valve piston for controlling the electric circuit of said electrically controlled means.

3. In a fluid pressure brake, the combination with a triple valve, brake cylinder, and train pipe, of a valve for controlling communication from the triple valve piston chamber to the atmosphere and a valve for controlling communication from the train pipe to said chamber and electrically controlled means adapted upon movement of the triple valve to operate said valves to cut off communication from the train pipe and vent air from the triple valve piston chamber.

4. In a fluid pressure brake, the combination with a triple valve, brake cylinder, and train pipe, of valve means for controlling

communication from the triple valve piston chamber to the atmosphere and from the train pipe to said chamber and electrically controlled means for operating said valve means to cut off communication from the train pipe and vent air from the triple valve piston chamber, and an electric switch operated by the movement of the triple valve for controlling the circuit of said electrically controlled means.

In testimony whereof we have hereunto set our hands.

EDWARD H. DEWSON.
WALTER V. TURNER.

Witnesses:

A. M. CLEMENTS,
S. W. KEEFER.