

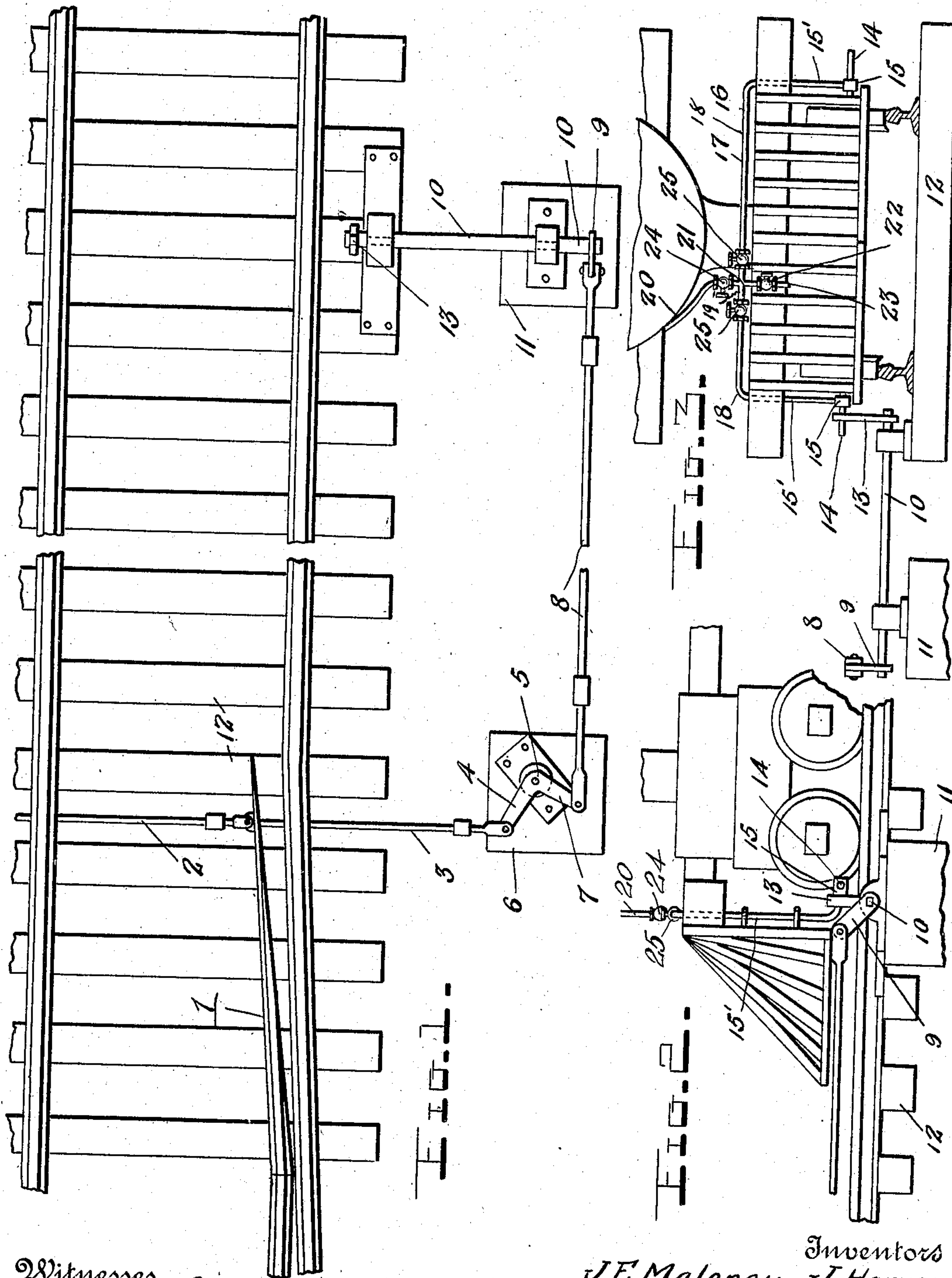
J. E. MALONEY, J. HARVEY & C. PAUL.

TRAIN STOPPING DEVICE.

APPLICATION FILED DEC. 10, 1908.

924,482.

Patented June 8, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN E. MALONEY, JOHN HARVEY, AND CHARLES PAUL, OF SALAMANCA, NEW YORK.

TRAIN-STOPPING DEVICE.

No. 924,482.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed December 10, 1908. Serial No. 466,847.

To all whom it may concern:

Be it known that we, JOHN E. MALONEY, JOHN HARVEY, and CHARLES PAUL, citizens of the United States, residing at Salamanca, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Train-Stopping Devices; and we do 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 new and useful improvements in train stopping devices and has for its object to provide suitable connections which may be operated from a derail switch whereby the application of the air brakes may be effected to bring the train to an instant stop, in the event of the engineer failing to observe the danger signal and performing the necessary duties of locomotive engineers when approaching a derail switch, cross-over or other like points along a railway track.

With the foregoing and other objects in view, the invention consists of certain novel features of construction combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view showing the connections for effecting the application of the brake pipe as arranged in position along a section of a track; Fig. 2 is a side elevation also showing a portion of a locomotive provided with suitable means for coöperating with the connections shown in Fig. 1 to effect the application of the brakes, and, Fig. 3 is a transverse section taken immediately in front of the engine.

In the embodiment illustrated, the derail is indicated by the numeral 1, a suitable operating bar 2 being connected with the free end of the derail and projecting beyond one side of the track, and a connecting bar 3 being arranged between said end of the derail and one arm as 4 of the bell crank 5, mounted upon a suitable upright support 6 arranged at the opposite side of the track. The other arm 7 of the bell crank is connected by means of a pipe 8 arranged in longitudinal relation with the track to a crank 9 provided at the outer end of a transversely disposed rock shaft 10 mounted in suitable bearings upon a

support 11 and a number of the railway ties 12.

The inner end of the rock shaft is provided with a trip arm 13 which lies in a horizontal plane when the derail switch is in position for the train to travel along the main track or, in other words, when the train has the right of way. When the derail is set to switch the train, as shown in Fig. 1, the trip arm 13 is disposed in vertical position and is adapted to engage a laterally projecting arm 14 for operating an angle cock or valve 15 arranged at the depending end 15' of a U-shaped pipe connection 16 which is supported at the front of the locomotive by suitable fixtures.

As shown in the drawings, the cross piece 17 of said U-shaped pipe connection is made in two sections 18 which are connected by means of a T-connection 19 with a supply pipe 20 which leads to the air supply and a depending pipe 21 provided with a stop valve 22 connected with a hose connection 23, the supply pipe 20 being equipped with the usual stop valve 24 and the sections 18 with stop valves 25. By the above connections, it will be observed that the air from the source of supply may be caused to pass in either direction through the cross piece 17 of the U-shaped pipe connection, depending upon which side of the track the mechanism is arranged for operating either of the angle cocks. The hose connection 23 and pipe 21 are provided so that air may be supplied to the brake pipe of a car or engine which may be coupled ahead, the valve 22 providing a means whereby the supply of air through the pipe 21 may be cut-off at will.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described and ascertained the nature of our invention, what we claim as new and desire to secure by Letters-Patent is:

1. In a device of the class described, a source of air pressure, a U-shaped pipe having depending end portions, mounted at the

front of the engine and communicating with the air source, angle cocks provided with outwardly and laterally projecting arms arranged at the lower ends of the end portions of the pipe, manually operable connections arranged along the track and adapted to be set to engage the operating arm of one of the angle cocks, and valved connections for controlling the course of the air from the air source to either side of the U-shaped pipe.

2. In a device of the class described, a source of air supply, a U-shaped pipe having depending end portions, mounted at the front of the engine, and communicating with the air source, angle cocks having projecting arms arranged at the lower ends of the end portions of the pipe, manually operable means arranged along the track and adapted to be set to engage the operating arm of one of the angle cocks, and means to control the course of the air when released from the air source to either end of the U-shaped pipe, said means comprising a pipe between the air source and the body of the U-shaped pipe, a valve in said pipe, and manually operated valves on the body of the U-shaped pipe at opposite sides of said first mentioned valve.

3. In a device of the class described, a source of air pressure, a U-shaped pipe comprising two sections, each having a depending end portion, a discharge pipe communicating with the air source, a T coupling for connecting the inner ends of the sections of the U-shaped pipe with the discharge pipe, release valves provided with operating arms carried by the sections of the U-shaped pipe, manually operated means adapted to be set to engage the operating arm of either of the release valves, and manually operated valves at the inner ends of the sections of the U-

shaped pipe at opposite sides of the adjacent end of the discharge pipe for controlling the course of the air from the air source to either side of the track, as desired.

4. In a device of the class described, a source of air pressure, a transversely extending air pipe carried by the front end of the engine, a discharge pipe leading from the air source to the air pipe, manually operated valves in the air pipe at opposite sides of its junction with the discharge pipe, and an air hose provided with a valve communicating with the discharge pipe.

5. In a device of the class described, a source of air pressure, an air pipe extending across the front of the engine, angle cocks provided with laterally and outwardly projecting operating arms arranged at the ends of the air pipe, a transverse rock shaft mounted at one side of the track, a trip arm at the inner end of the rock shaft, a crank at the outer end thereof, a bell crank lever pivoted to swing in a horizontal plane at a point distant from the rock shaft, a connection between one arm of the bell crank lever and the crank of the rock shaft, a connecting rod between the other arm of the bell crank lever and the derail, and an operating bar connected to the derail and extending to the opposite side of the track.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JOHN E. MALONEY.
JOHN HARVEY.
CHARLES PAUL.

Witnesses:

PATRICK H. O'DAY,
JESSE M. SEYMOUR.