

No. 736,262.

PATENTED AUG. 11, 1903.

W. H. HUGHES & J. ROCHE.  
AUTOMATIC SAFETY STOP FOR AIR BRAKES.

APPLICATION FILED JULY 17, 1902.

NO MODEL.

Fig. 1.

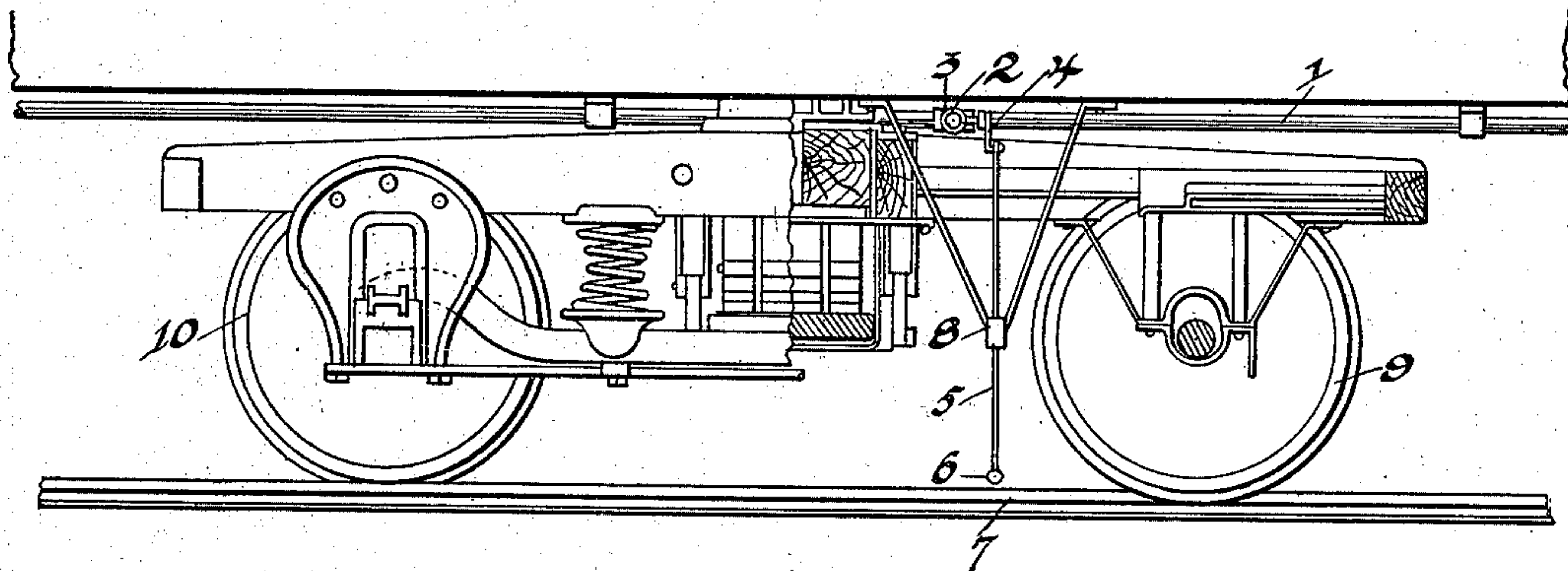
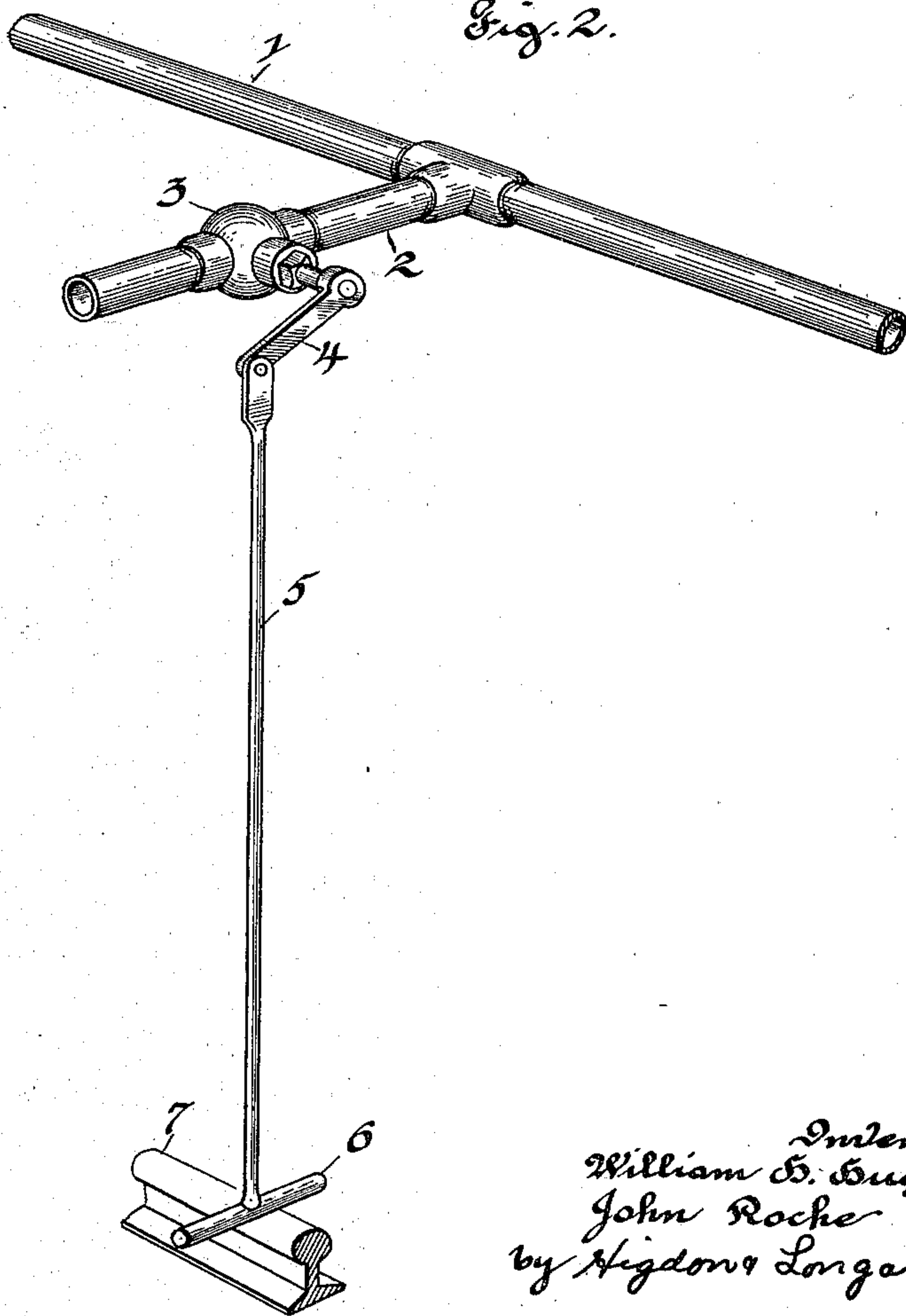


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. HUGHES AND JOHN ROCHE, OF SAPULPA, INDIAN TERRITORY,  
ASSIGNORS OF ONE-HALF TO WILLIAM HENRY, OF MONETTE, MISSOURI,  
AND GEORGE A. HANCOCK, OF SPRINGFIELD, MISSOURI.

## AUTOMATIC SAFETY-STOP FOR AIR-BRAKES.

SPECIFICATION forming part of Letters Patent No. 736,262, dated August 11, 1903.

Application filed July 17, 1902. Serial No. 115,894. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM H. HUGHES and JOHN ROCHE, of the city of Sapulpa, Creek Nation, Indian Territory, have invented certain new and useful Improvements in Automatic Safety-Stops for Air-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to automatic safety-stops for air-brakes; and it consists of the novel features herein shown, described, and claimed.

Figure 1 is a sectional side elevation of a portion of a car having our invention applied thereto. Fig. 2 is a detail view, in perspective, showing the pipe which connects with the train-pipe and also exhibiting the devices for automatically releasing the air contained within the train-pipe.

The object of our invention is to provide an improved automatic safety-stop for air-brakes, whereby the air in the train-pipe will be automatically released whenever one or more wheels of the train are accidentally derailed. Usually it has been necessary for the conductor's valve to be operated by hand in case of an accidental derailment of the train or any portion thereof.

We have not deemed it necessary to illustrate the customary air-brake apparatus, except the train-pipe thereof.

1 indicates the usual train-pipe, which extends from end to end of each car composing the train, and leading from said pipe 1 adjacent each of the truck-wheels is a branch pipe 2, provided with a common cock or valve 3, which is normally closed. This valve is provided with a crank 4, from which extends downwardly a connecting-rod 5, and from the lower end of said rod is preferably connected a cross-piece 6. This cross-piece is normally supported about one inch above the rail 7, and the rod 5 is guided and retained in a vertical position by means of a suitable guide and brace 8, the upper end of which is connected to the bottom of the car, so that the said rod will be both guided and braced and yet permitted to move freely in a vertical direction within the guide 8.

Although we have shown but a single cross-piece 6 and its connections, and these adja-

cent one of the car-wheels, yet it is obvious that the apparatus shown may be duplicated and applied to each wheel of the train without departing from the scope and spirit of our invention, or in some cases we may move the rod 5 and its connections to a point centrally located between two wheels on the same side of the truck.

The operation is as follows: Should a derailment accidentally occur while the car is in motion and the wheel 9 or the wheel 10 leave the rail 7, (or should any of the wheels of the train equipped with our device leave the rail,) said wheel will immediately drop a sufficient distance to bring the cross-piece 6 into contact with the rail, and as the downward movement continues the rod 5 will be shoved upwardly and thereby move the crank 4 and open the cock 3 and release the air in the train-pipe 1, and the brakes will thereby be applied in the well-known manner and make an "emergency stop." In this manner a stop can be made much more quickly than by using the ordinary conductor's valve, as the brakes will be applied by our device without any loss of time, and much loss of life and destruction of property may thereby be prevented.

We claim—

The improved safety-stop for air-brakes, comprising the combination of a train-pipe, a branch pipe, a cock 3 connected to said branch pipe, a crank 4 connected to said cock, a rod 5 extending downwardly from said crank, a cross-piece 6 at the lower end of said rod, extending transversely over and above the rail and beyond each side thereof and adapted to engage with the rail in case of derailment, and a suitable guide and brace 8, the upper end of which is connected to the bottom of the car so that the said rod will be both guided and braced, and yet permitted to move freely in a vertical direction within said guide, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WM. H. HUGHES.

JOHN X ROCHE.  
his mark

Witnesses:

HARRY CAMPBELL,  
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