W. F. NORTON & H. N. REID.

EMERGENCY BRAKE.

APPLICATION FILED JAN. 27, 1909.

941,335.

Patented Nov. 23, 1909.

Fig. 1.

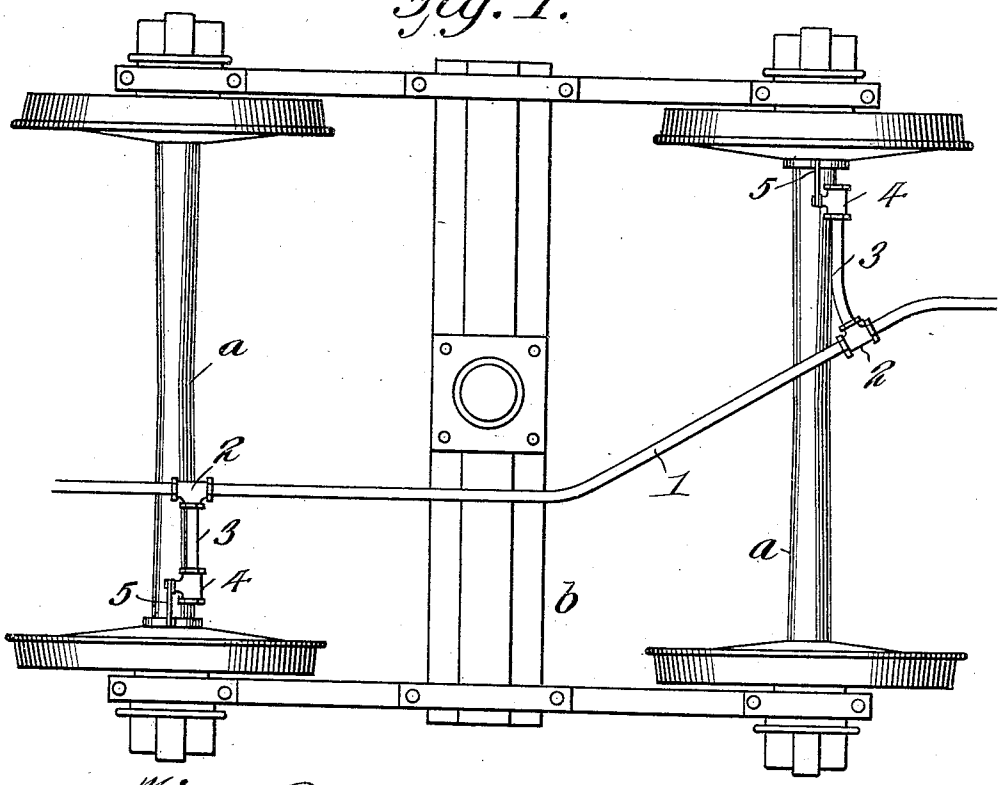


Fig. 2.

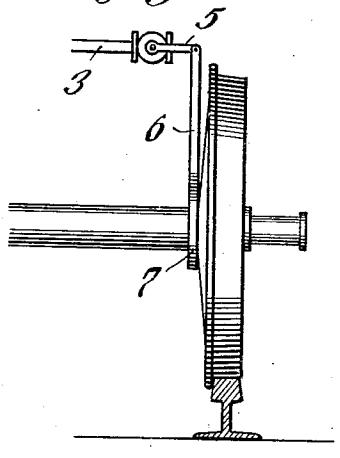
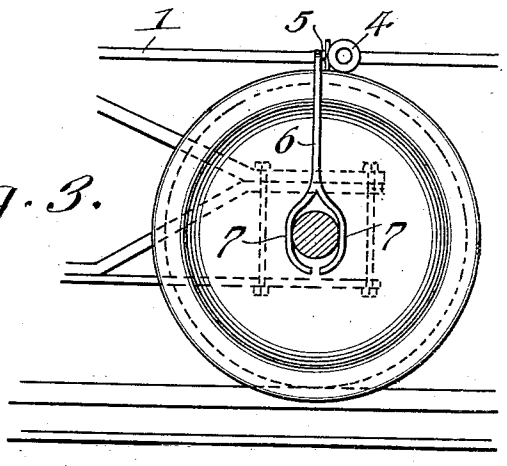


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM F. NORTON AND HARRY N. REID, OF SEDALIA, MISSOURI.

EMERGENCY-BRAKE.

941,335. Specification of Letters Patent. Patented Nov. 23, 1909.

Application filed January 27, 1909. Serial No. 474,503.

To all whom it may concern:

Be it known that we, WILLIAM F. NORTON and HARRY N. REID, citizens of the United States, residing at Sedalia, in the county of Pettis and State of Missouri, have invented new and useful Improvements in Emergency-Brakes, of which the following is a specification.

This invention is an improved emergency brake for use on railway trains equipped with air brake apparatus for causing a valve or valves connected to the train pipe to open and hence cause the brakes to be applied in the event of the derailing of or the breakage of any portion of a truck so as to cause a train to be almost instantly brought to a standstill and the said invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a plan of a railway truck provided with emergency air brake apparatus forming one embodiment of this invention. Fig. 2 is a detail view of the same. Fig. 3 is a detail sectional view of the same at right angles to Fig. 2.

In accordance with this invention, we provide the air brake apparatus train pipe 1 at points above the axles *a* of the truck *b* with tees 2 from each of which extends a branch pipe 3, said branch pipes extending laterally from opposite sides of the train pipe and being each provided with a valve 4 the turning plug of which has a lever 5 which is normally in horizontal position or approximately horizontal position so as to keep the valve closed.

Owing to the laterally extending branch pipes, the valves are disposed above the axles and near the wheels. Operating links 6 have their upper ends pivotally connected to the levers 5 of the valves and their lower portions bearing against the inner sides of the wheels. The lower ends of the said links are split or bifurcated to form arms 7, the lower ends of which are disconnected from each other and are inturned. The said arms 7 pass on opposite sides of the axles and their length is such as to permit slight vertical play of the axles independently of the said links. This construction of the links with the bifurcated lower arms which are disconnected from each other and the lower ends of which are inturned facilitates the application of the links to the axles.

Should a wheel or axle break or should a truck or a bogie thereof become derailed or should any other similar accident occur, the axle will immediately drop and in so doing will cause the link 6 to open the valve in the branch pipe overhead and hence permit the escape of compressed air from the train pipe so that the brakes throughout the entire train will be instantly applied and the train brought to a standstill and thus minimize the damage and prevent a serious wreck.

It will be observed upon reference to Fig. 3 of the drawings that owing to the provision of the bifurcated lower ends to the links and the inturning of the arms of the links which bear on opposite sides of the axle, and also owing to the length of said arms, that in effect a slot or elongated opening is formed in the lower end of each link through which the axle extends so that the axle is permitted to play vertically to a limited extent as will be required under ordinary conditions without affecting the link and hence also without opening the valve or tending to open the valve to which the link is attached. Hence casual opening of the valves and inappropriate application of the brakes is avoided.

What is claimed is:—

In combination with the bogies of a railway train truck, an emergency air brake apparatus comprising a train pipe having laterally extending branch pipes projecting from opposite sides thereof above the axles, normally closed valves at the outer ends of said branch pipes, said valves having crank levers, and links connecting the said levers to the axles, said links being disposed near the ends of the axles and at the inner sides of the wheels, each of said links having its lower end provided with downwardly extending arms on opposite sides of an axle forming in effect a slot or elongated opening to admit of slight vertical play of the axle, the lower ends of said arms being inturned under the axle and disconnected from each other.

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

WILLIAM F. NORTON.
HARRY N. REID.

Witnesses:
GEO. L. YEAGER,
JOHN W. CARLISLE.