(No Model.)

W. A. HARRIS.

AIR BRAKE.

No. 547,253. Patented Oct. 1, 1895.

Fig. 1.

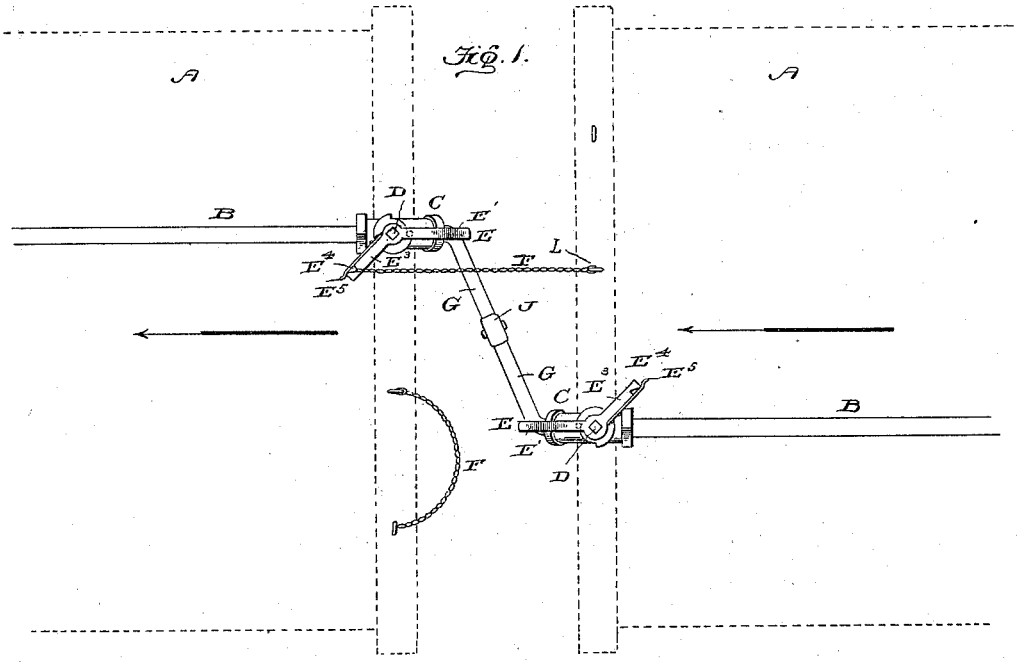


Fig. 2.

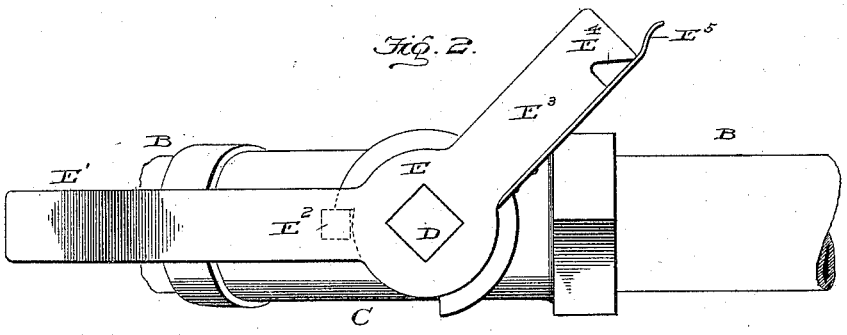
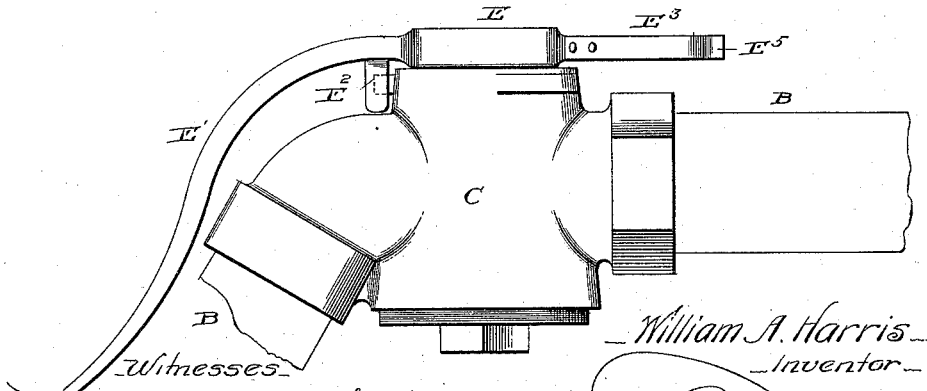


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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AIR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 547,253, dated October 1, 1895.

Application filed April 10, 1895. Serial No. 545,156. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ANDREW HARRIS, a citizen of the United States, residing at Greenville, in the county of Greenville and State of South Carolina, have invented certain new and useful Improvements in Air-Brakes; and I do hereby 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.

My invention relates to improvements in air-brakes, and has special reference to an attachment to be used on the valves, which is located in the usual train or supply pipe at the ends of each car.

The main object or purpose of my invention is the provision of an extremely simple, inexpensive, and thoroughly practical device which can be easily applied to the stems of the valves in use and which will operate upon the separation of the flexible coupling or of the car-coupling to close the valves and prevent setting or application of the brake to the front section of the train.

To attain the desired objects, the invention consists in the combination, with the valve, of a handle of novel and peculiar construction and a flexible or loose connection having one end detachably connected to the handle or lever and the other end rigidly secured to the adjoining or next car, as will appear from the following disclosure.

In order that the peculiar construction of my device and its operation may be understood and numerous advantages be fully appreciated, I have illustrated in the accompanying drawings a device constructed in accordance with my invention.

Figure 1 represents a bottom plan view of two cars or portions thereof provided with my improvement. Fig. 2 represents a plan view, on an enlarged scale, of the valve-casing, stem, and my improved lever applied; and Fig. 3 represents a side elevation thereof.

In the drawings, A designates a portion of two cars. B designates the train or air-supplying pipe. C designates the casing secured to the said pipe and having the usual valve provided with the rectangular stem D to receive my improved handle or lever E, to which are connected the chains F, and the train-pipes are put into communication by means of the flexible pipes G, having the usual coupling J.

The novelty of my invention resides particularly in the handle or lever E, which is connected to the valve-stem. The free end E′ of this lever is curved, as shown, so as to be out of the way of obstructions, and depending from said arm is the lug E^2, which limits the movement of the lever by contacting with the stops on the valve-casing, and the other end E^3 of the lever or handle is arranged at an angle with reference to the free end and is formed with a notch or recess E^4 on one side, in which engages one end of the flexible connection F, having its other end rigidly secured, as at L, to the car, and the free end of the chain is sustained in the notch or recess by means of the flat spring E^5, which serves to hold the flexible connection in place under normal conditions; but immediately upon sudden jerking, as upon separation or detachment of the cars, the chain will draw upon said arm, close the valve, and become detached.

The advantage of making the arm E′ of the lever curved and in a straight line and the other arm E^3 offset or at an angle to the arm E′ is that the curved arm E′ is in line with the train-pipe and out of the way and the offset arm E^3 permits the chains F to be connected away from the parts of the couplings, so that it is impossible for the chains to become entangled with any part of the coupling, which is very important.

In use the parts are in the position shown in Fig. 1 and the chain is connected to the short inclined arm of one of the levers. Now, in the event of the cars separating the chain would pull the valve closed and slip out of the notch or recess of the lever, leaving the front section of the train as though nothing had happened, and the valve on the rear section would remain open, allowing the air to escape and set brakes in the usual manner.

The main advantage of my invention is that it will prevent jamming of the cars after they have become separated, as is the case with the usual construction generally, causing much damage to the car and possible injury to the passengers.

I claim—

1. In combination with the cars, train pipes

coupled together, and the valves communicating therewith, the levers or handles connected to the valves and having the curved arm arranged in line with the train pipe and having each an offset extension or arm provided with a notch or recess, flexible connections having one end rigidly secured to the car, and the other end engaging the notch or recess, and the spring or clip for securing said end in the recess.

2. In combination with the cars and train pipes, the valves in the train pipes having the lug on their casing, the levers connected to the valve stems and having the lug for engaging the lug on the casing, and further provided with the curved downward turned end and the notch in the other offset end, the flexible connections having one end secured to the car and the other end fitting in the notch of the lever and the flat spring or clip on the lever for holding the connection from accidental detachment.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM ANDREW HARRIS.

Witnesses:

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