

(No Model.)

2 Sheets—Sheet 1.

H. M. LOFTON.
LOCOMOTIVE BRAKE.

No. 516,569.

Patented Mar. 13, 1894.

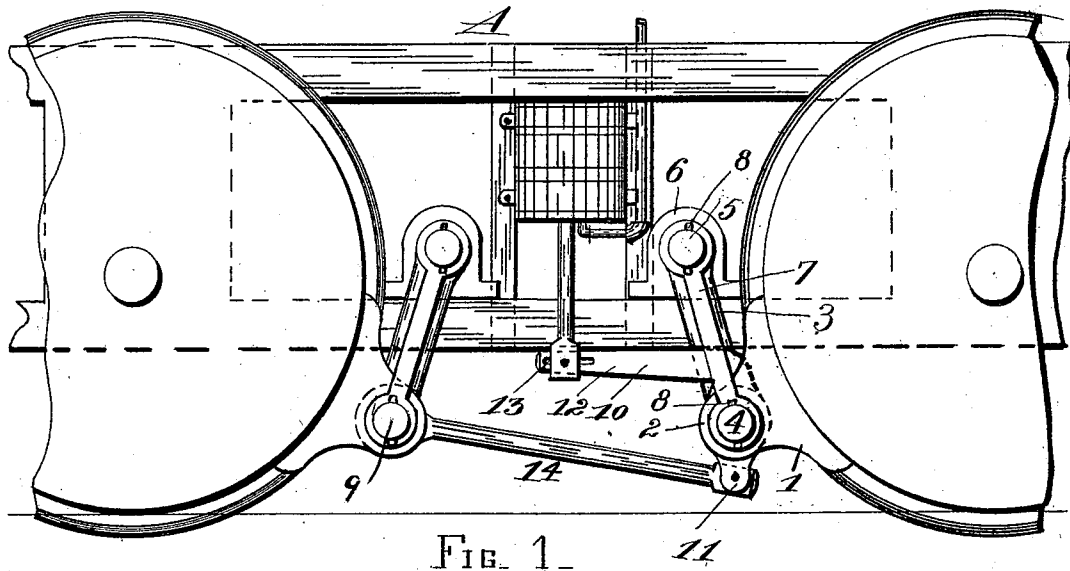


FIG. 1.

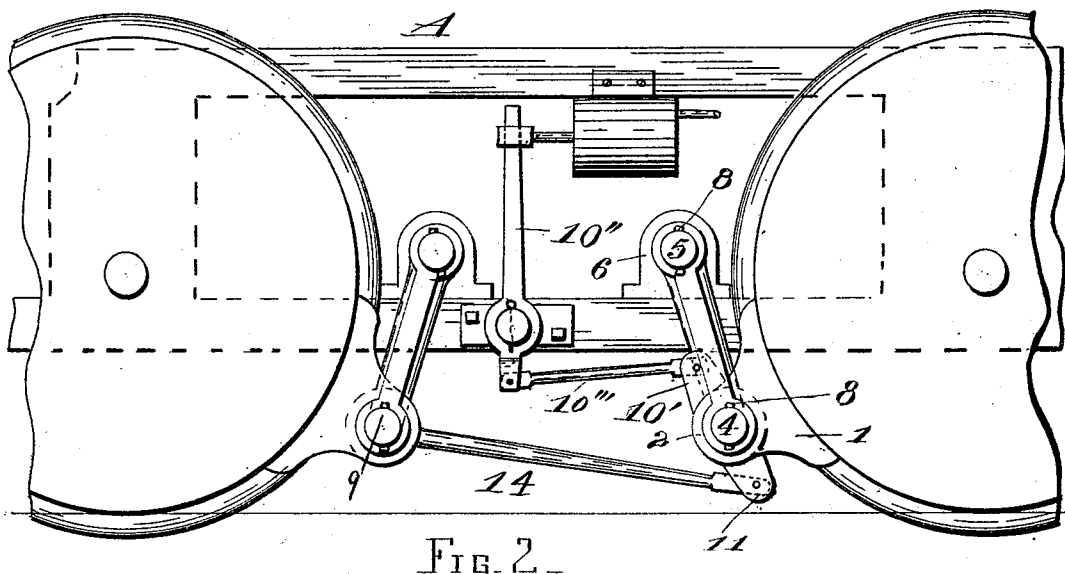


FIG. 2.

Witnesses

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A. Woodruff

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2 Sheets—Sheet 2.

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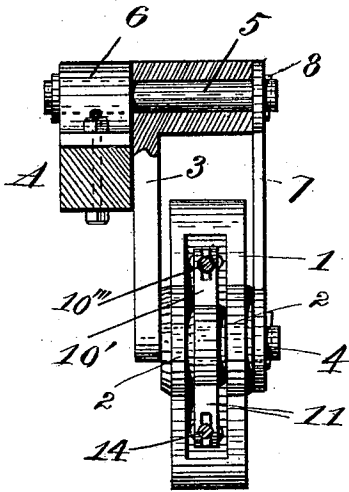


Fig. 3.

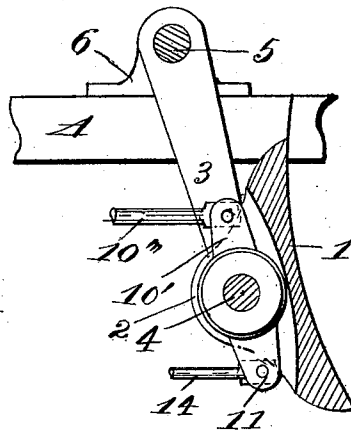


Fig. 4.

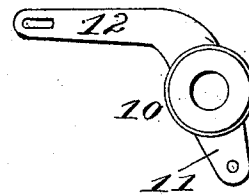


Fig. 5.

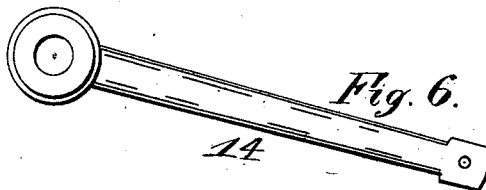


Fig. 6.

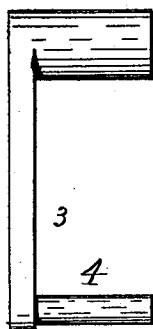


Fig. 7.

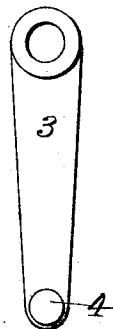


Fig. 8.

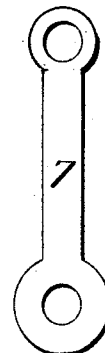


Fig. 9.

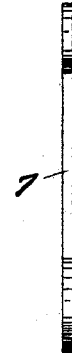


Fig. 10.

Witnesses

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UNITED STATES PATENT OFFICE.

HERBERT M. LOFTON, OF SAVANNAH, GEORGIA.

LOCOMOTIVE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 516,569, dated March 13, 1894.

Application filed April 6, 1893. Serial No. 469,343. (No model.)

To all whom it may concern:

Be it known that I, HERBERT M. LOFTON, a citizen of the United States of America, and a resident of Savannah, in the county of Chatham and State of Georgia, have made certain new and useful Improvements in Locomotive-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, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

This invention relates as above stated to air-brakes having particular reference to the class of such devices as are used on locomotives and operated from the cab thereof, the object being to so improve this class of devices, further than the improvement set forth and covered in and by my former Letters Patent No. 476,283, dated June 9, 1892, as to render them still more effective and durable under the peculiar conditions and strains to which they are subjected, the details of all of which will be hereinafter fully specified and claimed.

In the accompanying drawings, Figure 1 is a side elevation of the device as constructed and attached in the case of an ordinary two-wheeler passenger locomotive. Fig. 2 is a like view but of a modification of the device shown in Fig. 1, showing the connection to the piston when it is impossible for the cylinder to be placed vertically. Fig. 3 is an elevation of the back side of the brake shoe, hanger, and connected elements, the upper end of the hanger being in section to show its manner of suspension. Fig. 4 is a section of Fig. 3 on the center of the brake shoe, showing the hanger and shoe, the pivoting block on the locomotive truck-frame, the connections being such as are shown in the modified Fig. 2. Fig. 5 is a side elevation of the lever for comparison with Fig. 4, said lever being such as is shown in connection with Fig. 1. Fig. 6 is a detail of the rod connecting the two sections of the brake. Fig. 7, is a view of the novel form of hanger, and Fig. 8 is a view looking from the right hand side of Fig. 7. Fig. 9 is a view of the hanger

strengthening brace, and Fig. 10 is an edge view thereof.

In the figures, like reference characters are uniformly employed in the designation of corresponding elements of construction.

A designates the truck-frame, B, the wheels and C the axles, all of which are usually employed for their several functions, although their construction is immaterial to the proper working of the device.

The brake shoe 1, which is of the usual form with the exception that it carries on its back side two backwardly projecting lugs 2, having between them a space of the requisite width, is suspended from the frame by the hanger 3, being pivotally seated on the wrist-pin 4 thereof. The hanger 3 is pivotally secured to the frame on a pin 5 which is inserted in or forms part of a bracket 6 secured to the frame A in the proper position. The stability of the relative positions of the pin 4 and the hub of the hanger 3 and the pin 5 is insured by the link 7, which is seated on said pins 4 and 5 extending between them, and also serving as washers under the pins 8 which secure the parts in place. This construction prevents one of the effects of the torsional strains incident to the required heavy braking and remedies a fault in the class of brakes as now constructed.

Pivoted on the pin 4 which passes through the lugs 2 on the brake shoe is a lever 10 as best shown in Fig. 5, having a short downwardly extending arm 11 and a longer inwardly extending horizontal arm 12, the former having a hole (one or more) and the latter having a longitudinally extending slot 13 in its end. The said arm 11 is connected by means of a pitman 14 with the brake-shoe on the other hanger, being secured to the pin 9 thereof between the lugs 2, whereby equalization of pressure is had. The arm 12 is secured by a pin passing through the slot thereof, to the piston-rod of a vertically-arranged pressure cylinder. The vertical movements of the said piston-rod obviously applies and releases the brakes by a semi-rotary movement of the lever 10 on its axis, an upward movement of the arm 12 applying the brakes equally on both wheels and a downward movement thereof releasing them.

Fig. 2, shows a short upward extension 10' in lieu of the lever 10, a vertical lever 10'' pivoted to the frame and extending above and below same, connected at its upper end 5 with a horizontally arranged piston-rod 10'', and being at its lower end connected with the lever 10', the construction otherwise being the same as in Fig. 1.

Having thus described my invention, what 10 I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the class specified, a truck having wheels thereon, pendent arms and brake shoes thereon carrying lugs centrally 15 of their back sides, a double lever pivoted between the lugs on one shoe, and connected to the braking power at its upper end, a pitman secured to lower end and pivotally secured between the shoe lugs on the back of

the other shoe, substantially as and for the 20 purpose specified.

2. In a device of the class specified, a truck, wheels thereon in combination with the hanger having a hollow hub seated on a pin secured to the frame and carrying a wrist pin on its 25 lower end, the brake shoe seated revolvably on said pin, a link perforated in its ends, one end engaging the pin on the frame and the other end engaging the wrist pin, and means for applying and releasing the brakes, for the 30 purpose specified.

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

HERBERT M. LOFTON.

Witnesses:

A. P. WOOD,
E. P. WOOD.