

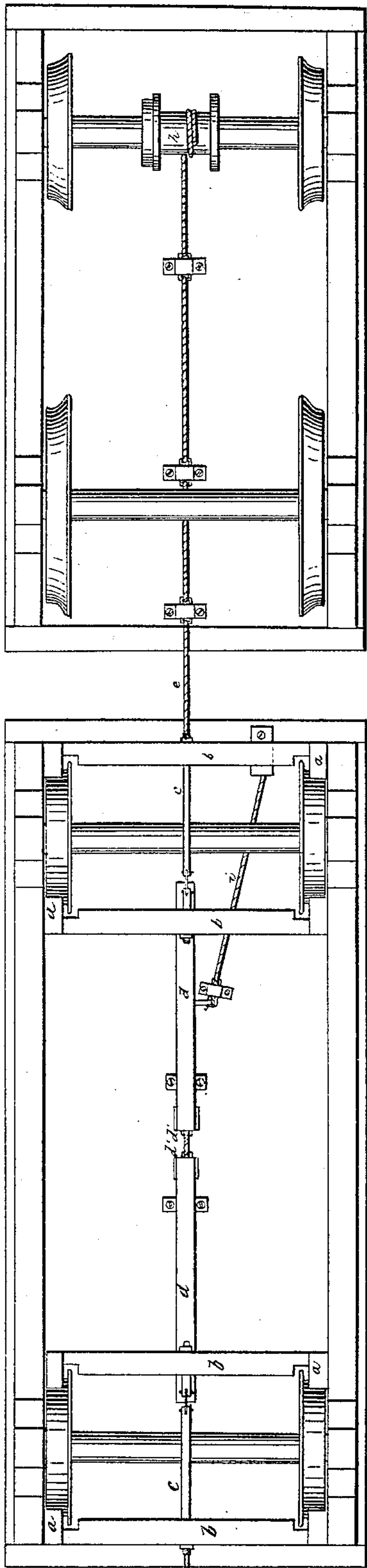
L. STEBBINS.

Car Brake.

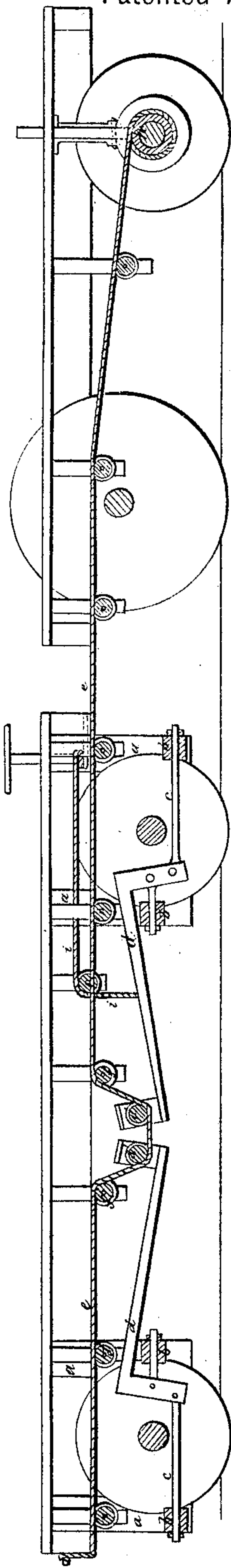
No. 5,510.

Patented Apr. 18. 1848.

*Fig. 2.*



*Fig. 1.*



# UNITED STATES PATENT OFFICE.

LUCIUS STEBBINS, OF HARTFORD, CONNECTICUT.

## OPERATING BRAKES FOR CARS.

Specification of Letters Patent No. 5,510, dated April 18, 1848; Antedated October 18, 1847.

*To all whom it may concern:*

Be it known that I, LUCIUS STEBBINS, of Hartford, in the State of Connecticut, have invented new and useful Improvements in  
5 Brakes for Railroad-Cars, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

10 Figure 1 is a longitudinal vertical section through the car trucks, and Fig. 2, a plan of the underside of the cars.

15 The same letters indicate like parts in both figures.

The nature of my improvement consists in arranging the levers that act on the  
20 brakes in a line under the cars, or in such position that a cord or chain, which is extended from one end of the train to the other over pulleys attached to the frame, shall also pass around pulleys in the ends of  
25 said levers in such a way that when the chain is drawn tight it shall draw equally on all the levers attached to any given number of brakes so as to make them act alike on each brake in the train at one and the  
30 same time; and said chain being connected with one of the axles of the locomotive, on which it is located by means of a clutch within the reach of the engineer, so that he can at all times command all the brakes of  
35 the train.

The construction is as follows: The trucks are of the ordinary character, the brakes  
(a) being jointed to the frame come down each side of the wheel, the brakes on each  
40 side are connected to a cross bar (b) to the center of which there is a connecting rod (c) that connects with a bent lever (d). The horizontal arm of lever (d) extends back to near the center and on its extreme end  
45 bears a pulley (d'). All the brakes are in

like manner connected; a chain (e) which is fastened to the rear end of the last car of the train runs along under the frame on pulleys (f) attached to the frame passing  
50 over one of said pulleys near the end of lever (d) above described and thence down around the pulley (d') thence through under the pulley on the next succeeding pulley (d') and thence up again to one of the pulleys  
55 (f) on the frame, and so on to the front of the train, passing in succession around each lever pulley as above described. On one of the axles of the locomotive there is a reel or drum (h) to which the forward end of the  
60 chain can be hitched; this drum can be connected or disconnected at pleasure with the axle by a common friction clutch controlled by the engineer and placed in a convenient position therefor.

It is obvious that many changes can be  
65 made in the construction and location of the brakes and the levers that operate them, and also in the manner of tightening the chain, but these I should only deem modifications of my improvements so long as the chain  
70 is retained; (i) is a chain attached to one of the levers (d) which connects it with a hand apparatus of ordinary construction by which one brake can be acted on separately.

What I claim as my invention and desire  
75 to secure by Letters Patent is—

1. The employment of a chain or other analogous device which extends from one end of the car or train to the other, and by tightening which all the brakes are acted on  
80 equally.

2. I also claim in combination with the above described chain, the reel or drum and clutch operated by the engineer for bringing the brakes into action, substantially as here-  
85 in set forth.

LUCIUS STEBBINS.

Witnesses:

ALEX. PORTER BROWN,  
WM. H. BISHOP.