

J. C. GIBSON.  
Improvement in Car-Brakes.

No. 131,678.

Patented Sep. 24, 1872.

Fig. 1.

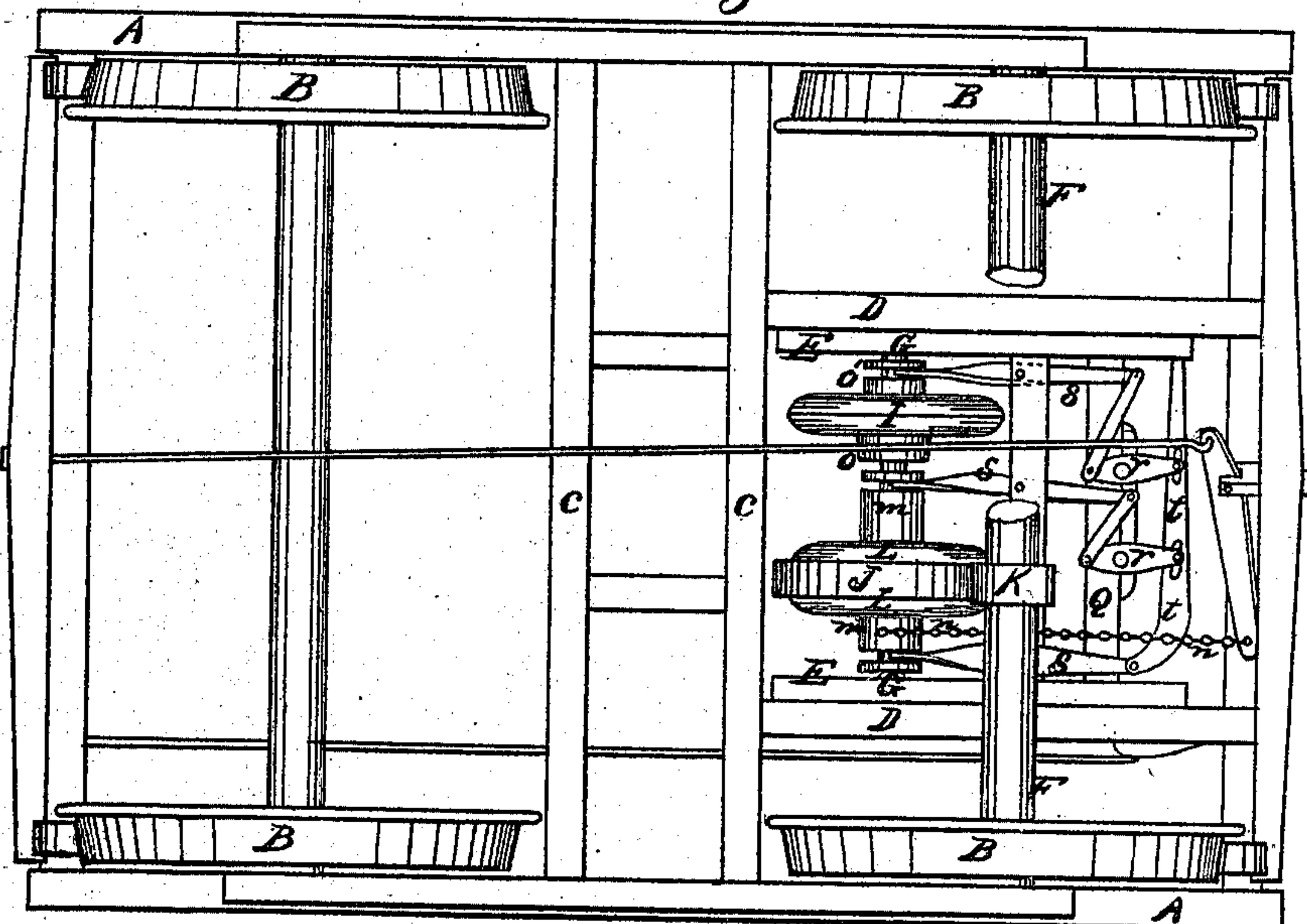


Fig. 2.

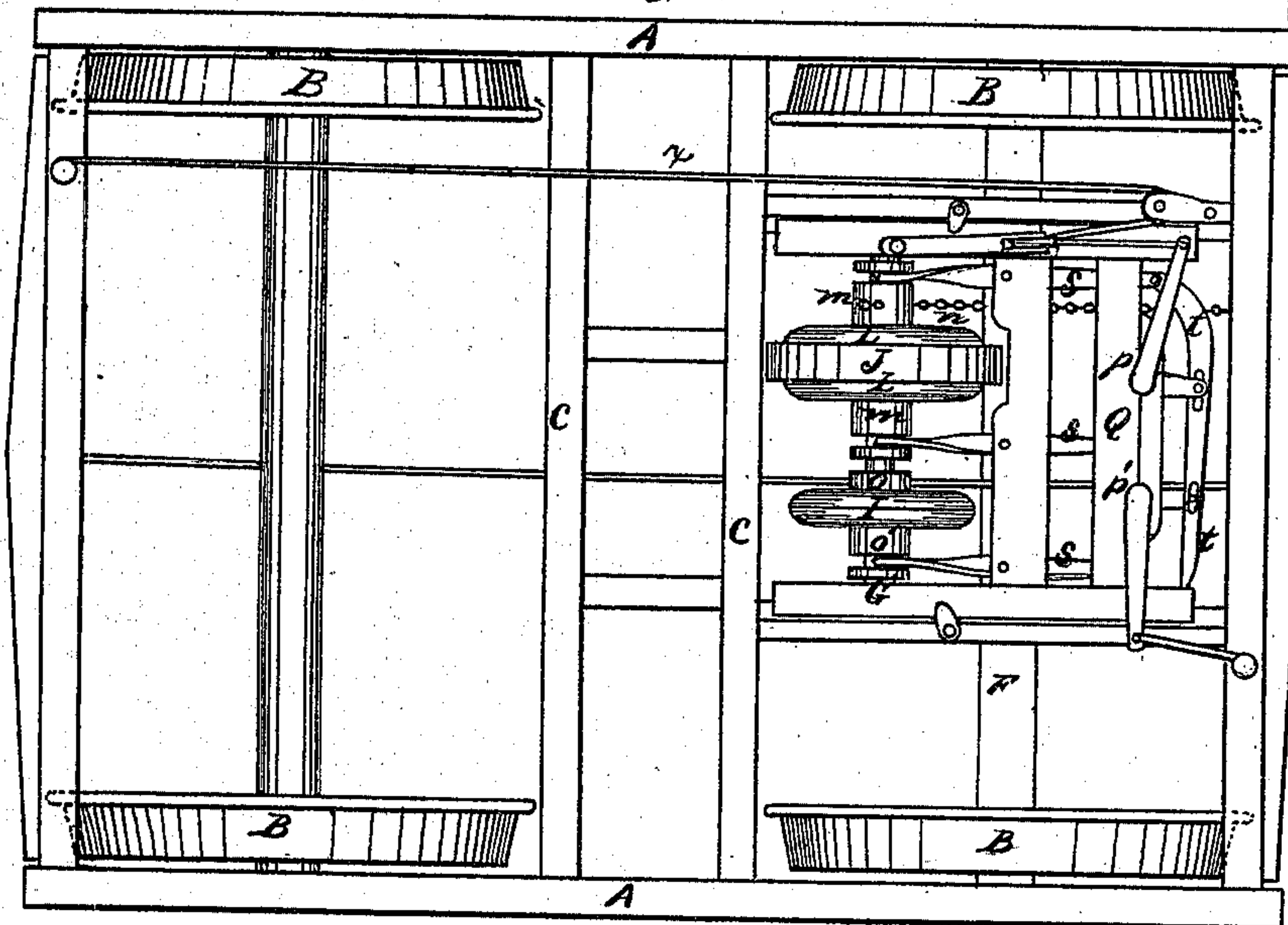
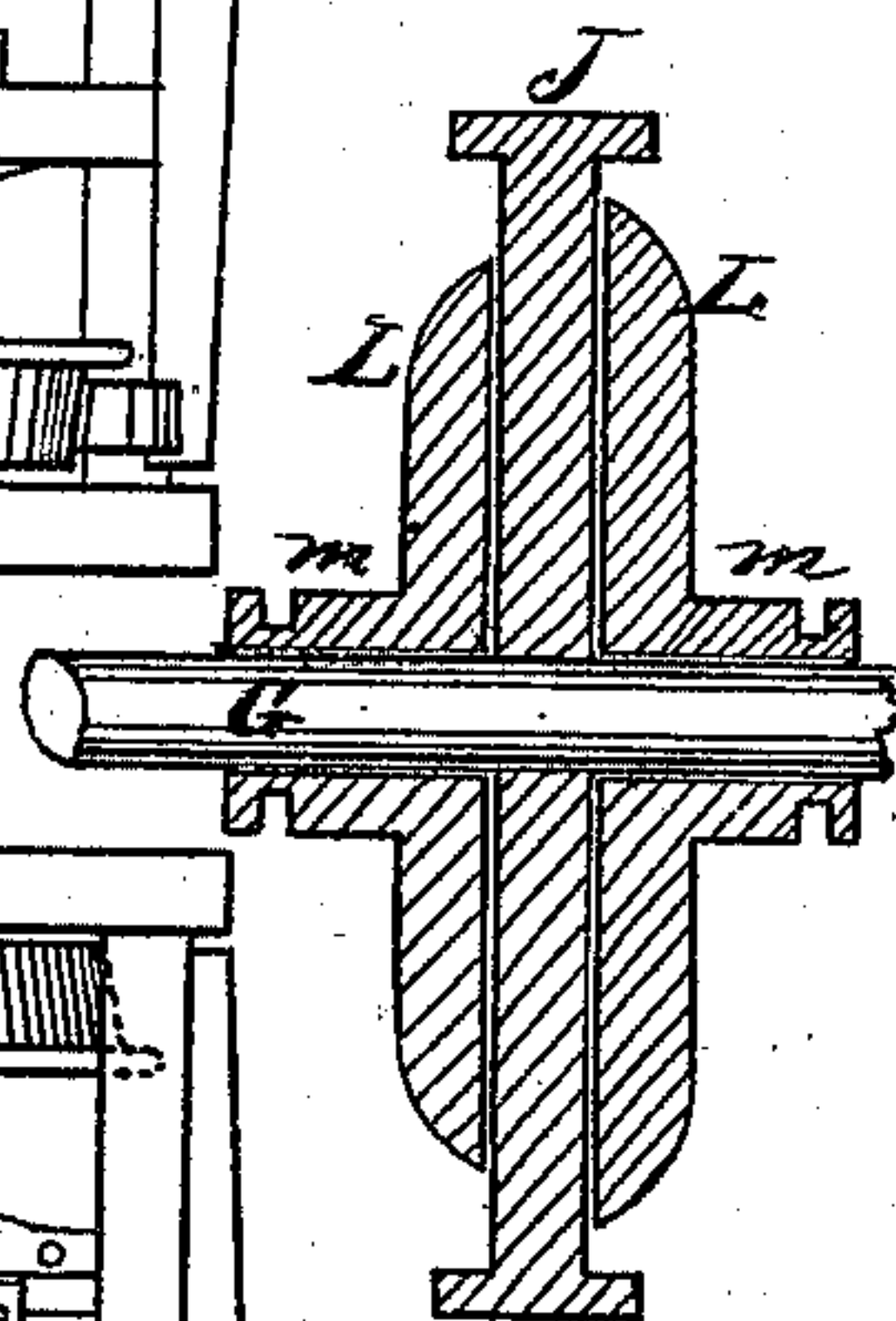


Fig. 3.



Witnesses

J. L. Dorne  
C. M. Richardson

Inventor

James C. Gibson  
Per Dewey & Co.  
Atty.



# UNITED STATES PATENT OFFICE.

JAMES CHARLES GIBSON, OF SACRAMENTO, CALIFORNIA.

## IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. 131,678, dated September 24, 1872.

*To all whom it may concern:*

Be it known that I, J. C. GIBSON, of Sacramento, county of Sacramento, State of California, have invented an Improved Car-Brake; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

My invention relates to an improved arrangement for applying the brakes of railway-cars, either to the wheels of single cars or to the wheels of an entire train of cars, the arrangement being such that the engineer of the train, or any person in either of the cars connected with the train, can readily apply the brakes to every wheel or to a portion only, as desired.

In order to more fully illustrate and explain my invention, reference is had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a bottom view of the truck; Fig. 2 is a top view; and Fig. 3 is a vertical section, of the frictional wheel.

A represents the truck-frame, inside of which the supporting-wheels B of a railway car are carried in the usual way. Inside of this frame, between two of the wheels, I construct a small frame by connecting the side of the truck-frame with the center or cross beam C by two parallel timbers D D, and inside of this latter frame I place a sliding frame, E, which can move back and forth directly above and in a direction transversely to the line of the shaft or axle F, to which the car-wheels B are fixed. A shaft, G, passes across the sliding frame E parallel with the axle F, its journals being in the side timbers of the frame. This shaft carries a friction-coupling, I, and a large friction wheel or drum, J, of the description and for the purpose described below. Upon the axle F, opposite the face of the friction-wheel J, I secure an elastic or other wheel or sleeve, K, so that when the sliding frame is moved forward the face of the wheel or drum J will come in contact with it and cause it to revolve when the car is moving. The wheel J has flat sides and a projecting rim, as shown, and spools L, consisting of a disk with one flat face and a hollow shaft, m, projecting from the

center of their opposite faces, are slipped upon the shaft G, one upon each side of the wheel, so that the flat faces of the two spools will bear against the sides of the wheel. The chain n, which draws upon the brake-levers in order to put on the brake, is secured to the shaft m of one of these spools, so that when the spools are pressed against the wheel J, and the wheel is revolved, the spools will be revolved also, and the chain consequently wound up; but as soon as a certain amount of power is exerted by the spool, according to the pressure of the spools against the wheel, the spools will remain stationary, while the wheel revolves between them. The friction-coupling I consists of a spool, o, similar to that above described, which is firmly fixed to the shaft G, and another sliding shaft, o', so arranged that the flat faces of the two can be pressed together, and thus also apply the brakes, as described further on. Two levers, p p', pass up through the timbers Q of the sliding frame, and have their upper ends bent at right angles, so as to lie parallel with the upper side of the frame. On the lower ends of these levers is secured a horizontal plate, r, so as to form two arms for each lever, extending in opposite directions. The inner extremities of these arms are connected, by links, with the extremities of the pivoted lever s, by means of which the spools L are pressed against the wheel J. The extremities of the opposite arms r are connected to a plate, t, one end of which is attached to another pivoted lever, s'. A cord or chain is attached to the extremity of the lever p above the frame, and extends forward to the ordinary hand-brake at one end of the car, by which it is wound up in order to apply the brakes, and a similar cord is attached to the end of the lever p', which extends to the hand-brake at the opposite end of the car for the same purpose. A cord or chain, x, which can be coupled together between each two cars as the train is made up, is connected to levers p p', so as to apply the brakes throughout the train, when the spool to which the chain n is secured is wound up.

This arrangement can either be applied to every car or only to the locomotive-tender, as desired; but, when attached to each car, the lever p is connected with the hand-brake of the car so as to apply the brakes of the one



car only, while the brake  $p'$  is connected with the brakes of every car in the train, and through which all of the brakes can be applied by the engineer or other person on the train.

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

1. The shaft  $G$  with its fixed wheel  $J$ , and the clamping-spools  $L$  with their short hollow shafts  $m$ , and also the friction-coupling  $I$ , consisting of the spools  $o$  and  $o'$ , in combination

with the axle  $F$  with its sleeve  $K$ , all arranged to operate as described.

2. The levers  $p p'$ , connected, as described, with the plate  $r$  and pivoted levers  $s$  and  $s'$ , substantially as and for the purpose above described.

In witness whereof I hereunto set my hand and seal.

JAMES CHARLES GIBSON. [L. S.]

Witnesses:

A. LEONARD,

J. F. CLARK.