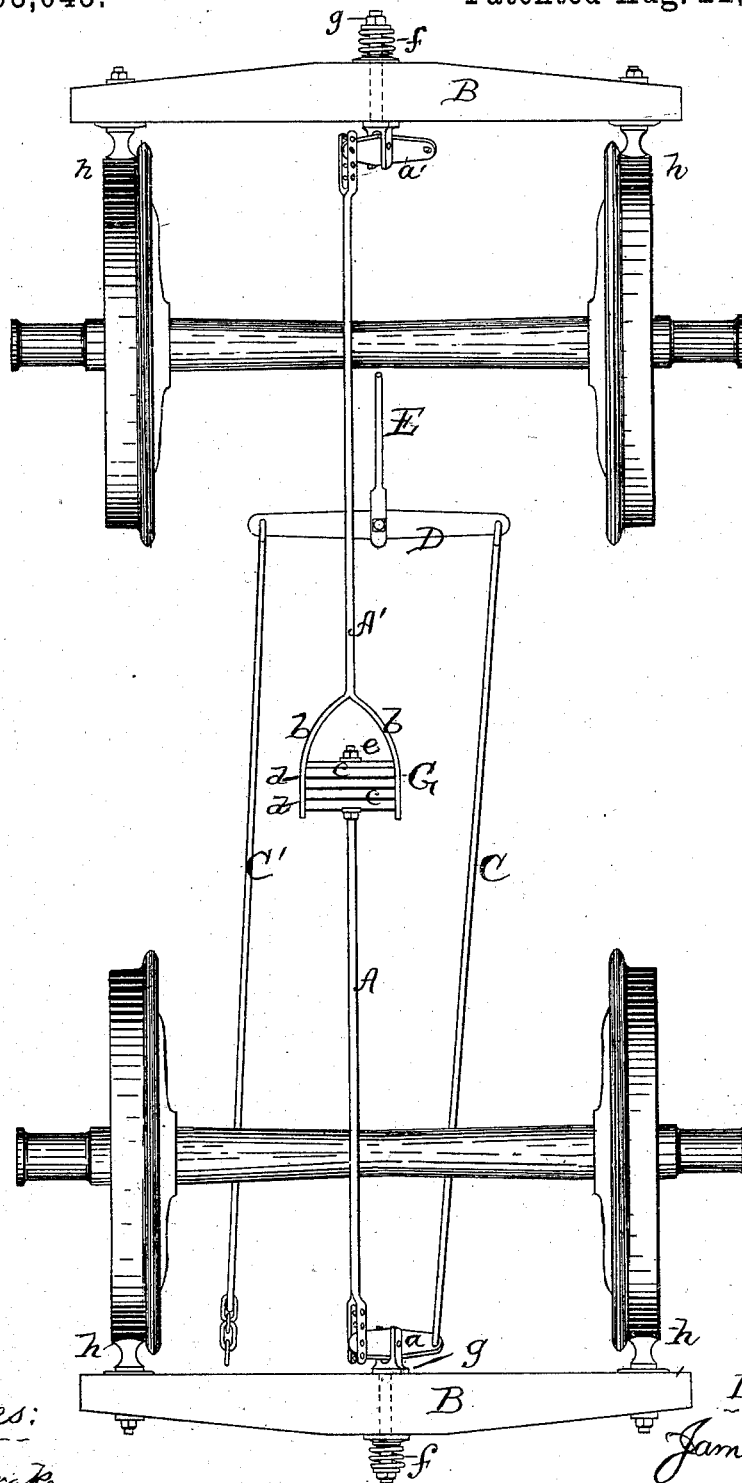


(No Model.)

J. HOW.
CAR BRAKE.

No. 263,045.

Patented Aug. 22, 1882.



Witnesses:

J.R. Drake
G.H. Kellogg.

Inventor,
James How,
by
J.R. Drake
Attg

UNITED STATES PATENT OFFICE.

JAMES HOW, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO BENJAMIN F. SHERMAN, OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 263,045, dated August 22, 1882.

Application filed June 5, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES HOW, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have made certain Improvements in Springs for Railroad Car Brakes, of which the following is a specification.

This invention is solely for the purpose of preventing car-wheels sliding on the rails when the brakes are set.

It is well understood that as usually arranged the car-brakes, when set either by air, steam, or hand, will often cause the wheels to slide; and whenever they do so slide they grind a flat place on the periphery or "tread" of the wheels, rendering them useless for passenger-cars. Car-wheels are always examined at the end of their usual run, and when any are found having flat places thereon the car is at once ordered off and taken to the shops for new wheels. This is a great loss, the wheels being expensive. The labor, the cost of new wheels, and the withdrawing the car from use all make a large amount in the aggregate.

It is found that when the wheels do slide there is less resistance than when rolling. In one case a very small portion of the wheel is on the track, while in the other a revolving wheel constantly presents a surface.

The present invention is calculated to obviate these difficulties, and will be understood as hereinafter set forth and claimed.

The drawing is a bottom plan view of a car-truck, showing the position of the spring as set into the ordinary brake-rod.

A A' represent the usual brake-rod underneath the car-truck, attached at each end, as is usual, to the levers *a a'*, which are pivoted in bolts *g g* in the brake-beams B B. At the other end of lever *a* is attached the usual lever top rod, C, and also is attached at the other end to dead-lever D, and which has the usual chain-rod C', running from its other end to the brake-wheel.

E is the body-rod, to which dead-lever D is pivoted, and which is connected to the piston of the air-cylinder when air-brakes are used. (Not shown.)

The spring G is set in the brake-rod A by cutting said rod and forming on one end, A', a yoke or frame, *b*, which incloses said spring,

and which may be of pieces of rubber *c c c*, with washers *d* between, as shown; or a spiral, *j*, or any other suitable springs may be used that will be sufficiently sensitive. The other end of the rod A passes through said spring in frame *b*, and its end is held by a nut or head, *e*. When the brake is set the spring G is compressed; but, while allowing the brake-shoes *h h* to act sufficiently, it prevents setting the wheels so that they cannot revolve, the "give" or elasticity of the spring doing this effectually.

It is possible that a spring or springs may be set in the rods C or C' or E and produce nearly the same result; but at present I prefer the spring G in the brake-rod A, as described.

In addition to the spring G, or without it, as may prove suitable, I set a spiral spring, *f*, or the bolt *g* in the brake-beams B B, to which the brake-levers *a a'* are pivoted. These will give somewhat the same effect, or at least aid said spring G in its workings, and will be used in connection therewith or without, as may be most effective.

I am aware that springs of various sorts have been and are used in connection with car and wagon brakes, but are for the purpose of throwing off the brakes after being applied and holding them away from the wheels. Such I do not claim, but only a spring or springs arranged substantially as described and solely for the purpose set forth.

I claim—

A car-brake spring device consisting of the spring G, located at the mid-length of the rods A A', levers *a a'*, whose points are furnished with springs *f* on the outside of the brake-bars B, so as to give elasticity at this point, as well as at the mid-length of the rod, and the connecting-rods C C' and center lever, D, whereby the brake is eased off when the wheel begins to slip upon the rail, substantially as herein set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JAMES HOW.

Witnesses:

J. R. DRAKE,

B. F. SHERMAN.