W. J. JOHNSON.

Car Brake and Starter.

No. 80,964. Patented Aug. 11, 1868.

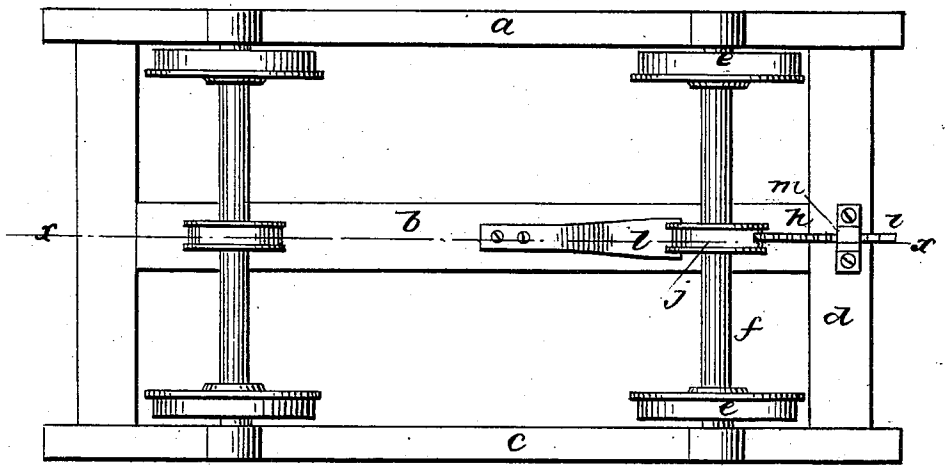
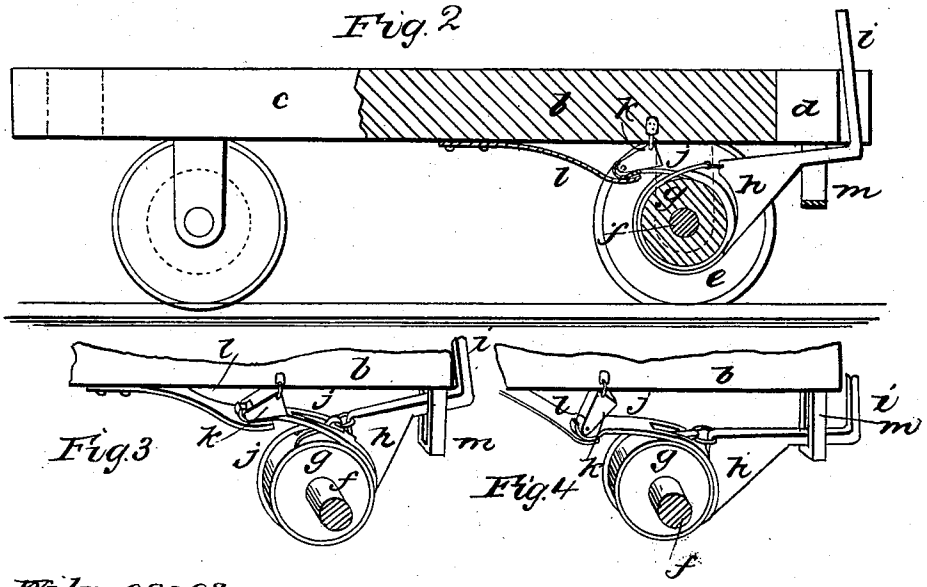


Fig. 2



Witnesses

F. C. Robbins

Chas. H. Andrews

Inventor

W. J. Johnson

UNITED STATES PATENT OFFICE.

WILLIAM J. JOHNSON, OF NEW ORLEANS, LOUISIANA.

IMPROVED CAR BRAKE AND STARTER.

Specification forming part of Letters Patent No. **80,964**, dated August 11, 1868.

To all whom it may concern:

Be it known that I, WILLIAM J. JOHNSON, of the city of New Orleans, in the State of Louisiana, have invented a new and useful Improvement in Street-Railway Cars; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, which constitute a portion of this specification.

My said improvement can be readily applied to any street-railway car, and may be described as follows: A doubly-flanged pulley, *g*, secured to the central portion of the forward car-axle, *f*, is embraced by an elastic metallic band. One end of this metallic band *j* is secured to a block, *k*, which is hinged to the central floor-timber, *b*, and the opposite end of said band is secured to an angular lever, *h i*, all in the manner represented in Figures 2, 3, and 4 of the accompanying drawings. The broad head *h* of the angular lever *h i*, or the lower portion thereof, bears upon the face of the metallic band *j* on the pulley *g*, and thence the said lever, diminishing in depth, passes forward to a point immediately below an aperture in the driver's platform, through which the vertical portion *i* of said lever passes upward the proper distance to be operated by the driver of the car. The stiff spring *l*, which is secured to the under surface of the floor-timber *b* and bears against the hinged block *k*, ordinarily retains the lever *h i* in the position shown in Fig. 2, and thereby slackens the spring-band *j*, and prevents it from binding upon the pulley *g*.

The sudden depression of the portion *i* of the lever *h i* will partially turn forward the car-wheels *e e*, and if after such depression the said lever be instantly relieved from pressure the said vibratory movement of the actuating-lever will aid in starting the car; but if when the actuating-lever *h i* is thus depressed it is retained in said depressed position, it causes the spring-band *j* to act as a brake for arresting the motion of the car.

The said pulley *g*, spring-band *j*, hinged block *k*, and counter-spring *l* may be combined with the rear axle, and the whole be connected with the actuating-lever *h i;* or the said attachment may be so arranged as to be operated at both ends of a car.

In the manufacture of my said improvement in street-railway cars I wish it to be understood that I do not limit myself to any precise proportions of parts or details of construction, as the same may be varied without departing from the principles involved in said improvement.

Having thus fully described my improvement in street-railway cars, what I claim therein as my invention, and desire to secure by Letters Patent, is—

The combination of the angular lever *h i*, the elastic metallic band *j*, the hinged block *k*, and the counter-spring *l* with each other and with the car-axle pulley *g*, substantially in the manner and for the purposes herein set forth.

W. J. JOHNSON.

Witnesses:
Z. C. ROBBINS,
F. DANIEL.