

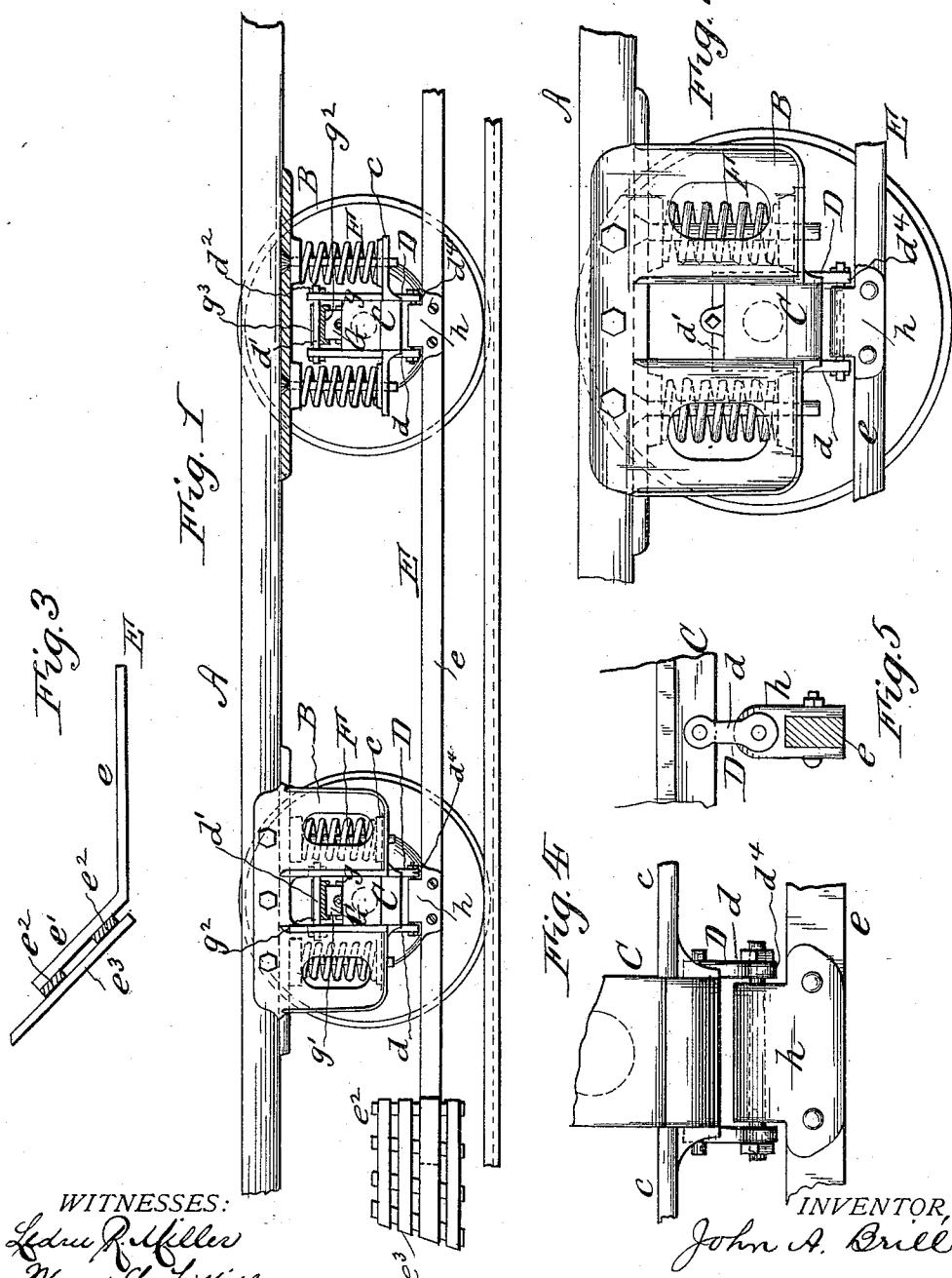
(No Model.)

J. A. BRILL.
RAILWAY CAR.

2 Sheets—Sheet 1.

No. 428,068.

Patented May 20, 1890.



WITNESSES:
John R. Miller
Harry L. Gillins

INVENTOR,
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By J. Van Stavoren
ATTORNEY

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Fig. 6

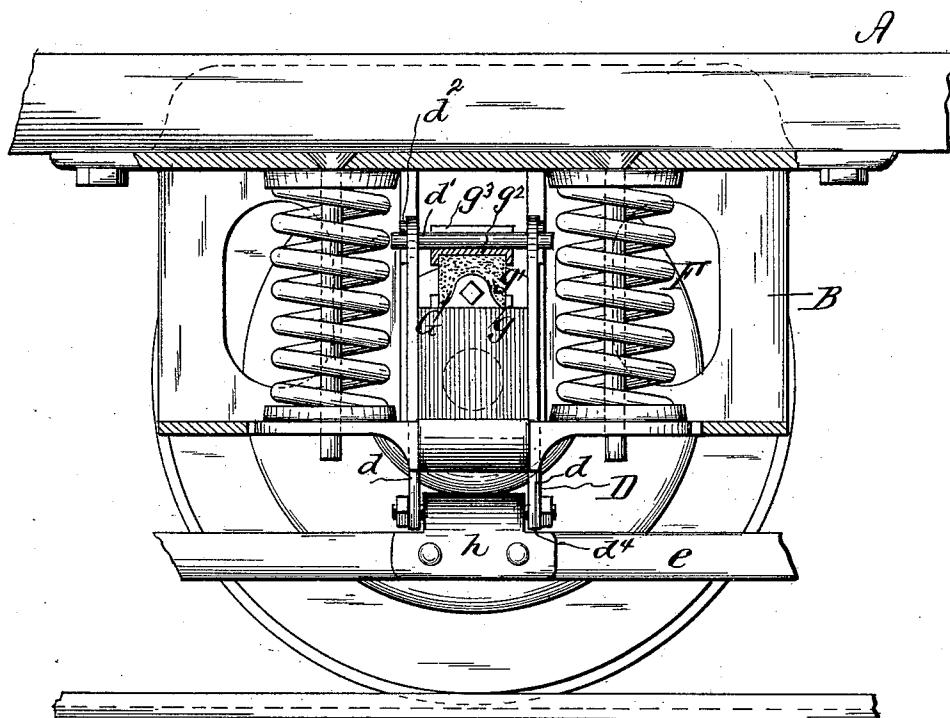
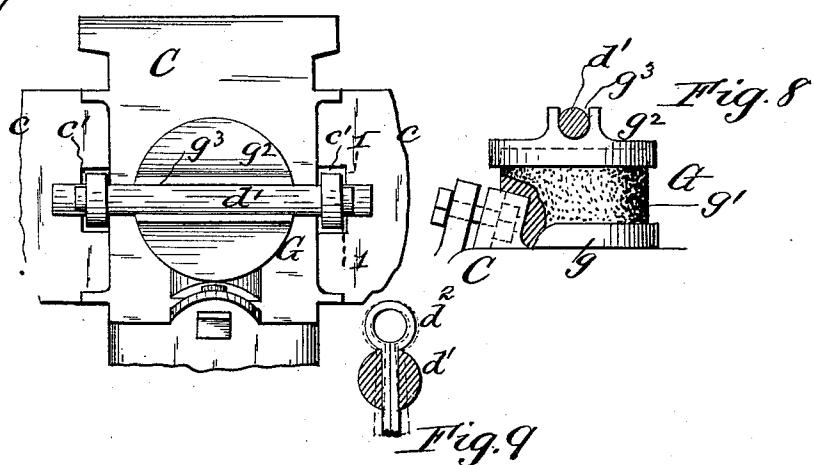


Fig. 7



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UNITED STATES PATENT OFFICE.

JOHN A. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 428,068, dated May 20, 1890.

Application filed March 15, 1888. Serial No. 267,205. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BRILL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and 5 State of Pennsylvania, have invented certain new and useful Improvements in Railway-Cars, of which the following is a specification.

My invention has relation to that form of supports or frames for cable railway-car grips 10 or other motor devices, wherein the grip or motor supporting frame is composed of longitudinal and transverse bars suspended from or secured to the axle-box saddles, a form of which is shown, described, and claimed in 15 United States Letters Patent granted to George M. and John A. Brill on the 22d day of November, 1887, No. 373,639. The object of said patented improvements is to secure the grip-supporting frame to the car in 20 such manner that the frame has no direct bearings on or with the axles, and is not subject to the lateral and vertical vibrations of the car-body nor to the end-thrust of the axles, yet is capable of a lateral movement independent of the car body and axles to admit 25 of a corresponding movement of the grip independent of the car or its running-gear. In said patent the grip-supporting frame is shown applied or secured to that form of axle- 30 box saddle having seats or bearings for the lower end of the car-springs.

My invention has for its object to dispense with the spring-seats on the saddles and to connect or secure the grip-supporting frame 35 to that form of axle-boxes which have formed thereon spring seats or bearings, and a further object of my invention is to provide elastic or spring cushions or bearings for the saddle or connection between the axle-box and the 40 grip-supporting frame.

My invention accordingly consists of the combinations, constructions, and arrangements of parts, as hereinafter described in the specification, and pointed out in the claims, 45 reference being had to the accompanying drawings, wherein—

Figure 1 represents a side elevation, partly sectional, of a portion of a car body or truck frame with running-gear, showing the spring 50 supported or cushioned saddles or connections

between the axle-boxes and grip or motor supporting frame suspended; Fig. 2, an elevation drawn to an enlarged scale of part of same, showing the saddle or connection between the axle-box and supporting-frame 55 without the elastic or spring bearings; Fig. 3, a sectional plan of part of one side of the grip-supporting frame, showing construction of one end of the side bars of said frame for attachment thereto of a fender or guard for the 60 running-gear; Fig. 4, an elevation showing lower part of the front end of the axle-box and a modified form of connection between the axle-boxes and grip-supporting frame; Fig. 5, a side elevation, partly sectional, of same; Fig. 6, a longitudinal section, drawn to an enlarged scale, of one of the axle-boxes and gear shown in Fig. 1; Fig. 7, a top view of part of the axle-box and its side spring-seats, showing openings therein for said saddle or connection, and the spring supports or bearings between the box and saddle or connection; Fig. 8, an elevation, partly sectional, of the same, the axle-box side or spring seats not being shown; and Fig. 9, a sectional view of 70 top or cross bar of said saddle or connection, showing a cotter or a preferable form of pin for journaling the side bars of the saddle to said cross-bar when the same are made separate from one another.

A represents the frame-work of a car body or truck having axle-box pedestals B, of any style or form, axle-boxes C, saddles or connection D, and grip or motor frame E, secured to said saddles or connection. The 85 saddles or connection D have no spring-seats; but in lieu thereof the axle-boxes C are provided with or have secured thereto plates or seats c, for bearings for the lower ends of the car-springs F, which plates may be on the 90 sides of the box or at its top, or the latter may form the seat for the lower end of the springs, according to the style or form of axle-box and pedestal used.

The axle-box, pedestal therefor, and springs 95 F may be constructed and arranged relatively to one another as desired, as the construction and arrangement of the same form no essential part of my invention.

The axle-box side spring plates or bearings 100

c, when used, have adjacent to or contiguous with the sides of the box openings *c'*, (see more plainly in Fig. 7,) through which the links *d* of the saddle or connection *D* pass to 5 below the bottom of the pedestal *B*.

The saddle or connection *D* may be in one piece of metal, preferably of the form of an inverted **U**, the top cross-bar *d'* of which may rest directly upon the top of the axle-box, as 10 shown in Fig. 2, or upon a spring cushion or support *G*, as indicated in Figs. 1 and 6; or said saddle or connection may be composed of a separate cross-bar *d''*, to which the separate side links *d* are journaled or pivoted and held in place by cotters or pins *d²*, as illustrated in Figs. 1, 6, and 9; or said cross-bar *d'* may be dispensed with, and the side links *d* of the saddle or connection may be journaled or otherwise secured directly to any part of 15 the axle-box sides, as shown in Figs. 4 and 5, as the formation or construction of the saddle or connection and the manner of mounting it upon or securing it to the axle-box may be greatly varied without departing from the 20 spirit of my invention.

When the spring supports or cushions *G* are used for the saddles or connection *D*, I prefer to form on the top of the box a seat *g*, for the reception of the lower end of a rubber, metal, or other spring *g'*, and upon the 25 top of the latter is a metal or other seat *g²*, having on its upper surface a longitudinal groove *g³*, for the reception of the cross-bar *d'* of the saddle or connection, as more plainly 30 shown in Figs. 6 and 7, to maintain the saddles or connections and their spring-supports *G* in due relation with each other and with the axle-boxes.

To the lower ends *d⁴* of the saddle-links *d* 40 are pivoted or journaled blocks or castings *h*, to which are secured the longitudinal bars *e* of the frame *E*, upon which the grip, motor, or other fixture is suitably mounted, as desired, said grip, motor, or fixture not being 45 shown in the drawings, as they or the manner of securing them to frame *E* form no part of my invention.

From the foregoing it will be noted that as the upper ends of the sides or links *d* of the 50 saddles *D* are journaled on the cross-bar *d'*, and their lower ends have pivotal or journal connection with the blocks *h*, supporting frame *E*, such double pivotal connections for the saddle-links *d* admit of the end-thrust 55 or longitudinal movement of the axles and axle-boxes independently of or without affecting the saddles or connections *D*, and consequently without imparting such movement to the frame *E* and any fixtures supported thereon. It will also be noted that as the frame *E* has pivotal connections with the parts *D* it and the fixtures thereon may move laterally independently of the axle-boxes and car-body. Again, it will be noted that the 60 frame *E* is not subject to the vertical, lateral, or other vibrations of the car-body, and it is

preferably provided with elastic or spring supports to take up or compensate for hammering of the wheels upon the rails and for preventing the grip or fixtures supported 70 upon frame *E* being subject to such influences.

The forward ends *e'* of the side bars *e* of frame *E* are preferably bent at any suitable angle, as indicated in Fig. 3, to approach 75 each other, and to these ends *e'* are secured vertical bars *e²*, to which are firmly fastened the fender or guard bars *e³*.

I do not confine myself to the construction and arrangement shown of the novel parts of 80 my improvements, as it is obvious that the same may be varied without departing from the spirit of the same.

From the foregoing it will be noted that the saddles or yokes *D* are spring-supported 85 upon the axle-boxes independent of the car-springs, and as the frame *E* is secured to the saddles or yokes *D* it is also correspondingly supported, and all fixtures or appliances secured to said frame are also correspondingly 90 supported.

What I claim is—

1. The combination of the axle-boxes for the running-gear of a car having seats or supports forming part of the axle-boxes, for the 95 car-springs, connections suspended from or secured to the axle-boxes, and a frame *E*, secured to said connections, substantially as set forth.

2. The combination, with the axle-boxes 100 for the running-gear of a car, of a frame *E*, having spring or elastic supports on said axle-boxes, substantially as set forth.

3. The combination of the axle-boxes for the running-gear of a car having seats or supports for the car-springs, saddles or connections suspended from or secured to the axle-boxes, spring cushions or elastic supports between the saddles or connections and the axle-boxes, and a frame *E*, secured to said 105 saddles or connections, substantially as set forth.

4. The combination of the axle-boxes for the running-gear of a car, saddles or connections *D*, having journaled or pivoted side bars, 115 and a frame *E*, journaled to said side bars, substantially as set forth.

5. The combination of an axle-box, spring-cushion *g'*, supporting a saddle or connection *D*, and frame *E*, substantially as set forth. 120

6. In combination with an axle-box, a saddle or connections *D*, journaled on said axle-box independent of its spring-seats, and a frame *E*, journaled on said saddle or connections, substantially as set forth. 125

7. The combination of an axle-box having spring-seat *g*, the spring-cushion *g'*, seat *g²*, having groove *g³*, saddle or connections *D*, and frame *E*, substantially as set forth.

8. The combination of axle-box *C*, having 130 spring-seats *c*, with openings *c'*, the saddle or connections *D*, having spring cushion or sup-

port G, and frame E, secured to said saddle or connections, substantially as set forth.

9. The combination of the axle-boxes for the running-gear of a car, the saddles or connections D, and frame E, having side bars provided with bent ends, bars secured to said ends, and a guard or fender secured to bars, substantially as set forth.

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

JNO. A. BRILL.

Witnesses:

R. S. REED,
E. C. BROADBENT.