No. 842,474. PATENTED JAN. 29, 1907.

J. A. LIGHTBODY.

BRAKE RIGGING.

APPLICATION FILED OCT. 12, 1906.

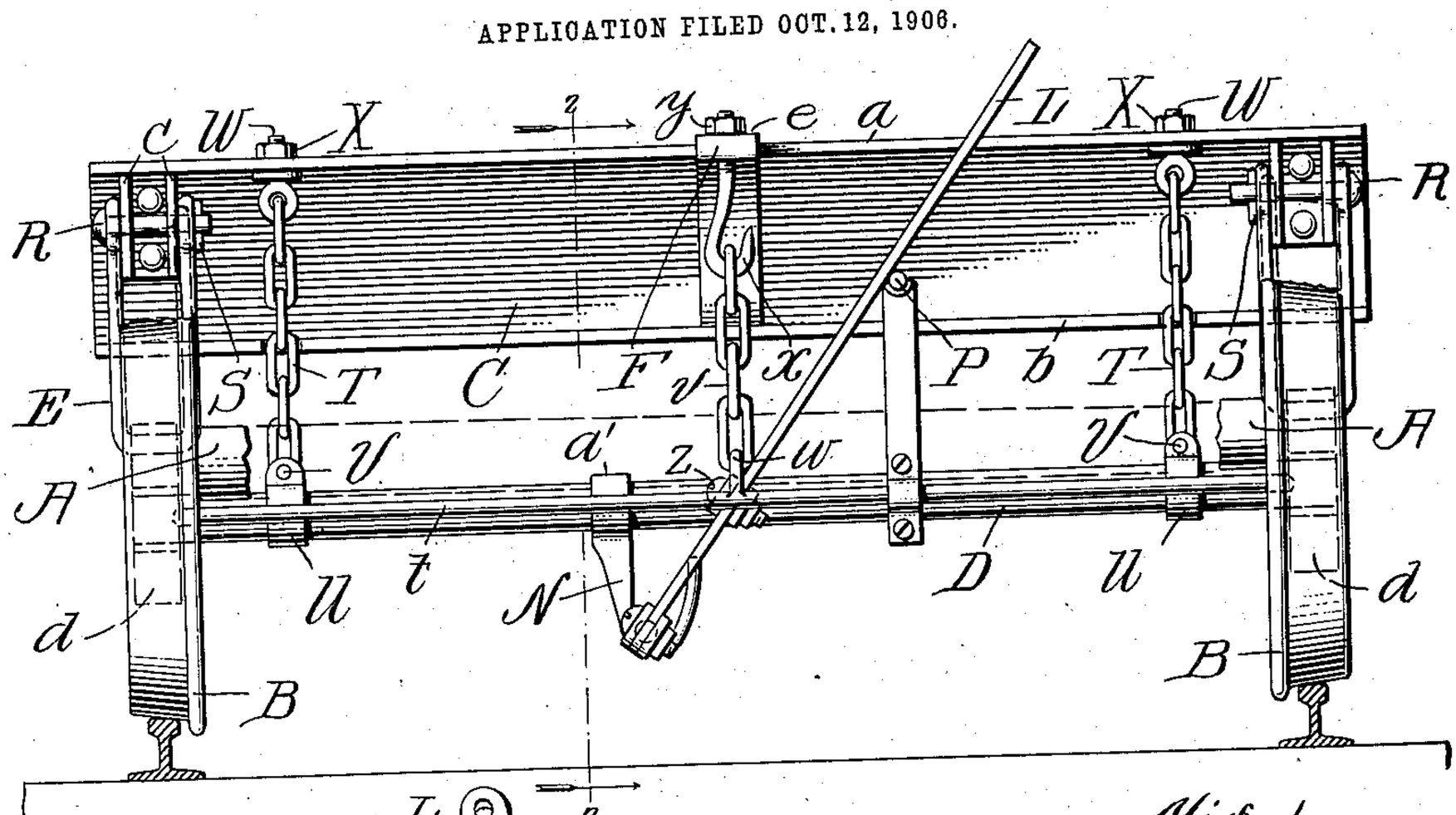


Fig. 1.

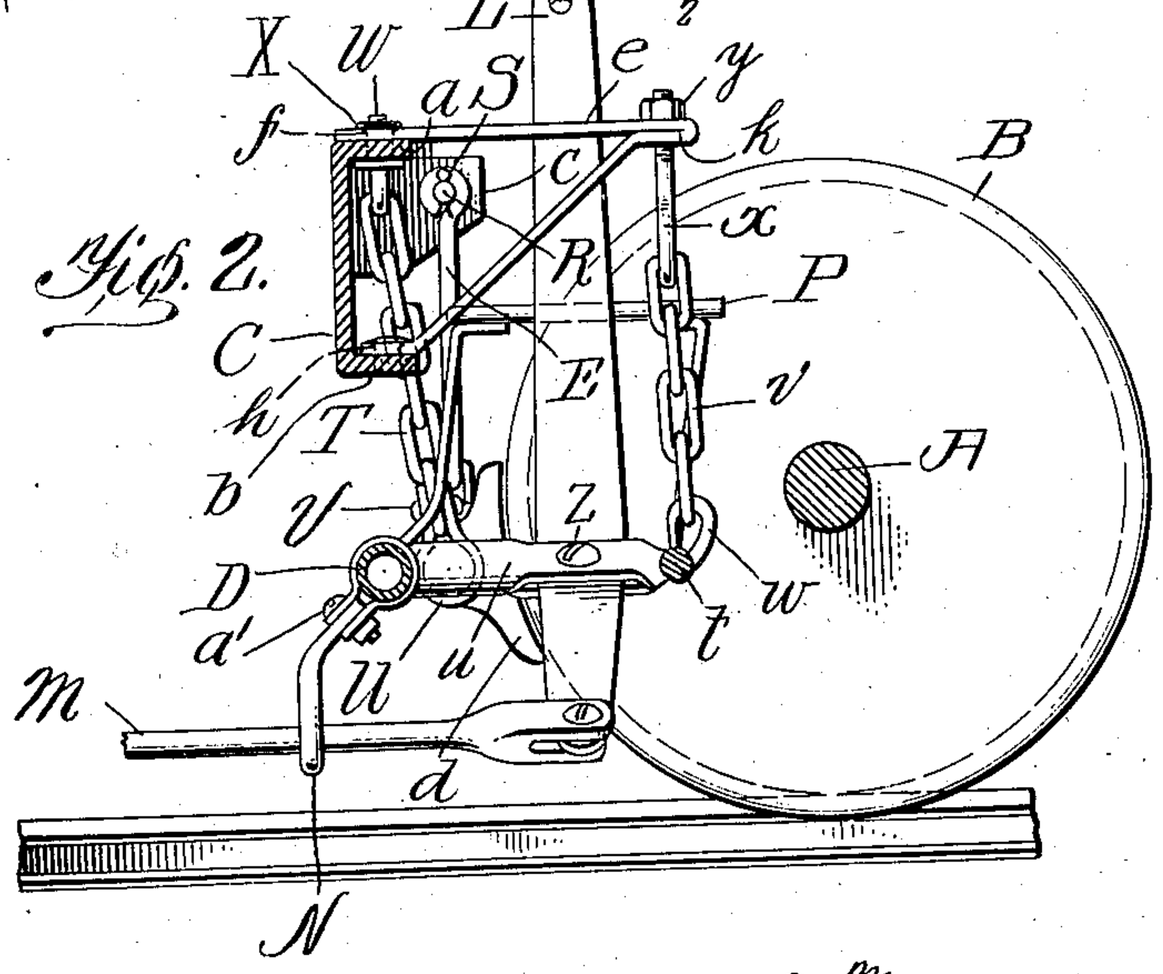


Fig. 2.

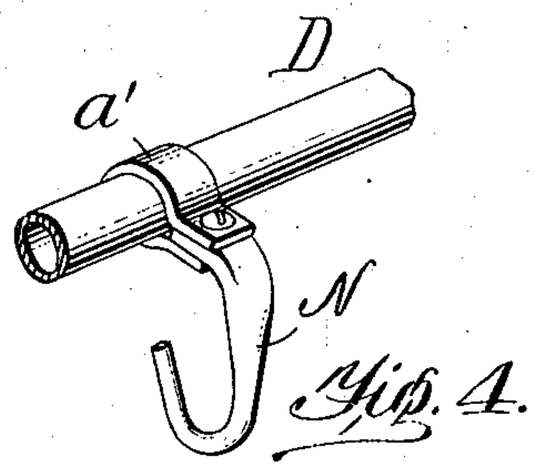
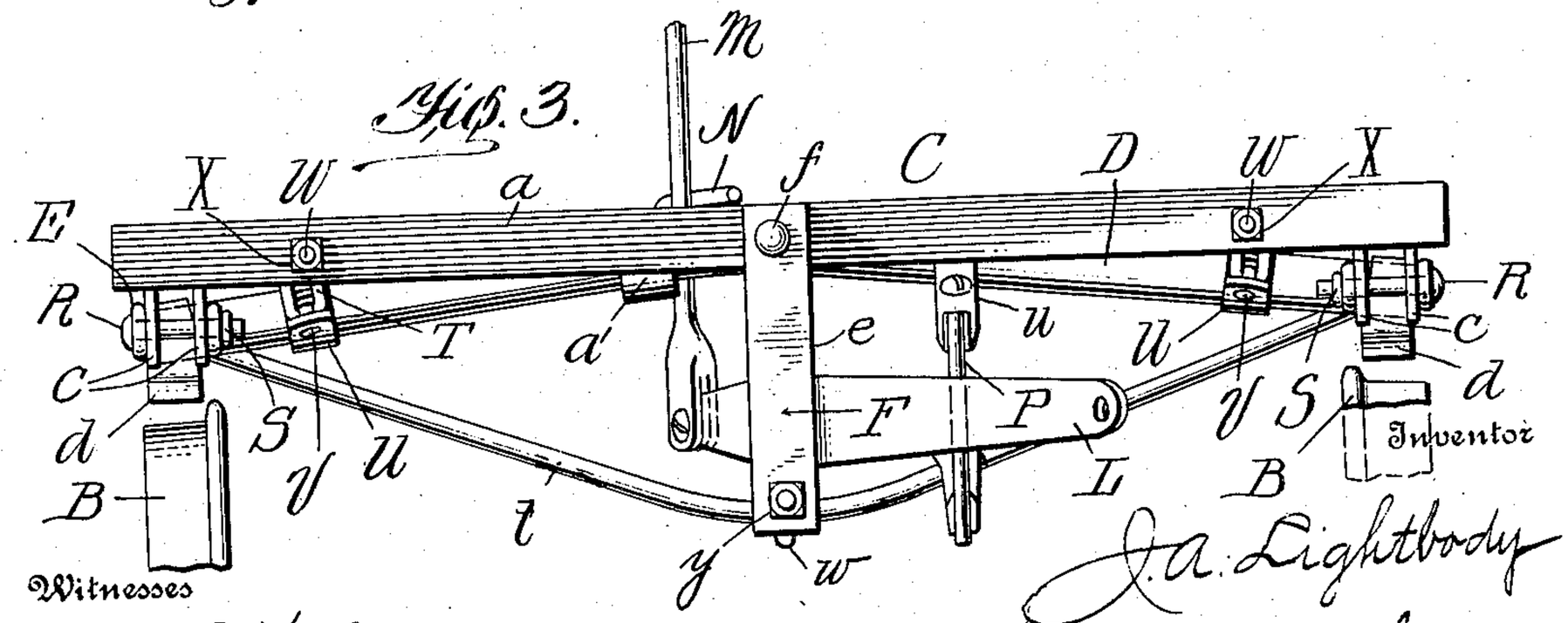


Fig. 4.

Fig. 3.



Witnesses

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JAMES ALBERT LIGHTBODY, OF WATERVILLE, MAINE.

BRAKE-RIGGING.

No. 842,474. Specification of Letters Patent. Patented Jan. 29, 1907.

Application filed October 12, 1906. Serial No. 338,591.

To all whom it may concern:

Be it known that I, JAMES ALBERT LIGHTBODY, a citizen of the United States, residing at Waterville, in the county of Kennebec and State of Maine, have invented new and useful Improvements in Brake-Rigging, of which the following is a specification.

My invention pertains to the brake-rigging of cars; and it contemplates the provision of a brake-rigging designed with a view of assuring safety and of withstanding the rough usage to which railway-brakes are ordinarily subjected.

The invention will be fully understood from the following description and claims when the same are read in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation illustrating the rigging constituting one embodiment of my invention as properly applied. Fig. 2 is a vertical section taken in the plane indicated by the line 2 2 of Fig. 1 looking in the direction indicated by the arrow. Fig. 3 is a plan view of the rigging, and Fig. 4 is an enlarged detail perspective view illustrating a portion of the brake-beam and my novel safety-loop attached thereto.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a car-axle.

B B are the wheels carried by the axle.

C is a truck-bar having lower and upper flanges *a* and *b* and also having apertured lugs *c*.

D is a brake-beam, of the form shown in construction or of any other suitable form compatible with the purpose of my invention, equipped with brake-shoes *d*.

E E are hangers through which the end portions of the beam D are connected with the lugs *c* of the truck, and F is my novel bracket for assisting in the suspension of the brake-beam D from the truck. The said bracket F comprises a top bar *e*, fixedly connected at *f* to the top flange *b* of the truck and extending at a right angle thereto, and a brace-bar *g*, fixedly connected at *h* to the lower flange *a* of the truck-bar and extending upward and outward from said flange and preferably, though not necessarily, welded at *k* to the bar *e*. As thus formed the bracket F obviously constitutes a firm support for the brake-beam, with which it is connected in the manner presently set forth. The brake-beam D is preferably reinforced and strengthened through the medium of a bar *t*, extending at a right angle from its middle, and inclined truss-bars *u*, joined to the beam and said bar *t*, and it is preferably connected with the bracket F through a chain *v*, connected to an eye *w* on the bar *t*, and a hook *x*, engaged with said chain *v* and having a threaded shank engaging a threaded aperture in the welded portion of the bracket and equipped above the bracket with a nut *y*. The strengthening-bar *t* of the brake-beam supports the brake-lever L, which is fulcrumed at *z* therein, and to the lower arm of said lever is connected the brake-connecting rod M, while the upper arm thereof serves for the connection of the chain or rod (not shown) to operate the brakes.

N is my novel safety-loop, which rests under the brake-connecting rod M and has for its office to catch and hold or support the said rod in the event of any of the connecting-pins being displaced, thus assuring the safety of the car equipped with the brake. The brake-beam D may, as before stated, be of any form in cross-section, and the safety-loop N may be connected to said beam in any approved manner without involving departure from the scope of my invention. I prefer, however, to connect the safety-loop with the brake-beam in the manner shown—that is, through the medium of a shackle *a'*, clasping and fixed on the brake-beam, and a bolt by which the safety-loop is attached to said shackle.

P is a yoke carried by the brake-beam. The upper part of this yoke serves, as illustrated, to support the lever L in its working position.

As best shown in Fig. 1, the beam-hangers E are of loop form and are connected with the apertured lugs *c* of the truck through the medium of bolts R, secured in place by cotter-pins S. In order to assist the hangers E in the suspension of the brake-beam D and form a rigging that will not shake loose or become unfastened, I prefer to employ the safety-chains T, connected to the brake-beam D through the medium of clevises U, the bolts V of which pass through end links of the chains and serve to hold both chains and clevises to the beam, and also connected to the top flange of the truck through the medium of eyebolts W, checked by nuts X, the upper links of the chains being preferably welded in the eyebolts.

It will be gathered from the foregoing that my improvements contribute materially to the strength and durability of the brake-rigging and in that way prolong the usefulness of the same, and it will also be gathered that the means provided for meeting the contingency of the brake-connecting rod becoming unfastened practically eliminates the liability of accident from that cause.

The construction herein shown and described constitutes the preferred embodiment of my invention; but I desire it understood that in practice such changes may be made in the form, construction, and relative arrangement of parts as fairly fall within the scope of my invention as claimed.

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

1. The combination in a brake-rigging, of a truck-bar, a bracket having upper and lower bars joined together and fixedly connected to upper and lower portions, respectively, of the truck-bar, a brake-beam, and a connection intermediate the bracket and the beam for hanging the latter from the former.

2. The combination in a brake-rigging, of a truck-bar having upper and lower flanges, a bracket having upper and lower bars welded together at their outer ends and fixedly connected to the upper and lower flanges, respectively, of the truck-bar; said bracket having a vertically-disposed threaded aperture in the welded portions of its bars, a bolt having a threaded shank secured in said threaded aperture, a brake-beam, and a connection intermediate said bolt and beam.

3. The combination in a brake-rigging, of a truck-bar having upper and lower flanges and also having lugs adjacent to its ends, a brake-beam, hangers connecting said lugs and the end portions of the beam, a bracket having upper and lower bars welded together at their outer ends and fixedly connected to the upper and lower flanges, respectively, of the truck-bar; said bracket having a vertically-disposed threaded aperture in the welded portions of its bars, a bolt having a threaded shank secured in said threaded aperture, and a connection between said bolt and the intermediate portion of the brake-beam.

4. The combination in a brake-rigging, of a truck-bar having upper and lower flanges, a brake-beam, a bracket having upper and lower bars joined together at their outer ends and fixedly connected at their inner ends to the upper and lower flanges, respectively, of the truck-bar, and a connection intermediate the outer portion of the bracket and the brake-beam.

5. The combination in a brake-rigging, of a brake-connecting rod, a brake-beam, and means carried by the brake-beam for supporting the brake-connecting rod.

6. The combination in a brake-rigging, of a brake-connecting rod, a brake-beam, and a safety-loop attached to the brake-beam and disposed under the brake-connecting rod.

7. The combination in a brake-rigging, of a brake-connecting rod, a brake-beam, and a shackle fixed on the brake-beam, and a safety-loop connected to said shackle and disposed under the brake-connecting rod.

8. The combination in a brake-rigging of a truck-bar, a bracket having upper and lower bars fixedly connected to the upper and lower portions, respectively, of the truck-bar, a brake-beam having a bar extending at an angle from its middle and also having inclined truss-bars connecting its ends and said angular bar, hangers connecting the end portions of the truck-bar and the ends of the beam, means connecting the bracket and the outer end of the angular bar of the beam, a lever fulcrumed on said angular bar, a brake-connecting rod connected to the lower arm of said lever, and a safety-loop connected to the brake-beam and disposed under said brake-connecting rod.

9. The combination in a brake-rigging, of a truck-bar having a top flange, a brake-beam, and one or more safety-chains interposed between the top flange of the truck-bar and the beam and connected to the same, substantially as specified.

10. The combination in a brake-rigging, of a truck-bar having a top flange and a bottom flange and also having apertured lugs, a brake-beam, a bracket connected to the top and bottom flanges of the truck-bar, a connection intermediate the bracket and the beam, hangers connected to the beam and the apertured lugs of the truck-bar, and safety-chains interposed between and connected to the brake-beam and the top flange of the truck-bar.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES ALBERT LIGHTBODY.

Witnesses:
MARK GALLERT,
FRANK K. SHAW.