No. 849,649. PATENTED APR. 9. 1907.

S. D. WRIGHT.

DRAFT RIGGING FOR RAILWAY CARS.

APPLICATION FILED JAN. 7, 1904.

2 SHEETS—SHEET 1.

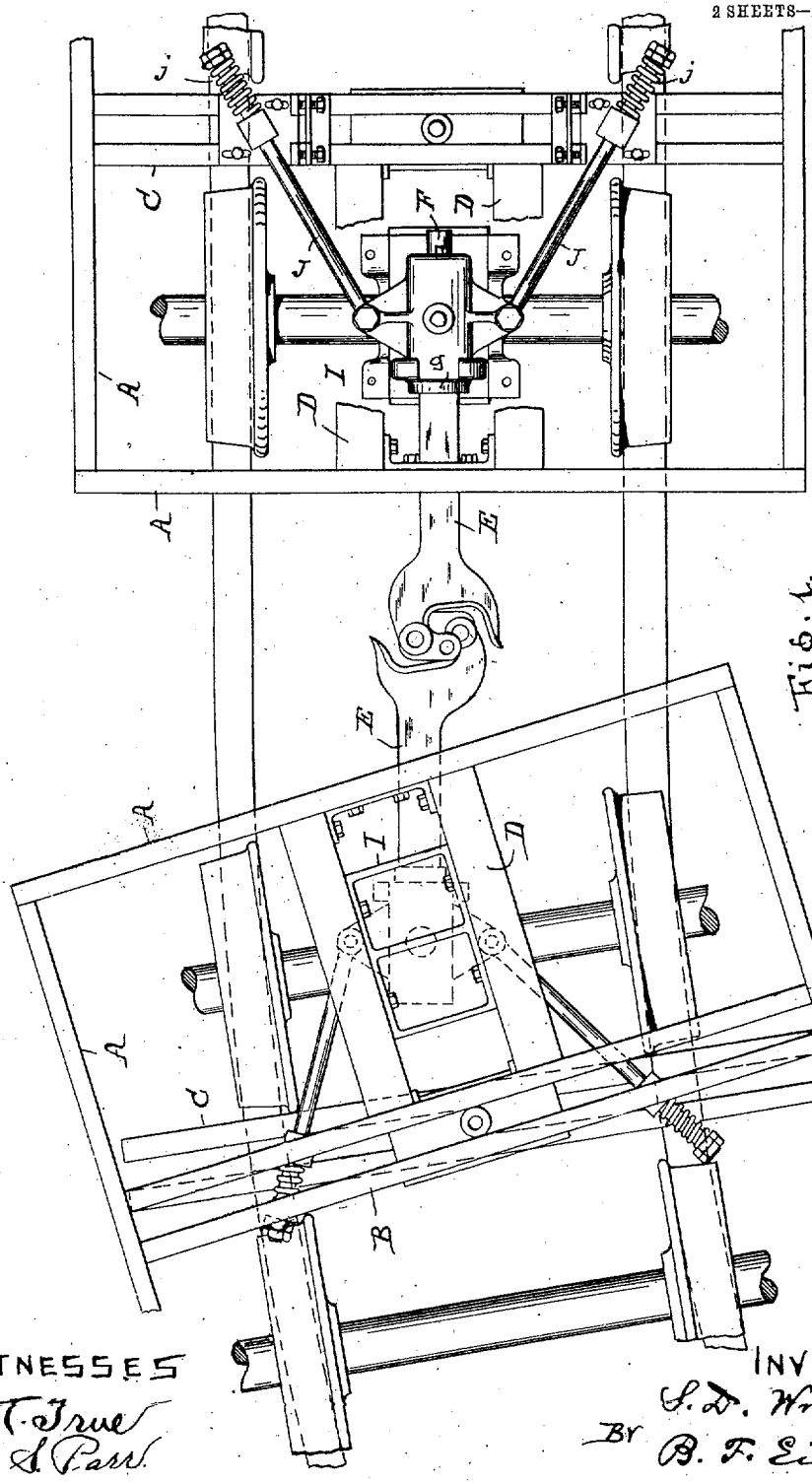

Fig. 1.

WITNESSES

D. T. True

M. L. Parr.

INVENTOR

S. D. Wright

By B. F. Eibler

Atty.

No. 849,649. PATENTED APR. 9, 1907.

S. D. WRIGHT.

DRAFT RIGGING FOR RAILWAY CARS.

APPLICATION FILED JAN. 7, 1904.

2 SHEETS—SHEET 2.

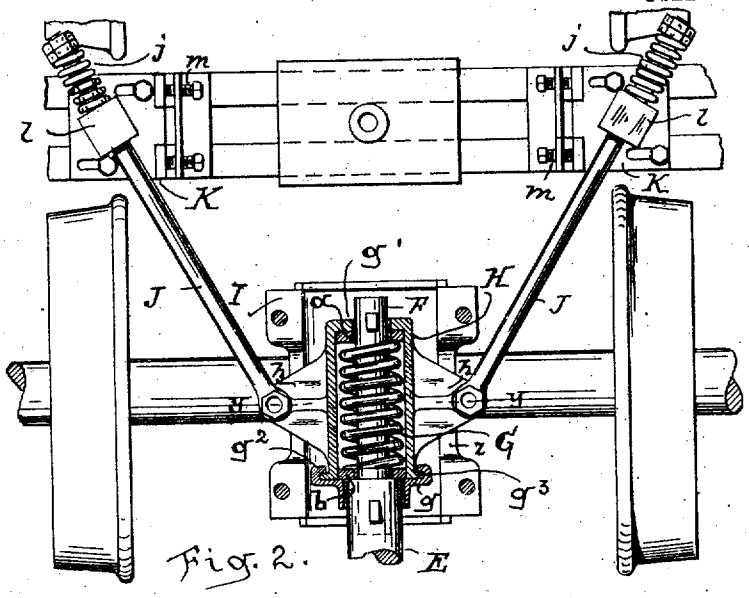

Fig. 2.

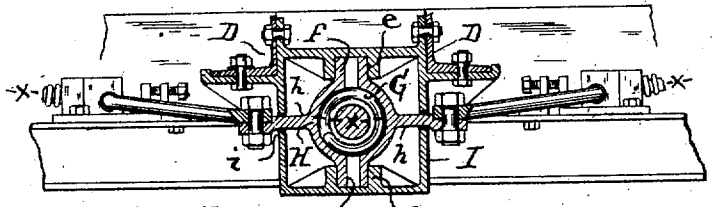

Fig. 3

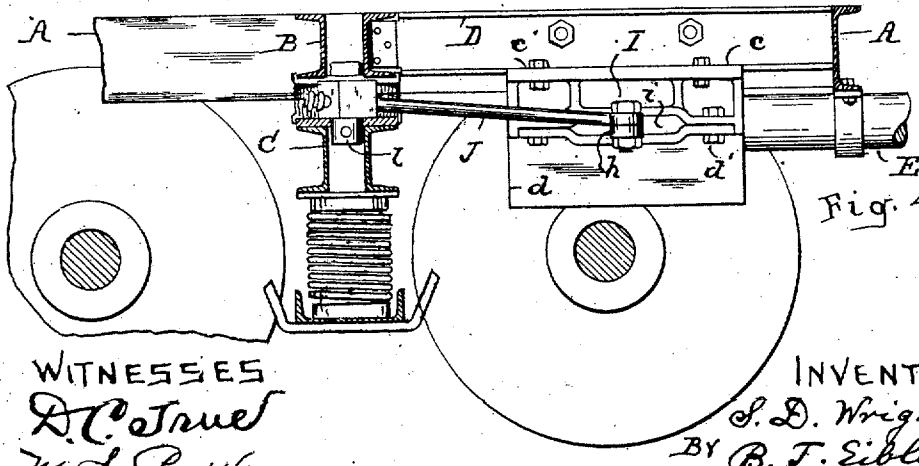

Fig. 4.

WITNESSES

D. C. True

M. S. Parr.

INVENTOR

S. D. Wright

BY B. F. Eibler Atty.

UNITED STATES PATENT OFFICE.

SAMSON D. WRIGHT, OF CLEVELAND, OHIO.

DRAFT-RIGGING FOR RAILWAY-CARS.

No. 849,649. Specification of Letters Patent. Patented April 9, 1907.

Application filed January 7, 1904. Serial No. 188,098.

To all whom it may concern:

Be it known that I, SAMSON D. WRIGHT, a citizen of the United States of America, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Draft-Rigging for Railway-Cars, of which the following is a specification.

My invention relates to improvements in draft-riggings for railway-cars, which are more particularly intended for so-called "industrial" cars; and the object of my improvement is to construct and arrange said rigging in such manner as to assure at all times of a proper adjustment of the draw-bars with regard to the curves around which a train of cars is supposed to proceed. I attain this object in and with a draft-rigging constructed and arranged substantially as shown in the accompanying drawings, in which—

Figure 1 represents a partial plan view of coupled cars, one being on the straight part and the other on the curved part of a railway-track. Fig. 2 is an enlarged horizontal sectional view of a single draw-bar and the rigging therefor on line *x x*. (See Fig. 3.) Fig. 3 is a transverse sectional view on line *y y*, (see Fig. 2,) and Fig. 4 is a side elevational view of the same.

Like letters of reference denote like parts in the drawings and specification.

The characteristic feature of my invention consists in the novel manner of supporting and guiding horizontally-swinging draw-bars in order to retain said bars in proper alinement in passing around curves, thereby avoiding undue strains upon said bars and the tendency of uncoupling same.

Unlike other draft-riggings, which swing the draw-bars concentric with the king-bolt center, I provide a pivotal support for said bars intermediate the end sill and the body-bolster of the car, the rear end of said bars being equipped with a spring-carrying cage which furnishes the pivots for the bar and the position of said cage being controlled from and by the truck-bolster through the intervention of guide-rods hereinafter referred to.

In Fig. 1 an illustration is presented showing one car on the straight part and another car on the curved part of a track. From this illustration it can readily be seen how the position of the draw-bars can be affected in order to suit the radius of any curve regardless of the wheel-base and the length of cars. Draft-riggings of this type are more particularly intended for use in connection with industrial railways, (mines and other plants handling raw material,) since the track of such railways oftentimes has sharp curves, and the cars operated thereon are by necessity of peculiar construction, which present propositions not experienced in ordinary railroading.

In the illustration herewith given my invention is shown in connection with a so-called "steel car," channeled beams being used for car-frame A, the car-bolster B, the truck-bolsters C C, and the intermediate sills D D. (See Figs. 2 and 3.) This invention, however, is equally as well applicable in connection with wooden car-frame constructions.

The draw-bar E is preferably cast of malleable iron and is of the Master Car-Builders' standard type.

To the rear of the bar is secured the rod F, which carries the washers *a b* and spring G, all of which are contained within the cage H, which in turn is held in pivotal engagement with and within the two-part casing I. Said casing I consists of the members *c d*, of which the member *c* is securely fastened to the intermediate sills D D, as at *c'*, and the lower member is bolted onto the upper member, as at *d'*. Each of these members contains a circular recess *e*, into which extend the pivots *f* of the cage H, (see Figs. 2, 3, and 4,) the latter being allowed to swing freely within said casing. The draft and buffing strains are also borne by said casing and the pivots of the draw-bar cage.

In pulling it is the washer *a* which compresses the spring G against the cover *g* of said cage, and in buffing the spring becomes compressed against the rear wall *g'* of said cage, the bar forcing the washer *b* inwardly against said spring. The cover *g* may be secured to the cage in any suitable manner, as shown. This is accomplished by grooved flanges g^2 upon the cover, which engage plain segmental flanges g^3 on the cage. Also the draw-bar extends part way into said cover, as seen in Fig. 2. Furthermore, from the cage extend in opposite directions the arms *h*. Said arms pass through slots *i*, which are formed in and by the casing members *c d*, the former having free movement within the latter. The rods J connect the ends of said arms with the truck-frame, as shown in Figs. 2, 3, and 4. The connection of the rods upon

the truck-frame, as well as on the arms, is such as to accommodate free adjustment of said rods when and while the truck is changing its position in relation to the car-body. Also the springs *j j* are applied to maintain said rods in proper tension and to avoid jerking strains upon said rods and arms. Simply by establishing a certain prefixed distance between king-bolt center and draw-bar pivots and the king-bolt center and points of connection (swivel-bearings *l*) for the guide-rods upon the truck-bolster the draw-bars may be adjusted out of alinement of the car-frame in the angle as the curves in or of the track require it to be in order to maintain the draw-bars in proper engagement under exclusion of undue strains between and upon said bars.

As shown, the plates K, which carry the swivel-bearings *l* for the rods, can be adjusted outwardly by means of the set-screws *m* to compensate for wear of the connections, wheel-flanges, rails, &c.

With little attention a draft-rigging of the type as above described can be maintained in proper working condition. Only few parts are required for this rigging, all of which are applied to functionate in a most rational manner and furnish coöperatively a simple, efficient, and durable device.

What I claim, and desire to secure by Letters Patent, is—

1. In a draft-rigging for railway-cars the combination with the draw-bar and truck-bolster of a spring-cushioned cage being pivotally supported intermediate said bolster and end sill of such cars, and having arms extending approximately horizontally therefrom and diverging rods connecting said arms with said bolster in the manner as and for the purpose set forth.

2. In a draft-rigging for railway-cars the combination with the draw-bar and a spring-cushioned pivoted cage supported between the king-bolt and end sill of such cars, said cage having arms extending approximately horizontally therefrom, of the truck-bolster and rods extending from near the ends of bolster to said arms and having loose connection with both as shown and for the purpose described.

3. The combination with the draw-bar of a railway-car, of a cage containing the spring for said bar, and having externally-projecting pivots and arms arranged within a suitable casing, the latter being mounted distant from the car-bolster, the truck-bolster, and guide-rods extending angularly from said truck-bolster to said arms for the purpose of fixing the position of the pivotal draw-bar according to the position of the truck-bolster as shown and for the purpose set forth.

4. A draft-rigging for railway-cars comprising a draw-bar having a cage attached to its rear end, a spring placed upon said end between sliding washers and all contained within said cage, vertical pivots and horizontal arms projecting from said cage, a suitable support for said pivots arranged intermediate the bolster and end sill of the car and guide-rods connecting said arms with the truck-bolster substantially in the manner as and for the purpose set forth.

5. In combination with a draft-rigging, a two-part casing secured to the car-frame intermediate the bolster and end sill of said frame, the said casing being adapted for reception of the draw-bar-spring cage and containing sockets for the pivots of said cage as shown and set forth.

6. In a draft-rigging comprising the combination with the truck-bolster and a pivoted laterally-swinging draw-bar, of guide-rods having connection with arms in vertical plane alinement with the pivots of said bar and a swiveled, laterally-adjustable connection with said bolster as shown.

7. In a draft-rigging the combination with the draw-bar of a cage and a suitably-fixed casing for said cage, the said cage containing the spring for said bar, having oscillating movement within said casing and lateral connection with the truck-bolster as shown and described.

SAMSON D. WRIGHT.

Witnesses:
B. F. EIBLER,
D. C. TULL.