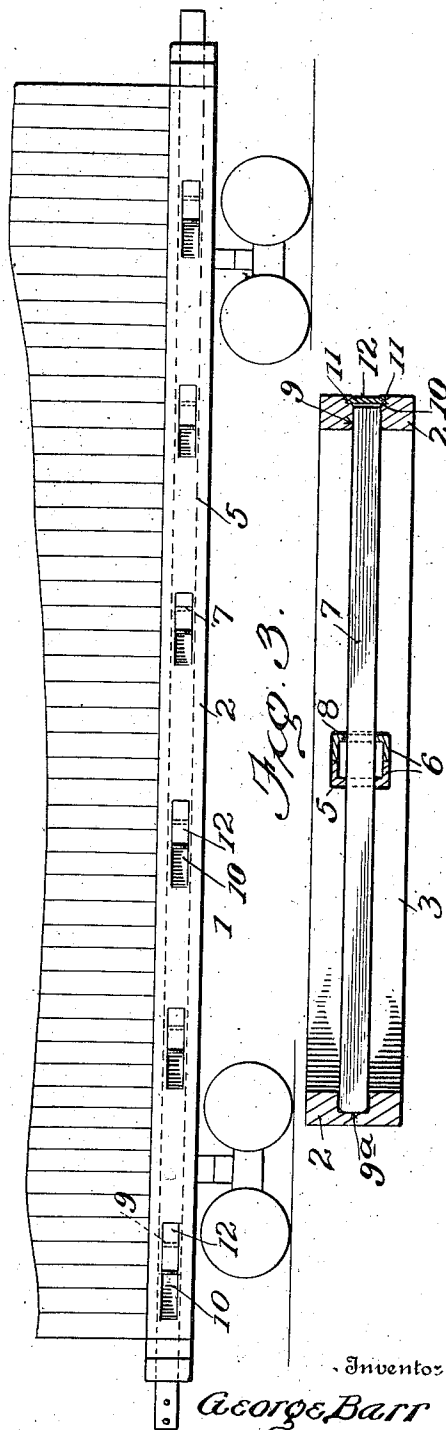
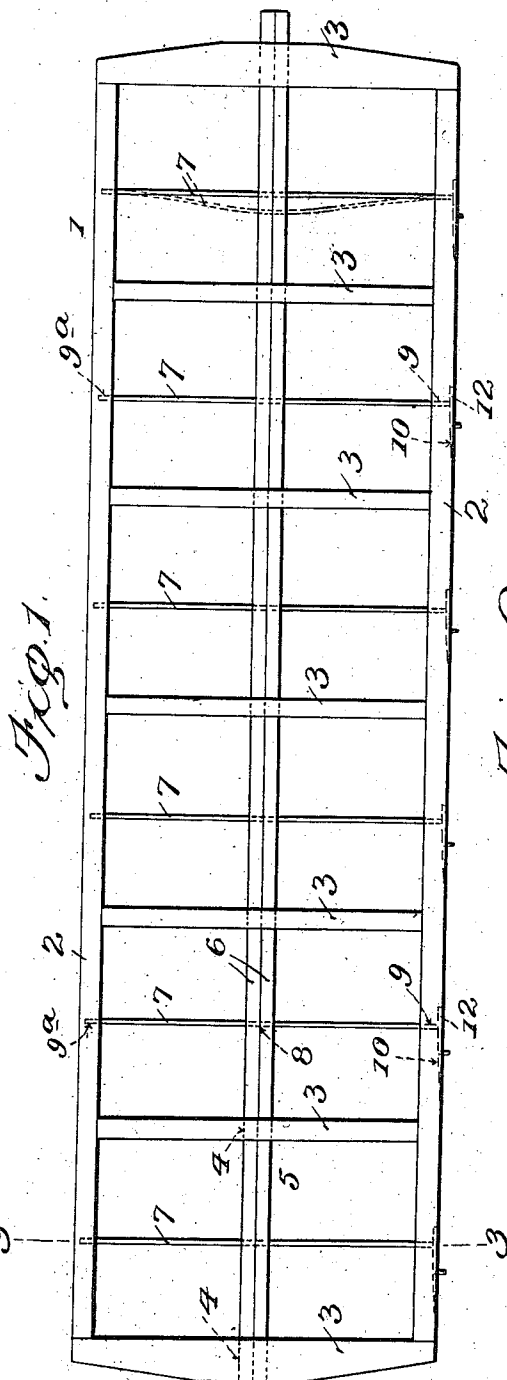


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DRAFT GEAR FOR RAILWAY CARS.
APPLICATION FILED FEB. 3, 1909.

960,778.

Patented June 7, 1910.



Witnesses

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DRAFT-GEAR FOR RAILWAY-CARS.

960,778.

Specification of Letters Patent.

Patented June 7, 1910.

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To all whom it may concern:

Be it known that I, GEORGE BARR, citizen of the United States, residing at La Center, in the county of Clarke and State of Washington, have invented certain new and useful Improvements in Draft-Gear for Railway-Cars, of which the following is a specification.

This invention comprehends certain new and useful improvements in railway cars, relating more particularly to draft appliances or gears therefor, and the invention has for its object an improved device of this character which is adapted to be readily applied to the frame of a car body; which affords means whereby the draft is yieldingly applied to the car so as to effect the absorption of the shocks incident to the starting of the train or the like; which embodies to a marked degree the characteristics of simplicity, durability and efficiency in construction and operation, and which possesses certain other advantages that will become at once apparent as the invention is hereinafter disclosed.

With this and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe, and then point out the novel features thereof in the appended claims.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a top plan view showing my improved draft appliance applied to the frame of a railway car; Fig. 2 is a side elevation thereof; and, Fig. 3 is a transverse section on the line 3—3 of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

My improved draft appliance is designed to be applied to the frame 1 of a car body, which may be of the usual or any approved construction, although it preferably consists of two longitudinal sills 2 that extend substantially the entire length of the car and are secured together in parallel relation by means of a plurality of cross-beams 3. These cross-beams are formed at their middle points with longitudinally alining

guide openings 4 in which a draw beam 5 is mounted for relative longitudinally sliding movement, the ends of the draw beam projecting beyond the extreme cross-beams 3 and being equipped with suitable coupling gears to admit of connection with the corresponding ends of the draw beams of the adjacent cars. This draw beam 5 is preferably hollow in order to secure the element of lightness, and for this purpose, said beam is composed of two channeled bars 6 which are arranged side by side with their channeled faces toward each other, as best seen in Fig. 3.

In order to yieldingly maintain the draw beam in position in the frame 1, I provide a plurality of spring or tension bars 7 that are disposed transversely of the longitudinal sills 2 and which are connected at their middle points to the draw beams 5 and, in the present instance, pass through transverse apertures 8 therein. These spring bars 7 are arranged to bend or yield by and upon the movement of the draw beam 5 and therefore are only connected to the frame 1 at their opposite ends which are seated in the respective pairs of transversely alining sockets 9 and 9^a provided at regular intervals in the opposing faces of the longitudinal sills 2, the cross bars 3 being disposed intermediate of each two adjacent sockets. The sockets 9 in one of the sills 2 extend transversely therethrough and are intersected by longitudinal recesses 10 formed in the opposite face of the sill. The longitudinal walls of these recesses are under-cut, as indicated at 11, and are arranged to engage plates 12 to slidably mount the same in the recesses, the plates being normally positioned in the recesses so as to extend over and substantially close the outer ends of the corresponding sockets 9.

In the practical operation of my improved draft appliance, it will be apparent that as the draft is applied to the beam 5 from the engine or the next car in front, the beam will slide longitudinally and forwardly and will yield sufficiently to cause the spring bars 7 to bend and assume substantially the positions illustrated in dotted lines in Fig. 1. By such yielding connection with the frame, it will be obvious that all jerks or other shocks incident to the travel of the train, may be absorbed by the draft appliance, so as to prevent such shocks from being transmitted to the body of the car, as is very disagreeable to

the passengers. Furthermore, this draft appliance will serve as a buffer, and inasmuch as the draw beam 5 extends longitudinally the entire length of the car, any number of spring bars 7 may be employed, according as found most desirable in practice, while both ends of the draft bar may be used for attachment to adjacent cars to obviate the necessity of duplicating the parts. In event of the spring bars 7 becoming broken from excessive strain, the same may be conveniently removed from position by sliding the corresponding plate 12 in the recess 10 so as to uncover the adjacent slot 9 and admit of the damaged bar being withdrawn laterally from engagement with the draft bar and the frame. By the reverse of the above operation, a new spring bar may be quickly substituted for the old one.

From the foregoing description, in connection with the accompanying drawing, it will be apparent that I have provided an improved draft appliance which may be advantageously employed on railway cars; although it is susceptible of application to vehicles generally; which embodies essentially a plurality of tension bars disposed transversely of the frame and connected to the draw beam; which possesses to a marked degree the characteristics of simplicity, durability and strength, and which consists of comparatively few parts that may be easily and cheaply manufactured and readily attached when desired.

Attention is also directed to the fact that the draw beams when coupled together, extend the entire length of the train of cars, so that the draft is yieldingly applied to each car independent of the other cars, thereby materially assisting in starting the train.

Having thus described the invention, what I claim is:

1. In a railway draft appliance, the combination of a car frame comprising transversely spaced side sills formed in their opposing faces at regular intervals with pairs of transversely alining sockets, and a series of cross beams connecting the side sills and disposed intermediate of each two adjacent sockets and formed at their middle points with longitudinally alining openings, of a longitudinal draw beam extending throughout the entire length of the car frame and slidably mounted in the said openings with

its ends projecting beyond the extreme cross beams of the series, the draw beam being formed with a series of transverse apertures arranged in the normal position of the draw beam in alinement with the respective pairs of sockets, and a series of spring bars extending transversely of the car frame with their ends seated in the sockets of the respective pairs and with their middle portions passing through the corresponding apertures in the draw beam, the spring bars being free to bend in both directions and being simultaneously bent in either direction by and upon the application of force to the draw beam.

2. In a railway draft appliance, the combination with a car frame comprising transversely spaced side sills formed in their opposing faces at regular intervals with pairs of transversely alining sockets, and a series of cross beams connecting the side sills and disposed intermediate of each two adjacent sockets and formed at their middle points with alining openings, of a longitudinal draw beam extending throughout the entire length of the car frame and slidably mounted in the said openings with its ends projecting beyond the extreme cross beams of the series, the draw beam being formed with a series of transverse apertures arranged in the normal position of the draw beam in alinement with the respective pairs of sockets, a series of spring bars extending transversely of the car frame with their ends seated in the sockets of the respective pairs and with their middle portions passing through the corresponding apertures in the draw beam, the spring bars being free to bend in both directions and being simultaneously bent in either direction by and upon the application of force to the draw beam, one of the sockets of each pair opening outwardly through the corresponding side sill to admit of the insertion and removal of the spring bars into and from the car frame, and detachable means for closing the outer ends of the last named sockets.

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

GEORGE BARR. [L. S.]

Witnesses:

C. F. MYERS,
J. MYERS.