C. E. ESTES.

DRAW BAR EQUALIZER.

APPLICATION FILED DEC. 22, 1910.

999,495. **Patented Aug. 1, 1911.**

Fig. 1.

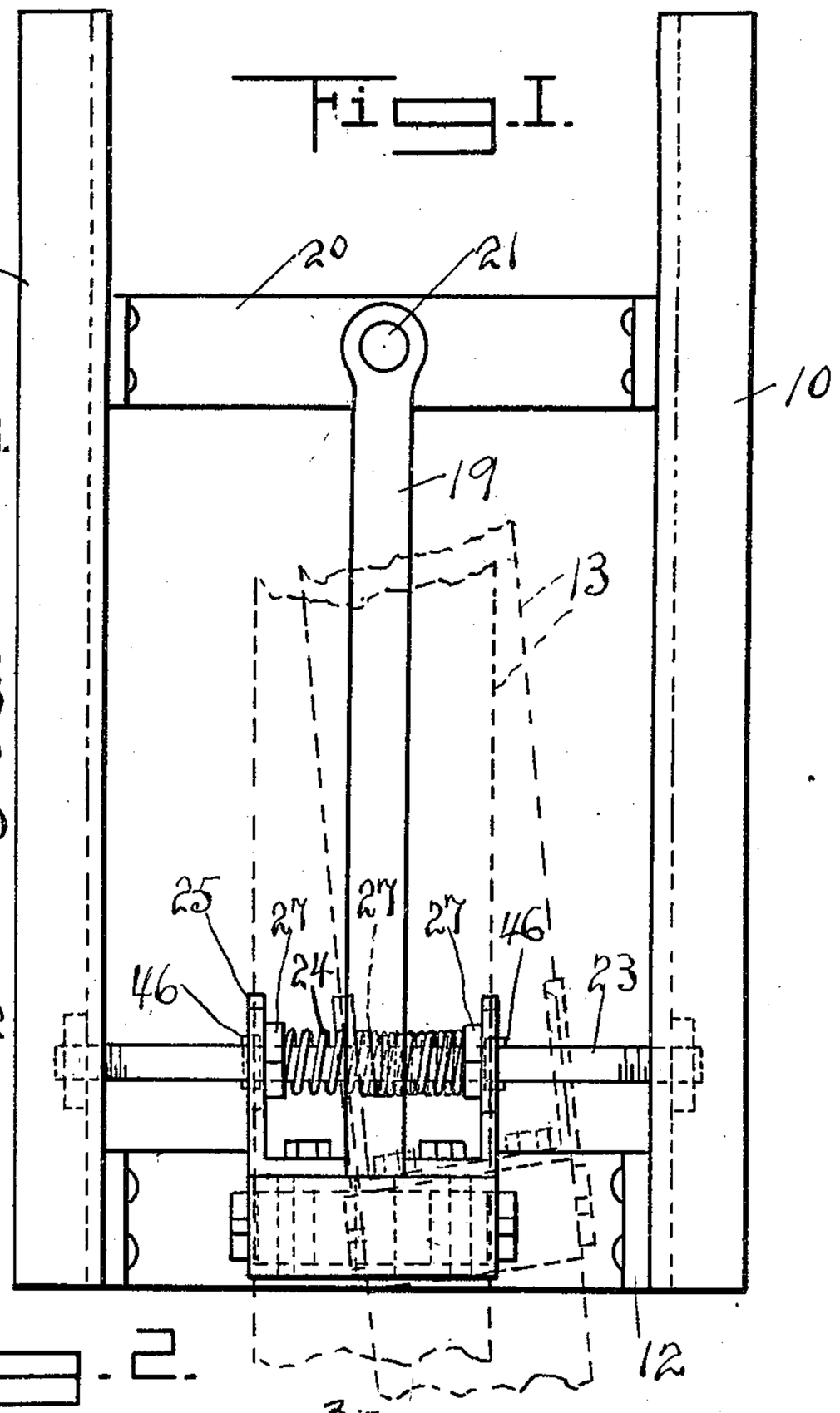


Fig. 3.

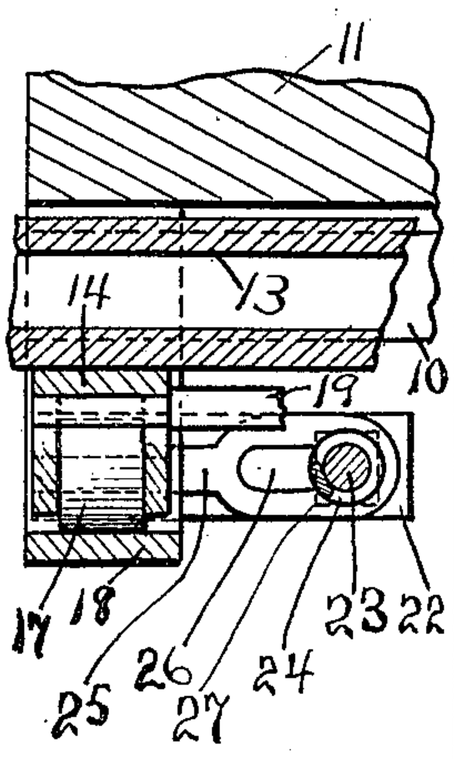


Fig. 2.

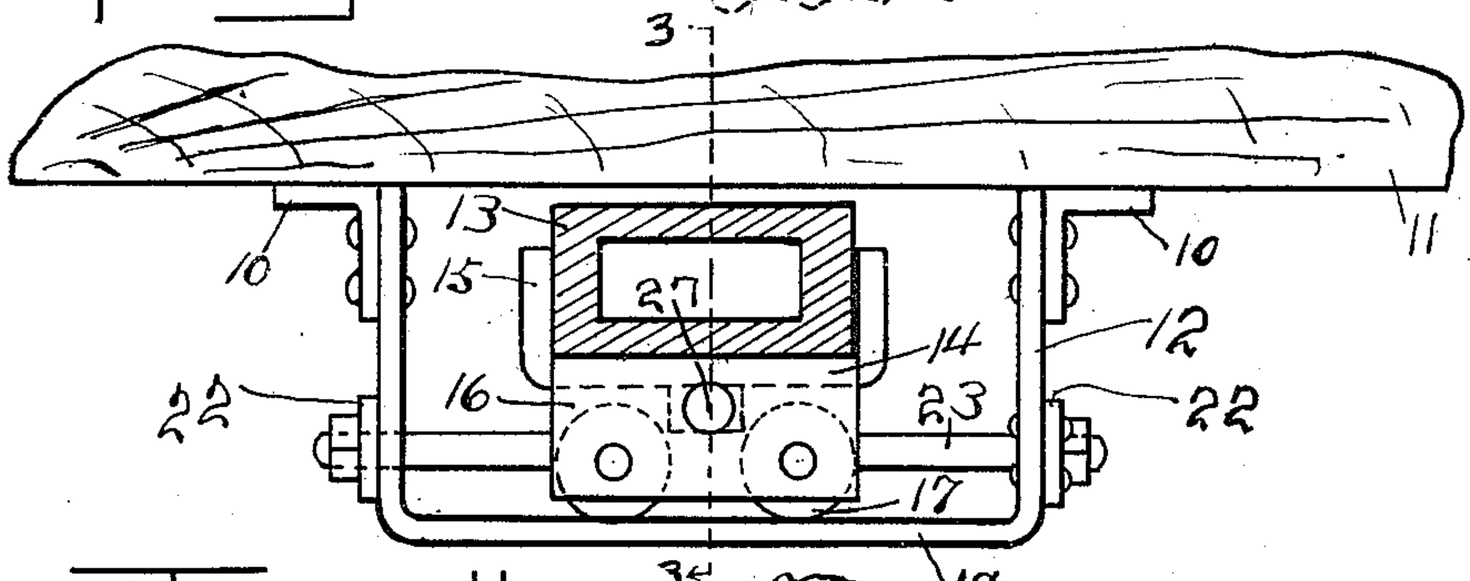
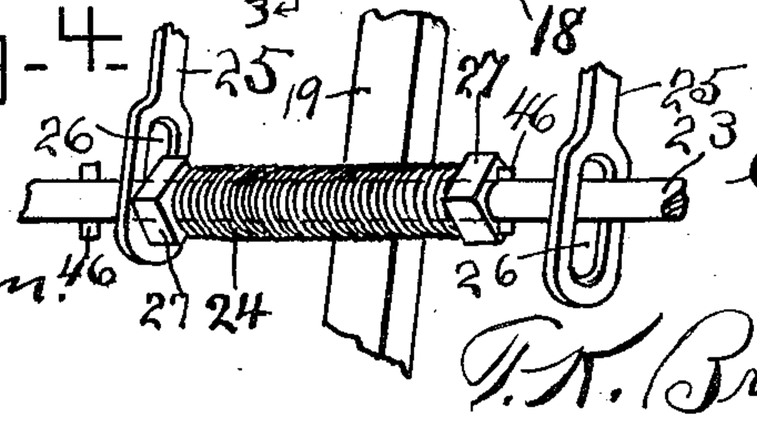


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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DRAW-BAR EQUALIZER.

999,495. Specification of Letters Patent. **Patented Aug. 1, 1911.**

Application filed December 22, 1910. Serial No. 598,777.

To all whom it may concern:

Be it known that I, CHARLES E. ESTES, a citizen of the United States, residing at Medusa, in the county of Albany and State of New York, have invented certain new and useful Improvements in Draw-Bar Equalizers, of which the following is a specification.

This invention relates to improvements in draw bar equalizers for railroad rolling stock.

In connection with the draw bars of railroad cars employed with any of the well known car couplers, it is evident that the draw head being pivoted and capable of slight lateral movement with respect to the cars, the coupler and draw head will be forced toward the sides of the car during the shifting in the positions of the latter in such a case for instance as when the train is rounding a curve.

It is desirable to automatically return the coupler and draw head to a central position after the same has been thus drawn from its normally central alinement and to accomplish such a result is the main object of the present invention.

A further object of the invention is to provide a simple and efficient means for centering a draw bar, which is easy and cheap to manufacture and which may also be employed as an attachment and readily secured to cars now in use in conjunction with the draw bars thereof.

With the above objects in view and others that will appear as the nature of the invention is better understood, the same consists in the novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings forming a part of this application and in which like designating numerals refer to corresponding parts throughout the several views: Figure 1 is a plan view of the device illustrating the same secured to and suspended from the metallic sills of a car, Fig. 2 is a front elevation of the device with the draw bar shown in section, Fig. 3 is a vertical longitudinal section taken upon line 3—3 of Fig. 2. Fig. 4 is a detail view of the spring actuating return mechanism.

Referring more specifically to the drawings, the draft or center sills 10, constructed of angle iron and positioned centrally beneath the car body 11 are disclosed with the central front sill or striking plate 12 in the form of a downwardly-extending yoke rigidly secured therebetween, in the form as shown or in any of the usual forms in which the draw bar 13 is movably positioned therein.

A carriage 14 is provided with oppositely arranged upwardly-extending brackets 15 and between which brackets and upon the carriage the draw bar 13 is adapted to rest. Between the down turned sides 16 of said carriage there are journaled a plurality of rollers 17 and by which the carriage is capable of sidewise movement upon the track portion 18 of said plate 12.

Rigidly secured to said carriage and here illustrated as extending transversely therethrough, a rearwardly-extending tongue 19 is pivoted to a strip 20 spanning the said sills 10—10 although said pivotal point 21 of the tongue may be mounted upon any convenient portion of the car.

Mounted rearwardly of said sill 12 and upon projecting brackets 22 carried thereby, there is rigidly mounted transversely of and at a point beneath the draw bar a bolt member 23 for accommodating the helical expansion spring 24 coiled therearound and the function of which will be hereafter referred to.

Ears 25 oppositely arranged and here shown integral are provided upon the carriage and said ears have alining oblong openings 26 in the ends thereof and through and out of contact with which the said bolt 23 extends.

In the normal position of the parts as shown in Fig. 1, it will be noted that at points through said bolt in substantial alinement with said ears 25 there are provided transverse pins 46 and over which without touching the same the ears 25 are adapted to move in either lateral direction. Said spring member 24 being positioned upon said bolt and between said ears is provided with a stop washer 27 at each end thereof of sufficient size to prevent its passage through the openings 26 of the ears and thus said spring normally holds said washers in contact with the opposite inner faces of the ears.

Further referring to Fig. 1, the complete operation of the device in automatically centering the draw bar 13 will be at once ap-

parent. A sidewise movement for instance toward the right and moving the draw bar 13 and its mounting elements to the position shown in dotted lines, results in allowing the right hand ear 25 by reason of its oblong opening 26 to pass over the pin 46 of the bolt 23, while the right hand stop washer 27 is held from movement by the said pin 46 which results in forcible compression of the spring 24 by reason of the power exerted thereagainst by the left hand ear 25 in forcing its respective washer 27 inwardly and a release of the force so moving the draw head leaves the spring 24 in a position to exert expansive force and thus move the carriage 14 with the draw head 13 thereon upon the rollers 17 toward the left to the normal central position of the parts with respect to the car.

While the forms of the invention herein shown and described are what are believed to be preferable embodiments thereof, it is nevertheless to be understood that minor changes may be made in form, proportion and details of construction without departing from the spirit and scope of the invention, as set forth in the appended claims.

I claim:—

1. A device of the class described comprising in combination with a draw bar, of a lateral movable carriage, upwardly-extending ears adapted to receive the draw bar therebetween, downwardly-extending sides provided upon said carriage, a plurality of rollers journaled in said sides, and a means upon which said rollers are movable, rearwardly-extending ears provided upon said carriage and having alining perforations therethrough, a rigidly held bolt passed through said perforations, a helical spring surrounding said bolt and positioned between said ears and adapted to normally centralize said carriage upon any forcible lateral movement thereof.

2. A device of the class described comprising in combination with a draw bar, of a lateral movable carriage, upwardly-extending ears adapted to receive the draw bar therebetween, downwardly-extending sides provided upon said carriage, a plurality of rollers journaled in said sides, and a means upon which said rollers are movable, a rigidly held bolt positioned rearwardly of said carriage, projecting ears upon said carriage and alining oblong openings in each of said ears and receiving said bolt therethrough and out of contact with said ears, pins upon said bolt in alinement with said ears when in their normal positions, a helical spring upon said bolt and normally exerting outward pressure against the inner faces of said ears, said spring adapted for compression upon the lateral movement of said carriage.

3. A centering means for a draw bar comprising a carriage upon which the draw bar is mounted, rollers upon said carriage positioned beneath the draw bar, a track upon which said rollers are adapted to move upon a lateral motion of said carriage, rearwardly-extending integral ears projecting from opposite corners of said carriage and having enlarged alining openings in their free ends, a rigidly positioned bolt of less diameter than said openings positioned through the latter rearwardly of the carriage, and a tongue rigidly secured through said carriage between the rollers thereof and extending rearwardly beyond said bolt, a rigid pivot centrally positioned and upon which said tongue is pivoted, and a resilient means cooperating with said ears and bolt for normally retaining said carriage in a central position.

4. A centering means for a draw bar comprising a carriage upon which the draw bar is mounted, rollers upon said carriage positioned beneath the draw bar, a track upon which said rollers are adapted to move upon a lateral motion of said carriage, rearwardly-extending integral ears projecting from opposite corners of said carriage and having enlarged alining openings in their free ends, a rigidly positioned bolt of less diameter than said openings positioned through the latter rearwardly of the carriage, and a tongue rigidly secured through said carriage between the rollers thereof and extending rearwardly beyond said bolt, a rigid pivot centrally positioned and upon which said tongue is pivoted, a coil spring encircling said bolt, washers freely movable upon said bolt at each end of said spring and normally contacting the opposite inner faces of the ears, said washers being incapable of movement through said perforations, projecting pins through said bolt and alining with said ears at the normally central position of the carriage, said pins adapted to freely pass through said perforations and said spring adapted to return said carriage to a normal central position upon a forcible lateral movement thereof.

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

CHARLES E. ESTES.

Witnesses:
JEROME SPALDING,
JAY GOULD.