No. 650,099. Patented May 22, 1900.

H. H. SESSIONS.

CAR CONSTRUCTION.

(Application filed Nov. 10, 1899.)

(No Model.) 2 Sheets—Sheet 1.

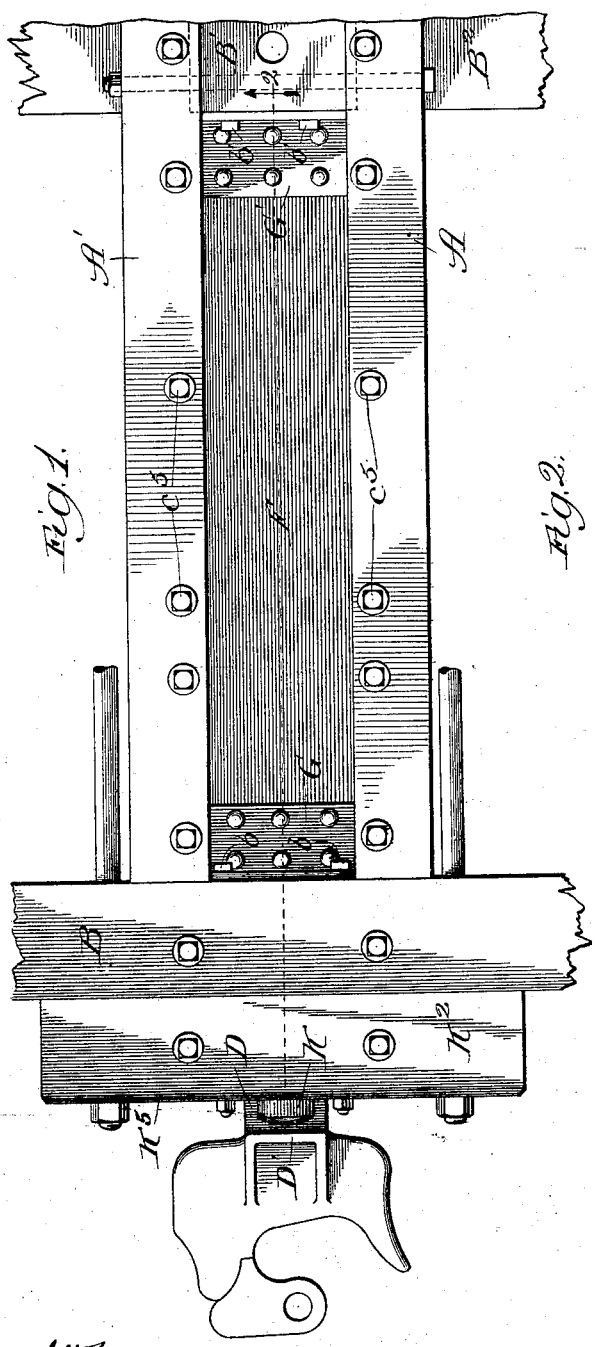

FIG. 1.

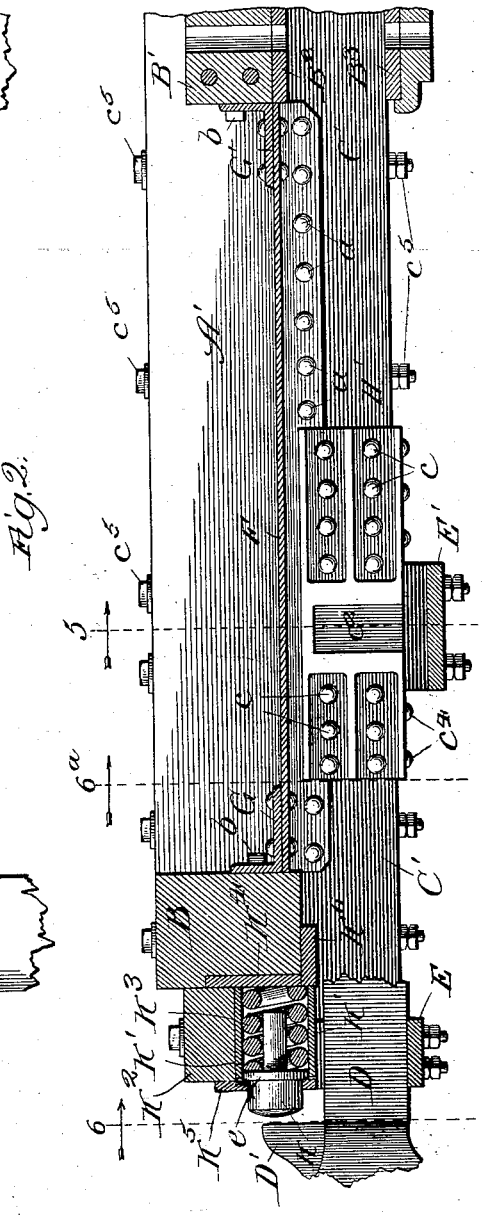

FIG. 2.

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Fig. 3.

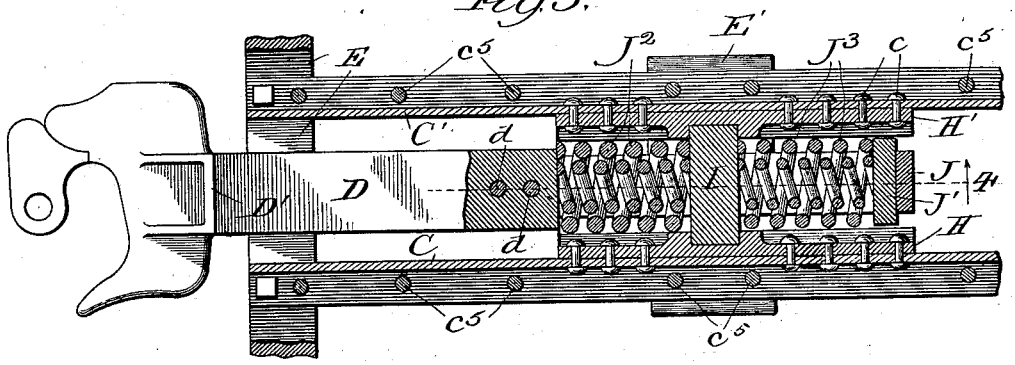


Fig. 4

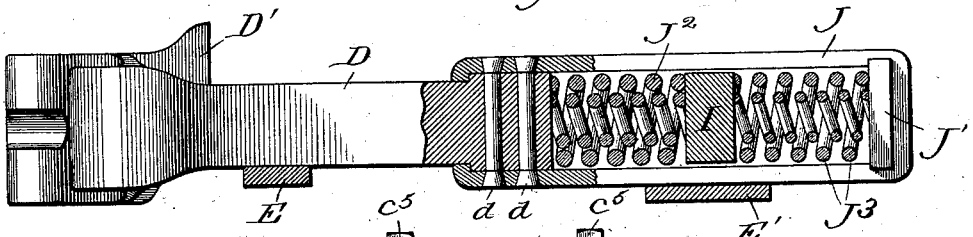


Fig. 5.

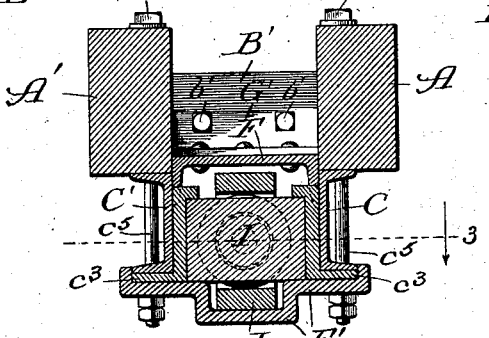
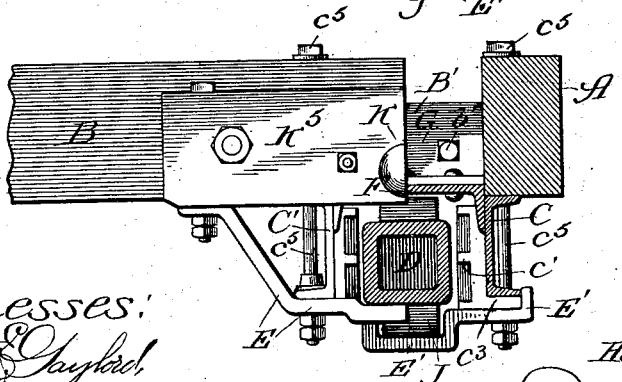


Fig. 6.



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UNITED STATES PATENT OFFICE

HENRY H. SESSIONS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE STANDARD COUPLER COMPANY, OF NEW YORK, N. Y.

CAR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 650,099, dated May 22, 1900.

Application filed November 10, 1899. Serial No. 736,511. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. SESSIONS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car Construction, of which the following is a specification.

My invention relates particularly to an improvement in draft-rigging and buffing mechanism for use more especially in freight-car construction.

My primary object is to provide improved means for yieldingly securing the draw-bar to the draft-beams and sills of the car-body, and also coacting buffing mechanism which shall replace the ordinary dead-block to the extent that a dead-stop shall be completely avoided under conditions short of a very severe accidental collision.

In the accompanying drawings, Figure 1 is a broken plan view of the substructure or sills of a car-body and the draft-beams thereof equipped with my improvements; Fig. 2, a broken vertical longitudinal section on line 2 of Fig. 1; Fig. 3, a plan section on line 3 of Fig. 5; Fig. 4, a vertical section on line 4 of Fig. 3; Fig. 5, a transverse vertical section on line 5 of Fig. 2; and Fig. 6, a composite sectional view, the left-hand portion being taken at the line 6 of Fig. 2 and the right-hand portion being taken at the line 6^a thereof.

A A′ represent the center sills; B, the end sill; B′, a block joining the center sills above the body-bolster, the ends of said block being set into recesses in said sills, as indicated in dotted lines in Fig. 1; B^2 B^3, the upper and lower metallic members, respectively, of the body-bolster; C C′, metallic draft-beams, preferably in the present construction of channel form; D, the draw-bar, provided at its head with an upwardly-projecting lug or horn D′ and supported by carrier-yokes E E′; F, a horizontally-disposed channel-bar having downturned flanges and extending from the end sill to the block B′, its web portion occupying the space (about nine inches wide) between the lower portions of the center sills and its flanges being secured to the webs of the draft-beams by rivets *a*; G G′, short transversely-extending angles riveted to the web of the channel-bar F and secured by bolts *b* *b*′ to the end sill B and block B′; H H′, metallic draft-plates or draft-spring pockets secured to the webs of the channel-bars C C′ by rivets *c*, Fig. 3, said plates being provided with longitudinal ribs or guides *c*′, with vertical transverse recesses c^2, and with outturned lower flanges c^3, Fig. 5, which latter extend beneath the lower flanges of the channel-bars C C′ and are secured thereto by rivets c^4 and also by certain of the bolts c^5, which serve to secure the draft-beams to the center sills; I, Figs. 3 to 5, a fixed block having its ends set into the recesses c^2 and serving to transmit pressure to and from the draw-bar springs; J, a spring-retaining loop or clevis secured to the inner end of the draw-bar by rivets *d*; J′, a spring-bearing plate for said loop; J^2 J^3, buffing and draft springs, respectively, the former being confined between the block I and the outer end of the slot formed by the loop J and the latter between the block I and the inner end of said slot; K, a movable buffer-head or plunger which fits within a sleeve or bushing K′, set into a block K^2, and bears against a powerful buffer-spring K^3, the latter in turn bearing against a facing or spring-bearing plate K^4 set into the front face of the end sill B; K^5, a retaining face-plate provided with a perforation through which the outer end of the stem or plunger K projects and which engages a collar *e* on the plunger to hold the latter in place, and K^6 a chafing-plate on the lower face of the sill B directly above the draw-bar.

As shown in Fig. 2, the inner or rear end of the channel-bar F abuts against the metallic member B^2, and the latter rests upon the draft-beams C C′. The buffer-head-engaging lug D′ of the draw-bar is preferably normally out of contact with the buffer-head K, and said lug comes into contact with said buffer only after the spring J^2 has been compressed a certain distance. The powerful spring K^5 coacts with the spring J^2 to prevent the lug D′ from reaching a dead-stop under normal working conditions.

It will be observed that force is transmitted from the draft-beams to the car-sills, and vice versa, through the bolts c^5 and also through

the angles G G′, the latter virtually forming a part of the channel-bar F, which is thus set in between the center sills, the end sill B, and block B′.

From the foregoing description it will be understood that when the draw-bar is drawn forward the rear end of the loop J presses the spring J^3 against the rigid block I, from whence the moving force is distributed through the plates H H′ to the draft-beams, and from thence directly to the car-sills through the bolts c^4, and indirectly to said sills through the channel-bar F and angles G G′, the latter angle serving particularly in the draft action and the former in the buffing action. On the other hand, when the draw-bar is forced in it presses the spring J^2 against the block I, from whence the force is transmitted to the sills, as stated. After a certain compression of the spring J^2 the spring K^3 is compressed and transmits force directly to the sills of the car.

By preference the carrier-yoke E′ passes beneath the flanges c^3 of the draft-plates H H′, as shown in Fig. 5, and is provided with upturned flanges which embrace the lower flanges of the draft-beams. As appears also from the last-named figure, the horizontally-disposed clevis J, which occupies a vertical plane, has a wide enough horizontal channel or slot to receive the block I without contacting therewith, the draw-bar and clevis being supported and guided by the carrier-yokes E E′.

The flanges of the channel-bar F are preferably cut out or recessed to receive portions of the draft-plates H H′, as appears in Figs. 2, 5, and 6, as such a construction relieves to a large extent the shearing action on the rivets and bolts of the draft-plates.

No limitation is intended by the detailed description given except as shall appear from the appended claims.

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

1. In a car, the combination with the sills, draft-beams, and a block joining the center sills, of a channel-bar provided with downturned flanges riveted to said draft-beams and secured at its outer end to the end sill, and at its inner end to said block, bolt connection between draft-beams and center sills, a draw-bar, and spring connection between draw-bar and draft-beams, substantially as and for the purpose set forth.

2. In a car, the combination with the sills, draft-beams, and a block joining the center sills, of a channel-bar provided with downturned flanges riveted to said draft-beams, angles riveted to said channel and secured to the end sill and to said block, bolt connection between draft-beams and center sills, a draw-bar, and spring connection between draw-bar and draft-beams, substantially as and for the purpose set forth.

3. In a car, the combination with the sills and draft-beams, of a draw-bar provided with a clevis lying in a vertical plane and provided with a channel, a block extending through said channel and secured at its ends to said draft-beams, said block being out of contact with the walls of said channel, springs confined between said block and the ends of said channel, and carrier-yokes supporting and acting as guides for said clevis, substantially as and for the purpose set forth.

4. In a car, the combination with the sills and draft-beams, of a channel-bar between the center sills, having downturned flanges riveted to said draft-beams, said flanges being provided with recesses, draft-plates set into said recesses and secured to said draft-beams, a draw-bar, and spring connection between said draw-bar and draft-plates, substantially as and for the purpose set forth.

5. In a car, the combination of an end sill, center sills, a block B′, connecting the center sills, a metallic body-bolster member B^2, a channel-bar F having downturned flanges and abutting at its inner end against said member B^2, angles G G′ securing said channel to the end sill and block B′, metallic draft-beams extending beneath the member B^2 and secured to said center sills and to the downturned flanges of said channel-bar, a draw-bar, and spring connection between draw-bar and draft-beams, substantially as and for the purpose set forth.

6. In a car, the combination with an end sill provided with a spring-bearing plate K^4, a block K^2 containing a metallic sleeve K′, a spring K^3, a buffer-head provided with a flange, a retaining-plate K^5, a draw-bar provided at its head with a lug D′, draft-beams, and spring connection between the inner end of said draw-bar and the draft-beams, substantially as and for the purpose set forth.

HENRY H. SESSIONS.

In presence of—
D. W. LEE,
M. J. FROST.