

No. 810,805.

PATENTED JAN. 23, 1906.

H. M. PFLAGER.
DRAFT GEAR FOR RAILROAD CARS.

APPLICATION FILED NOV. 9, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

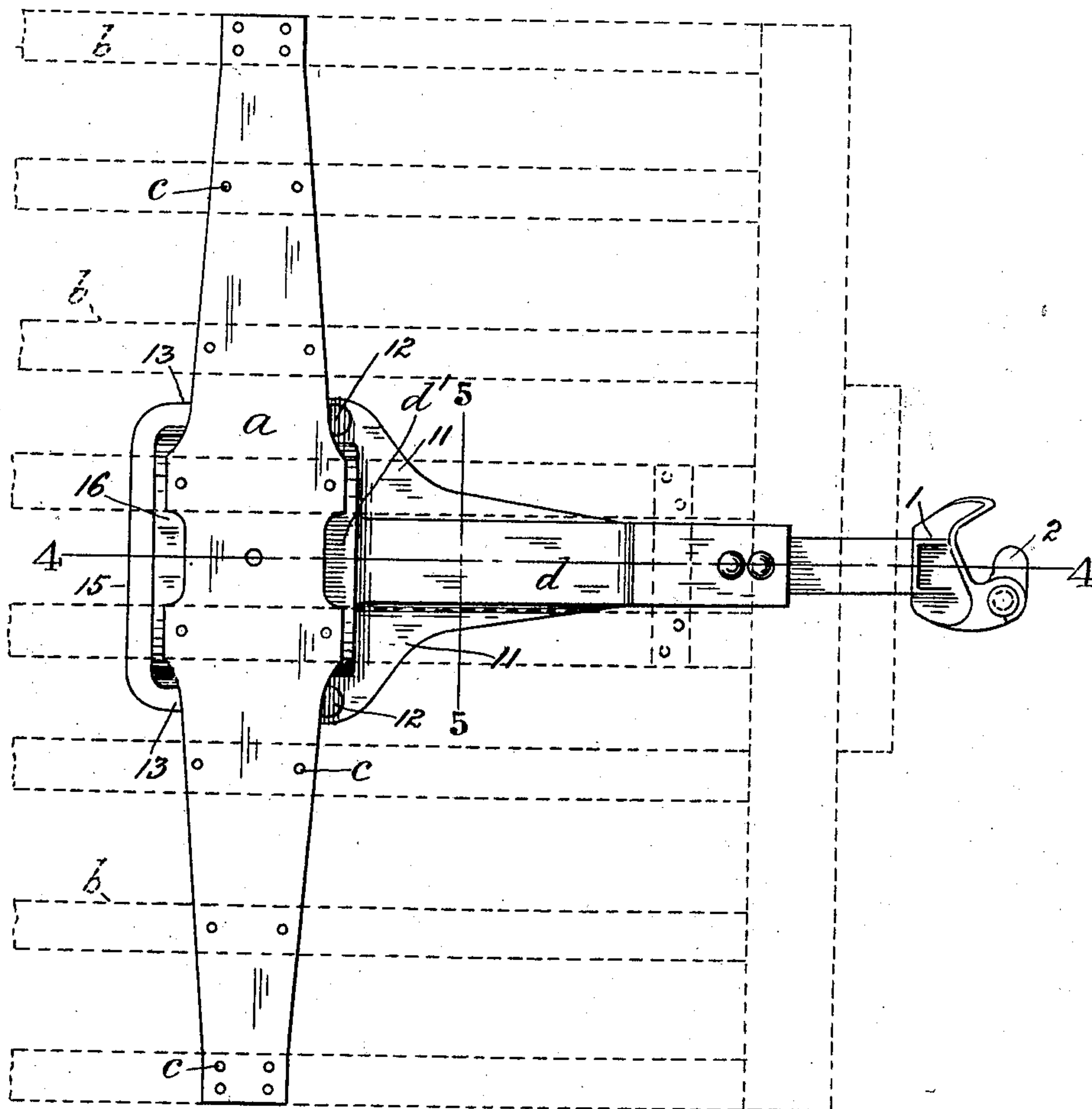
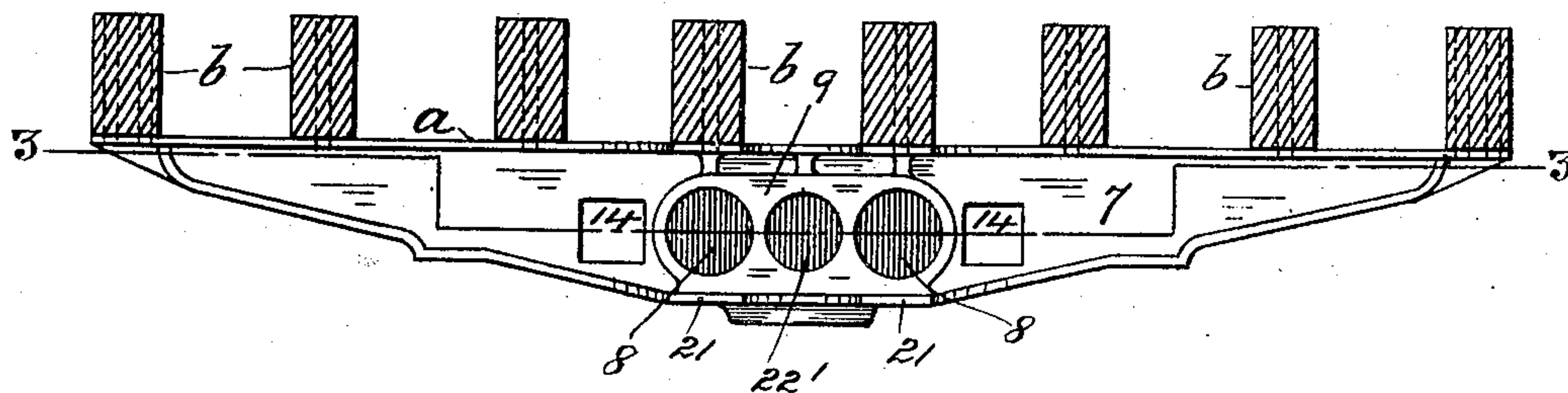


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

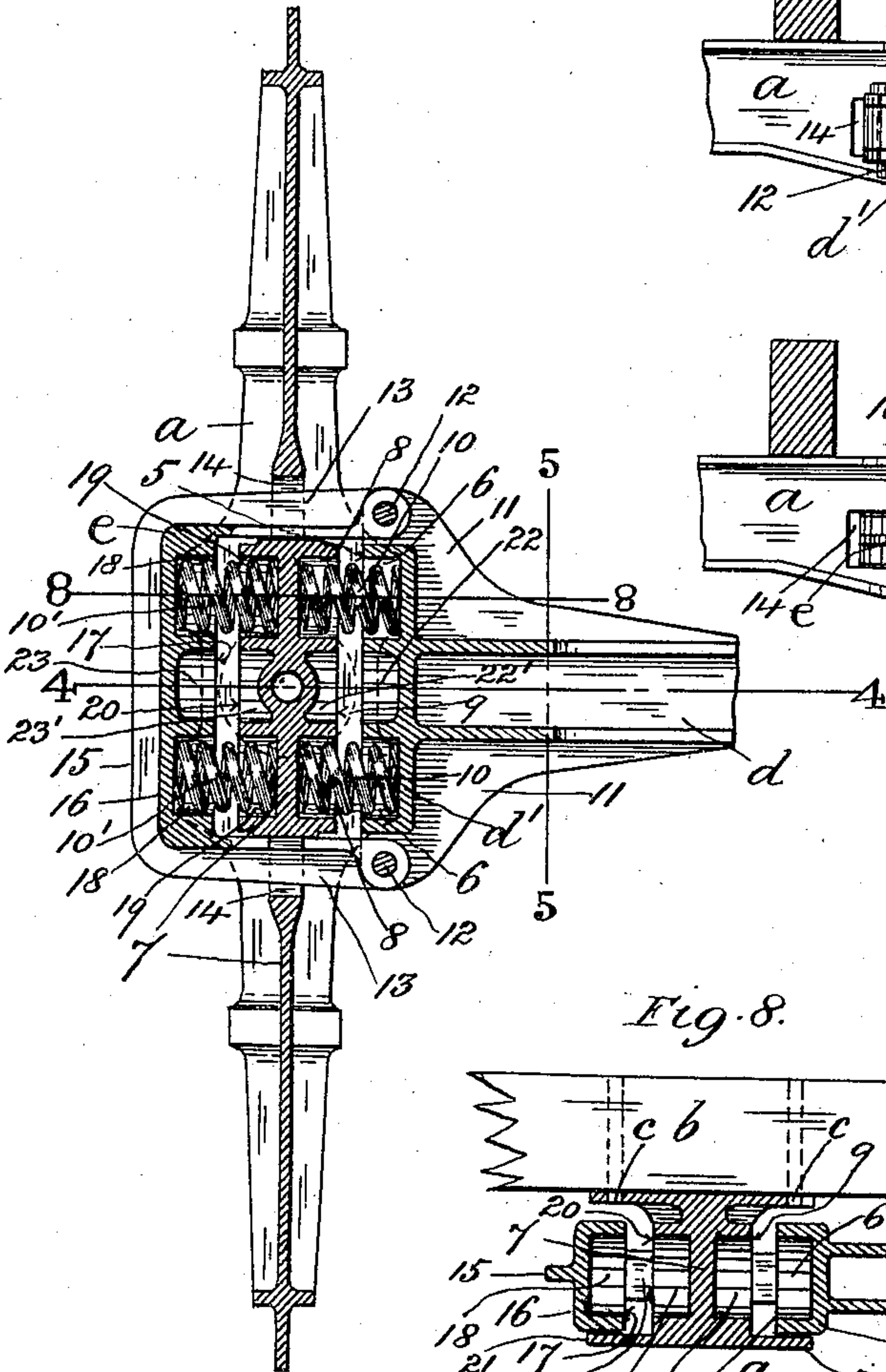


Fig. 5.

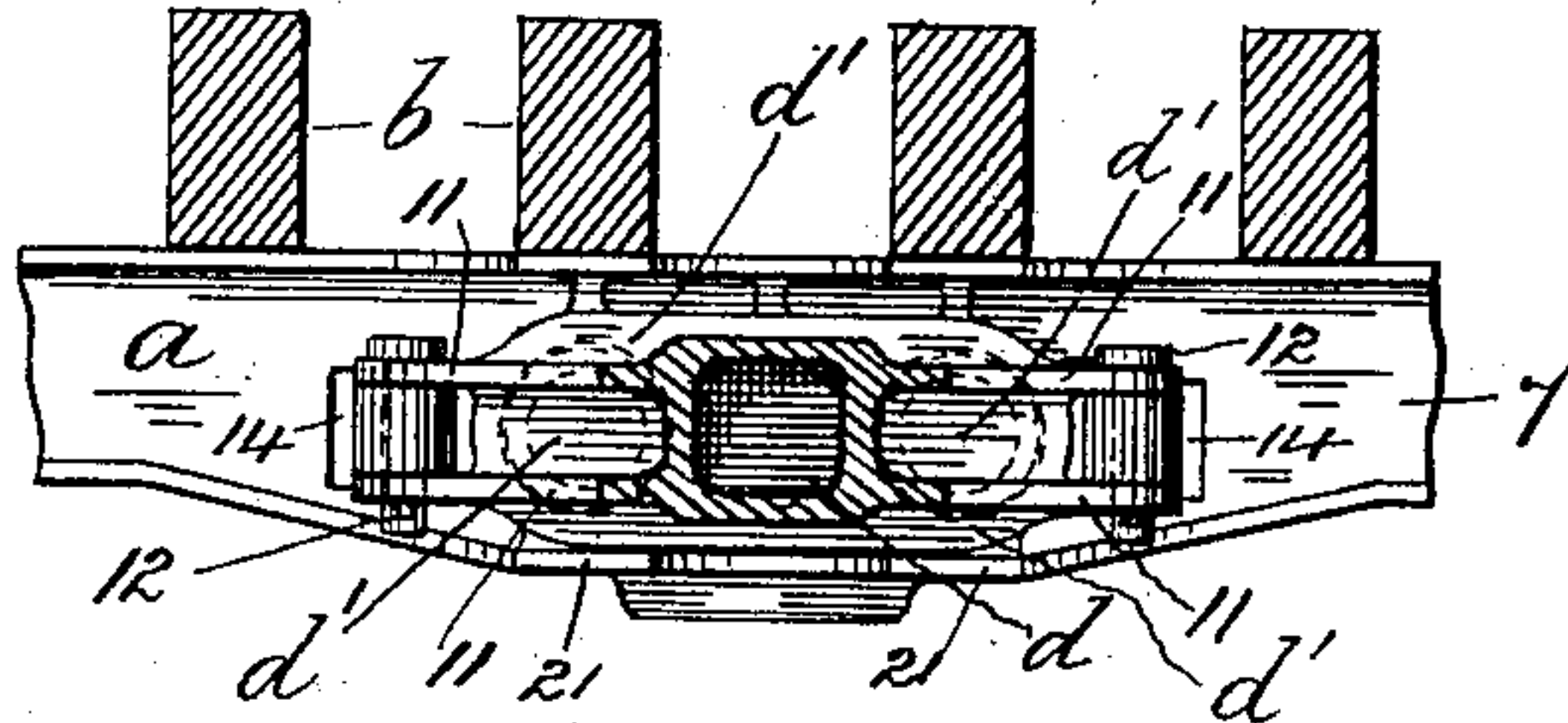


Fig. 6.

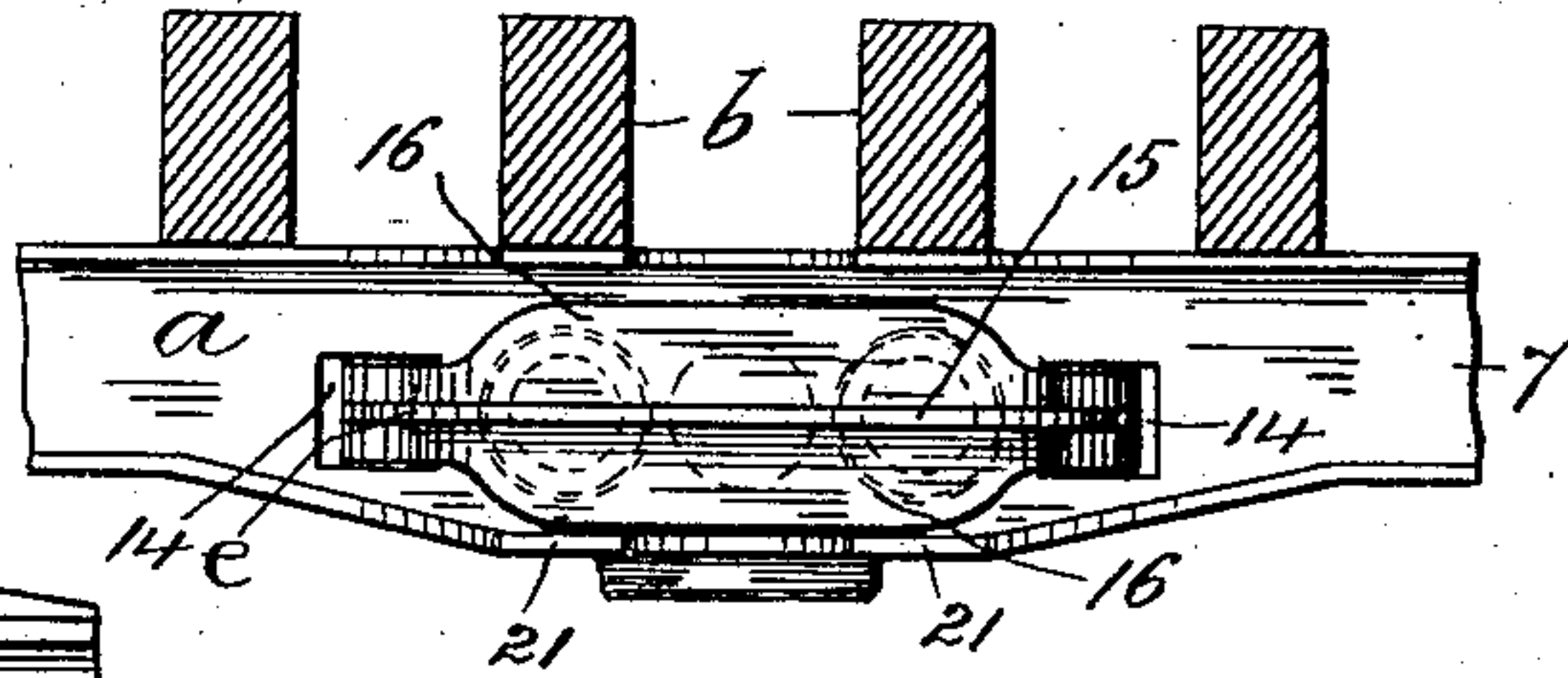


Fig. 8.

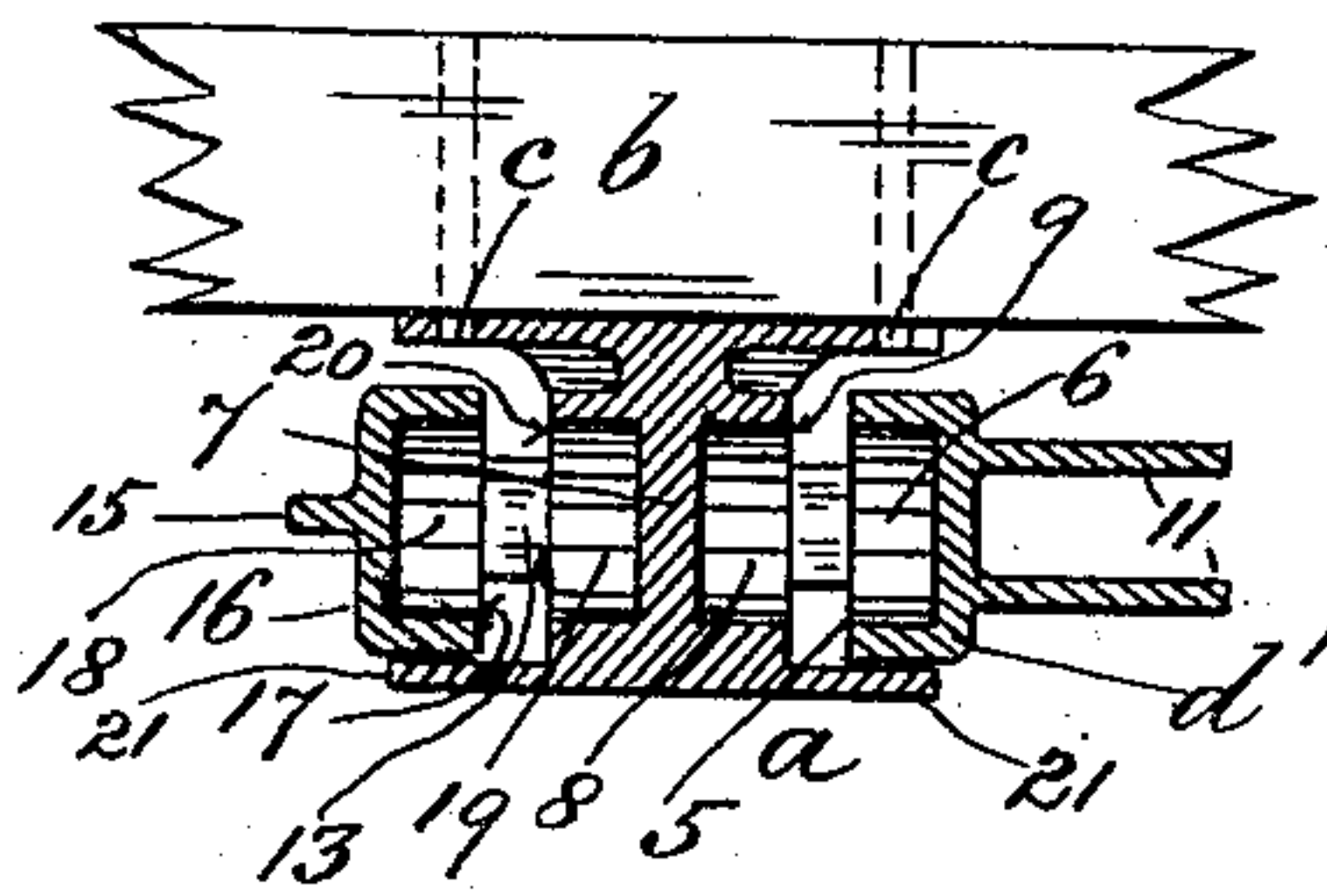


Fig. 7.

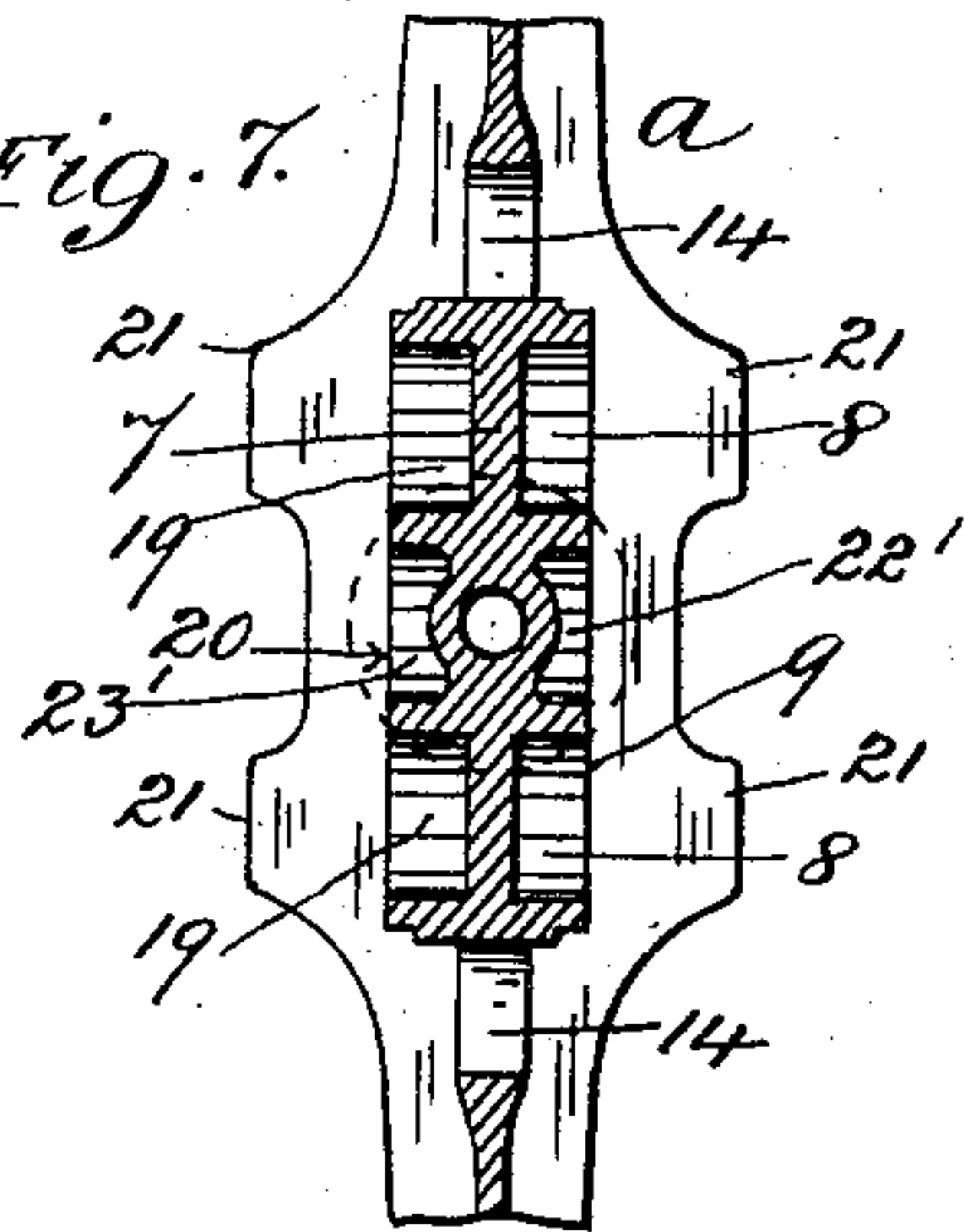
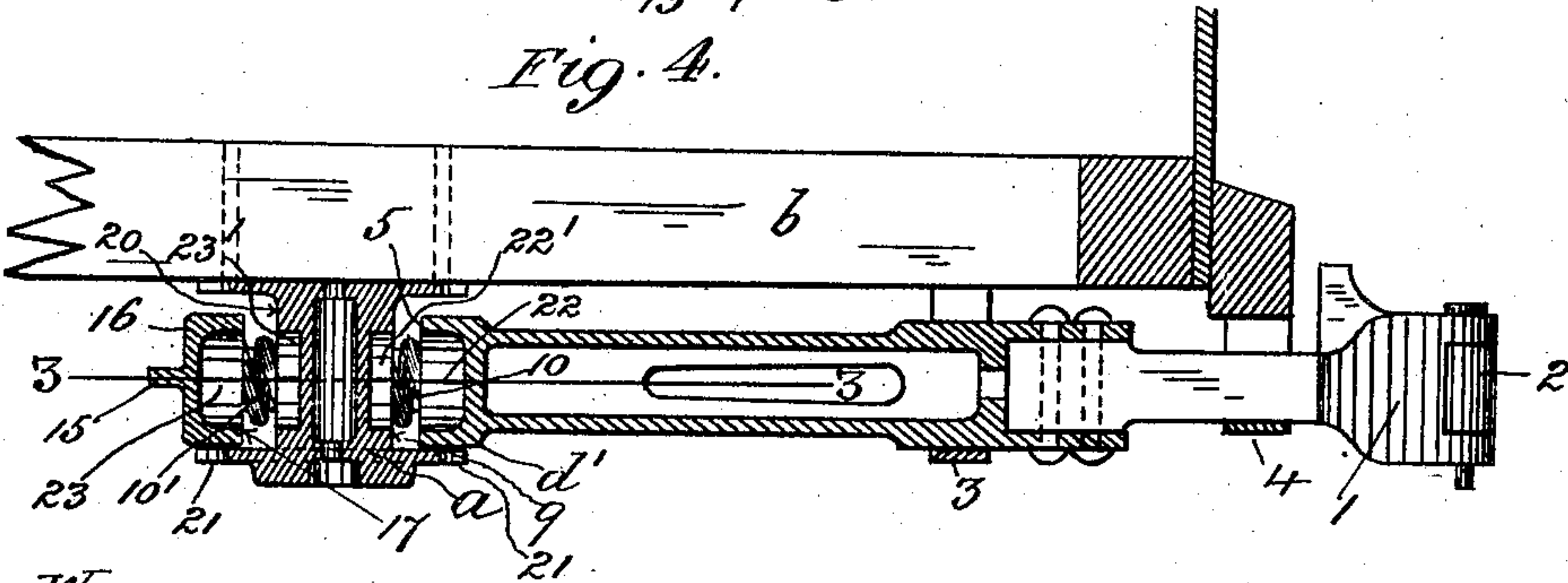


Fig. 4.



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UNITED STATES PATENT OFFICE.

HARRY M. PFLAGER, OF ST. LOUIS, MISSOURI.

DRAFT-GEAR FOR RAILROAD-CARS.

No. 810,805.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed November 9, 1905. Serial No. 286,578.

To all whom it may concern:

Be it known that I, HARRY M. PFLAGER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Draft-Gear for Railroad-Cars, of which the following is a specification.

My invention, which is in the nature of an improvement on that for which Letters Patent of the United States were granted to me January 10, 1905, No. 779,559, for an improvement in draft-gear for railroad-cars, relates to that class of draft-gear in which the draw-bar, with its follower-plates and draft-springs, is combined directly with the body-bolster without the use of draw-timbers and separate housings for the springs with their respective fastenings as ordinarily constructed, and has for its object to simplify the construction and to apply the strain of the draft-gear directly to the principal member or strongest part of the body-bolster.

The invention consists in features of novelty as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 is a top plan view of my improved draft-gear as applied to a car-body bolster; Fig. 2, a front side elevation of the bolster as seen transversely to the car-sills from the right in Fig. 1, omitting the draft-gear; Fig. 3, a horizontal section through the draft-gear and combined body-bolster on line 3 3 in Figs. 2 and 4; Fig. 4, a vertical longitudinal section through the bolster and draft-gear, partly in side elevation, on line 4 4 in Figs. 1 and 3; Fig. 5, a transverse section through the draw-bar on line 5 5 in Figs. 1 and 3, showing the middle portion of the bolster combined therewith in elevation corresponding to Fig. 2; and Fig. 6, an inner end view of the draft-gear, showing the middle portion of the bolster combined therewith in corresponding side elevation; Fig. 7, a horizontal section through the middle portion of the bolster corresponding to Fig. 3, omitting the draft-gear; and Fig. 8, a vertical longitudinal section through the draft-gear on line 8 8 in Fig. 3, omitting the "draft-springs" and "buffing-springs."

Like letters and numerals of reference denote like parts in all the figures.

a represents the car-body bolster, which in the present case is preferably made I-shaped in cross-section of cast-steel integral throughout and secured to the car-sills *b* (indicated

by broken lines in Fig. 1) by bolts (not shown) which pass through the holes *c* in the bolster *a* and through the sills *b* in the usual well-known manner.

d is the draw-bar, having a suitable draw-head 1 and coupler 2, supported at their front portions, respectively, by carry-irons 3 and 4. The draw-bar *d* is formed or provided at its inner end with a head *d'*, which is arranged horizontally across or T-wise thereto with its outer face 5 opposite to the front side of the bolster *a*. In the face 5 are formed two preferably cylindrical pockets or housings 6, which are parallel to each other in the same horizontal plane and equidistant from the longitudinal center of the draw-bar *d*. From the front side, preferably of the middle upright web (or other suitable body member) 7, of the bolster *a* project two cylindrical pockets or housings 8, which are similar and opposite to the housing 6 and in central alinement therewith, the space or clearance between the face 5 of the head *d* and the face 9 of the housing 8 being equal to the buffing play of the draw-bar *d*. Within the housings 6 and 8 are placed the buffing-springs 10, which bear at their ends, respectively, against the bottoms of the housings 6 and 8 in the normal position of the draw-bar *d*, as seen particularly in Fig. 3.

From each end of the head *d'* project, preferably, two parallel horizontal webs or flanges 11, which extend therefrom along the sides of the draw-bar *d* and strengthen the junction therewith of the head *d'*. The head *d'*, with the webs or flanges 11, is preferably integral with the draw-bar *d*, as shown, but may be of separate construction and bolted or otherwise fixed thereto, if desired. Between the webs or flanges 11, beyond the ends of the head *d'*, are jointed by pins 12 the free ends of a yoke *e*, which is preferably T-shaped in cross-section and arranged in the same plane with the draw-bar *d* and its head *d'*, the arms or sides 13 of the yoke *e* being adapted to slide through openings 14, formed therefor transversely through the middle web (or other member) 7 of the bolster *a*, or, if desired, the yoke *e* may be jointed directly to the ends of the head *d'* or to lugs thereon.

On the inside face or edge of the bar 15, which connects the arms or sides 13 of the yoke *e* together at their other ends, is formed (or fixed,) preferably integrally therewith a block 16, in the face 17 of which opposite to the rear side of the bolster *a* are formed two

cylindrical pockets or housings 18, which are parallel to each other in the same horizontal plane and in central longitudinal alinement to the housings 6 and 8, before described, while from the rear side of the middle web (or other member) 7 of the bolster *a* project two cylindrical pockets or housings 19, which are similar and opposite to the housings 18, the space or clearance between the face 17 of the block 16 and the face 20 of the housings 19 being equal to the draft play of the draw-bar *d*. Within the housings 18 and 19 are placed the draft-springs 10' in a similar manner to the buffing-springs 10.

For maintaining the horizontal position of the draw-bar *d* with its head *d'* and the block 16 with the yoke *e* during their forward and rearward movements the bottom member (or thereabout) of the bolster *a* is formed with outwardly-projecting flanges or brackets 21, on which the head *d'* of the draw-bar *d* and the block 16 of the yoke *e* bear and ride at all times.

In operation when pulling on the draw-bar *d* the block 16, with the yoke *e*, is drawn forward, and in so doing compresses the draft-springs 10' between the block 16 and the middle web 7 of the bolster *a* on its rear side and simultaneously releases the head *d'* of the draw-bar *d* from the buffing-springs 10, which lie free within their housings 6 and 8. In the buffing operation of the draw-bar *d* its head *d'* is pushed rearward, so as to compress the buffing-springs 10 against the front side of the web 7 of the bolster *a* and at the same time release the block 16 of the yoke *e* from the draft-springs 10', which lie idle within their housings 18 and 19.

By this invention the usual follower-plates are dispensed with and the pressure of the springs applied directly to the main body or strongest part of the bolster (instead of to flanges or abutments at the outer edges of the bolster, as in the said patent) and thence uniformly to the entire series of car-sills *b*, thereby diminishing the danger of the draft-gear collapsing in the case of sudden shock thereto.

It is to be here noted that when the limit of compression of the draft and buffing springs is reached further compression thereof is prevented by the faces 5 and 9 and 17 20 of their respective housings bearing against

each other, and thereby distributing the strain of the draft-gear over a larger surface of the bolster and that between the housings 6 of the head *d'* is formed a middle pocket 22, which is opposite to a similar pocket 22', between the housings 8 of the bolster *a*, whereby, if desired, an additional buffing-spring may be placed therein and similarly with respect to the middle pockets 23 23' between the housings 18 and 19 of the block 16 and bolster *a*, respectively.

I do not limit myself to the particular form and material of the bolster *a* described and shown on the drawings, as the same arrangement of draft-gear is applicable to other forms of body-bolster by modifying its constructive details accordingly, care being taken in all cases to form the housings 8 and 19 for the corresponding ends of the buffing and draft springs, respectively, in the body or principal resisting member of the bolster for insuring a uniform distribution of the strain of the draft-gear and durability of its parts.

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

In draft-gear for a railroad-car, the combination with the car-body bolster, of a draw-bar having a suitable coupler, a cross-head on the inner end of the draw-bar opposite to the front side of the bolster, "buffing-springs" movable in and between housings therefor in the face of the cross-head, and in the front side of the bolster, a yoke jointed at its ends to the cross-head and slidable through the bolster transversely thereto, a block straddled by the said yoke opposite to the rear side of the bolster and adapted to be engaged by the said yoke, "draft-springs" movable in and between housings therefor in the face of the said block, and in the rear side of the bolster, flanges projecting from the bolster beneath the said block and cross-head respectively, and means for securing the bolster to the car-body, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY M. PFLAGER.

Witnesses:

EDWARD W. FURRELL,
ELIZABETH C. TOUHEY.