

No. 783,379.

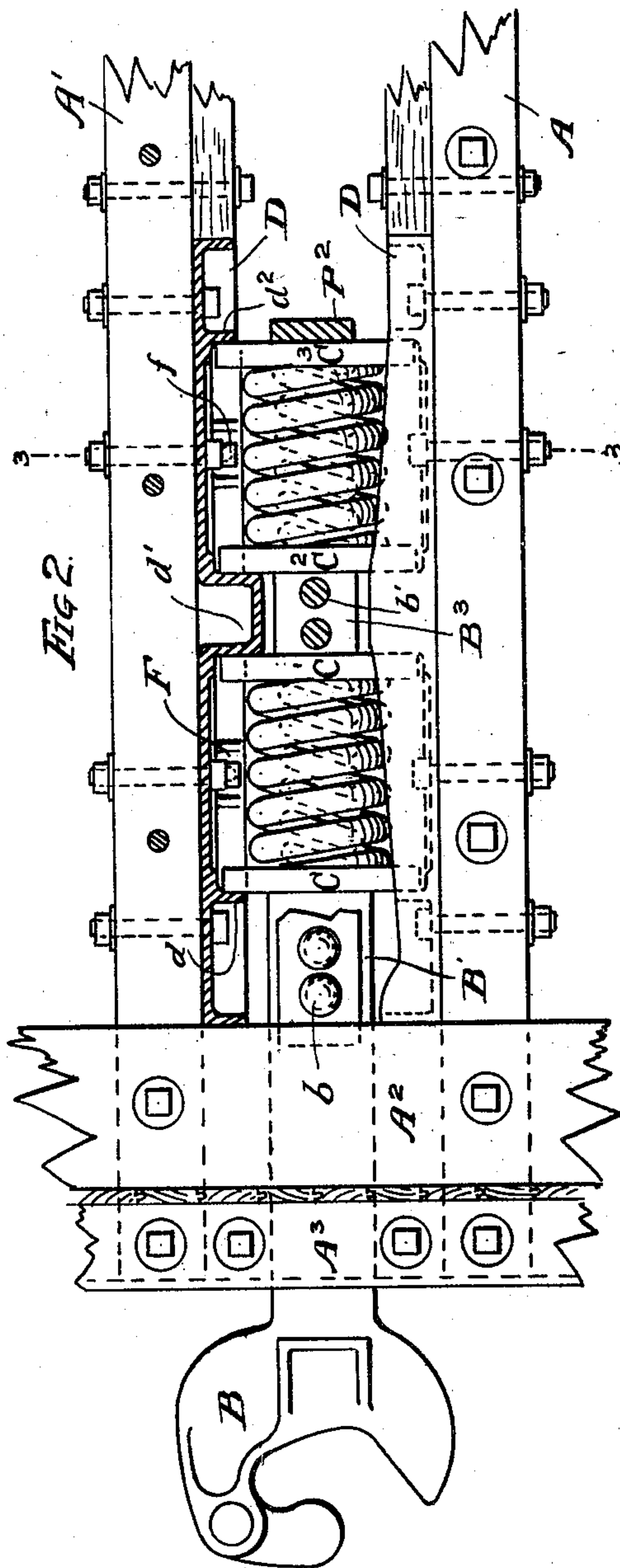
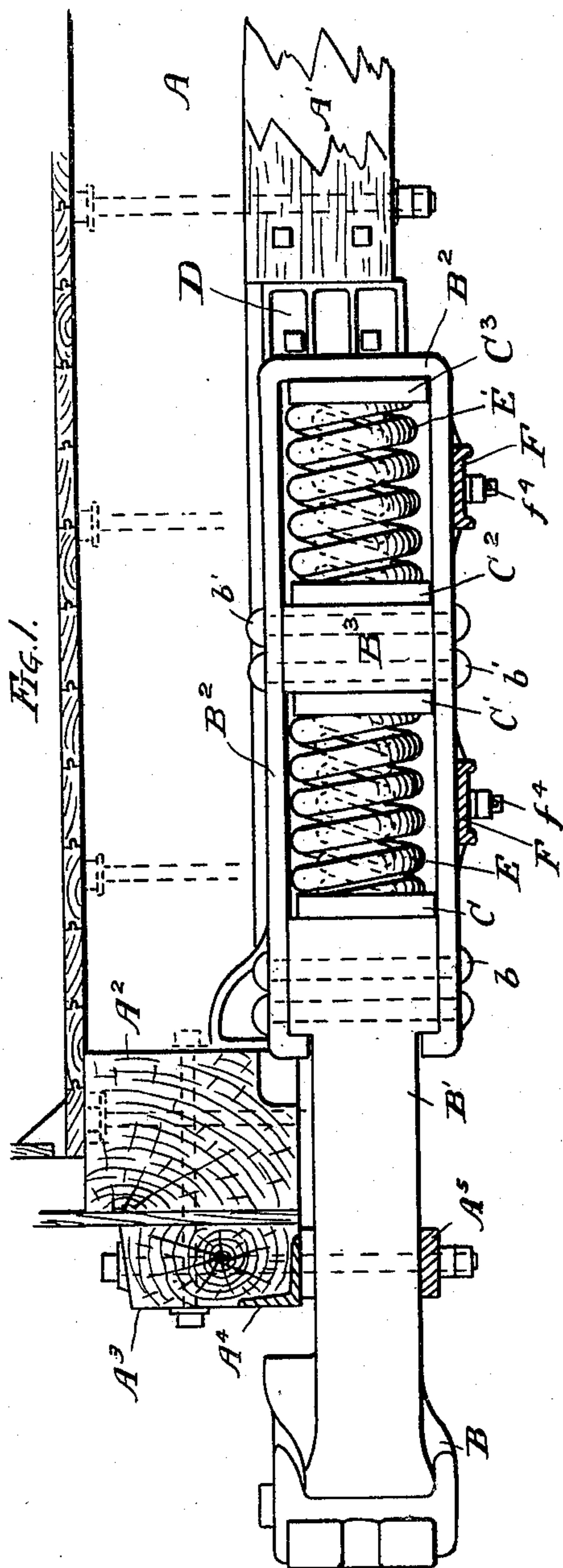
PATENTED FEB. 21, 1905.

J. R. MITCHELL.

TANDEM SPRING DRAFT RIGGING FOR RAILWAY CARS.

APPLICATION FILED SEPT. 28, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

*F. B. Townsend*  
*H. W. Munday*

INVENTOR.

*John R. Mitchell*

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*Munday, Evans & Adcock.*  
his ATTORNEYS

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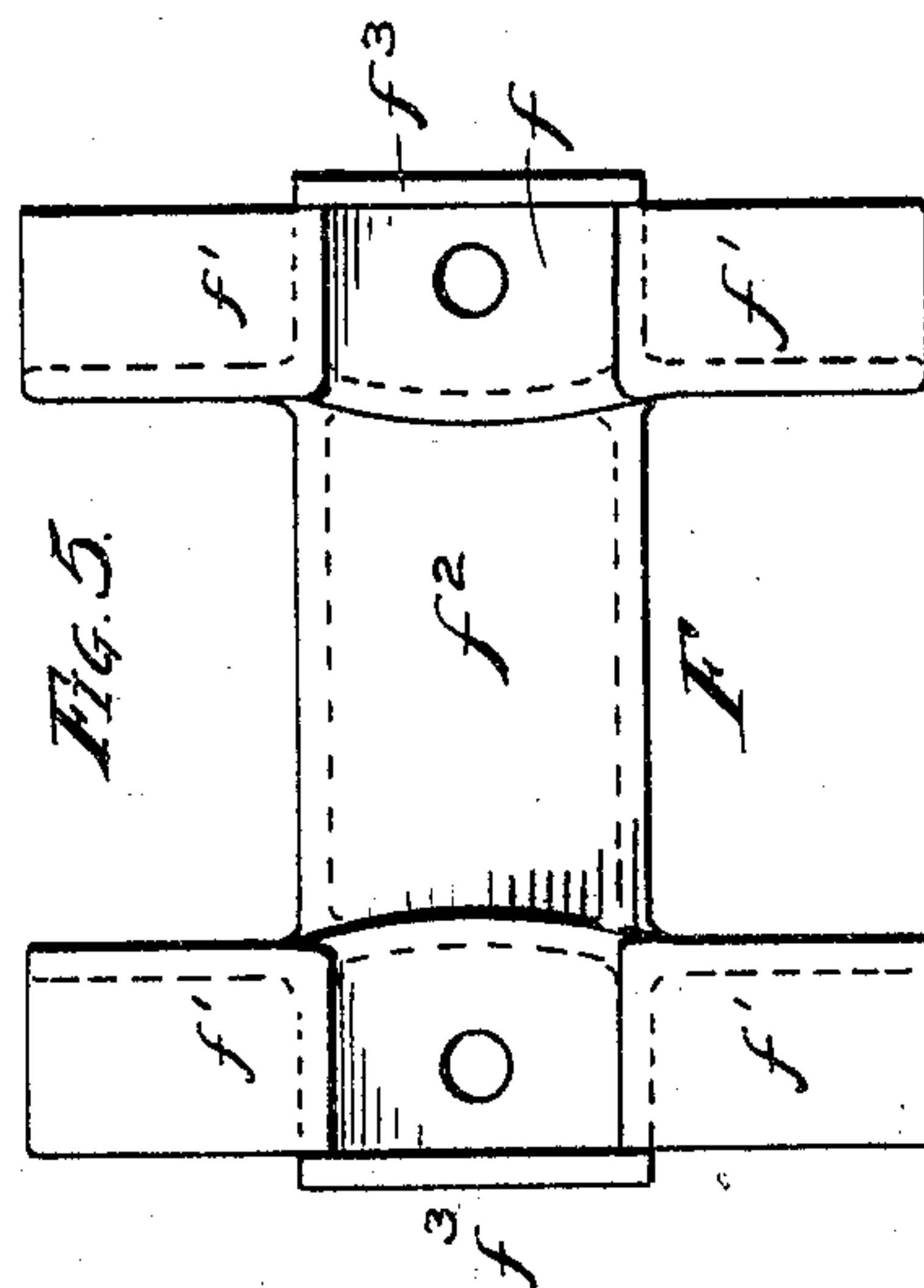
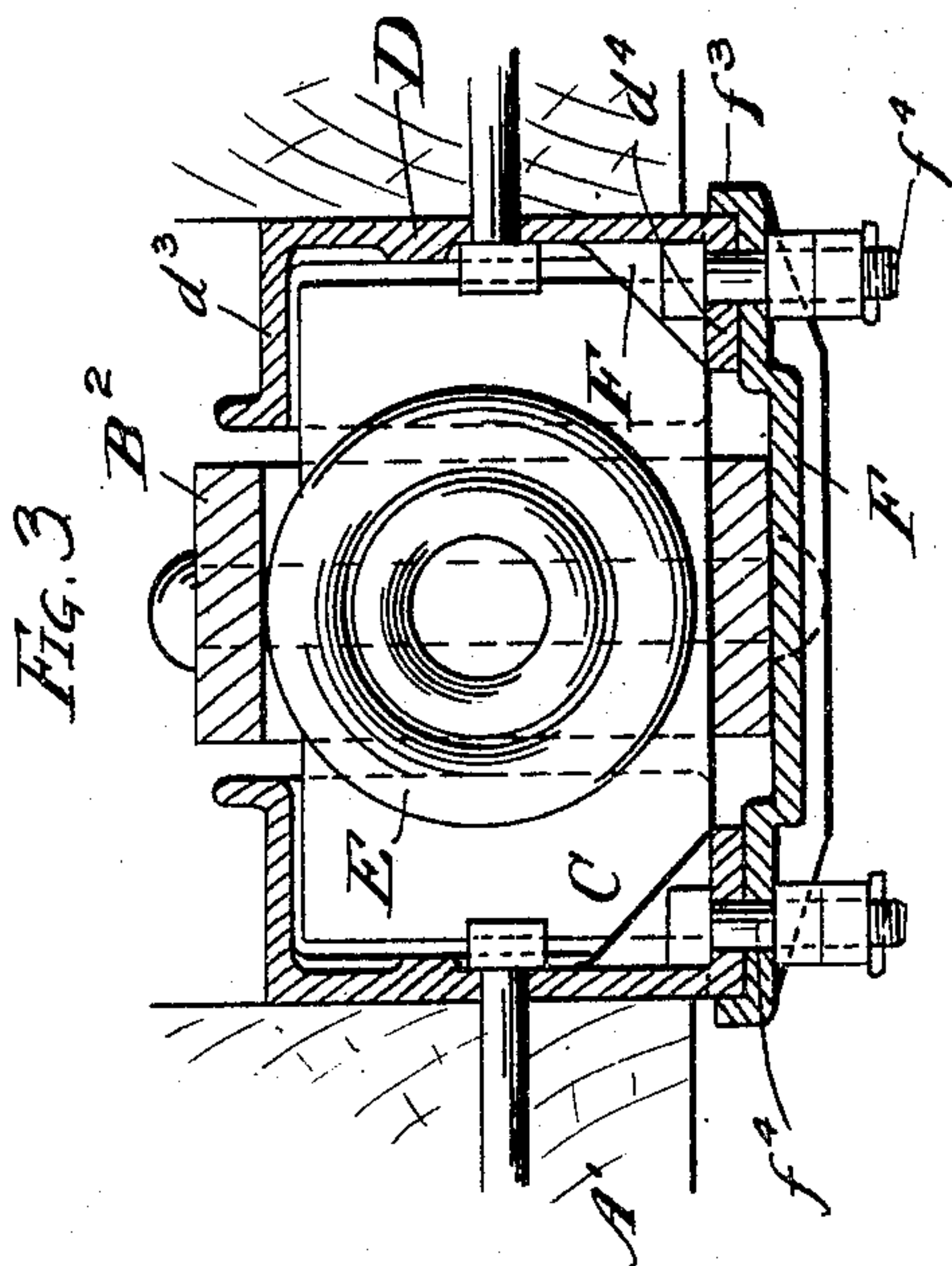
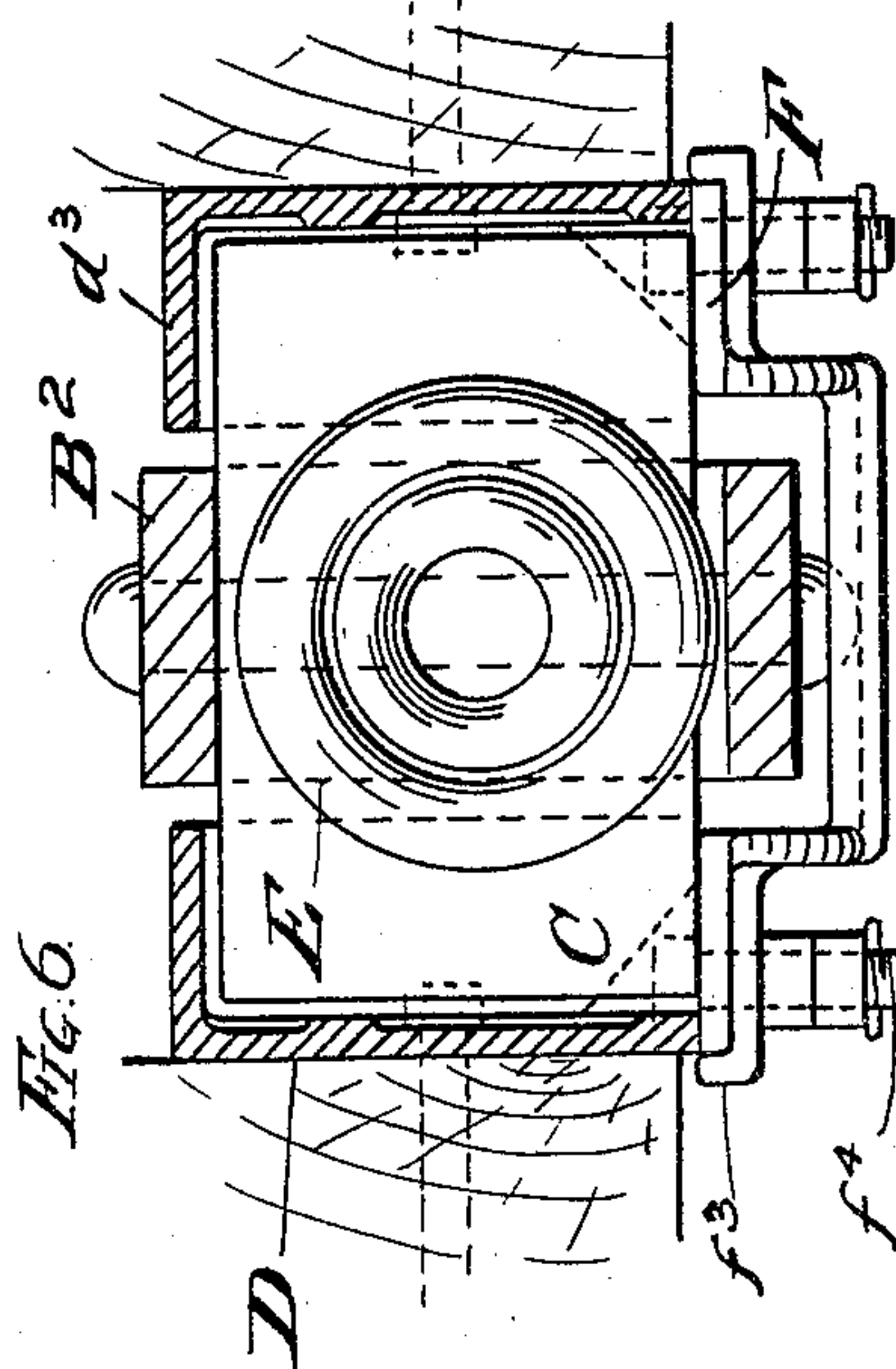
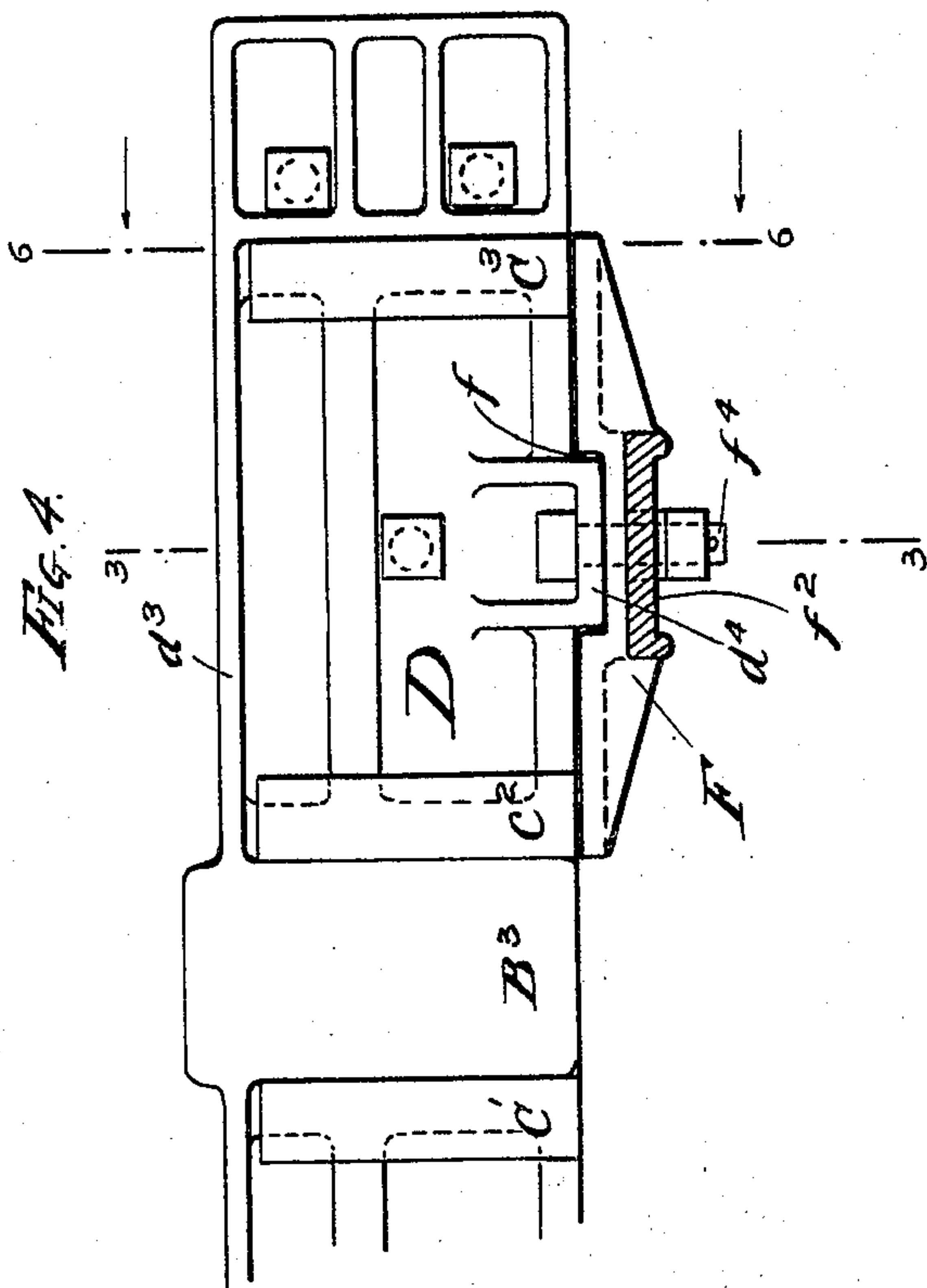
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# UNITED STATES PATENT OFFICE.

JOHN R. MITCHELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. H. MINER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## TANDEM-SPRING DRAFT-RIGGING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 783,379, dated February 21, 1905.

Application filed September 28, 1904. Serial No. 226,270.

*To all whom it may concern:*

Be it known that I, JOHN R. MITCHELL, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Tandem-Spring Draft-Rigging for Railway-Cars, of which the following is a specification.

My invention relates to improvements in tandem-spring draft-rigging for railway-cars.

The object of my invention is to provide a tandem-spring draft-rigging of a strong, simple, efficient, and durable construction.

My invention consists in a tandem-spring draft-rigging comprising, in connection with the draw-bar of the coupler and draw-bar strap, yoke, or extension, tandem-springs and followers, a pair of side plates or stop-castings having stops or shoulders for the followers to abut against, and upper integral guides, and provided with short feet, lugs or projections on their lower edges or faces, and lower removable guides furnished with integral tie-plates extending between the removable guides and underneath the draw-bar strap or yoke and furnished with recesses to receive the short feet, lugs or projections on the lower faces or edges of the side plates or stop-castings.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown or described.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation, partly in vertical longitudinal section, of a tandem-spring draft-rigging embodying my invention. Fig. 2 is a plan view, partly in horizontal section. Fig. 3 is a cross-section on line 3 3 of Fig. 2, the section-line being also indicated on Fig. 4. Fig. 4 is a detail elevation of one of the side plates or stop-castings, showing one of the integral tie-plate members of the lower removable guides in cross-section. Fig. 5 is a detail top or plan view of one of the lower removable combined guides and tie-plates; and Fig. 6 is a detail cross-section on line 6 6 of Fig. 4, showing a slight modification.

In the drawings, A A represent the center sills of the car; A', draft-timbers; A<sup>2</sup>, the front or cross sill; A<sup>3</sup>, the buffer-block; A<sup>4</sup>, the buffer-plate, and A<sup>5</sup> the carry-iron.

B is the coupler; B', the draw-bar; B<sup>2</sup>, the draw-bar extension, the same being preferably in the form of a yoke or strap secured to the draw-bar by bolts or rivets b.

B<sup>3</sup> is the abutment-block, which engages the middle followers and is secured to the strap or yoke B<sup>2</sup> by bolts or rivets b'.

C C' C<sup>2</sup> C<sup>3</sup> are the followers, and E E' tandem-arranged springs.

D D are the side plates or stop-castings, each being furnished with integral stops or shoulders d d' d<sup>2</sup> for the followers to abut against and each provided with an upper integral flange or guide d<sup>3</sup>, under which the followers reciprocate. Each of the side plates or stop-castings D is also provided on its lower edge or face with integral inwardly-projecting feet d<sup>4</sup>, which project downwardly beyond the lower face of the side plate or stop-casting and fit in shouldered recesses f in the lower removable combined guide and tie-plates F, which are preferably made of malleable iron or other cast metal and two in number. The lower removable combined guide and tie-plate F has guide arms or members f', which extend longitudinally of the side plates or stop-castings and guide and support the followers at the ends thereof, and an integral cross or tie member f<sup>2</sup>, uniting the members f' and extending underneath the lower limb or member of the draw-bar strap or yoke B<sup>2</sup>. The removable combined guide and tie-plates F are also furnished with upright flanges f<sup>3</sup>, which engage and embrace the side plates or stop-castings and serve to relieve the bolts f<sup>4</sup> from shearing strain. The removable combined guide and tie-plates F are secured to the side plates or stop-castings D D by short bolts f<sup>4</sup>, which extend through the inwardly and downwardly projecting feet or lugs d<sup>4</sup> on the side plates or stop-castings D.

In the form of my invention illustrated in Figs. 1, 2, 3, 4, and 5 the cross or tie member f<sup>2</sup> of the castings F supports the draw-bar strap or yoke B<sup>2</sup> and through the yoke guides

it in its longitudinal reciprocation, and the strap or yoke itself supports the followers. In the form illustrated in Fig. 6 the followers rest and reciprocate upon the guide members 5  $f' f'$  of the castings  $F$ , and the draw strap or yoke rests upon the followers.

I claim—

1. In a tandem-spring draft-rigging, the combination with the draw-bar and draw-bar 10 strap or yoke, of tandem springs and followers, a pair of side plates or stop-castings having stops for the followers to abut against, and upper integral guides, and provided with projecting feet or lugs on their lower edges 15 or faces, and lower removable combined guides and tie-plates furnished with recesses to receive said feet or lugs on the side plates or stop-castings, said combined removable guides and tie-plates having upright flanges

engaging and embracing the side plates or 20 stop-castings, substantially as specified.

2. In a draft-rigging, the combination with the draw-bar, draw-bar strap or yoke, spring and followers, of a pair of side plates or stop-castings having stops for the followers to abut 25 against, and upper integral guides, and provided with projecting feet or lugs at their lower edges or faces, and a combined lower removable guide and tie-plate secured to the stop-castings, said combined integral guide 30 and tie-plate having upright flanges engaging and embracing the stop-castings, substantially as specified.

JOHN R. MITCHELL.

Witnesses:

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