No. 782,408. PATENTED FEB. 14, 1905.

W. H. MINER.

FRICTION DRAFT RIGGING FOR RAILWAY CARS.

APPLICATION FILED SEPT. 28, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

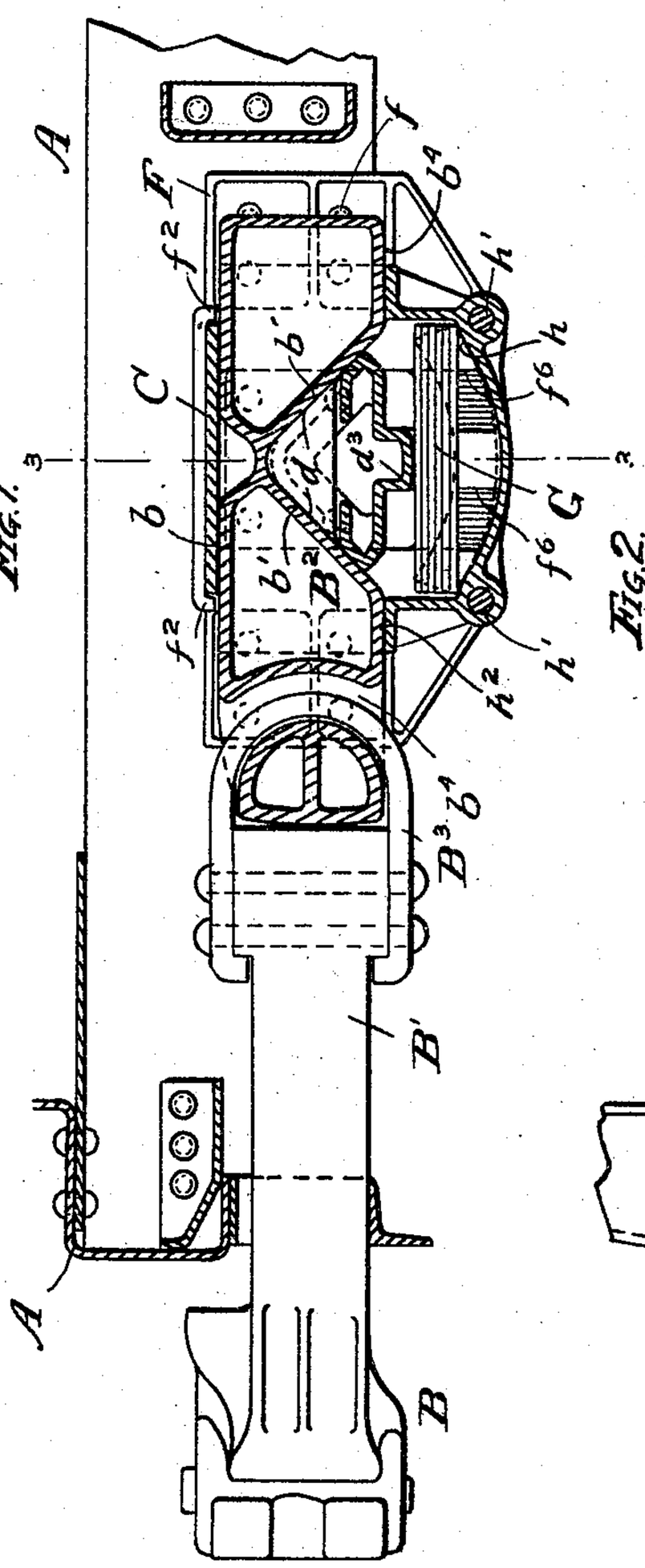
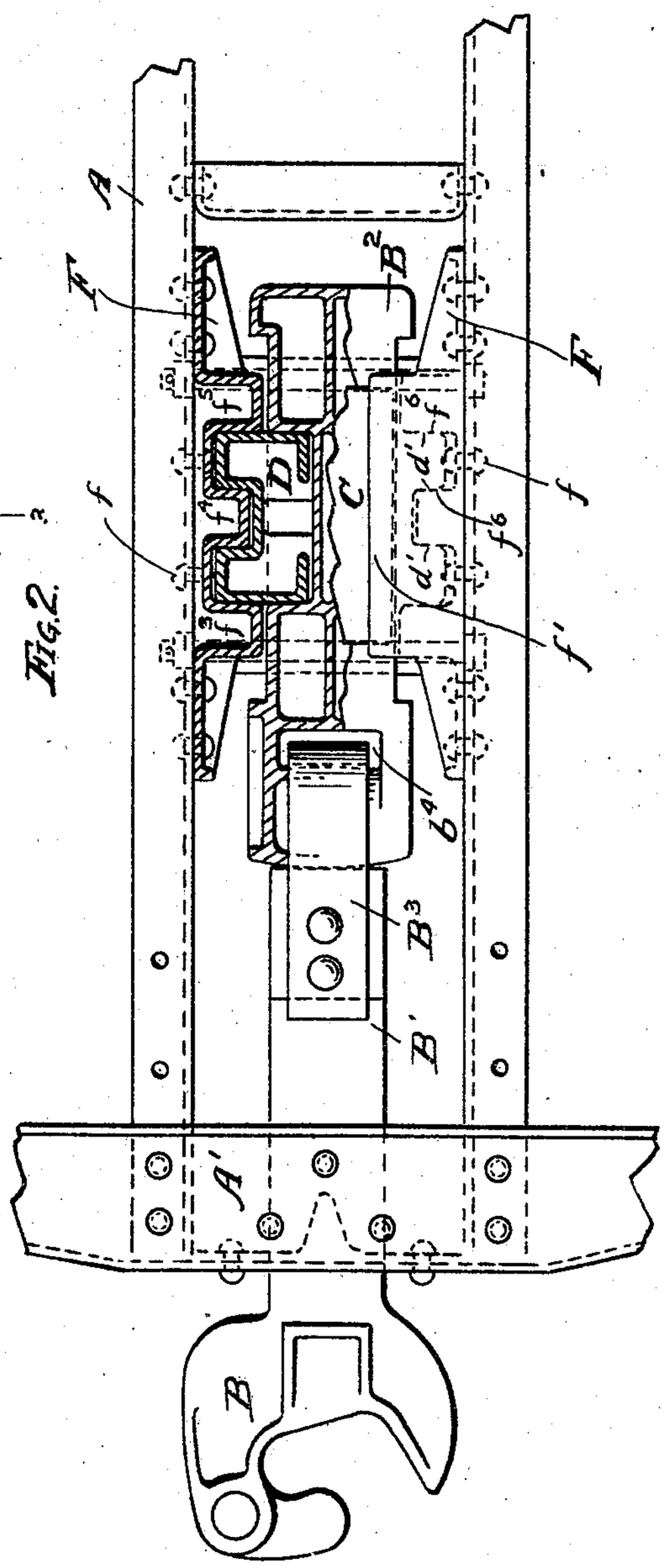


Fig. 2.



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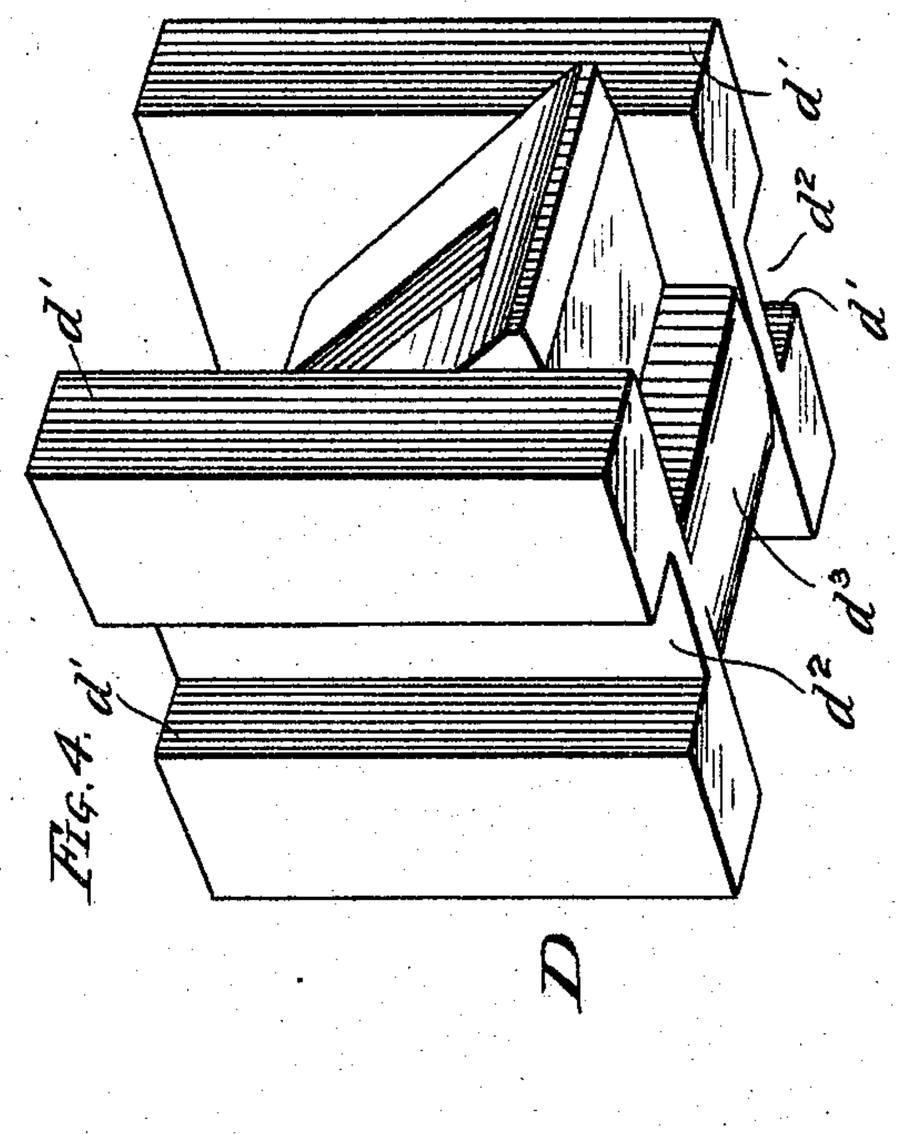

FIG. 4.

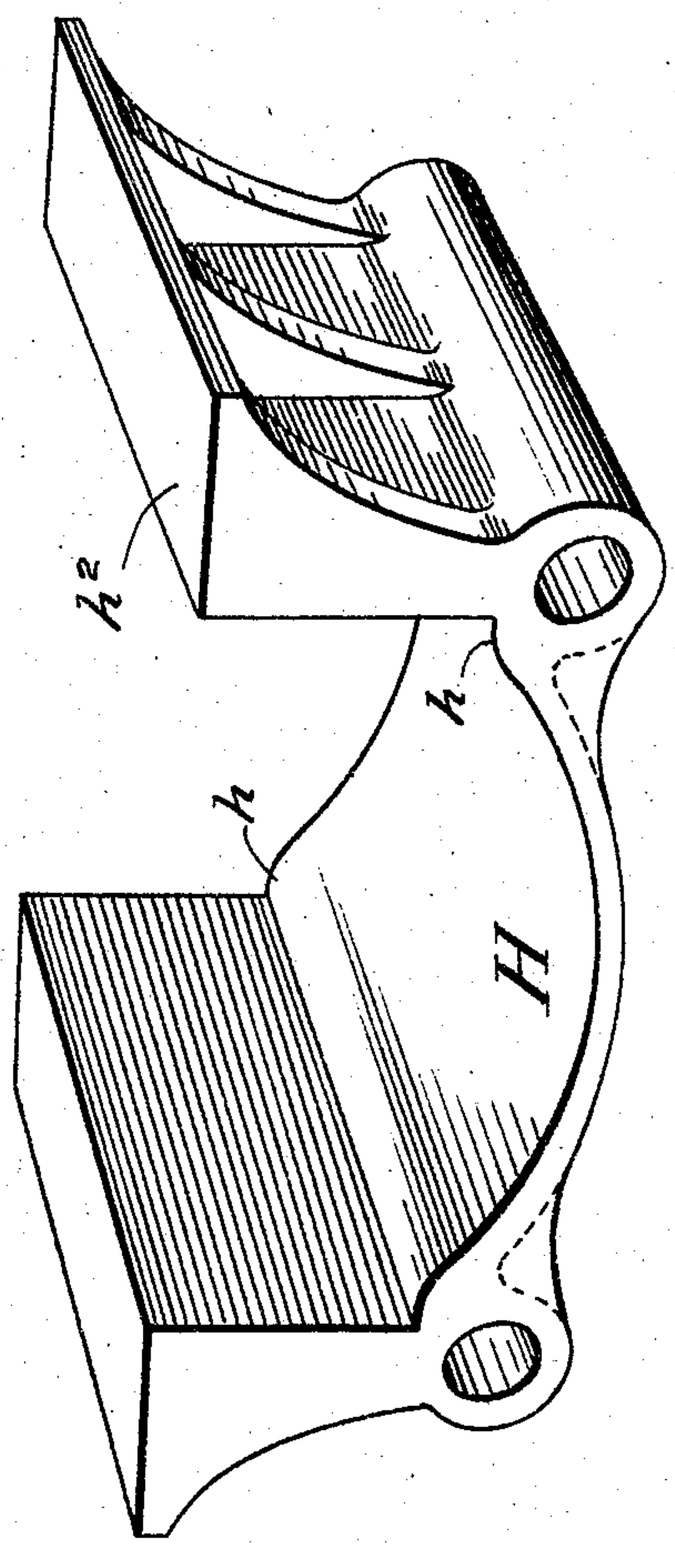

FIG. 5.

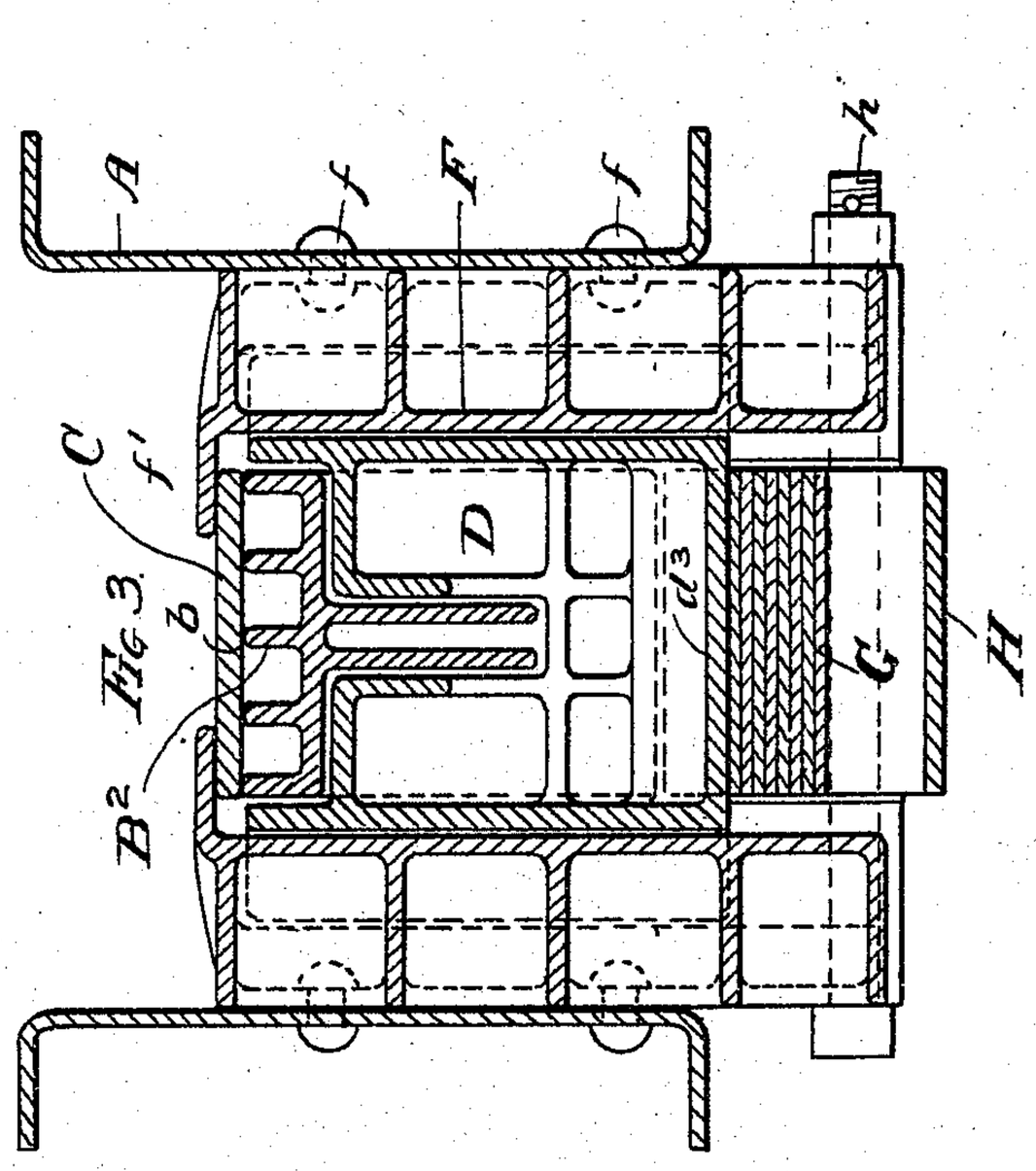

FIG. 3.

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No. 782,408. Patented February 14, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM H. MINER, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. H. MINER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

FRICTION DRAFT-RIGGING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 782,408, dated February 14, 1905.

Application filed September 28, 1904. Serial No. 226,268.

To all whom it may concern:

Be it known that I, WILLIAM H. MINER, 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 Friction Draft-Rigging for Railway-Cars, of which the following is a specification.

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

My invention 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 central vertical longitudinal section of a friction draft-rigging embodying my invention. Fig. 2 is a plan view, partly in horizontal section. Fig. 3 is a vertical cross-section on line 3 3 of Fig. 1. Fig. 4 is a detail perspective view of the transversely or vertically movable friction-block, and Fig. 5 is a detail perspective view of the removable combined spring-support and tie-bar.

In the drawings, A A represent the center sills, and A′ the cross-sill, of a car-frame.

B is the coupler, B′ the draw-bar, and B^2 the draw-bar extension or draft-iron, secured to the draw-bar by a short strap or yoke B^3, which extends through a socket b^4 in the front end of the draft-iron B^2. The draft-iron B^2 has a straight friction-face b on one side, preferably its upper side, and double-incline oppositely-disposed friction-faces b' b' on its under or lower side. The straight friction-face b is in sliding frictional engagement with the stationary flat friction-plate C, and the double-incline friction-faces b' b' of the draft-iron are in sliding frictional engagement with the corresponding double-incline friction-faces d d of the transversely or vertically movable friction-block D.

F F are the side plates or guide-castings secured to the longitudinal or draft sills A A of the car-frame by rivets f. Each of these side plates or guide-castings F is furnished with an integral inwardly-projecting horizontal flange f', furnished with front and rear shoulders f^2 f^2 to engage the friction-plate C and hold it rigidly and firmly in position. The side plates or guide-castings F are also each furnished with three upright integral guides f^3 f^4 f^5, each having upright faces f^6, which engage the corresponding upright faces or shoulders d' of the transversely or vertically movable friction-block D. The friction-block D is provided with upright slots or grooves d^2 to receive the middle upright guides f^4 on the side plates or guide-castings F. The vertically or transversely movable friction-block D is provided with an integral central spring-bearing rib d^3 to bear against a series of flat steel springs G, which rest at their ends upon the spring-bearing ledges h of the combined spring-support and tie-bar H, which is secured at its opposite ends to the side plates or guide-castings F by the removable bolts h'. The spring-support and tie-bar H is also provided with horizontal faces h^2, which fit against the lower face b^4 of the draft-iron B^2.

By combining with the stationary straight friction-plate C the longitudinally-movable draft-iron B^2, having double-incline friction-faces, and the transversely or vertically movable friction-block D a set of flat steel springs G, acting against the friction-block to resist its transverse or vertical movement, I am enabled to construct a friction draft-rigging of this type in a very strong and compact form and very materially reduce the vertical dimension of the draft-rigging as a whole and the space vertically necessary to accommodate it on the car, thus materially increasing its strength and efficiency, as well as materially diminishing its cost of manufacture.

I claim—

1. In a friction draft-rigging, the combination with the draw-bar, of a friction draft-iron having a straight friction-face on one side, and oppositely-directed double-incline friction-faces on its opposite side, a friction-plate having a straight friction-face in sliding frictional engagement with the straight friction-face of the draft-iron, a transversely or vertically movable friction-block having oppositely-directed double-incline friction-faces in sliding frictional engagement with

the corresponding inclined friction-faces of the draft-iron, and provided with a central rib or bearing for the spring, a pair of side plates or guide-castings furnished with upright guides for said vertically-movable friction-block, a combined spring-support and tie-bar secured to and connecting the side plates or guide-castings, and a series of flat steel springs interposed between said vertically-movable friction-block and said spring-support, substantially as specified.

2. In a friction draft-rigging, the combination with a draw-bar and draft-iron having a straight friction-face and oppositely-disposed double-incline friction-faces, of a transversely-movable friction-block having double inclines engaging said double inclines on the draft-iron, side plates or guide-castings furnished with guides for said friction-block, a spring-support and a set of flat, steel springs interposed between said spring-support and said friction-block, substantially as specified.

3. In a friction draft-rigging, the combination with a draw-bar and draft-iron having a straight friction-face and oppositely-disposed double-incline friction-faces, of a transversely-movable friction-block having double inclines engaging said double inclines on the draft-iron, side plates or guide-castings furnished with guides for said friction-block, a spring-support and a set of flat steel springs interposed between said spring-support and said friction-block, said friction-block and said support having coacting bearings engaging said springs, substantially as specified.

4. In a friction draft-rigging, the combination with a draw-bar and draft-iron having a straight friction-face and oppositely-disposed double-incline friction-faces, of a transversely-movable friction-block having double inclines engaging said double inclines on the draft-iron, side plates or guide-castings furnished with guides for said friction-block, a spring-support and a set of flat steel springs interposed between said spring-support and said friction-block, said friction-block and said support having coacting bearings engaging said springs, said spring-support being removably secured to and connecting said side plates or guide-castings, substantially as specified.

5. In a friction draft-rigging, the combination with a draw-bar and draft-iron having a straight friction-face on its upper side, of a stationary friction-plate having a straight friction-face engaging the straight friction-face on the upper side of said draft-iron, said draft-iron being provided with double-incline friction-faces on its under side, a transversely-movable friction-block, side plates or guide-castings having upright guides engaging said vertically-movable friction-block, a spring-support and a set of flat springs interposed between the spring-support and said friction-block, substantially as specified.

6. In a friction draft-rigging, the combination with a draw-bar and a draft-iron having a straight friction-face on its upper side, of a stationary friction-plate having a straight friction-face engaging the straight friction-face on the upper side of said draft-iron, said draft-iron being provided with double-incline friction-faces on its under side, a transversely-movable friction-block, side plates or guide-castings having upright guides engaging said vertically-movable friction-block, a spring-support and a set of flat springs interposed between the spring-support and said friction-block, said spring-support and friction-block having coacting bearings engaging said springs, substantially as specified.

7. In a friction draft-rigging, the combination with a draw-bar and draft-iron having a straight friction-face on its upper side, of a stationary friction-plate having a straight friction-face engaging the straight friction-face on the upper side of said draft-iron, said draft-iron being provided with double-incline friction-faces on its under side, a transversely-movable friction-block, side plates or guide-castings having upright guides engaging said vertically-movable friction-block, a spring-support and a set of flat springs interposed between the spring-support and said friction-block, said spring-support being removably secured to and connecting said side plates or guide-castings, substantially as specified.

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