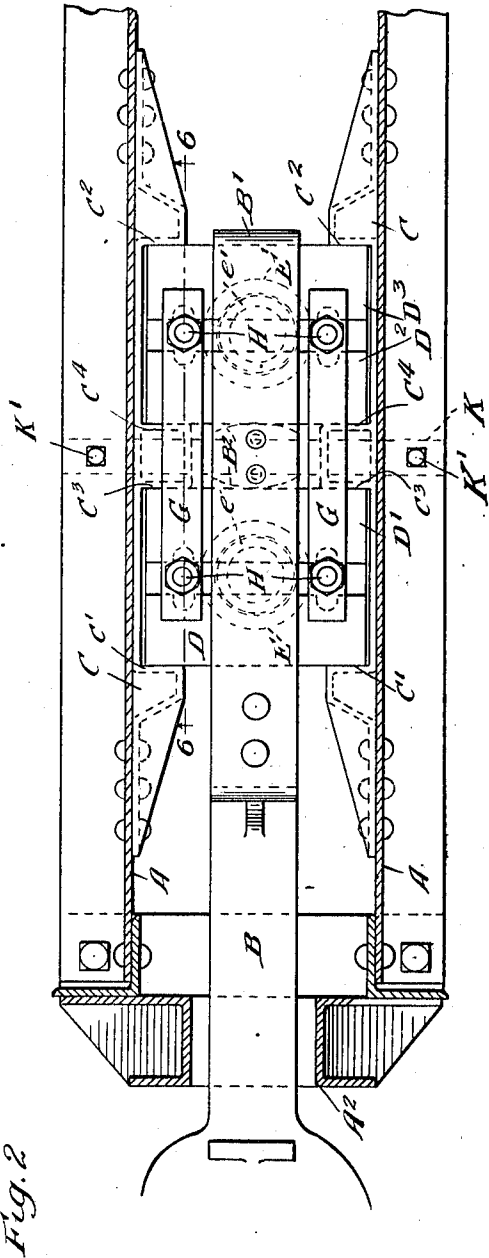
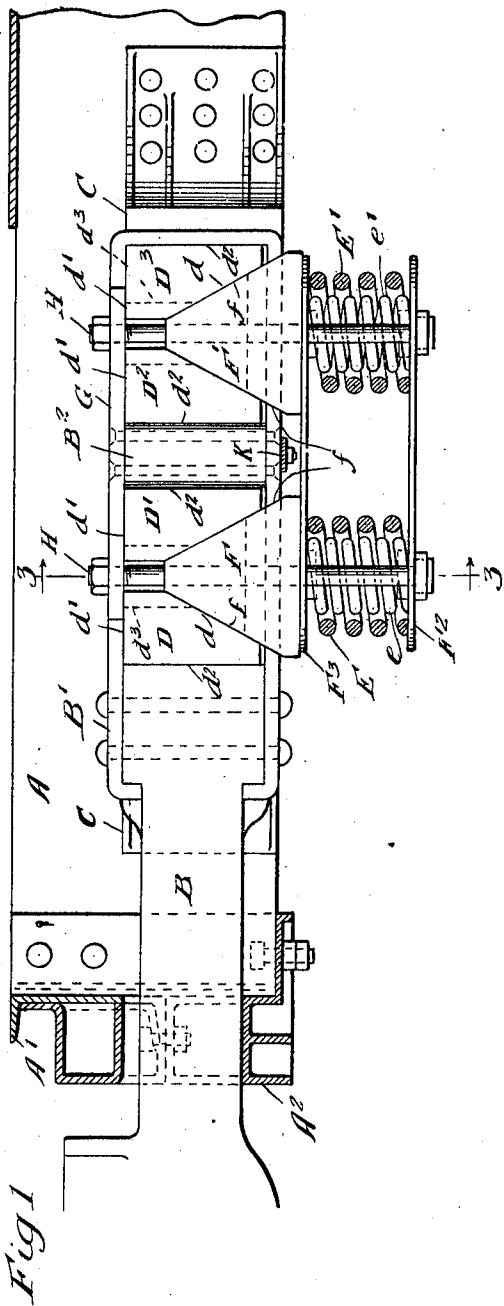


C. L. BUNDY.
 FRICTION DRAFT RIGGING FOR RAILWAY CARS.
 APPLICATION FILED JULY 27, 1909.

974,467.

Patented Nov. 1, 1910.

2 SHEETS—SHEET 1.



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 W. W. Bundy

Inventor:
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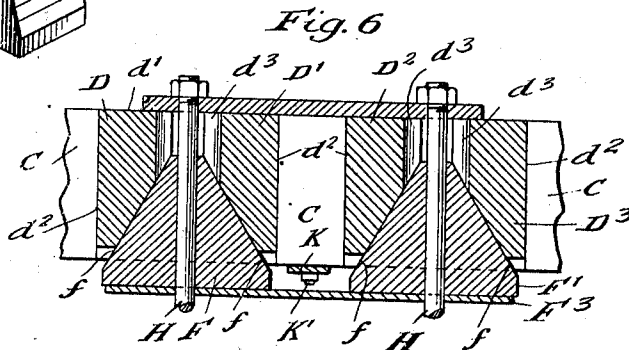
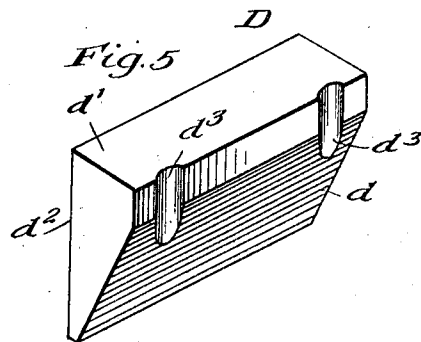
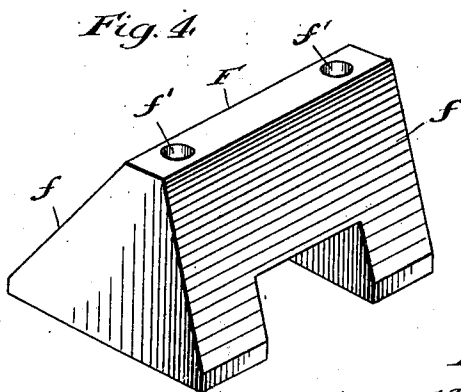
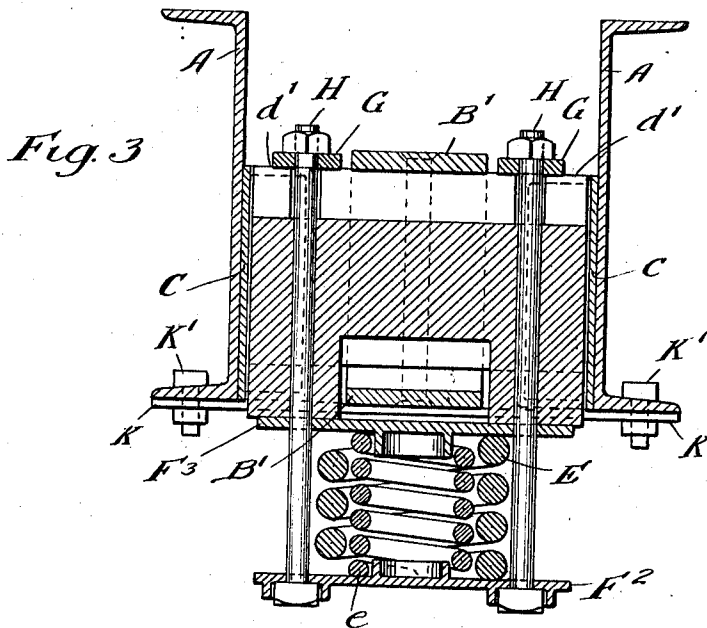
Attorneys

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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FRICITION DRAFT-RIGGING FOR RAILWAY-CARS.

974,467.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed July 27, 1909. Serial No. 509,944.

To all whom it may concern:

Be it known that I, CYRUS L. BUNDY, a citizen of the United States, residing in Kingsland, in the county of Bergen and State of New Jersey, 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.

The object of my invention is to provide a friction draft rigging of a simple, efficient and durable construction having friction and spring cushioning devices arranged in tandem.

My invention consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described and more particularly specified in the claims.

In the accompanying drawing forming a part of this specification, Figure 1 is a side elevation partly in section of a friction 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. 1. Fig. 4 is a detail perspective view of the intermediate friction block. Fig. 5 is a detail perspective view of one of the wedge faced friction followers. Fig. 6 is a detail section on line 6—6 of Fig. 2.

In the drawing, A represents the center sills or draft members of the car to which the draft rigging is applied, A¹ the front sill and A² the carry-iron or face plate.

B is the draw-bar, B¹ the draft yoke having an intermediate abutment block B² to engage the two intermediate followers, and C the draft lugs or stop members against which the followers abut, the same comprising front, rear and intermediate stop shoulders C¹ C² C³ C⁴.

D, D¹ D² D³ are two pair of tandem arranged wedge faced followers, each having an inclined friction face *d* and a horizontal friction face *d*¹ and an upright face *d*² for engagement with the stop shoulders of the draft members C, and for engagement with the corresponding part of the draw-bar, draft yoke or its abutment block.

F F¹ are two tandem arranged intermediate friction blocks or wedges, each having inclined or wedging faces *f* in frictional engagement with the corresponding friction

face *d* of the adjacent wedge faced follower D D¹ D² or D³.

E E¹ are tandem arranged springs, each preferably surrounding a smaller spring *e* or *e*¹, and bearing at their inner ends against tandem arranged intermediate friction blocks F F¹ respectively.

G G are friction straps or plates fitting one on each side of the draft yoke D and bearing against the horizontal friction faces *d*¹ of the wedge faced friction followers D D¹ D² D³. At their outer ends the springs E *e*, E¹ *e*¹ bear against a spring seat or supporting plate F² which is connected by tension or connecting rods H with the friction straps or plates G, these tension or connecting rods H fitting in longitudinal slots *d*³ with which the wedge faced friction followers D D¹ D² D³ are provided to permit relative longitudinal movement of the followers and tension rods, the one in respect to the other. The two front tension rods preferably extend up between the front pair of tandem arranged wedge faced followers or friction blocks D D¹, one on each side of the draft yoke. The two rear tension or supporting rods H in like-manner preferably extend up between the rear pair of tandem arranged friction blocks or wedge faced followers D² D³, one on each side of the draft yoke. The intermediate friction blocks or wedges F are provided with holes or openings *f*¹ to receive the tension or supporting rods H. A spring seat plate F³ is preferably interposed between the inner ends of the tandem arranged springs E E¹ and the tandem arranged friction blocks F F¹.

The tandem arranged friction blocks F F¹, the tension or supporting rods H and the springs E and friction straps or plates G and spring seat plates F² F³ all move together longitudinally with the draw-bar, the longitudinal movement of the same being half that of the draw-bar. In buffing, the two rear followers D¹ D³ of each pair are stationary while the two front followers D D² move with the draw-bar. In pulling, the two front followers D D² of each pair are held stationary by the shoulders of the stop members and the two rear followers D¹ D³ move forward with the draw-bar.

The upright tandem arranged springs E E¹ are preferably arranged below the draw-bar instead of above the same.

In my improved draft rigging, the two tandem arranged cushioning units, each comprising a pair of longitudinally movable wedge faced friction followers and a transversely and longitudinally movable intermediate friction block and transversely arranged spring, are adapted to cooperate and be used with the draw-bar and draft yoke and draft lugs or stop members of an ordinary tandem spring draft rigging simply by replacing the ordinary tandem longitudinally arranged springs and followers of such tandem spring draft rigging with two of my spring and friction cushioning units; and this without other change. My improved tandem spring friction gear or draft rigging is thus adapted to be very cheaply applied to cars already equipped with tandem spring draft rigging. In my improved draft rigging, as the two cushioning units act simultaneously under both pulling and buffing strains, and as each is adapted to exert a much greater cushioning capacity than that incident to the tension of the spring alone, it, in a very simple manner, produces a draft rigging of high cushioning capacity, and one adapted for substitute use for tandem springs and followers of the ordinary tandem spring draft rigging.

K represents a tie-plate removably secured to the draft sills by bolts K¹ which may be employed to support the draft rigging between the draft sills. The friction straps on plates G, however, through the cooperative action of the intermediate stops C¹ C² of the draft members C will also serve to removably support the draft rigging in operative position between the draft sills A A or stop members C C.

I claim:—

1. In a friction draft rigging, the combination with a draw-bar, draft yoke and stop members, the draft yoke having an intermediate abutment, of two tandem arranged pairs of wedge faced friction followers extending through the draft yoke, two intermediate tandem wedge faced friction blocks, upright springs acting at their inner ends against said intermediate friction blocks, a spring seat plate against which the outer ends of said springs bear and tension

rods connecting said spring seat plate with said wedge faced followers, substantially as specified.

2. In a friction draft rigging, the combination with a draw-bar, draft yoke and stop members, of two tandem pair of wedge faced followers, two tandem arranged intermediate friction blocks acting against said followers, tandem springs acting against said intermediate blocks, friction straps on each side of the draft yoke bearing against the horizontal friction faces of said wedge faced followers, a spring seat plate against which the outer ends of the springs bear, and tension rods connecting said spring seat plate with said friction straps, substantially as specified.

3. In a friction draft rigging, the combination with a draw-bar, draft yoke and stop members, of two tandem arranged friction units, each of said units comprising a pair of wedge faced followers, a friction block between and acting against said followers, a spring acting against said friction block, and friction straps on each side of the draft yoke bearing against the horizontal friction faces of said wedge faced followers of both of said units, substantially as specified.

4. In a friction draft rigging, the combination with a draw-bar, draft yoke and stop members, of two tandem arranged friction units, each of said units comprising a pair of wedge faced followers, a friction block between and acting against said followers, a spring acting against said friction block, friction straps on each side of the draft yoke bearing against the horizontal friction faces of said wedge faced followers of both of said units, a spring seat plate against which the outer ends of the springs of both of said units bear, tension rods connecting said spring seat plate with said friction straps, said wedge faced followers having slots to accommodate said tension rods, substantially as specified.

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Witnesses:

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