

No. 782,407.

PATENTED FEB. 14, 1905.

W. H. MINER.

FRICITION DRAFT GEAR FOR RAILWAY CARS.

APPLICATION FILED SEPT. 28, 1904.

2 SHEETS—SHEET 1.

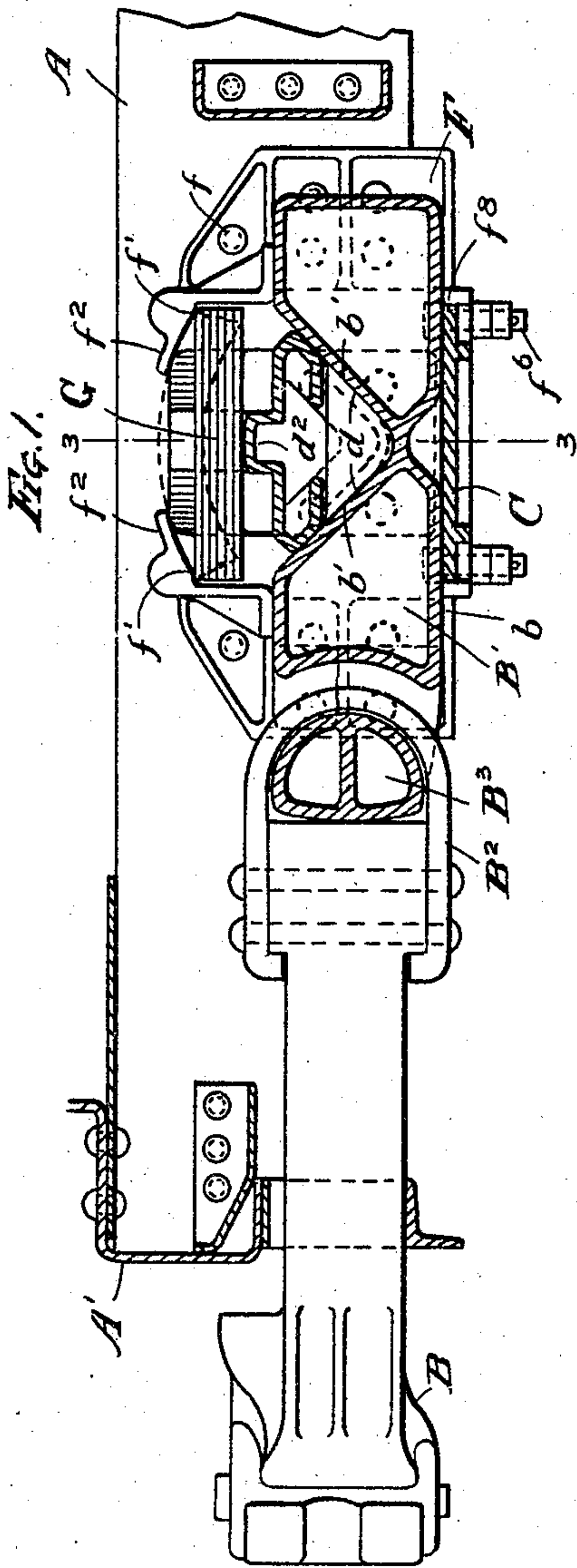


Fig. 1.

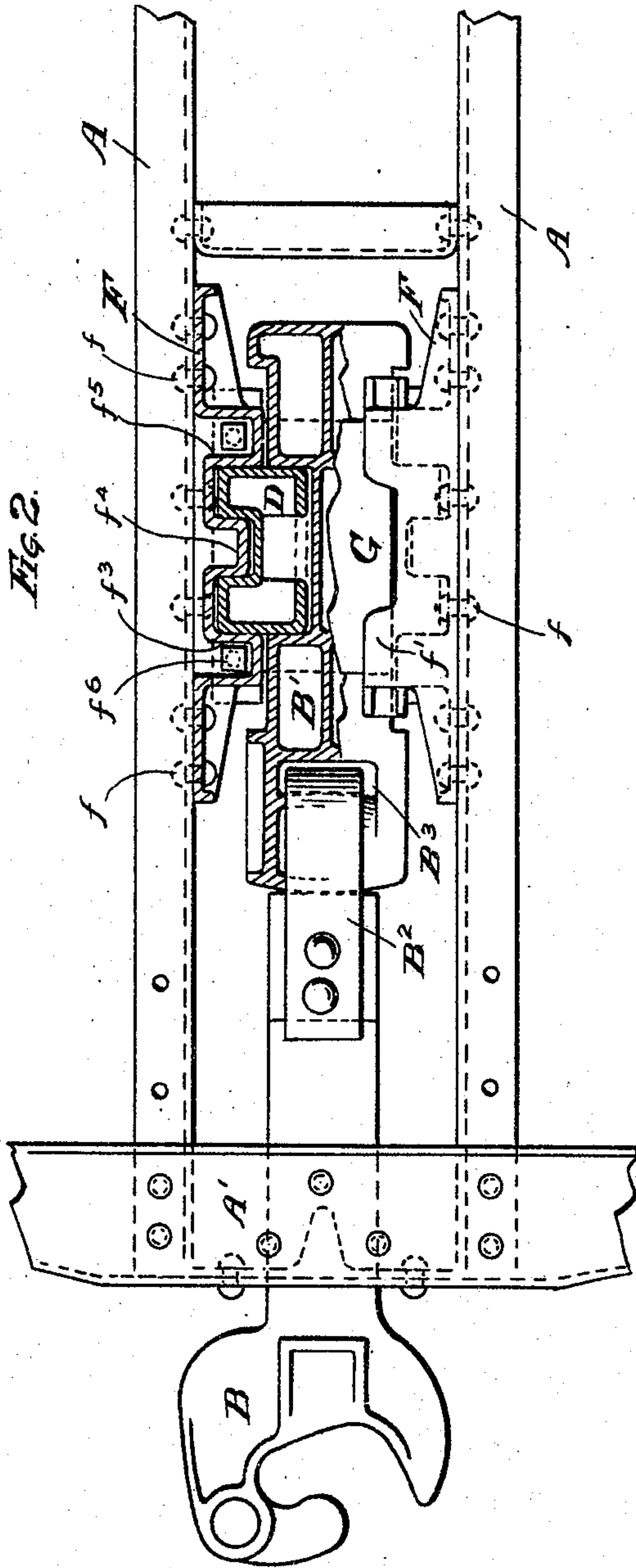


Fig. 2.

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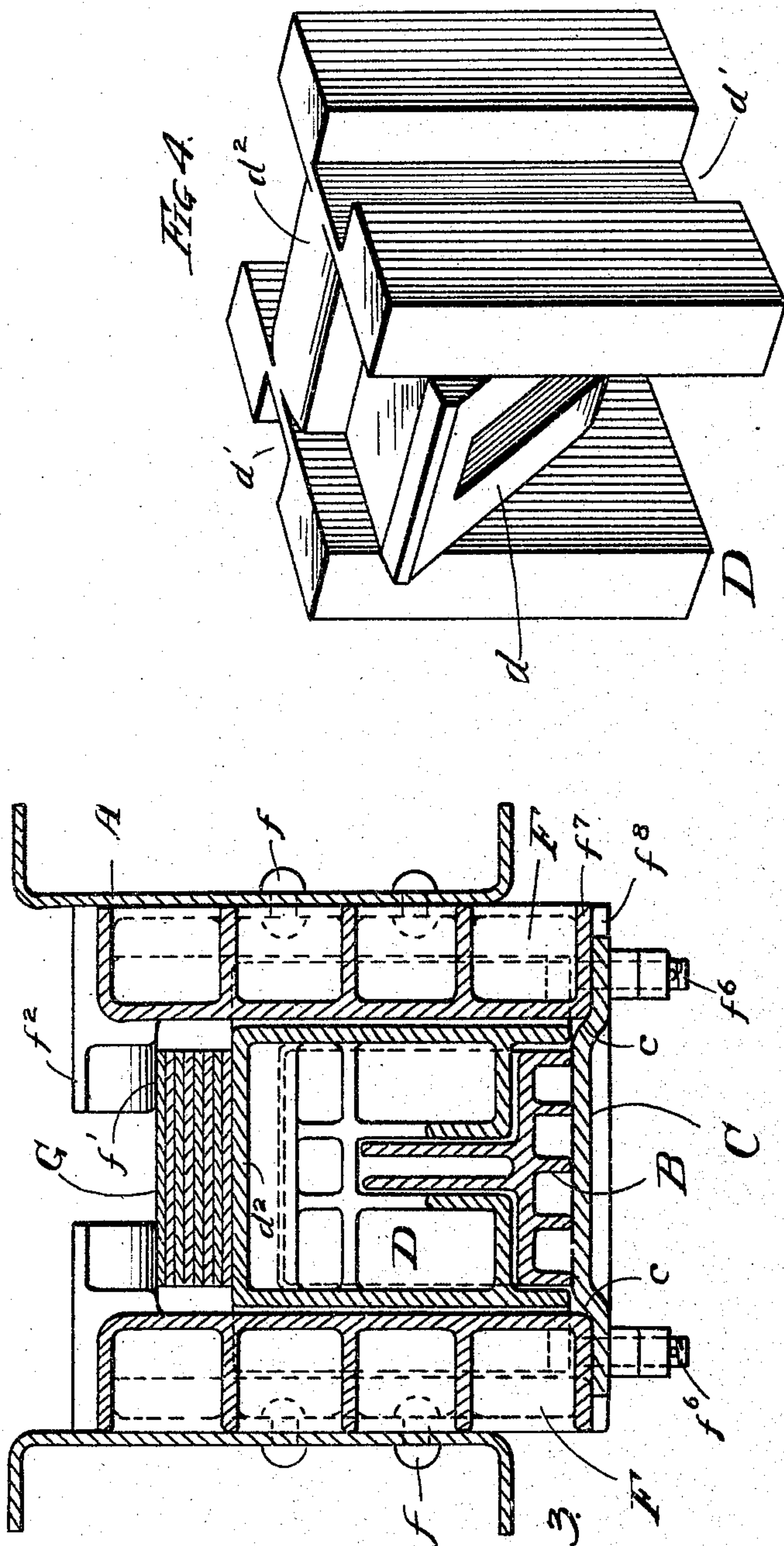
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UNITED STATES PATENT OFFICE.

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

FRICITION DRAFT-GEAR FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 782,407, dated February 14, 1905.

Application filed September 28, 1904. Serial No. 226,267.

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-Gear for Railway-Cars, of which the following is a specification.

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

The object of my invention is to provide a friction draft-gear of a strong, simple, compact, efficient, and durable construction.

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

In the accompanying drawings, forming a part of this specification, Figure 1 is a central vertical longitudinal section of a friction draft-gear 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 transversely or vertically movable friction-block.

In the drawings, A represents the longitudinal draft or center sills of a car, and A' the front or cross sill.

B is the draw-bar of the coupler, and B' the draft-iron connected to the draw-bar by a short strap or yoke B², extending through or around the head or socket B³ of the draft-iron. The draft-iron B' has a straight friction-face *b* on its lower side in sliding frictional engagement with a stationary friction-plate C. The friction draft-iron B' has oppositely-disposed double-inclined friction-faces *b'* *b'* on its upper side in sliding frictional engagement with the corresponding double-inclined friction-faces *d* of the transversely or vertically movable friction-block D.

F F are the side plates or guide-castings secured by rivets *f* to the draft or center sills A A'. Each of these side plates or guide-castings is furnished with integral bearings or ledges *f'* to engage the ends of the flat steel springs G and with upwardly-inclined wings or flanges *f²* to partially cover or inclose the springs on top, while permitting them to bend upward at their middle. Each of the side

plates or guide-castings F is also provided with a plurality of upright guides *f³* *f⁴* *f⁵* to frictionally engage and guide the transversely-movable block D in its up-and-down movement. The friction-block D has an upright slot or groove *d'* to receive the middle upright guide *f⁴* of the side plate or guide-casting F. The stationary friction-plate C is removably secured to the side plates or guide-castings F by short bolts *f⁶*, which extend through the lower horizontal flanges *f⁷* of the side plates or guide-castings F. The side plates or guide-castings F are further provided with front and rear shoulders *f⁸* to engage the front and rear ends of the stationary friction-plate C, and thus relieve the bolts *f⁶* from shearing strain. The friction-plate C is depressed or recessed at its sides to form shoulders *c* to fit between and engage the side plates or guide-castings F F. The transversely or vertically movable friction-block D has a central bearing or rib *d²* to bear against the middle of the flat springs G and cooperate with the bearings *f'* *f'* on the side plates or guide-castings F, which engage the springs at their ends.

I claim—

1. In a friction draft-gear, the combination with a draw-bar and friction draft-iron connected thereto and having a straight friction-face on its lower side, and oppositely-disposed double-inclined friction-faces on its upper side, of a transversely or vertically movable friction-block having double-inclined friction-faces engaging the double-inclined friction-faces on the draft-iron, and furnished with a central rib or bearing for a set of flat springs, a pair of side plates or guide-castings furnished with upright guides engaging said friction-block, and with integral bearings or ledges to engage the ends of a set of flat springs, a set of flat steel springs interposed between said friction-block and said side plates or guide-castings, and a stationary friction-plate removably secured to said side plates or guide-castings on the under side thereof, substantially as specified.

2. In a friction draft-gear, the combination with a draw-bar and friction draft-iron connected thereto, having a straight friction-face

on its under side and double-incline friction-
faces on its upper side, of a sliding friction-
plate engaging the straight friction-face of
said draft-iron, a vertically-movable friction-
5 block having double-incline friction-faces en-
gaging said incline friction-faces of said draft-
iron, side plates or guide-castings having up-
right guides engaging said friction-block, and
furnished with integral bearings or ledges to
10 engage flat springs, and a series of flat steel
springs interposed between said friction-block
and said side plates or guide-castings, said
friction-block having a rib or bearing engag-
ing said springs, substantially as specified.
15 3. In a friction draft-gear, the combination
with a draw-bar and friction draft-iron con-
nected thereto, having a straight friction-face
on its under side and double-incline friction-
faces on its upper side, of a sliding friction-

plate engaging the straight friction-face of 20
said draft-iron, a vertically-movable friction-
block having double-incline friction-faces en-
gaging said incline friction-faces of said draft-
iron, side plates or guide-castings having up-
right guides engaging said friction-block, and 25
furnished with integral bearings or ledges to
engage flat springs, and a series of flat steel
springs interposed between said friction-block
and said side plates or guide-castings, said
friction-block having a rib or bearing en- 30
gaging said springs, and said stationary fric-
tion-plate being removably secured to and con-
necting said side plates or guide-castings, sub-
stantially as specified.

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Witnesses:

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