

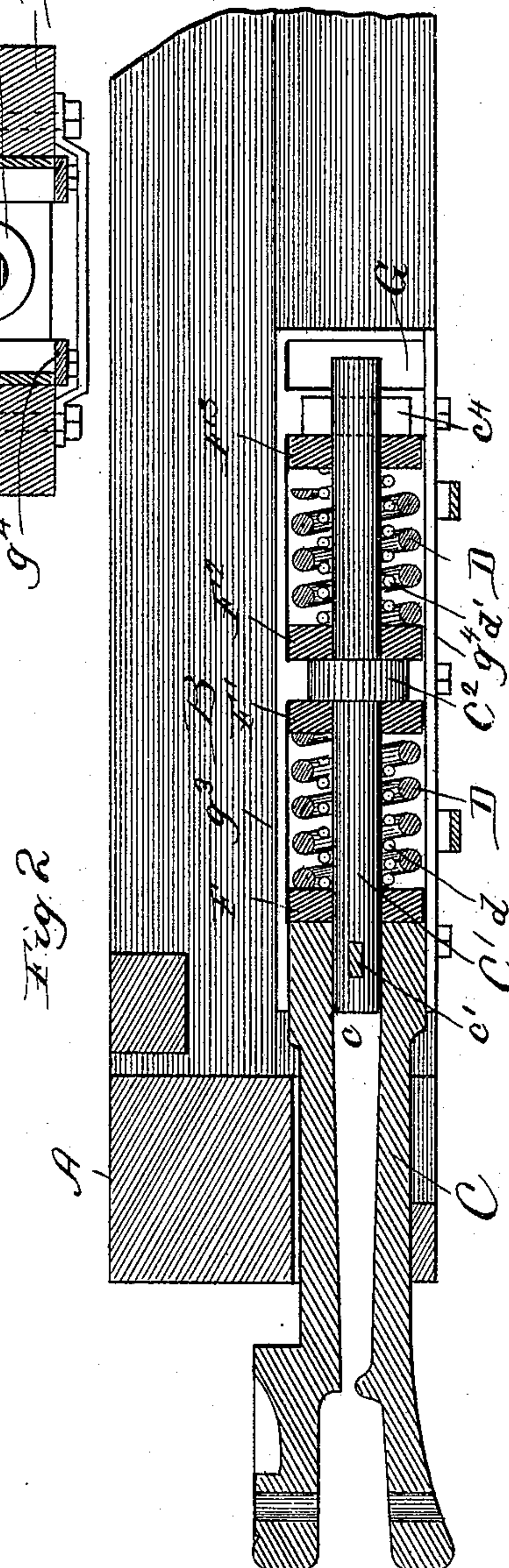
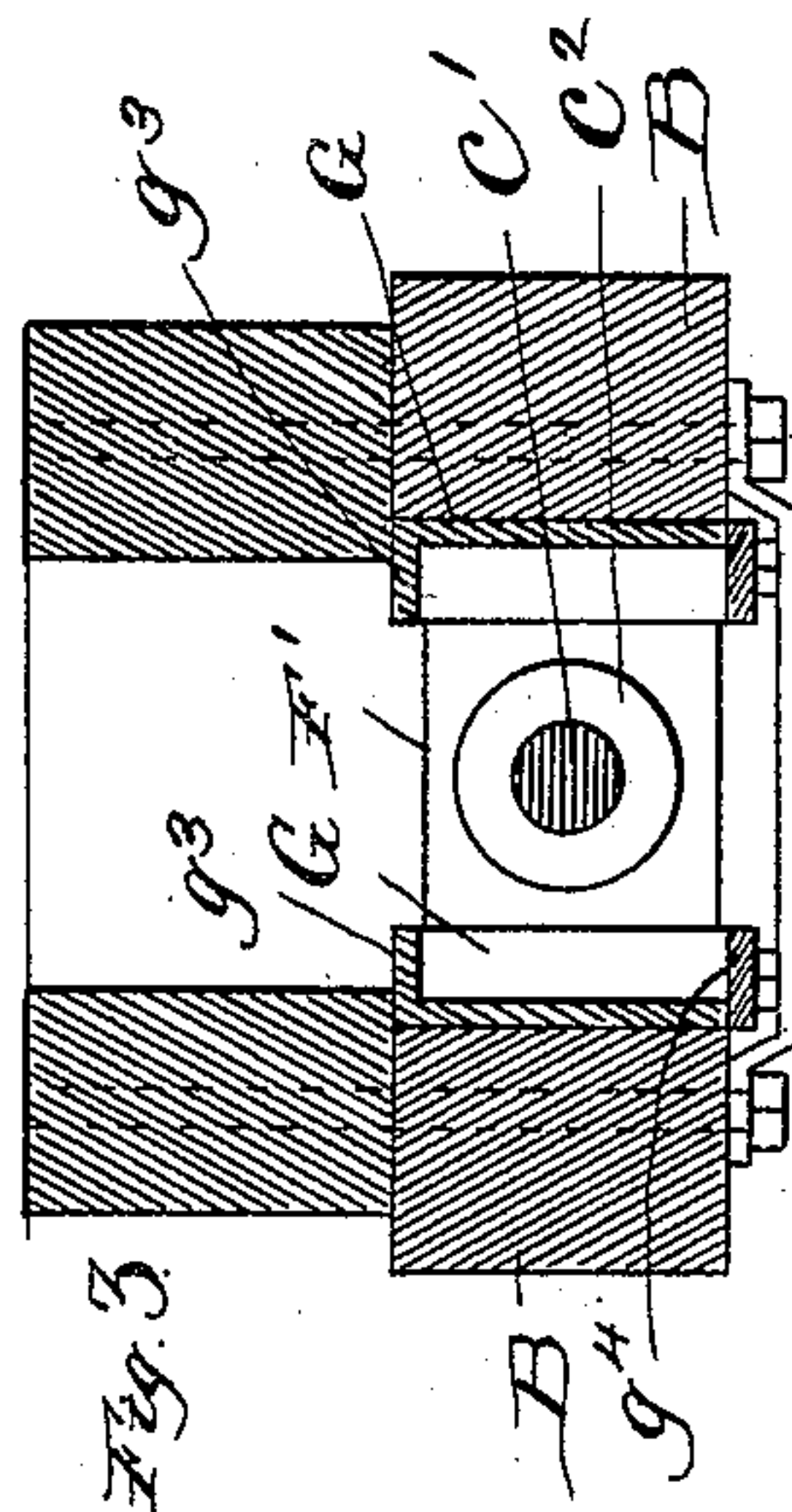
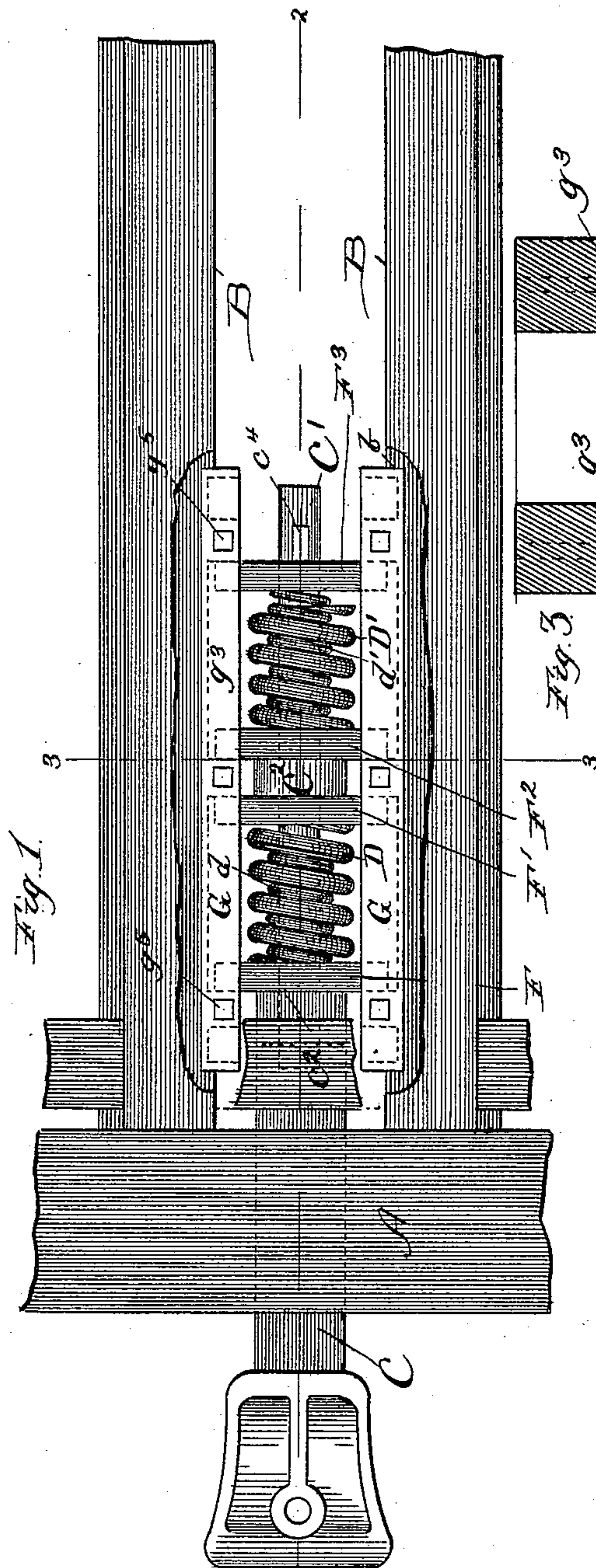
(No Model.)

2 Sheets—Sheet 1.

W. H. MINER.
DRAFT RIGGING FOR CARS.

No. 474,996.

Patented May 17, 1892.



Witnesses:
Lew. C. Curtis
Emma Stack

Inventor:
William H. Miner.
By Munday Evans & Adcock
His Attorneys

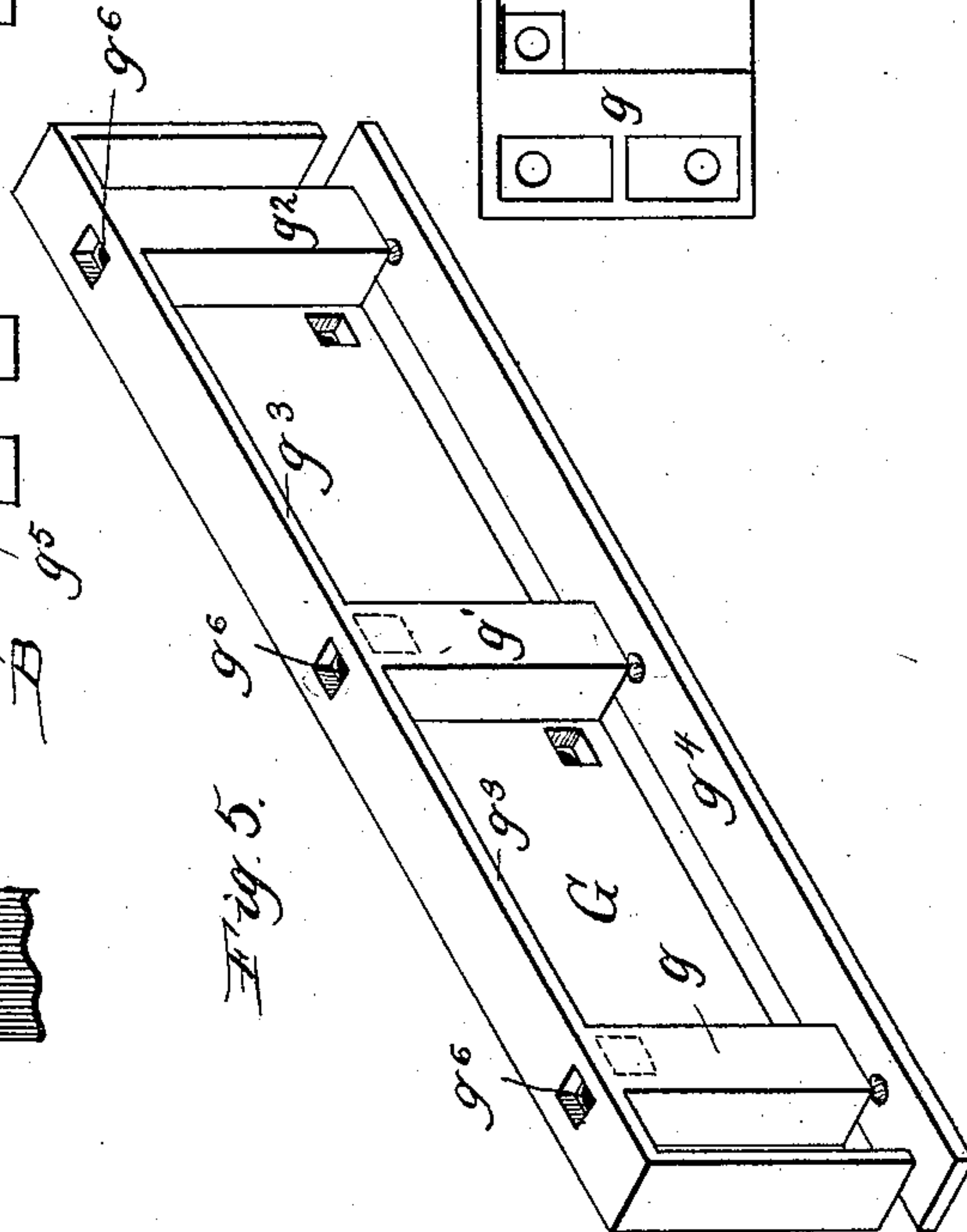
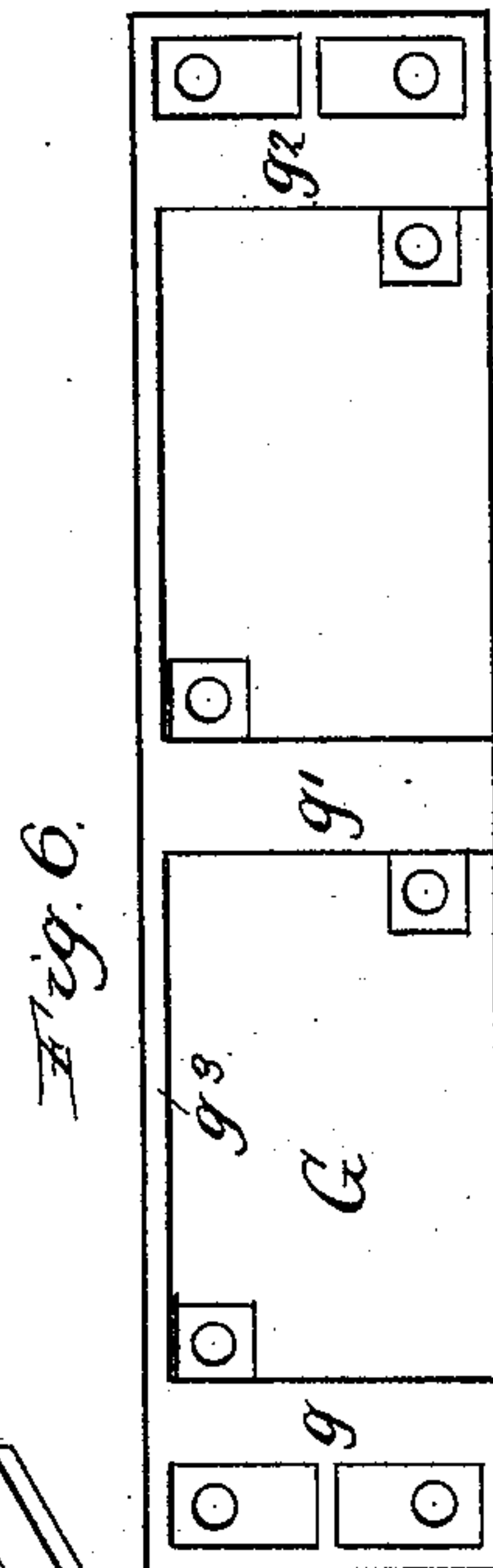
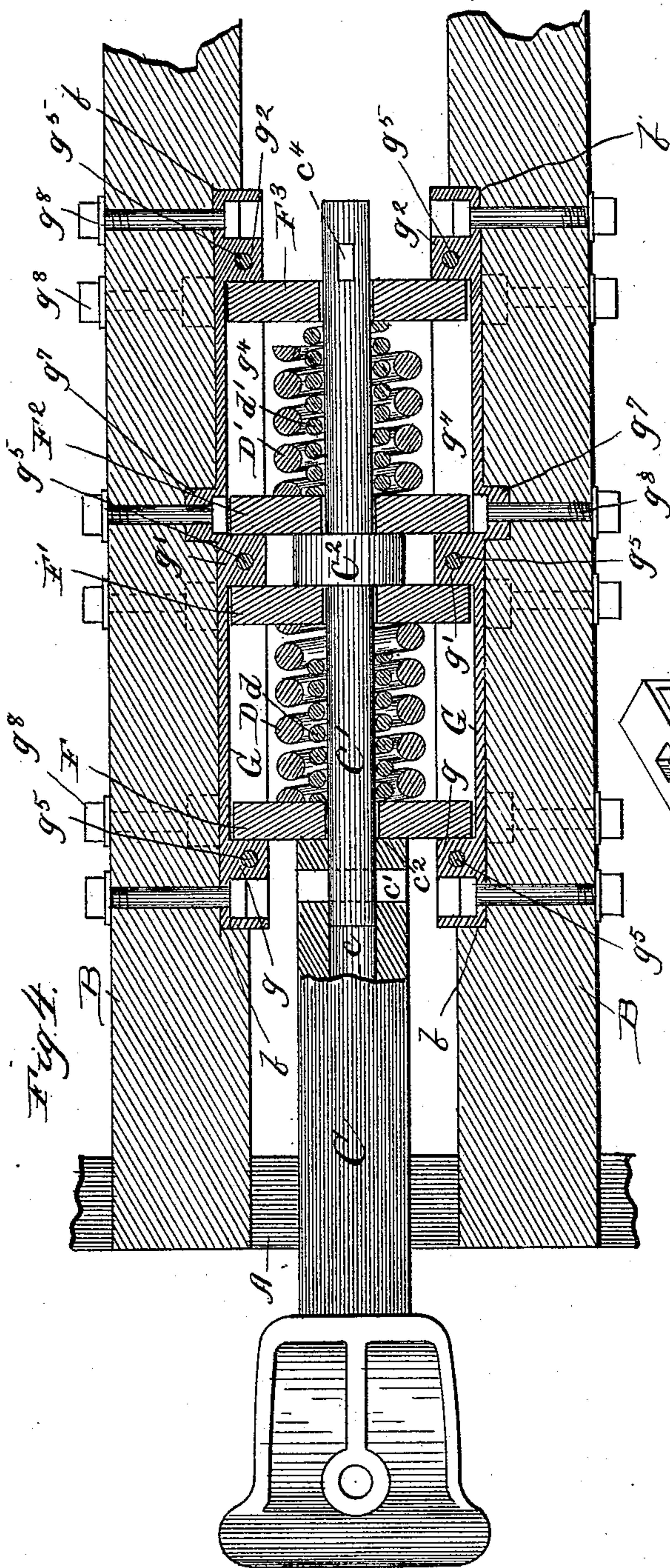
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2 Sheets—Sheet 2.

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DRAFT RIGGING FOR CARS.

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Witnesses:

Sam. E. Curtis
Emma Stark

Inventor:

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His Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM H. MINER, OF CHICAGO, ILLINOIS.

DRAFT-RIGGING FOR CARS.

SPECIFICATION forming part of Letters Patent No. 474,996, dated May 17, 1892.

Application filed November 9, 1891. Serial No. 411,278. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. MINER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Draft-Rigging for Cars, of which the following is a specification.

My invention relates to improvements in draft-rigging for freight-cars, and more particularly to certain improvements upon the draft-rigging heretofore patented to me in Letters Patent of the United States No. 464,443, of October 20, 1891.

My present improvement consists in the novel devices and novel combination of parts and devices herein shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts throughout all the figures, Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a cross-section on line 3 3 of Fig. 1. Fig. 4 is a horizontal section. Fig. 5 is a perspective view of the guide and stop-plate, which is secured to the draft-timbers, and Fig. 6 is a face view of the same.

In the drawings, A represents one of the cross-sills of the car-body; B, the draft-timbers; C, the draw-bar; D *d* and D' *d'*, the tandem-arranged graduated coil-springs, through which the draw-stem C' passes.

F F' F² F³ are the followers, which abut against the ends of the coil-springs and through which the draw-stem C' passes. The draw-stem C' fits in a suitable socket *c* in the end of the draw-bar C, and is secured therein by a strong steel key *c'*. The squared end *c*² of the draw-bar C abuts against the follower F. A button or collar C², secured to the draw-stem C' or integral therewith between the followers F' F², abuts against said follower. A key *c*⁴ in the end of the draw-stem abuts against the follower F³.

The followers F F' F² F³ are preferably rectangular blocks, and they reciprocate back and forth in suitable guides G G, one secured to each of the draft-timbers B B. The guides are preferably made of malleable iron and cast to the required shape, each guide consisting of a plate lettered G and furnished

with three integral projections *g g' g*², constituting the stops, against which the followers F F' F² F³ abut. The guide-plates G have each a web *g*³ at their upper edges, forming one wall of the guide-recesses in which the followers fit. The lower wall of the guide-recess is formed by a plate or bar *g*⁴, which is secured to the lower edge of the guide-plate G by bolts *g*⁵, which pass up through the guide-plate in holes *g*⁶, extending through the stop projections *g g' g*². The guide-block or casting G is also furnished with hollow bosses *g*⁷, through which bolts *g*⁸ pass to secure the same to the draft-timber. The heads of the bolts *g*⁸ are countersunk in the guide-plate G, so as to not interfere with the movement of the followers. The draft-timbers B should be notched or recessed at *b* to receive the guide blocks or plates G. The guide-plate and all the stops on one side for all the followers of the tandem-springs being thus made integrally in one piece, it materially lessens the number of parts and adapts the apparatus to be more conveniently and quickly applied to a car, while at the same time the strength and resistance of each stop and its attachment to the draft-timber is increased by that of all the others.

I claim—

1. In a draft-rigging for railway-cars, the combination, with the draft-timbers B B, of the draw-bar C, secured thereto, draw-stem C', secured to said draw-bar, followers F F' F² F³, tandem-arranged springs D *d* D' *d'*, and guide-plates G, furnished with integral stop projections *g g' g*² for said followers to abut against, said guide-plates being secured to said draft-timbers, substantially as specified.

2. In a draft-rigging for railway-cars, the combination, with the draft-timbers B B, of the draw-bar C, draw-stem C', secured to said draw-bar, followers F F' F² F³, tandem-arranged springs D *d* D' *d'*, guide-plates G, furnished with integral stop projections *g g' g*² for said followers to abut against, said guide-plates being secured to said draft-timbers, said guide-plates having an upper web *g*³ and a lower guide-bar *g*⁴ bolted thereto, substantially as specified.

3. In a draft-rigging for railway-cars, the combination, with the draft-timbers B B, of the draw-bar C, draw-stem C', secured to said

draw-bar, followers F F' F² F³, tandem-arranged springs D d D' d', guide-plates G, furnished with integral stop projections g g' g² for said follower to abut against, said guide-plates being secured to said draft-timbers, said guide-plates having an upper web g³ and a lower guide-bar g⁴ bolted thereto, said stop projections g g' g² having holes through them for the bolts to pass through, substantially as specified.

4. In a draft-rigging for railway-cars, the combination, with the draft-timbers B B, of the draw-bar C, draw-stem C', secured to said draw-bar, followers F F' F² F³, tandem-arranged springs D d D' d', and guide-plates G, furnished with integral stop projections g g' g² for said followers to abut against, said guide-plates being secured to said draft-timbers, said guide-plates G having hollow projections or bosses g⁷ on the back face thereof, through which bolts pass to secure the same to the draft-timbers, substantially as specified.

5. In a draft-rigging for railway-cars, the combination, with the draft-timbers B B, of draw-bar C, having socket c, stem C', fitting in said socket in said draw-bar and secured therein by a key, of followers F F' F² F³, tandem-arranged springs between said followers F F' and F² F³, a collar C², secured to said draw-stem between said followers F' F², and

a key c⁴, secured to said draw-stem at the end thereof, and stops secured to said draw-timbers for said followers to abut against, substantially as specified.

6. In a draft-rigging for railway-cars, the combination, with the draft-timbers B B, of the draw-bar C, having socket c, stem C', fitting in said socket in said draw-bar and secured therein by a key, of followers F F' F² F³, tandem-arranged springs between said followers F F' and F² F³, a collar C², secured to said draw-stem between said followers F' F², a key c⁴, secured to said draw-stem at the end thereof, and stops secured to said draw-timbers for said followers to abut against, said draw-bar having a squared end, against which said follower F abuts, substantially as specified.

7. The combination, with the draft-timbers B, having guide-plates G secured thereto furnished with stops g g' g², of draw-bar C, draw-stem C', fitting in a socket in the end of said draw-bar and secured therein by a key, followers F F' F² F³, tandem-arranged springs D d D' d', said draw-stem having a collar C² keyed thereto, and a key c⁴, substantially as specified.

WILLIAM H. MINER.

Witnesses:

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EMMA HARK.