

No. 768,611.

PATENTED AUG. 30, 1904.

M. S. LUKAK.  
DRAFT RIGGING FOR CARS.  
APPLICATION FILED APR. 18, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

FIG. 1

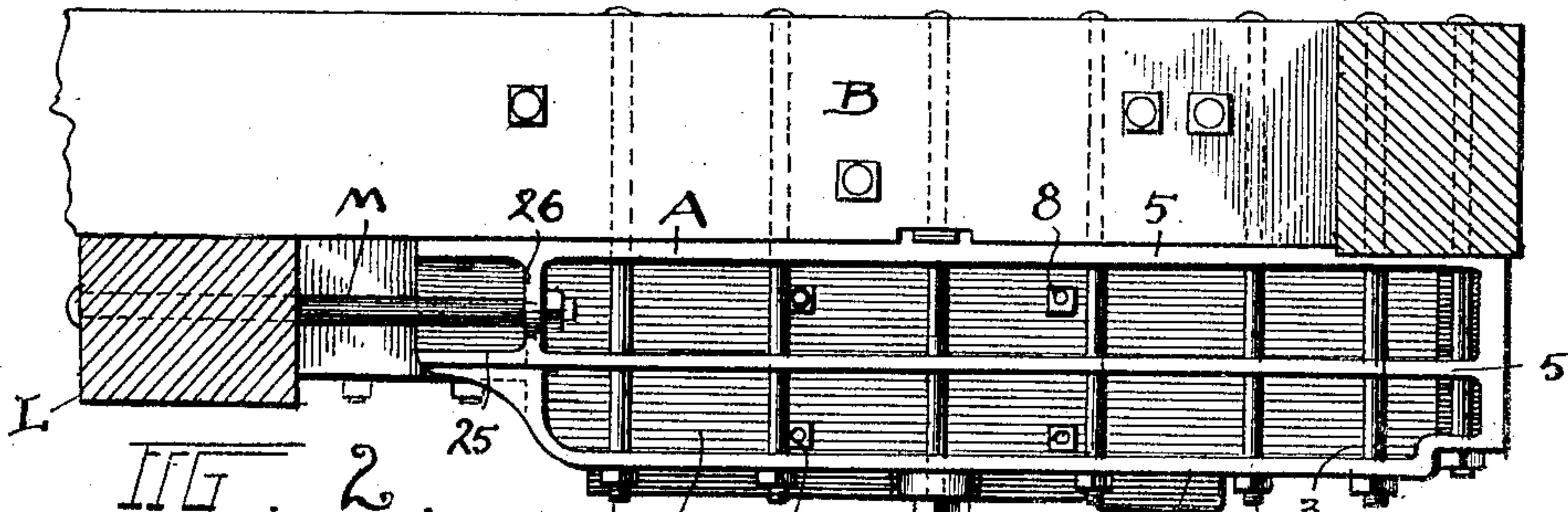


FIG. 2

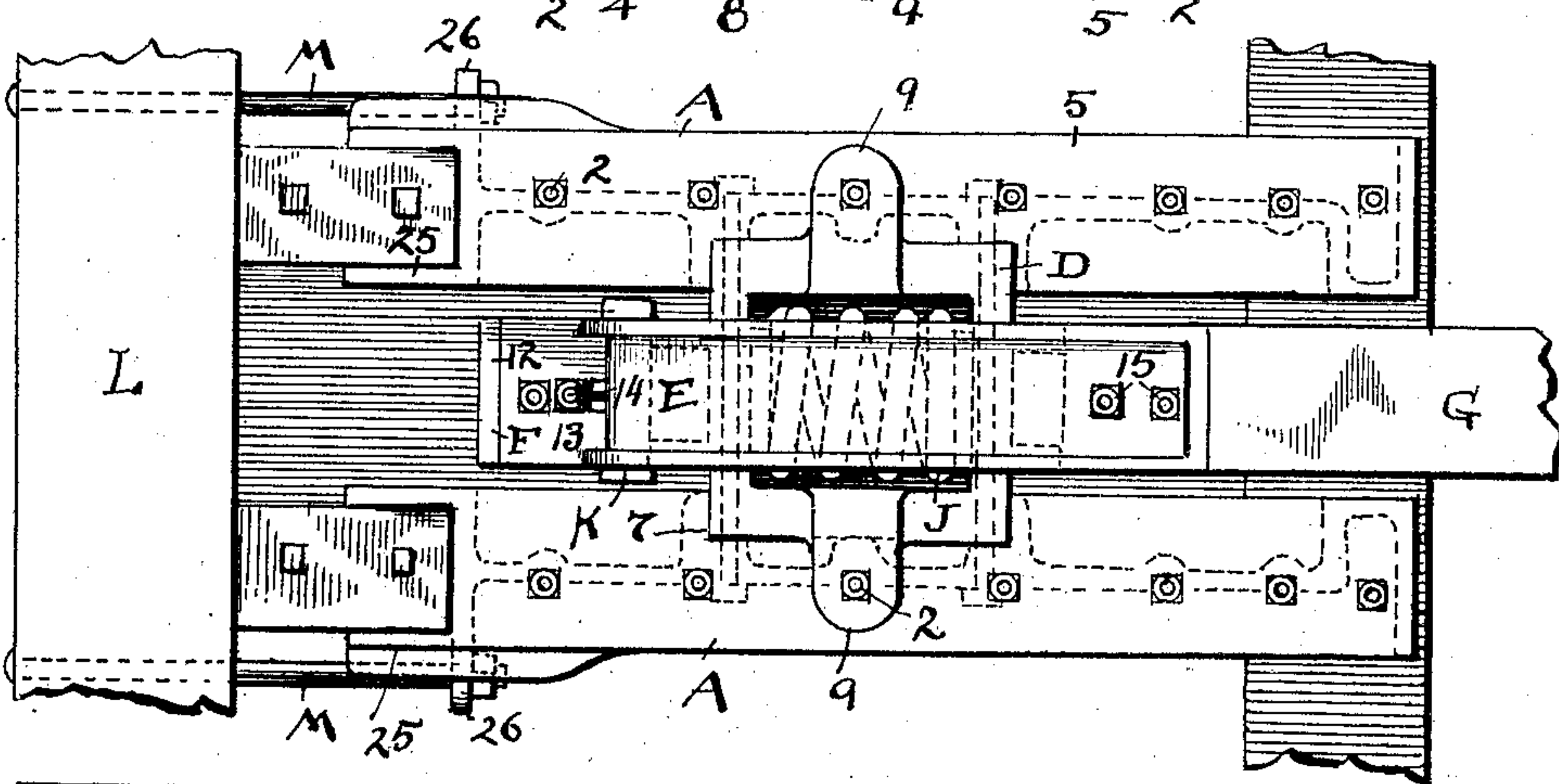


FIG. 3

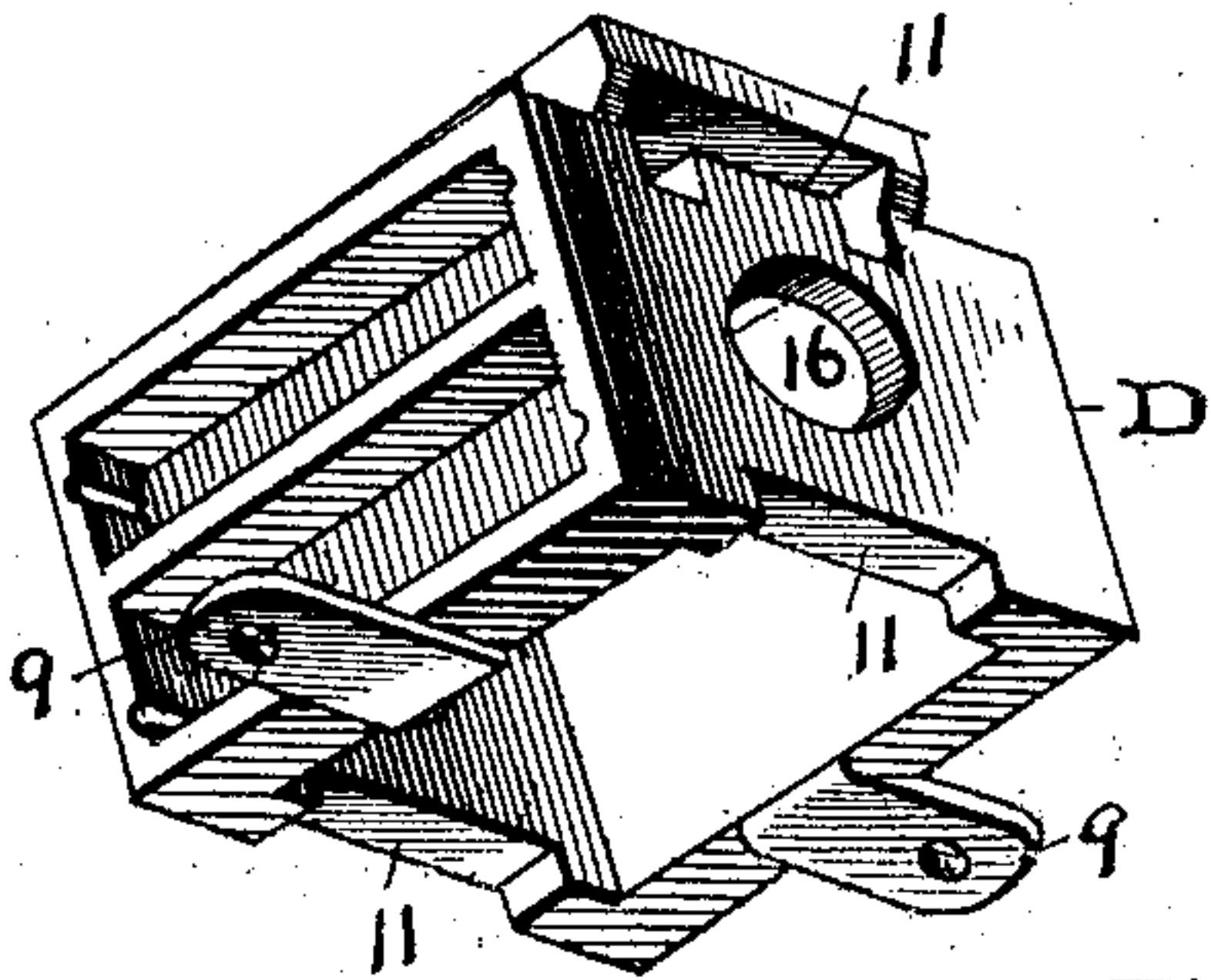


FIG. 4

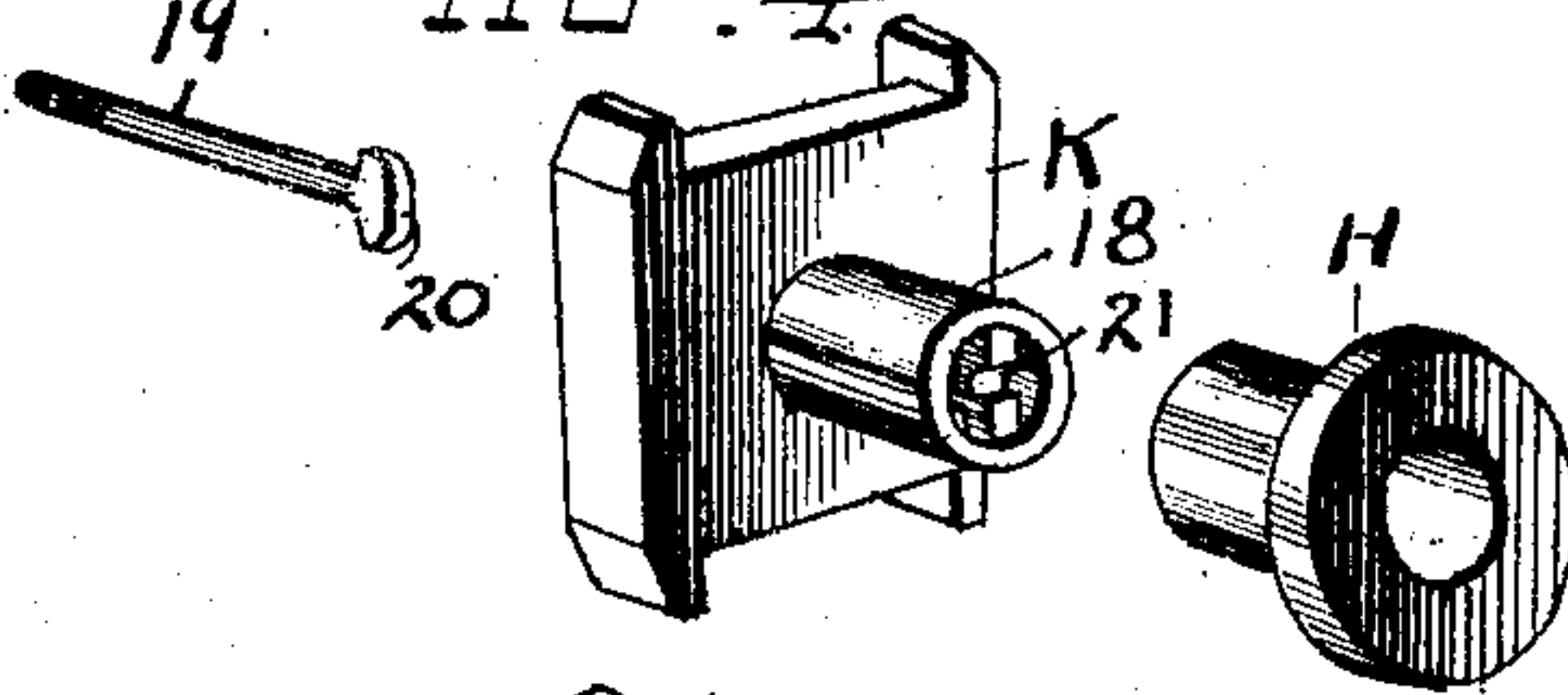
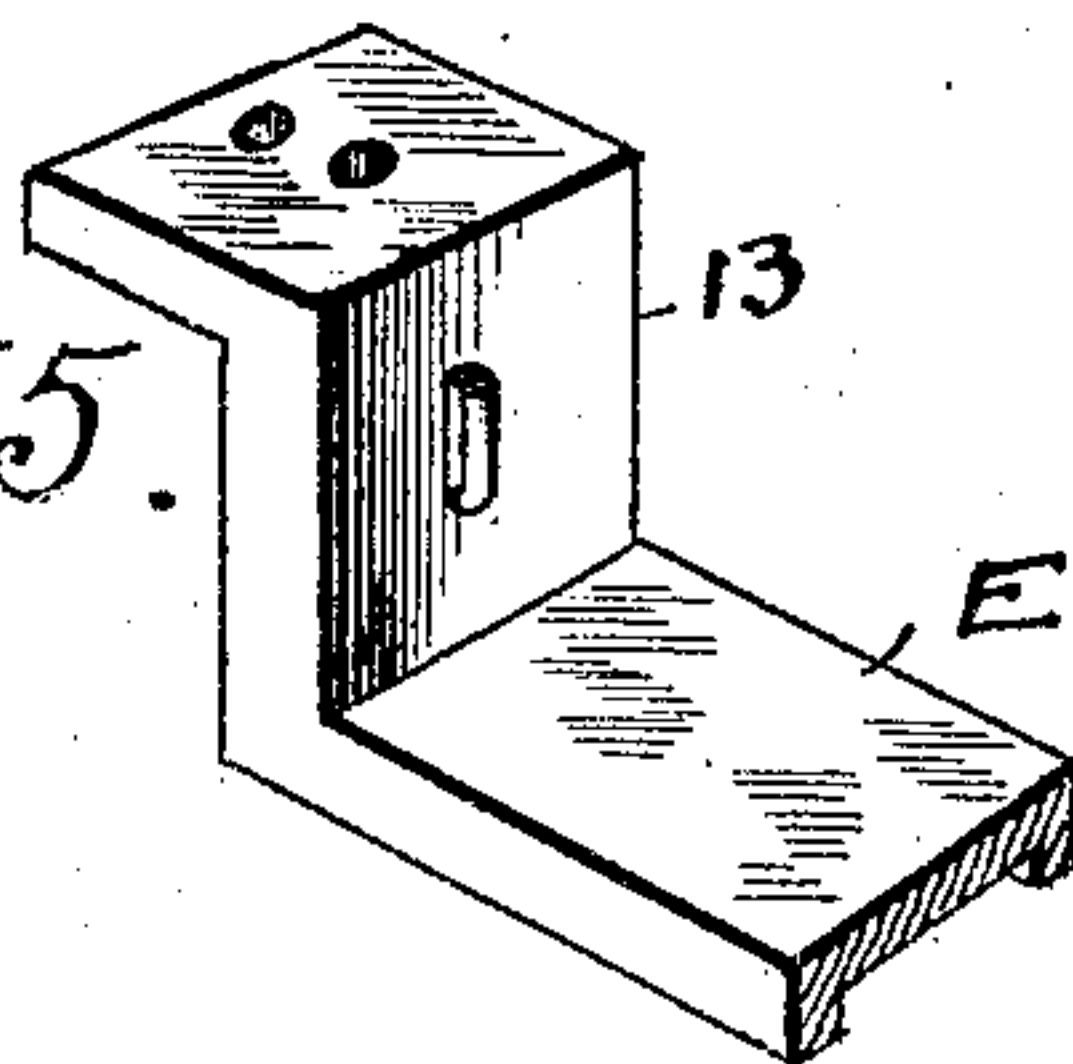


FIG. 5



WITNESSES:

A. N. Moser.  
J. S. Moser.

INVENTOR.

Michael S. Lukak  
BY H. J. Fisher  
ATTORNEY.



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2 SHEETS—SHEET 2.

FIG. 6

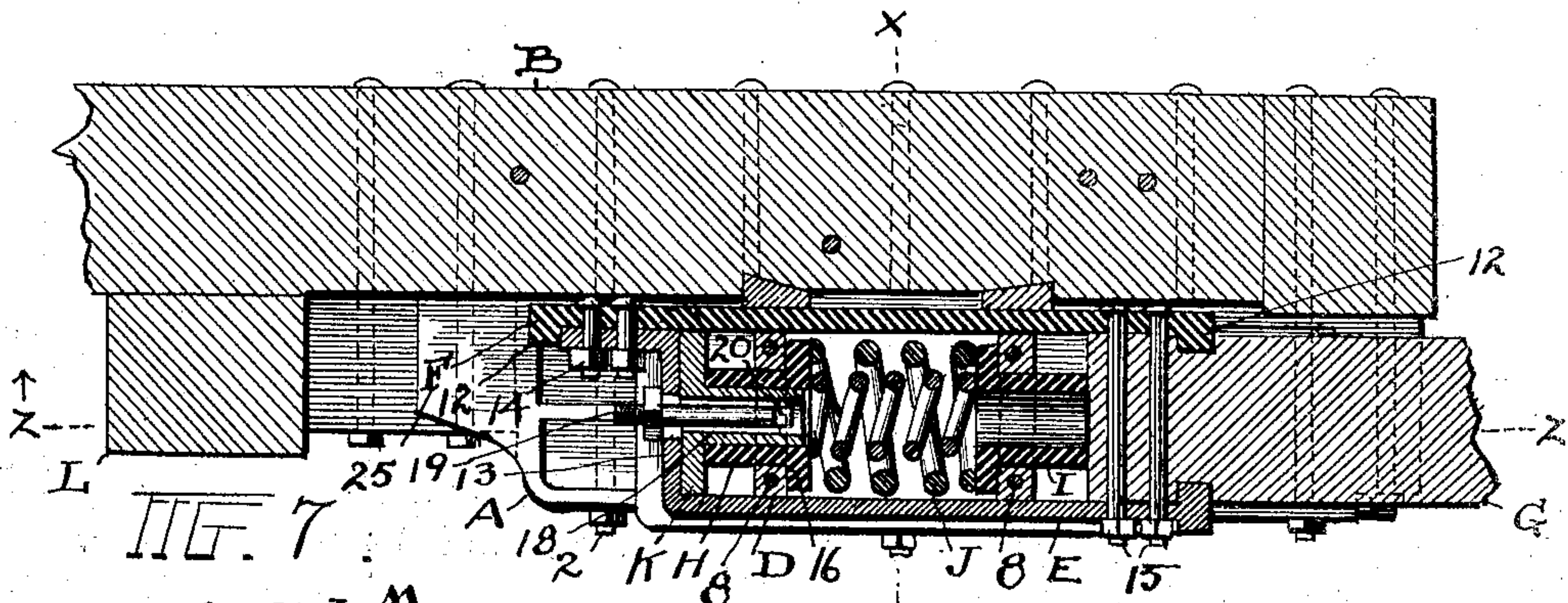


FIG. 7

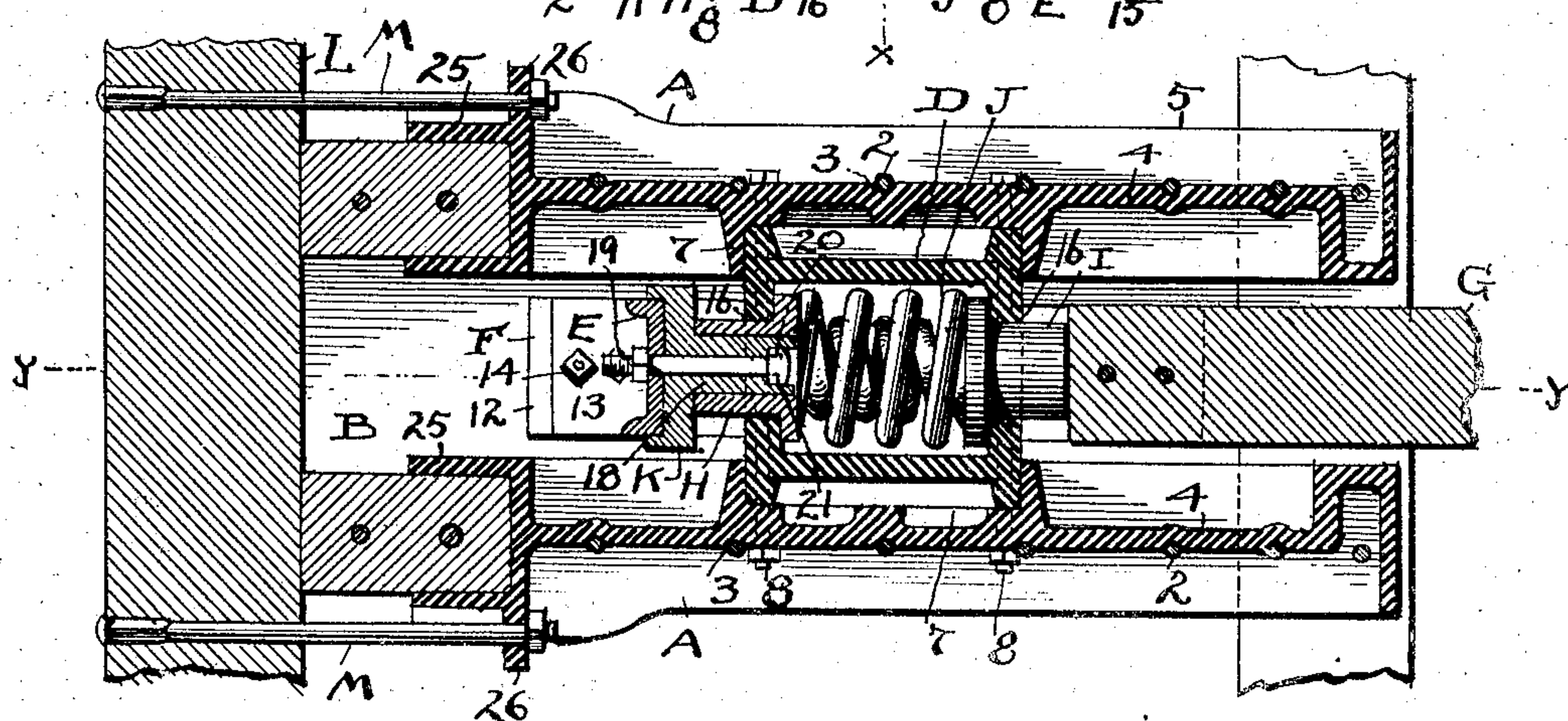
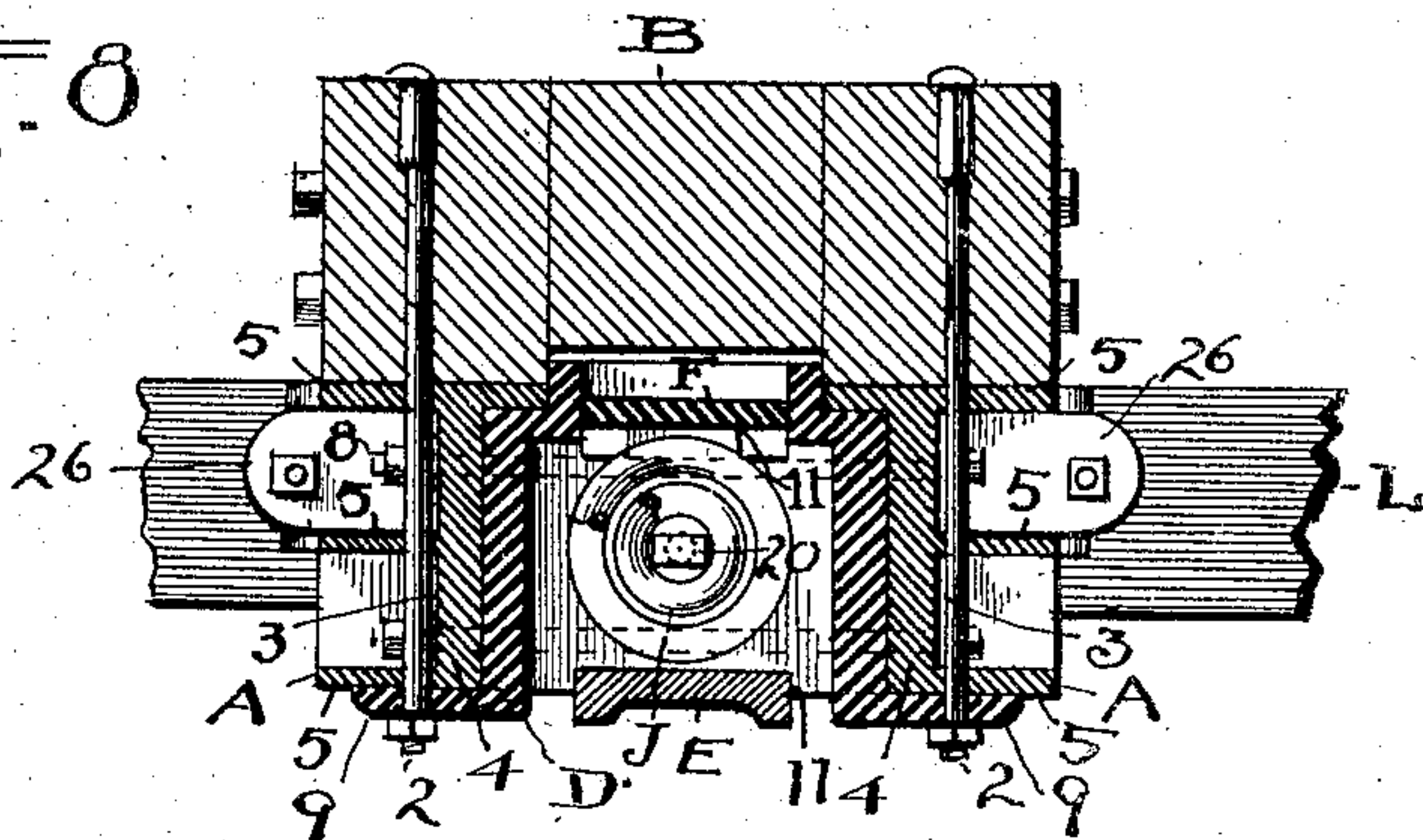


FIG. 8



WITNESSES:

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# UNITED STATES PATENT OFFICE.

MICHAEL S. LUCAK, OF CLEVELAND, OHIO.

## DRAFT-RIGGING FOR CARS.

SPECIFICATION forming part of Letters Patent No. 768,611, dated August 30, 1904.

Application filed April 18, 1904. Serial No. 203,623. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL S. LUCAK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Draft-Rigging for Cars; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in draft-rigging for cars; and the improvement consists in the construction and arrangement of parts, substantially as hereinafter shown, and more particularly pointed out in the claims.

It is my aim to provide a separable draft-rigging wherein the parts which are apt to become broken can be taken apart and repaired and replaced while the main parts remain on the car.

In the accompanying drawings, Figure 1 is a side elevation of my improved draft-rigging mounted upon a section of the draft-timbers or bolsters of the car. Fig. 2 is a bottom view of the draft-rigging shown in Fig. 1. Fig. 3 is a perspective view of the spring and bolster confining box. Fig. 4 illustrates in perspective view three distinct follower-member pieces. Fig. 5 is a perspective view of a section of the lower follower-strap. Fig. 6 is a longitudinal section on line *y y*, Fig. 7, of my improved draft-rigging with a portion of the car-coupler attached thereto at its front end. Fig. 7 is a section on lines *z z*, Fig. 6 looking up; and Fig. 8 is a cross-section on line *x x*, Fig. 6, of my improved draft-rigging with the parts assembled as in use.

The two main members of the draft-rigging comprise side castings A, which are fastened to the timbers B of the car by vertical bolts 2, which pass centrally through said castings, but are exposed at one side of vertical grooves 3, formed in a central vertical rib 4. These vertical bolts are subject to great strain and are very often broken and require replacing and are also entirely removed in the event of a removal of the whole casting A. Ordinarily these bolts are hidden from view; but in this instance I prefer to use the arrangement

shown, because in the event of a broken bolt a glance at the open side of casting A will show the necessity for repairs and also because these bolts in the course of time accumulate rust and become so wedged in place that it is a difficult matter to remove the bolt, whereas with a bolt exposed at one side in a semi-spherical opening 3 a tap of a hammer upon the bolt will loosen the bolt in its socket and permit easy removal of the same. Castings A are preferably constructed with a central vertical wall 4 and top and bottom and middle horizontal walls or flanges 5, which extend to either side of said vertical wall and which together form a strong support for the other members of the draft-rigging.

Castings A are connected at their inner side by a box D, which is confined within a recess 7 in the side of each casting, and cross-bolts 8 tie said box and casting members together. Ears 9 on the bottom of the box D overlap and lie flush upon the bottom flange 5 of each member A, and one of the vertical bolts 2 through each member A and said ears is utilized to fasten the box in place.

Box D is provided with guideways 11 upon its top and bottom faces, in which follower-straps E and F are adapted to slide. Follower-strap F is a straight bar provided with cross-ribs or projections 12 at its ends, and strap E has an upper projecting foot 13, which is bolted to strap F at its inner end by short bolts 14. The front end of straps F and E engage and are bolted upon the draw-bar coupling member G proper by bolts 15. The pull and push upon the coupler is taken up through the straps and suitable follower members H and I, which slide in openings 16 in the ends of box D and between which a pair of heavy coiled springs J are confined.

In the event of a broken spring or follower member taking place I provide a separable construction for conveniently replacing the broken parts without taking the entire draft-rigging apart or removing it from the supporting-timbers B, and this construction is comprised in the straps E and F and an intermediate part K, which is provided with tubular portion 18, free to slide within the tubular portion of follower H and which



part abuts the inner vertical face of foot 13 and is detachably fastened thereto by a connecting pin or bolt 19. Said bolt 19 has a T-shaped head 20 adapted to lock in slots or grooves 21 at either side of the central slot and at the inner end thereof within tubular portion 18. When said bolt is in locking position, strap E and part K are firmly united and move together; but when the strap is to be removed the nut on bolt 19 is taken off, and a quarter-turn is given to said bolt to release it from its engagement with grooves 21, and then said bolt can be taken out and part K removed from follower H after strap E has been disconnected from strap F. The bottom of box D is now open, and new springs or new followers can be replaced therein with ease and convenience. Part K is essential, in that it provides a central guide for the straps and when pushing upon the coupler forces the straps inward against the action of the springs. The forward pull upon the coupler is taken up through both straps, part K, and follower H.

Castings A are provided at their inner end with rearwardly-extending flanges 25, between which suitable timbers are confined and which timbers abut against cross-bolster L. Tie-bolts M connect bolster L with ears 26 upon members A.

Box D, straps E and F, the follower, and springs, and all are removable together from casting A upon the removal of cross-bolts 8 and the two vertical bolts 2, which engage ears 9 of box D. This provides a convenient means for taking the draw-bar and its immediate draft-rigging connections bodily from the car.

What I claim is—

1. In draft-riggings, a draft-rigging frame comprising side members having each a central vertical wall with side flanges laterally on the outside of said wall, and a series of vertical side grooves in the outer face of said wall and tie-bolts in said grooves extending through said flanges, said grooves and bolts disposed at intervals from end to end of said walls, substantially as described.

2. In a draft-rigging, a frame comprising side members, and a central box detachably mounted between said side members and se-

cured thereto, follower-straps supported to slide in the top and bottom, respectively, of said box, follower members adapted to slide within the ends of said box, a detachable part for one of said straps supported to slide within one of said follower members, and cushioning-springs between said members, substantially as described.

3. In a draft-rigging for cars, a frame comprising side members and a central connecting-box detachably mounted between said members, and upper and lower follower-strap free to slide upon said box, said lower strap having an upwardly-extending foot and bolts to secure the same to said upper strap, follower members to slide within the ends of said box, a cushioning-spring between said members confined in said box and an intermediate part between said lower strap and the follower members and detachably connected with said strap, substantially as described.

4. In a draft-rigging for cars, the combination of side members and a removable connecting-box therefor with follower-straps for the draw-bar mounted to slide upon said box, follower members slidably mounted within the ends of said box, a cushioning-spring within the box between said members, a detachable part for one of said straps adapted to slide within one of said followers, and means to removably fasten said parts and straps in place within said follower member, substantially as described.

5. In a draft-rigging for cars, a draft-rigging frame comprising side members, a removable connecting-box between said members, follower-straps mounted to slide upon said box, follower sliding members within said box, a detachable part for said straps provided with a tubular portion supported to slide within one of said follower members, a removable locking-bolt for said detachable part, and springs between said members, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

MICHAEL S. LUCAK.

Witnesses:

R. B. MOSER,  
C. A. SELL.