

(No Model.)

E. GRAFSTROM.

DRAFT RIGGING FOR CONNECTING COUPLINGS TO CARS.

No. 575,566.

Patented Jan. 19, 1897.

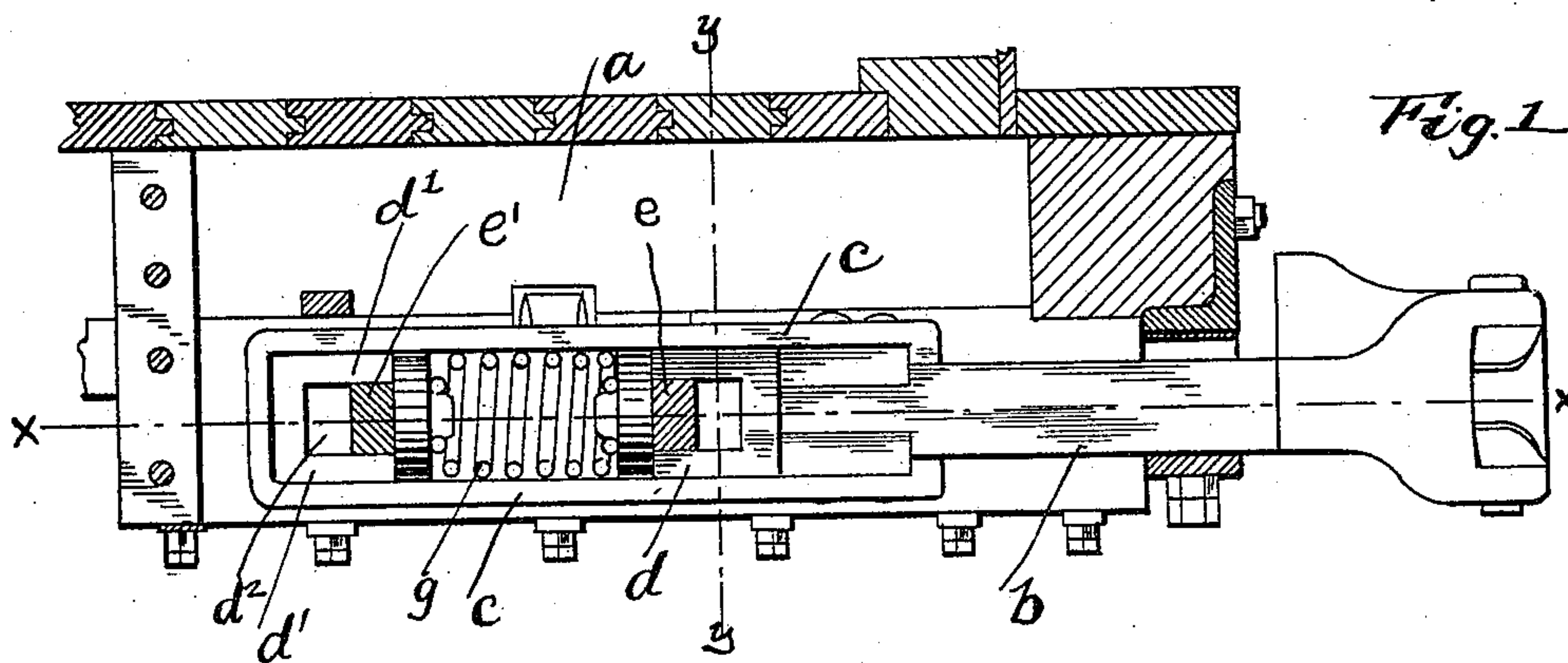


Fig. 1

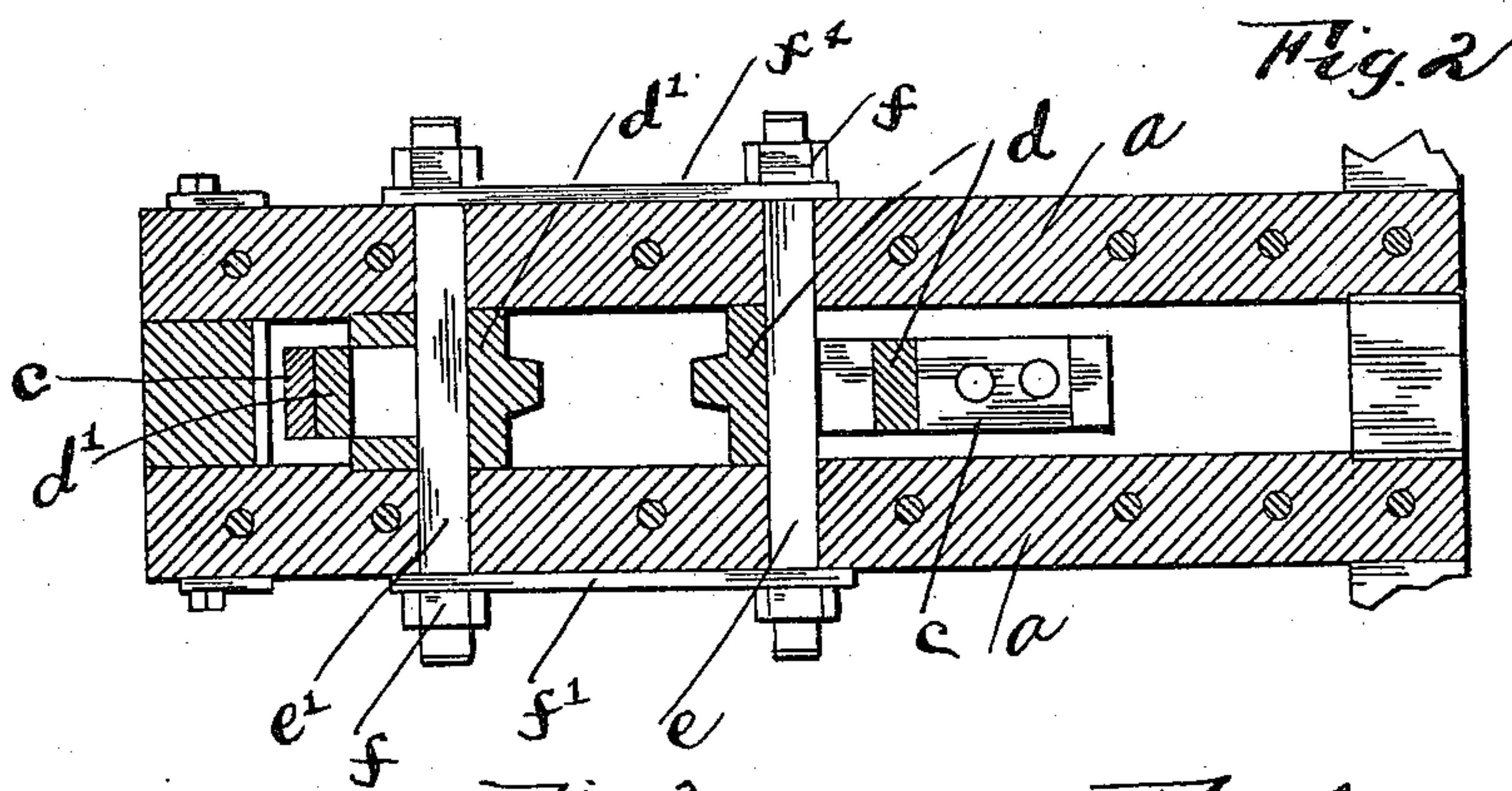


Fig. 2

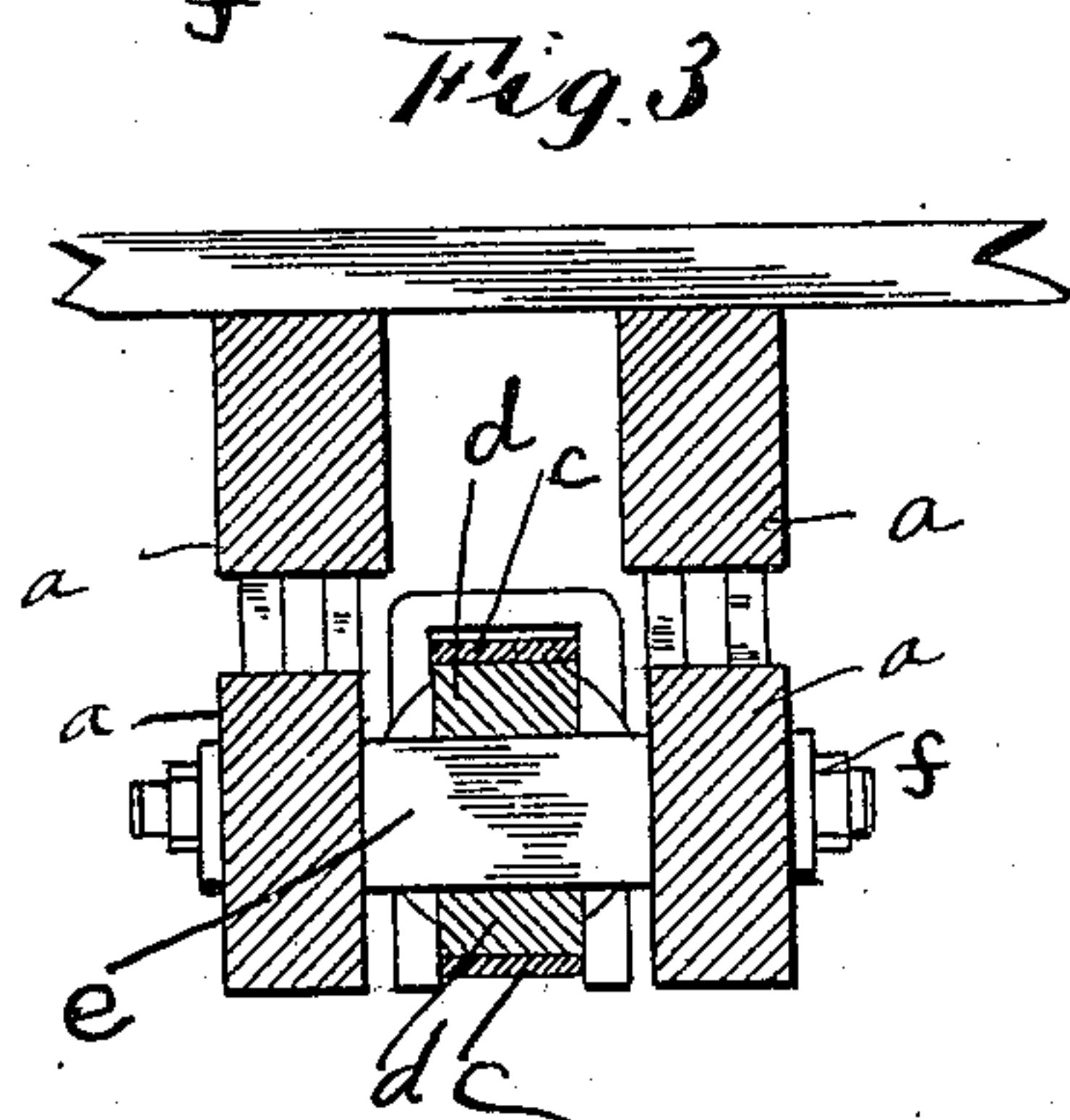


Fig. 3

Fig. 4

Fig. 5

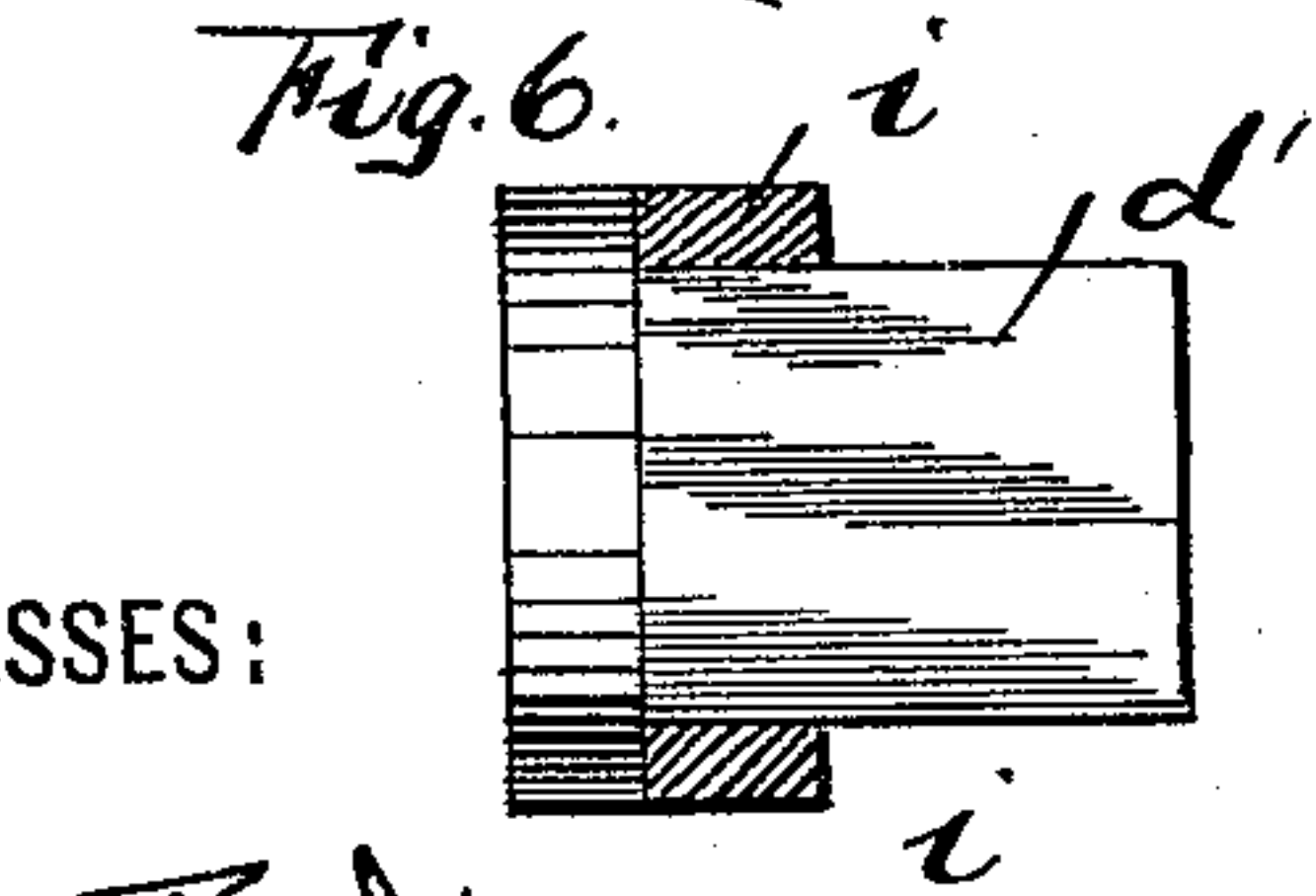
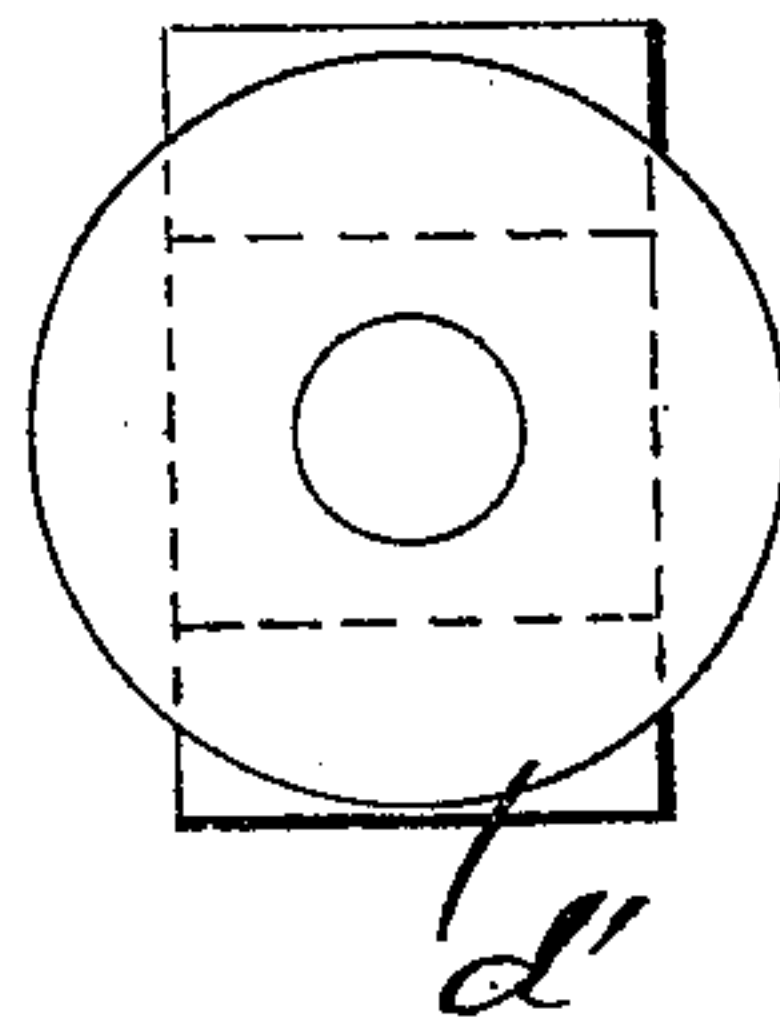
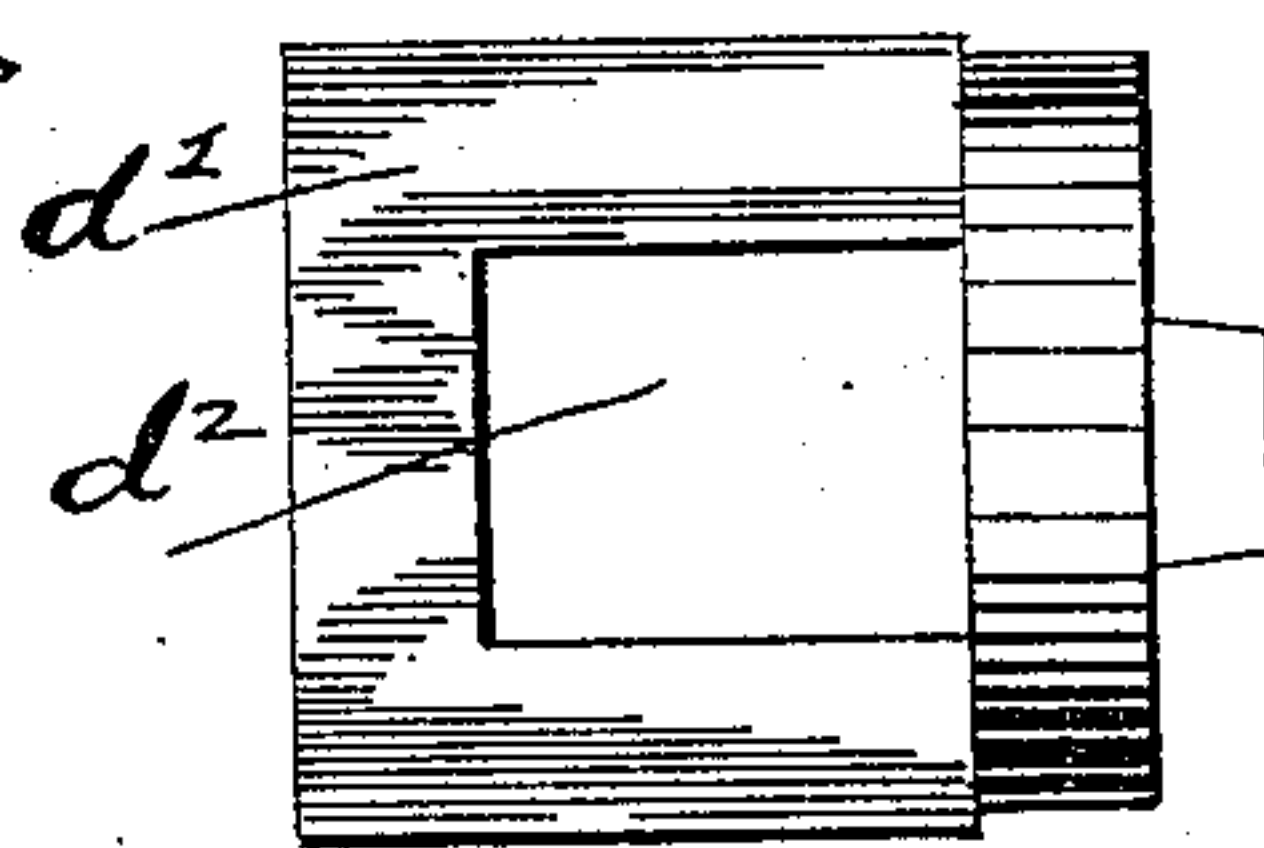


Fig. 6

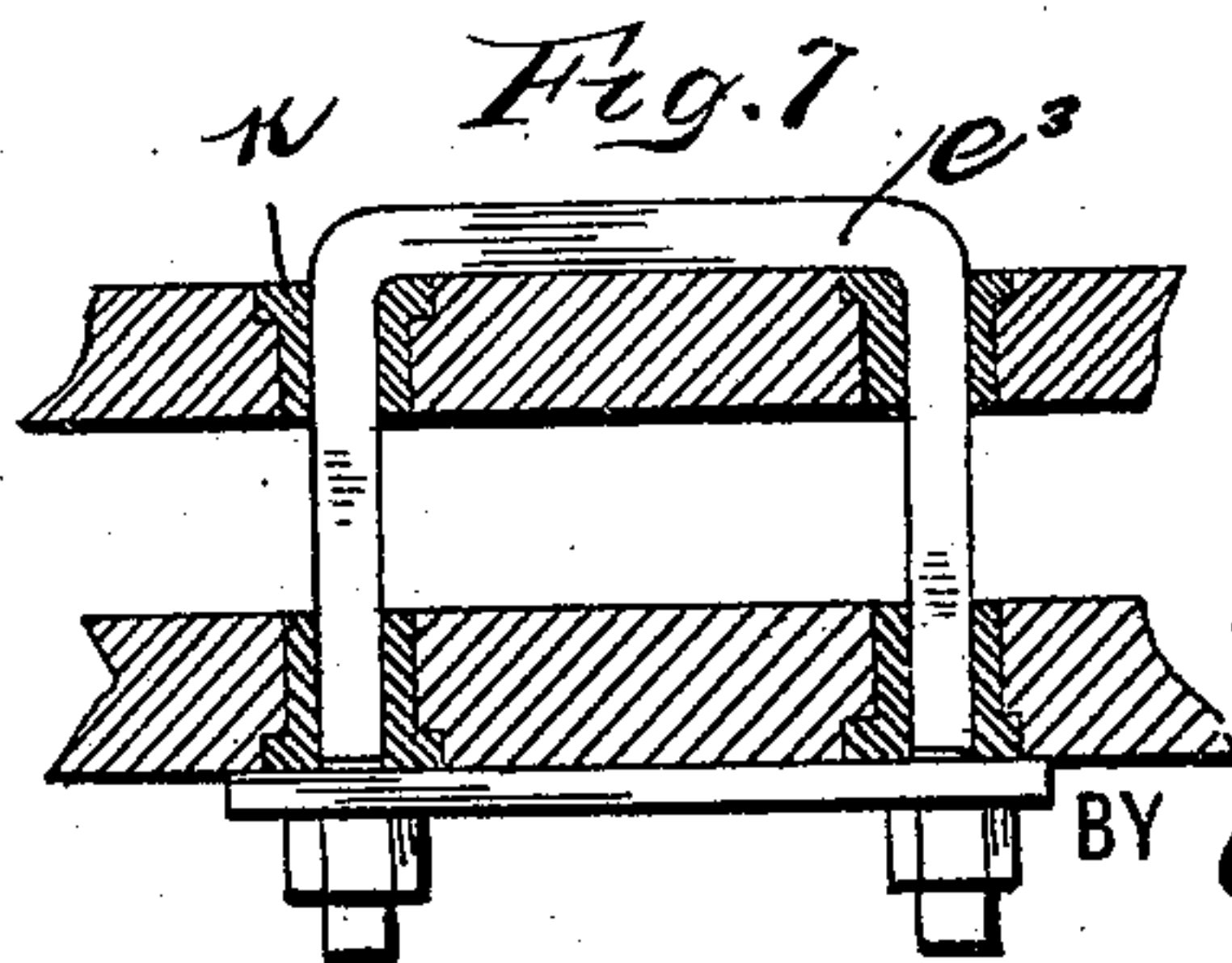


Fig. 7

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DRAFT-RIGGING FOR CONNECTING COUPLINGS TO CARS.

SPECIFICATION forming part of Letters Patent No. 575,566, dated January 19, 1897.

Application filed November 18, 1896. Serial No. 612,532. (No model.)

To all whom it may concern:

Be it known that I, EDWARD GRAFSTROM, a citizen of Sweden, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Draft-Rigging for Connecting Couplers to Cars, of which the following is a specification.

My invention relates to the improvement of resilient draft-riggings or means for connecting car-couplers with cars.

The objects of my invention are to provide an improved draft-rigging of this character of simple, inexpensive, and reliable construction, to so construct the same as to admit of the parts thereof being readily disconnected by simple means, and to provide certain improvements in details of construction and arrangement of said parts which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of a portion of one end of a car having my improved draft-rigging thereon. Fig. 2 is a sectional view on line *xx* of Fig. 1. Fig. 3 is a transverse section on line *yy* of Fig. 1. Fig. 4 is a detail view in elevation of one of the followers which I employ. Fig. 5 is an end view of the same. Fig. 6 is a detail view showing one of the followers in elevation and illustrating a modification in the engagement of the stop-bars therewith; and Fig. 7 is a view, partially in section and partially in elevation, showing a modified form of stop-bar.

Similar letters refer to similar parts throughout the several views.

a a represent the parallel draft-timbers, which are supported beneath the car-body in the usual manner. *b* represents the draw-bar, which extends in the usual manner between said draft-beams. With the enlarged inner end or shouldered tailpiece of the draw-bar is engaged the intumed ends of an oblong strap-frame *c*, which extends, as shown, between said beams.

Within the strap-frame I provide separated and movable followers, which are indicated at *d* and *d'*. As shown more clearly in Figs. 4 and 5 of the drawings, each of these followers is in the form of a block having a mortise

*d*² formed therein. These followers are supported in their positions between the beams by means of transverse bars *e* and *e'*, said bars passing loosely through the mortises *d*² of the followers. The bars *e* and *e'* also pass through the draft-beams *a*, and having bolt-shaped terminations are provided on their outer ends with nuts *f*, which are preferably adapted to be tightened against plates *f'*, which bear against the sides of the beams and through which the bar ends pass.

Between the inner ends of the followers I provide, as indicated in Fig. 1 of the drawings, a coil-spring *g*, which may be of the usual duplicate arrangement, if desired. As indicated in the drawings, this coil-spring serves to normally retain the heads or inner end portions of the followers against the inner sides of the bars *e* and *e'*.

As is usual, the forward end portions of the strap-frame arms are riveted to the inner end or tailpiece of the draw-bar.

By the arrangement which I have herein described it will be seen that when the coupler is subjected to a pull the forward movement of the strap *c* must result in a forward movement of the inner follower *d'*, which in turn causes a compression of the spring against the forward follower *d*, the latter having an immovable bearing against the forward strap-bar *e*.

It is evident that when the draw-bar is subjected to an inward movement the forward follower *d* will move inward and the spring will be compressed toward the inner follower *d'*, the latter having a solid bearing against the bar *e'*. In this manner it will be observed that the spring *g* will operate as a cushion to receive the force of either the inward or outward movement of the draw-bar, while the transverse strap-bars *e'* and *e* will serve to limit the movement of the followers.

From the construction and operation which I have described it will readily be seen that the followers are supported wholly upon the transverse strap-bars and that by removing said strap-bars and the strap-frame the tail end of the coupler can be lowered sufficiently to enable the spring or the followers to be readily removed or replaced. If in addition the strap-frame is removed, the coupler with

the affixed strap containing the followers and the spring can be dropped down and entirely freed from the car.

As indicated in Fig. 6 of the drawings, I may, if desired, substitute two stop-bars *i* for each of the bars *e e'*. In this modification, however, the follower could pass between the bars instead of employing one bar, which passes through the follower.

In case it should be deemed desirable I may, as indicated in Fig. 7, form the stop-bars *e* and *e'* as one substantially U-shaped body *e³*, that is, with two corresponding ends of said transverse bars connected on the outside of one of the draft-beams.

In order to prevent wear of the draft-timbers at the holes through which the strap-bars pass, said holes may be bushed or lined, as indicated at *k* in said Fig. 7.

It is well known that in attaching couplers to cars through the medium of a resilient draft-rigging it has been customary to use either a multiplicity of parts in order to obtain the necessary strength or to make the parts of such an intricate design or of such weight that more or less difficulty attends the work of securing the draft-rigging to the car in the first instance and that it is often a great annoyance to afterward remove or replace broken parts, which causes a considerable delay in handling cars and is a source of much expense.

By my invention I am enabled to produce a simple and substantial draft-rigging which can be applied to the ordinary forms of cars without difficulty or unnecessary waste of time and in which the parts can be removed and replaced with ease and rapidity.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a draft-rigging for connecting couplers to cars the combination with a car-frame, its draft-timbers, a draw-bar extending between said timbers and a strap-frame engaging with said draw-bar, of mortised followers arranged in said strap-frame, a spring or springs between said followers and transverse bars *e* and *e'*, detachably connected with the framework, said bars passing loosely through said follower-mortises, substantially as and for the purpose specified.

2. In a draft-rigging for connecting couplers to cars the combination with a car-frame, a draw-bar and a strap-frame connected with said draw-bar, of separated spring-actuated followers arranged in said strap-frame, transverse bars secured in the framework, said bars supporting and engaging with said followers, substantially as and for the purpose specified.

EDWARD GRAFSTROM.

In presence of—

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