

(No Model.)

J. S. BARTLEY.
CAR COUPLING.

No. 594,315.

Patented Nov. 23, 1897.

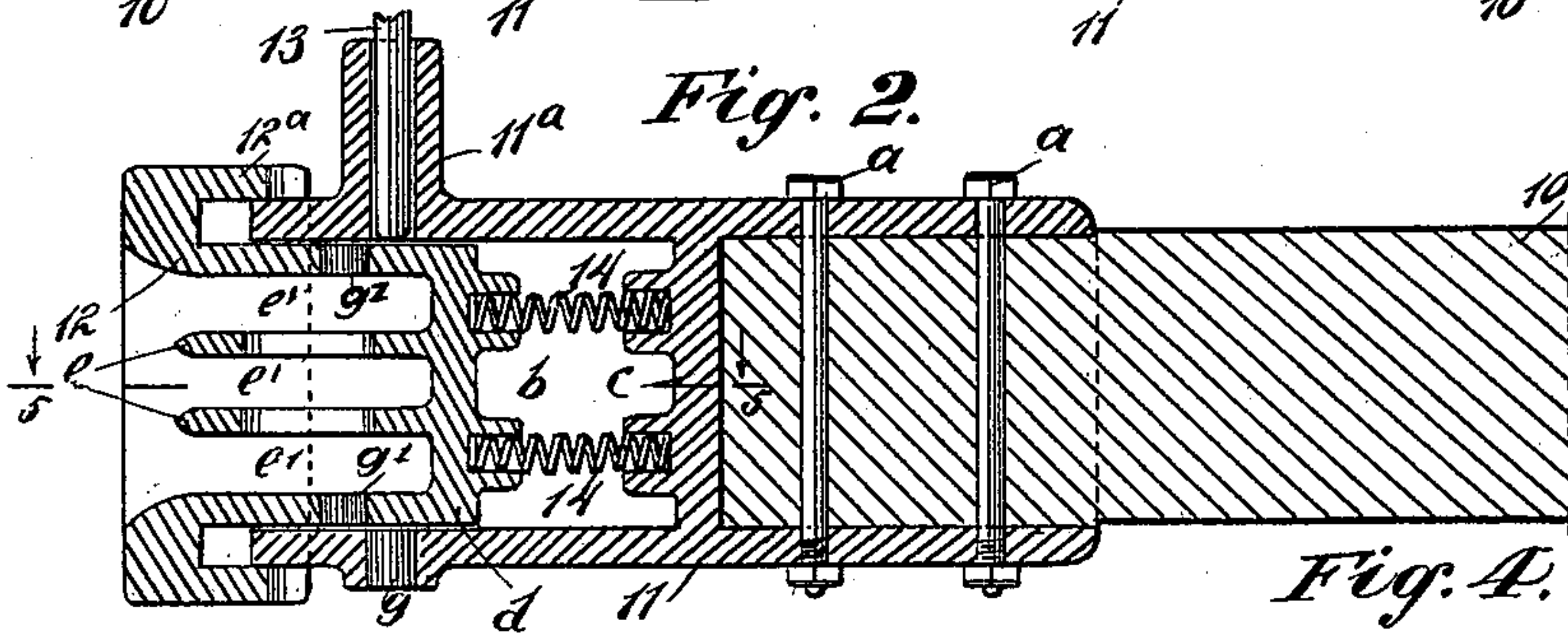
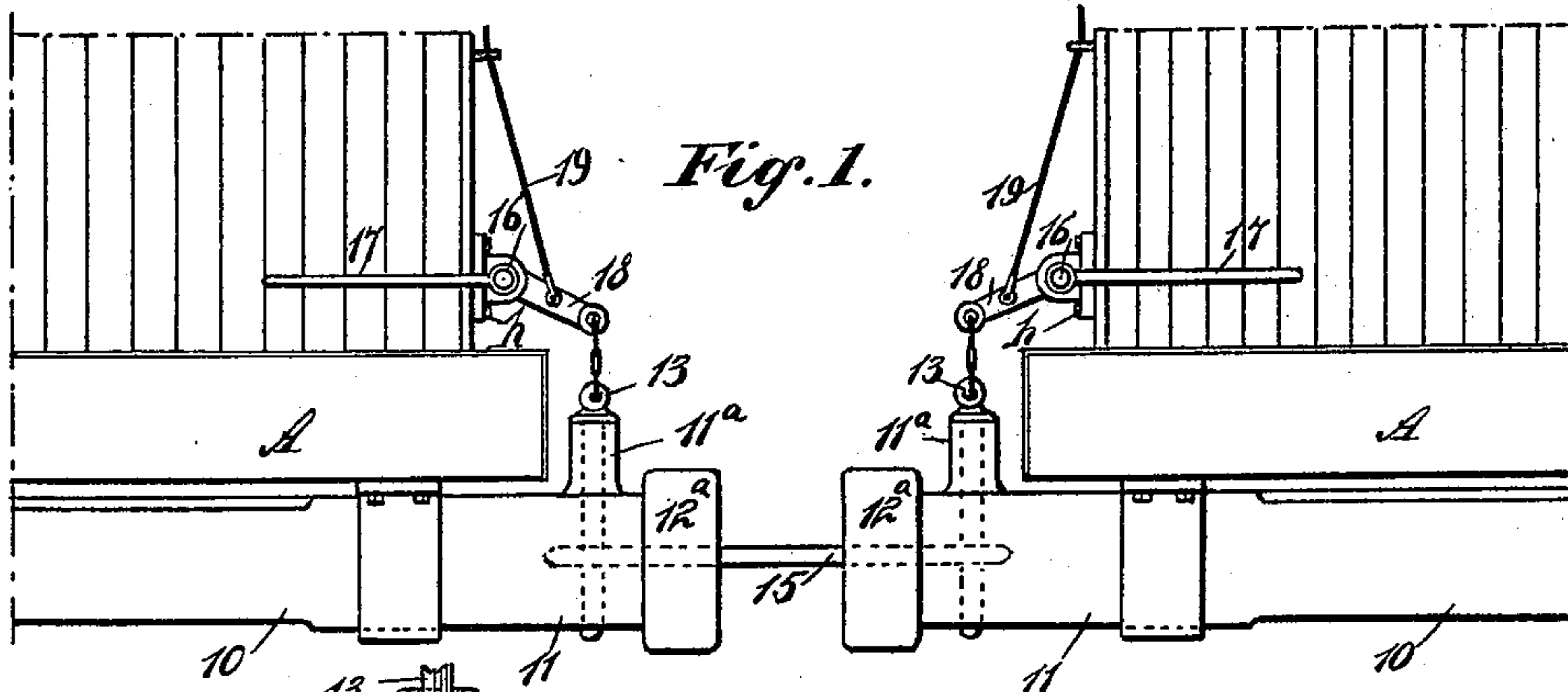


Fig. 3.

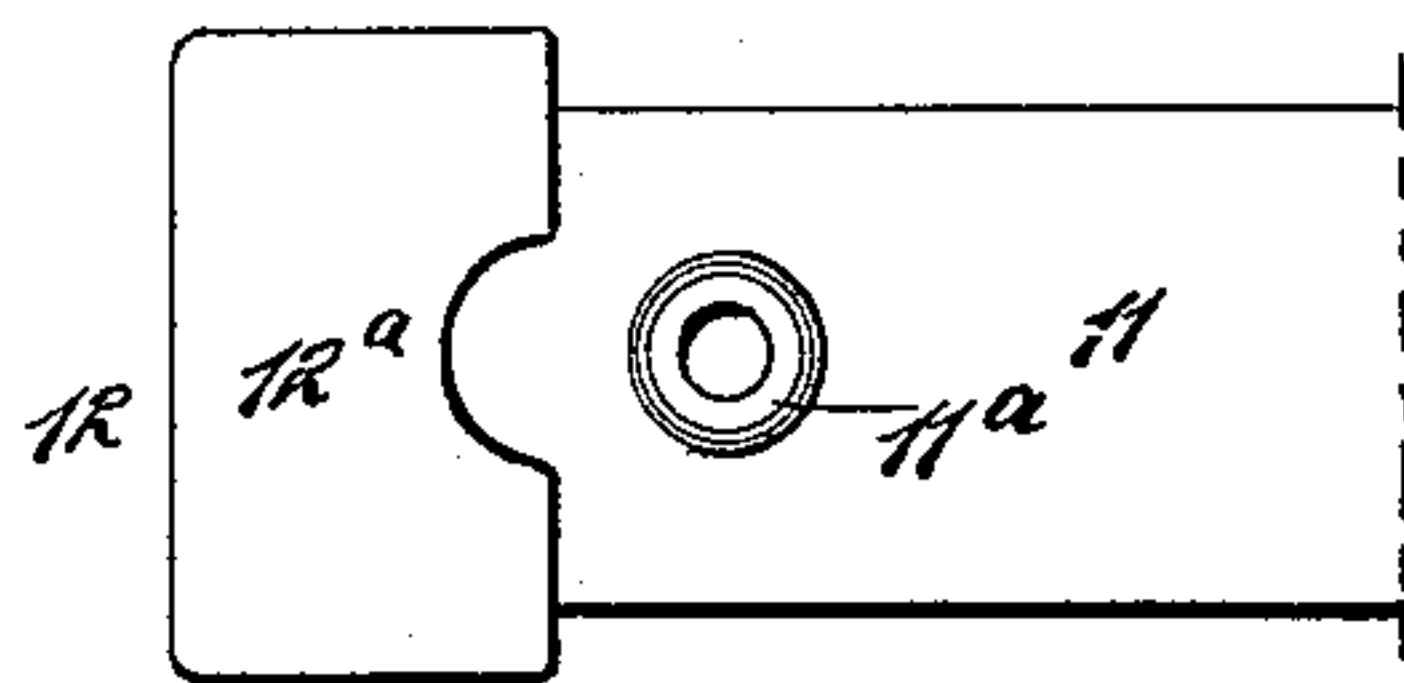
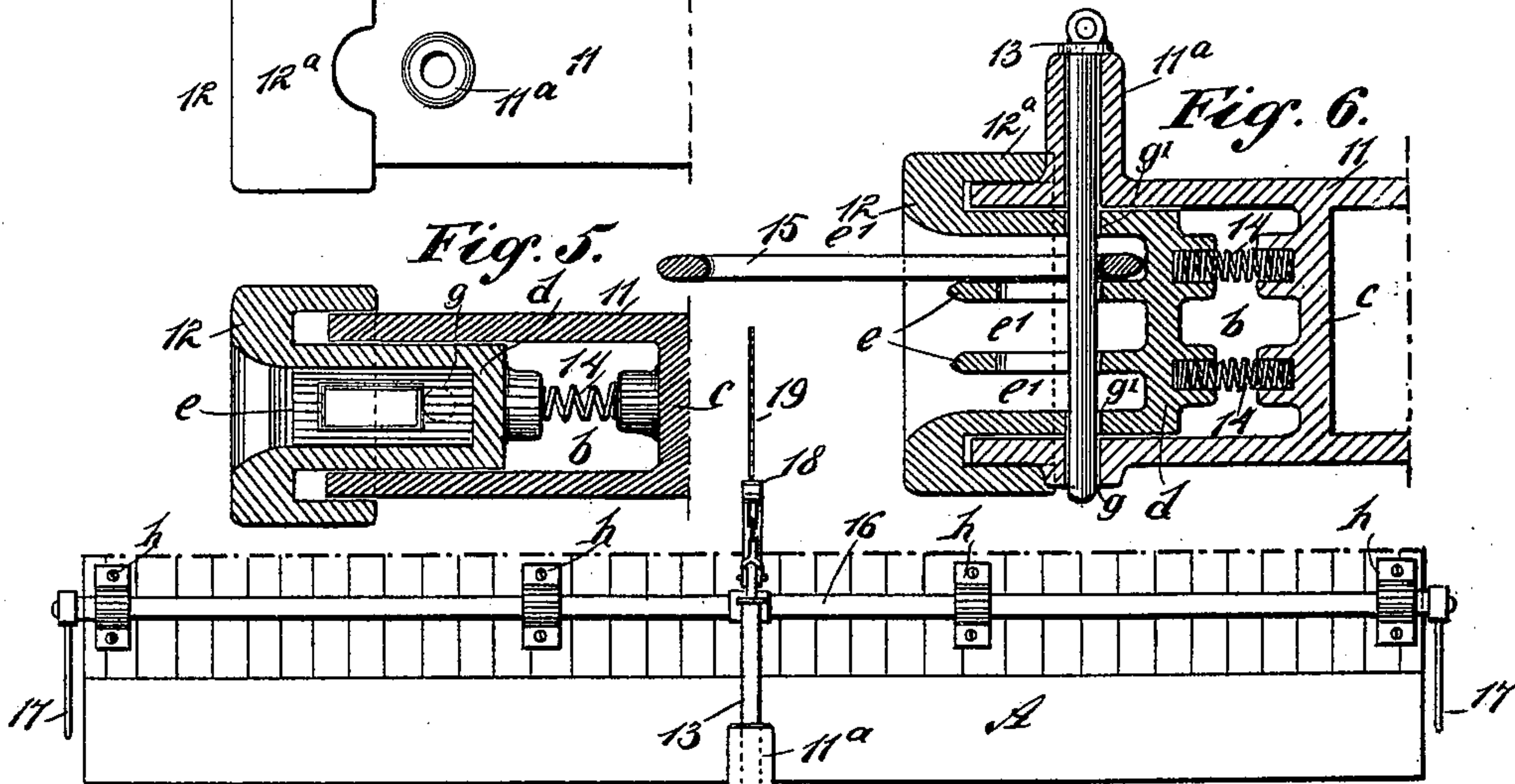


Fig. 5.



WITNESSES:

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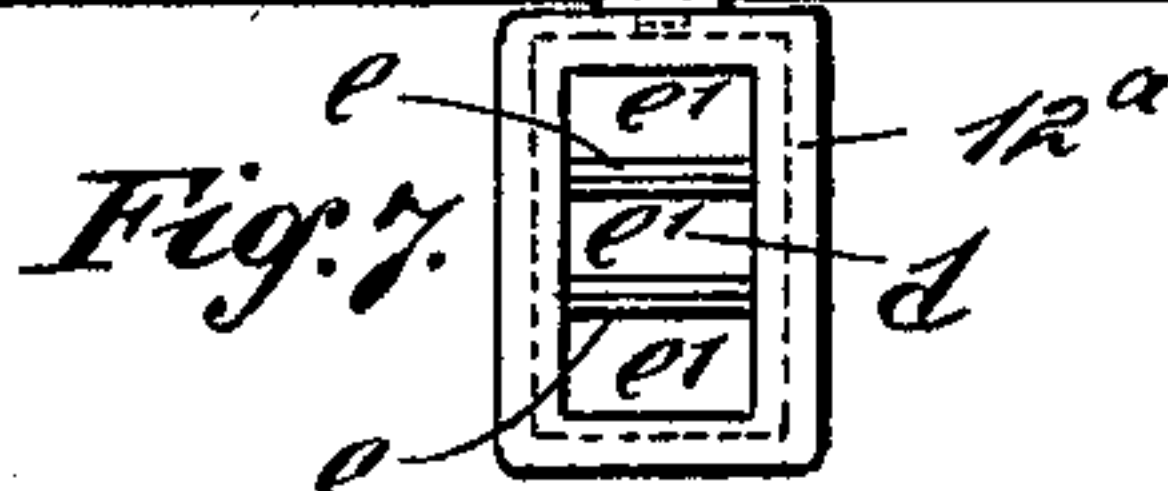


Fig. 7.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 594,315, dated November 23, 1897.

Application filed June 23, 1897. Serial No. 641,916. (No model.)

To all whom it may concern:

Be it known that I, JAMES SIMPSON BARTLEY, of Whitesville, in the county of Harris and State of Georgia, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

This invention relates to car-couplings of the gravity pin-and-link type, and has for its object to provide a car-coupling of the type mentioned which will be adapted for an automatic coupled engagement with another coupling of the indicated class and also be adapted for release in a safe manner either from the side or roof of the car whereon the coupling is placed.

A further object is to provide the car-coupling with a spring-cushioned coupling-box at the front end of the draw-head, said box being divided into a plurality of link-receiving compartments, the coaction of the coupling-box, draw-head body, and vertically-adjustable coupling-pin that passes through said parts being adapted to hold the coupling-link at different heights and angular adjustment for engagement with another coupling on a car and that may be above or below the coupling carrying the link for engagement therewith.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view in part of two cars having the improved car-couplings thereon in coupled condition. Fig. 2 is an enlarged sectional side view of the improved car-coupling. Fig. 3 is a plan view of the forward portion of the coupling. Fig. 4 is a plan view of the link preferably used with the coupling. Fig. 5 is a sectional plan view of the forward portion of the coupling, substantially on the line 5 5 of Fig. 2. Fig. 6 is a sectional side view of the coupling and coupling-link secured to the coupling by a vertical pin; and Fig. 7 is an end view in part of a car-body and the car-coupling thereon, showing the

coupling-pin elevated by adjustment of the link-releasing device on the car-body.

In the drawings that show the improved car-coupling and its application, 10 indicates the coupling draw-bar, which is secured in position for service by any preferred means near the transverse center of a car-body A and partially projected in advance of the same, as shown in Fig. 1.

The draw-bar 10 may be formed integrally with the draw-head body 11, or, as shown in Fig. 2, these parts may be produced separately and be secured together by bolts *a*.

To facilitate the connection of a detail of the car-coupling with the draw-head 11, said body is recessed from the front end, thus providing a forwardly-open chamber *b*, which extends rearwardly a proper distance and is terminated by a transverse wall *c*.

In the chamber *b* the coupling 12 is fitted to slide loosely, said box comprising a four-walled receptacle having its rear end closed by a cross-wall *d*, from which two spaced partition-walls *e* project forwardly, which walls may be formed integrally with the side walls and rear wall of the coupling-box and occupy parallel horizontal planes.

At the front of the coupling-box 12 a flaring throat is formed, which facilitates the free introduction of an elongated coupling-link into either of the three compartments *e'* that are afforded by the provision of the partition-walls *e*.

An encircling flange 12^a is formed or secured upon the forward end of the coupling-box, which flange projects rearwardly and is equally spaced from the four walls of said box, so as to freely receive the forward end of the draw-head body 11 in the continuous channel formed between the coupling-box body and annular flange 12^a, said flange affording a finish for the front end of the car-coupling. On the upper wall of the draw-head body 11 a guide-box 11^a is erected and is vertically and centrally apertured for the free reception of the body of the coupling-pin 13.

The lower wall of the draw-head body is perforated, as at *g*, in alinement with the vertical bore of the guide-box 11^a, so that the pin

13 may drop by its gravity through the draw-head, and to enable such an adjustment of the coupling-pin the partition-walls *e* are apertured, preferably, by the formation therein of elongated holes of considerable size, so as to reduce weight and yet afford ample strength.

A pin-receiving orifice *g'* is formed in the upper and lower walls of the coupling-box 12, these holes being in the same vertical plane and so positioned transversely of the box that the coupling-pin 13 will fall freely through the coupling-box when the latter is suitably adjusted in the draw-head body.

Between the coupling-box 12 and the transverse wall *c* in the draw-head body 11 one or more coiled springs 14 are located. Preferably two such springs are provided, as shown in Figs. 2, 5, and 6.

The ends of the springs 14 are firmly held in sockets formed to receive them in the cross-wall *d* and transverse wall *c*, and said springs thus loosely secure the coupling-box within the draw-head.

Such relative length is given the springs 14 that when not compressed they will project the coupling-box forwardly on the draw-head body 11, so as to remove the perforations *g'* from alinement with the bore of the guide-box 11^a, as shown in Fig. 2.

The forward adjustment of the box 12 permits the coupling-pin 13 to rest upon the top wall of said coupling-box immediately rearward of the alined perforations *g'* in the coupling-box, so that said pin is thus supported in position to be dropped through the coupling-box and draw-head body when the coupling-box is pushed rearwardly a distance sufficient to aline the perforations *g'* with the bore of the guide-box 11^a.

The coupling-link 15 is preferably shaped as shown in Figs. 4 and 6 and consists of an oblong body formed of an endless metal bar, and at each end said link is rounded, having the inner and outer edges thereof beveled or rounded, as best shown in Fig. 6.

The width of the link-body 15 is proportioned so that it may freely slide into either of the compartments *e'* and rest upon one of the partitions *e* or on the lower wall of the coupling-box, as may be desired.

If the link 15 is forcibly inserted within the coupling-box 12, so as to press the latter rearwardly and compress the springs 14 until the coupling-pin 13 drops down through the draw-head body and also through the coupling-box, a relaxation of such pressure on the end of the coupling-link will allow the springs 14 to exert pressure on the coupling-box and bind the link, so that it will be held projected from the coupling to engage with a like coupling.

It will be evident that the clamping of the inserted end of the link 15 between the rear wall of the coupling-box 12 and the body of the coupling-pin 13 will enable an angular adjustment of the link, so as to incline it up-

ward or downward, as may be necessary to direct the outer end of the link into a car-coupling not of the same height from the railroad-track as the coupling from which the link projects.

To adapt the coupling-link 15 to receive a lateral swinging movement, which is essential when coupled cars are traversing curves of a railroad, the side bars of the coupling-link are bent inwardly a proper degree, as shown in Fig. 4, these opposite bends *f* being near the longitudinal center of the link, which will give the necessary lateral play for the link at the mouths of two coupling-boxes held together by the link.

On the end wall of the car-body A the rock-shaft 16 is held to receive rocking movement in the boxes *h* or like means attached to the car-body A, said shaft having a lever 17 fixed upon each end, which levers are adjacent to the sides of the car-body and at such a height from the ground that a trainman may readily operate either lever and rock the shaft to which they are affixed.

An arm 18 is projected from the shaft 16 in the same vertical plane with the coupling-pin 13 and is loosely connected with said pin, as represented in Figs. 1 and 7.

From the rock-arm 18 a flexible connection 19 may be upwardly extended to the roof of the car-body A and held there by any suitable means, so that draft upon the flexible connection by an operator on the car-roof will elevate the coupling-pin 13 and release two coupled cars.

In like manner the manipulation of either lever 17 will lift the coupling-pin 13 and detach a coupled link 15 in an obvious manner.

It will be apparent that the link 15 when held projected from one coupling-box 12 will enter a like box on an approaching car-coupling, and if the pin 13 on the latter is in elevated adjustment, as before described, then the impinge of the entered end of the coupling-link upon the rear wall of the coupling-box in which it enters will push the box rearwardly against the stress of the springs 14 and drop the coupling-pin through the draw-head, thereby effecting an automatic coupled connection of the two couplings.

The improved car-coupling may be readily coupled to a common car-coupling or with any other car-coupling adapted to receive and hold a coupling-link, this being a feature of advantage pertaining to the improvement which will facilitate its general use on railroads disposed to adopt the improvement in a gradual way. Furthermore, this will allow cars having the improved car-coupling to be run on railroads using other kinds of car-couplings with which the improved coupling must be at times coupled.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a car-coupling, the combination with a

chambered draw-head having alined orifices through its top and bottom walls, of a coupling-box, a flange extended rearward from the front end of the coupling-box, there being a
5 space between the box and said flange to receive the end of the draw-head, horizontal partitions in the coupling-box provided with elongated openings in line with openings through the top and bottom walls of the box,

and a spring for holding the box yieldingly forward with its top and bottom openings out of line with the pin-openings of the draw-head, substantially as specified.

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Witnesses:

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