

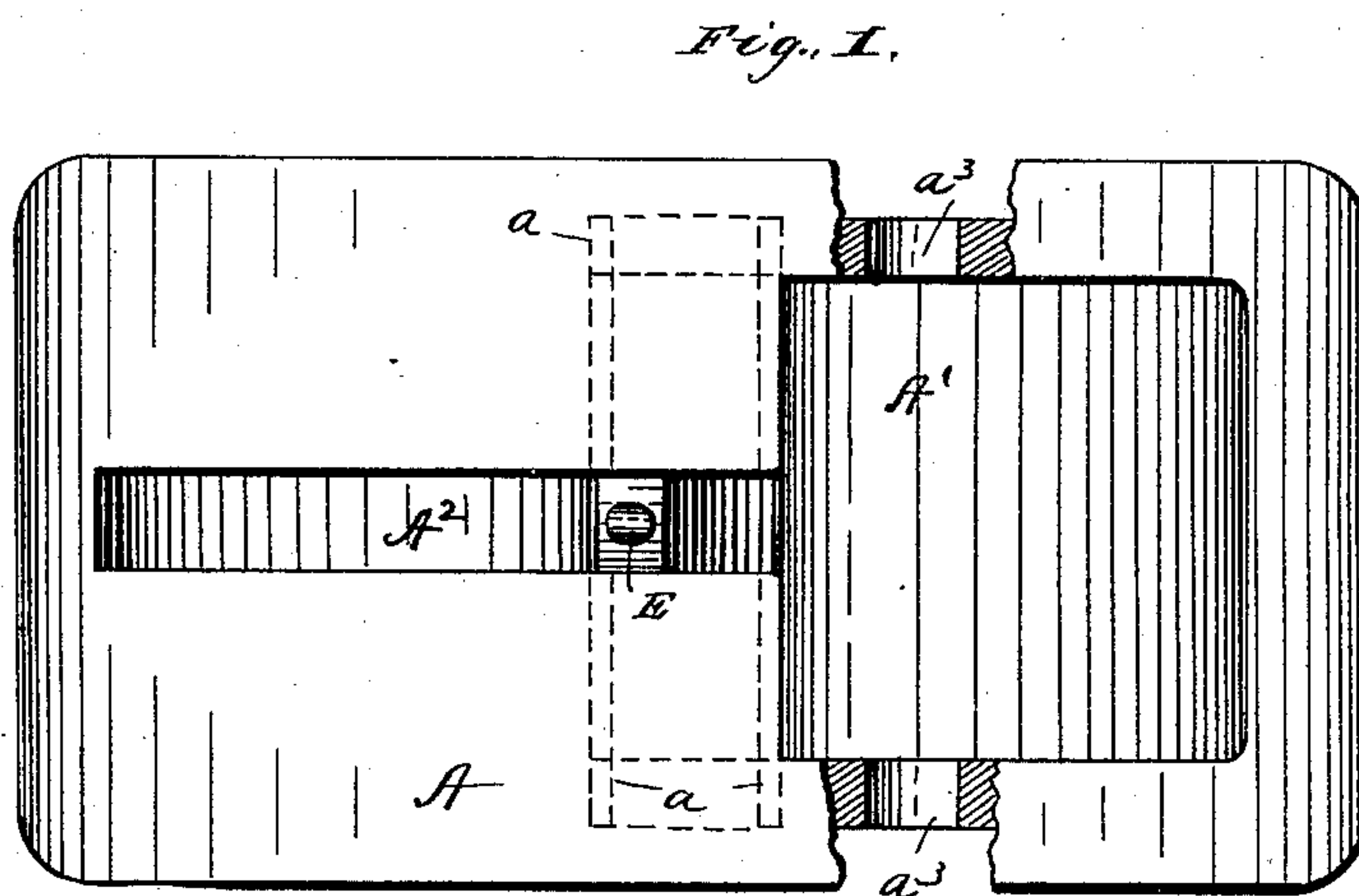
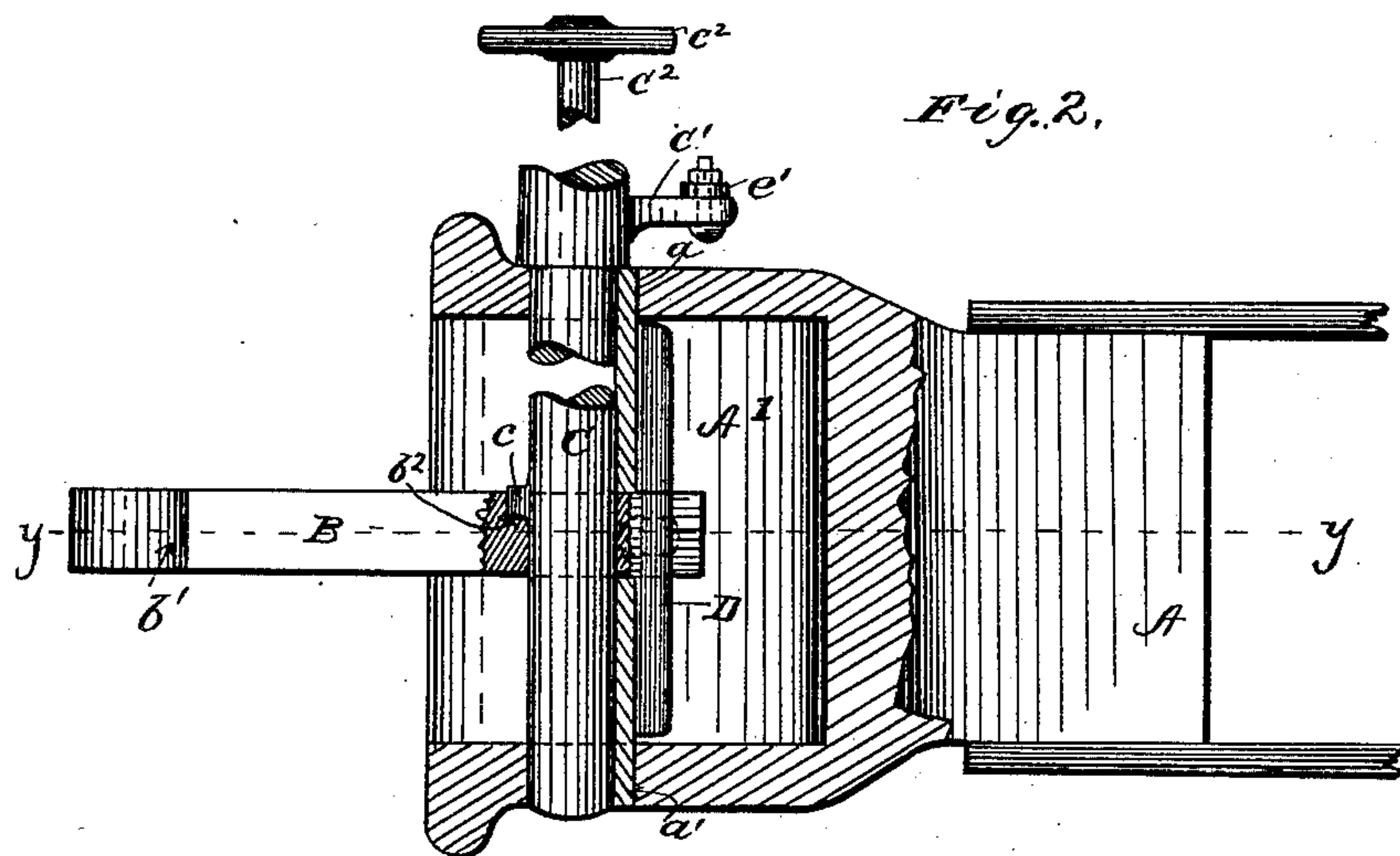
(No Model.)

2 Sheets—Sheet 1.

R. T. MORRISON, Jr.  
CAR COUPLING.

No. 428,689.

Patented May 27, 1890.



Witnesses.  
W. R. Edelen,  
Will B. Sage

Inventor  
Robert T. Morrison, Jr.  
By Leggett & Leggett  
Attys.

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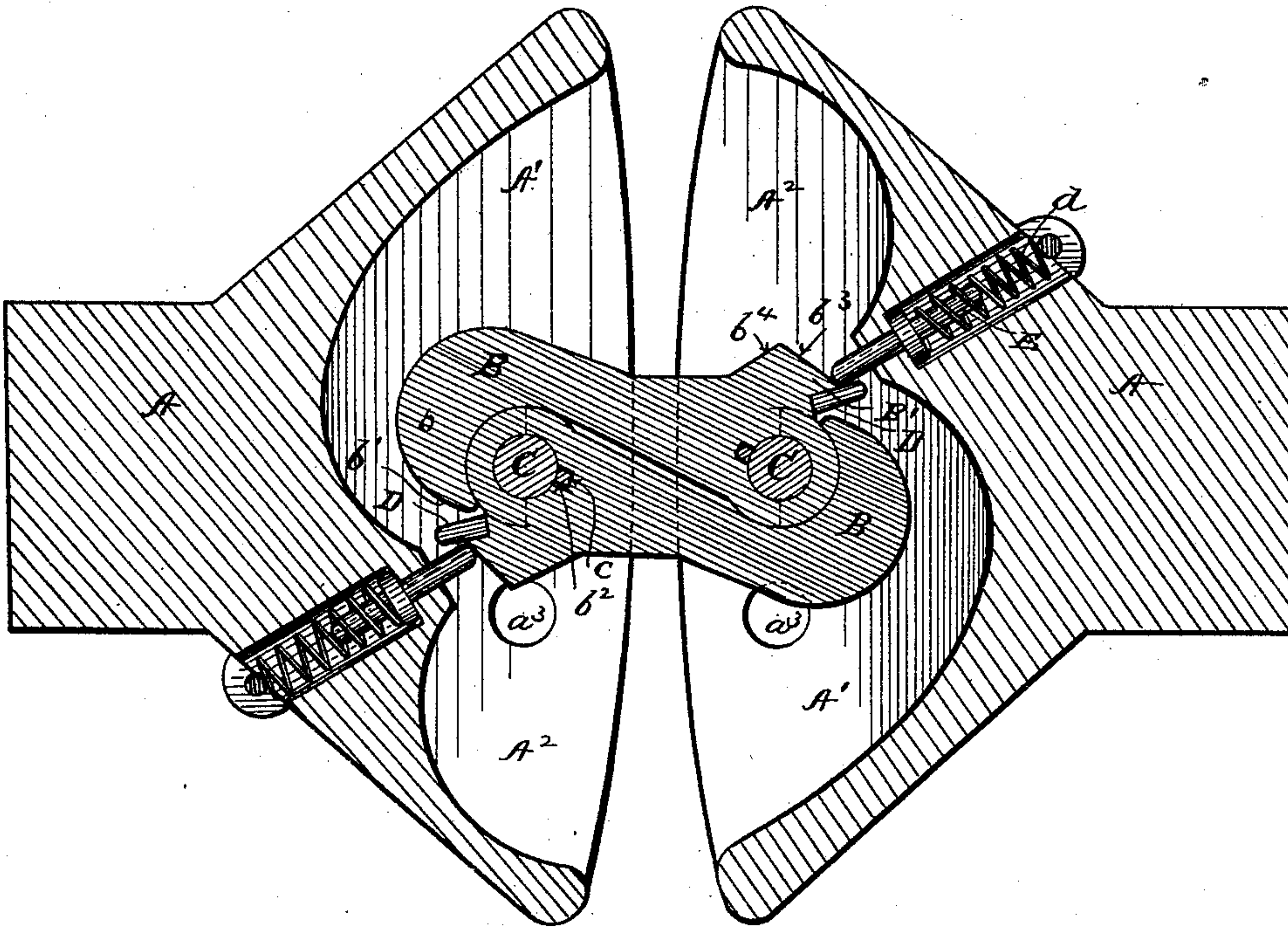


Fig. 3.

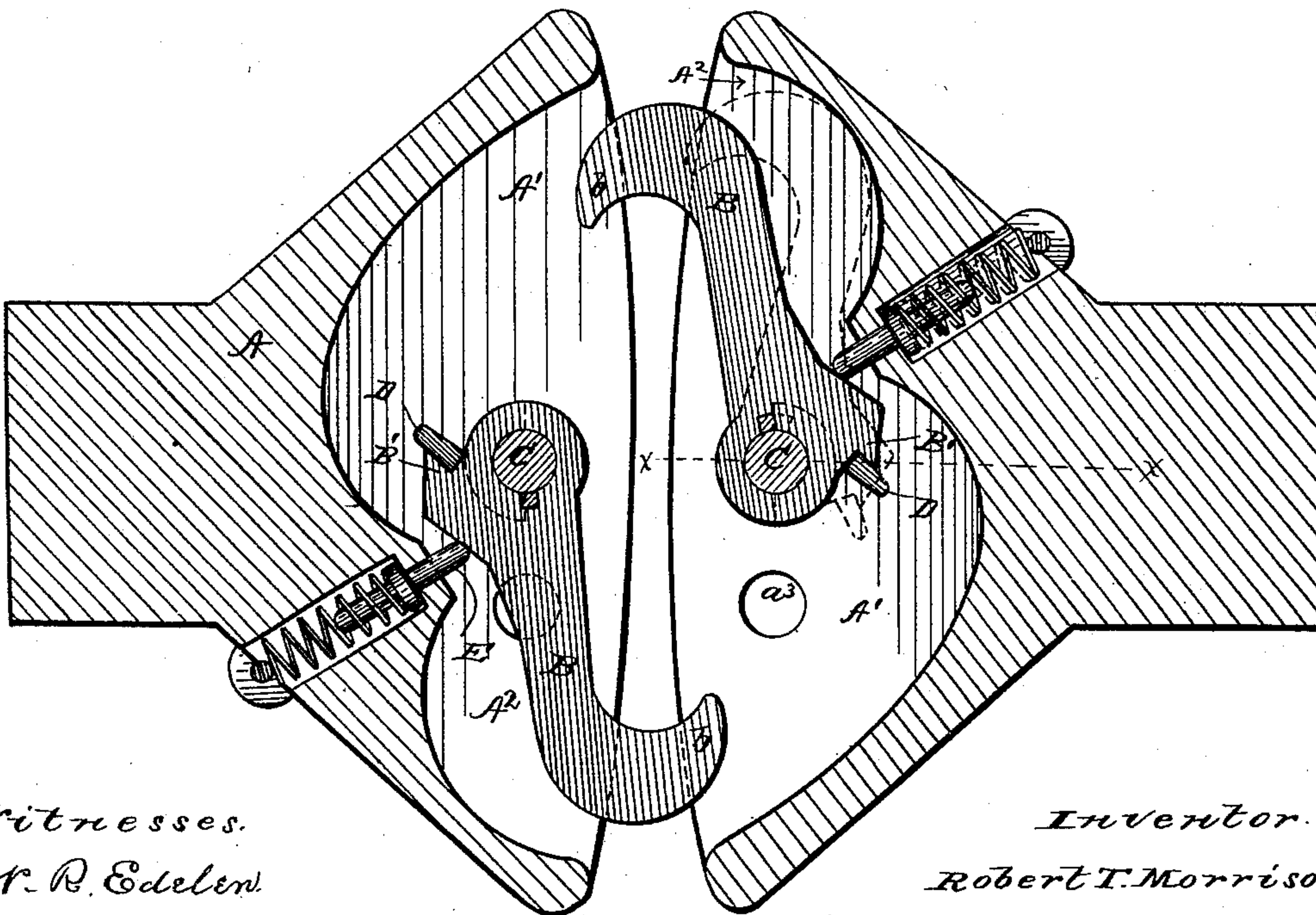


Fig. 4.

Witnesses.

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# UNITED STATES PATENT OFFICE.

ROBERT T. MORRISON, JR., OF MEDINA, ASSIGNOR OF ONE-HALF TO  
DAN. P. EELLS, OF CLEVELAND, OHIO.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 428,689, dated May 27, 1890.

Application filed January 28, 1890. Serial No. 338,374. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT T. MORRISON, Jr., of Medina, in the county of Medina and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in car-couplers; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front end elevation partly in section. Fig. 2 is a side elevation in section on line  $x x$ , Fig. 3. Figs. 3 and 4 are plans in section on line  $y y$ , Fig. 2, showing, respectively, different positions of the coupler.

A represents the draw-head, and B the hook-coupler with which each draw-head is provided, the coupler being preferably of forged steel and of approximately the form shown, and having a shoulder or hook  $b$  and adjacent incline  $b'$ , the coupler being pivoted on vertical pin C of the draw-head. Each draw-head has a chamber  $A'$ , in which the coupler of an opposing draw-head may operate, this chamber being of such vertical dimensions as will accommodate the opposing coupler with cars of different heights, loaded and unloaded, and variations of the tracks, &c. The draw-head is provided with a lateral recess  $A^2$ , this recess opening into chamber  $A'$  midway thereof vertically, the recess of the draw-head being adapted to receive with an easy fit its own coupler when the latter is swung back in uncoupling the cars.

Pin C is provided with spline  $c$ , that fits in groove  $b^2$  of the coupler, whereby the coupler may be swung laterally by turning C on its axis. Above the draw-head pin C may be provided with an arm  $C'$ , to which arm may be attached one or more rods  $e'$ , leading to the side or sides of the car, whereby the cars may be uncoupled by an operator standing on the ground at the side of the car; also, an extension-rod  $C^2$  may be coupled with pin C, this extension-rod extending up, for instance,

to the platform or to the top of the car, where it is provided with handle or handles  $c^2$ , whereby the cars may be uncoupled from the platform in case of passenger-cars, or from the top of the car in case of freight-cars. Semi-cylindrical bushings  $a$  and  $a'$ , preferably of steel, are inserted from above and below in corresponding recesses in the top and bottom walls of the draw-head, these bushings fitting the inner side of pin C, and the ends of the bushings engaging the coupler top and bottom, the thickness of these bushings corresponding with the thickness of the coupler at the heel thereof, so as to present an even surface from top to top of chamber  $A'$  for the engagement of the hook of an opposing coupler.

The heel of the coupler on the one side thereof is provided with lug  $B'$ , located as shown, to which lug is fastened a vertical bar D, the latter being about as long as will operate freely in chamber  $A'$ , this bar being in position to snub back and thereby uncouple the opposing coupling in turning back the coupler to which bar D is attached. It is evident, therefore, that by operating pin C both couplers may be turned back, so as to uncouple the cars.

E is a spring-actuated lateral pin adapted to engage the respective faces  $b^3$  and  $b^4$  of lug  $B'$ , according to the position of the coupler. Pin E, by engaging face  $b^3$ , as shown in Fig. 3, holds the coupler in its closed position. When the coupler is swung back into recess  $A'$ , as shown in Fig. 4, pin D, by engaging face  $b^4$  of lug  $B'$ , holds the coupler in its open position. Spring  $d$  need have but little tension when the coupler is in position open or closed, the spring being only momentarily strained in a moderate degree in shifting the coupler, and hence the spring is likely to last as long as other members of the coupler. The top and bottom walls of the draw-head are pierced vertically, as shown at  $a^3$ , for inserting a coupling-pin (not shown) for coupling with ordinary links. In assembling the parts, first the lower bushing is inserted and is held in place usually by means of a driving fit. Next the coupler is placed in position swung back into recess  $A^2$ , in which position the pin



may be inserted, together with the upper bushing. The parts having been assembled, in turning the coupler to its position for coupling, spline *c* is swung under the solid upper wall of the draw-head, and hence the pin can only be withdrawn when the coupler is swung back its full throw into recess *A*<sup>2</sup>.

What I claim is—

1. In a car-coupling, the combination of a pair of draw-heads and a hook-coupler carried by each head, each hook-coupler adapted to be hooked simultaneously over and around the hub of the other hook-coupler to lock the draw-heads together, substantially as set forth.

2. In a car-coupler, the combination of a pair of draw-heads and a hook-coupler carried by each head, each hook-coupler adapted to hook over or around the hub of the other hook-coupler and lock the draw-heads together, the hook-coupler which is operated adapted by its engagement with the other hook-coupler to throw the latter into locked position, substantially as set forth.

3. The combination, with draw-head and coupler, substantially as indicated, such coupler being mounted on and fastened to a vertical pin of the draw-head, of semi-cylindrical

bushings inserted in corresponding recesses of the draw-head, such bushings engaging the rear side of the pin and abutting the coupler from above and below, substantially as set forth.

4. The combination, with draw-head, hook-coupler, and pin, substantially as indicated, of upright bar connected with the coupler and operating inside the draw-head in position to engage and snub back the coupler of an opposing draw-head, substantially as set forth.

5. The combination, with draw-head and hook-coupler, substantially as indicated, of spring-actuated pin adapted to engage shoulders of the coupler in position to hold the coupler in position open and closed, such coupler having attached a vertical bar for snubbing back an opposing coupler, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 5th day of December, 1889.

ROBERT T. MORRISON, JR.

Witnesses:

CHAS. H. DORER,  
WILL B. SAGE.