

(No Model.)

A. FRANTZ.
CAR COUPLING.

No. 469,340.

Patented Feb. 23, 1892.

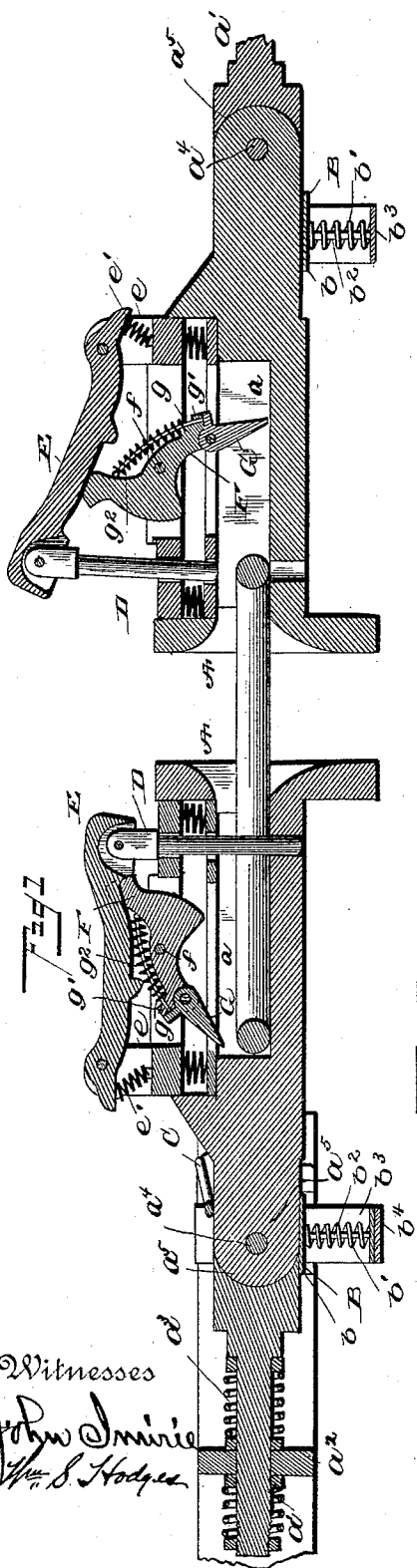
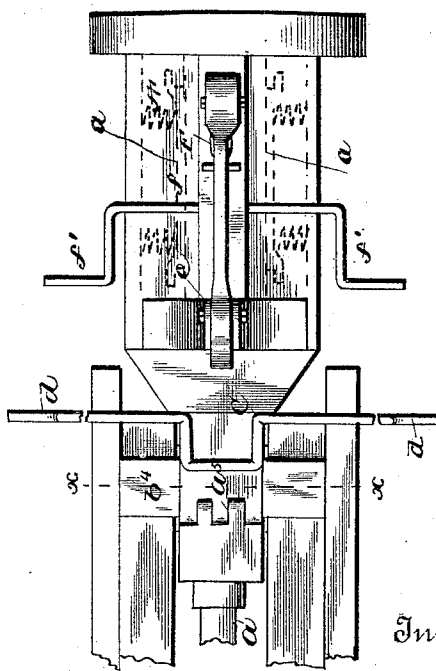
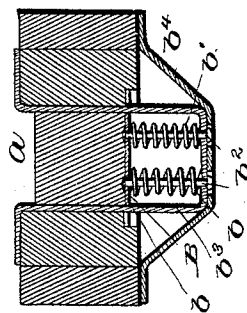


Fig. 1



Witnesses
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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 469,340, dated February 23, 1892.

Application filed September 23, 1891. Serial No. 406,587. (No model.)

To all whom it may concern:

Be it known that I, AMENDES FRANTZ, a citizen of the United States, residing in the county of Lehigh and State of Pennsylvania, have
5 invented certain new and useful Improvements in Car-Couplings; and I do 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 appertains
10 to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and
15 useful improvements in car-couplers, and has for its object, first, the production of a car-coupling applicable to cars of various heights or altitudes, and, second, the production of simple and highly-efficient means for auto-
20 matically effecting the lowering of the coupling-pin upon entrance of the link in the draw-head.

The invention consists, primarily, in providing a draw-head with a yielding connection at its rear end and a yielding bearing or
25 cushion, and a bail and crank-rods for effecting the lowering or depression of said draw-head as against the action of said bearing or cushion.

The invention further consists in a pin-carrying bar pivoted at one end, an arm for raising said bar and carrying a pawl at its inner
30 end, and also in the detail construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of two adjoining draw-heads, the coupling-pin being
35 lowered in one and raised in the other. Fig. 2 is a plan view of one of the draw-heads. Fig. 3 is a transverse sectional view on the line *x x*, Fig. 2.

Referring to the drawings, A designates a
45 chambered draw-head having inner opposite spring-pressed sides *a*, and has its inner reduced end *a'* extended through a cross-bar *a²* of the car-frame and encircled by coil-springs *a³*, which permit the draw-head to have a
50 rearward and forward movement. This draw-

head at its rear portion is formed into two parts or sections pivotally connected by a cross-rod *a⁴*, passed through coincident holes of overlapping tenons *a⁵*. The forward part or section of this draw-head rests upon a
55 yielding bearing or cushion B, which consists of a plate *b*, coil-springs *b'*, bearing there-against, and encircling rods *b²*, extending from plate *b* through a U-shaped bracket *b³* and holding-plate *b⁴*, attached to the frame-work
60 of the car. The ends of plate *b* are forked to fit the U-shaped bracket *b³*, which serves as a guide therefor. A bail C, pivotally held to the car-frame, bears on the forward part or section of the draw-head over the yielding bear-
65 ing or cushion, and the same has crank-handles *d*, by which it can be turned to force the draw-head down to suit a lower draw-head of an approaching car, the downward movement of the forward part of said draw-head being
70 readily permitted by the pivotal connection between its parts or sections.

D is the coupling-pin, loosely secured to a bar E, which latter is pivoted between ears *e*, secured to or forming part of the draw-head.
75 A coil-spring *e'*, located between these ears, bears upwardly upon the end of bar E, tending to hold pin D lowered.

F is an arm pivotally hung by a shaft *f*, extended through projections of the draw-head,
80 said shaft being provided with handled ends *f'*. This arm extends down into the draw-head through an opening therein and its upper curved grooved end bears against and hugs bar D. A pawl G is pivotally connected
85 to the inner end of arm F by a knuckle-joint, and from said pawl extends a rod *g*, passed through an eye *g'* of arm F, and against this eye bears a coil or spiral spring *g²*, which encircles rod *g* and is held by the outer bent
90 end of the latter. The pawl G can be moved forward by the connecting-link, but not backward. By turning shaft *f*, causing arm F to occupy an approximately vertical position,
95 the coupling-pin will be elevated. Upon entrance of a link into the draw-head the pawl is thrown backward and upward, causing the lowering of arm F and the coupling-pin.

The coupling and uncoupling can be per-
100 formed by hand; but it is preferable to oper-

ate the shaft *f* so as to raise the coupling-pin, the lowering thereof being effected automatically.

I claim as my invention—

5 1. A car-coupling having its draw-head formed in two parts or sections and provided with a yielding or elastic bearing or cushion, which latter consists in a spring-held plate, upon which said draw-head rests, and a bail
10 bearing on said draw-head over said cushion and having crank-handles, substantially as set forth.

2. The combination, with the car-frame, of a jointed draw-head having an inner reduced
15 end, springs encircling said reduced end, the U-shape bracket, the spring-pressed plate having forked ends guided by said bracket, the plate supporting said bracket, and the bail having crank-handles, substantially as
20 and for the purpose set forth.

3. The herein-described improved car-coupling, comprising the draw-head, the bar pivotally connected thereto at one end, the spring
25 bearing against the under side of said bar, the coupling-pin pivoted to the forward end of said bar, and the arm pivoted in said draw-head and engaging said bar, substantially as set forth.

4. The herein-described improved car-coupling, comprising the draw-head, the bar piv-
30 oted at one end and carrying the coupling-pin, the arm pivotally secured in said draw-head, and the pawl pivoted to the inner end

of said arm and adapted to be engaged by the coupling-link to trip said arm and bar
35 and lower said pin, substantially as set forth.

5. The herein-described improved car-coupling, comprising the draw-head, the bar pivotally connected thereto at one end and carrying the coupling-pin at its other end, the
40 arm extending down into said draw-head, the shaft upon which said arm is pivoted, having handled ends, and the pawl pivotally connected to said arm, substantially as set forth.

6. The herein-described improved car-coupling, comprising the draw-head, the bar pivotally connected thereto at one end, the coupling-pin, the pivoted arm extending down
45 into said draw-head, the pawl pivoted thereto, and the spring-pressed rod extending from said pawl, substantially as set forth.

7. The herein-described improved car-coupling, comprising the draw-head, the bar pivotally connected thereto at one end, the coupling-pin, the pivoted arm having an eye, the
55 pawl pivoted to said arm, the rod extending from said pawl through said eye, and the spring encircling said rod and bearing against the end thereof and against said eye, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AMENDES FRANTZ.

Witnesses:

JAMES HAUSMAN,

FRANK M. TREXLER.