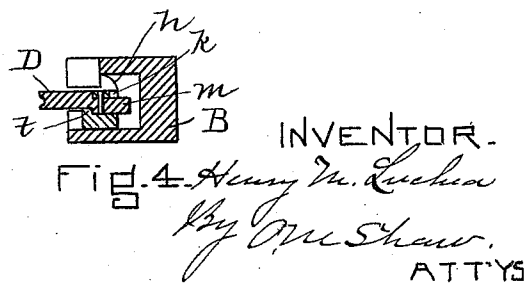
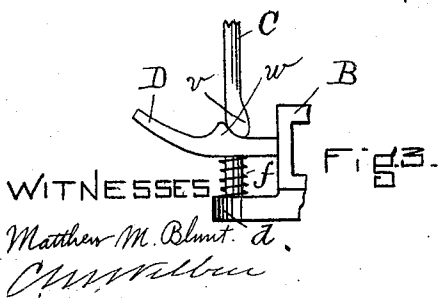
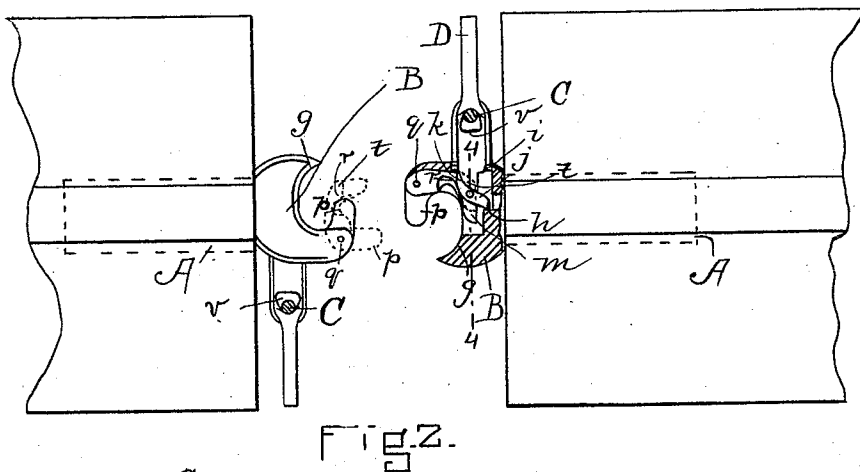
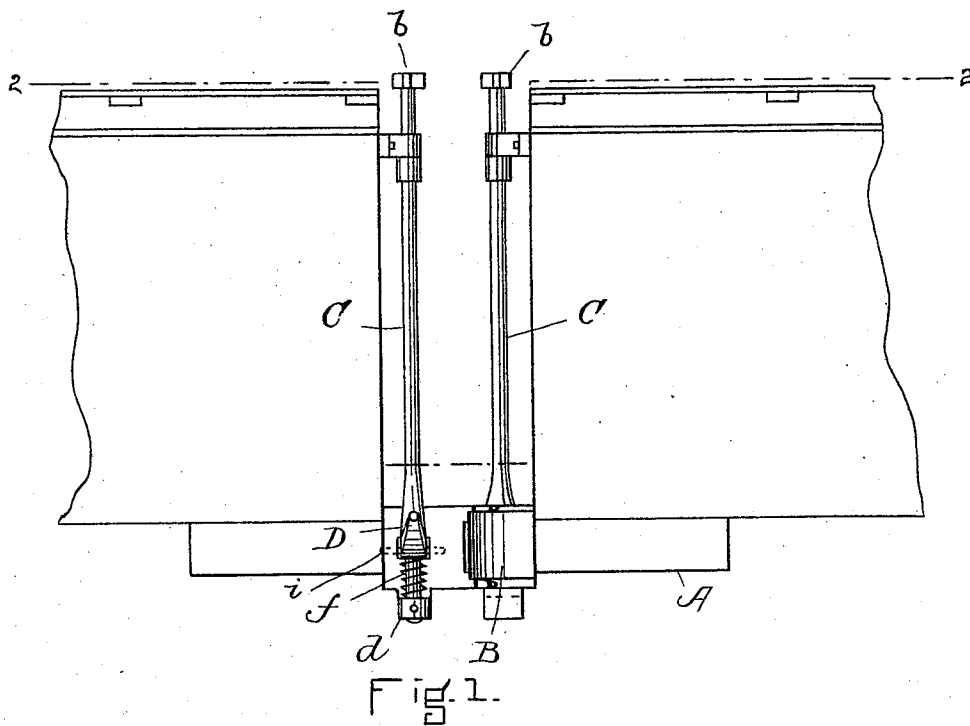


H. M. LUCHIA.  
CAR COUPLING.

No. 575,656.

Patented Jan. 19, 1897.



(No Model.)

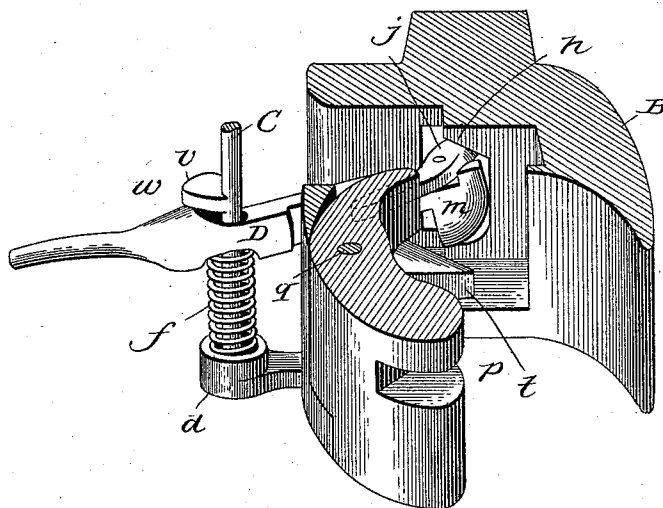
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H. M. LUCHIA.  
CAR COUPLING.

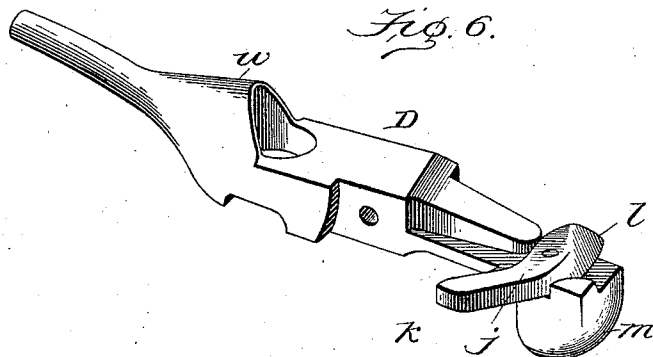
No. 575,656.

Patented Jan. 19, 1897.

*Fig. 5.*



*Fig. 6.*



WITNESSES:

*S. M. Dorsett,*  
*R. M. Pherson, Jr.*

INVENTOR

*H. M. Luchia,*  
BY *F. C. Jones,*  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

HENRY M. LUCHIA, OF LYNN, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND JOSEPH LANGLOIS, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 575,656, dated January 19, 1897.

Application filed April 22, 1896. Serial No. 588,566. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. LUCHIA, of Lynn, in the county of Essex, State of Massachusetts, have made certain new and useful  
5 Improvements in Car-Couplers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference  
10 being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of two cars provided with my improved coupler; Fig. 2, a  
15 top plan view of the same, one of the couplers being shown in horizontal section; Fig. 3, an elevation of the actuating-levers, and Fig. 4 a section on line 4 4. Fig. 5 represents a perspective view of the interior of the draw-head. Fig. 6 represents a perspective view  
20 of the locking-lever.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

25 My invention relates especially to improvements in that class of couplers which are adapted for use on freight-cars and can be operated without going between the cars, the object being to produce a simple, cheap, and  
30 effective device of this character and one adapted for use with the draw bar and head now commonly employed.

In the drawings, A represents the draw-bar, which is mounted in the ordinary manner, and B the draw-bar head. The head is  
35 chambered and a lever D is pivoted at *i* in a wall thereof. A brake-staff C, arranged vertically on the car, passes through the lever D and is stepped in a bracket *d* on the head.  
40 A coiled spring *f* is interposed between the lever and bracket and acts to force the outer end of said lever upward. This lever is of such length that it can be reached from the outer edge of the car. The staff has a cam  
45 *v*, which will engage a cam *w* on the lever and depress said lever as the staff is rotated. The outer end of the chambered head is open and its inner wall is curved at *g*, as shown. In the mouth of the head an approximately  
50 bell-crank-shaped locking-knuckle *p* is pivoted at *g*, one arm thereof normally project-

ing across the mouth of the head and the opposite arm having a locking lug or projection on its lower edge.

The lever D has a cam-hook *m* on its inner  
55 end adapted to ride said projection and lock the knuckle against being accidentally turned outward when the cars are coupled.

On the upper face of the inner end of the lever D an angular lever *j* is loosely pivoted  
60 to swing in a horizontal plane. The toe *k* of said angular lever is in position to engage the beveled face of the inner arm of the knuckle *p*. A cam *h*, having an inclined face, is fixed to the interior of the draw-head and  
65 adapted to be engaged by the heel *l* of the lever *j*.

In the use of my improvement to uncouple the cars the operator depresses the outer end of the lever D, throwing its inner end upward  
70 and releasing the lug *t* from the cam-hook or latch *m*. This upward movement of the inner end of the lever D brings the heel *l* of the angular lever *j* into contact with the fixed  
75 cam *h*, and said lever is thereby swung on its pivot and its toe *k* engages the knuckle *p* and swings said knuckle outward to the position shown at the left of Fig. 2, and thereby releases the coupling. The lever D is then released, and the spring *f* elevates it, so that the  
80 latch *m* is thrown down into the path of the lug *t*, preventing the knuckle from being accidentally rocked inward and locked by ordinary pressure. When the cars are run together, the outer arms of the knuckle engage  
85 the inner arms of their companion levers and simultaneously forcing them inward cause their lugs to catch under the respective latches and lock the bell-cranks together. The coupling may be operated in like manner by rotating the staff, the cam *v* on which, engaging  
90 the cam *w* on the lever D, will depress the end of said lever in a manner which will be understood without a more explicit description.

Having thus explained my invention, what  
95 I claim is—

1. In a car-coupling, the combination of a chambered draw-head, a knuckle pivoted thereto and provided with a cam-faced lug, a locking-lever provided with a cam-hook  
100 adapted to engage said lug for holding the knuckle in closed position, an ejecting-lever

pivoted on said locking-lever and adapted to open said knuckle when released, and means for actuating said ejecting-lever.

2. In a car-coupling, the combination of a  
5 chambered draw-head provided with a cam, a knuckle pivoted thereto and provided with a cam-lug, a vertically-oscillating locking-lever provided with a cam-hook adapted to en-  
10 gage said lug for holding the knuckle in closed position, an ejecting-lever pivoted to said locking-lever and adapted to engage said cam when said locking-lever is operated to release the knuckle.

3. In a car-coupling, the combination of a  
15 chambered draw-head provided with a cam, a knuckle pivoted to said draw-head and provided with a cam-faced lug, a vertically-oscillating lever pivoted to said draw-head and provided with a cam-hook automatically en-  
20 gaging said cam-faced lug for holding the knuckle in closed position, an ejecting-lever pivoted to said vertically-oscillating lever and engaging said cam on the draw-head on the  
25 release of said locking-lever for swinging out the knuckle and a spring for normally holding said locking-lever in locked position.

4. In a car-coupling, the combination of a

chambered draw-head, a knuckle pivoted thereto, and provided with a cam-faced lug, a locking-lever pivoted to said draw-head and  
30 provided with a cam-faced hook adapted to engage said cam-lug, an arm connected with said draw-head, a spring interposed between said arm and said locking-lever, a cam on the interior of said draw-head, and an ejecting-  
35 lever pivoted on said locking-lever and engaging said knuckle at one end and said cam at the other and operating to open said knuckle when the locking-lever is operated to release it.

5. In a car-coupling, the combination of a  
40 knuckle provided with a cam-lug, a spring-pushed lever having a cam-hook engaging said lug, an ejecting-lever pivoted to said spring-pushed lever and having an arm work-  
45 ing against a cam in said head, its opposite end engaging an arm of the knuckle and acting to rock said knuckle when released from the spring-pushed lever.

HENRY M. LUCHIA.

Witnesses:

O. M. SHAW,

T. M. SHUTE.