

(No Model.)

F. EDMONDS & R. ENGBERG.  
CAR COUPLING.

No. 418,508.

Patented Dec. 31, 1889.

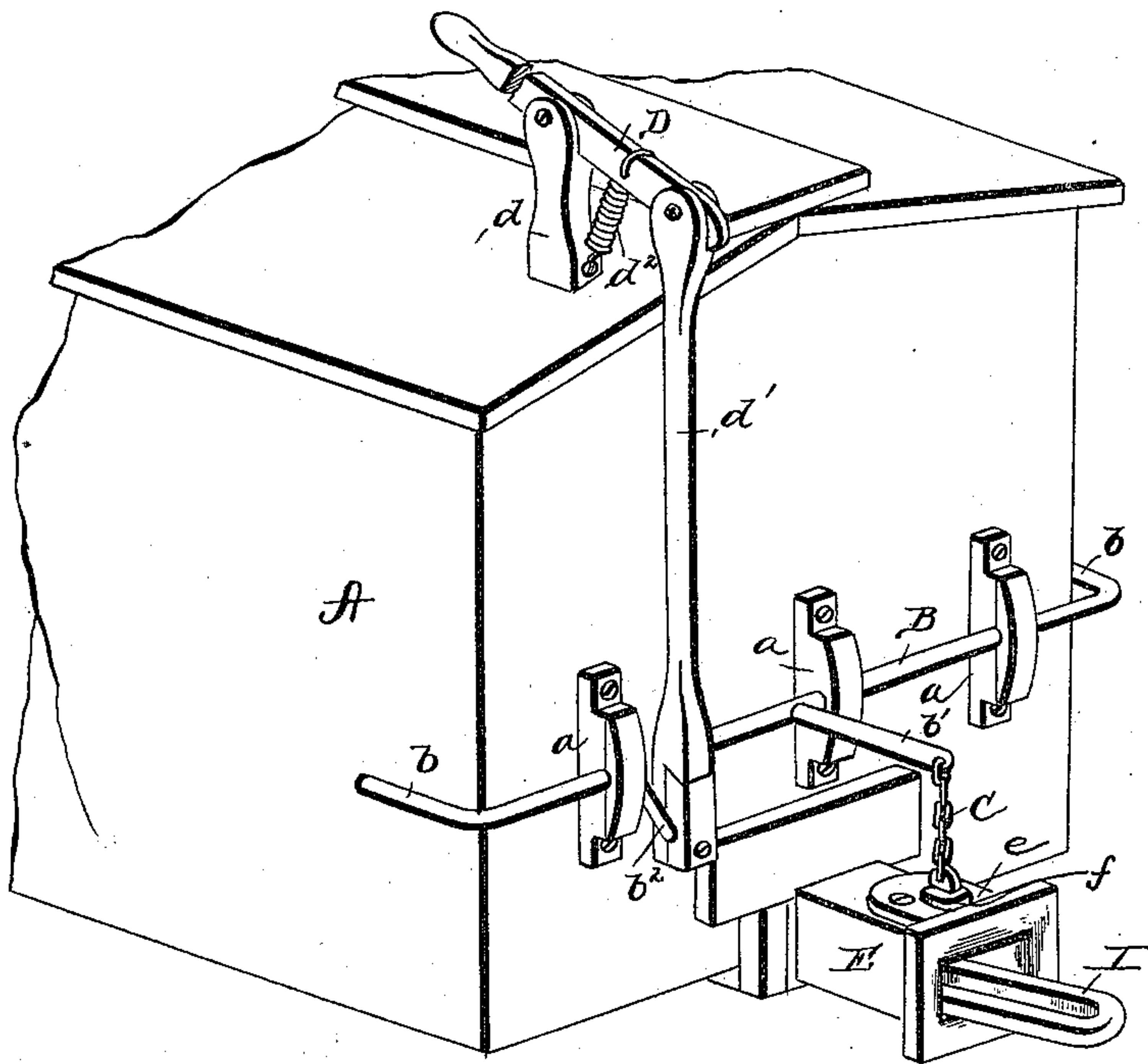


Fig. 1.

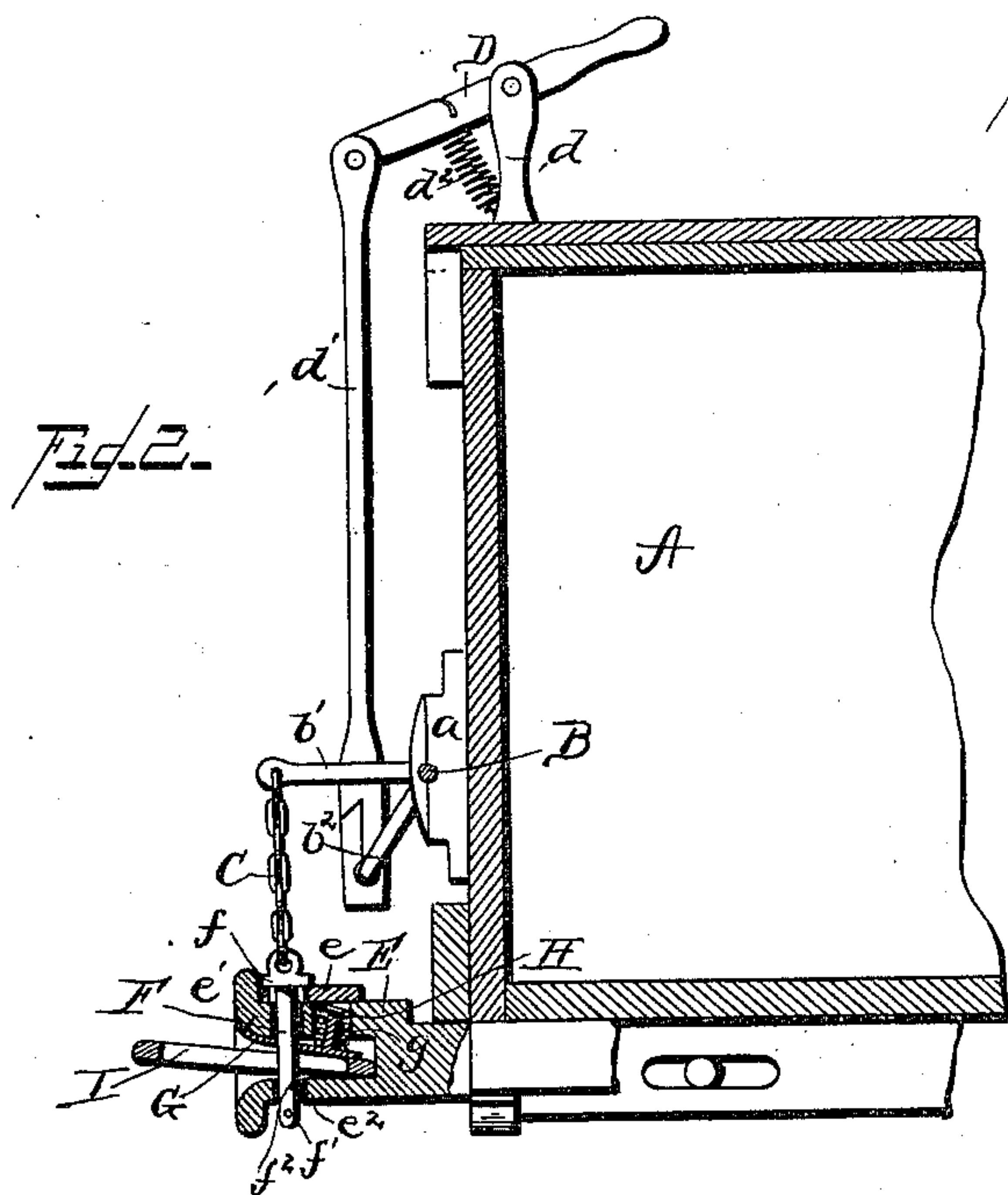


Fig. 2.

Fig. 4.

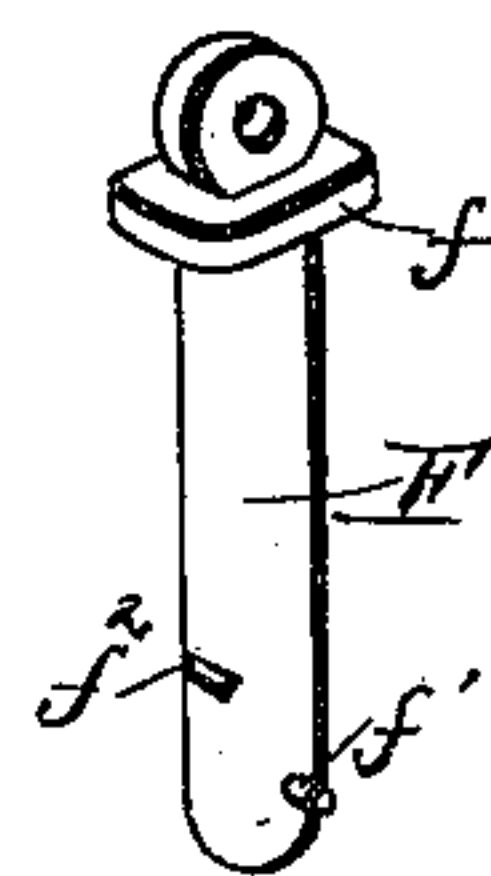
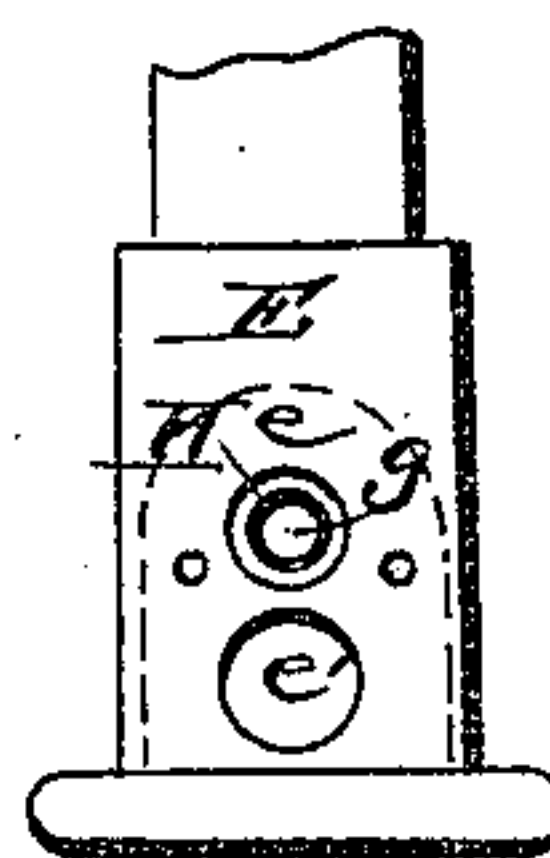


Fig. 3.



WITNESSES  
F. L. Ouraud  
H. A. Smith

INVENTOR  
Frank Edmonds &  
Richard Engberg,  
by David Bagges & Co.,  
Attorneys.



# UNITED STATES PATENT OFFICE.

FRANK EDMONDS AND RICHARD ENGBERG, OF ALEXANDRIA, MINNESOTA,  
ASSIGNORS OF ONE-THIRD TO ANDREW ANDERSON, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 418,508, dated December 31, 1889.

Application filed May 25, 1889. Serial No. 312,059. (No model.)

*To all whom it may concern:*

Be it known that we, FRANK EDMONDS and RICHARD ENGBERG, both residents of Alexandria, in the county of Douglas and State of Minnesota, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to improvements in car-couplers, the main object being to provide means whereby cars may be uncoupled from either side or the top of the train; and it consists in the construction and novel combination of parts hereinafter described, illustrated in the drawings, and pointed out in the claims.

In the accompanying drawings, forming part of this specification, in which like letters of reference indicate corresponding parts, Figure 1 represents a perspective view of one end of a car with a coupler embodying the invention attached. Fig. 2 represents a central vertical longitudinal section of the draw-head and attachments. Fig. 3 represents a plan view of the draw-head with the roof removed, and Fig. 4 represents a perspective view of the coupling-pin detached.

Referring to the drawings by letter, A designates a car, to the end of which is journaled in bearings *a*, bolted or otherwise secured to said end, the transverse horizontal shaft B, provided with the inwardly-standing arms *b* *b* at its ends on each side of the car, the outwardly-standing arm *b'* centrally above the draw-head, and the crank *b*<sup>2</sup> a suitable distance to one side of the arm *b'*. When the shaft is in its normal position, the crank *b*<sup>2</sup> stands vertically downward and the arm *b'* horizontally outward. The end of the arm *b'* is connected by a chain C with the upper end of the coupling-pin, hereinafter described.

D is a lever pivoted centrally in the bifurcated upper end of the standard *d*, that rises from the roof of the car near the end thereof. The end of the outer arm of the lever D is connected by a vertical link-rod *d'* with the crank *b*<sup>2</sup> of the shaft B.

It is evident from the foregoing description

that by means of the lever D the brakeman can lift the link in the draw-head when standing on top of the car, and can do the same on either side of the car by depressing the corresponding arm *b*.

*d*<sup>2</sup> is a coiled spring with its ends respectively secured to the foot of the standard *d* and the outer arm of the lever D, and serving by its retraction to depress said arm and consequently permit the coupling-pin to fall in the draw-head.

The draw-head E is of ordinary general construction and secured in the ordinary manner to the car-platform, being backed by a spring, as usual. The roof of the draw-head has in it a large opening, which is covered by a metal plate *e*, in which is the upper pin-opening *e'*, the lower pin-opening *e*<sup>2</sup> being in the floor of the draw-head.

The coupling-pin F is surrounded near its upper end, below the perforation for the attachment of the chain C, with a flange *f*, which rests on the plate *e* and prevents the pin from falling too far in the draw-head. At its lower end the coupling-pin is provided with outstanding lateral projections *f' f'*, which, when the pin is raised, strike against the inner surface of the plate *e* and prevent the pin leaving the draw-head.

G is a spring-plate with its outer or front edge secured to the inner surface of the floor of the draw-head, near the front end thereof, and its inner edge, which is free, provided with a short rod *g*, that stands upward within the draw-head and is surrounded by a reinforcing coiled spring H, the ends of which respectively bear on the facing surface of the plates *e* and G. The spring-plate G curves inward and downward from its outer fixed edge and approaches the floor of the draw-head near enough to hold the link I, when forced into the draw-head, flat upon said floor, and consequently in proper position to enter an opposing draw-head when two cars come together.

The coupling-pin is provided in its side facing the car with a notch *f*<sup>2</sup>, which, when the pin is raised, catches on the adjacent part of the edge of the plate *e*, the upper part of the pin inclining toward the car and its lower end



standing between the plates *e* and *G*. When the cars come together, the jar knocks the pin out of position, so that it falls and engages the link.

5 Having described our invention, we claim—

1. In a car-coupler, the combination, with the draw-head *E* and coupling-pin *F*, of the transverse shaft *B*, provided with the arms *b* *b'* and crank *b*<sup>2</sup>, the chain *C*, the lever *D*, piv-  
10 oted on the standard *d*, the link-rod *d'*, and the retracting coiled spring *d*<sup>2</sup>, substantially as described.

2. In a car-coupler, the combination, with the draw-head *E*, of the spring-plate having its  
15 outer edge secured to the inner surface of the roof of the draw-head and provided with an upstanding rod or stem on its free inner edge, and the coiled re-enforcing spring surrounding said rod, the spring-plate curving down-  
20 ward and inward within the draw-head in

such manner as to hold an entered link flat on the floor of the draw-head and in position to enter an opposing draw-head, substantially as described.

3. In a car-coupler, the combination, with 25 the draw-head *E*, of the plate *e*, having the upper pin-hole, the spring-plate *G*, having the rod *g* and opening *g'*, the coiled spring *H*, the coupling-pin *F*, having the flange *f*, notch *f*<sup>2</sup>, and projections *f'*, and mechanism, substan- 30 tially as described, whereby the said pin may be raised and lowered, as specified.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

FRANK EDMONDS.

RICHARD ENGBERG.

Witnesses:

C. J. GUNDERSON,

BRUL CHIDESTER.