

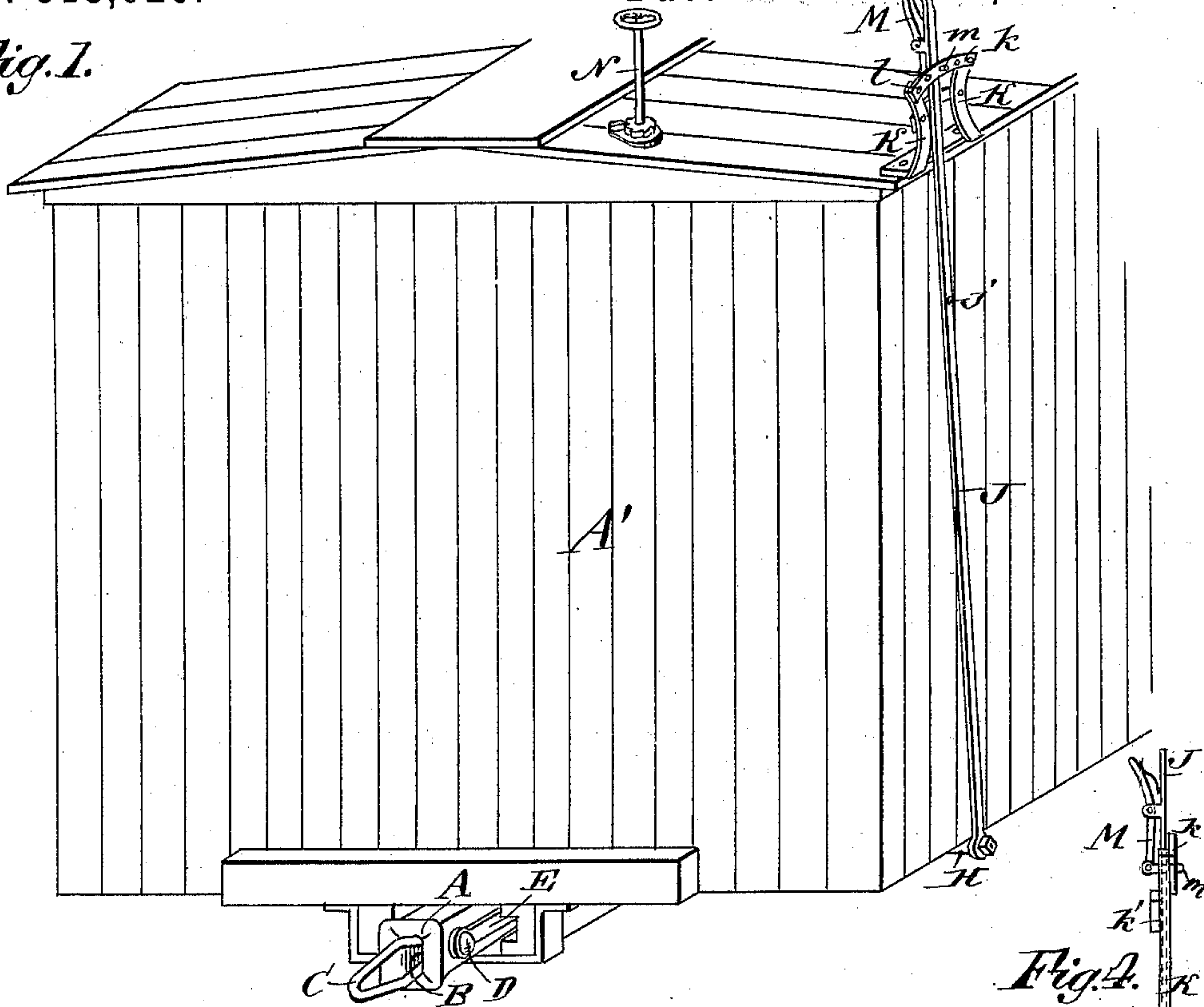
(No Model.)

E. RYE.  
CAR COUPLING.

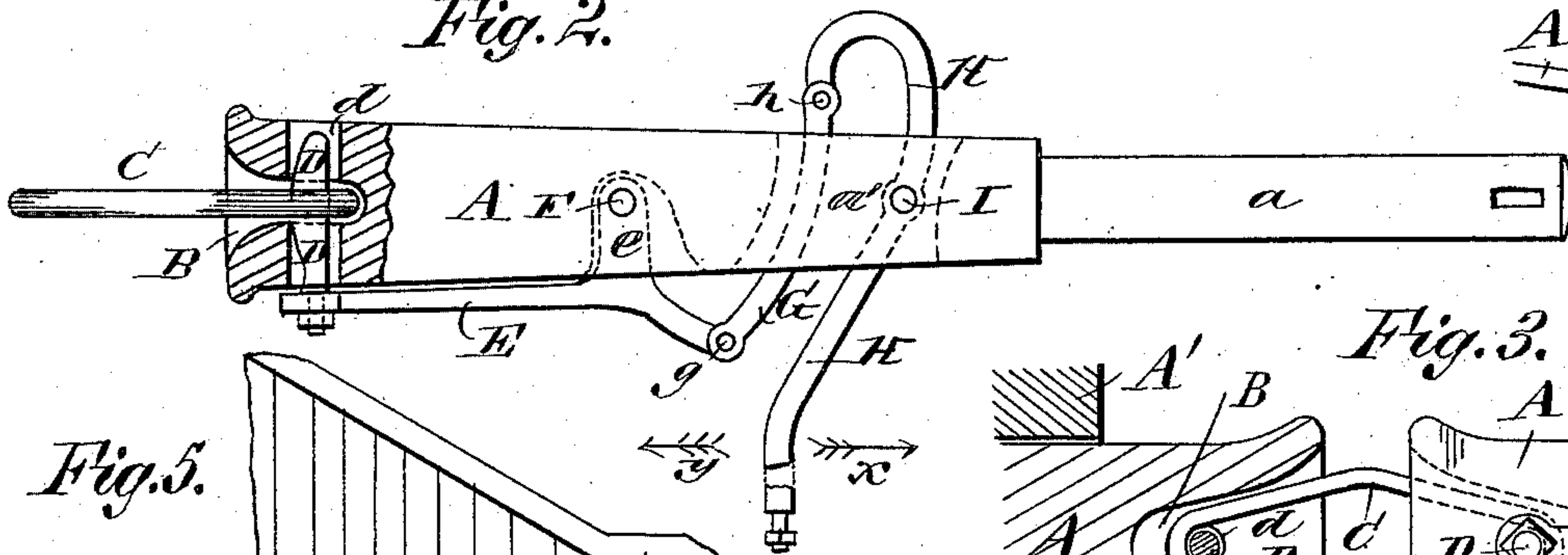
No. 313,026.

Patented Feb. 24, 1885.

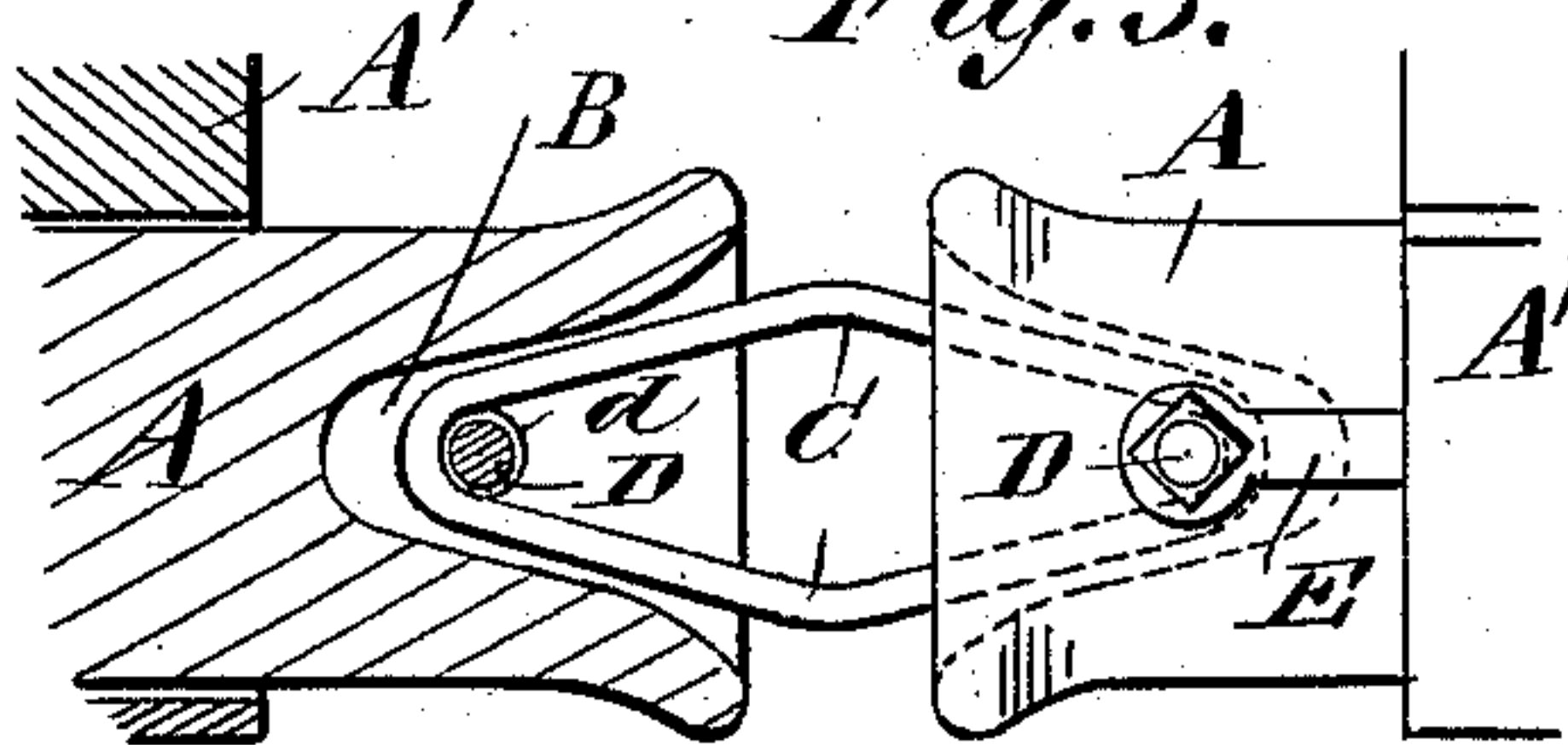
*Fig. 1.*



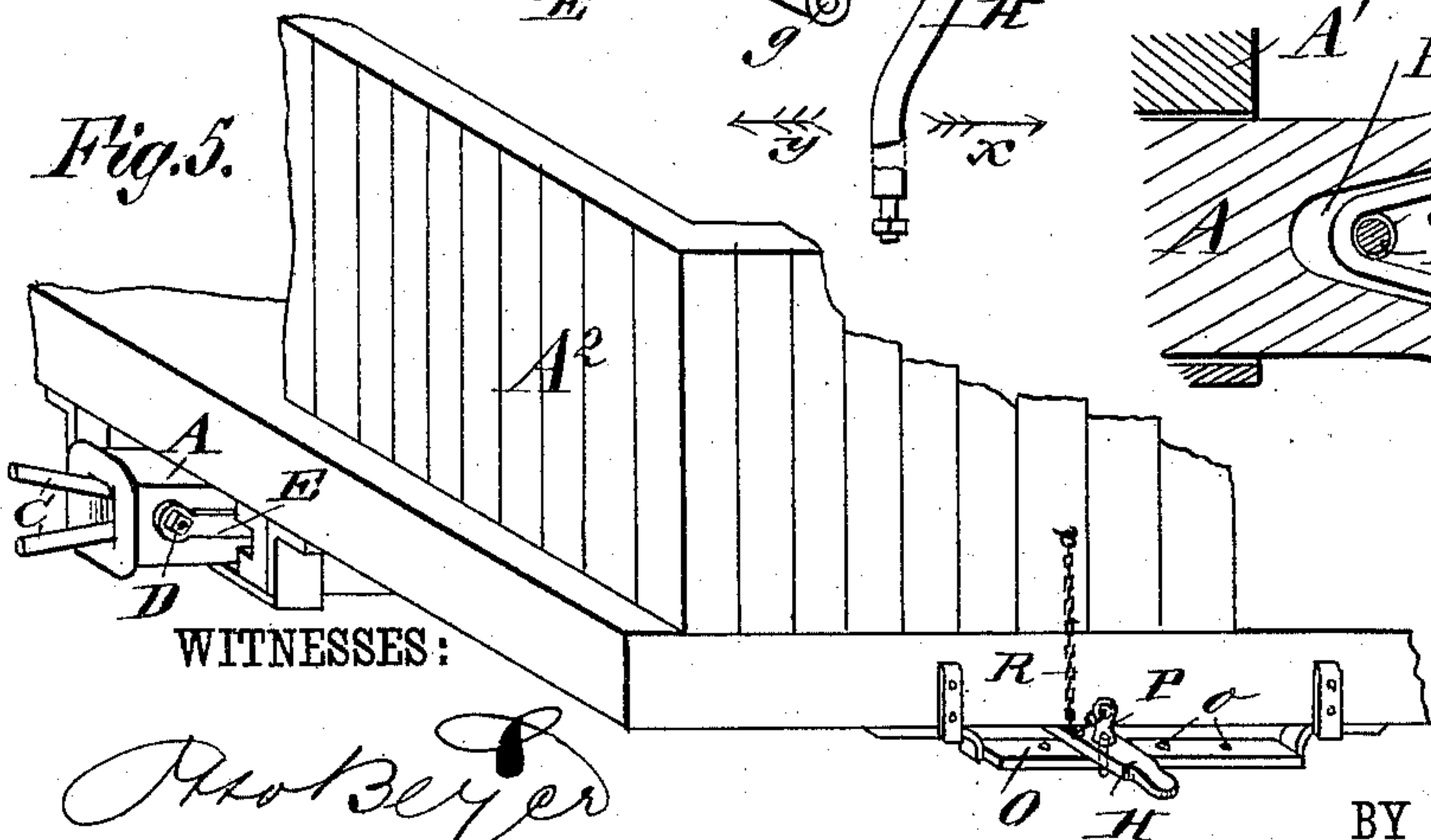
*Fig. 2.*



*Fig. 3.*



*Fig. 5.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDGAR RYE, OF ALBANY, TEXAS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 313,026, dated February 24, 1885.

Application filed November 29, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR RYE, of Albany, in the county of Shackelford and State of Texas, have invented a new and Improved  
5 Car-Coupling, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple, inexpensive, and efficient car-coupling by which cars may be coupled without requiring the train-men to stand between them and  
10 expose themselves to injury.

The invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

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

Figure 1 is a perspective view of the end of  
20 a box freight-car with my improved coupling applied. Fig. 2 is an enlarged sectional plan view of the draw-head removed from the car, and showing the coupling-pin operating-levers. Fig. 3 is an enlarged side elevation  
25 showing the end of one draw-head in vertical section and the two opposite draw-heads coupled. Fig. 4 is a detail view of the lever-locking mechanism of the coupling, and Fig. 5 shows a modification of the lever-locking mechanism.  
30

The letter A indicates the draw-head, which may be held to the car-frame in any approved way, and may have a buffer-spring fitted on its shank or bar *a* to ease the shocks in coupling. The draw-head has a socket, B, which  
35 ranges vertically, so as to receive the coupling-link C, which stands edgewise, instead of lying flat or horizontally in the common way. I prefer to make the link in tapering form  
40 both ways from the center toward its ends, or diamond shaped, and shape the link-sockets correspondingly. (See Fig. 3.) Near the base of the link-socket I make the horizontally-ranging hole *d*, to receive the coupling-pin D, which is connected with the outer end of the  
45 lever E, which has an inwardly-extending lug, *e*, which may enter a recess in the side of the draw-head A, so that a pin, F, passed vertically through the draw-head and lug pivots  
50 the lever E to the draw-head so it may swing in horizontal plane.

To the back end of the lever E is pivoted at *g* a link, G, which extends through an aperture, *a'*, of the draw-head to its other side, where it connects pivotally at *h* with the  
55 curved end of a lever, H, which is pivoted on a vertical pin, I, within the aperture *a'* and projects from the draw-head to the side of the box-car A', at which point said lever H may be connected to the end of a lever, J, which is  
60 fulcrumed at *j* to the car-body and extends to the top of the car, where it passes between the two cross-bars *k k*, fixed to opposite sides of a frame or stand, K, suitably secured to the top of the car. The bar K has a series of holes, *l*,  
65 into any one of which the pin *m* of a spring-pressed locking-lever, M, pivoted to the lever H, may be passed.

When the lever J is swung to carry the horizontally-ranging lever H in the direction of  
70 the arrow *x* in Fig. 2, the pin D will be carried through the entered link C of the draw-head to couple on another car, in which position, as in Fig. 2, the pin will be locked by entering the pin *m* of lever M into one of the  
75 holes *l* of the frame K, so that the pin cannot be displaced accidentally by the shocks of coupling on other cars to a train, or by the jars incident to travel over the road; and to uncouple the cars it is only necessary to un-  
80 lock the pin *m* of lever M from the frame K and swing the lever J to move the lever H the other way, or in the direction of arrow *y*, which will withdraw the coupling-pin D from the link C, and allow the cars to be drawn  
85 apart.

I prefer to make the forward edge or side of the coupling-pin rounding or curved, as in Fig. 2, so it may more easily be withdrawn by the uncoupling-levers should there be any  
90 draft-strain or tightness of the link on the pin, as will readily be understood.

When the end of the pin D is withdrawn past the link-socket B, it may be locked by the lever M in this position also, so that the cars  
95 may come together without coupling, as often is required in backing cars onto sidings or in shunting them about the yard in making up trains.

I locate the uncoupling-lever J, frame K,  
100 and lock-lever M in close proximity to the brake-shaft or stand N, so that in case of acci-



dent the cars may quickly be detached from the engine or the rest of the train by operating the unlocked lever J before or at about the same time that the brakes are applied.

5 When the coupling is fitted to passenger-cars, the frame K will be fixed suitably to the car-platform, and when the coupling is applied to flat box-cars A<sup>2</sup> or to coal-cars I will extend the lever H to the side of the car and form on  
10 it a handle by which it may be moved to operate the coupling-pin by a train-man standing at one side of the track, where he can see and more conveniently and quickly signal the engineer, and thus save considerable time in  
15 making up trains.

O is a plate fixed to the car sill or frame, and having a series of holes, o, into any one of which the pin P may be entered after passing through the lever H, as shown in Fig. 5,  
20 to lock the cars coupled or to hold the coupling-pin to prevent coupling, as hereinbefore described. I connect the pin P to a chain, R, attached to the car, to prevent loss of the pin.

The locking devices O P of Fig. 5 may be  
25 applied to passenger-cars also, if desired.

The coupling-link C, having narrow ends, will readily enter the link-socket of an opposing draw-head, be it higher or lower, the link having the necessary play in the socket,  
30 and it is evident that the link enters the opposing draw-head automatically, and need not be held and guided into it; hence the trainmen are not required to stand between the cars and expose themselves to injury when  
35 coupling the cars.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. A car-coupling constructed with a draw-head having a vertically-ranging and inward- 40 ly-tapering link-socket and a horizontal hole to receive the coupling-pin, in combination with a coupling-link tapering from the middle toward the end, substantially as herein set forth.

2. The combination, in a car-coupling, of a 45 draw-head, A, having a vertically-ranging link-socket, a horizontal hole, d, crossing the socket, and a coupling-pin, D, adapted to said hole and to the coupling-link C, and connected 50 to a lever, E, link G, and lever H, and said lever H extending to the side of the car, substantially as herein set forth.

3. The combination, in a car-coupling, of a 55 draw-head, A, having a vertically-ranging link-socket, a horizontal hole, d, a coupling-pin, D, lever E, link G, lever H, extending to the side of the car, lever J, connecting with lever H and extending to the top of the car, and means for locking the lever J at the top 60 of the car, substantially as herein set forth.

4. The combination, in a car-coupling, of a draw-head, A, having a vertically-ranging link-socket, a horizontal hole, d, a coupling-pin, D, lever E, link G, levers H J, and a 65 frame, K, having a series of holes, l, and a lock lever or latch, M m, substantially as herein set forth.

EDGAR RYE.

Witnesses:

SAML. SPEARS,  
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