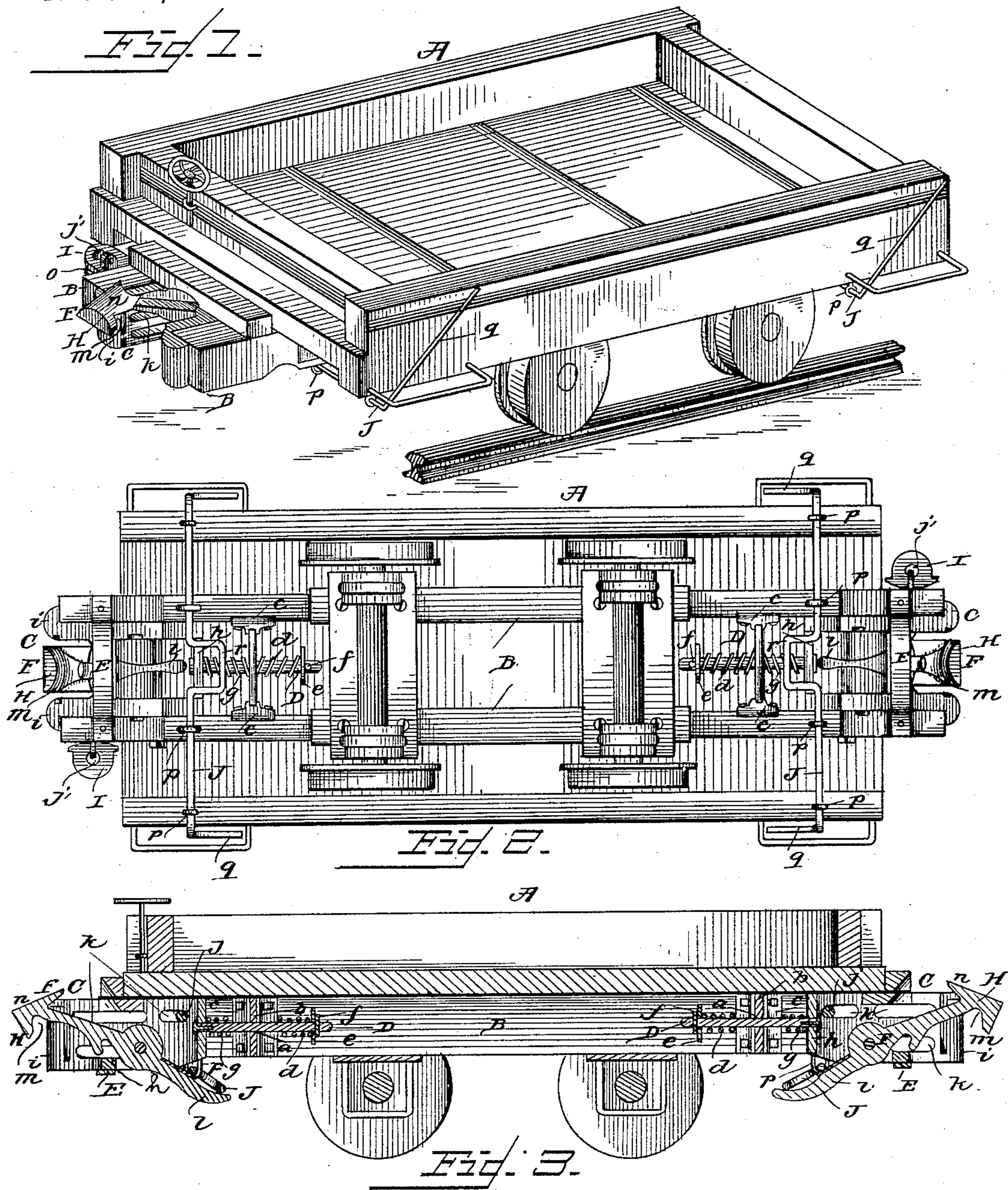


(No Model.)

I. L. STOVER.  
CAR COUPLING.

No. 318,052.

Patented May 19, 1885.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ISAAC L. STOVER, OF CENTRALIA, ILLINOIS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 318,052, dated May 19, 1885.

Application filed January 21, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC L. STOVER, a citizen of the United States, residing at Centralia, in the county of Marion and State of Illinois, have invented a new and useful Improvement in Automatic Car-Couplings, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to automatic car-couplings; and it has for its object to provide a device of this character which shall possess superior advantages over others of its class in point of strength, simplicity, durability, and general efficiency.

With these ends in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a car equipped with my improved coupling. Fig. 2 is a bottom view. Fig. 3 is a longitudinal vertical section, and Fig. 4 is a detail view of the coupling-pin.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents the car, upon the under side of which are arranged, a suitable distance apart, draw-bars or beams B B.

C represents the draw-head, which is formed with or has attached to its rear end a bar or rod, D. This bar or rod D extends through a hole or opening, *a*, in a plate, *b*, which plate *b* is fitted in grooves of guide-plates *c*, arranged upon the inner side of the draw-bars or beams B B.

Upon the bar or rod D, between the plate *b* and the rear end of the draw-head, is mounted a spiral spring, *d*, thus relieving the draw-head of any strain it might be subjected to when the cars are being coupled. The rear end of the bar or rod D, which extends through the hole or opening *a* of the plate *b*, is provided at its end with a disk or plate, *e*, which is held in place against detachment by a transverse pin, *f*, passing through a hole or opening in said bar or rod. A spiral spring, *g*, is also mounted upon the said rod or bar D between the plate *b* and the disk on the end of said rod, said spring serving to remove the strain from the draw-head when draft is ap-

plied. The forward end of the draw-head C is held in place between the draw-beams or bars B B by a bracket, E, secured to the under sides of said beams or bars B B, and adapted to support the draw-head. The draw-head is open upon its under side, but is braced by a bar, *h*, formed integral with the sides of the same. The said sides of the draw-head have their outer or forward ends turned outward, and said outwardly-bent ends or flanges *i* bear against the forward ends of the draw-beams or bars, and thus serve as stops to limit the rearward movement of the draw-head when the cars are being coupled. A transverse pin, *j*, is also employed, said pin passing through elongated slots *k* in the draw-head and secured at its ends in the draw-bars or beams B.

F represents the coupling-bar, which is pivoted between the side of the draw-head at the lower ends thereof, and preferably at a point adjacent to the rear end of said draw-head. This coupling-bar F has extending rearwardly therefrom an arm, *l*, which is provided with a circular recess upon its upper side. The forward end of the coupling-bar F is provided with an enlarged head, H, which is provided on its under side at the forward end thereof with a recess, *m*, forming a seat. The outer face of this enlarged head H of the coupling-bar F is inclined upwardly, as shown at *n*, so that, when the head of the coupling-bar of the adjacent car strikes the same, it will slide upwardly thereupon. The upwardly-extending end of the said head H forms a seat to receive the lower hooked end of the coupling-bar of the adjacent car. Upon the side of the draw-head is formed a lug or bracket, I, having a horizontal slot or opening, *o*, and a vertical passage or opening, *j'*, communicating therewith. By the employment of this bracket it will be seen that cars equipped with the ordinary form of draw-head and coupling devices may be connected with a car provided with my improved coupling. Upon the under side of the car is pivoted in downwardly-extending brackets or guides *p* a crank-shaft, J, the ends of which are formed with operating-levers *q*. The crank-arm *r* of said crank-shaft fits in the circular recess upon the upper side of the rearwardly-extending arm of the coupling-bar. It will thus be seen

that when said crank is forced downwardly by the levers it will bear in said circular recess, depress the said arm, and thus raise the forward end of the coupling-bar to uncouple the  
5 cars.

It will be seen that by the employment of my improved coupling, cars of unequal heights can be accommodated, that the operation is positive and effective, and that the devices  
10 described are cheap and simple in their construction and strong and durable.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a car-coupling, the combination, with a 15 draw-head, of a pivoted coupling-bar having the arm *l* at its rear end provided with a recess on its upper side, the head *H*, having the recess *m* on its under side, and an upwardly-extending end having an inclined front face, 20 as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ISAAC L. STOVER.

Witnesses:

JOHN W. DICKERSON,  
JOHN R. DUNCAN.