(No Model.)

T. L. McKEEN.

CAR COUPLING.

No. 301,738. Patented July 8, 1884.

Fig. 1.

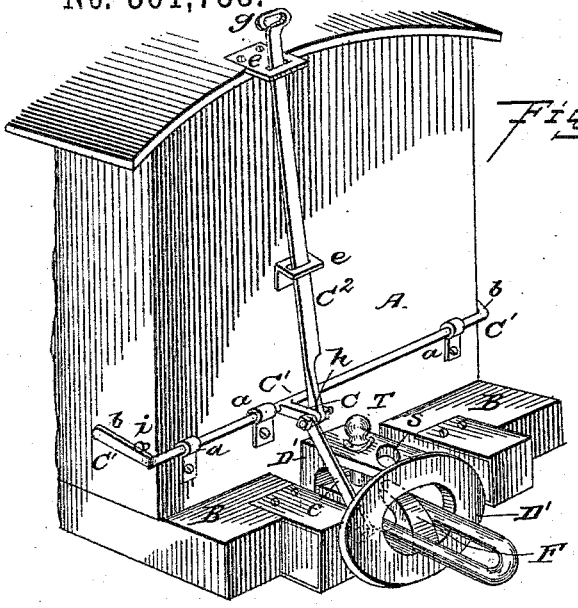


Fig. 6.

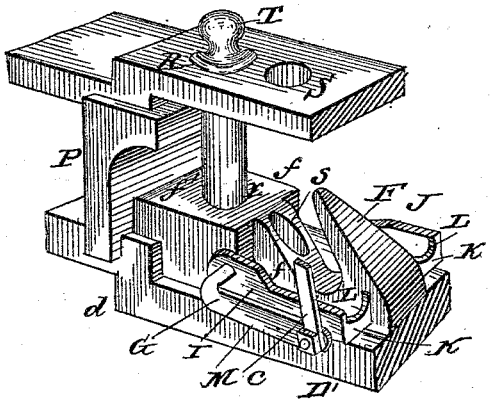


Fig. 2.

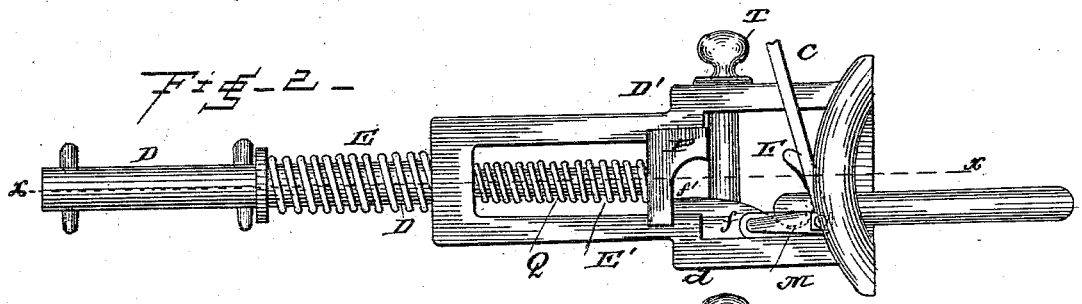


Fig. 3.

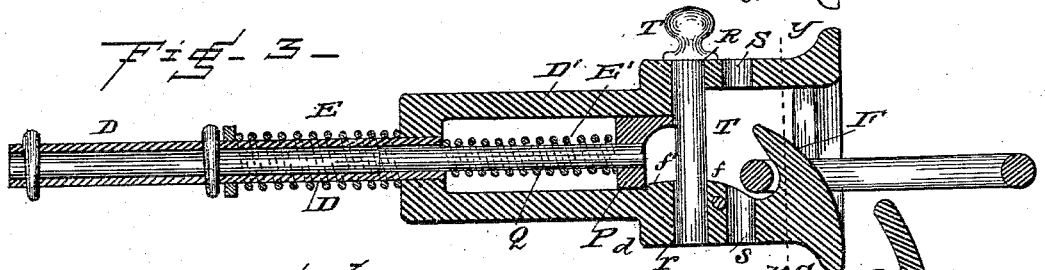


Fig. 4.

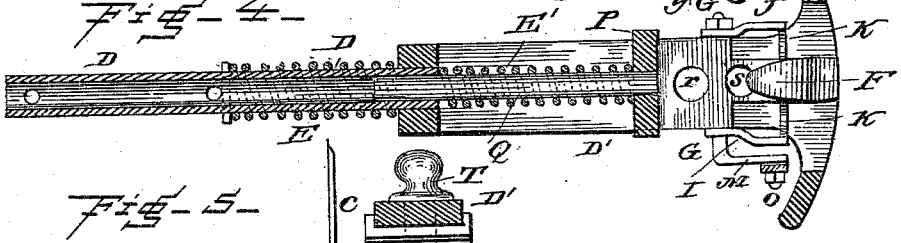
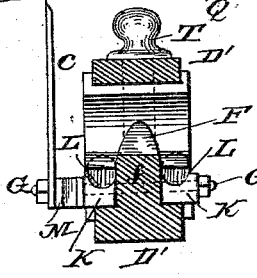


Fig. 5.



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THOMAS L. McKEEN, OF EASTON, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 301,738, dated July 8, 1884.

Application filed April 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. McKEEN, a citizen of the United States, and a resident of Easton, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings; and I 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, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of the front part of a freight-car fitted with my improved automatic coupling. Fig. 2 is a side view of the coupling removed from the car. Fig. 3 is a longitudinal vertical sectional view of the same. Fig. 4 is a horizontal sectional view through the line indicated by *x x* in Fig. 2. Fig. 5 is a vertical cross-section through line *y y* in Fig. 3, and Fig. 6 is a detail view.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to so-called "automatic" car-couplings, or "self-couplers," of that class which are adapted more especially for use upon freight-cars; and it consists in the improved construction and combination of parts of a coupler of that class, as will be hereinafter more fully described and claimed.

In the accompanying drawings, A denotes the front part of the car, and B the timbers or sill of the platform.

C, C′, and C² denote the system of connecting-rods and levers, whereby the coupling may be operated either from the roof of the car or from both sides of the same, as may be desired.

D is the draw-bar, which is made hollow or tubular, and encircled by the usual spring or springs, E.

D′ denotes the draw-head, the lower part of which is sunk or depressed, as shown at *d*, for the purpose of enlarging its forward end, inside of which the coupling-hook F is placed. This construction gives great strength to the hook by making it wide at the part *f*, where the strain comes when the coupling is in use.

Arranged back of the rear end or offset, *f′*, of the hook F is a sliding block or plunger, P, of the shape shown in the drawings, which is fastened to the forward end of a rod or bar, Q, which projects into the tubular draw-bar D, and is encircled by a stout coiled spring, E′, opposite ends of which bear against the rear end of the draw-head D′ and the plunger P, thus, it will be seen, operating to force the plunger P against the step or offset *f′* inside of the draw-head. When the link is inserted into the draw-head, it will, after passing over the hook, strike this spring-actuated plunger and force it a certain distance back into the draw-head until the cars assume their proper relative position, with the link resting in the hook, in which position the plunger will again occupy its normal position.

G is a bolt, which is inserted transversely through the hook, back of the notch in the same, and upon opposite ends of this bolt, on opposite sides of the hook, are fastened the arms I and J. One end of the bolt G is bent to form, or has rigidly connected to it, an arm, M, the free end of which has a pin or projection, O, for connecting it to the system of operating rods and levers, to be hereinafter described. The outer ends of the parallel arms I and J are bent toward each other to form the elbows K, which have recesses or notches L in their upper sides, adapted to fit against the under side of the link when the same is inserted into the coupling, as will be seen more clearly by reference to Fig. 4 of the drawings.

The draw-head is provided with two apertures, R and S, for the insertion of a coupling-pin, T, of the usual construction, said apertures R and S having corresponding holes, *r* and *s*, in the bottom part of the draw-head. When the coupling-pin T is inserted through the apertures R *r*, it will operate in conjunction with the link as an ordinary pin-and-link coupling; but when the pin is inserted through the front apertures, S *s*, the pin will be just back of the hook, and thus prevent a link inserted into the coupling from engaging the same. When the cars are in the yard, it frequently becomes undesirable that the cars should become coupled to one another by pushing them together. Where this condition

arises I prevent such accidental coupling by placing the pin in the holes S *s*. The arm M is connected by its pin O to the connecting-rod *c*, which in turn is connected at its upper end to an arm, C, projecting at right angles from the arm or cross-bar C′, which has its bearings on the front side of the car in boxes *a*. The free ends of this cross-bar C′ are bent at right angles to form the handles *b*, whereby the coupling may be operated from the sides of the car.

Pivoted to the projecting arm C of cross-bar C′ is a rod, C^2, which is inserted through and has a loose play in keepers *e*. The rod C^2 extends up to the roof of the car, where it has a handle, *g*, for operating it. The transverse rod or bar C′ has a free sidewise motion in its boxes *a*, the connecting-rod *c*, as well as the lower end of the rod C^2, being loosely jointed at the point *h*, where they are respectively connected to the outer end of the arm or elbow C. It follows that rod C′ may be moved forward and back in its boxes or bearings, and thereby cause either one or both of its handles, *b*, to engage a stud or pin, *i*, fastened in the side of the car in such a manner that the link-supporting arms I and J, with their recessed elbows K L, will be in the proper position for holding the free end of the link in an appropriate position for entering and coupling with the draw-head of the car opposite. It is obvious that there may be several of these projecting studs or pins *i*, so that by the adjustment of the handles *b* the free end of the link may be placed at any desired angle.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, in an automatic car-coupling, of the tubular draw-bar D, draw-head D′, having the depressed or sunken portion *d*, fixed hook F, constructed with a wide web, *f*, terminating in the offset or shoulder *f′*, plunger P, having piston-rod Q, projecting into the tubular draw-head, and spring E′, substantially as and for the purpose shown and set forth.

2. The combination, in an automatic car-coupling, of the draw-head D′, constructed as described, fixed hook F, constructed with a wide web, *f*, terminating in the offset or shoulder *f′*, spring-actuated plunger P, bolt G, having at one end the arm M, parallel arms I and J, fixed upon opposite ends of the bolt, on opposite sides of the hook, and bent to form the recessed elbows K L, and mechanism connected to the free end of arm M, and adapted to operate the same for the purpose of adjusting the position of the link in the draw-head or uncoupling the link from the hook, substantially as and for the purpose shown and set forth.

3. The combination, in a car-coupling, of the arms I and J, adapted to bear against the under side of the link, arm M, bolt G, sliding rod C′, having handles *b* and projecting arm C, connecting-rod *c*, jointed loosely at *h* to the outer end of arm C, and rod C^2, jointed loosely at its lower end to the outer end of arm C and connecting-rod *c*, whereby the rod C′ has a free lateral motion in its boxes or bearings *a*, substantially as and for the purpose shown and set forth.

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

THOMAS L. McKEEN.

Witnesses:

AUGUST PETERSON,

ARTHUR L. MORSELL.