

(No Model.)

2 Sheets—Sheet 1.

S. P. COAN.

CAR COUPLING.

No. 260,941.

Patented July 11, 1882.

Fig. 1.

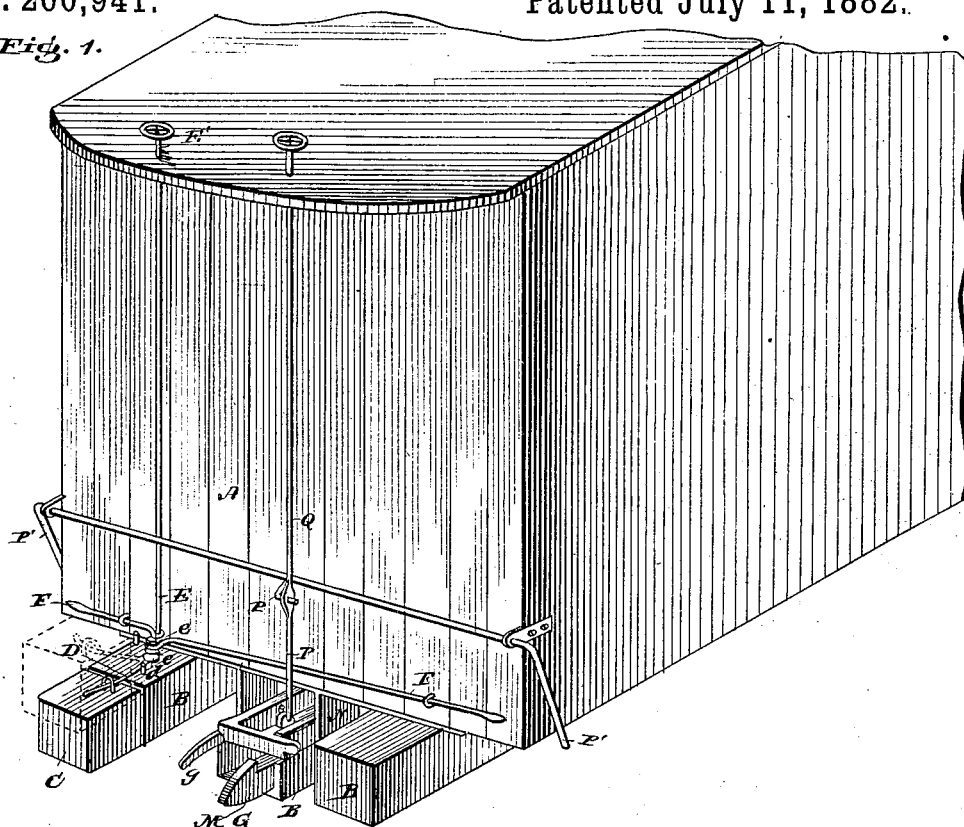


Fig. 2.

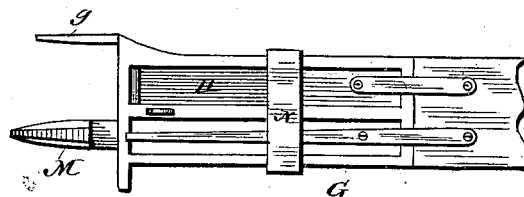
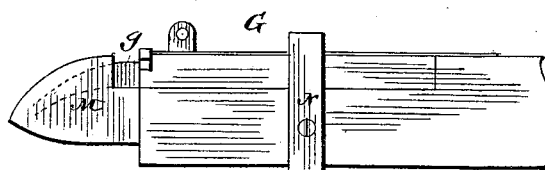


Fig. 3.



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(No Model.)

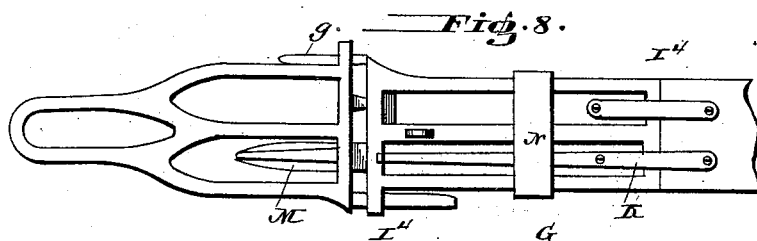
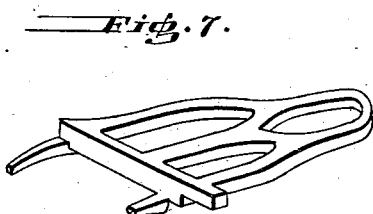
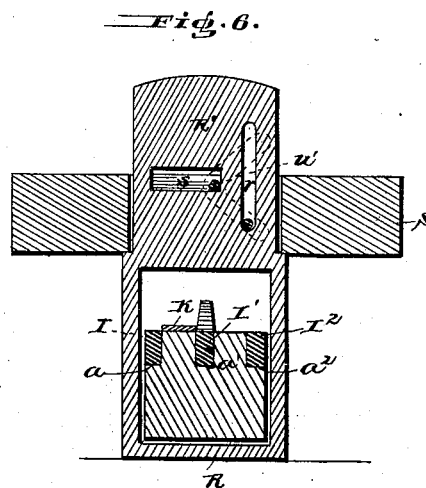
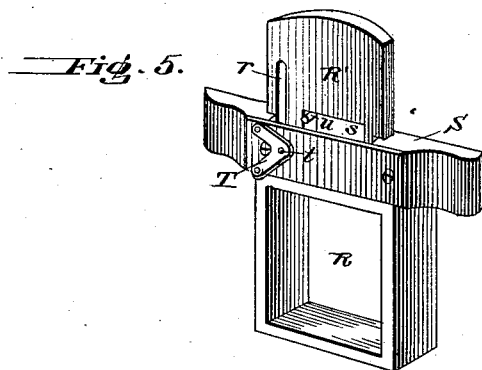
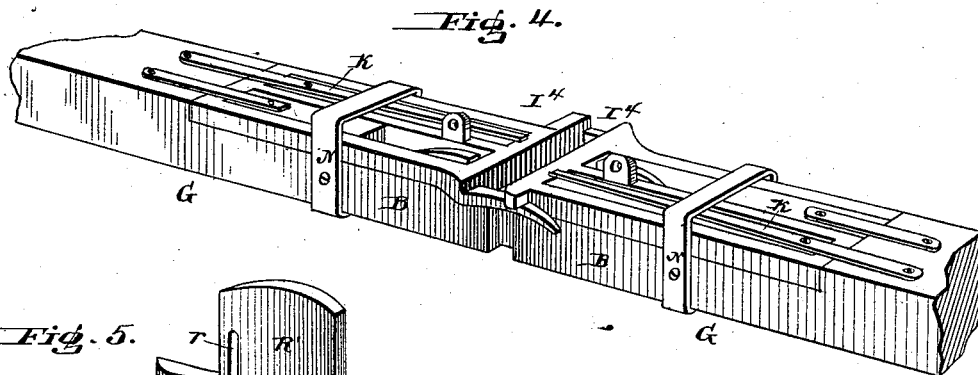
2 Sheets—Sheet 2.

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CAR COUPLING.

No. 260,941.

Patented July 11, 1882.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SANTFORD P. COAN, OF MEDICINE LODGE, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 260,941, dated July 11, 1882.

Application filed April 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, SANTFORD P. COAN, of Medicine Lodge, in the county of Barbour and State of Kansas, 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 end of a box-car provided with my improved car-coupling. Fig. 2 is a plan or top view of the draw-head. Fig. 3 is a side elevation of the same. Fig. 4 is a perspective view of the two draw-heads coupled. Fig. 5 is a perspective detail view of the stirrup device for adjusting the elevation of the draw-bar and draw-head. Fig. 6 is a sectional view of the same, showing the draw-bar inserted through the stirrup. Fig. 7 is a perspective view of my combined latch and link; and Fig. 8 is a top view, showing the application of the latter to the draw-head.

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

My invention has relation to automatic car-couplings or so-called "self-couplers;" and it consists in the improvements which will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying two sheets of drawings, A represents the front end of a box-car provided with my improved automatic coupling.

B B are the bumpers or "buffers," to one or both of which I affix a block, C, which is secured at the outer end of an arm, D, that in turn is fastened to a rod, E, that works in staples or keepers *e e*, and has a handle, E', at its upper end. By turning this handle arm D, with its block C, may be swung to one side out of the way, as shown in dotted lines in Fig. 1; or the same may be done from either side of the car by means of a rod, F, which is pivoted upon a stud or pin, *d*, on arm D, and extends to opposite sides of the car. If desired, springs may be employed to retain block C in either of its positions, so that when swung into place in front of the buffer-beam it will

not swing out accidentally, or vice versa; or other means may be employed to effect the same result. The swinging block C, if made of wood, should be shod or faced with iron, and provided with a rubber cushion to take up the shock when the cars come together. When swung into place in front of the buffer-beam it will prevent coupling of the cars by preventing the draw-heads from engaging with one another.

Each of the draw-heads G is cast with a projecting hook, *g*, and a recess, H, extending into the body of the draw-head. The flat top part of this is grooved longitudinally to form parallel channels or recesses *a a' a''*, into which is placed a casting (of malleable or wrought iron) composed of three parallel bars, I, I', and I², connected by end bars, I³ and I⁴. Bar I³ rests in a groove or recess, *i*, cut transversely across the rear end of the draw-head, and is confined therein by a plate, *b*, and the back part or base of a flat spring, K, the outer end of which bears against the front cross-bar, I⁴. Thus it will be seen that the piece composed of the parts I, I', I², I³, and I⁴ (which, for the sake of brevity, I shall denominate simply "part I") is hinged in the top part of the draw-head, and actuated by the spring K, which keeps it down upon the draw-head flush with its top. Part I is provided with a forwardly-projecting curved arm, L, and a laterally-projecting arm or finger, M, and the play of the part is limited or controlled by a stirrup or keeper, N, which spans the draw-head.

In coupling the draw-heads, the hook G of one will enter the recess H of the other, the beveled head of the hook, as it strikes cross-bar I⁴, raising part I until the hook slips under the bar, when spring K will force bar I⁴ down into the notch of the hook. The projecting curved arm L of one of the parts, I, striking the laterally-projecting finger M of the draw-head opposite, operates in like manner as the beveled hook—viz., raising part I so as to permit the hook to enter its recess freely.

To uncouple the cars (which may be done either from the roof or from the sides of either car) the parts I are disengaged from their respective hooks *g*, with which they are interlocked, by a rod or chain, O, the upper end of which connects with an arm, *p*, projecting from

a rod, P, having levers or handles P' P' at its ends. Another rod, Q, extends from arm p up to the roof of the car.

If it is desired to use this draw-head with 5 couplings of the ordinary "link-and-pin" description, I use the combined latch and link shown in Figs. 7 and 8, by coupling it with the hook and latch of the draw-head, with its link-shaped end, W, projecting in front of the 10 hook, so that it will enter the mouth of the draw-head opposite.

Where my improved draw-head is used with cars of different height, its elevation may be adjusted by means of the device shown in 15 Figs. 5 and 6. This consists simply of a stirrup, R, through which the draw-bar is inserted, and which is cast with a plate or extension R', having two slots, r and s. Plate R' works in a vertical slot in a beam, S, which is bolted 20 upon the front side of the car.

T is a bell-crank, the shaft t of which passes through the vertical slot r of plate R', and has an arm, u, the bent outer end, u', of which works in the horizontal slot s. Thus by turning 25 bell-crank T (by means of rods connecting it with the sides and roof of the car,) its bent arm u u' will raise or lower plate R' and its stirrup R, and with it the draw-head.

Having thus described my invention, I claim

and desire to secure by Letters Patent of the 30 United States—

1. In a car-coupling, the combination of a draw-head having the projecting hook g, recess H, and channels a a' a², hinged part I, provided with the projecting arm L and finger 35 M, set at right angles to each other, and spring K, constructed and combined to operate substantially in the manner and for the purpose herein shown and described.

2. In a car-coupling, the combination, with 40 a hinged draw-bar and draw-head, of the stirrup R, having plate R', slotted at r and s, bell-crank T, having shaft t and bent arm u u', and slotted beam or keeper S, constructed and combined substantially as and for the purpose 45 herein shown and described.

3. The swinging buffer-block C and means for operating the same, in combination with the buffer-beam and draw-head of a railway-car, arranged to operate substantially as and 50 for the purpose herein shown and specified.

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

SANTFORD PETER COAN.

Witnesses:

WILLIAM S. WATKINS,
SAMUEL J. SHEPLER.