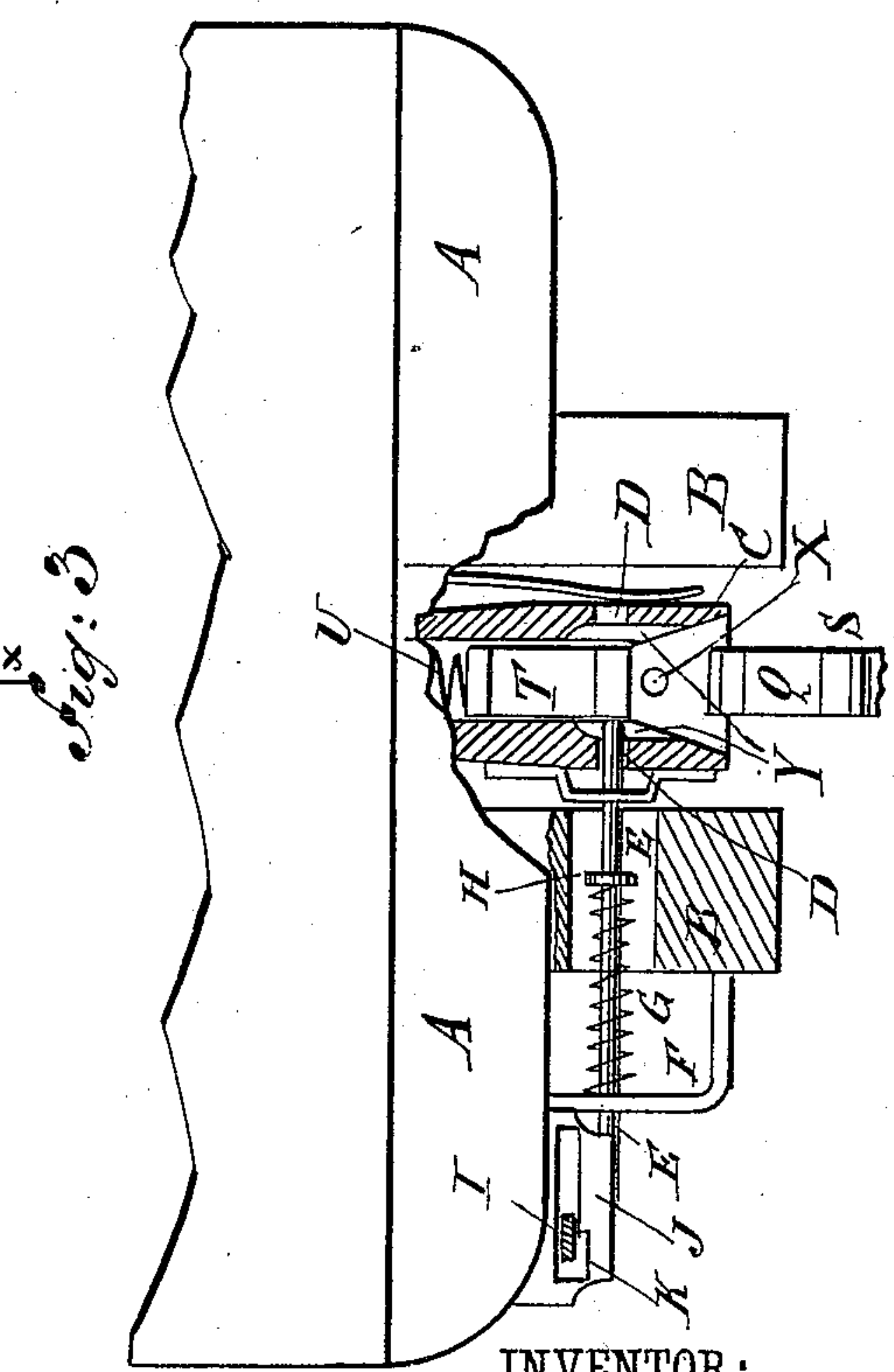
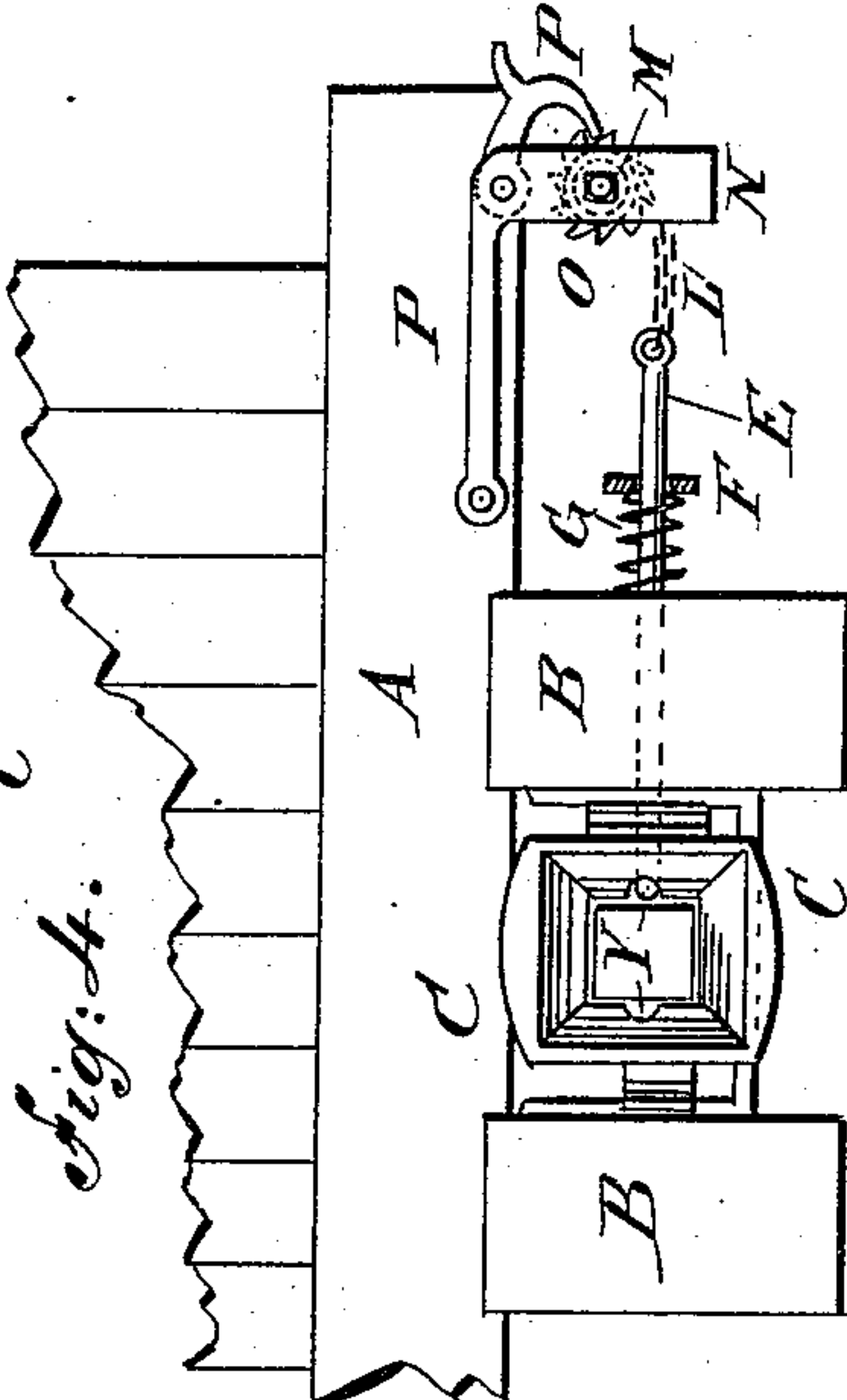


J. BERSCH.
CAR COUPLING.

Patented Dec. 21, 1886.



INVENTOR:

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 354,677, dated December 21, 1886.

Application filed April 27, 1886. Serial No. 200,285. (No model.)

To all whom it may concern:

Be it known that I, JOHN BERSCH, of Kingston, in the county of Luzerne and State of Pennsylvania, have invented a new and useful
5 Improvement in Car-Couplings, of which the following is a full, clear, and exact description.

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

Figure 1 is a front elevation of a part of a car to which my improved coupling has been applied. Fig. 2 is a sectional side elevation of the same, taken through the line *x x*, Fig. 1,
15 and showing the end of a coupling-bar ready to enter the draw-head. Fig. 3 is a sectional plan view of a part of the same, taken through the line *y y*, Fig. 1. Fig. 4 is a front elevation of a part of a car, showing a modification
20 of the mechanism for uncoupling the cars.

A represents the frame, and B the bumpers, of an ordinary freight-car. C is the draw-head, which is secured to the frame A in the usual manner.

25 The top and bottom of the mouth of the draw-head C are flared or beveled in straight lines, as shown in Fig. 2.

The draw-head C has a transverse perforation, D, at its throat to receive the horizontal
30 coupling-pin E, which slides in a support, F, attached to the car-frame, and is held forward by a spiral spring, G, placed upon it. The outer end of the spring G rests against the support F, and its inner end rests against a collar,
35 H, formed upon or attached to the said coupling-pin E. The outer end of the pin E is connected with the lower end of a lever, I, by a link or other suitable coupling.

The lever I is pivoted to the car-frame A,
40 and its upper end extends into such a position that it can be readily reached and operated to uncouple cars. The lower part of the lever I moves in a keeper, J, attached to the car-frame A, which keeper has a recess, K, at its
45 outer end to receive the lower end of the said lever I and fasten the said lever in place when the pin E is drawn outward, so that cars can be run together without coupling.

50 If desired, the lever I can be omitted, and one end of a short chain, L, attached to the outer end of the pin E. The other end of the

chain L is attached to and wound upon a short shaft, M, journaled in supports N, attached to the car-frame and operated to wind the chain L upon it by a crank or key applied to the
55 outer end of the said shaft, but which key is not shown in the drawings. To the shaft M is attached a ratchet-wheel, O, with the teeth of which engages a pawl, P, pivoted to the frame A, to hold the coupling-pin in place
60 when drawn out. When the pawl P is raised from the ratchet-wheel O, the coupling-pin E is forced forward by the spring G, hereinbefore described.

Q is the coupling-bar, the ends of which are
65 beveled upon their upper and lower edges to cause them to enter the mouths of draw-heads C readily, and have each a perforation, R, formed through them to receive the coupling-pins E.
70

Inclined shoulders S are formed upon the upper and lower edges of the draw-bar Q, a little in the rear of the perforations R, and in such positions as to fit snugly against the inclined tops and bottoms of the mouths of the
75 draw-heads C when the coupling-pins E are in place, so as to take the strain of the jar when the cars are run together, and thus relieve the said coupling-pins E from the said strain. The inclined shoulders S of one end of a draw-bar,
80 Q, fitting against the inclined top and bottom of a draw-head, C, cause the coupling-bar to be supported in a horizontal position, so that two cars will be coupled automatically when run together.
85

T is a block fitted into the throat of the draw-head C, and which is held forward by a spiral spring, U, interposed between its inner end and the inner end of the cavity in which it is placed. The outward and inward movements
90 of the block T are limited by a pin or bolt, V, which passes transversely through the draw-head and through a recess, W, in the upper side of the said block T, the said recess being made of such a length as will allow the said
95 block to have the necessary amount of movement.

The recess W and the pin V are so arranged that when the block T is at the limit of its forward movement the sides of the outer end of
100 the block T will cover the inner ends of the pin-hole D, so that the said block will hold

the coupling-pin from being pushed inward by the spring G.

5 With this construction when two cars are run together the coupling-bar Q of one car will enter the draw-head of the adjacent car and strike against and push back the guard-block T, allowing the spring G to push the coupling-pin E through the perforation R of the draw-bar Q and couple the cars.

10 The draw-head C has a vertical perforation, X, formed through it to receive the coupling-pin, so that an ordinary link-and-pin coupling can be used when necessary. In this case the inner surface of each of the sides of the draw-head C has a horizontal groove, Y, formed in it. These grooves receive the coupling-link, so that the link will be held in a horizontal position by the pressure of the guard-block T while cars are being run together.

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

1. In a car-coupling, the coupling-bar Q, made

substantially as herein shown and described, with its ends beveled upon their upper and lower edges and having transverse perforations to receive the coupling-pins, and provided with inclined shoulders S upon its upper and lower edges to fit against the inclined top and bottom surfaces of the draw-heads, as set forth. 25 30

2. In a car-coupling, the combination, with the draw-head C, having the top and bottom of its mouth flared in straight lines and provided with a transverse perforation, of the coupling-bar Q, having upon its upper and lower edges inclined shoulders to fit against the inclined top and bottom of the draw-head mouth, the coupling-pin E, held forward by a spring, G, and a pin-withdrawing mechanism, substantially as herein shown and described. 35 40

JOHN BERSCH.

Witnesses:

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