

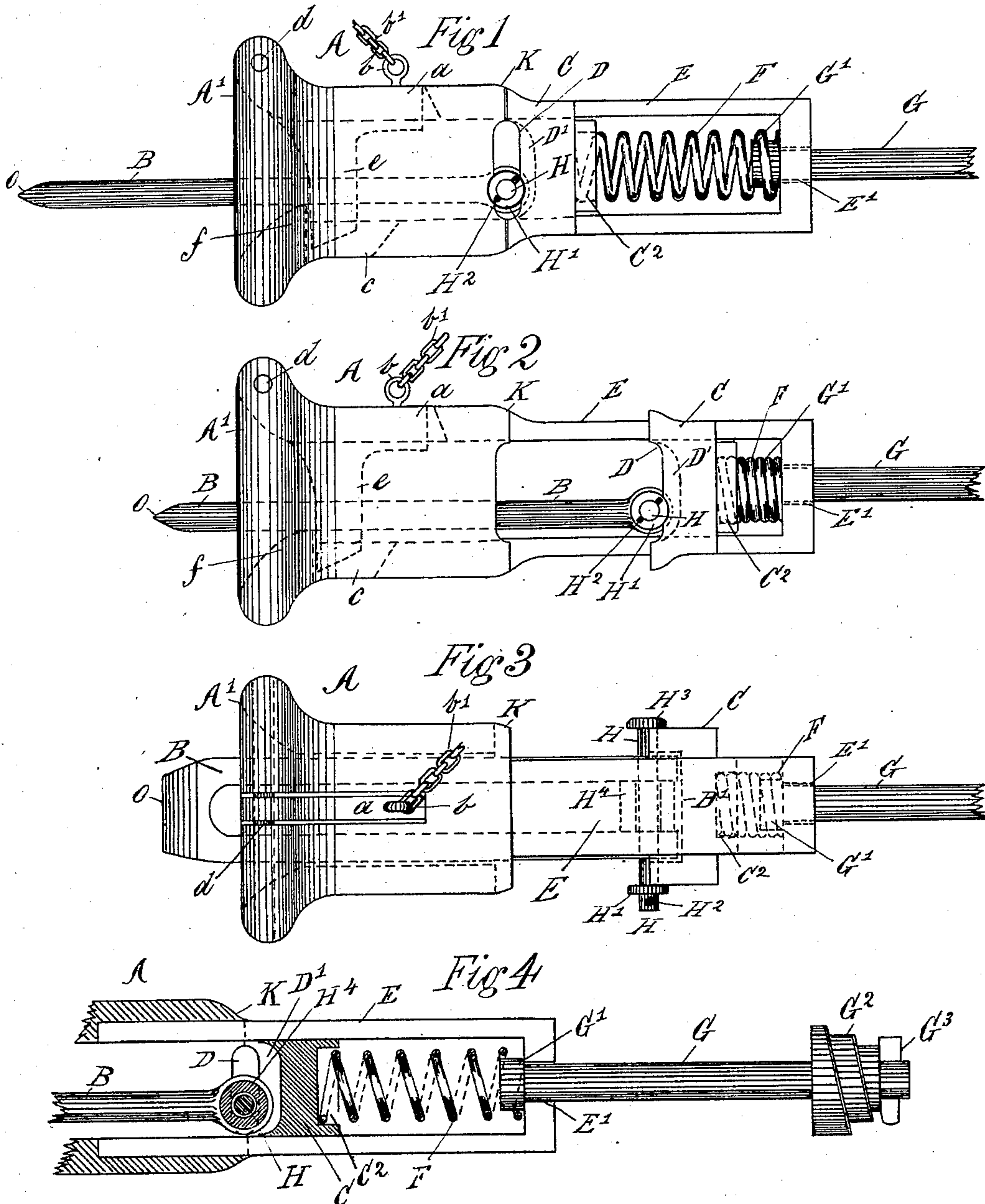
(No Model.)

D. CARLOUGH.

CAR COUPLING.

No. 304,704.

Patented Sept. 9, 1884.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 304,704, dated September 9, 1884.

Application filed February 26, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL CARLOUGH, a citizen of the United States, residing at Paterson, Passaic county, State of New Jersey, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The object of my invention is to produce an automatic car-coupling in which the coupling-link is made longitudinally adjustable, and is an improvement on the one for which I obtained Letters Patent No. 291,149, bearing date January 1, 1884; and the improvement consists of an adjustable slide and spring novelly arranged in the draw-head, in combination with the coupling-link, draw-head, and coupling-box, which will be hereinafter fully explained.

Figure 1 of the drawings shows the coupling in elevation with my improvement thereon, with the coupling-link extended. Fig. 2 is the same with the link depressed. Fig. 3 is a plan of the coupling, and Fig. 4 is a longitudinal section of the same.

A represents a car-coupling, having arranged in the draw-head E a slide-block, C, having formed therein recesses D' and C'. The recess D' is curved so as to conform to the inner end of the coupling-link B. The recess C' is made square, and forms a suitable seat or box for the inner end of a spring, F, one end of which spring is arranged therein. The outer end of the spring F is arranged on and suitably secured to the inner end of a draw-bar, G, which inner end of the bar is provided with an enlargement, G', that projects over the hole E', formed in the end of the draw-head E. As shown in Fig. 4, the slide-block C conforms to the shape of the coupling-box, as shown at K, Fig. 1. The inner ends of the coupling-link B have enlargements formed thereon, in which enlarged portions of the link there are arranged holes H<sup>4</sup>, to accommodate pivots H, having heads H<sup>3</sup>, washer H', and pin H<sup>2</sup>. The pivots H are arranged in vertical slots D, formed in the sides of the coupling-box and slide-lock. The coupling-box A' is provided with an opening, c, in the bottom of the same, and a suitable slot in the top to ac-

commodate a pawl, a, having lugs e and d, and which pawl is pivoted to the coupling-box A' at d. As shown in Figs. 1 and 2, the pawl a is provided with a ring, b, and link b', and the coupling-box A' with a flaring mouth, and the draw-bar with a spring, G<sup>2</sup>, and pin G<sup>3</sup>.

Operation: The coupling is supposed to have been secured to the cars by some of the known means employed therefor. The coupling-links B are placed in position on the pivots H, arranged in slots D, and rest horizontally on the stops f, just enough out of balance to hold the links to their horizontal positions. The cars to be coupled are brought together therefor. The solid sharpened ends o of the links B present themselves to the open flaring mouth A' of the coupling A, which is adapted to meet any vertical or lateral differences of the cars and direct or guide the coupling-links B into their engagement with the pawl a, which pawl recedes in its engagement with the link B until the solid sharpened end o of the link B has passed beyond the pawl a, which relieves the pawl a from its engagement with the solid sharpened end o of the link B, and permits the pawl by force of gravity to drop down in the open center of the coupling-link, and thus automatically couple the cars together. The pawl in its descent passes forward to its position against the stop f. The coupling-links, having sharpened ends, readily pass each other, and, being vertically adjustable by reason of the slots D, the outer ends of the links yield to vertical pressure without injury to the links, and which when released from said pressure return to their horizontal position on the stop f, as shown in Fig. 1; and in case of the longitudinal contact of the links B the slide C, in its engagement with the coupling-links B, recedes in the draw-head E, which action contracts the spring F, and puts the same in tension, as shown in Figs. 2 and 3, which spring, when the link B is released from its longitudinal contact, suddenly distends and forces the link B forward to its nearly balanced position on the stop f, as shown in Fig. 1. The opening c permits the dirt to escape from the box and prevents the same from accumulating therein. The pawl a may be held out of au-

tomatic position by hooking the link *b'* on a suitable hook provided therefor when making up trains, &c.

Having described my improved car-coupling and its operation, I claim and desire to secure by Letters Patent—

1. The combination, with the adjustable slide-block C, having recesses *D'* and *C'*, of the spring F, arranged in said recess *C'*, and draw-bar G, having spring *G'* and pin *G'*, the draw-bar arranged in the draw-head and holding spring F, and draw-head E for holding said slide-block and spring, substantially as set forth.

2. The combination, with the adjustable slide-block having recesses and draw-head for holding said slide-block and spring, of the coupling-link B, having pivot H, the pivot arranged in slots D, and coupling-box having flaring mouth *A'*, opening *c*, stop *f*, and slots D, and pawl *a*, pivoted in said coupling-box, the pawl having a ring, *b*, and link *b'*, substantially as set forth.

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Witnesses:

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