3 Sheets--Sheet 1.

F. W. NASH.

Car-Coupling.

No. 165,751. Patented July 20, 1875.

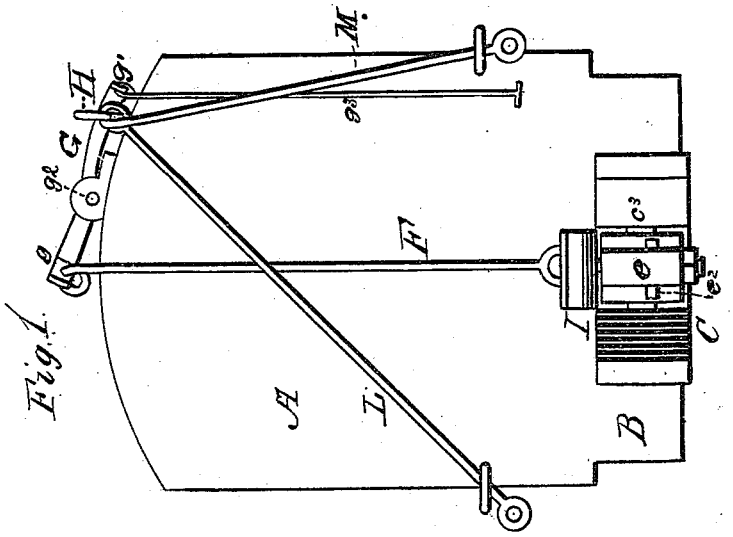

Fig. 1.

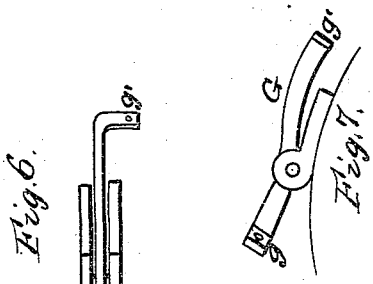

Fig. 6.

Fig. 7.

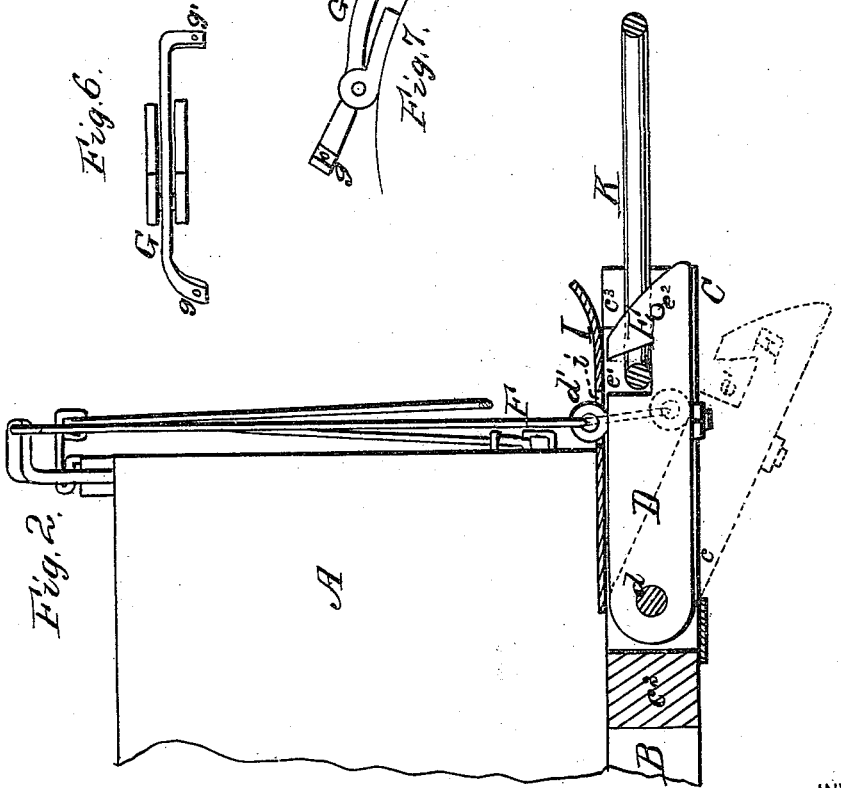

Fig. 2.

WITNESSES

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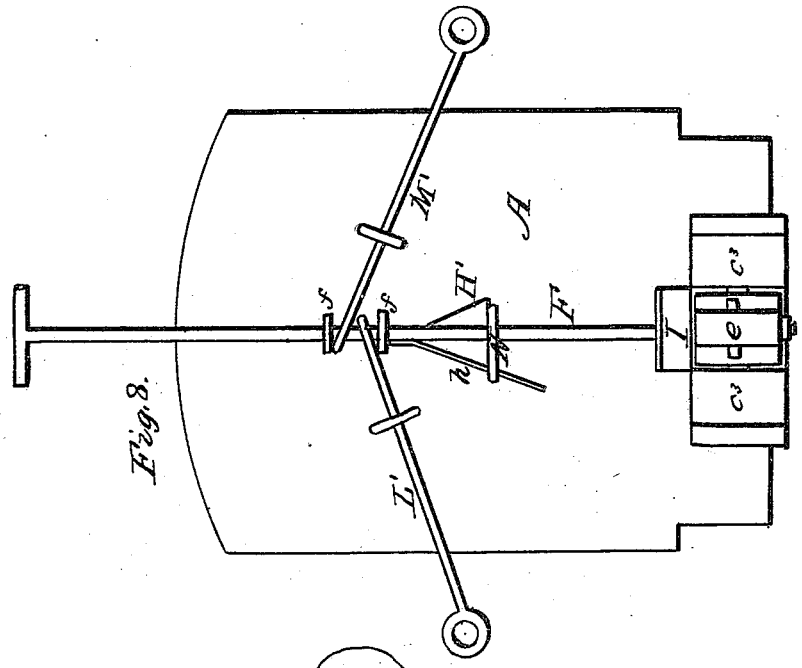

Fig. 8.

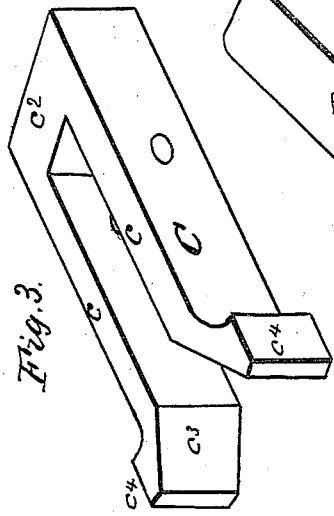

Fig. 3.

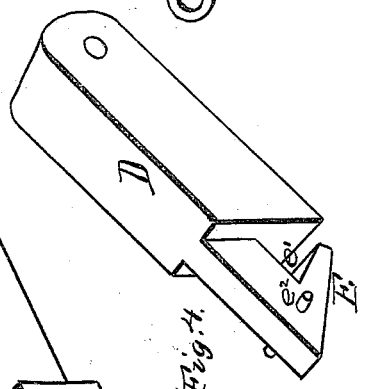

Fig. 4.

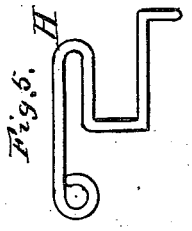

Fig. 5.

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Car-Coupling.

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Fig. 9.

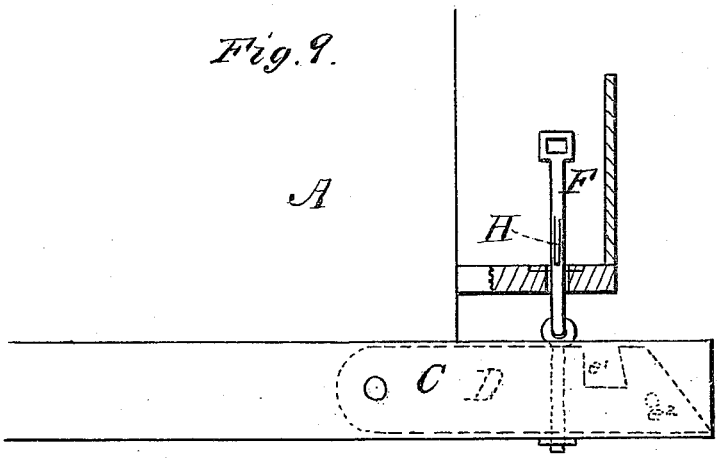
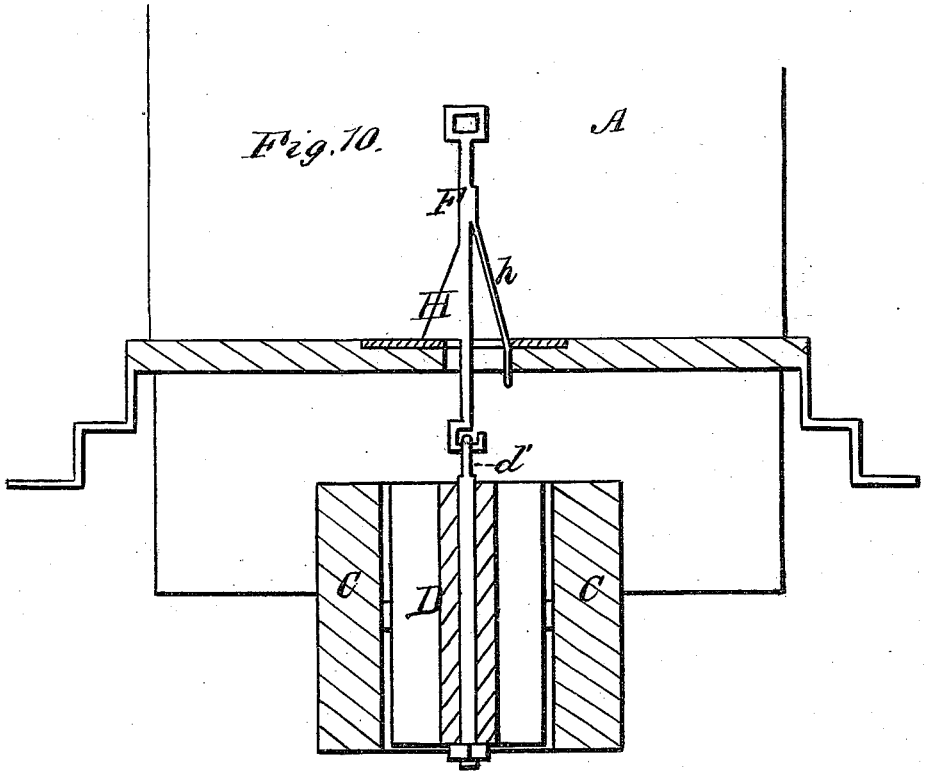


Fig. 10.



WITNESSES

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UNITED STATES PATENT OFFICE.

FRANK W. NASH, OF PLANO, ASSIGNOR OF ONE-FOURTH HIS RIGHT TO WILLIAM FRASER, OF SANDWICH, ILLINOIS.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 165,751, dated July 20, 1875; application filed June 11, 1875.

To all whom it may concern:

Be it known that I, FRANK W. NASH, of Plano, Kendall county, and State of Illinois, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification:

My invention relates to improvements in car-couplers, whereby the same may be automatically coupled or uncoupled without necessitating an attendant passing between or beneath the cars, for the purpose of operating or guiding any of the parts of the device, the nature of which will be fully explained by reference to the drawings.

Figure 1 represents an end view, and Fig. 2 side view, (partly in section,) of part of car with my improvement applied thereto. Fig. 3 is a perspective view of the draw-head; and Fig. 4 is a perspective view of the hook detached; and Figs, 5, 6, and 7 are detail views of parts separated; and Fig. 8 is a face view of modification.

In each of the views similar letters of reference are employed to indicate corresponding parts wherever they occur.

A represents the car, and B the under platform or framing thereof. C is the draw-head, which is composed of a framing having two horizontal side pieces, *c c*, connected together at their rear ends by a cross-piece, c^2. The side pieces *c* are formed with flaring or inclined sides c^3 and extensions or buffer surfaces c^4, as shown by Fig. 3. Between the side pieces *c* is mounted the lever D, which is pivoted on a bar or rod, *d*, passing through the same and supported by the side pieces *c*. On the front end of lever D is formed the coupling-hook E, which, as shown by Fig. 2, is formed with an inclined front surface, *e*, to facilitate the introduction of the coupling-link K of the adjoining car into the recess. e^1 e^2 represent a pin or shoulder running laterally through the hook E, for the purpose of holding and guiding the link K, and keeping it in a horizontal position while in the act of coupling the cars together. F is a bar or other suitable connecting means, the lower end of which is connected to a loop or ring, *d'*, attached to the lever D, while its upper end is connected to one end, *g*, of a lever, G, the opposite end of which is arranged so as to be capable of being received and held when required by a hooked projection or spring, H, affixed to the car A. I is a spring-bar affixed above the draw-head C, and provided with a slot or hole, *i*, for the passage of the rod or bar F. At its front end this spring-bar I is inclined upward so as to allow of the said spring being raised automatically by a coupling-link, K, entering the hook E, when desired, but when such link has entered the recess e^1 it will be retained therein until the lever D is lowered, as hereinafter explained, and shown by dotted lines in Fig. 2. L and M are rods for operating the spring-hook lever G from the sides of the car.

The parts being in the position shown by Fig. 2, when it is desired to couple another car to the car A, the link of the car desired to be coupled is first placed in position as usual, the cars are then backed together, when the link K will pass up the inclined surface *e* of the lever E, and drop into the recess e^1, thereby coupling the two cars together.

When it is desired to uncouple the cars, the same may be effected from the top by operating the lever G, or from the sides by means of the levers L M. In either case the end g^1 of the lever G is first released from the spring-catch or hooked projection H. The lever G will then turn on its axis g^2 by means of the rod F, lower the lever D so that the coupling-hook E shall release the coupling-link K, and uncouple the cars. When the cars have been thus uncoupled the end g^1 of the lever G should be replaced in the catch H, thereby placing the parts in position to be coupled with the links of another car.

In place of attaching the rods L M to the catch H, the said rods may be attached to the end of the lever G, as shown by Fig. 1, in which case the catch will be stationary.

Fig. 8 shows a slight modification of the apparatus represented by the previous figures. In this case the catch or hooked projection H is applied directly to the vertical rod or bar F, and the said catch, or hooked projection H', is caused to engage with a loop or guide N, affixed to or carried by the end of the car

A; or it may be operated and attached to the platform of a passenger-car in the same manner, Figs. 9, 10, by means of a spring, *h*. Levers L′ M′ are arranged to embrace the rod F between washers or projections *f f* applied thereon. It will thus be seen when the cars are uncoupled, and the other end of the lever at g^2 is raised to its desired height, it is then drawn down in its former position by a rod or rope, g^3, as shown in Fig. 1.

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

1. The combination, with the draw-head C, and spring-bar I, of the pivoted lever D, provided with a draw-hook, E, and pin e^2, said draw-hook having an inclined front surface, *e*, and recess e^1, operated in a vertical direction, and retained in position by means of a rod or other connecting means, F, substantially as described.

2. The combination, with the draw-head C, spring-bar I, and the pivoted lever D, provided with a draw-hook, E, (having an inclined front surface *e* and recess e^1,) operated vertically, of the rod or connecting means F, lever G, rods L M, and hooked projection or catch H, substantially as and for the purposes described.

In testimony that I claim the foregoing as my own, I herewith affix my signature in presence of two witnesses.

FRANK W. NASH.

Witnesses:

S. F. AUSTIN,

S. S. KIRK.