(No Model.)

H. P. MONDAY.

CAR COUPLING.

No. 403,600. Patented May 21, 1889.

Fig. 1.

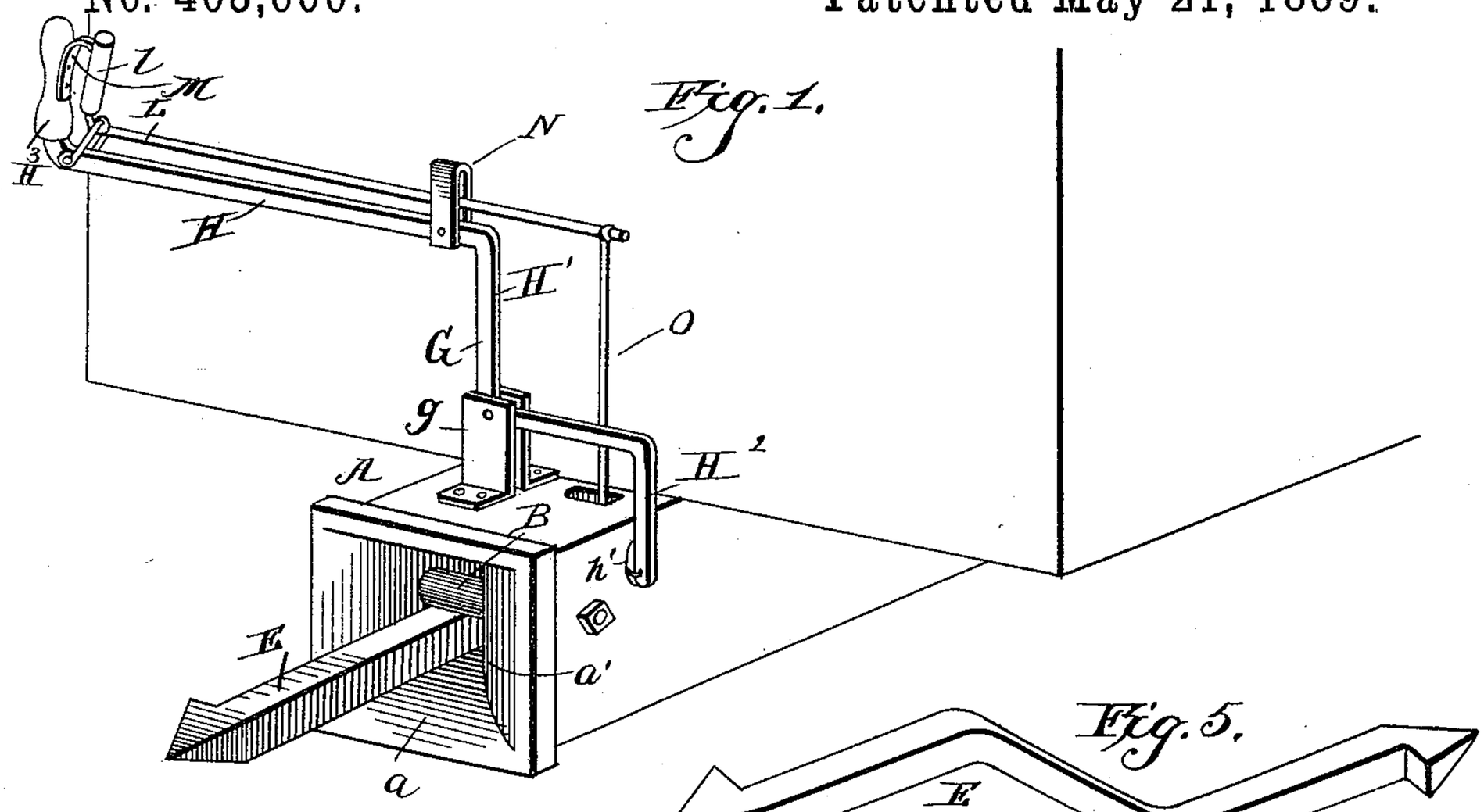


Fig. 5.

Fig. 2.

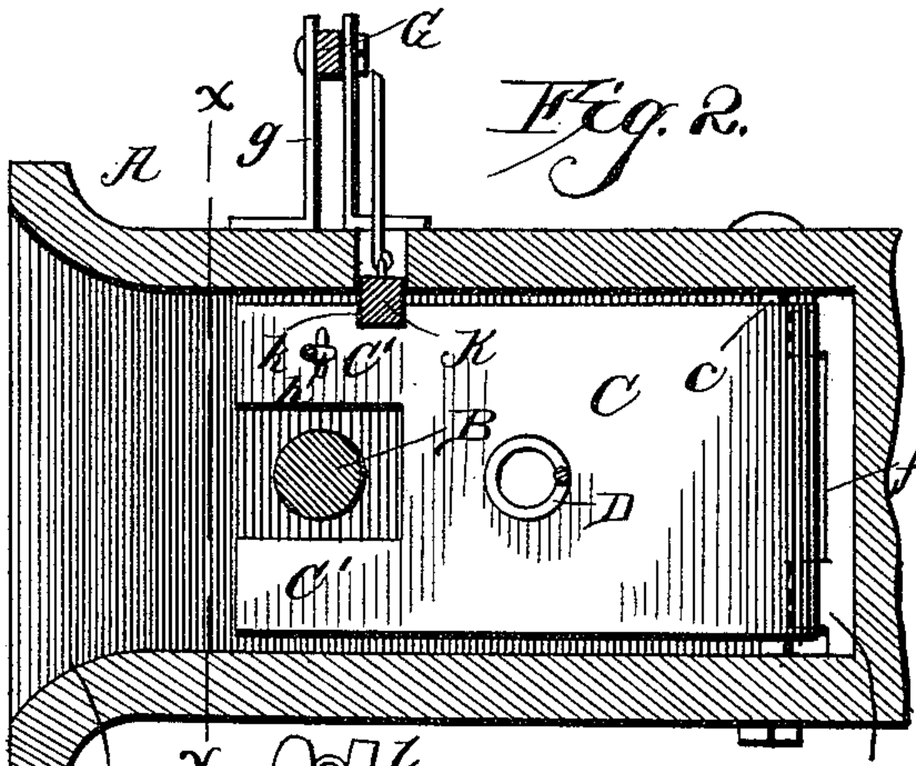


Fig. 3.

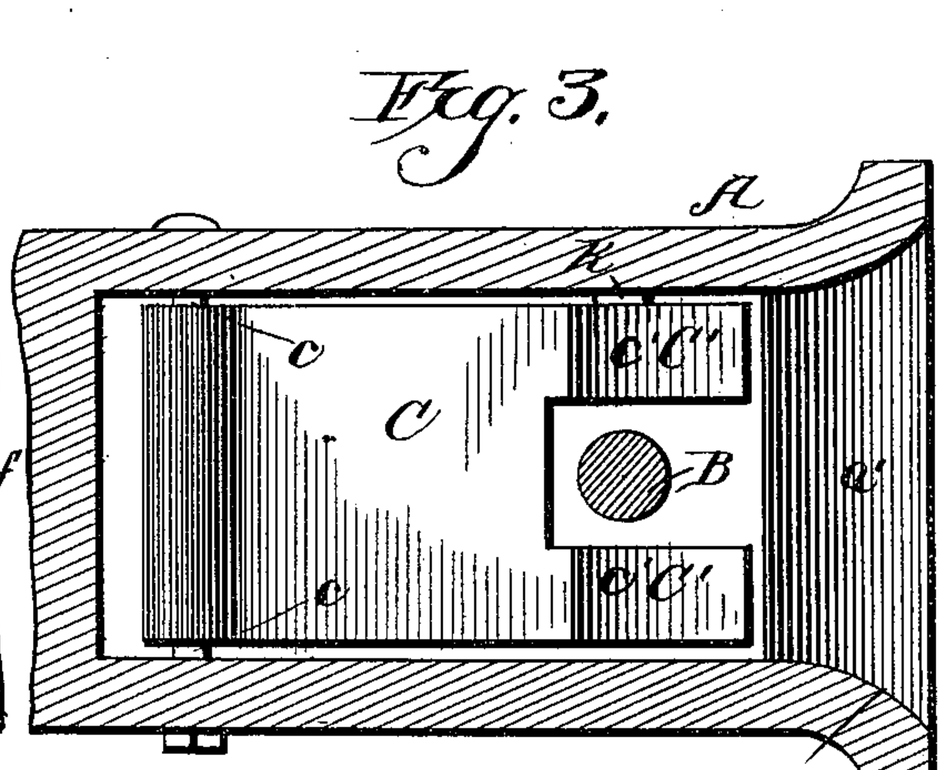
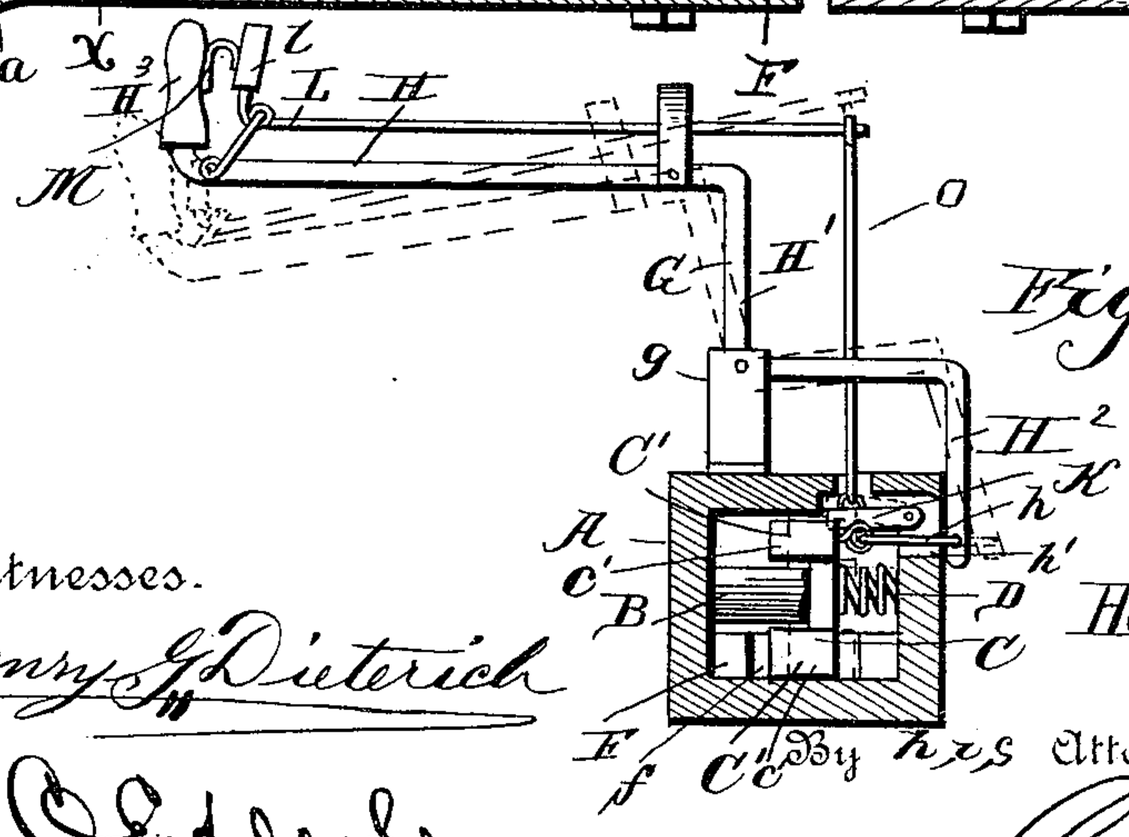


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY PETER MONDAY, OF STOUTLAND, MISSOURI, ASSIGNOR OF ONE-HALF TO BENJAMIN F. TIPTON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 403,600, dated May 21, 1889.

Application filed February 13, 1889. Serial No. 299,740. (No model.)

To all whom it may concern:

Be it known that I, HENRY PETER MONDAY, a citizen of the United States, residing at Stoutland, in the county of Camden and State of Missouri, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to improvements in car-couplings; and it consists in certain novel construction and combination of devices fully described hereinafter in connection with the accompanying drawings, and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of the improved coupler applied in the operative position to the end of a car. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a similar view looking in the opposite direction. Fig. 4 is a transverse sectional view on the line *x x* of Fig. 2. Fig. 5 is a detail view of a bent link.

Referring by letter to the drawings, A designates the draw-head having a flared mouth, *a*, which is provided at one side with the inwardly-projecting lip *a'*, for a purpose to be hereinafter described, and B designates a horizontal transverse pin which extends across the mouth of the draw-head in rear of the said lip.

C designates the swinging jaw, which is pivoted at its rear end on a vertical bolt, *c*, and the jaw is divided at its front end to form the two members C' C', which operate, respectively, above and below the transverse pin B, and are provided on the side away from the lip *a'* with engaging shoulders *c' c'*. An extensile coiled spring, D, is arranged between the plain side of the jaw —namely, the side which is not provided with the engaging shoulders—and the adjacent side of the throat of the draw-head, so as to normally hold the free ends of the jaw pressed toward the opposite side of the throat.

The coupling-link E is provided on one side at each end with an engaging shoulder, which is adapted to engage the shoulder on one of the members of the jaw, the end of the link being tapered or pointed, so as to force its way between the free end of the swinging jaw and the adjacent side of the draw-head. The link may engage with either member of the jaw, according to the height of the draw-head of the car which carries the link, and the throat of the draw-head is provided at a suitable point with a vertical stop-rib, F, which limits the insertion of the link. This rib is provided on its front side with shoulders *f f*, under which the inner end of the link may be engaged to hold the free end of the latter in the same horizontal plane with the inner end.

G represents an operating-lever which is pivoted to a bracket, *g*, on the upper side of the draw-head, and it consists of the long arm H, which projects out to the side of the car, the angular portion H', which is pivoted to the said bracket, and the depending arm H^2, which is connected at its free end to the free end of the jaw by the horizontal link *h*, the said link extending through a perforation, *h'*, in the side of the draw-head. The free end of the long arm of the lever is provided with a vertical handle, H^3, and it will be evident that when this handle is drawn downward, as indicated by the dotted lines in Fig. 4, the free end of the jaw will be swung laterally and the end of the link will be disengaged. When the jaw is drawn laterally in this manner, it retreats behind the laterally-projecting lip on the side of the mouth of the draw-head and is concealed thereby.

K designates a small latch which is pivoted within the throat of the draw-head and engages at its free end in a notch, *k*, in the plain side of the jaw to hold the latter in the locked position, and L designates an angular latch-lever which is pivoted to the upper side of the operating-lever and has its vertical portion or handle *l* arranged adjacent to the handle of the said operating-lever, whereby both handles may be grasped simultaneously with one hand. A leaf-spring, M, is arranged between the said handles to normally hold them separated.

The long arm of the latch-lever extends through a guide-loop, N, on the operating-arm to prevent lateral play, and the free end of the said arm is connected to the free end of the latch by a vertical connecting-rod, O, which passes through a perforation in the upper side of the draw-head.

The operation of the improved coupler will be evident from the foregoing description. The latch normally holds the jaw locked in

the engaging position, so that the link cannot become accidentally disengaged, and when a link carried by an approaching draw-head is about to enter the draw-head the latch-lever must be drawn up so as to raise the latch and disengage the jaw. To disengage the link in order to disconnect two cars, the handles of the latch-lever and operating-lever are grasped, the handle of the former is drawn toward that of the latter, and the free end of the operating-lever is drawn down, as hereinbefore described, to swing the free end of the jaw behind the concealing-lip a'.

The bent link shown in Fig. 5 is designed to be used to facilitate the coupling of cars having draw-heads of different heights.

Having thus described my invention, I claim—

1. In a car-coupling, the combination, with the draw-head provided at its mouth with the inwardly-extending lip a', of the swinging jaw pivoted in the throat of the draw-head and adapted to swing at its free end in rear of the said lip, the spring to normally hold the free end of the jaw away from the said lip, and the operating-lever connected to the jaw to enable the latter to be drawn laterally against the pressure of the said spring, substantially as specified.

2. In a car-coupling, the combination, with the draw-head having a transverse horizontal pin adjacent to its mouth, of the swinging jaw pivoted in the throat of the draw-head and provided at its free end with two members, C′ C′, which are arranged, respectively, above and below the said transverse pin and have engaging shoulders c' c' to engage corresponding shoulders on the link, the spring connected to the said jaw, and the operating-lever connected to the jaw to enable the latter to be operated against the pressure of the spring, substantially as specified.

3. In a car-coupling, the combination, with the draw-head provided with a horizontal pin, B, near its free end, and having a stop-rib, F, provided with shoulders f f, of the jaw pivoted in the throat of the draw-head and provided with the shouldered members C′ C′, the operating-lever connected to the free end of the jaw, and the link provided with shoulders to engage the shoulders of the jaw and having tapered ends to bear against the stop-rib and engage the shoulders thereof, substantially as specified.

4. In a car-coupling, the combination, with the draw-head and the swinging spring-actuated jaw pivoted in the throat thereof, of the operating-lever pivoted to the draw-head and engaging the jaw to lock it in position, and the latch-lever mounted on the operating-lever and connected to the latch, where the latch may be manipulated by the hand which grasps the operating-lever, substantially as specified.

5. In a car-coupling, the combination, with the draw-head, the swinging spring-actuated jaw arranged therein, and the latch mounted in the throat of the draw-head and engaging the jaw, of the operating-lever provided with a long arm, H, and a depending arm, H^2, which is connected to the free end of the jaw, and the latch mounted on the operating-lever and connected to the latch, the handles of the said lever being arranged adjacent to each other and normally held separated by an interposed spring, substantially as specified.

6. In a car-coupling, the combination, with the draw-head, the swinging spring-actuated jaw arranged therein, and the latch K arranged in the throat of the draw-head and engaging a notch, k, in the jaw to hold the latter in the engaging position, of the operating-lever G, pivoted to a bracket on the upper side of the draw-head and comprising the long arm H, which extends to the side of the car and is provided at its free end with a vertical handle, H^8, the angular portion H′, and the depending arm H^2, which is connected at its lower end to the free end of the jaw by the link h, the latch-lever pivoted to the long arm of the operating-lever, extending through a guide-loop thereon and provided with a vertical handle which is arranged adjacent to the handle of the operating-lever, the connecting-rod between the free end of the latch-lever and the free end of the latch, and the leaf-spring arranged between the handles of the said levers, whereby they are normally held separated, substantially as specified.

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

HENRY PETER MONDAY.

Witnesses:
B. F. TIPTON,
G. W. DAVIS.