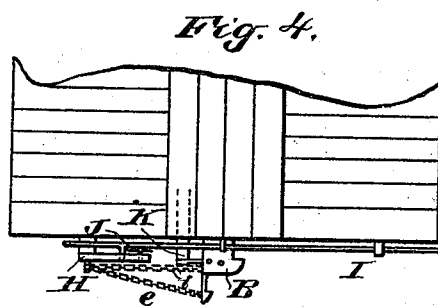
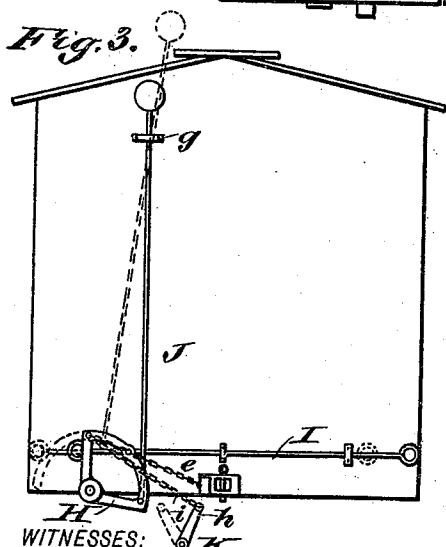
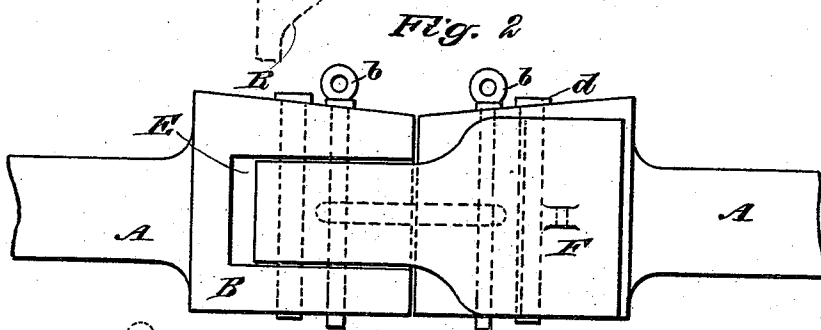
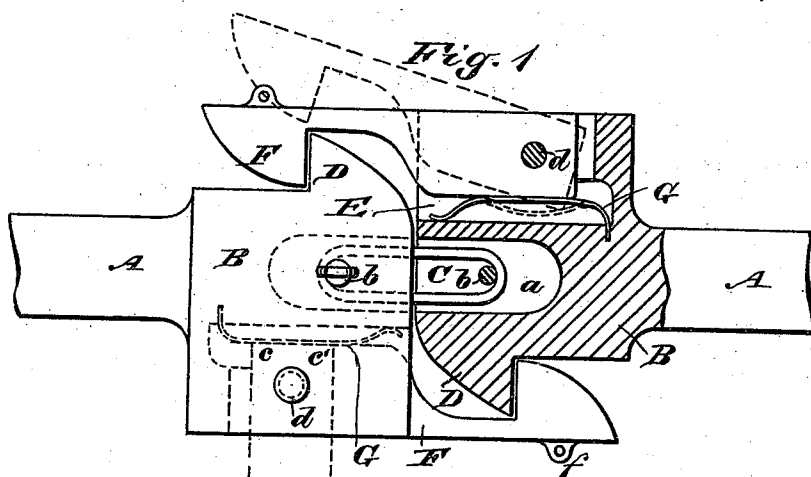


(No Model.)

J. H. CRUMB.
CAR COUPLING.

No. 488,873.

Patented Dec. 27, 1892.



WITNESSES:
J. A. Bergstrom
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN H. CRUMB, OF BURLINGAME, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 488,873, dated December 27, 1892.

Application filed March 28, 1892. Serial No. 426,651. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. CRUMB, of Burlingame, in the county of Osage and State of Kansas, have invented a new and Improved Car-Coupling, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view, partly in section, of my improved car coupling; Fig. 2 is a side elevation of the same; Fig. 3 is an end elevation of a car to which my improved coupling has been applied; and Fig. 4 is a plan view of the same.

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

The object of my invention is to provide a simple and efficient automatic car coupling which may be uncoupled from the side or top of the car, and which may also be used as an ordinary coupling using a link.

My object is also to close the air brake pipe simultaneously with the uncoupling of the coupling.

My invention consists in the combination with a draw-head having cavities for receiving an ordinary link, and holes for the link pins, and provided with a nib, of a spring-actuated hook for engaging the nib of the part of the coupling carried by the adjacent car, the said hook being furnished with shoulders which engage the spring so as to hold the hook either open or closed.

It also consists in mechanism for uncoupling from the top or sides of the car, and for closing the air brake valve, all as will be hereinafter more fully described.

The draw-bar A, is provided with a head B, in which is formed a cavity *a* for receiving the link C. It is also provided with apertures for receiving the ordinary coupling pin *b*. One side of the head B is provided with a nib D, and in the opposite side of the head is formed a recess E, for receiving the shank of the hook F, the said shank being provided with shoulders *c*, *c'*, and with a vertical aperture for receiving the pin *d*, which passes through the recessed side of the head, and forms the pivot of the hook.

In the head B, at the bottom of the recess E, is inserted one end of a curved flat spring

G, the other end of which rests upon the inner wall of the recess. The said spring G, is engaged by the shoulders *c*, *c'*, and holds the hook F at right angles to the line of the draw-bar and draw-head when the said hook is detached from the nib D of the adjacent half of the coupling and thrown back, as indicated in dotted lines in Fig. 1, to permit of using the ordinary coupling link, but when the hook F is in engagement with the nib D, the spring G holds it in such engagement by pressing the shoulder *c'*.

At the end of the car near the coupling is pivoted a sector lever H, which is pivotally connected with a rod I, arranged to slide across the end of the car in suitable bearings, the rod I, being provided at opposite ends with eyes which serve as handles. The sector lever H is connected with the hook F, by a chain *e* attached to the lever and to an eye *f* projecting from the back of the hook F. A rod J is pivotally connected with the sector lever H, and extends upwardly through a guide *g* near the top of the car, and is provided at its upper end with a ring or target, which serves as a handle, and also indicates that the coupling hook is swung out of the way so that it will not act when the cars come together.

Below the floor level of the car is arranged the usual air brake valve K, which is provided with a lever *h*, connected with the sector lever H by a chain *i*. The parts of the coupling automatically engage each other, as shown in Fig. 1, when two cars are pushed together.

When it is desired to uncouple the cars, the rod I is either pushed or pulled so as to turn the sector lever H, or the rod J is pulled upward to accomplish the same thing; the turning of the sector lever pulls the hook F away from the nib D and this releases the coupling. The hook F is held out of the acting position by its spring and by the weight of the rod I. The same motion of the sector lever turns the air brake lever *h*, and closes the air brake pipe, thereby preventing the escape of air, as the brake couplings are automatically uncoupled by the separation of the cars.

It is obvious that instead of arranging the coupling so that the hooks will swing in a horizontal plane, the coupling may be placed so that the hooks will swing in a vertical plane,

but on account of the automatic adjustment of the coupling to cars of different heights when it is placed in a horizontal plane, this position is preferred in actual practice.

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

1. In a car coupling, the combination with
10 a draw head provided with pivoted coupling hooks, and the air brake valve, of mechanism for operating the hooks, and a connection between the said mechanism and the said valve, substantially as and for the purpose set forth.

2. In a car coupling, the combination with
15 a draw head having the cavity *a* for receiving an ordinary coupling link, the nib *D* on one side and the recess *E* on the opposite side, of a coupling hook *F* having its shank provided with the shoulders *c c'* and pivoted in the said
20 recess, and the curved flat spring *G*, having one end secured in the bottom of the rear end

of the recess and its other end projecting forwardly and resting upon the inner wall of the said recess, substantially as herein shown and described.

3. The combination, with the coupling provided with the spring-pressed hook *F*, of the sector lever *H*, the connecting chain *e*, and the rods *I, J*, substantially as specified.

4. The combination, of the coupling provided
30 with the spring-pressed hook *F*, the sector lever *H*, the sliding rods *I, J*, connected with the sector lever, the air brake valve *K* provided with the lever *h*, and chains *e, i*, connecting the coupling and the lever of the air
35 brake valve with the sector lever *H*, substantially as specified.

JOHN H. CRUMB.

Witnesses:

W. P. BEVERLY,
J. W. OWEN.