

(No Model.)

C. G. A. ALEXANDER.

CAR COUPLING.

No. 256,943.

Patented Apr. 25, 1882.

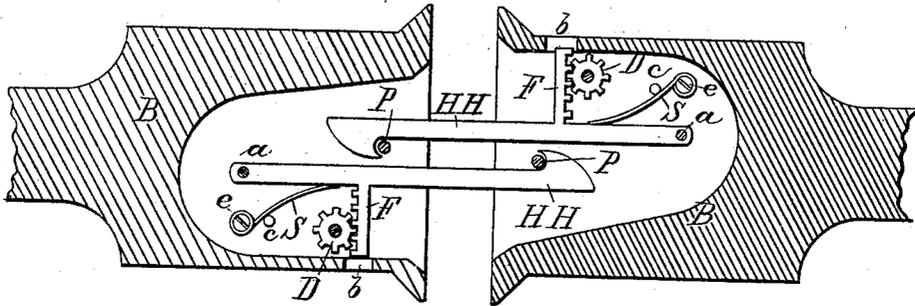


Fig. 1.

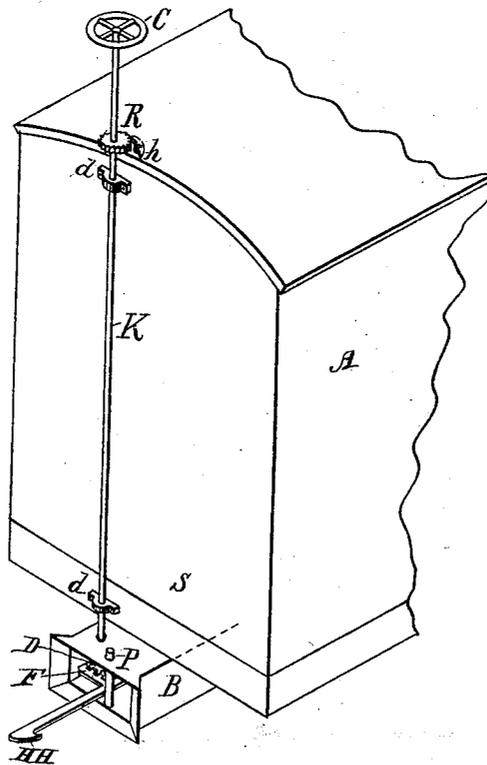


Fig. 2.

Witnesses.
W. L. Clark
J. W. Rabe.

Inventor.
Carl George Arnold Alexander.

UNITED STATES PATENT OFFICE.

CARL G. A. ALEXANDER, OF ALDEN, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 256,943, dated April 25, 1882.

Application filed March 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, CARL GEORGE ARNOLD ALEXANDER, of Alden, in the county of Hardin and State of Iowa, have invented certain new and useful Improvements in Automatic Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and letters of reference marked thereon, in which—

Figure 1 is a horizontal section of the draw-heads of two adjacent cars with my improvements attached, and Fig. 2 is a perspective view of one end of a car and one of its draw-heads having my improvements applied thereto.

My invention relates to improvements in automatic car couplings; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claims.

In the accompanying drawings, A represents a car, provided at its ends with draw-heads B B, of the usual construction, and each having the ordinary central opening therein for the reception of the coupling devices. The coupling devices employed in each opposite draw-head are precisely alike, so that a description of the coupling devices in one draw-head will suffice for those in the opposite one.

H H represent a hook, the inner end of which is pivoted to the bottom of the opening in the draw-head by the headed pin *d*. The hooked end of the hook H H projects out beyond the mouth of the draw-head, and is adapted to engage with a removable coupling-pin, P, which passes through holes made vertically through the draw-head, and through the opening therein.

To the rear face of the hook H H is secured the horizontal rack-bar F, the teeth of which engage with the horizontal pinion D, adapted to revolve in the opening in the draw-head, and fast on the lower end of a vertical shaft, K, which passes through eyes *d d* in the end of the car A, and is provided with a ratchet-wheel, R, on a level with the top of the car, having a pawl secured to the top of the car. The upper end of the shaft K, projecting a short distance above the top of the car, is provided with a hand-wheel, C, whereby the shaft K can be revolved, as desired.

b represents an opening made in one side of the draw-head B, opposite the end of rack-bar F, to allow the passage of the end of the

latter when the hand-wheel is turned and the hook H H is moved outwardly on its pivot *a* in uncoupling two cars.

S represents a flat spring, one end of which is secured to the bottom of the opening in the draw-head B by a screw, *e*, the opposite free end of the spring bearing against the pivoted hook H H, the tension of the spring S being exerted to force the outer end of the hook inwardly.

c represents a stop for the spring S.

It will be observed that the removable coupling-pin P serves the double purpose of a coupling-pin for the hook of the opposite draw-head and also as a stop for the hook in its draw-head, preventing the spring from pressing the outer end of the hook too far inwardly.

The rod K may extend above the top of the cars, for freight-cars, or it may be made to extend only a short distance above the platform in passenger-trains, with a hand-wheel at its upper end and a ratchet-wheel on a level with the platform, the pawl for the ratchet being pivoted to the upper face of the platform.

In coupling cars, the spring S having forced the hook against the coupling-pin which acts as a stop, when the cars come together the hooked end of the hook strikes the coupling-pin of the opposite draw-head, its beveled end riding over the pin, and the spring locking the hook and coupling-pin, and the pawl *h* holding the hooks coupled and locked. In uncoupling, the hand-wheel is revolved so as to throw the hook outward and release the hook from the coupling.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with a draw-head, B, provided with a central opening, and a side opening, *b*, of the pivoted hook H H, rack-bar F, secured thereto, pinion D, spring S, and coupling-pin P, substantially as described, and for the purpose set forth.

2. The combination of the draw-head B, pivoted hook H H, rack-bar F, secured to said hook, shaft K, provided with the pinion D, ratchet-wheel R, and hand-wheel C, pawl *h*, spring S, stops *e*, and coupling-pins and stops P, substantially as described, and for the purpose set forth.

CARL GEORGE ARNOLD ALEXANDER.

Witnesses:

H. W. RABE,
WM. L. CLARK: