

B. B. HARRIS.  
Car-Couplings.

No. 153,768.

Patented Aug. 4, 1874.

Fig: 1.

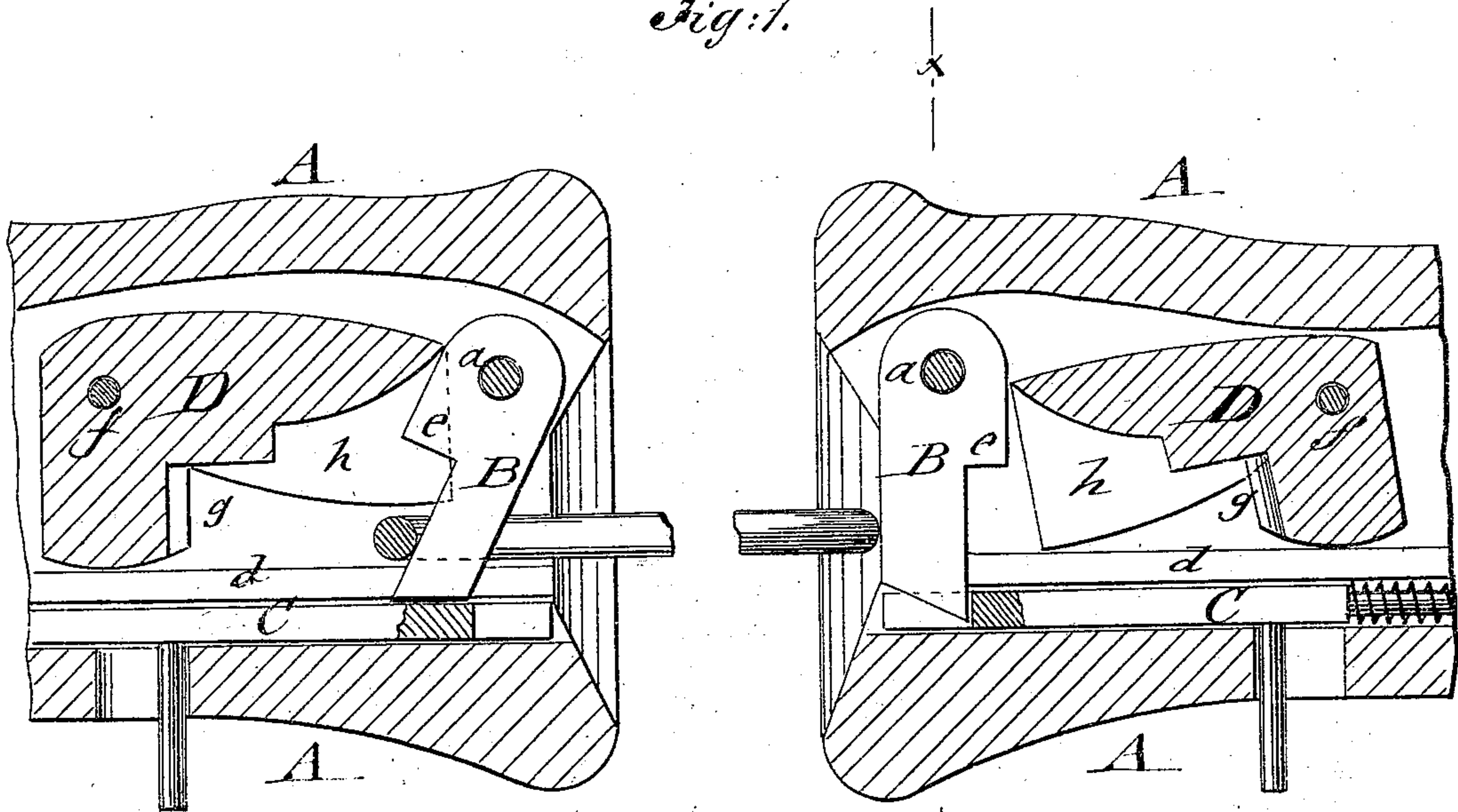
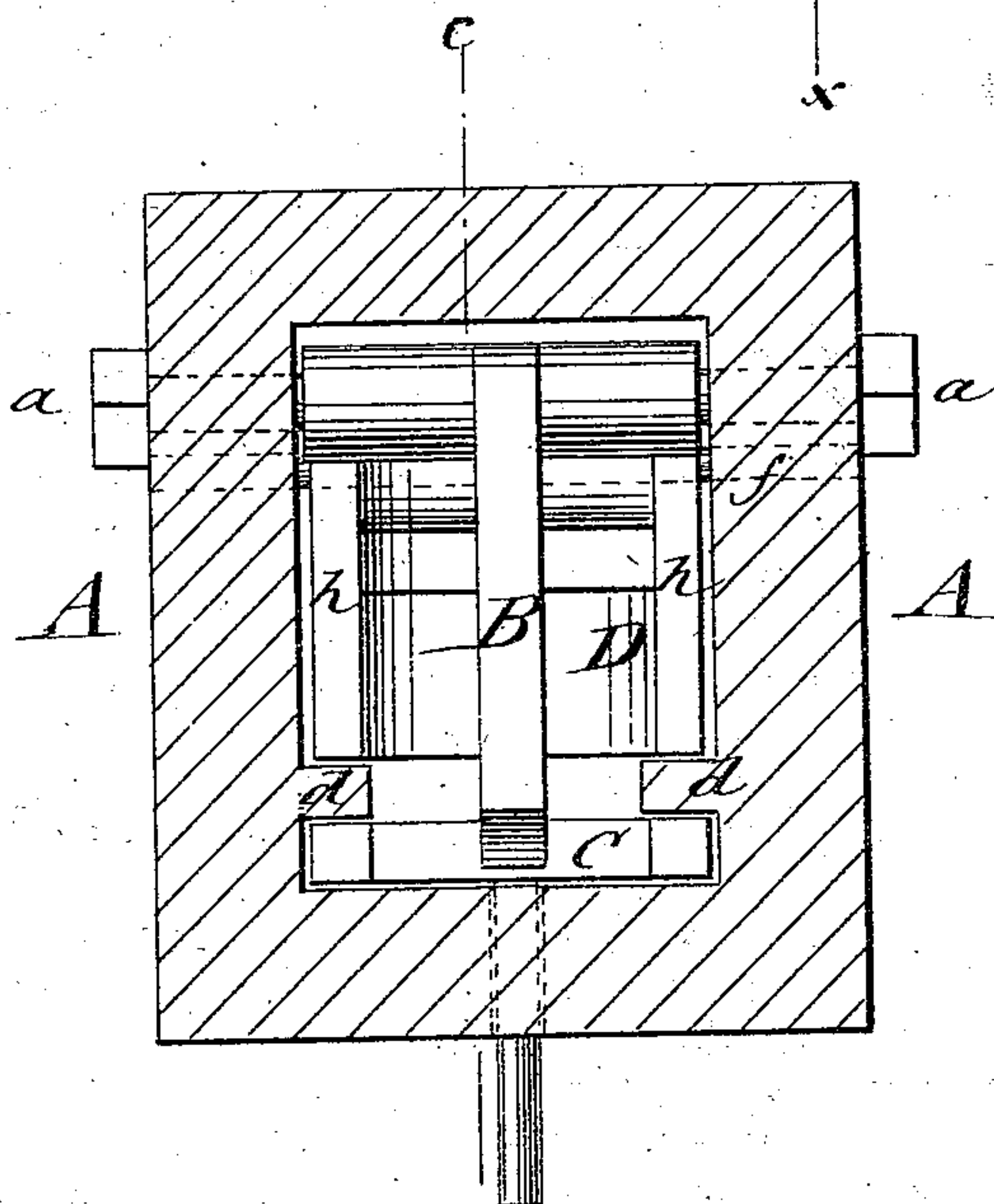


Fig: 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

BENJAMIN B. HARRIS, OF LOCKPORT, ILLINOIS, ASSIGNOR TO HIMSELF  
AND WILLIAM B. ROUSE, OF SAME PLACE.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **153,768**, dated August 4, 1874; application filed  
June 6, 1874.

*To all whom it may concern:*

Be it known that I, BENJAMIN B. HARRIS, of Lockport, in the county of Will and State of Illinois, have invented a new and Improved Car-Coupling, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section taken on the line *c c*, Fig. 2, of my improved self-acting car-coupling, showing one draw-head in coupled, the other in uncoupled, position; and Fig. 2 is a sectional front view of the same on the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved automatic car-coupling of very simple and effective construction; and consists of the arrangement of a pivoted drop-latch with a slotted spring-slide and recessed balance-weight back of the latch for bearing therein, and holding it in coupled and uncoupled position.

In the drawing, A represents the draw-head of my improved car-coupling, made in the usual manner, with tapering mouth and suitable cavity for the coupling parts applied therein. A drop-latch, B, is pivoted to a cross-bolt, *a*, at the upper front part of the draw-head, and swings in a suitable recess or groove of the bottom of the same. The lower part of drop-latch B has an inclination from the front to the rear, and projects thereby into the recessed or slotted front end of a sliding spring-plate, C, which is guided along the bottom of the draw-head by projecting side cleats or shoulders *d* of the same. The rear part of drop-latch B is provided with a shoulder, *e*, against which a recessed balance-weight, D, bears, so as to carry it in forward direction. The balance-weight is pivoted to a cross-bolt, *f*, and slides with its curved rear part on the shoulders *d*, while side shoulders *g* of the same serve to carry the front part of the weight down on the entrance of the link E. The forward extending part of balance-weight D is centrally recessed for the play of the drop-latch, and bears with its side flanges *h* on the link, holding it in horizontal position for coupling, while yielding readily to the motions of link when coupled.

For coupling, the link E is carried against the drop-latch, which is placed in position in the slot in front of the sliding spring-plate. The drop-plate is forced back thereby, together with the sliding plate, until the inclined end is released from the same and swings back, allowing the entrance of the link to the cavity, and simultaneously therewith the forward motion of the sliding plate into its former position. The link strikes, then, the shoulders of the rear part of the balance-weight, and causes thereby the pressure of the front end on the shoulder part of the drop-latch, so that the same is carried down on the sliding plate, and firmly bound thereon by its inclined end, as indicated in Fig. 1. The link slides along the drop-latch up to the shoulder when pulled, and has thereby sufficient play for the oscillations of the cars. For uncoupling, the sliding spring-plate is connected by means of a side or bottom slot of the draw-head and rod with a suitable lever mechanism, so that by moving the spring-plate in backward direction the drop-plate may be released, and on swinging forward uncouple the link.

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

1. The self-acting car-coupling composed of draw-head A, with pivoted drop-latch B, slotted sliding spring-plate C, and pivoted recessed balance-weight D, all constructed and combined substantially as and for the purpose set forth.

2. The swinging drop-latch B, having inclined end and rear shoulder, for locking firmly by the action of the balance-weight and link over the bottom spring-plate, all combined substantially as set forth.

3. The combination, with the coupling-link, of the pivoted balance-weight D, having projecting lower part, and front recessed part with vertical side flanges *h*, and the drop-latch B, pivoted within the draw-head, and having shoulder *e*, all constructed to operate as shown and described.

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Witnesses:

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