F. L. SMALL.

Car-Coupling.

No. 169,304. Patented Oct. 26, 1875.

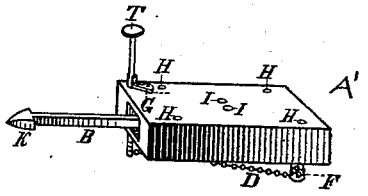

Fig. 1.

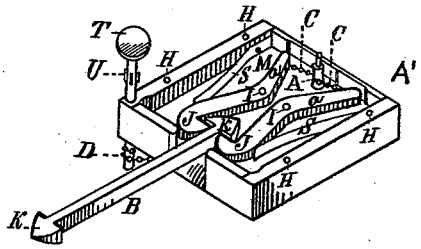

Fig. 2.

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UNITED STATES PATENT OFFICE.

FREEMAN L. SMALL, OF HOULTON, MAINE.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **169,304**, dated October 26, 1875; application filed July 14, 1875.

To all whom it may concern:

Be it known that I, FREEMAN L. SMALL, of Houlton, in the county of Aroostook, State of Maine, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is an isometrical perspective view, and Fig. 2 a view showing a part of the platform removed.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

My invention relates to that class of car-couplers which are automatic in their operation; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simpler, cheaper, and more effective device of this character is produced than is now in ordinary use.

It is well known that many fatal accidents occur on railways arising from the necessity of the brakeman going between the cars in order to couple the same, where the couplers are of the ordinary construction. My invention is designed to obviate this imperfection, and to that end I construct and arrange the coupler in a manner which will be readily understood by all conversant with such matters from the following description:

In the drawing, A′ represents the platform of the car; B, the draw-bar; K K, the pointed heads of the draw-bar, and H H, bolts and nuts by which the top of the platform is connected to the sides of the same, the bottom or floor M being also connected to the side pieces or frame of the platform by similar means. J J represent two levers, which are formed with a central inward bend, at which points they are pivoted, as shown, at I I, and are provided with hooks at their further ends. Their rear ends are, by chains C C, connected to the capstan A. Disposed in one corner of the platform there is a vertical brake-shaft, T, provided with the ratchet-wheel U and pawl G, in the usual manner, and to the lower end of this shaft there is attached a chain, D, one end of which is secured to the roller A. Two springs, S S, are disposed within the platform in such a manner as to act expansively against the outer ends of the levers, and cause them to grasp the draw-bar by means of the hooks J J, when the brake is off, as shown in Fig. 2. The levers J being constructed as described, and independently pivoted, either one may be removed and replaced, in case of breakage of the hooks, without disturbing the other, and their ends being extended outward from their pivot-points, the leverage is direct and the coupling easy and safe in operation.

From the foregoing it will be obvious that when the brake-shaft T is revolved the chain D will cause the roller A to wind up the chains C C, and thus vibrate or swing the levers on the pivots I I, causing the jaws or hooks J J to open and release the bar B, thus enabling the brakeman to unshackle the cars without leaving the platform. It will also be obvious that when two cars provided with couplers of this description are brought together they will be coupled automatically, the draw-bar heads entering between or separting the levers, and being caught and held by the hooks J J.

Having thus explained my invention, what I claim is—

The levers J J, each provided with a central inward bend, with hooks at their forward ends, and with outward-extending arms *a a* at their rear ends, in combination with the chains C C, capstan A, springs S, chain D, and brake-shaft T for connecting and releasing the head-link B, as set forth.

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Witnesses:

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