W. DUNN.
Car-Coupling

No. 198,972 **Patented Jan. 8, 1878**

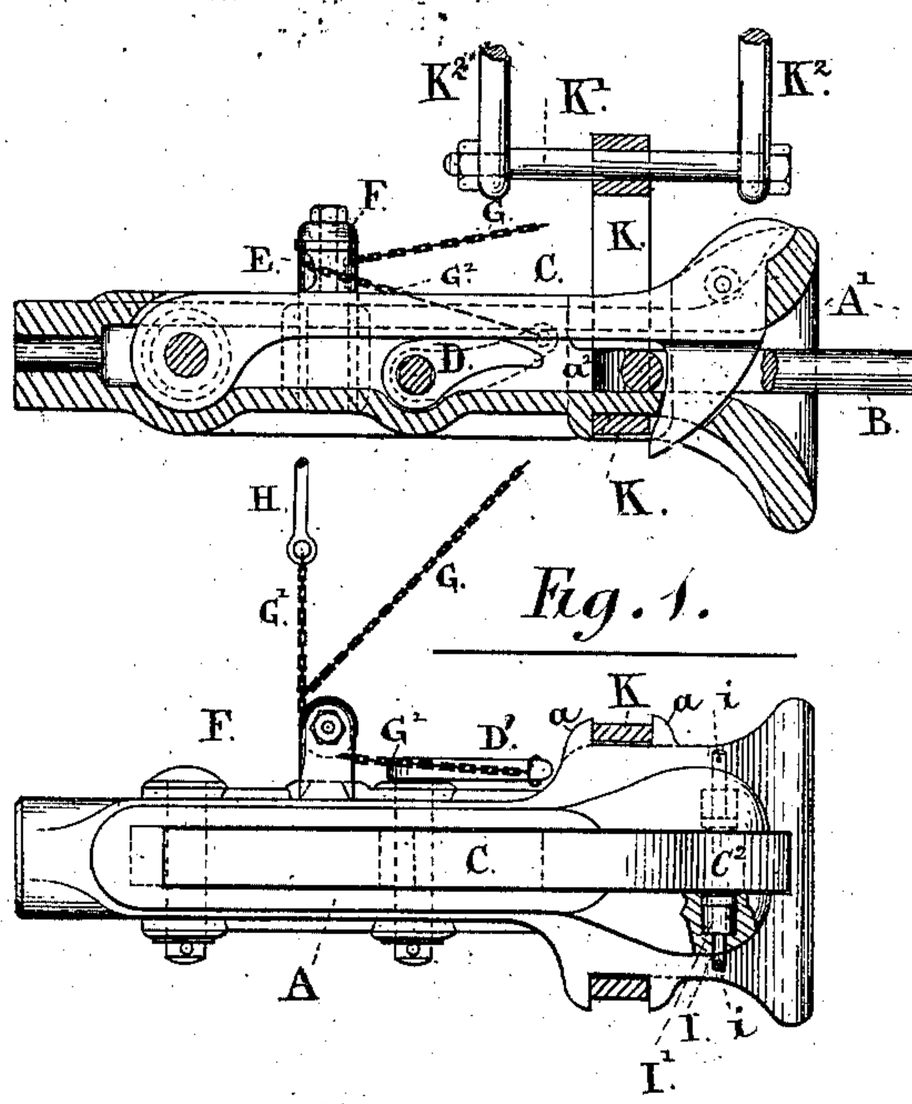

Fig. 1.

Fig. 3.

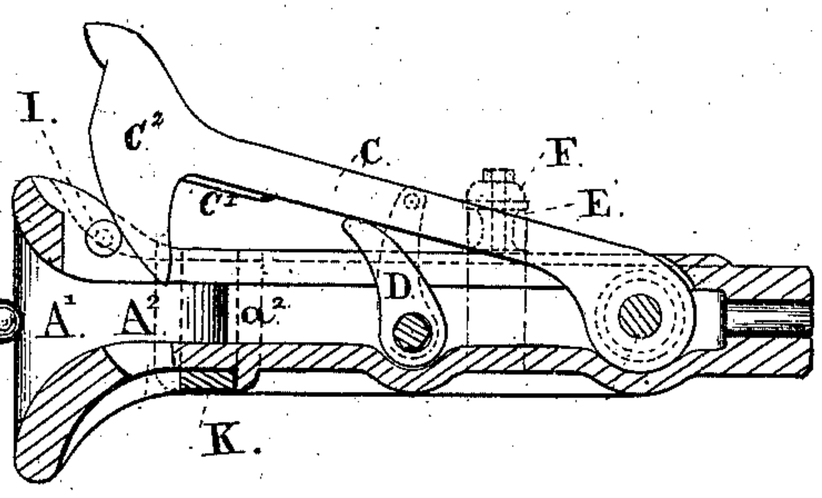

Fig. 2.

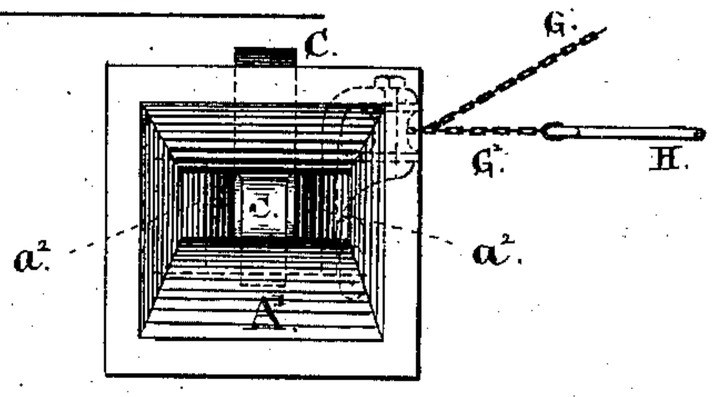

Fig. 4.

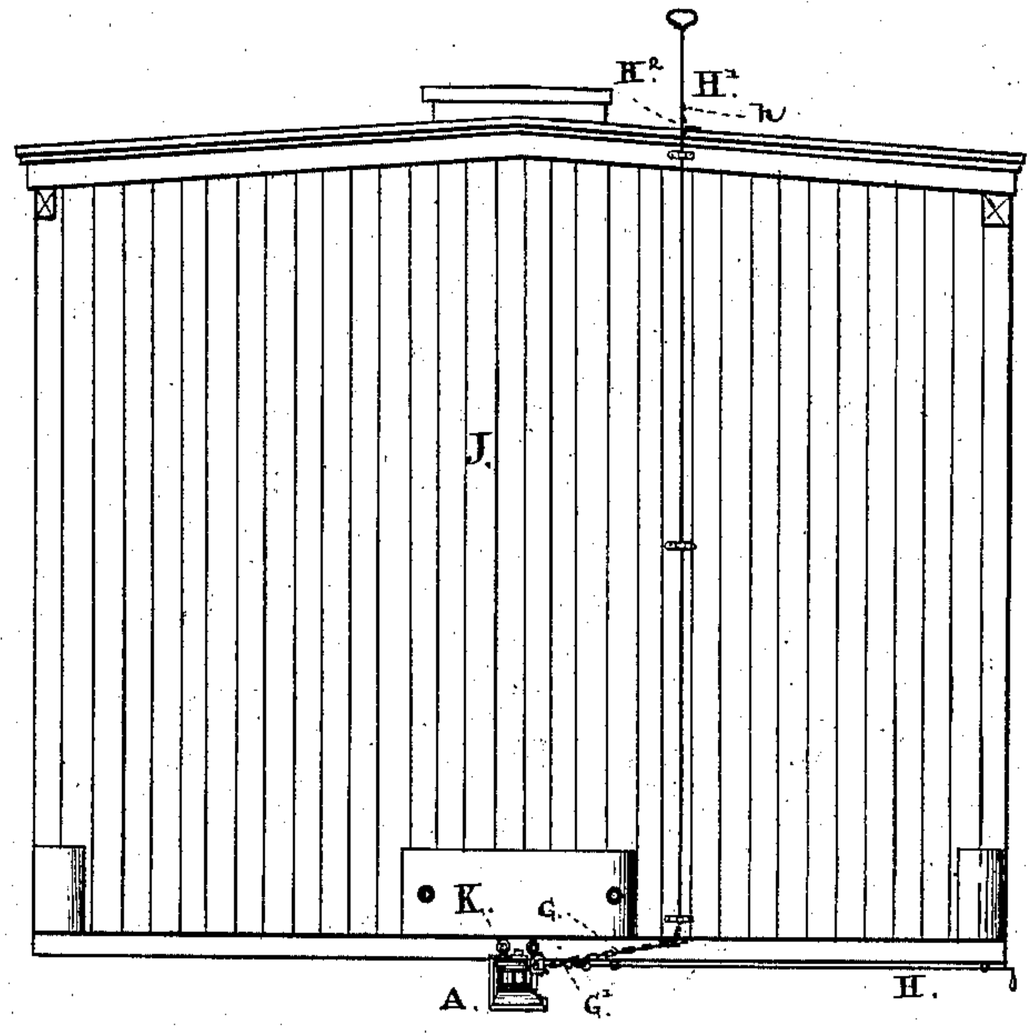

Fig. 5.

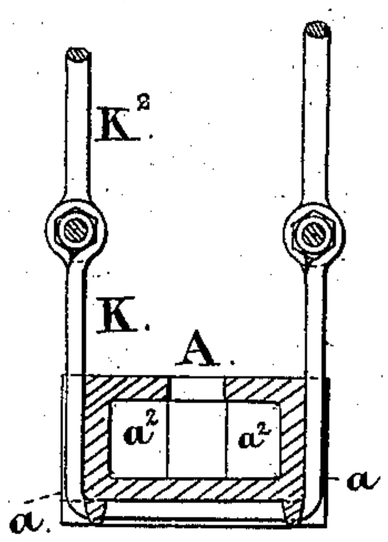

Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM DUNN, OF ST. MARY'S, ASSIGNOR TO ISAAC BALDWIN McQUESTEN, OF HAMILTON, ONTARIO, CANADA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **198,972**, dated January 8, 1878; application filed March 14, 1876.

To all whom it may concern:

Be it known that I, WILLIAM DUNN, of the town of St. Mary's, in the county of Perth, in the Province of Ontario, Canada, have invented an Improved Self-Acting Car-Coupling, of which the following is a specification:

My invention relates to that class of self-acting car-couplings in which a pivoted hook-bar is used, instead of a pin, to secure the link to the draw-head; and it consists in the means by which the crank-shaft to which the hook-bar lifting mechanism is attached is operated from the top or either side of a car by a peculiar arrangement of chains, pulley, and rods, without it being necessary for the operator to pass between the cars.

It consists, further, in the manner in which the draw-head is attached to the car at the front end, and in the provision made within the bell-mouth to insure a coupling.

In the accompanying drawings, Figures 1 and 2 are longitudinal sections, Fig. 3 a plan, Fig. 4 an end view, and Fig. 6 a cross-section, of a draw-head constructed according to my invention. Fig. 5 is an end view of a car with coupling attached.

A is the draw-head, of somewhat the usual construction, provided with the bell-mouth A^1, pivoted hook-bar C, and lifting-tongue D. D′ is the crank-shaft, by which the rotation of the hook-bar is accomplished. E is a friction-roller, contained within the bracket F attached to either or both sides of the draw-head, around which roller the chain G^2 attached to the crank-arm D′, and common to both chains G and G^1, passes. H and H are hand-rods, connected to the chains G and G^1, leading, respectively, to the top and either or both sides of the car, from any of which points the hook-bar can be operated equally well.

A feature specially advantageous in this construction is that the connection of the mechanism for uncoupling the draw-heads is rendered entirely independent of the jolting motion of the car. Were this not so the lateral motion incident to cars when running would be apt to uncouple the draw-heads.

The upper part of the rod H^1 is provided with notches *h*, which engage with a plate, H^2, for the purpose of holding the hook-bar up when it is desired to "shunt" cars. I I are spring-blocks, placed at right angles to the sides of the hook-bar, near the front end. They are provided with rounded faces, and are forced outwardly a suitable distance by the springs I^1 pressing against the inner side of the head and the face of the recess, the extent of their action being controlled by the pins *i*. These blocks act as a check to prevent the rise of the hook-bar by the jolting of the cars. The recess A^2 within the draw-head for the reception of the link is only of sufficient length to allow of proper clearances between the end of the link and hook. To insure correct action, shoulders a^2 are provided, against which the end of the link strikes, thus preventing it being shoved too far into the draw-head. On the under face of the hook-bar, immediately over the location of the end of the link, and immediately in rear of the head, a bearing-piece, C^1, projecting below the general level of the bar, is provided, for the purpose of holding the link always on, or nearly on, a level. This bearing-piece C^1 is made to project downward a sufficient distance, so as to bear directly upon the coupling-link when the same is in position in the draw-head. Thus the link is securely clamped between the hook and bottom of the draw-head, by which means it is at all times held in a horizontal position.

K is a stirrup passing under and supporting the front end of the draw-head. The ends of the stirrup are connected to and slide upon horizontal bars K^1 K^1, which bars are attached to the front ends of the car by the supension-rods K^2, or their equivalent. The side and under faces of the draw-head are provided with projecting strips *a*, within which the stirrup is contained.

I am aware that a long hook-bar constructed somewhat similar to mine has before been used. This therefore I lay no claim to, my claim to invention relating only, in this particular, to a peculiar construction of the coupling-hook, the same consisting of a bearing-piece placed on the under face of the hook-bar, immediately over the location of the end of the link and immediately in rear of the head, made to project downward a sufficient distance so as to bear directly upon the link

when the same is in position in the coupling-head, for the purpose of holding the link always in a horizontal position.

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

1. The hand-rods H and H^1 and chains G, G^1, and G^2, in combination with the friction-roller E and crank-arm D^1, arranged and operating substantially as described, and for the purpose specified.

2. In combination with the draw-head A, with shoulders a^2 formed therein, the long hook-bar C, made to pass through the lower part of the draw-head, and constructed with weighted head C^2 and enlargement C^1, immediately in rear of the head, made to extend downward, so as to bear directly upon the link when the same is in position in the draw-head, as and for the purpose described.

3. The stirrup K, supported upon the horizontal bars K^1, in combination with the draw-head A, provided with the projecting strips a, substantially as described.

4. The combination, in a car-coupling, of draw-head A, shoulders a^2, weighted hook-bar C C^2, made to pass through the lower part of the draw-head, bearing-piece C^1, made to project downward a sufficient distance to bear directly upon the link for the purpose of holding it in a level position, and lifting-tongues, D D^1, all constructed, arranged, and adapted to operate substantially as and for the purposes described.

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Witnesses:
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