C. H. TRASK.
Car-Coupling.

No. 209,433 Patented Oct. 29, 1878.

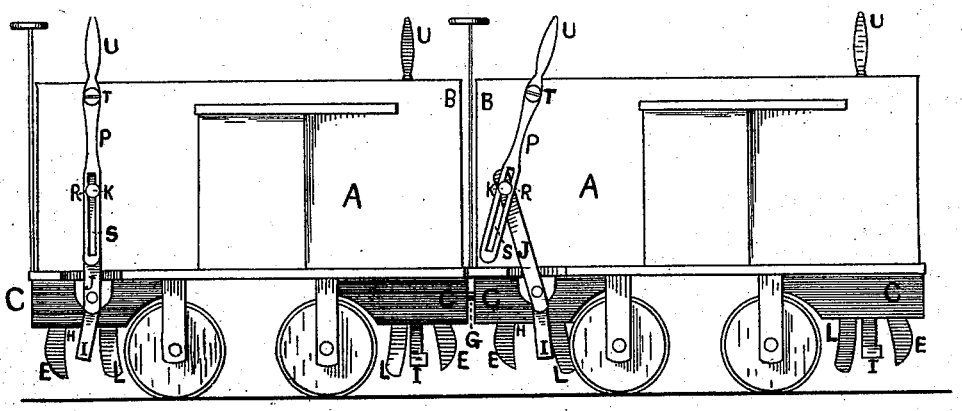


Fig: 1.

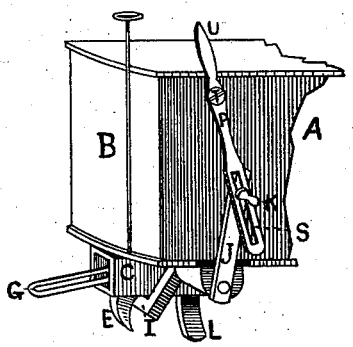


Fig: 2.

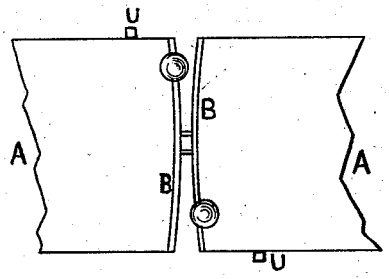


Fig: 3.

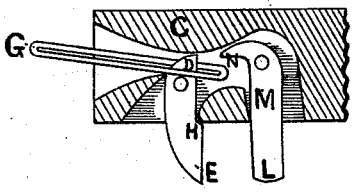


Fig: 4.

Witnesses:

H. S. Talbot

Edward Emmels

Inventor:

Charles H. Trask,

By Sylvenus Walker

Atty.

# UNITED STATES PATENT OFFICE.

CHARLES H. TRASK, OF LYNN, MASSACHUSETTS.

## IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **209,433**, dated October 29, 1878; application filed May 6, 1878.

*To all whom it may concern:*

Be it known that I, CHARLES H. TRASK, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Automatic Car-Couplings, of which the following is a specification:

The object of my invention is to provide a self-acting car-coupling which may be readily coupled to any draw-bar and link coupling now in general use, so as to avoid the danger attendant upon the act of coupling two cars wherein it is necessary to pass between the ends of the cars to raise the link and guide it into the mouth of the opposite draw-bar, as heretofore; and it consists in the combination and arrangement of a pendent coupling catch-pin so pivoted within the mouth of the draw-bar that the insertion of the end of the common link causes it to swing so as to allow the link to pass over its inclined top end, when its weight of gravitation returns it to its former position and within the link, its lower portion projecting below the bottom of the draw-bar, so as to permit of being moved or swung forward by means of a hinged lever and bent arm, which is brought in contact with its rear side by a movement of the said lever, which may be operated at the side of the car, or connected to a secondary hinged lever, so as to be operated from the top of the car also, and thereby uncouple the same whenever desired. To the rear of this pivoted catch-pin is pivoted within the mouth of the draw-bar a pendent link-guider, which is brought in contact with the rear end of the link in the coupling or draw bar, so as to depress the same, thereby raising the forward end of the link sufficiently to allow it to enter the mouth of the draw-bar of the opposite car. This link-guider is actuated by the movement of the above-described hinged lever and bent arm in the opposite direction. Also, in the construction of the ends of the car-body, whereby they are coupled very near together, as hereinafter more fully described and set forth.

Figure 1 is a side elevation of two cars with my invention attached. Fig. 2 is a perspective view of the end of a freight-car with my invention attached. Fig. 3 is a top-plan view of the ends of two adjacent cars as coupled together, showing the curved ends of the bodies. Fig. 4 is a vertical section of one coupling detached, its rear end being broken off.

A represents the body of the car, provided with curved ends B, which allow them to be coupled or shackled very near together, as shown in Figs. 1 and 3, by which means the weight of load is brought nearer the engine. C represents the draw-bar, its mouth or outer end being on a line with the curved bottom of the car, as is shown by Fig. 2. Within the mouth of the coupling is pivoted a pendent catch-pin, D, its lower portion, E, projecting below the bottom of the coupling, as shown, its upper end, D, being beveled or inclined rearward within the mouth, so as to allow the link G to strike it and force it backward and downward, and pass over its upper end, D. Its weighted or longer lower end, E, being swung forward and upward at the same time, instantly resumes its former vertical position, with its bearing-shoulder H brought in contact with the bottom of the coupling C, as shown in Fig. 4, thus adding great strength to the same when drawn upon by the link G as coupled. Now, in order to uncouple the said link G from the end D of the catch-pin, a bent lever-arm is hinged or pivoted to the under side of the car-body A, one end, I, being located just back or in rear of the pendent end E of the catch-pin, the other end, J, passing up beside the car-body A, and provided with a suitable handle, K, which, being grasped by the hand and forced backward or from toward the end, as shown at the right hand of Fig. 1, causes the lever-arm I to be brought against the lower end, E, of the catch-pin, carrying it forward, and its upper end, D, in the opposite direction and below the link G. It is thereby released or uncoupled.

The link G being placed in the mouth of the coupling, as described, preparatory to being coupled to a similar or any common draw-bar now in use, it is necessary to be able to raise or depress the opposite or outer end at will, so as to guide it into the mouth of the approaching draw-bar without standing at the end of the car and guiding the link with the hand of the operator, as heretofore. Therefore I pivot a link-guider, M, at the rear of the mouth of the draw-bar C, having a forward projection, N, which is made to press down

upon the end of the link G. By moving the bent lever I in the opposite direction, it comes into contact with the pendent lower end, L, of the link-guider, and moves or swings it backward and upward, thereby depressing the rear end of the link G, which link has a bearing upon the bottom of the mouth of the draw-bar C at the intersection of the catch-pin D with the same, its throat being so concaved at the rear of such bearing-point as to allow the link G to be tilted, as shown in Fig. 4, or as desired, to elevate its front end in coupling to draw-bars of varying heights. Now, in order to be enabled to operate the catch-pin, link-guider, and link equally as well from the top of a box-car, I connect a supplemental hinged lever, P, to the upper end of the hinged lever J by a pin, R, operating in a slot, S, and connect this lever P, by a bolt or pivot, T, to the car box or body, as shown, a handle, U, projecting above the top of the car so as to be operated by the brakeman, as desired, to couple or uncouple the link from the draw-bar of the car, and guide the link into the draw-bar of an approaching car in a very expeditious, safe, and convenient manner.

Having thus described my invention, what I claim is—

1. In combination with the draw-bar C, the pendent catch-pin D E, having the shoulder H, and the pendent link-guider L M, provided with the projection N, arranged to operate with the link G, as and for the purposes set forth.

2. In combination with the catch-pin and link-guider of the draw-bar C, the pivoted bent lever-arm I J, provided with the handle K, so as to control the link G in the act of coupling and uncoupling the same, essentially as and for the purposes set forth.

3. In combination with the bent lever-arm I J, the supplemental hinged lever P, having the handle U, so as to operate the coupling from the top of the car A, as and for the purposes set forth.

4. The combination of the catch-pin D E, link-guider L M, bent lever-arm I J, and supplemental hinged lever P with the draw-bar C and link G, substantially as and for the purposes set forth.

CHARLES H. TRASK.

Witnesses:
SYLVENUS WALKER,
D. W. SMITH.