(No Model.)

H. G. CLARK.

CAR COUPLING.

No. 493,481. Patented Mar. 14, 1893.

Fig. 1.

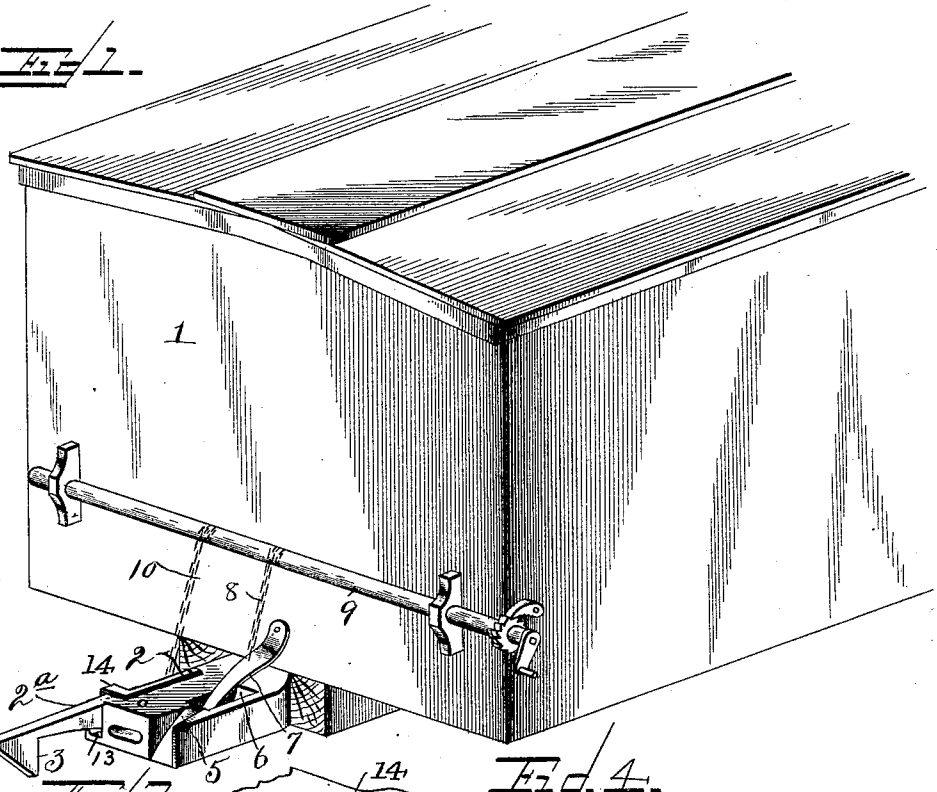


Fig. 2.

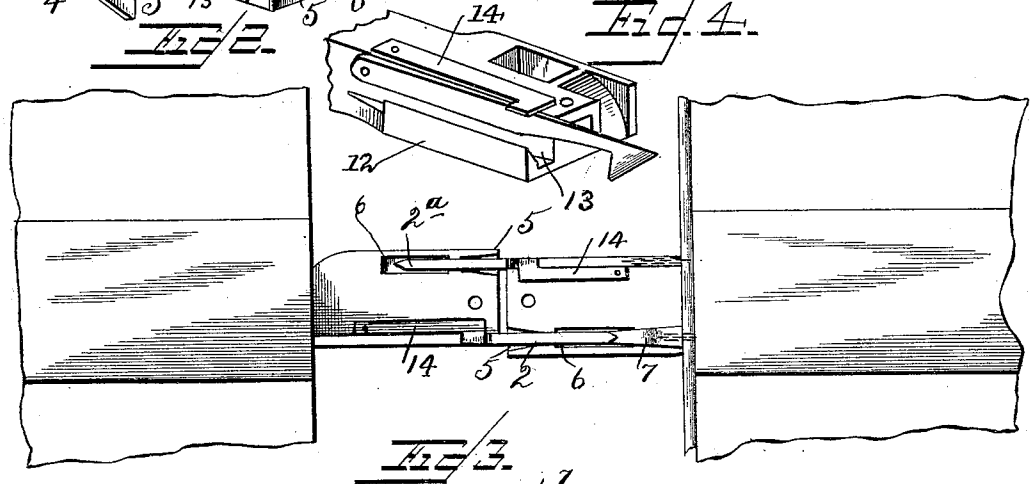
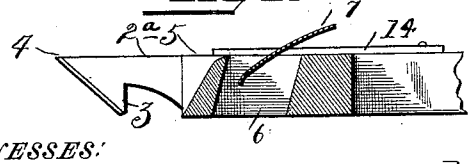


Fig. 4.

Fig. 3.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY G. CLARK, OF HUB CITY, WISCONSIN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 493,481, dated March 14, 1893.

Application filed December 9, 1892. Serial No. 454,640. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. CLARK, a citizen of the United States, and a resident of Hub City, in the county of Richland and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in car couplers of that class known as automatic couplers, in which the cars are coupled when they come together without the necessity of a brakeman or other party going between the same to manipulate the coupling devices.

The object of the invention is to provide an automatic coupler which shall possess superior advantage with respect to simplicity, economy and efficiency.

The invention consists in the novel construction and combination of parts hereinafter fully described and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of a portion of an ordinary box car with my improved coupling applied thereto. Fig. 2 is a plan view of the draw bar and a portion of the car. Fig. 3 is a longitudinal section on the line *x*, *x*, Fig. 2. Fig. 4, is a perspective of the drawhead.

In the said drawings the reference numeral 1 designates the car and 2 the draw bar. This draw bar is located underneath the car as usual. At or near the center of this draw bar at one side is pivoted a forwardly projecting arm 2^a formed at its free end into a hook 3, having its outer face beveled as shown at 4. The hooked portion of this arm projects some distance beyond the end of the draw bar. The opposite side of the draw bar is formed with a recess 5, the rear wall of which is beveled or rounded, forming a guide-way to receive the end of the coupling hook when the cars come together, and guide the same into a recess 6, in rear of and aligned with the same. The front and rear walls of this recess 6 are beveled or rounded as seen in Fig. 3.

Pivoted to the end of the car is a forwardly projecting arm 7, the front or free end of which projects into the recess 6, and is provided with a cord or chain 8, secured to a transverse shaft 9, journaled in bearings on the front of the car. A chain 10 is also secured to the shaft and the coupling hook. This shaft is to be provided with an operating crank or wheel, as is usual, with a ratchet wheel and pawl to prevent any backward movement of the shaft, when desired. The chains may also be carried, to the top of the car if desired so as to suit different forms or descriptions of cars, but as such features form no part of my invention they are not described nor illustrated herein, as they may be of any ordinary construction found suitable.

In practice the draw bars are connected with the cars, in such manner that the hook of the draw head of one car will be aligned with the recess 5 of the next adjoining car, as will be readily understood by those skilled in the art.

The operation will be readily understood. When two cars come together the coupling hooks will strike the beveled wall of the recess 5, of the opposite draw bar, and be elevated and guided into the recess 6, and engage with the beveled front wall thereof. It will be noted that the hooked end of the coupler rests upon the arm 7, so that when the same is elevated by the chain and transverse shaft it will throw the hook out of the recess and thus uncouple the cars. It will also be noted that by means of the beveled front wall of recess 6, the arm 7 is prevented from being entirely withdrawn from said recess, so that when elevated the coupling hook of the opposite car will rest thereon and be prevented from engaging in the recess when it is not desired to couple the cars.

For the purpose of preventing the coupling hook from falling below the draw head, I provide the latter with a flange 12, having a groove 13, in which the shank of said hook rests when depressed. I also provide the draw head on its upper face with a spring 14, the free end of which is formed with a flange 15, which abuts against the hook and serves to throw it into engagement with the recess in the opposite draw head.

Having thus described my invention, what I claim is—

In a car coupler the combination with a draw bar having a flange on one side with a groove thereon a hook pivoted to one side and provided at the opposite side with a guide-way having a beveled rear wall, and an aligned recess in rear thereof with beveled front and rear walls, and a spring with a flange at its free end abutting against the shank of said hook, of the arm pivoted to the front of the car and having its free end extending into said recess, the transverse rock shaft and the chains connecting said shaft with the pivoted arm and coupling hook, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

HENRY G. CLARK.

Witnesses:
DANIEL SPRAGUE,
JOHN E. MELLAM.