L. I. BAKER.

Car-Coupling.

No. 161,586. Patented April 6, 1875.

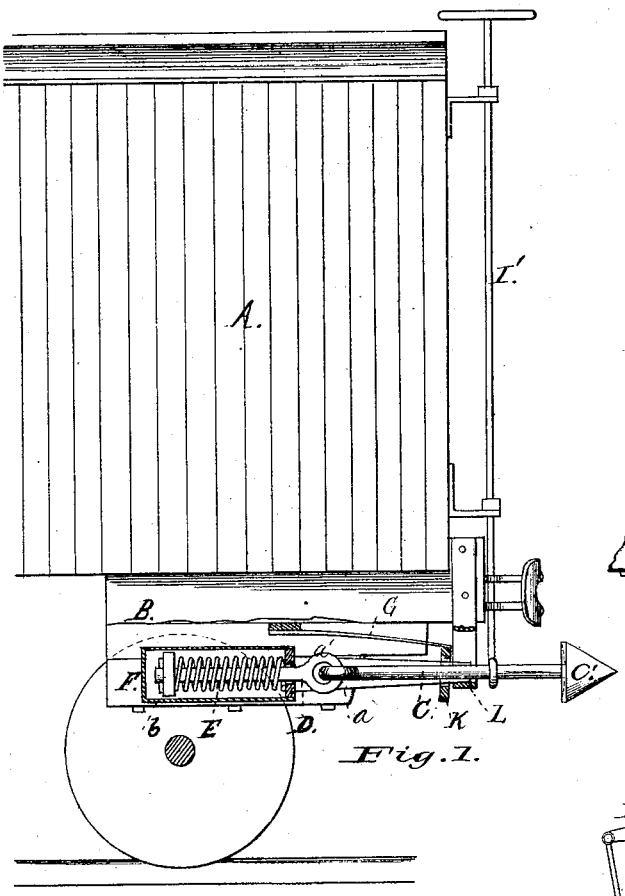

Fig. 1.

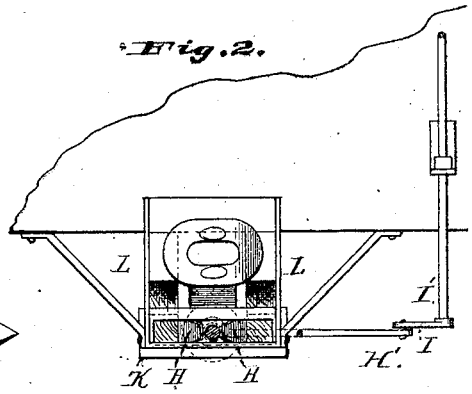

Fig. 2.

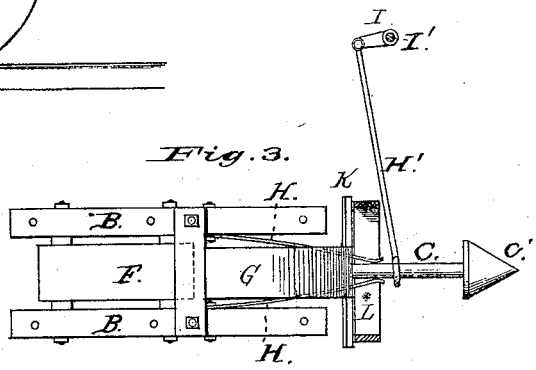

Fig. 3.

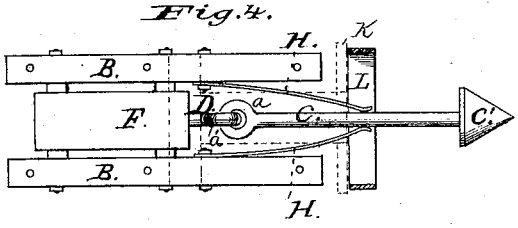

Fig. 4.

Attest.

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UNITED STATES PATENT OFFICE.

LEWIS I. BAKER, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **161,586**, dated April 6, 1875; application filed August 11, 1874.

To all whom it may concern:

Be it known that I, LEWIS I. BAKER, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Automatic Car-Couplings, of which the following is a specification:

This invention relates to certain improvements in car-couplings, in which the cars are automatically coupled upon coming together, and may be uncoupled or disconnected without danger to the brakeman or attendant.

My invention consists of a coupling-bar or bolt, having a conical or arrow-shaped head, and connected with a spring-impelled rod contained in a box or casing, by means of eyes, to produce a flexible joint, so that the coupling-bar can be shifted from one side of the car to the other for performing the uncoupling operation. The said coupling-bar is acted upon at each of its sides by a flat metallic spring, and on its top by another flat spring, for retaining and holding the coupling-bar in a true horizontal line, while it may move laterally or vertically.

The coupling-bar is connected, by means of a link, to a crank-arm on the vertical shaft, which extends either to the platform or the top of the car for shifting the said coupling-bar to uncouple the cars.

In the drawings, Figure 1 represents a longitudinal sectional view of my coupling attached to a car; Fig. 2, a transverse sectional view on the line *x x* of Fig. 1; Fig. 3, a detached top view of the coupler; and Fig. 4, a detached side elevation of the same.

In the accompanying drawings, A represents the car-body, and B a frame attached at the end thereof, and which carries the coupling devices. C represents the coupling bar or bolt, which is provided with an eye, *a*, which is attached or connected with the eye *a'*, on the end of the rod D. This rod is arranged within a circular or rectangular casing, F, and is provided with a shoulder or nut, *b*, at its rear end, between which and the front end of said casing is arranged a spring, E.

The coupling bar or bolt is retained in a true horizontal line by means of the flat metallic springs H H bearing on the sides of the same, and a flat metallic spring, G, arranged above the coupling-bar, and bearing at its free end upon the oblong slotted movable cross-head K, which supports the coupling-bar, and in which it may be moved laterally. The object of this spring and oblong slotted frame is to keep the coupling-bar down upon the supporting-bracket L.

The coupling-bar is connected, by means of a link, H', to the crank-arm I, on the lower end of the vertical shaft I', which projects upwardly to the platform or top of the car, for shifting or manipulating the coupling-bar for performing the uncoupling operation.

The shifting is rendered easy and possible by connecting the rear end of the coupling-bar to the spring-impelled bar D, by means of the eyes *a a'*, by which a flexible joint is secured.

The operation of my invention will be readily understood.

When two cars having my improvements are to be coupled, it is only necessary to run them together, when the shock will be received by suitable bumpers, and the conical or arrow heads coming together, will pass along each other until the shoulder of one is caused to engage with the shoulder of the other by the action of the side springs H.

When it is desired to uncouple the cars, the vertical shaft is turned, which operates the crank-arm I, and moves the link H', which causes the coupling-bar to be moved from one side or the other of the car, thus releasing the arrow-heads.

In case of accident, if either car should jump the track, the coupling-bar will be thrown out of its true line, and will automatically uncouple.

I intend to apply my invention to cars possessing the usual or ordinary coupling devices, so that when two cars come together, one of which is provided with my coupling, they may be readily coupled. This ordinary coupling is arranged above my device, as represented in the drawing.

What I claim is—

1. The coupling-bolt C, having the conical or arrow head C', and connected to the spring-rod D by the eyes *a a'*, so as to produce a flexible joint, in combination with the side springs H H, and the top spring G, connect-

ed to the movable cross-head K, all substantially as and for the purpose described.

2. The coupling-bolt C, side springs H, and the top spring G, connected to the cross-head K, bearing against the coupling-bolt, in combination with the link H′, and the vertical shaft I′, having the lateral arm I, at its lower end, and connected to the link H′, substantially as and for the purpose described.

L. I. BAKER.

Witnesses:
LEWIS MAISH,
FRED. W. BELL.