

(No Model.)

2 Sheets—Sheet 1.

L. O. LECOMPTE.
AUTOMATIC CAR COUPLING.

No. 541,329.

Patented June 18, 1895.

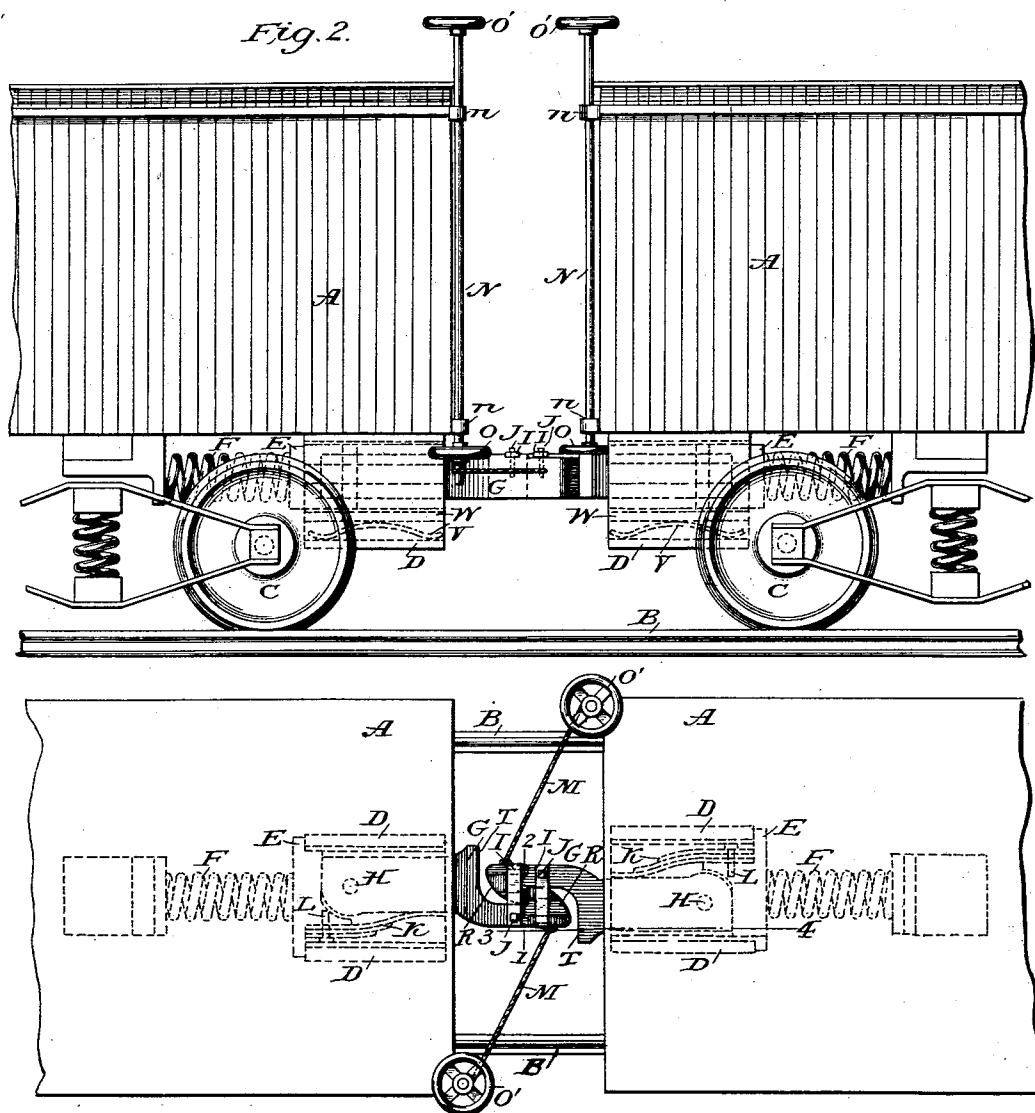


Fig. 1.

Witnesses.

Wm Eggenmann
H. J. Jericho

Inventor.

Louis O Lecompte

(No Model.)

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Fig. 3.

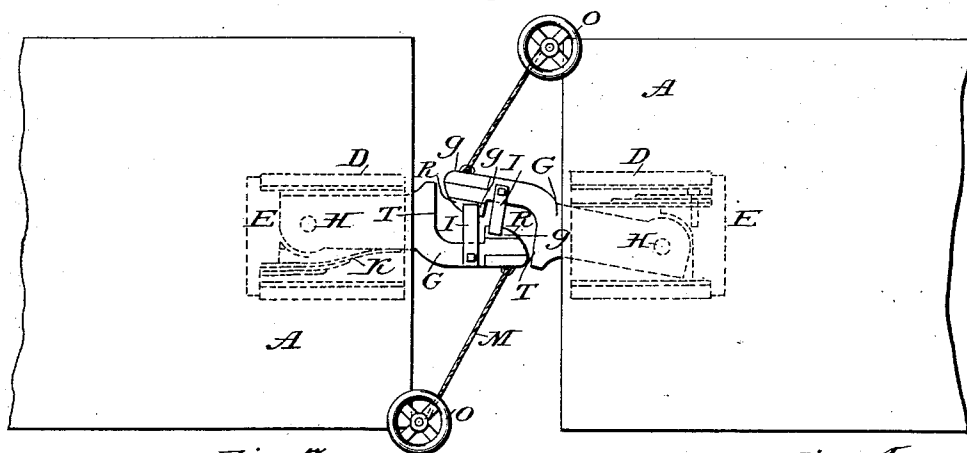


Fig. 7.

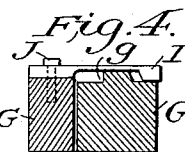
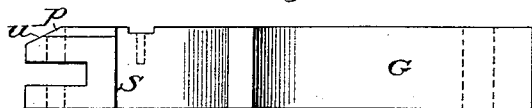


Fig. 5.

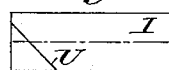


Fig. 6.

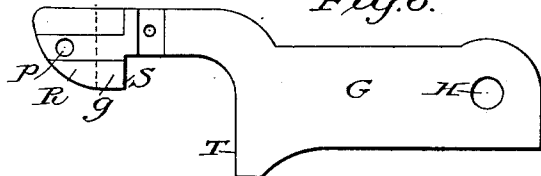
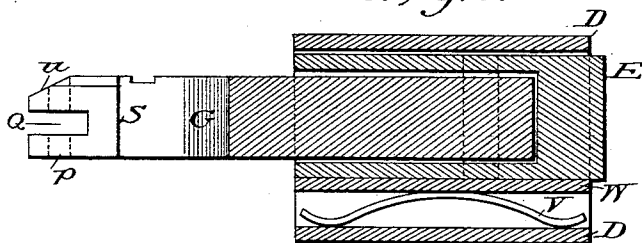


Fig. 8.



Witnesses.

Oym Egernann
Hunt Jericho

Inventor.

Louis O Lecompte

UNITED STATES PATENT OFFICE.

LOUIS O. LECOMPTE, OF AURORA, ILLINOIS, ASSIGNOR OF ONE-HALF TO JOHN F. O'CONNOR AND J. J. O'CONNOR, OF SAME PLACE.

AUTOMATIC CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 541,329, dated June 18, 1895.

Application filed January 7, 1895. Serial No. 534,131. (No model.)

To all whom it may concern:

Be it known that I, LOUIS O. LECOMPTE, a subject of the Queen of Great Britain, residing in the city of Aurora, county of Kane, State of Illinois, and having resided in the United States for a period of over eight years and duly declared my intention to become a citizen by taking out my first papers according to law, have invented a new and useful Automatic Car-Coupler, of which the following is a full, clear, and exact description, which will enable others skilled in the art to make and use the same.

This invention relates to the manner of coupling and uncoupling railroad freight cars, railroad passenger coaches, street cars, mining cars and all vehicles that require to be coupled and uncoupled when used or operated in the manner for which they are intended.

The object of this invention is to provide a secure means of coupling and uncoupling railroad freight cars, passenger cars, &c., in such a manner that the brakeman or operator of such cars will not be exposed to the danger of personal injury by going between said cars to couple or uncouple them as he is now obliged to do under the present system of coupling.

By using my invention railroad freight cars, passenger cars, and other cars similarly used upon rails will couple themselves automatically, and they may be uncoupled by the brakeman or operator from the top of the cars, or from the ground without said brakeman or operator being obliged to go between the said cars, as he is now obliged to do.

I have also provided a means in my said invention by which cars not using my device may be attached or coupled to all cars using my invention in the ordinary manner in which cars are now coupled and uncoupled. I have also provided a means by which cars using my device may be unlocked and afterward pushed upon the rails to any desired place or position, and then when so left in such desired position they may again without further manipulation be automatically coupled, to other cars using my invention.

By using my invention railroad freight cars, passenger cars and cars of all description can be used and operated in any and all ways, in which they are now operated.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which like letters refer to like parts.

Figure I is a plan showing a portion of two cars coupled together. Fig. II is a side elevation of the same. Fig. III is a plan showing a portion of two cars with the coupling mechanism unlocked. Fig. IV is a cross-section on line 1 2, showing the steel plate I in elevation. Fig. V is an end elevation of the steel plate I. Fig. VI is a plan of the jaw G. Fig. VII is a side elevation of the same. Fig. VIII is a section on the line 3 4, showing a portion of the jaw G in elevation.

A A represents the cars; B, B, the rails; C, C, the truck wheels.

D, D, is the slide box on the bottom of the car to receive the plunger E E, which works against the bumper springs F F.

G G are the jaws which are pivoted in the plunger E E by the pins H H.

I I are spring plates fastened to the jaws G G, by the bolts J J, and are constructed so as to operate in depressions *g'*, in the jaws G G in the manner hereinafter described.

K K, are springs attached to the plunger E E, by the bolts L L, and operating against the jaws G G, for the purpose of retaining them in contact or allowing them to be pressed back by power applied to the rope or chain M M, through the shaft N N, and the hand wheel O, O' said shafts N N, being attached to the cars A A, by the boxes *n, n*.

P P are holes in the jaws G G, for the purpose of receiving the pin commonly used in coupling cars.

Q Q is a slot in the outer ends of the jaws G G, for the purpose of accommodating the link commonly used in railroad cars not provided with an automatic coupler.

R R, are curved faces of the jaws G G, so formed that when pressed together by the motion of the cars, they will spread apart by revolving on the pivots H H, and compressing the springs K K, until the said jaws G G, have moved a sufficient distance along each other for the recesses S S, to interlock.

T T, are projections formed on the jaws G G, for the purpose of receiving the pressure from the opposite jaw when the cars are backed or pushed together, said pressure being trans-

ferred through the pins H H, to the plungers E E, and thence to the buffer springs F F.

U U, is the beveled face of spring-plates I I, so formed that they will ride the jaws G G, when the said jaws are pushed together.

V V are springs placed in the lower portion of the slide box D D, for the purpose of supporting the washer plate W, which presses against the plunger E E, allowing the said plungers E E and their jaws G G, to accommodate themselves to any inequalities in the elevation of the said jaws G G above the rails.

While I prefer the combination of parts as above described, and represented in the accompanying drawings; it is not essential to my invention that a flat spring such as K K, should be used to press the jaws G G, together, but a coil spring might be inserted between the jaw G, and the plunger E so as to give the required pressure, or I could attach one end of a tensional coil spring to the jaws G, and the other end of said spring to a point on the car. I could also obtain the required pressure on the jaws G G, by attaching weights thereto working over ordinary pulleys with a rope or chain. While I also prefer the combination of the chain M, shaft N, and handwheel O, O' for the purpose of separating the jaws G G, I do not wish to restrict my invention to this particular design, as the same object may be attained by a combination of levers made to work from the top and the side of the car.

The operation of this device is as follows, to wit: To couple cars that are provided with this invention, the one attached to the motive power, is simply pushed in the direction of the other along the rails. The curved faces R R, of the jaws G G, coming in contact, the said jaws G G, are forced to revolve around the pivots H H, in the plungers E E, compressing the springs K K, until the said jaws G G, slide along each other to interlock themselves in the depressions S S. In the above operation the spring plates I I, coming in contact with the opposing jaws G G, respectively present their beveled faces U U, to the beveled faces u u, of the jaws G G, and slide upon them until the said jaws G G, interlock themselves in which position the cars are coupled. Any forward motion of the front car will now be imparted to the rear car, through the pressure of the jaws G G, upon each other at their recessed faces S S, and any backward motion of the front car will be imparted to the rear car by the contact of each jaw G G, upon the opposing jaw at the faces T T.

To uncouple the cars the brakeman or operator works on the hand wheel O, situated near the side of the car, said operator standing on the ground. By turning the hand wheel O, the shaft N is made to revolve in its bearings n n, carrying with it the chain or rope M, which pulls the jaw G, open, and allows the spring plates I I, to slide over the jaws G G. The ends of said spring plates I I, drop into recesses g g, formed in the ends of the jaws G G, and keep the said jaws G G,

apart so that their recessed faces S S, no longer engage one another. Any backward motion now given to the car that is attached to the motive power will be transmitted to the other car through the contact of the ends of the jaws G G, upon the respective faces T T of the opposing jaws one upon the other; and such backward motion will not disturb the relative positions that the jaws G G, and other parts have assumed, but should any forward motion be imparted to the car attached to the motive power the jaws G G, being held apart by the spring plates I I, with their ends resting in the recesses g g, in the jaws G G, the said jaws G G, will slide along one another and become entirely disengaged or uncoupled, leaving the jaws in both cars in the desired position to be automatically coupled again when necessary.

Now the above operation was performed by the brakeman or operator while standing on the ground, and operating the hand wheel O, but as the shaft N, runs vertically and the hand wheel O' has been placed so as to be convenient to an operator standing on the top of the car, it is evident that the said operation above described could be performed by an operator standing on the top of the car. By this means therefore the said cars can be uncoupled by the brakeman or operator either from the top of the car, or from the side of the car, when said brakeman would be standing on the ground, and thus avoid the danger to life and person of being obliged to go between the cars as is now commonly done on all railroads.

When it is desired to couple cars using my invention, with cars not provided with the same, the operation can be performed by using an ordinary link which will enter into the recess Q, in the jaw G, and be held in position by the ordinary pin, dropped through the hole P, in the said jaw G.

Now I am aware that prior to my invention, various devices have been made for coupling railroad cars, but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an automatic car coupler, the combination of the jaw G, the pivot H, the plunger E, and the slide box D, all arranged substantially as described, and for the purpose therein set forth.

2. In an automatic car coupler, the combination of the jaw G, the pivot H, the plunger E the slide box D, the washer plate W, and the spring V, all arranged substantially as described and for the purpose therein set forth.

3. In an automatic car coupler, the combinations of the jaws G G, having recessed faces S S, the depressions g g, and the projections T T, with the spring plates I I, all arranged substantially as described and for the purpose therein set forth.

4. In an automatic car coupler the combination of the jaws G G, working on the pivots

H H in the plunger E E, with spring plates I I, all arranged substantially as described and for the purpose therein set forth.

5 5. In an automatic car coupler, the combination of the jaws G G, the pins H H working in the plungers E E, and the springs K K, with the spring plates I I, the rope or chain

M, the shafts N N, and the hand wheels O, O, all arranged substantially as described, and for the purpose therein set forth.

LOUIS O. LECOMPTE.

In presence of—

JAMES SPELMAN,
JOHN LOSER.