(No Model.)

H. C. WEBB & J. A. KELLOGG.

CAR COUPLING.

No. 348,363. Patented Aug. 31, 1886.

Fig. 1.

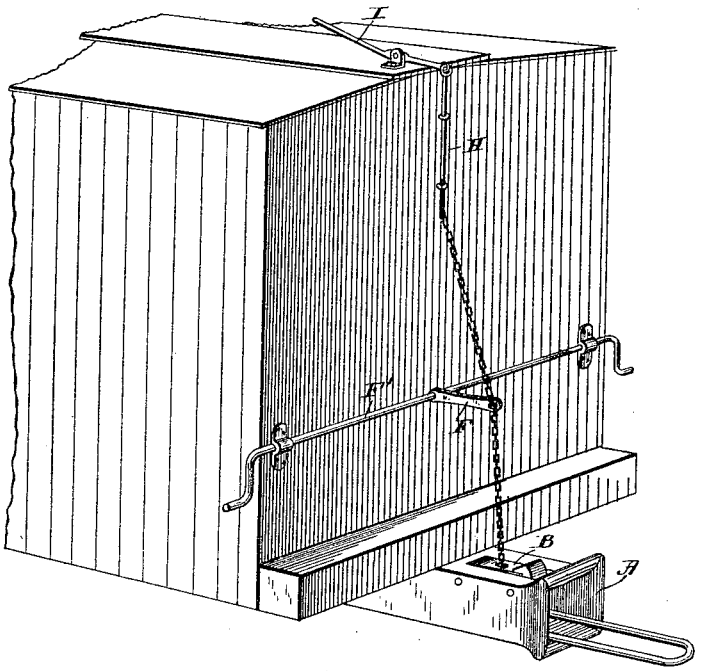


Fig. 2.

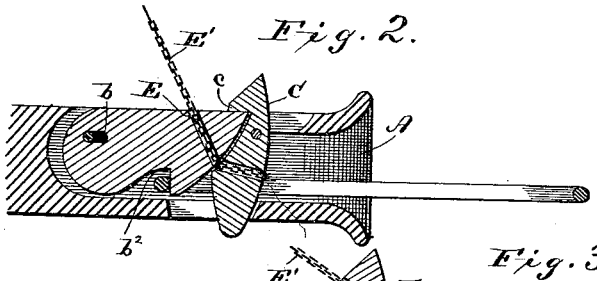
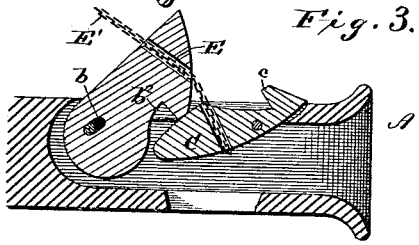


Fig. 3.



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UNITED STATES PATENT OFFICE.

HARRY CHARLIE WEBB AND JOSEPH ARTHUR KELLOGG, OF NASHVILLE, TENNESSEE; SAID WEBB ASSIGNOR TO SAID KELLOGG.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 348,363, dated August 31, 1886.

Application filed March 8, 1886. Serial No. 194,654. (No model.)

To all whom it may concern:

Be it known that we, HARRY CHARLIE WEBB and JOSEPH ARTHUR KELLOGG, both of Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

Our invention relates, generally, to improvements in car-couplings, and particularly to that class known as "automatic," and has for its object to provide a safe, simple, cheap, and substantial coupling that can be placed upon the cars now in use without any alteration in the draw-head connection, and can be made at slight cost. By the employment of our invention, also, the numerous accidents to employés of the railway companies, resulting in the loss of life and limb, are obviated, as it is never necessary for the operator to go between the cars, either to couple or uncouple them. It can also be applied to cars of any height or to cars of different heights, by employing the ordinary crooked link, and can be operated either from the platform of an ordinary passenger or freight car or from the top of a box-car, as may be desired.

The invention consists in certain novelties of construction and combinations of parts, which we will now proceed to describe, and point out particularly in the claims at the end of this specification.

In the drawings, Figure 1 is a front elevation of a car, showing the application of our invention; Fig. 2, a view showing the parts coupled; Fig. 3, a view showing the position of the parts while coupling.

Similar letters of reference in the several figures indicate the same parts.

A represents the bell-mouthed draw-head of the ordinary construction, with the exception of a longitudinal slot in its upper side communicating with its inner chamber. Near the rear end of this slot is pivoted a hook-shaped casting, B, shaped as shown in Fig. 3, having an inclined slot, *b*, near its rear lower end, through which its pivotal pin is passed, which latter also passes through the sides of the draw-head. The forward end of the hook is inclined, and on its under side is a hook or projection formed by cutting the recess b^2 therein, as shown, and it is with this hook that the coupling-link engages. Passing diagonally through the forward portion of this casting is a perforation, E, through which a chain, E′, is to be passed, as will be further on explained.

Near the forward end of the slot in the draw-head, and operating therein, is a latch-pin, C, which we term a "safety" or "latch" hook or pin. This casting is constructed as shown in Fig. 3, and is provided near its upper end with a perforation, through which its pivotal pin is passed. The lower front portion is rounded somewhat for the entering link from the opposing car to strike, and its upper forward end is provided with a projection or hook, *c*, adapted to engage the end of the coupling-hook B when the cars are coupled and the strain is on the coupling-hook. The end of the chain, passing through the hook B, is secured to the casting C, near its middle, as shown, and its other end is secured to the arm F, projecting from a shaft, F′, secured in suitable bearings on the car. The outer ends of this shaft are provided with handles or levers, permitting it to be rotated from the sides of the car, when desired.

From the arm F a chain extends upward, attached to the lower end of a rod, H, reciprocating in bearings attached to the body of the car, and the upper end of this rod is secured to the outer end of a short lever, I, pivoted in suitable bearings on the top of the car, as shown in Fig. 5, so that pressure upon the inner end of the lever will raise the rod H, rotate the shaft F′, pull the chain upward, and release the coupling, in a manner to be described.

When in normal position, the forward latch-pin, C, hangs vertically with its lower end projecting below the lower side of the draw-head, and the rear hook, B, is at its lowest position, with the upper side horizontal. When, now, the link is inserted, it strikes against the

C and swings it back on its pivot at the same time its rear side or shoulder strikes against the end of the hook B and raises it to the position shown in Fig. 4. As soon as the end of the link passes the end of the latch-pin C, the latter returns to normal position, projecting through the loop of the link at the same time the hook B falls, and the hooked end drops over the end of the link, as will be readily understood. When in this position, the hook at the upper end of C projects over the forward end of the hook B and effectually locks it from vertical movement, which would release the coupling-link. No jars or movement of the train can now release the link, and it is only by a positive backward and upward movement of the latch-pin C that this can be done.

It will be noted that the latch-pin C serves a double purpose: First, it forms a lock for the main hook, and, again, it serves as a supplemental or safety attachment in case the lower end of the hook B should break or be accidently disengaged from the link without the pin C being moved. In this event the link will at once be released, and, moving forward toward the mouth of the draw-head, will strike against the pin C, moving its lower end into engagement with the forward end of the lower slot, and effectually prevent its removal.

When it is desired to uncouple the cars, it is only necessary to pull upward on the chain, either by rotating the shaft by means of handle G or by operating the foot-lever on top of the car and raising the rod. This movement of the chain first draws the lower end of the pin C, backward and then a continued pull causes the shoulder on the former to raise the hook B, disengaging the link and permitting its withdrawal, the parts then assuming the position shown in Fig. 4.

From the above description it will be seen that we have provided an automatic coupling possessing advantages not exhibited by any other, so far as we are aware. The automatic latch device and the safety-pin we regard as the most important.

There is no occasion for the brakeman or any of the train-hands to go between the cars for any purpose, as the coupling can be operated from the side or top of the cars, when desired, and this dispenses with all of the accidents so frequently happening to railway employés.

The parts of the entire coupling are so few, and they are perfectly interchangeable, that our invention at once recommends itself on the ground of economy. They are easily constructed, strong, and not liable to get out of order.

We do not desire to be confined to the construction of devices shown, as others, their equivalents, might be employed without departing from the essential features of the invention.

We claim as new—

1. The combination, with the draw-head, the hook for engaging the link, and the pin having the hook for engaging the end of the coupling-hook mounted in front of the latter, of the chain passing through the coupling-hook and attached to the pin on one side of its pivot, substantially as described.

2. The combination, with the coupling-hook having the inclined forward portion, the pin pivoted in front of it, having the hook for engaging the end of the coupling-hook and an inclined portion corresponding to that in the coupling-hook and in engagement therewith, of the chain passing through the coupling-hook and secured to the pin at or below the end of the incline, substantially as described.

3. The combination, with the pivoted coupling-hook B, having the forward inclined face, of the locking-pin C, pivoted at its upper end in front of it, having the hook for engaging the upper forward end of the coupling-hook and the curved or inclined forward portion, and the chain passing through the coupling-hook and secured to the pin C on one side its pivot, whereby when the coupling-hook is engaged the pin holds it locked in position, but upon pulling the chain upward the pin will release the hook and both hook and pin will be elevated, permitting the withdrawal of the link, substantially as described.

4. The combination, with the coupling-hook B, having the inclined forward portion and the hook on its lower side, of the pin C, having the hook at its upper end adapted to engage the coupling-hook, and the weighted lower portion in line with the mouth of the draw-head, and the chain for swinging the pin backward, so as to disengage the link at the upper end and raise the coupling-hook out of engagement with the link, substantially as described.

5. The combination, with the coupling-hook B, of the pin C, the chain connected with the pin C, the shaft F′, the chain D′, rod H, and lever I, substantially as described.

6. The combination, with the coupling-hook, of the latch-pin for locking the hook in coupled position, and pivoted in such position relative to the coupling-hook as that when swung backward the latch will be disengaged from the coupling-hook, and a further motion of the pin will raise the coupling-hook out of engagement with the link, substantially as described.

7. The combination, with the coupling-hook, of the latch-pin pivoted in front thereof, having the hook for engaging the coupling-hook and locking it in position, the lower end of the latch-pin projecting in line with the mouth of the draw-head and adapted to abut against and raise the coupling-hook when swung backward, substantially as described.

8. The combination, with the coupling-hook, of the latch-pin pivoted in front thereof, having the hook for engaging the coupling-hook and locking it in position, the latch-pin projecting in line with the mouth of the draw-head and adapted to abut against and raise

the coupling-hook out of engagement, and a chain attached to the latch-pin, substantially as described.

9. The combination, with the pivoted coupling-hook, of the pin pivoted in front thereof, having a catch for locking the coupling-hook in position, and a portion projecting in front of the engaging portion of the coupling-hook and within the link, so as to prevent the withdrawal of the link, should the hook break, without the latch-pin being raised, substantially as described.

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