

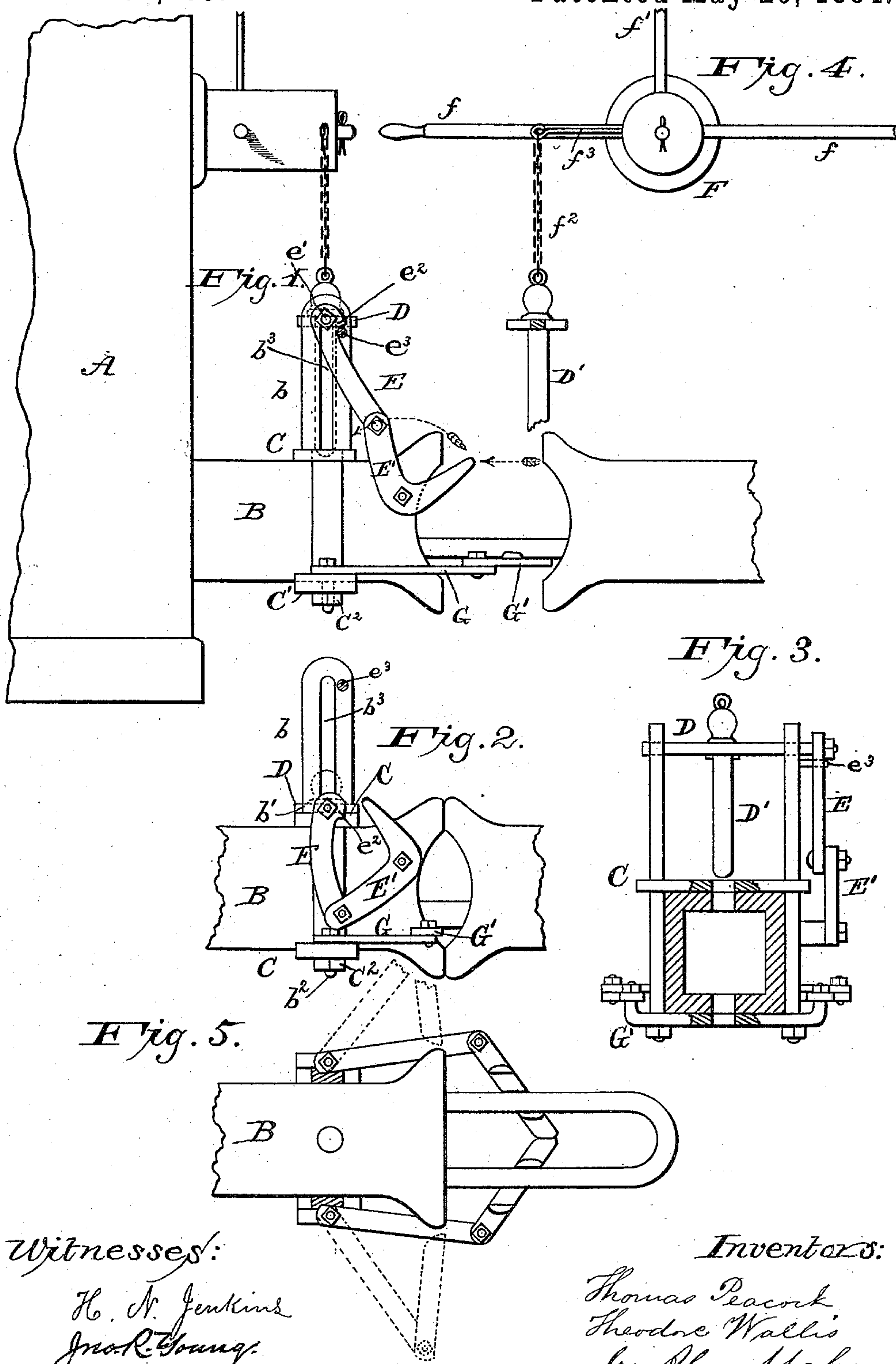
(No Model.)

T. PEACOCK & T. WALLIS.

CAR COUPLING.

No. 298,885.

Patented May 20, 1884.



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THOMAS PEACOCK, OF AUBURN, AND THEODORE WALLIS, OF SCIPIO, N. Y.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 298,885, dated May 20, 1884.

Application filed October 19, 1883. (No model.)

To all whom it may concern:

Be it known that we, THOMAS PEACOCK, of Auburn, and THEODORE WALLIS, of Scipio, in the county of Cayuga, State of New York, have invented certain new and useful Improvements in Car-Couplers, of which the following is a full and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of a portion of a car with our improved coupling device applied thereto, showing the same set to automatically couple the cars when brought together. Fig. 2 is a side view of a portion of two draw-heads, showing the relation of the parts after the cars are coupled together. Fig. 3 is a transverse section through the line *xx*, Fig. 1. Fig. 4 is a front view of the windlass for setting the coupling-pin; and Fig. 5 is a plan or top view of portion of a draw-head, showing the link guide or holder.

Our invention relates to that class of car-couplers in which the pin is set or raised by hand and is automatically dropped to engage the link by means of devices operated upon by the draw-head coming in contact therewith; and our invention consists, first, in providing the draw-head with a jointed arm, connected at one end, through a sliding cross-head, with the coupling-pin, and provided at its opposite end with a forwardly-projecting extension, whereby the coupling-pin is adapted to be held in a raised or suspended position when the jointed arm is extended and to be dropped to engage the link by the opposing draw-head coming in contact with the forward extension and tripping or breaking the joint of the arm.

It further consists in providing the upright guideways in which the sliding cross-head carrying the coupling-pin is adapted to slide with a locking pin or stud for engaging the jointed arm when extended, to assist in holding the pin in its raised position.

It further consists in a novel construction of device for raising the sliding cross-head carrying the coupling-pin into position, whereby the same can be raised or set from either side or from the platform or roof of the car.

It further consists in certain details in the construction and arrangements of parts, all as hereinafter explained.

In the accompanying drawings, A represents an end section of a car, and B the draw-head. This draw-head B is made in the usual or in any other preferred form, and is provided on each side, on a line with the opening for the coupling-pin, with an upright bar or standard, *b*. The portion of the standard that embraces the draw-head is made smaller or is cut away to form shoulders, as shown at *b'*, and is further provided on its lower end with a screw-thread, *b*², hereinafter referred to. These standards or bars are connected to the draw-head by means of plates C C', one arranged upon the upper and the other upon the lower face of the draw-head, the upper one being slotted, for the passage of the lower portion of the standard, so that the shoulders *b*, formed thereon, shall engage the upper face of the plate. The lower plate is also perforated, for the passage of the screw-threaded portion of the standard, and serves, in connection with the nut C², to firmly hold said plates together and to the draw-heads. The bars or standards *b* are slotted vertically, as shown at *b*³, in which slot the sliding cross-head connected with the coupling-pin is adapted to slide or move.

D is a sliding cross-head fitting between the bars or standards and engaging the slots formed therein by means of projecting studs or lugs formed upon the ends of said cross-head. This cross-head carries and supports the coupling-pin D', hereinafter referred to.

E E' is a jointed arm or toggle-link the upper end of which is connected to the cross-head D by means of one of the projecting studs formed upon the cross-head, and which projects through the slot formed in the standard *b*, and is secured thereto by means of a nut, *e'*, as shown. The lower end of this jointed arm or toggle-link is pivoted to the draw-head near its forward end in such manner that when the cross-head is elevated or at its highest point the arms of the link will be brought into line with each other, or nearly so. The lower portion, E', of this arm or link is provided with a forward extension, projecting therefrom about at right angles to the main portion, and which extension, when the cross-head is elevated and the arms are extended or brought into line with each other, projects out beyond the face of the draw-head, for a pur-

pose hereinafter explained. The upper portion, E, of this arm or link is notched, or is provided with a projection, e^2 , at a point below its pivotal connection with the cross-head, and which projection is adapted to engage a pin or stop, e^3 , formed with or upon the standard b , when the arms are extended, and the cross-head elevated, and to be disengaged therefrom by the action of an opposing draw-head coming in contact with the forwardly-extended part of the portion E'.

F is a windlass or chain wheel provided with projecting arms or levers $f f'$, those marked f projecting therefrom in the direction of the sides of the car, and that f' extending upward toward the platform or top thereof. This windlass is connected to the sliding cross-head D, or to the coupling-pin mounted therein, by means of a chain, f^2 , and arm f^3 , in such manner that by turning the windlass or chain wheel the cross-head, and with it the coupling-pin, can be raised to engage the projection e^2 of the toggle-link with the projecting pin or stop e^3 , formed upon the standard, and thus hold the coupling-pin suspended or elevated. By this arrangement of connecting the coupling-pin with the windlass, in connection with the projecting arms thereon, it will be seen that the device can be set to automatically couple the cars from either side thereof, or from the top; or, where the device is used with passenger-cars, the device can be set either from the sides or from the platform by the brakeman, thus avoiding all necessity of the train-men going between the cars to couple or uncouple the same.

The operation of the device is as follows: Supposing the parts to be in the position shown in Fig. 2, and it is desired to uncouple the cars, by turning the windlass or chain wheel by means of the arms or levers, the chain will be wound upon the wheel carrying the cross-head, and with it the coupling-pin, upward until the jointed arm or toggle-links are straightened out, and the notched end of the upper arm of the link is caused to engage the pin or projection e^3 on the standard b , which locks the parts in position. In this movement of raising the cross-head and links the projecting end of the lower arm of the link is thrown forward, and extends out beyond the face of the draw-head in position to be acted upon by the draw-head of an opposing car. The position of the parts is then as shown in Fig. 1, ready to be acted upon to automatically drop the pin to engage the link in a manner that will be readily understood.

G G' is a jointed arm, pivoted at one end to the plate C', so as to have a free swinging movement upon said pivot. One of these jointed arms is arranged upon each side of the draw-head, and the two arms are adapted to have their free ends brought together, as shown in full

lines, Fig. 2, and serve to hold and steady the link and to insure its entrance into an approaching draw-head. These arms are adapted to be set by hand, and to be automatically thrown back by contact with the approaching draw-head of the car to be coupled, and to assume a position substantially as shown in dotted lines, Fig. 2.

In the drawings only one jointed arm or toggle-link is shown; but it will be readily seen that one can be used upon both sides, if desirable.

It will also be seen that by the arrangement of jointed arm or toggle-link described the locking-pin on the standard may in some cases be dispensed with, as when the link is extended it forms a lock in itself.

Having now described my invention, I claim—

1. The combination, with the draw-head, of the jointed arm or toggle-link, connected at one end through a sliding cross-head with the coupling-pin, and provided at its opposite end with a forward projection for adapting the arms to be tripped by an opposing draw-head, substantially as described.

2. The draw-head provided with the guideways for supporting the cross-head, in combination with the jointed arm or toggle-links for holding the cross-head, and with it the coupling-pin, in an elevated or suspended position, substantially as and for the purpose set forth.

3. The draw-head provided with the guideways for supporting the cross-head carrying the coupling-pin, in combination with the notched arm for engaging the pin or stud formed upon the standard for locking or holding the cross-head, and with it the coupling-pin, in its elevated position, substantially as and for the purpose set forth.

4. The cross-head carrying the coupling-pin mounted in the upright guideways, in combination with the windlass or chain wheel, provided with operating arms for raising the cross-head, and with it the coupling-pin, into its elevated or suspended position, substantially as and for the purpose described.

5. The draw-head provided with the slotted standard, the sliding cross-head mounted thereon, and the toggle-link, in combination with the windlass or chain wheel for raising said cross-head and extending the toggle-link, substantially as and for the purpose set forth.

6. The combination, with the draw-head, of the pivoted jointed link-holders, arranged and operating substantially as and for the purpose set forth.

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