

(No Model.)

2 Sheets—Sheet 1.

J. C. LOOK.
CAR COUPLING.

No. 535,254.

Patented Mar. 5, 1895.

Fig. 1.

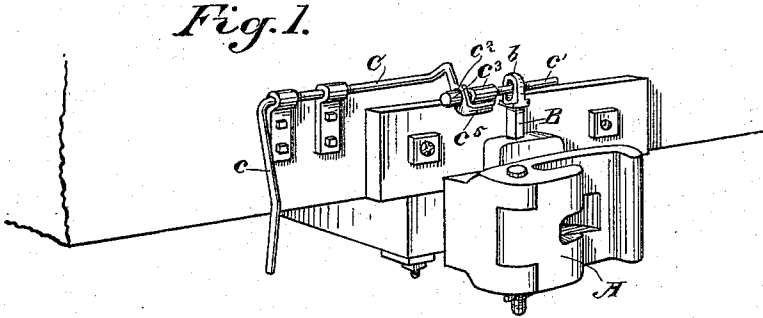


Fig. 2.

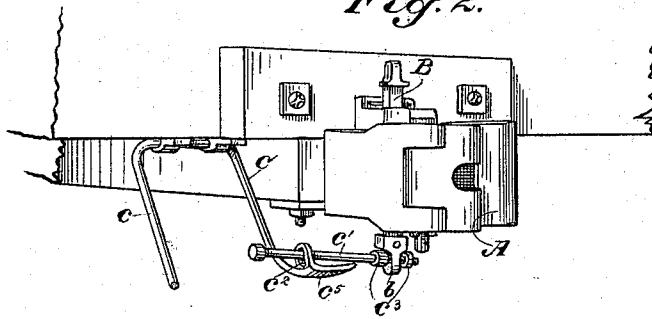


Fig. 3.

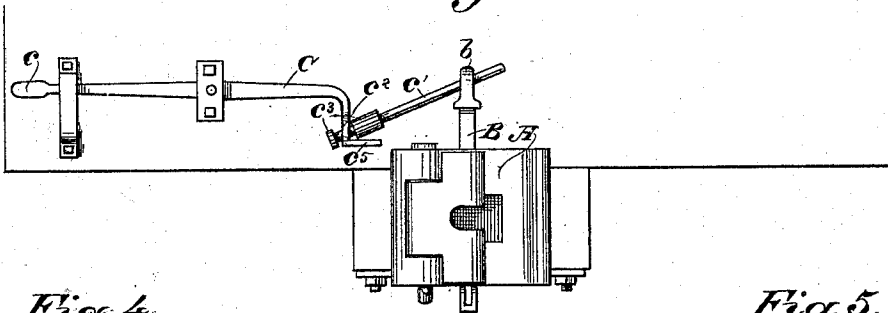


Fig. 4.

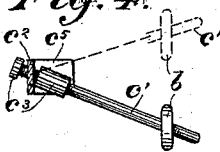


Fig. 5.

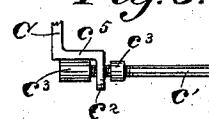
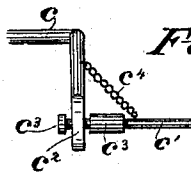


Fig. 6.



Witnesses,
J. H. Morse
H. F. Aschbeck

Inventor
John C. Look
By Dewey & Co.
Attys

(No Model.)

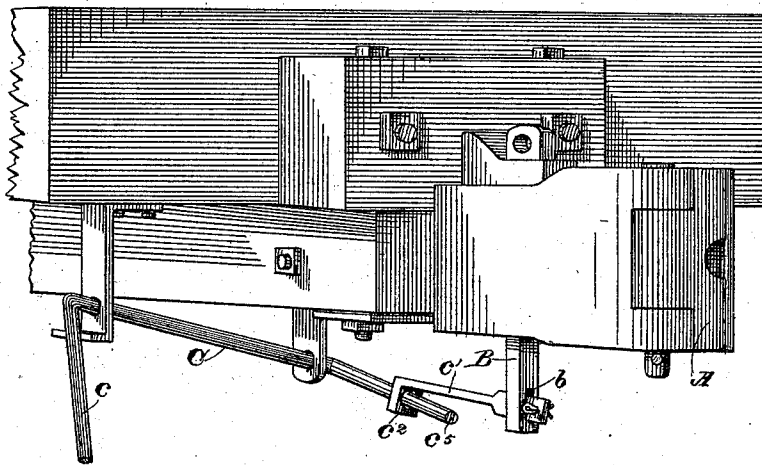
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Fig. 7.



Witnesses,
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H. F. Aschbeck

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UNITED STATES PATENT OFFICE.

JOHN C. LOOK, OF SAN JOSÉ, CALIFORNIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 535,254, dated March 5, 1895.

Application filed January 10, 1894. Serial No. 496,412. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. LOOK, a citizen of the United States, residing at San José, county of Santa Clara, State of California, have invented an Improvement in Car-Couplings; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of car couplings having a locking device or pin, adapted to be raised to uncouple, by means of a lever or rock shaft extending to the side of the car.

My invention consists of a lever mounted upon the car with its inner extremity engaging the coupling or locking pin, said lever being jointed in its length by a connection enabling its inner portion to move with and to permit the movements of the pin and coupling or drawhead, and to be raised by the outer portion in the line or direction in which the lifting force is applied whereby the pin may be raised.

It also consists in the novel construction and arrangement of the lever which I shall herein after fully describe and specifically claim.

My invention is applicable to all classes of couplings where a vertical locking pin or other device is used and which requires to be lifted to couple or uncouple. Its object is to provide a lever for manipulating car couplings from the side of the car, and which is so jointed as to obtain all the flexibility necessary to permit that portion within the joint, and which is connected with the locking pin, to conform to and permit all the movements of the draw-head and pin. Heretofore the connection between the lever and locking pin has been a flexible chain or loosely pivoted link vertically disposed and which was liable to become distorted or disarranged by the constant changing position of the coupling and thereby to become unfit for use. A rigid non-jointed crank shaft has also been suggested, the inner extremity of which was to be loosely and peculiarly connected with the pin, said connection being such that the least distortion would result in unfitting the device for use. My invention overcomes these difficulties by providing the jointed lever which I shall now describe.

Referring to the accompanying drawings for a more complete explanation of my in-

vention,—Figure 1 is a perspective view showing my jointed lever applied to the top of the locking pin, the lever being of the crank form. Fig. 2 is a perspective view showing its application to the lower extremity of the pin. Fig. 3 is a front view showing a straight lever, so adjusted that the pin is raised as in a coupling operation. Fig. 4 is a top view of the lever, showing its inner extremity as it would appear when the coupling is drawing, the dotted lines showing its position as when buffing. Fig. 5 is a side view showing the joint of the lever so constructed that the inner extremity lies below the lifting plate instead of above as in Fig. 4. Fig. 6 is a view showing a modification of the means for rendering the joint rigid in the line of the lifting force applied to the pin. Fig. 7 is a perspective view showing the enlarged eye as formed in the end of the inner section of the lever instead of in the outer section as in the preceding figures, the same being merely a reversal of the parts of the joint.

Referring to Fig. 1, A represents generally a form of coupling, of which B is the locking pin.

C is my lever. It is made in two sections, the outer section *c* being in the form of a cranked rock shaft and the inner section *c'* being in the form of a straight rigid rod. The outer section is suitably journaled in bearings on the car. The inner section has its inner extremity passing freely through and slidable in an eye *b* in the top of the pin B. The adjacent ends of the two sections are united by a joint, formed in this figure, by the end of the inner section *c'* passing freely through a somewhat enlarged eye *c²* made in the end of the outer section, and limited from sliding therein by means of collars *c³*. Now it will be seen that the inner section may move up and down with the pin B; and it may also move forward and back with the longitudinal movement of the draw-head, both movements being possible by reason of the outer end of said section fitting freely in the enlarged eye of the outer section; and finally the draw-head may have its side movement freely by reason of its pin-head sliding freely over the inner extremity of the inner section. These are all the movements required; but at the same time the

joint is such that if the inner extremity of the outer section be raised, it will raise the inner section also and the pin B will thereby be lifted. This raising of the inner section may be effected by reason of said section cramping in the eye c^2 , but in order to raise it positively and substantially horizontally, the eye c^2 may be a wide one for this purpose, or as shown in Fig. 6, there may be a chain c^4 connecting the outer section with the inner section at a point far enough inwardly from the joint, to effect the purpose; but the form I deem best is that shown in Figs. 1 to 5 inclusive, namely, the plate or arm c^5 formed with or secured to the outer section, and lying either under the inner section, as shown in Figs. 1 to 4 inclusive, or below it as shown in Fig. 5.

In Fig. 2 the lever is shown applied to the lower extremity of the pin B. In this case, I have shown the outer end of the inner section as slidable in the adjacent end of the outer section and its inner end as limited in the pin B by the collars c^3 , this being the reverse in this regard to the arrangement shown in Fig. 1, though the same in operation.

In Fig. 3 I have shown the lever C as a straight one, as its particular shape is immaterial.

In Fig. 7 I have shown a reverse way of forming the joint which consists in placing the enlarged eye c^2 in that portion or inner section of the lever which is attached to the coupling and have it pass over that portion or outer section which is attached to the car; it being obviously immaterial in which part the eye is placed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car coupling, a means for manipulating the locking device consisting of a lever made in sections, the outer section of which is mounted on the car, and the inner section engaging the locking device, and the sections so jointed flexibly that the inner end of the inner section is adapted to move with and to permit the movements of the locking device and coupling or draw-head independently of the outer section, and a means for controlling and limiting the joint in the direction in which force is applied in lifting the locking device, whereby the inner section will be lifted substantially horizontally by the movement of the outer portion of the lever, thereby lifting the locking device at a distance substantially horizontally from the joint, substantially as herein described.

2. In a car coupling, a jointed lever for manipulating the locking device, consisting of an outer section mounted on the car, and an inner section connected with the coupling for actuating the locking device, said sections being so jointed flexibly by means of an enlarged eye in one section in which the adjacent end of the other section is so freely fitted that the inner end of the inner section is adapted to move with and permit the movements of the coupling, and means in connection with the said enlarged eye for controlling and limiting the joint in the direction in which force is applied in actuating the locking device, whereby the inner section will be lifted substantially horizontally by the movement of the outer section of the lever, substantially as herein described.

3. In a car coupling, a means for manipulating its locking device consisting of a lever, the inner extremity of which engages said locking device, said lever being made in rigid sections so jointed that the inner section is adapted to move with and to permit the movements of the locking device and coupling or draw-head, and a means for controlling and limiting the joint in the direction in which force is applied in lifting the locking device, whereby the inner section will be lifted substantially horizontally by the movement of the other portion of the lever, consisting of a rigid plate or arm on the lever bearing against the inner section substantially as herein described.

4. In a car coupling, the jointed lever for manipulating the locking device, consisting of an outer section mounted on the car, an inner section engaging the locking device, an enlarged eye on the outer section in which the inner section is freely fitted and a rigid plate or arm on the outer section and against which the inner section bears whereby the latter may be lifted by the movement of the outer section, substantially as herein described.

5. In a car coupling, the jointed lever for manipulating the locking device consisting of an outer section mounted on the car, an inner section engaging the locking device, an enlarged eye on the outer section in which the inner section is freely fitted and means for limiting the longitudinal play of said inner section, substantially as herein described.

In witness whereof I have hereunto set my hand.

JOHN C. LOOK.

Witnesses:

C. H. JOHNSON,
G. E. BASTIAN.