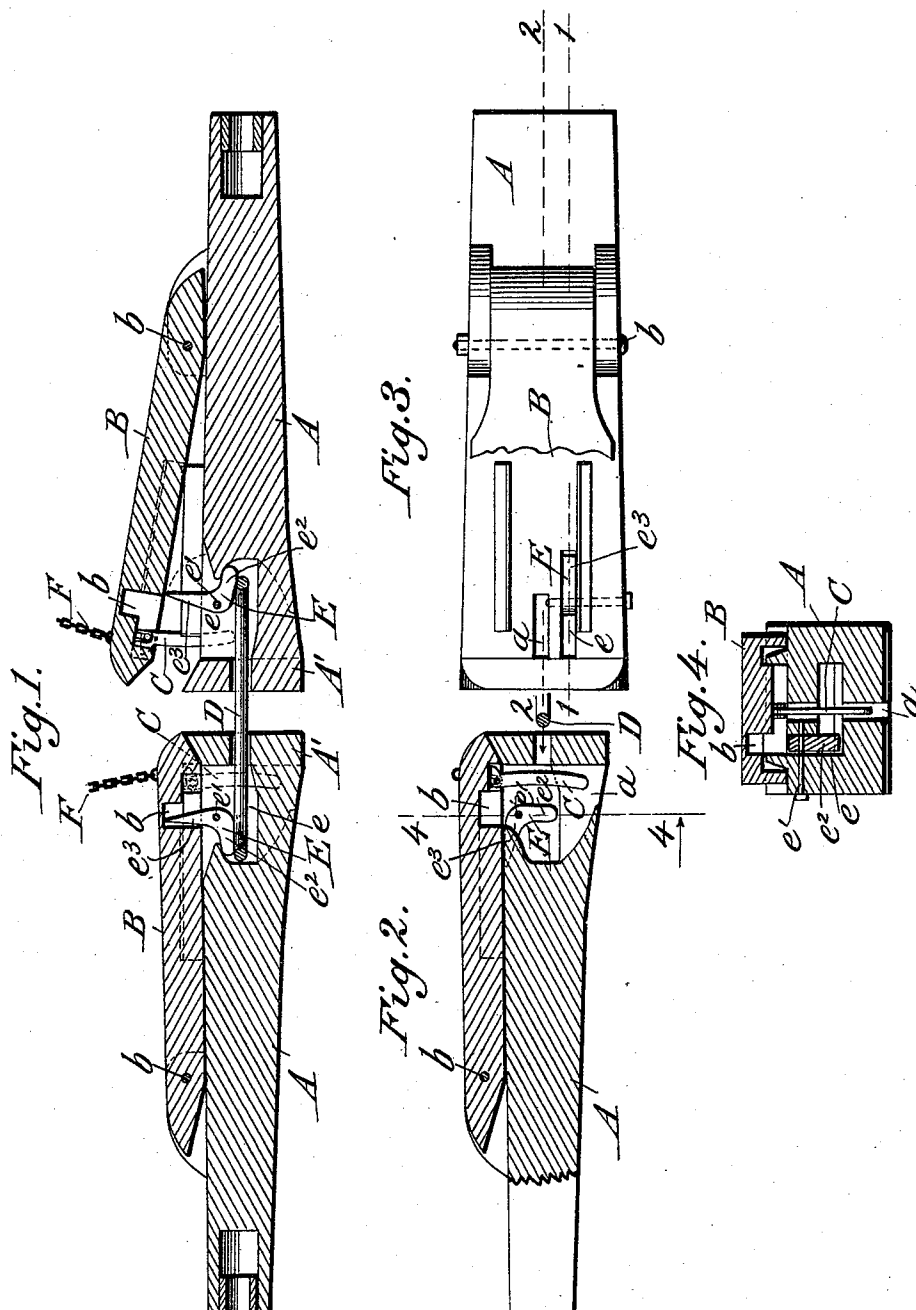


(No Model.)

C. LEISCHER.
CAR COUPLING.

No. 499,235.

Patented June 13, 1893



Attest:

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UNITED STATES PATENT OFFICE.

CHARLES LEISCHER, OF PIERRE, SOUTH DAKOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 499,235, dated June 13, 1893.

Application filed February 16, 1893. Serial No. 462,579. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LEISCHER, a citizen of the United States, residing at Pierre, in the county of Hughes and State of South Dakota, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of car couplings, known as "automatic couplings," that is to say, couplings in which the simple introductions of the link, extending out from one of the draw heads on one car, into the draw head of the other car, when the cars are pushed together, will effect the coupling.

The invention relates more particularly, to a coupling of the class described in my former Patent No. 488,078, dated December 13, 1892, that is to say a coupling in which the tops of the draw bars, are each provided with a yoke or cover hinged thereto, from which yoke depends loosely the coupling pin, extending into a slot, where it engages the coupling link to effect the coupling, the slot being of such a length as to permit the coupling pin to be pushed aside, by the link, when the same is introduced into the draw head and to drop back into the vertical locking position, when the link has passed into the draw head to a sufficient extent.

The object of the present invention is to provide means whereby the coupling pin, will be caused to drop into a locking position, sooner than otherwise, and whereby much shorter links may be employed than heretofore to effect the coupling. This advantage results in greater strength of the coupling.

For this purpose my invention consists in the employment of a tripping device, preferably in the form of a tripping lever, whereby the yoke is thrown upward on the introduction of the link, and the coupling pin is raised wholly or partly out of the path of the coupling link, and my invention consists in such further features and combination of parts, as will hereinafter be set forth, and pointed out in the claims.

In the drawings accompanying this specification Figure 1 represents a vertical, longitudinal section of a coupler, on line 1—1, Fig.

2, embodying my invention in its preferred form; Fig. 2, a similar section, through one of the draw heads on line 2—2, Fig. 3; Fig. 3, a plan view of the same, with the yoke partly broken away to expose the underlying parts; Fig. 4, a transverse, vertical section in line 4—4 Fig. 3.

By referring to the drawings, it will be noted, that the draw-bars A, which are of any ordinary or suitable construction, and which may be attached to the cars in the usual way, are provided with the usual draw-heads A', having the usual mouths or horizontal slots for the introduction of the coupling-pins, and the vertical slots, *a*, *a*, extending through the draw-heads from top to bottom.

As in my former patent, each draw-head is provided with a yoke or lid B, at its top, and pivoted to the draw-head at *b*, whereby the yoke is permitted to swing upwardly in a vertical plane. A coupling pin C, is pivoted to and depends from the front end of each yoke B, at its under side. This coupling pin in the normal position of the parts, extends downwardly, into the slot *a*, and thus serves to lock the coupling link D, in position.

Thus far, the device shown in illustration of my invention, is similar to that shown in my former patent. I will now describe the essential features of my improvement.

When two short coupling links are employed in connection with coupling pin, it will happen that the link will not be pushed aside far enough on the introduction of such link and the pin C, will consequently not lock the link D, unless the yoke B, be raised by hand to allow the pin to clear the link, and swing into a vertical position, and this locks the pin on dropping the yoke into the draw-head. It is the purpose of my invention to make this elevation of the yoke, automatic by the insertion of the link, and for this purpose I provide the draw-head A, with a yoke tripping device, arranged in the path of the coupling link, D. This tripping device may be of any suitable or desired form or construction, all that is necessary, being that it will raise or trip, the yoke B, as the link D, is inserted into the draw-head. However, I consider the form of tripping-device, shown in the drawings the preferable form. In this form, the said yoke tripping device,

consists in a bell-crank-lever, E, arranged in a slot e , into draw-head and pivoted at e' . One arm e^2 of this lever normally lies in a vertical line, so as to be in the path of the coupling-link, as the same is inserted, while the other arm e^3 , is normally in a horizontal line.

In order to permit the yoke, B, to drop when it has been raised to a sufficient extent, and the pin C, has cleared the link, D, the lower surface of the said yoke B, is provided with a recess or cutaway portion, b , into which the end of the arm e^3 , passes when it has reached the upper extreme of movement, and thereby withdraws the support from under the yoke, B, which then drops back upon the draw-head. A chain F, is attached to the upper surface of the yoke B, to uncouple the coupling by raising the yoke, and this chain is carried to any convenient part of the car, within reach of the employé, who operates the coupling.

In order to permit the yoke-tripping lever to resume its normal position, with the arm e^2 , lying in a vertical line, the center of gravity of the said lever, is so arranged that it lies back of the pivot e' , when the lever is elevated.

The operation of the coupler is apparent from the foregoing. When the coupling link D, is introduced into the draw-head, it bears against the vertical arm e^2 , of the tilting lever E, tilting the same, causing the arm e^3 , to raise the yoke B, and thereby allowing the link D, to pass the end of the coupling pin C, much sooner than if the yoke B, were not raised. (See right hand draw-head in Fig. 1.) As soon as the lever E, has been tilted the sufficient extent, its upper arm e^3 , drops into the recess b , in yoke B, and the yoke drops the pin C, engaging the link D, (see the left hand draw-head in Fig. 1.) and locking the same. To uncouple the cars the yoke B, is raised by

chain F, or otherwise, and as soon as the yoke a has been raised, the lever E is released, and drops back into its normal position (see Fig. 2), so as to be again acted upon by the coupling link.

The lever E, may be arranged on either side of the draw-head.

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

1. In a car-coupler, a draw head, a yoke pivoted to the draw head, a coupling-pin carried by the yoke, and a yoke-raising and dropping device arranged in the path of the coupling-link, substantially as set forth.

2. In a car-coupler, a draw head, a yoke pivoted to the top of the draw head, a dependent coupling-pin carried by the yoke and a yoke-raising and dropping device located in the draw head in the path of the coupling-link, substantially as set forth.

3. In a car-coupling, a draw-head in combination with a yoke pivoted to the top thereof, and provided with a depending, coupling pin and a recess, as b , and a bell-crank lever, having a horizontal arm, and a vertical arm extending into the path of the coupling link, substantially as set forth.

4. In a car-coupler, a draw head, a yoke pivoted to the top of the draw head and provided with a recess, a coupling-pin carried by the yoke, and a bell crank pivoted in the draw head, its vertical arm lying in the path of the coupling-link at one side of the longitudinal axis of the same, and its horizontal arm engaging the under side of the yoke, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES LEISCHER.

Witnesses:

TERRELL PATTISON,
JOHN A. HOLMES.