

UNITED STATES PATENT OFFICE.

GEORGE SOUER, OF RICE'S, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 529,207, dated November 13, 1894.

Application filed July 2, 1894. Serial No. 516,331. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SOUER, a citizen of the United States, residing at Rice's, in the county of Benton, State of Minnesota, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to furnish an improved car-coupling which while automatic in its action in coupling the cars together shall be simple in construction, reliable in action and not liable to get out of order.

With this object in view my invention consists in the improved construction, arrangement and combination of parts hereinafter fully described and afterward specifically pointed out in the claims.

In the accompanying drawings—Figure 1 is a perspective view of a car coupling made in accordance with my invention. Fig. 2 is a longitudinal vertical sectional view of the car coupling to be attached preferably to the rear end of a locomotive tender.

While my invention is applicable for attachment to cars, it is most suitable to be applied to the rear end of the tender of the locomotive.

Like letters of reference mark the same parts in both figures of the drawings.

Referring to the drawings by letters A is a horizontal brace-beam on the end of the car or tender, secured thereto by bolts and nuts *a*. To this beam A are secured the upper ends of two elbow shaped bridge-pieces B and C, by means of bolts and nuts *b c*. The lower ends of these bridge-pieces are secured by a bolt *b'* to a longitudinal beam D, which is secured to a second cross beam E by means of bolts and nuts *e*, said beam being also secured to the end F of the car or tender. G is a lever that carries the coupling pin. Said lever is pivoted to and between the bridge pieces B and C by means of a shaft H which is rigidly secured in the pin-lever by any suitable means, in this instance by being made square in cross section for that part which is in the pin lever, and fitted in a square hole therein.

The parts of the shaft H which enter the bridge pieces B and C are cylindrical and one

of them, *h*, projects a short distance beyond the bridge-piece B and has secured to it a crank arm I having a hole *i* in its outer end by which to attach a chain or cord and operate it from a distance.

In the front end of the pin-lever G is pivoted on the bolt *j* the depending coupling pin J, and at its rear end is pivoted a depending block or bar K whose lower end is in the form of a pin *k* to guide it vertically.

L is a guide block which is pivoted by means of a shaft *l* to the bridge-pieces B and C and is located between them. In the front end of the guide block L is a nearly vertical hole *j'* which serves as a guide way for the coupling pin J and in the rear end is a similar guide way *k'* for the guide pin *k*.

Openings *j'* and *k'* substantially registering with the guide ways *j'* and *k'* are formed in the longitudinal beam D, to accommodate the coupling pin J and guide pin *k* in their lowermost positions.

The forward ends of the longitudinal beam D and guide block L are formed as converging inclined jaws M M', and the lower side or bottom of guide block L is hollowed out as shown at *m*, to accommodate the inner end of the coupling link N when in position for coupling the cars together as shown in Fig. 2.

The operation of my invention is as follows: The parts of the coupling are normally in the positions as illustrated, and when another car moves up with the coupling link projecting, the link, guided by the jaws M and M' will ride either up or down, as the case may be, to the central point where the jaws meet and will be received in between the jaws, raising the guide block L and with it the pin lever G and the pin J until the forward end of the link is permitted to pass into the position shown in Fig. 2 in the opening formed by hollowing out the guide block L at *m*. As soon as this occurs, the guide pin and pin lever will drop to their normal positions as shown, the coupling pin passing down through the link and securely coupling the cars together.

To uncouple the cars, the cord or chain heretofore referred to as being attached at *i* to the crank arm I is pulled by any suitable means; the shaft H will partly be rotated and thus cause the front end of pin lever G to rise

and withdraw the pin J from the link. At the same time the rear end of the pin lever G will be forced downward and the block K guided by pin *k* passing through the guide way *k'* in the guide block L will press the rear end of the guide block downward, raising the front end thereof and leaving the link free to be withdrawn. Upon the release of the cord or chain the parts will immediately resume their normal positions.

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

1. The combination of the pivoted guide block L and longitudinal beam having converging front ends, the guide block being provided with a guide way for a coupling pin, the pin-lever, G, the coupling-pin pivoted in the front end thereof and moving in said guide-way, and the rigidly secured bridge-pieces between which the guide block and pin lever are pivoted thereto substantially as set forth.

2. The combination of the cross beams A and E secured to the car, the longitudinal

beam D, the bridge-pieces secured to cross-beam A and to the longitudinal beam D, the guide block L pivoted to the bridge-pieces and having guide-ways *j* and *k'*, the pin lever G pivoted to the bridge pieces above the guide block, and the coupling pin J and block K pivoted to the opposite ends of the pin lever, the block K terminating in guide-pin *k* and the coupling pin and guide pin passing through the guide-ways in the guide-block as set forth.

3. The combination of the beam D having its front end beveled and two bridge pieces secured to its sides, the guide block L pivoted to said bridge pieces, the lever G also pivoted to the bridge-pieces above the block L, a crank lever I on the pivot of said lever G and a coupling pin pivoted to the lever G substantially as described.

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

GEORGE SOUER.

Witnesses:

B. MARTI,

ANDREW C. ROBERTSON.