(No Model.)

3 Sheets—Sheet 1.

J. REINICKE.

CAR COUPLING.

No. 508,976. Patented Nov. 21, 1893.

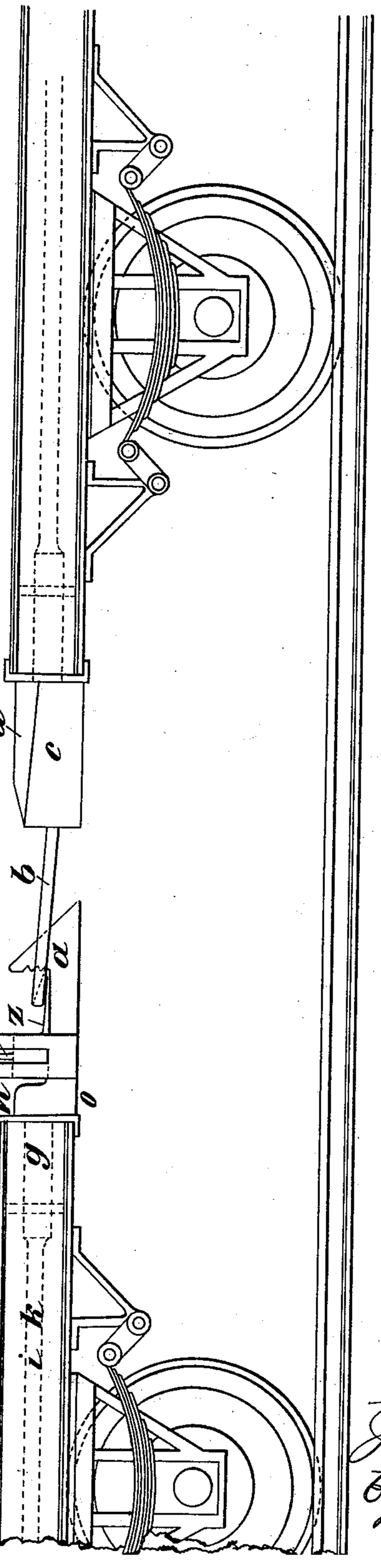

Fig. 1.

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(No Model.) 3 Sheets—Sheet 2.

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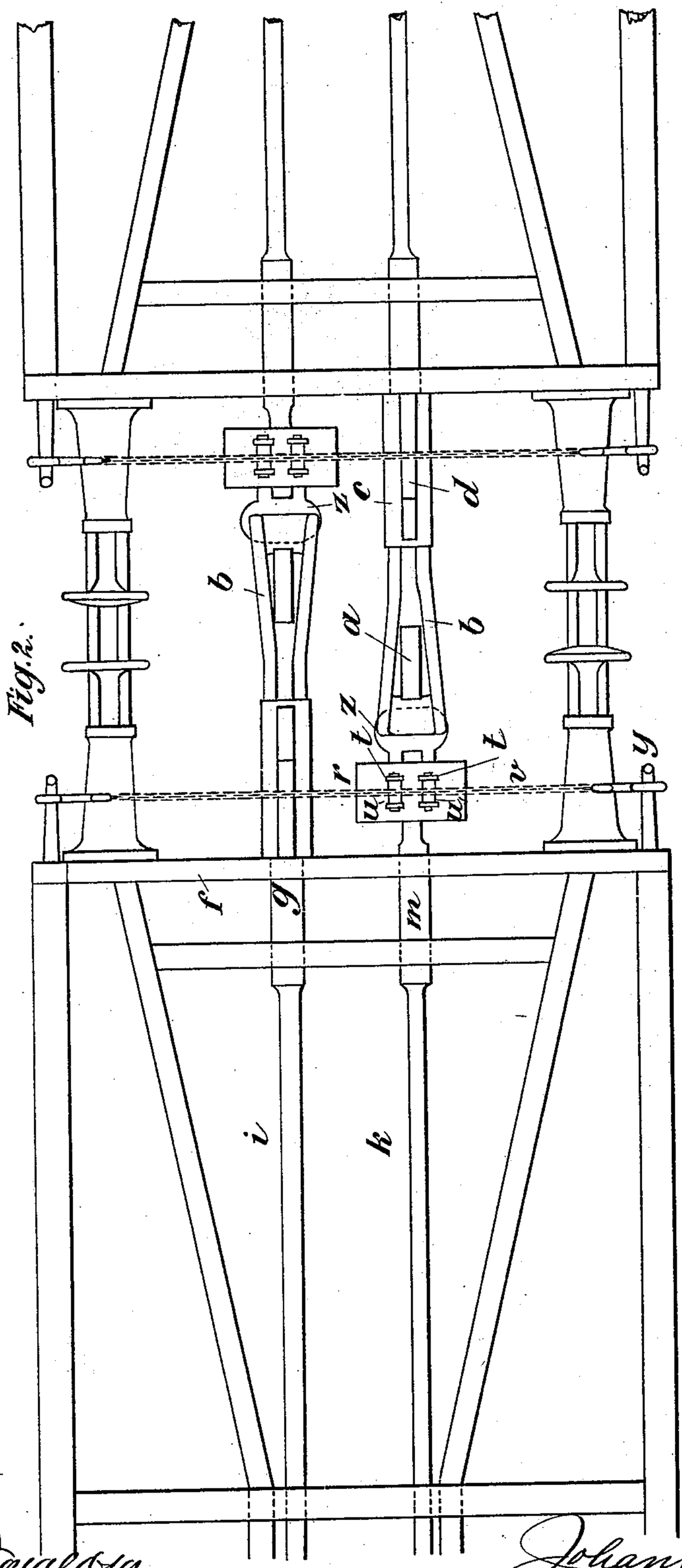

Fig. 2.

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CAR COUPLING.

No. 508,976. Patented Nov. 21, 1893.

Fig. 3.

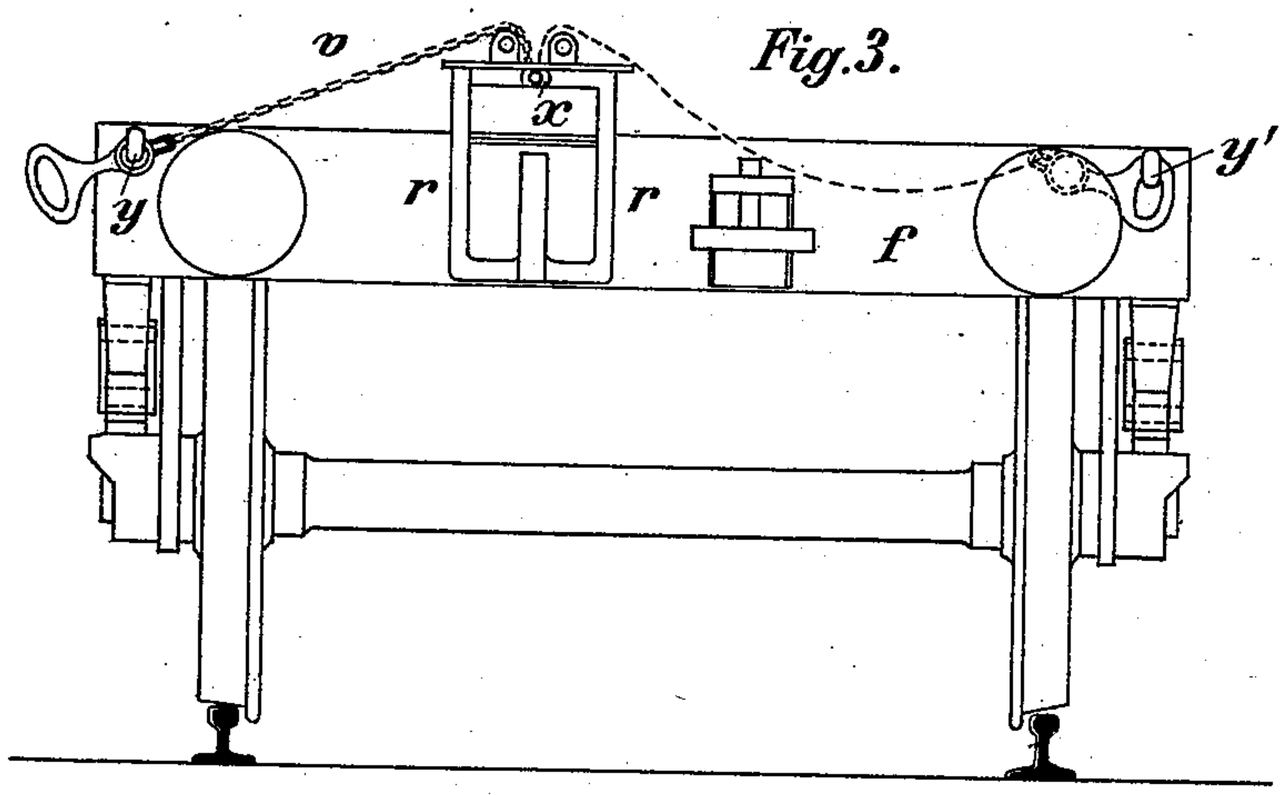


Fig. 4.

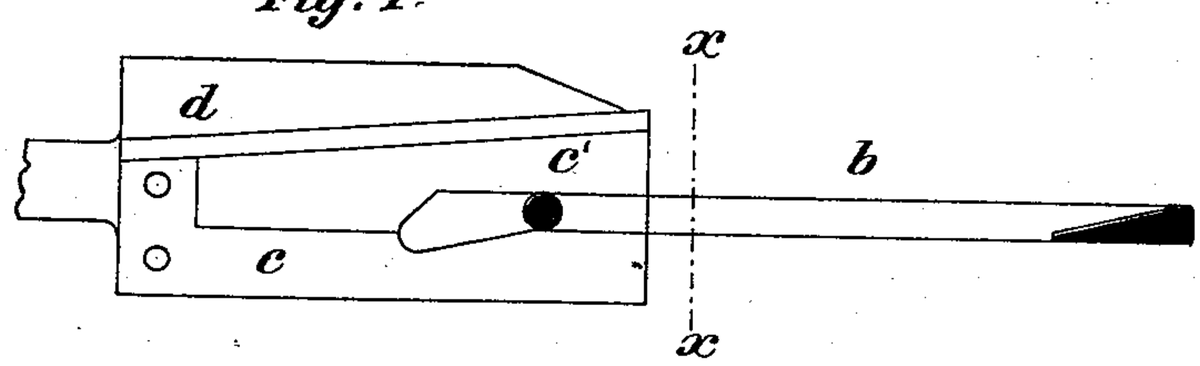
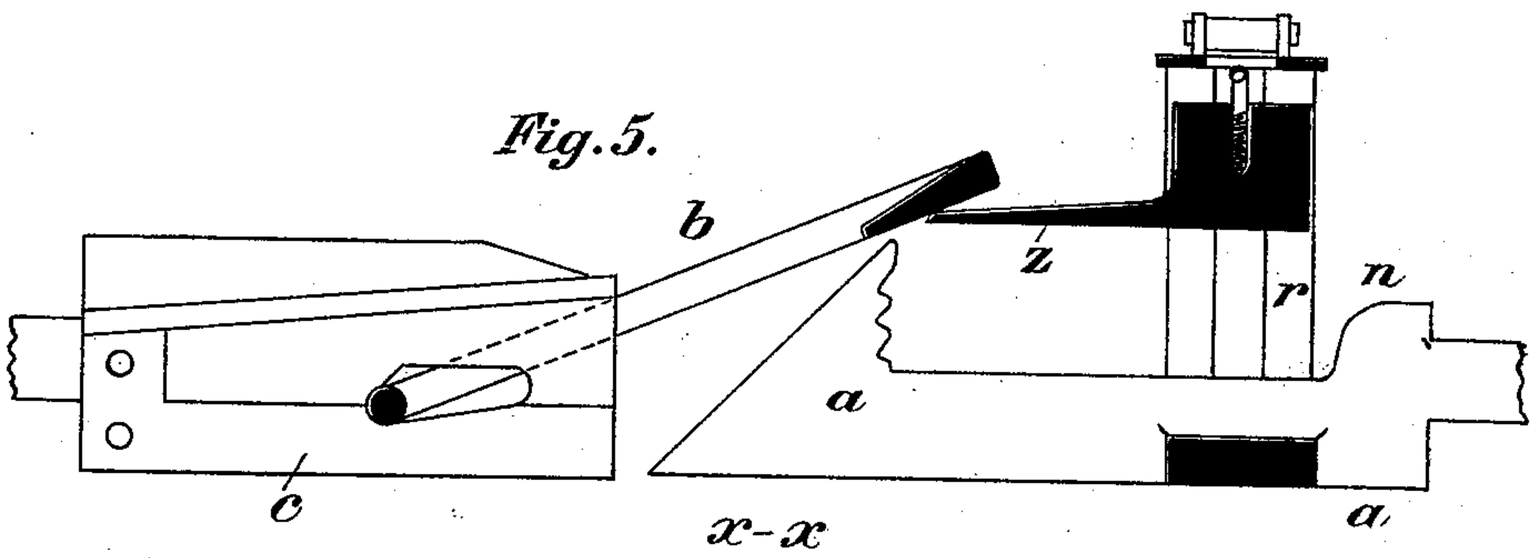
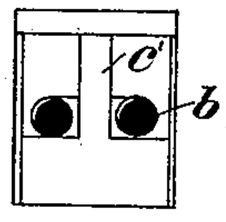


Fig. 5.



x-x

Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHANNES REINICKE, OF WIESBADEN, GERMANY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 508,976, dated November 21, 1893.

Application filed June 23, 1893. Serial No. 478,602. (No model.)

To all whom it may concern:

Be it known that I, JOHANNES REINICKE, a subject of the King of Prussia, residing at Wiesbaden, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Railway-Car Couplers; and I do declare the following to be a full, clear, and exact description of the same, taken with the accompanying drawings.

The object of the invention is to provide an automatic railway car coupler, which may be operated from a position on the side of the car to loosen the adjoining coupler, thereby doing away with the danger that has hitherto existed through the necessity of the operator stepping between the cars to arrange the coupling.

In the accompanying drawings, the detailed arrangement of the coupler is made clear.

Figure 1— represents a side view of the coupler; Fig. 2— a top view of Fig. 1; Fig. 3— a view of the end of a railway car; Fig. 4— a view of a half coupler; Fig. 5— a view of a coupler on the point of linking; Fig. 6— a section on the line *x*, *x* of Fig. 4.

The arrangement and *modus operandi* of the coupler are as follows: On each inner end of a car in place of the coupler now in use at about the same height, in each case, a stationary hook *a* and a link *b* movable in the slot of a box *c*, are so applied, that at the concussion of two cars, the two links by gliding on the sloping outer surfaces of the hooks *a* raise themselves and after passing the highest point of the hook, in consequence of their own weight, fall down and lie against the perpendicular inner surface of the same.

In order to prevent the link from becoming accidentally detached from the hook and to permit it to be lifted out easily when desired the inner surface of the hook is supplied with teeth slanted toward the top. The links are in the form of a trapezium, their non-parallel sides, which serve for drawing purposes being considerably longer than the parallel sides or ends. Of these parallel ends the outer and longer is besides appropriately broadened on its upper side serving to strengthen it, the surface inclining inward, so that the small edge insures a sure grip in the hollows of the teeth of the hook *a*, and a firm hold in the same, and so that in uncoupling an unobstructed action is secured. The other narrow or shorter side of the link is held in the hollow box in the manner represented in Fig. 4, as follows: A perpendicularly penetrating partition *c'* in the middle of the hollow box is far enough open in the front that the link supported therein has ample play in all directions.

The length of the links is so measured, that in reciprocal contact there is still sufficient room for play for the buffer in coupling. In order to prevent the links in the passing of the car around sharp curves, from becoming injured by being jammed against the side walls of the box, it is arranged that the walls can yield to a side pressure of the links.

The uncoupling of the cars is rendered possible by the following arrangement: On the stationary hook a stationary block *r* is secured near the back of the car in which a movable block Z guided by tongues in the grooves of the frame or block *r* can move up or down. A tongue formed on the under side of the movable block Z extends under the link and raises it when the block rises until passing the highest point of the hook. In consequence of its own weight and the inclination of its support, it glides back, a motion which moreover is favored by the specified depression in the under side of the box. The link rests then on the upper edge of the hook and the connection of the two cars is loosened. The movement of the movable block can be effected from the side of the car either by chains, which run on rollers, or by a suitable lever arrangement. Especial attention is called to the fact, that the movable block after every time of using is let back into its lowest position. This takes place in a simple manner. One removes the chains from the fastening, whereupon the movable block in consequence of its own weight falls down automatically.

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

1. In a railway car coupler, a box carried by one car having a vertical division wall with an opening therein, a link held in said opening and a hook carried by the other for automatically engaging the link, substantially as described.

2. In combination, the box carried by one

car having a vertical division wall, with an opening therein, a link having its end held in said opening, and a hook carried by the adjacent car having a serrated bearing face for engaging the link, substantially as described.

3. In a car coupler, a box carried by one car having a vertical division wall with an elongated opening in said wall having an inclined bottom, a square ended link having one end held in said opening, and a hook carried by the other car for engaging the link, substantially as described.

4. In a car coupler, a box having a vertical division wall with an opening therein, a link having one end loosely held in said opening, a hook carried by the adjacent car for engaging the other end of the link, a vertically movable piece carried by the shank of the hook having a tongue extending beneath the link, and means for elevating said piece to uncouple the cars, substantially as described.

5. In a car coupler, a box having a link loosely held therein, a hook having an inclined front face and a corrugated shoulder for engaging said link and preventing accidental displacement and a vertically movable piece having a tongue for engaging the link with operating connections to the side of the car for disengaging the hook and link, substantially as described.

6. In a car coupler, a box having vertical division wall with an elongated opening in said wall having an inclined lower edge, a link having parallel ends and converging sides loosely held by its narrower end in said opening, and a hook having an inclined face for engaging the wider end of the link, and means operated from the side of the car for disengaging the same, substantially as described.

7. In a car coupler, a box having a vertical division wall with an elongated opening therein, having an inclined lower edge, a link having parallel ends and converging sides with its narrow end loosely held in said opening, a hook having an inclined upper face and a corrugated shoulder for engaging the inner edge of the broad end of the link, the said inner edge being sharpened to engage the corrugations and prevent accidental displacement, substantially as described.

8. In a car coupler, a box having a link loosely held therein, a hook engaging said link, vertical guideways carried by the shank of the hook, a block vertically movable between said guideways, a tongue projecting from the lower part of the block beneath the end of the link, rollers mounted on the upper ends of the guides, and operating chains connected to the block passing over said rollers to the side of the car for raising said block and tongue and disengaging the hook and link, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHANNES REINICKE.

Witnesses:

PAUL FISCHER,

JOHN SALOWSKY.