

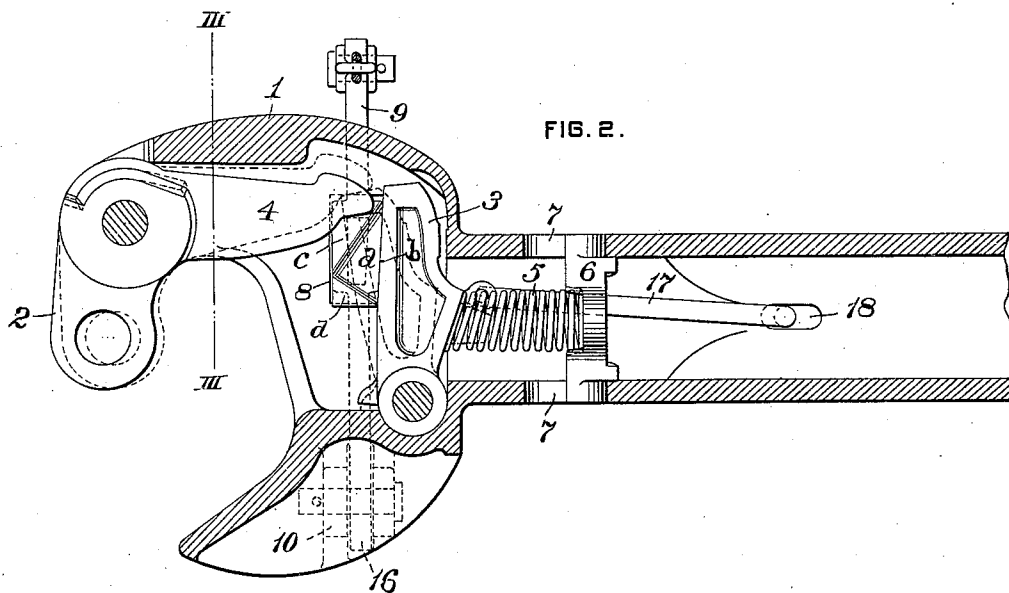
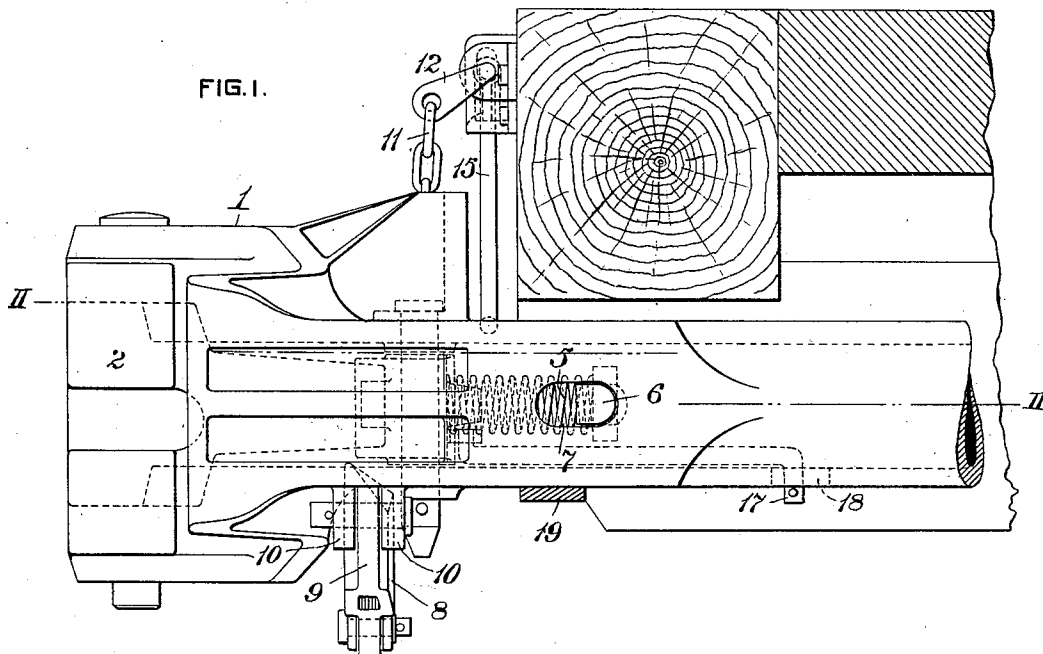
(No Model.)

2 Sheets—Sheet 1.

W. KELSO.
CAR COUPLING.

No. 582,929.

Patented May 18, 1897.



WITNESSES:

Chas. F. Miller.
A. E. Gaither.

INVENTOR.

William Kelso
by Danvers S. Wolcott
Att'y.

(No Model.)

2 Sheets—Sheet 2.

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CAR COUPLING.

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by Danni S. Wolcott
Att'

UNITED STATES PATENT OFFICE.

WILLIAM KELSO, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE
McCONWAY & TORLEY COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 582,929, dated May 18, 1897.

Application filed March 6, 1897. Serial No. 626,198. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KELSO, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Car-Couplers, of which improvements the following is a specification.

The invention described herein relates to certain improvements in car-couplers of the Janney or swinging-hook type, and has for its object a construction or arrangement of mechanism whereby the locking-block may be shifted from engagement with the hook or knuckle and retained in such position until the hook has been shifted from open or closed position.

It is a further object of the invention to provide for the automatic disengagement of the locking-block from the tail of the hook or knuckle in case of the breakage of the coupler or its being torn from its fastenings in the car-frame.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation having my improvements applied thereto and showing the coupler in position on a car-frame. Fig. 2 is a sectional plan view, the plane of section being indicated by the line II II, Fig. 1. Fig. 3 is a transverse section of the coupler-head, the plane of section being indicated by the line III III, Fig. 2. Fig. 4 is a perspective view of the wedge and its operating-lever.

In the practice of my invention the coupler-head 1 and the swinging hook 2 are constructed and arranged in the usual manner. In order to lock the hook in closed position, I employ a pivotally-mounted block 3, having its center of motion to one side of the axis of the coupler, as fully shown and described in Letters Patent No. 471,881, granted March 29, 1892, to William McConway. As described in said Letters Patent, the locking-block is so mounted that its free end can be shifted into the path of movement of the tailpiece 4 of the hook and is made of such a length as to hold or lock the hook in closed position. The movement of the locking-block to lock-

ing position is effected by a spring 5, bearing at one end against the rear side of the locking-block and at the other end against an abutment 6, which has its ends mounted in slots 7 in the barrel of the coupler, as clearly shown in Fig. 2.

In order to shift the locking-block to unlocking position, I employ a wedge 8, which is secured to or formed on a lever 9, having one end pivotally mounted between lugs 10, formed on the under side of the coupler-head on the same side of the coupler with the guide-horn thereof. This wedge 8 is made of sufficient length to project when raised a considerable distance into the interior of the coupler-head, as shown in Fig. 3, and is provided at its upper end with a beveled or inclined face *a*, which when the wedge is raised will strike against the front edge of the locking-block and force the same to the right in Fig. 2, out of engagement with the tail of the knuckle. By reference to Fig. 2 it will be observed that the wedge is so arranged with reference to the position of the locking-block that the apex of the wedge lies to one side of the locking-block when in locking position, so that when the wedge is raised the inclined face *a* will operate immediately upon the front lower edge of the locking-block. By reference to Fig. 4 it will be observed that the vertical height of the inclined face *a* is less than the vertical movement of the wedge, so that when the wedge is raised the flat or vertical portion *b* immediately below the inclined face *a* will pass up or lap over the front face of the locking-block a short distance. As the spring 5 constantly tends to force the block 3 to locking position the block will be forced with considerable pressure against the bearing portion *b* of the wedge, which will thus be clamped and held in raised position by the locking-block and the opposite wall of the slot in the coupler-head. The wedge while held in this position can be drawn down by a movement of its lever 9 or forced down by the action of the tail of the knuckle. As shown in Figs. 2 and 4, the upper end of the wedge is provided with inclines *c* and *d* on opposite sides thereof. If the hook or knuckle 2 is in closed position when the locking-block is shifted by the wedge, the tail of the knuckle

when the latter is opened will strike against the incline *c* and force the wedge down, thus freeing the locking-block 3. By reference to Fig. 2 it will be observed that the tail 4 of the knuckle will not in its opening movement strike against the incline *c* until the tail has passed beyond the free end of the locking-block. This relative arrangement and construction is necessary in order to prevent the locking-block from snapping in front of the tail of the knuckle after the latter has dislodged the wedge. When the knuckle is shifted to closed position, the tail thereof will strike against the incline *b* and force the latter down in case it has been accidentally raised when the knuckle is in open position.

In order to provide for the operation of the wedge from a point outside of the end of the car, the free end of the lever 9 is connected by a chain 11 to a crank-arm 12 on the shaft 13, which is mounted in suitable bearings 14 on the end sill of the car, and is provided at its outer end with an operating-handle 15. In order to prevent the lever 9 from dropping too far in case of the breaking of the chain 11, it is provided with a projection 16 at its pivotal end, so arranged that when the lever has dropped sufficiently far to move the wedge out of the path of movement of the locking-block 3 it will strike against the under side of the coupler and prevent any further movement of the lever or wedge.

In order to provide for the shifting of the locking-block 3 to unlocking position in case of the breakage of the coupler or its being torn from its fastenings on the car-frame, the rod 17 is loosely connected to the locking-block at one end and extends back through the coupler-barrel and has its opposite end downwardly bent, so as to project through a slot 18 in the coupler-barrel. This bent end projects sufficiently far outside of the barrel as to engage, in case of excessive movement of the barrel, with the supporting-strap 19, as clearly shown in Fig. 1. It will be readily understood that on the engagement of the

projecting end of the rod 17 with the strap 19 the locking-block will be held stationary, while the coupler-head and knuckle will continue to move until the tail of the knuckle is free from the locking-block, thereby permitting the knuckle to open and release the broken coupler. This construction will prevent a broken coupler from dropping on the track, as disengagement from the coupler of the adjacent car is effected before the broken coupler is withdrawn from its supporting or carrying irons.

I claim herein as my invention—

1. In a car-coupler, the combination of a swinging hook or knuckle, a locking-block and a vertically-movable wedge for shifting the block out of engagement with the tail of the knuckle, substantially as set forth.

2. In a car-coupler, the combination of a swinging hook or knuckle, a locking-block, and a vertically-movable wedge for shifting the locking-block out of engagement with the tail of the knuckle and adapted to be shifted to release the locking-block by the movement of the knuckle, substantially as set forth.

3. In a car-coupler, the combination of a swinging hook or knuckle, a locking-block, and a vertically-movable wedge for shifting the block out of engagement with the tail of the knuckle and adapted to be held in operative position by the locking-block and to be shifted therefrom by the knuckle, substantially as set forth.

4. In a car-coupler, the combination of a swinging hook or knuckle, a spring-actuated locking-block, a lever, a block having angularly-arranged inclined faces at its end, secured to the lever and movable thereby through the coupler-head to shift the locking-block, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM KELSO.

Witnesses:

F. D. ECKER,
JOSEPH STANTON.