

UNITED STATES PATENT OFFICE.

HENRY GALLAGER, OF SAVANNAH, GEORGIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 558,061, dated April 14, 1896.

Application filed November 30, 1895. Serial No. 570,639. (No model.)

To all whom it may concern:

Be it known that I, HENRY GALLAGER, a citizen of the United States, residing at Savannah, in the county of Chatham and State of Georgia, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

The object of the invention is to provide a new and improved car-coupler which is simple and durable in construction, very effective and automatic in operation, and arranged to couple or uncouple without the operator stepping between the cars.

The invention consists of certain parts and details and combinations of the same, as will hereinafter be described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a portion of an end of a car and coupler embodying my invention and showing the parts at rest. Fig. 2 is a sectional side view of the draw-head A, showing the knuckle B closed and the locking-block D down, with the curved twin lever J in position in the rear of the said locking-block D. Fig. 3 is a sectional side view of the draw-head A, with the knuckle B open and the locking-block D raised, with the foot T of the lever J bearing against the rear end of the tongue C of the knuckle B. Fig. 4 is a front elevation of the twin-lever J. Fig. 5 is a side elevation of the twin-lever J. Fig. 6 is a front elevation of the locking-block D. Fig. 7 is a side elevation of the locking-block D. Fig. 8 is a horizontal sectional view of draw-head A, showing grooves O O and L L. Fig. 9 is a side elevation of the knuckle B, showing the rabbet P on the upper side of the face of tongue C.

Referring to the drawings, Fig. 1 shows a draw-head A of the twin-jaw type, generally described as a vertical-plane coupler, and having its contour lines to conform to the requirements of the Master Car-Builder's Association.

Draw-head A is provided with a knuckle B, said knuckle B adapted to engage with the knuckles of other couplers of a similar type, and the said knuckle B being pivoted to the

draw-head A by a knuckle-pin E. The tongue C of the knuckle B is rabbeted on the upper portion of its face, and when said tongue C is arranged within the draw-head A is engaged by locking-block D, said locking-block D adapted to lock the knuckle B when in engagement with a similar knuckle of a twin draw-head.

Draw-head A is provided with an aperture S through its upper wall to admit of the passage of the arm F of the locking-block D through the said aperture S thus made, as shown in Figs. 2 and 3. Draw-head A is provided with a recess R on the inner side of its upper wall, said recess R adapted to admit of the entrance of the head of the locking-block D when said locking-block D is raised for the purpose of coupling or uncoupling, all as shown in Figs. 2 and 3.

Draw-head A is provided on its inner side walls with vertical grooves O O to permit the passage upward and downward of the trunnions V V of lever J. Draw-head A is also provided with horizontal grooves L L, adapted to provide a way for the trunnions V V of lever J, for the purpose of allowing the said trunnions V V of lever J to work either inward or outward and for the removal of said trunnions as may be desired, as shown in Figs. 2, 3, and 8.

The locking-block D is provided on its upper end with an arm F. The said locking-block D is also provided at the bottom of its inner side with a rabbet W, said rabbet W adapted to engage a similar rabbet P on the upper side of the face or tongue C of knuckle B to permit coupling on a curve, as shown in Fig. 1.

Lever J is a curved twin lever connected by a cross-piece N and so arranged as to admit the arm F of the locking-block D between the two upper curves of the said lever J, as shown in Fig. 2. The said lever J is provided on its sides with trunnions V V, said trunnions V V adapted to work upward and downward and inward and outward in grooves O O L L, as shown in Figs. 2, 3, and 8. One lower end T of said lever J bears against the rear end of tongue C of knuckle B, causing knuckle B to rotate outward whenever the locking-block D is raised, as shown in Fig. 3. The opposite foot U of the twin lever J is pro-

vided with a projection Z on its lower face, said projection Z adapted to engage the lower rear end of locking-block D when said locking-block D is raised for the purpose of coupling or uncoupling, as shown in Figs. 3 and 5.

When the knuckle B is closed, with tongue C in the recess of draw-head A, the locking-block D is down with arm F inclining rearward and passing through aperture S in draw-head A. One side of locking-block D engages the face of tongue C, while the opposite side of said locking-block D bears solidly against the inner side wall of draw-head A, thus holding said tongue C securely locked in draw-head A, all of which is shown in Fig. 1.

When draw-head A is in engagement with a similar draw-head attached to another car and it becomes necessary to uncouple the cars, the locking-block D can be raised by means of the arm H of the lifting-rod I, turning upward, the lever G, to which is attached the chain connecting the arm F of locking-block D with the said lever G.

Having thus described my invention, what I claim as new is—

1. The combination of a draw-head and knuckle, said knuckle having a tongue, and a locking-block with a twin lever pivotally

controlled by means of trunnions on its sides, the upper faces of the lever being in engagement with the rear shoulders of the locking-block, the inner foot of the twin lever adapted to bear against the rear end of the tongue of the knuckle and cause the knuckle to rotate outward whenever the locking-block is raised and pressed against the upper arms of the twin lever, the opposite foot of said twin lever being provided on its face with a projection that is adapted to support the locking-block, when said locking-block is in a raised position, substantially as set forth.

2. A draw-head provided with two sets of grooves, one set vertical, and the other set horizontal, said grooves adapted to provide a way for the said trunnions of the twin lever, for the purpose of allowing the said trunnions of the twin lever to work upward or downward, and for the removal of said trunnions inward or outward, as may be desired, all substantially as set forth.

In testimony of which I have hereunto subscribed my name.

HENRY GALLAGER.

Witnesses:

CARRIE E. DWELLE,
JOHN NICOLSON, Jr.