

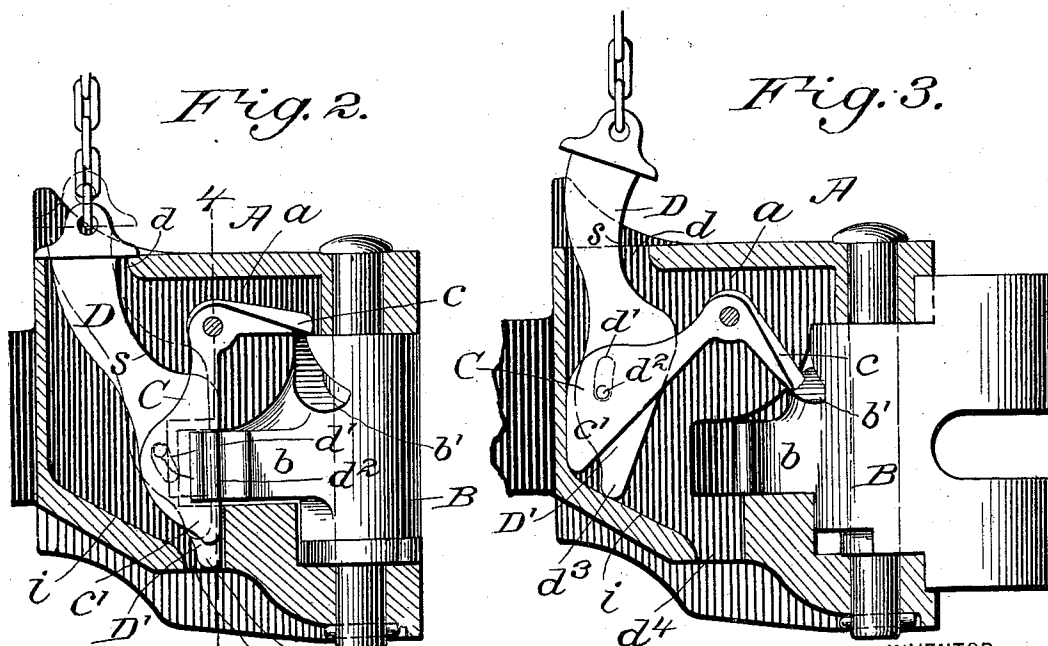
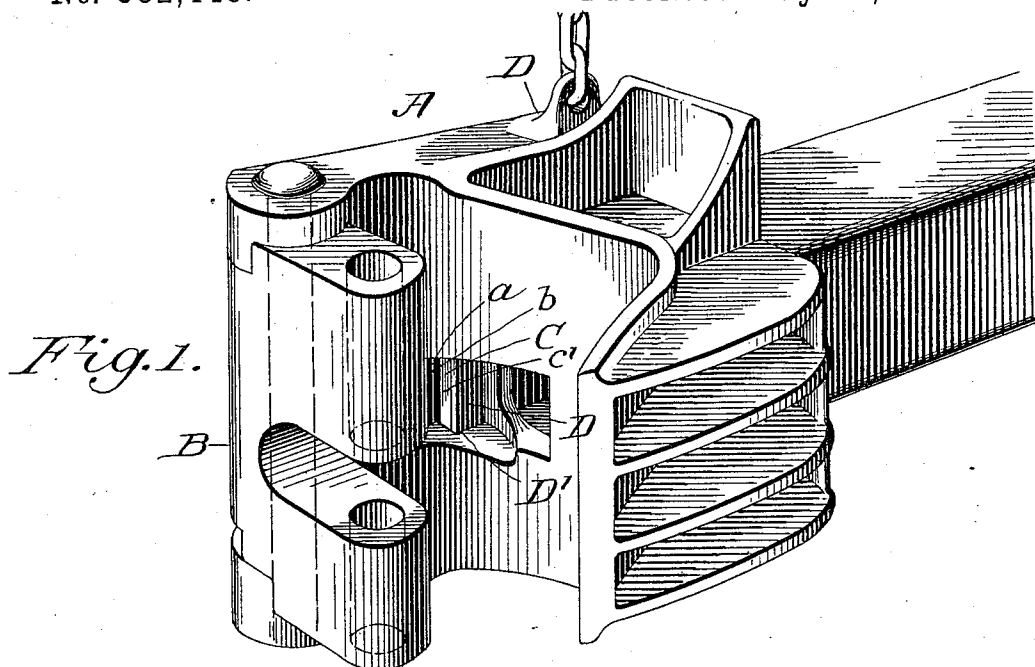
(No Model.)

2 Sheets—Sheet 1.

C. L. WHEELER.
CAR COUPLING.

No. 582,448.

Patented May 11, 1897.



WITNESSES:

N. H. Humphrey.
Mary E. Martin.

INVENTOR

Clarence L. Wheeler

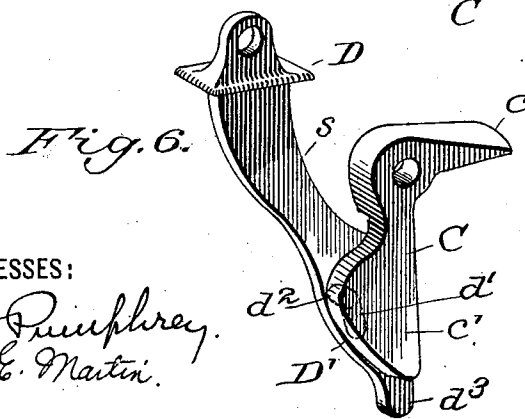
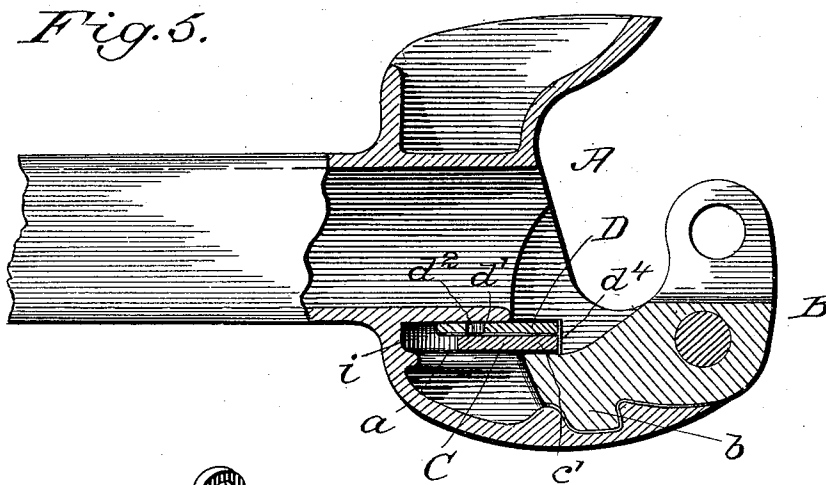
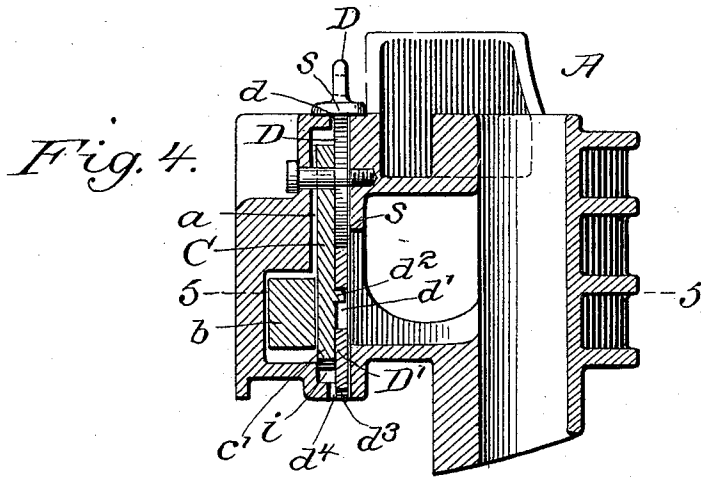
BY

J. R. Little,
his ATTORNEY

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UNITED STATES PATENT OFFICE.

CLARENCE L. WHEELER, OF MARION, INDIANA, ASSIGNOR TO FRANK A. FOX, OF NEW YORK, N. Y.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 582,448, dated May 11, 1897.

Application filed January 28, 1897. Serial No. 621,055. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE L. WHEELER, a citizen of the United States, residing at Marion, in the county of Grant and State of Indiana, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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-coupling devices which embody a lever or catch adapted to lock or control a swinging knuckle; and my improvements have special relation to those car-coupling devices of this general type which comprise a recessed coupler-head carrying an angular knuckle having a tailpiece adapted to swing into said recess and a lever pivoted within said recess and having an arm adapted to swing into the path of movement of the tailpiece and lock the latter in coupling position. Heretofore in this type of car-coupling devices the locking lever or catch has been liable to the danger of accidental disengagement from and release of the knuckle by reason of the movement of said lever upon its pivot, which may be caused by jarring or jolting.

My improvements are designed to obviate this disadvantage; and to this end they have for their object the effective and positive locking of the lever or catch against accidental movement and the provision of simple and effective devices supplementary to the locking lever or catch by which the same will be positively retained in locked position. In this connection it will be noted that my invention embodies certain improvements which are especially applicable to the form of car-coupling covered by Patent No. 560,788, granted May 26, 1896, to Floyd H. Fox.

In the drawings, Figure 1 is a perspective view of a car-coupling provided with my improvements. Fig. 2 is a vertical longitudinal sectional view taken on the plane of the locking-levers, the latter being in normal position. Fig. 3 is a corresponding view showing the levers in raised position. Fig. 4 is a vertical transverse sectional view taken on

the line 4 4, Fig. 2. Fig. 5 is a horizontal sectional view taken on the line 5 5, Fig. 4. Fig. 6 is a perspective view of the locking-levers.

Corresponding parts in all the figures are denoted by the same letters of reference.

Referring to the drawings, A designates the coupler-head, having the recess *a* and carrying the pivoted angular knuckle B, provided with the tailpiece *b* and with an inclined slot or groove *b'* in its hub.

C designates the locking-lever, which is pivoted within said recess, *a* and comprises a short top arm *c* in engagement with said cam-slot *b'* and a bottom arm *c'*, adapted to swing into the path of movement of the tailpiece *b* and lock the latter in coupling position, said lever operating to unlock the knuckle and simultaneously open the same when its lower arm is raised.

The foregoing members may be in the main of the construction and arrangement heretofore employed.

D designates the link, which is pivotally connected to the lower arm of the locking-lever and by which the latter is raised to unlock the knuckle. The locking-lever has heretofore in this type of car-coupling devices been formed of a single member, the lower end of which rests between the walls of the bottom of the recess *a* and locks the knuckle when in this position, and the lifting-link has had its bottom end pivoted to the lower arm of the lever at the rear, from which pivotal lower-end connection the link extends upwardly and through a slot *d* in the top of the recess *a*. In this foregoing construction and arrangement jarring or jolting is liable to throw the single locking-lever from engagement with the tailpiece of the knuckle and thus cause the accidental unlocking of the latter.

In my invention and improvement the link D is extended downwardly at the side of the lever C, below its pivotal connection therewith, as at D', and said pivotal connection is formed by an elongated slot *d'* in the link, through which passes the transverse pivot-pin *d''*. The lower portion D' of the link, be-

low its pivotal connection, thus forms a supplementary locking-lever at the side of the main locking-lever C, and also forms a supplementary locking device by which the lever C is securely and effectively retained in normal position and against accidental displacement by jarring or jolting. In carrying out this locking function the lower end or bottom point d^3 of the link or supplementary member D will drop into an auxiliary recess or slot d^4 at the bottom of the recess a below the lever C, and thus retain the latter against accidental swinging movement upon its pivot.

By reason of the elongated pivotal connection between the main locking-lever C and the link or supplementary lever D (embodying the elongated slot d') the supplementary locking-lever D has an independent vertical movement with relation to the lever C. Thus when the lever C and the supplementary lever D swing down together into locking position the latter will automatically drop in an independent vertical movement into the auxiliary recess or slot d^4 . The locking-lever is then locked in position. When it is desired to unlock the knuckle, the pull upon the link D will first lift the latter from engagement with the bottom recess or slot d^4 in an independent vertical movement with relation to the lever C while said lever remains stationary, which operation unlocks the lever C, and the members C and D will then simultaneously swing rearwardly, thus unlocking the knuckle.

I prefer to incline the bottom of the recess a upwardly and rearwardly, as at i , over which incline the lower ends of the members D and C will travel in their operation, and the top portion of the link or supplementary lever D, above its pivotal connection, is preferably segmentally curved, as shown at S, to facilitate its line of travel with relation to the top slot d .

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a car-coupling device comprising a coupler-head carrying a knuckle and a lever adapted to swing into the path of movement of said knuckle and lock the same, a lifting-link or supplementary lever pivotally connected to the locking-lever and extended downwardly so that it will engage with the coupler-head and lock the main lever in position; substantially as and for the purpose set forth.

2. In a car-coupling device comprising a coupler-head carrying a knuckle and a lever adapted to swing into the path of movement of said knuckle and lock the same, a lifting-link or supplementary lever pivotally connected to the locking-lever and having the lower portion extending below its pivotal connection and at the side of the main lever and projecting at the bottom of the latter, said

supplementary lever forming a catch for engaging the coupler-head and locking the main lever in position; substantially as and for the purpose set forth.

3. In a car-coupling device comprising a coupler-head having a recess and carrying a knuckle and a lever pivoted in said recess and adapted to swing into the path of movement of the knuckle and lock the same, a lifting-link or supplementary lever pivotally connected to the locking-lever and extending downwardly at the side thereof, said extension projecting below the main lever and being adapted to engage an auxiliary recess or slot in the main recess of the coupler-head; substantially as and for the purpose set forth.

4. In a car-coupling device comprising a coupler-head having a recess and carrying a knuckle and a lever pivoted in said recess and adapted to swing into the path of movement of the knuckle and lock the same, a lifting-link or supplementary lever having an elongated pivotal connection with the locking-lever and an independent vertical movement with relation thereto and extended downwardly at the side thereof, said extension projecting below the main lever and being adapted to engage an auxiliary recess or slot in the main recess of the coupler-head; substantially as and for the purpose set forth.

5. In a car-coupling device comprising a coupler-head carrying a knuckle and a lever adapted to swing with relation to said knuckle and lock the same, a lock or catch pivotally mounted upon said lever and having an independent vertical movement with relation thereto; substantially as and for the purpose set forth.

6. In a car-coupling device comprising a coupler-head carrying a knuckle, a double locking-lever embodying a main lever and a supplementary lever arranged at the side of the same, both of said levers being adapted to swing into the path of movement of said knuckle and the supplementary lever being adapted to lock the main lever in position; substantially as and for the purpose set forth.

7. A car-coupling device comprising a coupler-head, a knuckle mounted thereon, and a lever adapted to swing into the path of movement of said knuckle and lock the same, in combination with a lifting device embodying means for locking said lever in position, whereby in the operation of said lever it is conjointly locked and elevated by the same device; substantially as and for the purpose set forth.

8. A car-coupling device comprising a coupler-head provided with a recess and carrying a knuckle having a tailpiece adapted to swing into said recess and an inclined slot or groove in its hub, and a lever pivoted in said recess and having an arm engaging said inclined or cam slot and an arm adapted to swing into the path of movement of the tailpiece, where-

by said lever will operate to lock and unlock the tailpiece and simultaneously open the knuckle, in combination with a supplementary lever pivotally connected with the main lever and forming a catch engaging the coupler-head and locking the main lever in position, said levers conjointly forming a double locking-lever in which the supplementary member has an independent vertical move-

ment with relation to the main member, substantially as set forth.

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

CLARENCE L. WHEELER.

Witnesses:

WM. S. FREEL,
SHY BERCLEY.