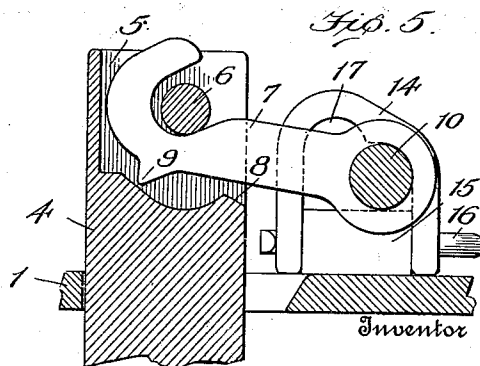
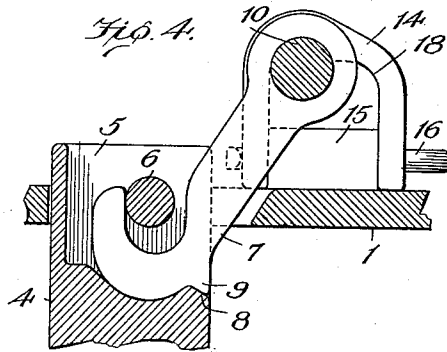
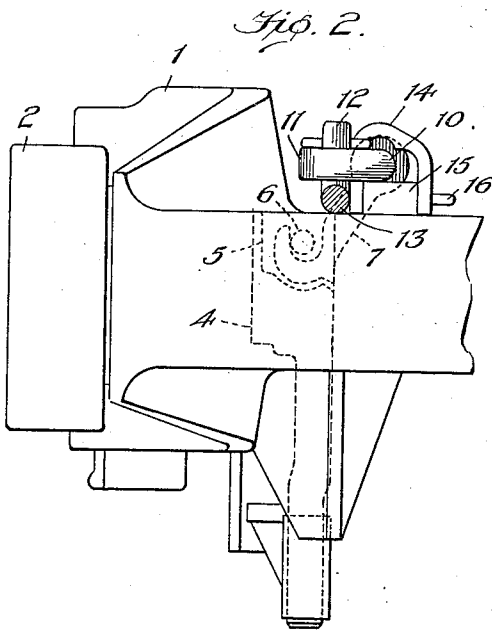
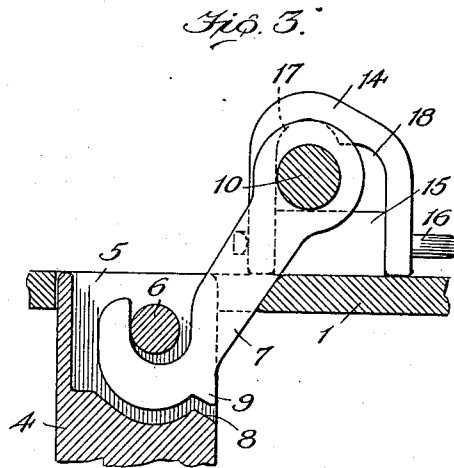
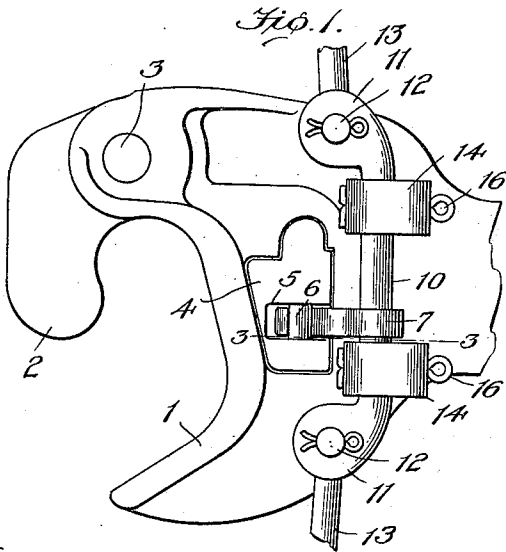


W. J. REGAN.
CAR COUPLING.
APPLICATION FILED JULY 8, 1914.

1,148,049.

Patented July 27, 1915.



Witnesses

Edwin L. Bradford
M. E. Dye.

William J. Regan
Ritter & Ritter
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM J. REGAN, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO McCONWAY & TORLEY COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CAR-COUPLING.

1,148,049.

Specification of Letters Patent.

Patented July 27, 1915.

Application filed July 8, 1914. Serial No. 849,709.

To all whom it may concern:

Be it known that I, WILLIAM J. REGAN, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the construction of car couplers and more especially to certain improvements which are designed to produce a car coupler that is excellently suited for application to cars where the vertical space beneath the platform or overhanging portion of the car which can be utilized for the coupler is quite limited.

It is the object of my invention to produce an improved coupler of the character indicated which is simple and durable, and which may be readily assembled and repaired.

It is also the object of my invention to provide top operating lock-actuating means for the coupler which may be disposed under the car platform without interference with the usual air, signal and steam pipes.

These several objects are attained by a construction which, generally stated, embraces the combination of a coupler head, the knuckle pivotally mounted thereon, a recessed lock for restraining outward rotation of the knuckle, actuating means for the lock involving a rotatable member which is mounted on the coupler head and which has a pin and slot connection with the lock, and yokes detachably secured to the coupler head for maintaining the lock-actuating means in assembled position on the coupler head.

In the drawings illustrating the preferred embodiment of the invention, the scope whereof is pointed out in the claims.

Figure 1 is a plan view of a coupler embodying my invention; Fig. 2 is a side elevation of the construction illustrated in Fig. 1; Fig. 3 is a detail section taken on the line 3—3, Fig. 1, the parts being in locked position; Fig. 4 is a view corresponding to Fig. 3, but illustrating the relative positions assumed by the parts when an accidental unlocking movement of the coupler is arrested; and, Fig. 5 is a view corresponding

to Fig. 3 but illustrating the positions of the parts when the lock is actuated to permit outward rotation of the knuckle.

In the drawings, 1 indicates the coupler head and 2 is the knuckle, which is pivotally secured to the coupler head by means of a knuckle pin 3. The lock 4, by which outward rotation of the knuckle 2 is restrained, is preferably mounted in the coupler head 1 so as to be vertically slidable with respect thereto. At its upper end the lock is fashioned with a shouldered recess 5 which opens laterally through the rear face of the lock and which preferably also opens through the top of said lock. Extending transversely of the recess 5, and preferably forming an integral part of the lock 4 which reaches from wall to wall of the recess, is a pin or bar 6 that is adapted to extend into a slot with which the rotatable lock-actuating member 7 is provided. The lower wall of the recess 5, which conforms generally to the lower face of the lock-actuating member 7, is preferably provided with an inclined face or shoulder 8 which, as illustrated in Fig. 4, is adapted to engage a corresponding projection or shoulder 9 upon the member 7, to thereby prevent the lock 4 from accidentally assuming an unlocked position.

The forward end of the lock-actuating member 7 is preferably slotted to form an upwardly opening hook which extends into the recess 5 of the lock and loosely embraces the transversely extending pin 6. At its upper end the member 7 is rigidly attached to a transversely extending shaft 10 which is rotatably mounted upon the top of the coupler head so as to be also capable of limited bodily movements both upwardly and rearwardly with respect to said head. As a convenient means for rotating the shaft 10 to cause the lock 4 to perform an unlocking movement, the ends of said shaft are preferably provided with forwardly extending arms 11 which may be perforated to receive the upturned ends 12 of corresponding uncoupling levers 13 which extend in opposite directions to the sides of the car.

The shaft 10 and attached parts are preferably retained in assembled position on the coupler head 1 by means of yokes 14 which embrace corresponding lugs 15 on the upper surface of the coupler head. These yokes, which are preferably detachably secured to the lugs 15 by means of cotter pins 16, are

of irregular form on their interiors, each being provided with a recess 17 which, as shown in Fig. 4, accommodates the shaft 10 when the parts are performing their function of preventing accidental unlocking of the coupler, and being also provided with a recess 18 which is adapted to receive and permit the rotation of the shaft 10 when the parts are operating to cause the lock 4 to assume an unlocked position. The shaft 10 preferably rests upon the upper surfaces of the lugs 15.

The construction being such as described, the operations of the devices in unlocking the coupler and in preventing accidental unlocking thereof will be as follows. When either of the uncoupling levers 13 is properly actuated from the side of the car to which the coupler is attached the shaft 10 is caused to rotate, simultaneously moving rearwardly until it occupies the recesses 18 in the yokes 14. This rotation of the shaft 10, which is communicated to the lock-actuating member 7, causes the lock 4 to be moved to unlocked position, as illustrated in Fig. 5. When the lock 4 accidentally attempts to assume an unlocked position the shoulder 8 upon said lock comes into engagement with the corresponding lug of shoulder 9 upon the member 7 and the latter, together with the shaft 10, is moved upwardly until the parts are brought to rest by the shaft 10 seating itself in the recesses 17 of the brackets 14. The lock 4 is thus prevented from accidentally executing a complete unlocking movement.

I claim:

1. In a car coupler, the combination with a coupler head and the knuckle pivotally mounted thereon, of a lock for said knuckle, actuating means for the lock rotatably mounted upon the coupler head, and bearing means on said coupler head for maintaining said lock-actuating means in assembled position on said head, said lock actuating means being rotatable within said bearing means and also being bodily movable with respect to said bearing means, and said bearing means being provided interiorly with a plurality of recesses one of which is adapted to receive said lock-actuating means when the lock accidentally moves toward unlocked position and one of which is adapted to receive said lock-actuating means when the latter is actuated to move the lock to unlocked position.

2. In a car coupler, the combination with

a coupler head and the knuckle pivotally mounted thereon, of a lock for said knuckle, actuating means for said lock mounted upon the upper face of the coupler head and rotatable upon an axis extending transversely of said head, and yokes detachably secured to said coupler head for maintaining said lock-actuating means in assembled position on said head, said lock-actuating means being rotatable within said yokes and also being bodily movable with respect thereto, and each of the respective yokes being provided on its interior with recesses one of which is adapted to receive said lock-actuating means when the said lock accidentally moves toward unlocked position and one of which is adapted to receive said lock-actuating means when the latter is actuated to move the lock to unlocked position.

3. In a car coupler, the combination with a coupler head and the knuckle pivotally mounted thereon, of a lock for said knuckle, and means for actuating said lock and for preventing said lock from accidentally assuming an unlocked position, said lock having a recess therein, and said means involving a rotatable member which is mounted on the coupler head and extends into said recess and which has a pin and slot connection with said lock for actuating the latter, said rotatable member having a portion adapted to engage a wall of said recess to prevent said lock from accidentally assuming an unlocked position, and said pin and slot connection allowing a movement of the rotatable member to release it from its lock-engaging position to permit it to actuate the lock.

4. In a car coupler, the combination with a coupler head and the knuckle pivotally mounted thereon, of a lock for said knuckle, and means for actuating said lock and for preventing said lock from accidentally assuming an unlocked position, said lock having a recess near its upper end and being provided with a pin extending transversely of said recess, and said means involving a rotatable hooked member mounted upon the coupler head and adapted to engage said pin and also having a shoulder which is adapted to engage said lock.

In testimony whereof I affix my signature, in the presence of two subscribing witnesses,

WILLIAM J. REGAN.

Witnesses:

ENOCH GEORGE, Jr.,
WM. ROGERS.