

APPLICATION FILED JAN. 29, 1910.

Patented Jan. 9, 1912.

Fig. 1.

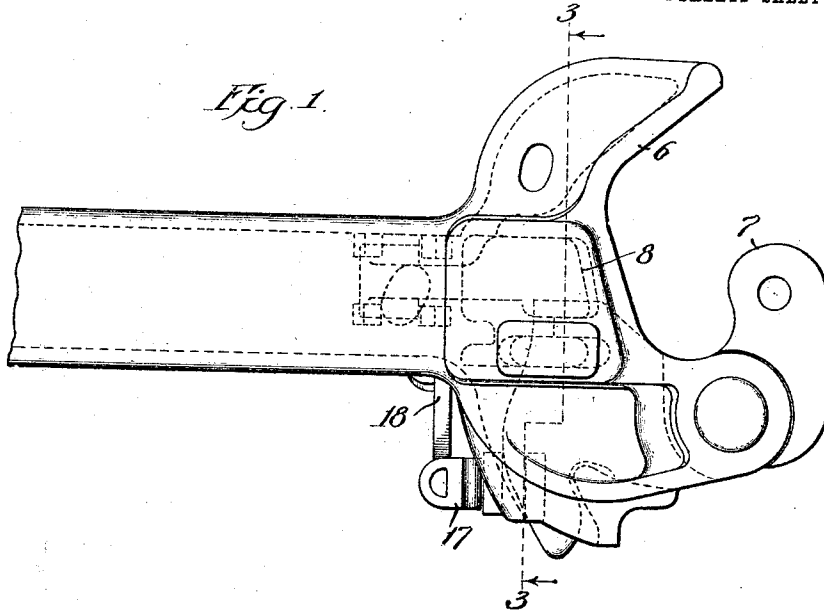
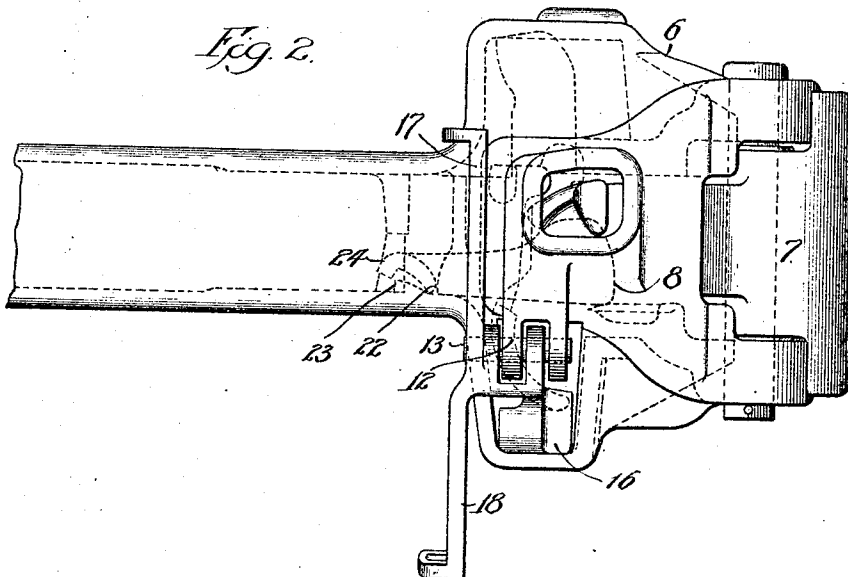


Fig. 2.



Res. F. Davison  
J. Wilson

Edmund P. Kime

By Linthicum Belt & Fuller  
Atty's.

E. P. KINNE.

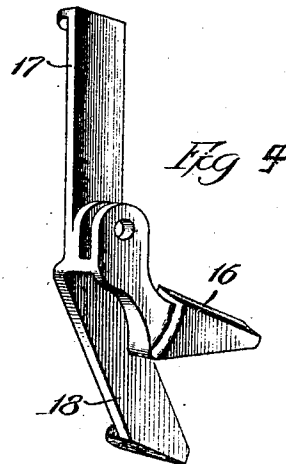
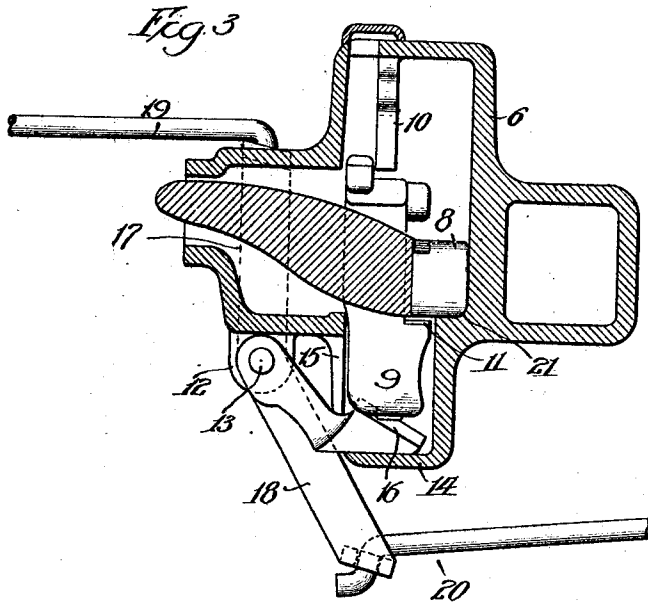
CAR COUPLING.

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1,013,880.

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2 SHEETS—SHEET 2.



Witnesses:

*Ed. C. Davis*  
*A. J. Wilson*

Inventor:

*Edmund P. Kinne*  
*By Linthicum Bell & Fuller*  
*Attys.*

# UNITED STATES PATENT OFFICE.

EDMUND P. KINNE, OF ALLIANCE, OHIO, ASSIGNOR TO AMERICAN STEEL FOUNDRIES,  
OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## CAR-COUPLING.

1,013,880.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed January 29, 1910. Serial No. 540,733.

### *To all whom it may concern:*

Be it known that I, EDMUND P. KINNE, a citizen of the United States, residing at Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention relates to that class of couplers of the M. C. B. type which employs a pivoted knuckle, a lock therefor, and a lifter for operating the lock. This general type of lock is disclosed in the patent granted to Janney, Kinne, and Trump, on November 24, 1908, No. 905,078. The construction therein disclosed embodies a lifter which projects out through the top of the coupler head or casing, and is adapted to be operated by means disposed above the coupler head.

It is an object of my present invention to provide a construction in which the lock lifter shall be entirely inclosed within the casing, thereby obviating the danger of the lifter being broken off or displaced when it is in its elevated position.

A further object is the provision of means for actuating the lifter, which is adapted to be secured upon the coupler head and to project beneath the lifter, whereby the lifter is operated from below. Furthermore, the operating mechanism is so constructed that it constitutes a two-way lifting mechanism which may be operated by pulling a chain or rod from either side of the car, thereby eliminating the usual handles, rock-shafts and levers, which are ordinarily attached to the sill-beam of the car.

In the patent above referred to, the lock is provided with anti-creeping provisions which are normally in operative position when the lock is in locking position. In my present invention I have provided the lock with anti-creeping provisions, which are normally in inoperative position, but which are brought into operative position to prevent creeping of the lock, as soon as the lock begins to creep. The shoulder on the interior of a coupler shank, and the hook on the lock, which constitutes the anti-creeping provision, being normally out of engagement with each other, afford no frictional resistance to the raising of the rear end of the lock in the initial opening movement thereof. Creeping of the lock, however, is effectually prevented because as

soon as the forward or locking end of the lock begins to creep under draft, the anti-creeping provisions are brought into operative relation and further creeping movement is prevented.

In the accompanying drawings which illustrate a preferred embodiment of my invention Figure 1 is a plan of my improved coupler. Fig. 2 is an elevation thereof. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a perspective of the side lifting mechanism.

In the drawings, 6 represents the coupler head or casing; 7 the knuckle; 8 the lock, and 9 the lifter. These parts are so constructed and arranged that the knuckle is adapted to be held in closed position by the lock, and said lock is released from locking position by vertical movement of the lifter. The lifter is disposed entirely within the casing and is adapted to be guided in its vertical movement by a rib 10, which extends outwardly and downwardly from the casing wall. This rib engages with a groove 9' in the side of the lifter 9, and said lifter is provided with a shoulder 11 for engagement with the underside of the lock 8, to lift the lock into unlocking position.

In order that the lifter may be disposed entirely within the casing with no portion thereof projecting outside the casing, I have provided separate means for actuating the lifter. This lifter actuating means is pivotally mounted on the side of the casing by means of lugs or ears 12, preferably cast integral with the casing, and a bearing pin 13 which passes through the bearing openings in the lugs and in the hub of the lifter actuating device, and pivotally supporting said device thereon, as clearly shown in Fig. 2. The draw head 6 is constructed to provide a depressed portion 14, adapted to receive and guide the lower end of the lifter 9, and open at one side as at 15, for the reception of the laterally and the downwardly extending bearing portion 16 of the lifter actuating device. The lifter 9 rests upon and is supported by this bearing portion of the lifter actuating device, which normally assumes the position shown in Fig. 3, with the lifter in lowered position and the lock in locking position and the lower face of the bearing portion 14 resting on the lower wall of the portion 14 of the casing.

It will be noted that I make the bearing portion 16 of comparatively large size. This mass of metal in addition to providing a large bearing surface for the lifter, acts as a counterweight and avoids the necessity for springs or other means to return the opener to normal position.

In order that the lock may be actuated from either side of the car, I have provided the lifter actuating mechanism with an upwardly extending arm 17 and a downwardly extending arm 18, to the ends of which are attached rods 19 and 20 or other operating means. It will be evident that by pulling upon either one of these rods from either side of the car, the lifter actuating device will be rocked on its pivot to raise its bearing portion, thereby raising the lifter and bringing the lock into unlocking position to release the knuckle. The lock is supported on the tail of the knuckle when the latter is opened, while the lifter and the lifter actuating mechanism are allowed to resume their normal position.

The lock shown in the drawings is supported at its rear end within the shank of the coupler, its forward end being heavy and provided with a flat face to make contact with the vertical face of the knuckle tail, and being supported when in its lowermost position, by a ledge 21 in one side of the draw head, as shown in Fig. 3.

My invention affords a coupler in which the lock is easily actuated because the initial movement of the lifter is opposed only by the weight of the front end of the lock, the anti-creeping provision being in inoperative position, thereby affording no frictional resistance to the upward movement of the lifter, and the arms 17 and 18 of the

lifter actuating mechanism being longer than the bearing portion 16, an effective leverage is afforded, which multiplies the power applied to the rods, and renders the manipulation of the lock easy and certain.

While I have shown and described the preferred embodiment of my invention, it will be evident that various minor changes in the construction and mechanical details may be resorted to without departing from the spirit of the invention as set forth in the appended claims.

What I claim is:

1. In a car coupler, the combination of a coupler head having a pivoted knuckle, a lock, and a lifter disposed internally of said head, a lifter actuating lever pivoted to said head, said lever having a weighted portion which is normally disposed within a recess in said head, and means for actuating said lever, substantially as described.

2. In a car coupler, the combination of a draw head having a depressed portion provided with an opening in the side thereof, a knuckle pivoted in said head, a lock for said knuckle, a lifter for the lock, and means for operating the lifter pivoted to the side of the draw head and comprising a bearing portion projecting into the draw head through the opening in the side of the depressed portion thereof and a plurality of lever arms extending in opposite directions from the point of pivotal attachment to the draw head, whereby to actuate said lifter and lock, substantially as described.

EDMUND P. KINNE.

Witnesses:

L. C. CARLISLE,  
E. H. TROTTER.