Oct. 1, 1946. E. P. KINNE 2,408,653

COUPLER

Filed July 30, 1943 3 Sheets-Sheet 1

Fig. 1

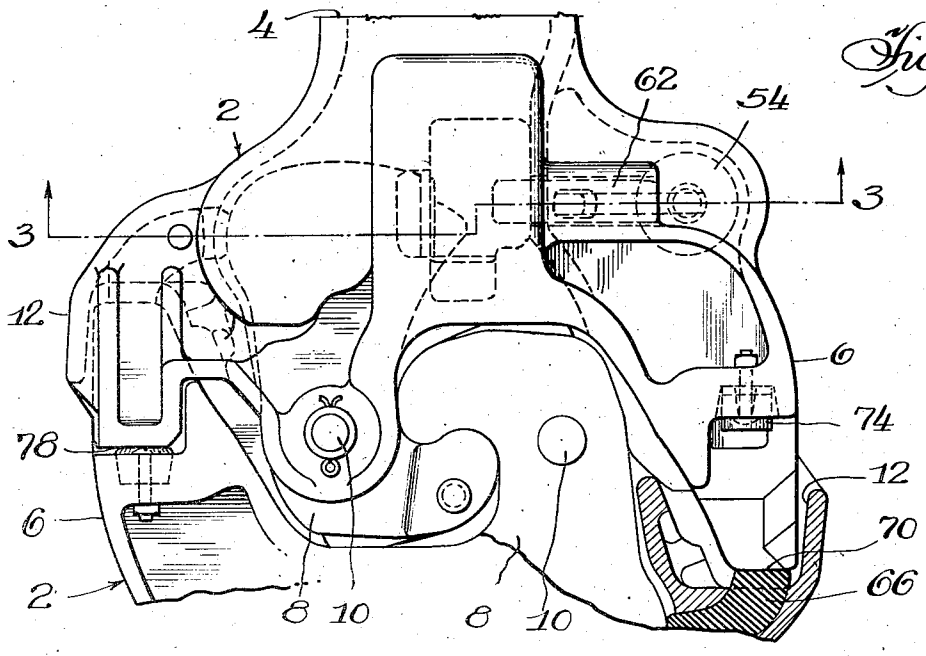
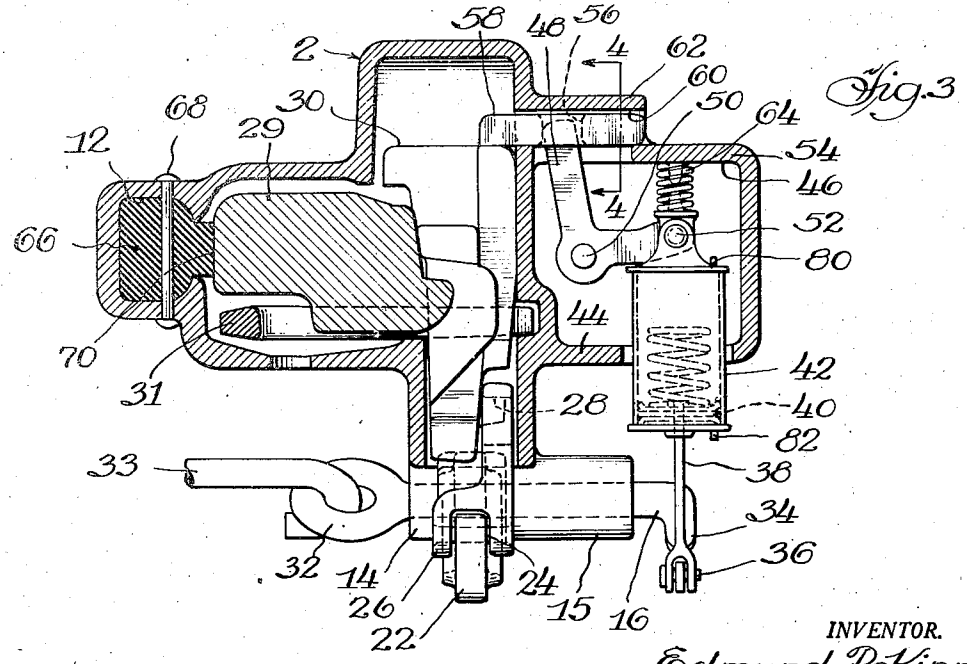


Fig. 3



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COUPLER

Filed July 30, 1943 3 Sheets-Sheet 2

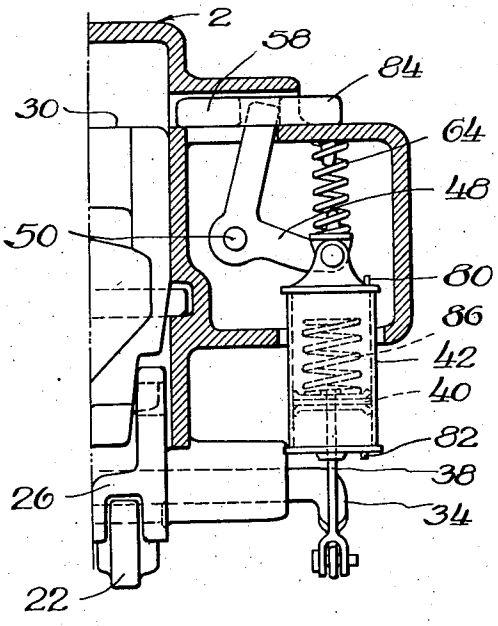


Fig. 5

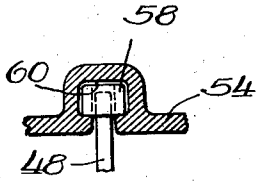


Fig. 4

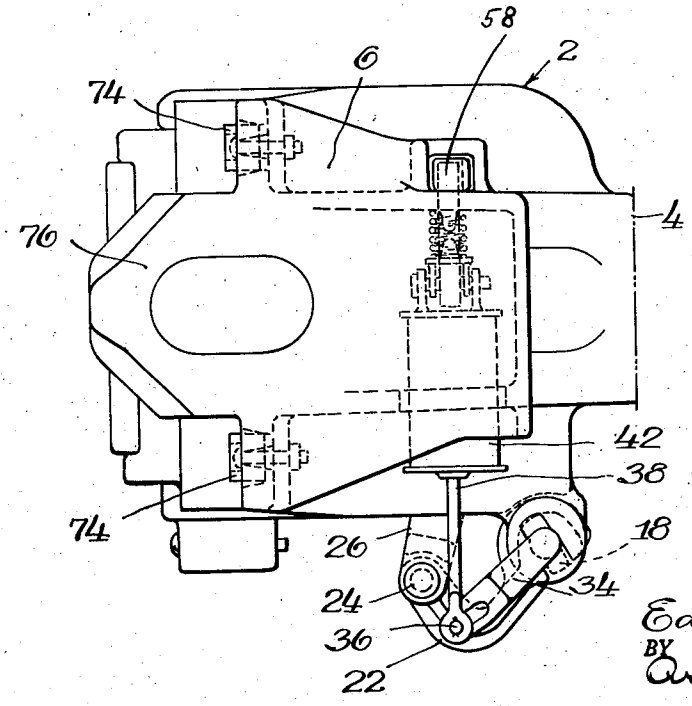


Fig. 2

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COUPLER

Filed July 30, 1943 3 Sheets-Sheet 3

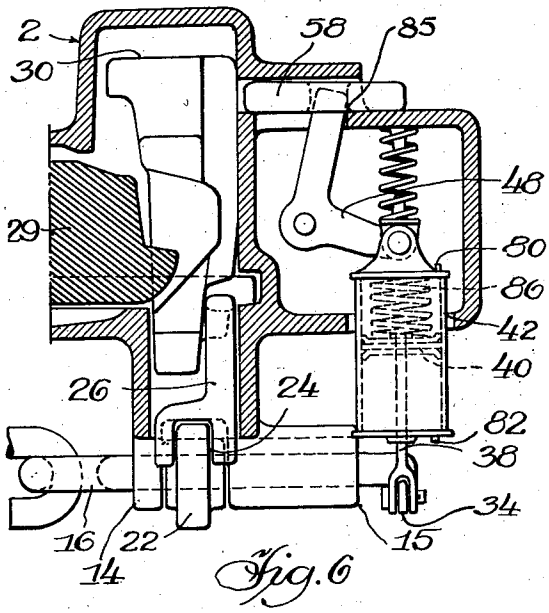


Fig. 6

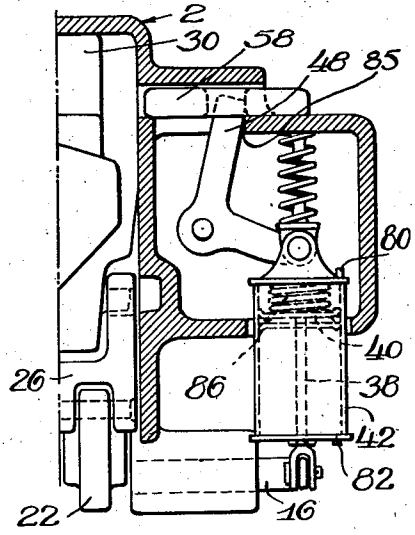


Fig. 7

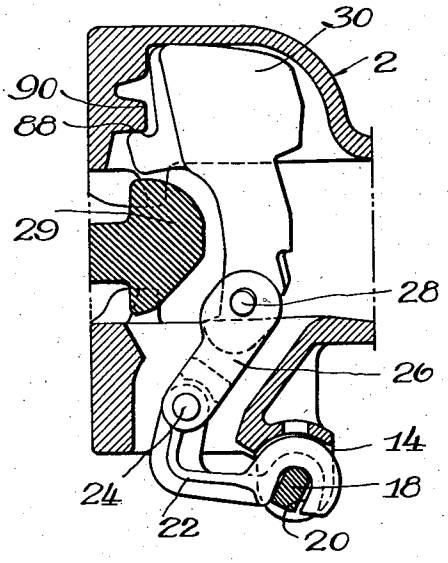


Fig. 8

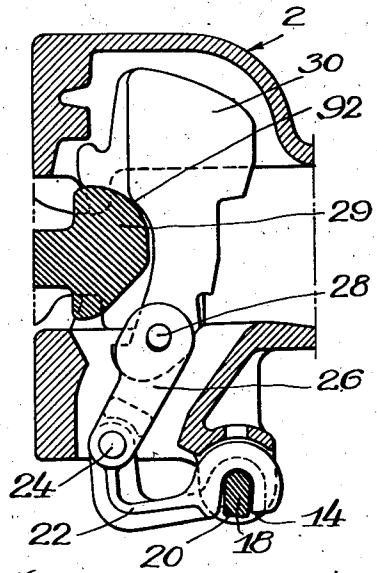


Fig. 9

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Patented Oct. 1, 1946 2,408,653

UNITED STATES PATENT OFFICE

2,408,653

COUPLER

Edmund P. Kinne, Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application July 30, 1943, Serial No. 496,802

43 Claims. (Cl. 213—153)

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This invention relates to couplers of the A. A. R. standard "Type E" bottom rotary operated or the A. A. R. tight lock coupler which, in modified form, is the one illustrated herein.

One of the difficulties which has been experienced with standard A. A. R. couplers, and especially with the tight lock coupler, is accidental unlocking, causing a train parting. This is no doubt due to a number of conditions and has shown the necessity of positive means for holding the lock down in locked position.

An object of this invention is therefore to provide such positive means for holding the lock down when in coupled position and maintaining this condition until the lock is released by a trainman.

Another object of this invention is to provide means for releasing the "lock-to-the-lock" or "anticreep" by the trainman without going between the cars, thus eliminating the possibility of accidental injuries.

Still another object of my invention is to enable the train operator to unlock the coupler, thereby raising the lock to lockset position for uncoupling at the same time and by the same means which releases the "lock-to-the-lock."

A further object of my invention is to provide novel telltale means to indicate when the coupler lock is in locked position and when the "lock-to-the-lock" is functioning.

My invention comprehends means for actuating the lock-to-the-lock and also raising the coupler lock by means of an air cylinder device controlled by the trainman.

Still another object of my invention is to facilitate locking of the coupler by providing positive means for forcing the lock down without depending solely on gravity as in present couplers.

A specific object is to provide a lock-to-the-lock or anticreep member slidably mounted in a slot through the guard arm side of the coupler, said member being adapted for engagement with the top of the lock to hold the same in locked position and said member in its retracted position projecting outwardly of the coupler to afford external, visual indication of the fact that the lock-to-the-lock is not functioning.

My novel coupler comprehends a pocket on the guard arm side thereof, said pocket being adapted for the reception of actuating means including an air cylinder device for simultaneous actuation of the lock-to-the-lock and the lock actuating rotor.

In the drawings,

Figure 1 is a top plan view, partly in section, of mating couplers embodying my invention, the couplers being in locked condition with the anticreep means in operation.

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Figure 2 is a side elevation of one of the couplers shown in Figure 1, taken from the guard arm side thereof.

Figure 3 is a sectional view, taken in the vertical transverse planes indicated by the line 3—3 of Figure 1, the lock and anticreep mechanism being shown in elevation.

Figure 4 is a sectional view in the plane indicated by the line 4—4 of Figure 3.

Figure 5 is a further fragmentary sectional view comparable to Figure 3 and showing the anticreep member retracted from engagement with the lock and with the lock in locked position.

Figure 6 is a fragmentary sectional view corresponding to Figure 3 with the anticreep member retracted from engagement with the lock and with the lock raised to lockset position.

Figure 7 is a fragmentary sectional view corresponding to that of Figure 3 but showing the lock in full knuckle throw position, and Figure 8 is a sectional view taken in a longitudinal vertical plane through the coupler to further illustrate this condition.

Figure 9 is a fragmentary sectional view corresponding to Figure 8 but showing the lock resting on the knuckle after the same has been thrown.

Describing in detail my novel form of coupler structure and referring first to the showing thereof as illustrated in Figures 1 to 4 inclusive, it will be noted that each coupler comprises the usual coupler head, generally designated 2, and integrally formed with the shank 4, a fragmentary portion only of which is shown. The coupler head comprises the usual guard arm portion 6 and the knuckle 8, which may be pivoted at 10 for automatic action in well known manner. My novel coupler comprises a cavity or recess formed within the coupler head at the knuckle side thereof and I have designated this portion a knuckle tail or guard arm pocket 12, said pocket serving to house resilient means more particularly described hereafter and as illustrated and described in detail in my copending application Serial No. 428,179, filed January 26, 1942, in the United States Patent Office.

Each coupler head is provided with the spaced depending trunnion lugs 14 and 15 affording pivotal bearing for the rotor 16, said rotor having a key 18, as best seen in Figures 3, 8 and 9, for reception within a slot 20 on the lifter arm or lever 22 for actuation thereof substantially as

shown and described in my Patent No. 1,639,300, issued August 16, 1927, by the United States Patent Office. The arm 22 is pivoted at 24 to a link 26 which is pivoted at its upper end at 28 to the lock 30, said lock being adapted to be raised out of locking engagement with the knuckle 8 or to be lowered into said engagement by the rotor 16, the arm 22, and the link 26 in customary manner. The knuckle tail 29 and the lock 30 are operatively associated with the knuckle thrower 31 in usual manner.

At one end thereof the rotor 16 is provided with an eye 32 for manual actuation in the conventional manner, as by a rod indicated at 33, and at the opposite end thereof said rotor is provided with a lever 34 pivoted at 36 to the piston rod 38 of the piston 40 within the air cylinder 42, said air cylinder extending through an opening in the bottom wall 44 of a pocket 46 integrally formed with the coupler head 2. This pocket I shall designate a bell crank pocket inasmuch as it houses the bell crank lever 48 pivoted at 50 to the coupler head.

The bell crank 48 is also pivoted at one end thereof as at 52 to the air cylinder and the opposite end of said bell crank extends through an opening in the top wall 54 of the pocket 46 for reception within a slot 56 in an anticreep member 58 which is slidably positioned within a slot 60 defined by the wall 62 and by the top wall 54 of the bell crank pocket 46. A release spring 64, here shown as a coil spring, extends between and bears against an abutment on the cylinder 42 and an abutment on the top wall 54 of the bell crank pocket, each of said abutments comprising positioning lugs received within the spring 64 as clearly illustrated in the sectional views of Figures 3 and 5.

It may be noted that a resilient member 66 is secured at 68 within the guard arm pocket 12 of each coupler for abutment at 70 with the guard arm of the mating coupler, and likewise the guard arm 6 of each coupler is provided with spaced resilient members 74, 74 mounted respectively above and below the guard arm nose 76 for abutment as at 78 (Figure 1, left) with surfaces on the mating coupler, all as fully illustrated and described in my before-mentioned co-pending application.

Figures 1 to 4 show the couplers in coupled position with the locks in locking engagement with the knuckles and with each lock engaged by its associated anticreep member 58. This is accomplished by forcing actuating fluid, such as air, into the upper end of the cylinder 42 through the port 80 and by venting the lower end of the cylinder by means of the port 82, thus causing the piston rod 38 to be urged downwardly within the cylinder 42 to the fullest extent of the downstroke of said piston. It will be seen that this causes the lever 34 to be urged downwardly and causes the bell crank lever 48 to be rotated in a counter-clockwise direction about the pivot 50, thus urging the anticreep member 58 into engagement with the top of the lock 30. At the same time by means of its upward movement the cylinder 42 compresses the spring 64 against the top wall 54 of the bell crank pocket.

Referring now to Figure 5, it will be seen that the anticreep member 58 is withdrawn from engagement with the top of the lock 30, and said anticreep member projects outwardly of the coupler head as at 84, thus acting as a telltale means to afford external, visual indication of the fact that the anticreep or lock-to-the-lock is not functioning. At the same time the lever 34 is in substantially the same position as in Figure 1, thus maintaining the lock in locked position with respect to the knuckle tail. This condition is accomplished by exhausting or venting the cylinder at both ends through the ports 80 and 82, thus permitting the release spring 64 to urge the cylinder 42 downwardly, whereby the bell crank 48 is rotated in a clockwise direction about its pivot 50 to retract the anticreep member 58 from engagement with the top of the lock 30. Under these conditions the lock may be raised manually or by means of the power cylinder device, as shown in Figure 6, where the piston is urged upwardly against the spring 86 within the cylinder 42.

It may be noted that the conditions shown in Figure 6 may be accomplished by venting the upper end of the cylinder through the port 80 and by admitting pressure fluid to the lower end of the cylinder through the port 82, thus urging the piston 40 upwardly whereby the piston rod 38 is operable through the lever 34 to rotate the rotor 16 which lifts the lock 30 through the medium of the arm 22 and the link 26. Downward movement of the cylinder is limited by abutment of the bell crank 48 as at 85 with the top wall of the bell crank pocket 46. Thus the lock, as illustrated in Figure 6, is raised by means of the power cylinder device to lockset position preparatory to an uncoupling operation.

Figures 7 to 9 inclusive illustrate the manner in which the knuckle may be thrown by the air cylinder device preparatory to a coupling operation. Assuming that the coupler knuckle is in closed position and it is desired to open the same in order to effect a coupling, air is vented from the cylinder 42 through the port 80 and actuating fluid is admitted to the lower end of the cylinder through the port 82 until the piston 40 is urged upwardly to the fullest extent of its upstroke within the cylinder 42, thus compressing the spring 86 to a maximum. It will be apparent that under these conditions the lock 30 is urged upwardly with the fulcrum thereon in engagement at 88 (Figure 8) with the ledge or lug 90 within the coupler to afford rotatable movement of the lock 30 about the fulcrum, thus throwing the knuckle open by means of the knuckle thrower 31 as will be clearly apparent to those skilled in the art. Thereafter, both ends of the cylinder 42 may be vented whereupon the spring 86 will urge the piston 40 downward to move the lock 30 downwardly into engagement at 92 (Figure 9) with the knuckle tail 29 preparatory to a coupling operation.

After the couplers have been coupled the weight of the piston 40 will normally actuate the rotor, as in Figure 5, to drop the knuckle 30 into locking engagement with the knuckle tail, the spring 86 being operable to overcome any friction between the piston 40 and the inside surface of the cylinder 42. Thereupon the lower end of the cylinder may be vented through the port 82 and actuating fluid may be admitted to the upper end of the cylinder through the port 80. This will not only force the lock into locked position in the event that it has not already dropped all of the way but will also urge the anticreep member 58 into engagement with the top of the lock, as illustrated in Figure 3.

It will be understood that, if desired, the piston rod 38 may be connected to the bell crank 48 and the cylinder 42 may be connected to the lever 34 in a simple reversal of the arrangement illustrated herein.

It is to be understood that I do not wish to be limited by the exact embodiment of the device shown which is merely by way of illustration and not limitation as various and other forms of the device will, of course, be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

I claim:

1. In a coupler, a pivoted knuckle, a lock presenting flat bearing surfaces for compression between said knuckle and a wall on said coupler, depending trunnion lugs on said coupler, a rotor pivoted from said lugs, a lifter arm interlocked with said rotor, a link pivoted to said arm and said lock, a lever fixed to said rotor, a bell crank pocket on the guard arm side of said coupler, a bell crank pivoted within said pocket, a slot through said coupler above said pocket and partly defined by the top wall thereof, an opening through said wall communicating with said slot, a slidable anticreep member mounted in said slot for movement into and out of locking engagement with said lock, the upper end of said bell crank extending through said opening for connection to said member, a slot in the bottom wall of said pocket, a double-acting power cylinder device movably positioned within said last-mentioned slot, said device being connected at opposite ends thereof to said lever and said bell crank, and resilient means bearing against the upper end of said device and against said top wall.

2. In a coupler, a pivoted knuckle, a lock presenting flat bearing surfaces for compression between said knuckle and a wall of said coupler, depending trunnion lugs on said coupler, a rotor pivoted from said lugs, a lifter arm interlocked with said rotor, a link pivoted to said arm and said lock, a lifter fixed to said rotor, a bell crank pocket on the guard arm side of said coupler, a bell crank pivoted within said pocket, a slot through said coupler above said pocket and partly defined by the top wall thereof, an opening through said wall communicating with said slot, a slidable anticreep member mounted in said slot for movement into and out of locking engagement with said lock, the upper end of said bell crank extending through said opening for connection to said member, a slot in the bottom wall of said pocket, and a double-acting power cylinder device movably positioned within said last-mentioned slot, said device being connected at opposite ends thereof to said lever and to said bell crank, said member extending through said first-mentioned slot externally of said coupler when said member is out of engagement with said lock.

3. In a coupler, a pivoted knuckle, a lock presenting flat bearing surfaces for compression between said knuckle and a wall on said coupler, depending trunnion lugs on said coupler, a rotor pivoted from said lugs, a lifter arm interlocked with said rotor, a link pivoted to said arm and said lock, a lever fixed to said rotor, a bell crank pocket on the guard arm side of said coupler, a bell crank pivoted within said pocket, a substantially horizontal slot through said coupler above said pocket and partly defined by the top wall thereof, an opening through said wall communicating with said slot, a slidable anticreep member confined within said slot and adapted for movement into and out of locking engagement with said lock, the upper end of said bell crank extending through said opening for connection to said member, a slot in the bottom wall of said pocket, and a double-acting power cylinder device movably positioned within said last-mentioned slot, said device being connected at opposite ends thereof to said lever and said bell crank respectively.

4. In a coupler, a pivoted knuckle, a lock therefor, an anticreep member slidably mounted on said coupler for movement into and out of locking engagement with the top of said lock, said coupler comprising guide means for said member, a bell crank lever fulcrumed within said coupler and connected at one end thereof to said member, a movable double-acting cylinder device connected to the opposite end of said lever, resilient release means bearing against abutment means on said cylinder device and said coupler, said device including a piston having a piston rod operatively associated with said lock for moving the same into and out of locked position.

5. In a coupler, a pivoted knuckle, a lock therefor, an anticreep member slidably mounted on said coupler for movement into and out of locking abutment with said lock, said coupler comprising means for confining said member against substantial relative movement except for said first-mentioned movement, a bell crank lever fulcrumed within said coupler and connected at one end thereof to said member, a movable double-acting cylinder connected to the opposite end of said lever, a piston within said cylinder having a piston rod operatively associated with said lock for moving the same into and out of locked position, and resilient release means bearing against abutment means on said cylinder and said coupler.

6. In a coupler, a pivoted knuckle, a lock therefor, an anticreep member slidably mounted within a complementary substantially horizontal slot through a wall of said coupler for movement into and out of locking abutment with said lock, a bell crank lever fulcrumed within said coupler and connected at one end thereof to said member, a movable double-acting cylinder connected to the opposite end of said lever, and a piston within said cylinder having a piston rod operatively associated with said lock for moving the same into and out of locked position.

7. In a coupler, a knuckle, a knuckle thrower operatively associated with said knuckle, and means for throwing said knuckle to open position comprising a fluid pressure device and means operatively connecting said device to said thrower, said last-mentioned means including a lock having means for engagement with said thrower, a lifter lever, a link connecting said lock and said lever, and an operative connection between said device and said lever.

8. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for said lock comprising a member carried by said coupler and slidable into and out of locking engagement with said lock, and an air cylinder device operatively connected to said member for actuating the same, said operative connection including a bell crank lever operatively connected to said member and to said cylinder device.

9. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for said lock comprising a member carried by said coupler and slidable into and out of locking engagement with said lock, an air cylinder device operatively connected to said member for actuating the same, said operative connection including a bell crank lever operatively connected to said member and to said cylinder device, and resilient release means associated with said lever.

10. In a coupler, a pivoted knuckle, a lock therefor, and a double acting power cylinder device movably mounted within said coupler and operatively connected to said lock for raising and lowering the same to unlocked and locked positions respectively, said device including a cylinder and piston members, and resilient release means between one of said members and a wall of said coupler, said operative connection comprising a rotor and a lifter arm pivoted from the coupler, a link connecting said lifter arm to said lock, a cylinder lever on said rotor, and an operative connection between said cylinder lever and said device.

11. In a coupler, a pivoted knuckle, a lock therefor, a slot through a wall of said coupler, an anticreep member slidably mounted within said slot for movement into and out of locking engagement with said lock, said member projecting externally of said coupler when out of engagement with said lock, and actuating means having independent operative connections to said member and said lock for substantially simultaneously moving said lock to its unlocked position and withdrawing said member from engagement with said lock.

12. In a coupler, a pivoted knuckle, a lock therefor, anticreep means movable into and out of locking engagement with said lock, and means for substantially simultaneously withdrawing said anticreep means from engagement with said lock and raising said lock to unlocked position, said second-mentioned means supporting a fluid pressure device operatively and independently connected to said lock and said anticreep means.

13. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for said lock comprising a member carried by said coupler and horizontally slidable into and out of locking engagement with the top of said lock, and an air cylinder device operatively connected to said member for actuating the same.

14. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for said lock, and a power cylinder device operatively connected to said means, said means including telltale means affording external, visual indication of the locked condition of the knuckle, said operative connection comprising a lever spaced from said lock and fulcrumed to said coupler.

15. In a coupler, a pivoted knuckle, a lock therefor, a horizontal slot through a wall of said coupler, an anticreep member slidably mounted within said slot for substantially horizontal movement into and out of locking engagement with the top of said lock, and actuating means for said member.

16. In a coupler, a pivoted knuckle, a lock therefor, means for raising and lowering said lock to unlocked and locked positions respectively, said means comprising a double-acting fluid pressure device including a cylinder member and a piston member therein, means movably connecting the upper end of said cylinder member to said coupler, and an operative connection between said piston member and said lock.

17. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for locking engagement with said lock, and a fluid pressure device connected at opposite ends thereof to said lock and said anticreep means, respectively, for substantially simultaneously withdrawing said anticreep means from locking engagement with said lock and raising said lock to unlocked position.

18. In a coupler, a knuckle, a knuckle thrower

operatively associated with said knuckle, and means for throwing said knuckle to open position comprising a fluid pressure device, and means operatively connecting said device to said thrower.

19. In a coupler, a pivoted knuckle, a lock therefor, means for raising and lowering said lock to unlocked and locked positions respectively, said means comprising a double-acting fluid pressure device including a cylinder member and a piston member therein, means movably connecting the upper end of said cylinder member to said coupler, means operatively connecting said piston member to said lock, and resilient release means compressed between said cylinder member and a wall of said coupler.

20. In a coupler, a pivoted knuckle, a lock therefor, means for raising and lowering said lock to unlocked and locked positions respectively, said means comprising a double-acting fluid pressure device including a cylinder member and a piston member therein, means movably connecting the upper end of said cylinder member to said coupler, and an operative connection between said piston member and said lock, said operative connection comprising a rotor and a lifter arm pivoted from said coupler, a link connecting said lifter arm to said lock, a cylinder lever on said rotor, and an operative connection between said lever and said piston member.

21. In a coupler, a pivoted knuckle, a lock therefor, means for moving said lock to unlocked and locked positions, said means comprising a double-acting fluid pressure device including a cylinder member and a piston member therein, means movably connecting said cylinder member to said coupler, resilient release means compressed between said cylinder member and a wall of said coupler, and an operative connection between said piston member and said lock.

22. In a coupler, a pivoted knuckle, a lock therefor, means for raising and lowering said lock to unlocked and locked positions respectively, said means comprising a double-acting fluid pressure device including a cylinder member and a piston member therein, means movably connecting one of said members to said coupler, and means operatively connecting the other of said members to said lock.

23. In a coupler, a pivoted knuckle, a lock therefor, means for moving said lock to unlocked and locked positions respectively, said means comprising a double-acting fluid pressure device including a cylinder member and a piston member therein, means movably connecting one of said members to said coupler, resilient release means compressed between said last-mentioned member and a wall of said coupler, and means operatively connecting the other of said members to said lock.

24. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for said lock, actuating means for said anticreep means comprising a fluid pressure device, and an operative connection between said device and said anticreep means comprising a bell crank lever fulcrumed from said coupler and housed therewithin.

25. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for said lock, a bell crank lever fulcrumed to said coupler and housed therewithin, said lever having an operative connection at one end thereof with said anticreep means, and actuating means operatively connected to the opposite end of said lever.

26. In a coupler, a pivoted knuckle, a lock

therefor, anticreep means for said lock, a bell crank lever fulcrumed to said coupler and housed therewithin, said lever having an operative connection at one end thereof with said anticreep means, actuating means operatively connected to the opposite end of said lever, and resilient release means compressed between a wall of said coupler and a portion of said lever.

27. In a coupler, a pivoted knuckle, a lock therefor vertically movable into and out of locking engagement therewith, an anticreep member slidably and guidably mounted within a complementary horizontal slot through a wall of said coupler for movement into and out of locking engagement with said lock, and an actuating mechanism operatively connected to both said lock and said anticreep member for substantially simultaneously moving said lock to its unlocked position and moving said anticreep member out of engagement with said lock.

28. In a coupler, a pivoted knuckle, a lock therefor vertically movable into and out of locking engagement therewith, an anticreep member slidably and guidably mounted within a complementary horizontal slot through a wall of said coupler for movement into and out of locking engagement with said lock, and an actuating mechanism operatively connected to both said lock and said anticreep member for substantially simultaneously moving said lock to its unlocked position and moving said anticreep member out of engagement with said lock, said actuating mechanism comprising a fluid pressure device.

29. In a coupler, a pivoted knuckle, a lock therefor vertically movable into and out of locking engagement therewith, an anticreep member slidably and guidably mounted within a complementary horizontal slot through a wall of said coupler for movement into and out of locking engagement with said lock, and an actuating mechanism operatively connected to both said lock and said anticreep member for substantially simultaneously moving said lock to its unlocked position and moving said anticreep member out of engagement with said lock, said mechanism comprising a fluid pressure device operatively connected to said lock, and means operatively connecting said device to said anticreep member, said last-mentioned means comprising a bell crank lever fulcrumed to said coupler.

30. In a coupler, a pivoted knuckle, a lock therefor vertically movable into and out of locking engagement therewith, an anticreep member slidably and guidaly mounted within a complementary horizontal slot through a wall of said coupler for movement into and out of locking engagement with said lock, and an actuating mechanism operatively connected to both said lock and said anticreep member for substantially simultaneously moving said lock to its unlocked position and moving said anticreep member out of engagement with said lock, said mechanism comprising a fluid pressure device operatively connected to said lock, and means operatively connecting said device to said anticreep member, said last-mentioned means comprising a bell crank lever fulcrumed to said coupler, and resilient release means for said device compressed between a wall of said coupler and one arm of said lever.

31. In a coupler, a pivoted knuckle, a lock therefor movable into and out of locking engagement therewith, anticreep means for said lock, operating means for said anticreep means comprising a bell crank lever fulcrumed to said coupler, and actuating means for said lock and said lever.

32. In a coupler, a pivoted knuckle, a lock therefor movable into and out of locking engagement therewith, anticreep means for said lock, operating means for said anticreep means comprising a bell crank lever fulcrumed to said coupler, and actuating means for said lock and said lever comprising a double-acting fluid pressure device having operative connections at opposite ends thereof to said lock and said lever, respectively.

33. In a coupler, a pivoted knuckle, a lock therefor movable into and out of locking engagement therewith, anticreep means for said lock, operating means for said anticreep means comprising a bell crank lever fulcrumed to said coupler, actuating means for said lock and said lever, and resilient release means housed within said coupler for returning said lever to its released position after actuation of said device.

34. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for locking engagement with said lock, and a fluid pressure device operatively connected at opposite ends thereof to said lock and said anticreep means, respectively, said means including telltale means affording external, visual indication of the locked condition of the knuckle.

35. In a coupler, a pivoted knuckle, a lock therefor movable into and out of locking engagement therewith, anticreep means for said lock, operating means for said anticreep means comprising a lever fulcrumed to said coupler, and a fluid pressure device operatively connected to said lever and lock for substantially simultaneously actuating said lever and said lock.

36. In a coupler, a pivoted knuckle, a lock therefor movable into and out of locking engagement therewith, anticreep means for said lock, and a fluid pressure device operativelyconnected to said lock and said anticreep means for substantially simultaneously withdrawing said anticreep means from locking engagement with said lock and raising said lock to unlocked position, said operative connection to said anticreep means comprising a lever fulcrumed to said coupler and housed therewithin.

37. In a coupler, a pivoted knuckle, a lock therefor, anticreep means for said lock, a power cylinder device, and a lever fulcrumed to said coupler and connected at opposite ends thereof to said device and said anticreep means for moving said anticreep means into and out of locking engagement with said lock.

38. In a coupler, a pivoted knuckle, a lock therefor, an anticreep member carried by said coupler and movable into and out of locking engagement with said lock, and actuating means having independent operative connections to said member and said lock for substantially simultaneously moving said lock to its unlocked position and withdrawing said member from engagement with said lock, said member projecting externally of said coupler when out of engagement with said lock.

39. In a coupler, a pivoted knuckle, a lock therefor, an anticreep member carried by said coupler and movable into and out of locking engagement with said lock, and actuating means having independent operative connections to said member and said lock for substantially simultaneously moving said lock to its unlocked position and withdrawing said member from engagement with said lock.

40. In a coupler, a pivoted knuckle, a lock therefor, an anticreep member carried by said coupler and movable into and out of locking engagement with said lock, a lever spaced from said lock and fulcrumed to said coupler and engageable with said member, and a power cylinder device operatively connected to said lever for actuating the same and thereby actuating said anticreep member.

41. In a coupler, a pivoted knuckle, a lock therefor, an anticreep member carried by said coupler and movable into and out of locking engagement with said lock, a lever spaced from said lock and fulcrumed to said coupler and engageable with said member, and a power cylinder device operatively connected to said lever for actuating the same and thereby actuating said anticreep member, said member projecting externally of said coupler when out of engagement with said lock.

42. In a coupler, a pivoted knuckle, a lock

therefor, a slot through a wall of said coupler, an anticreep member slidably mounted within said slot for movement into and out of locking engagement with said lock, and actuating means having independent operative connections to said member and said lock for substantially simultaneously moving said lock to its unlocked position and withdrawing said member from engagement with said lock.

43. In a coupler, a pivoted knuckle, a lock therefor, anticreep means movable into and out of engagement with said lock, and means for substantially simultaneously withdrawing said anticreep means from engagement with said lock and raising said lock to unlocked position, said second-mentioned means having a fluid pressure device associated therewith operatively and independently connected to said lock and said anticreep means.

EDMUND P. KINNE.