

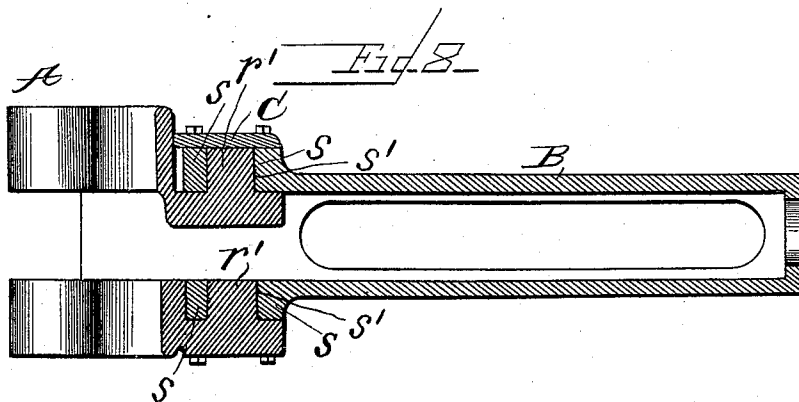
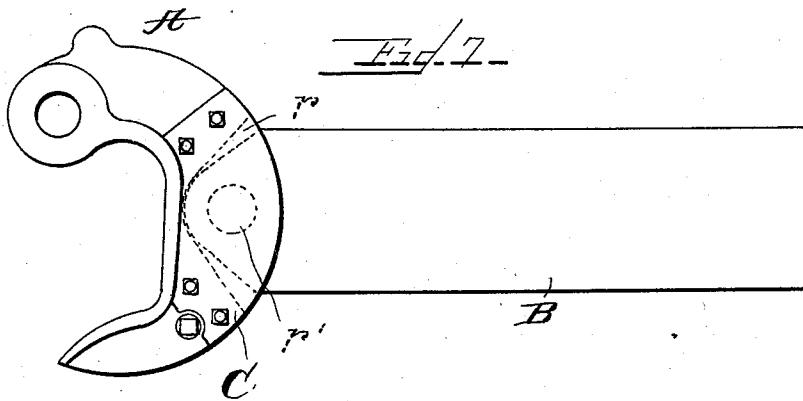
(No Model.)

2 Sheets—Sheet 2.

W. L. GELSTON.
CAR COUPLING.

No. 536,028.

Patented Mar. 19, 1895.



Witnesses

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WILLIAM L. GELSTON, OF CHESTER, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 536,028, dated March 19, 1895.

Application filed April 21, 1894. Serial No. 508,466. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. GELSTON, a citizen of the United States, residing at Chester, in the county of Delaware 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 Janney type car couplers, in general, but more especially to those having a rotatable head.

The object of my invention is to construct the head and draw bar, that the head may be rotated so that two or more cars may be coupled or uncoupled while standing on a curve. This I accomplish by casting a lug or projection on the draw bar while on the head I cast a slot, groove or opening in which the projection on the draw bar works. Of course it is obvious that I may cast the slot, groove or opening in the draw bar and the lug or projection in the head as found most desirable.

In the drawings: Figure 1 is a top plan view of a coupler embodying my invention. Fig. 2 is a vertical transverse section of Fig. 1 on the line X X. Fig. 3 is an end view. Fig. 4 is a top plan view of two couplers at an angle to each other. Figs. 5 and 6 are detail views of the knuckle locking mechanism. Fig. 7 is a top plan view of a modification. Fig. 8 is a vertical transverse section of the same.

A represents the draw bar, the forward end of which is open from side to side and has the top and bottom portions a , the ends of which are cast with an angle less than a right angle as at a' . On the inner face of these top and bottom portions I form a lug or projection a^2 and a groove a^3 .

B is the coupling head; b , the knuckle pivoted thereto by means of the pin b' and provided with the tongue b^2 .

b^3 is a spring secured in the head, in a suitable manner, one end of which bears against the rear of the tongue b^2 thereby holding the knuckle open or in an unlocked position, when desired.

b^4 is a pin, passing through the coupling

head, to which is secured, in any desirable manner, a stop b^5 provided with a cam face or portion b^6 . On one side of the head I form a projection b^7 to be hereinafter referred to.

On the rear of the coupling head B, I form a lug, projection or rib b^8 and a groove b^9 , the rib b^8 on the head engaging the groove a^3 on the bar while the rib or projection a^2 on the bar engages the groove b^9 in the head.

C is a cover which is secured to the head directly over the groove and rib, by means of the bolts c . This cover C extends at right angles below the lug or rib b^8 , at c' , thus forming a stop, to prevent the head and draw bar becoming disengaged, and further, in conjunction with the walls of the recess in the head in which the end of the draw bar works, to limit the rotatable movement of the head. It will be noticed that the recess D in the head is wider at the front than at the back. In other words, it has an inclination from back to front, thereby shedding the rain, snow, &c., that may drift in said recess.

From the construction described and the reference to the drawings it is of course understood that the head B is adapted to be rotated.

The operation is as follows: On the supposition that two cars are on a curve and it is desired to couple them, all that is necessary is to turn the head B in the desired position and on one of the heads it will be necessary to release the knuckle b by pulling up the pin b^4 , thus raising the stop b^5 and freeing the tongue b^2 and permitting the knuckle to be thrown open by the action of the spring b^3 . The cars are then pushed together and the locked knuckle strikes the unlocked knuckle and forces it back to its locked position where it is held by the stop b^5 . When the knuckle is forced back the tongue b^2 engages the cam portion of the stop b^5 ; thus raising said stop out of the way, but the instant that the tongue slides off the cam portion, the stop b^5 drops by gravity immediately in front of the tongue thereby locking the knuckle.

In Fig. 4 I have illustrated two coupling heads at an angle to each other, the point x of one head being an engagement with the projection b^7 on the other head. The pressure against the heads will cause the point x to

press hard on the projection b^7 and thereby rotate both heads into coupling position, and thus couple.

The object of forming the angle a , on the ends of the portions a , is to prevent the head from spreading when subjected to great pressure, or jam.

In Figs. 7 and 8 I have shown a slight modification, in which A is the head, provided with a recess r , in which are located lugs or projections, or trunnions r' . These trunnions r' are part of the casting.

B is the draw bar one end of which is open from side to side and has top and bottom portions s , in each of which are openings s' . These portions s are pushed in the recesses until the openings s' are directly over the lugs or projections or trunnions r' . The bar is then dropped and the lugs r' engage the openings s' . Thus the head may rotate on the bar. After the bar is in position I secure a suitable cap C to the head by means of bolts cast on the head thereby holding the bar on the lugs r' in the recesses r .

Of course it will be understood that the recess r is of greater width than the ends of the draw bar to allow the head to rotate.

The head except as just explained, is of the same construction as the ones first described.

What I claim, and desire to secure by Letters Patent, is—

1. In a car coupler, the combination with a rotating head, of a lug, on the knuckle side thereof to be engaged by the opposite side of another coupler and rotate both couplers into locking position when they meet at an angle.

2. A car coupler comprising a draw bar, the forward end of which is open and its edges cast at an angle sloping rearwardly and outwardly, a lug or projection and a groove on the

inner faces of said end and a draw head having a seat to receive the lug or projection and groove, substantially as described.

3. A car coupler head having a seat provided with curved and angular walls in the rear end of the head, a solid wall sloping rearwardly and outwardly in front of said seat, and a groove and lug or projection also on the rear of said head, in combination with a draw bar having an open head constructed to engage the inclined wall, groove and projection, and a cap to cover the head and draw bar, where they engage each other, a portion of said cover extending below the lug b^8 substantially as described.

4. A car coupler comprising a draw bar having an open forward end, a curve and bevel on the extreme edge of said end, a lug and a groove on the inner faces of said end, said bevel sloping rearwardly and outwardly and a draw head with a seat for the said lug, groove and curved and beveled end of the draw bar, substantially as described.

5. In a car coupler, the combination with a rotatable head, a groove and rib on said head, of a draw bar, a groove and rib on said bar, a stop to limit the movement of said head, substantially as described.

6. In a car coupler, the combination with the head and bar, a groove and projection formed on said head and bar respectively, of a combined cap and stop to cover the joint between the head and bar and limit the rotation of the head, substantially as described.

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

WILLIAM L. GELSTON.

Witnesses:

W. J. SHAFFER,
J. W. G. BARKER.