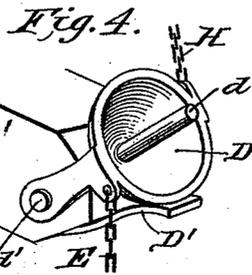
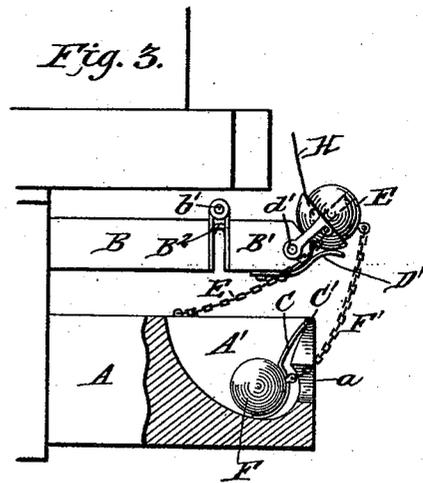
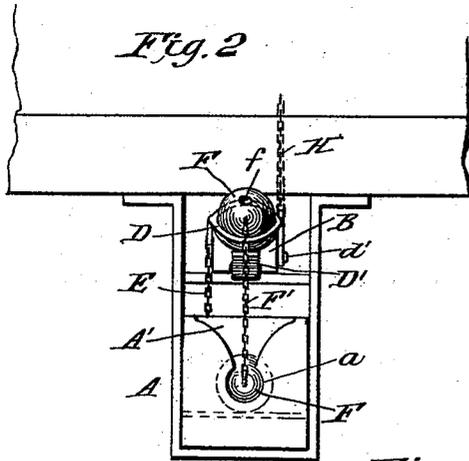
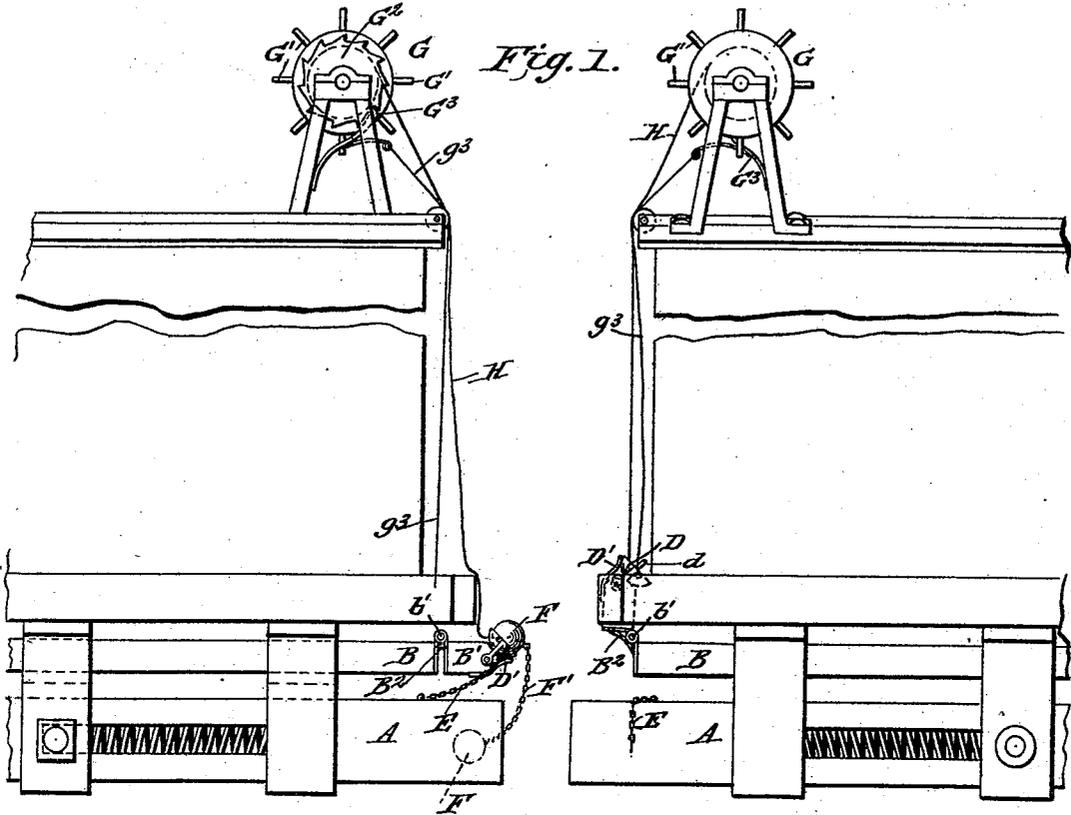


(No Model.)

F. VAUGHAN.
CAR COUPLING.

No. 500,981.

Patented July 4, 1893.



WITNESSES:
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FRANK VAUGHAN, OF ELIZABETH CITY, NORTH CAROLINA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 500,981, dated July 4, 1893.

Application filed March 21, 1893. Serial No. 467,093. (No model.)

To all whom it may concern:

Be it known that I, FRANK VAUGHAN, of Elizabeth City, in the county of Pasquotank and State of North Carolina, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention is an improvement in car couplings and has for an object to provide a simple convenient form of coupling which can be cheaply made, will automatically couple and may be conveniently uncoupled; and the invention consists in the special constructions and combinations of parts hereinafter described and pointed out in the claims.

In the drawings—Figure 1 is a side view of my improvement. Fig. 2 is an end view thereof. Fig. 3 is a detail view partly broken away and Fig. 4 is a detail perspective view.

The car frame may be the usual construction.

The improvements include the draw heads A and the ball supports or holders B, the former being connected to yield under the meeting impact of the cars and the latter B being arranged above and in alignment with the drawhead, and are formed to extend at their outer extremities to or slightly beyond the ends of their respective drawheads as shown. In the drawheads are formed the mortises A' to receive the balls such mortises being open at the top to permit the ball to drop therein and provided with apertures *a* leading to the front of the drawhead for the passage of the chains or other connections. These mortises A' incline downward toward their front ends and in order to ease the shock and to take up in a measure the slack of the connecting chains I provide the yielding plates C supported in the mortises and arranged to form spring seats for the balls. These plates C are preferably fixed at their upper ends at C' to the drawhead and free at their lower ends so that they will yield under stress.

The ball holder B has a pivoted arm or portion B' pivoted at *b'* and spring actuated normally to the upright position shown by the spring B². At its outer end the part B' is provided with a ball receiver D which is in the nature of a cup provided centrally with a pin *d* and pivoted at *d'* to oscillate from the position in which it retains the ball to that from

which it will release the ball and being actuated by the spring D' normally to the former position. In the use of the improvement the arm or portion B' is turned down to horizontal position and the receiver D is connected by a chain E with the movable drawhead A. This chain E may be permanently fastened to either the parts A or D and be hooked into engagement with the other as will readily appear. The coupling device includes two balls F F connected by a chain F' as shown or it may be by a rod but a chain is preferred. In the balls F are formed openings *f* to receive the pins *d*.

The operation will be readily understood from the drawings. The arm B' is turned down to horizontal position and a ball is placed in its receiver, the other ball being dropped in the drawhead below and the chain E being adjusted to connect the receiver and drawhead. It will be seen that the weight of the ball and chain F' will be sufficient to hold the arm B' down against the action of its spring B². When the drawheads meet and are retracted the ball receiver will be tilted to drop the ball into the approaching drawhead and complete the coupling.

The cars may be uncoupled by lifting the ball out of the drawhead and the construction shown may be found desirable for such purpose. This consists of a wheel or drum G mounted in bearings upon the top of the car and having handles or spokes G' by which it may be turned and a ratchet G² engaged by a detent pawl G³ and having a cord *g*³ extending to the ground so that it can be released, a rope or chain H being arranged to connect the drum G and the ball as shown.

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

1. In a car coupling a coupling device comprising a pair of connected balls one of which is provided with an opening to receive a pin in a support or receiver substantially as set forth.

2. In a car coupling an oscillating ball holder arranged normally to support the ball and to be tilted to position to discharge the same substantially as set forth.

3. In a car coupling a ball holder consisting

of an oscillating receiver having a projecting pin to enter an opening in the ball substantially as set forth.

4. In a car coupling the combination of the drawhead supported to yield longitudinally, and the ball support arranged above the drawhead substantially as set forth.

5. In a car coupling the combination of the drawhead and the ball support arranged above it and having a pivoted outer arm or portion substantially as set forth.

6. In a car coupling a ball support provided with an oscillating ball receiver substantially as set forth.

7. In a car coupling the ball support having a pivoted outer arm or portion and provided at the extremity thereof with an oscillating ball receiver substantially as set forth.

8. The combination in a car coupling of the drawhead movable longitudinally the ball support having an oscillating ball receiver and a connection between said receiver and the drawhead whereby the movement of the drawhead may oscillate the receiver substantially as set forth.

9. In a car coupling, the combination of the

wheel or drum having handles and mounted to turn, and provided with a ratchet wheel, the pawl engaging said ratchet, the cord connected with said pawl the coupling ball and a rope or connection between said ball and the drum substantially as set forth.

10. In a car coupling substantially as described the drawhead having the open top mortise and the aperture leading to the point and provided with the spring plates forming a yielding bearing for the coupling ball substantially as set forth.

11. The improved car coupling herein described consisting of the drawhead, the ball support arranged above the drawhead and having the pivoted spring actuated arm or portion B', the oscillating spring actuated ball receiver having a projecting pin, the connection between said receiver and the drawhead and the ball having an opening to fit said pin substantially as set forth.

FRANK VAUGHAN.

Witnesses.

M. B. CULPEPPER,
J. B. OVERMAN.