

(No Model.)

H. W. TAYLOR.
CAR COUPLING.

No. 529,427.

Patented Nov. 20, 1894.

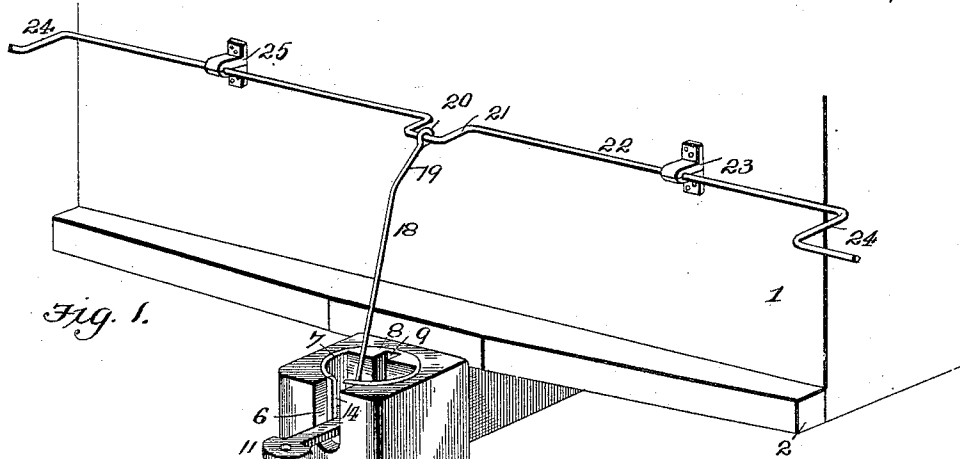


Fig. 1.

Fig. 2.

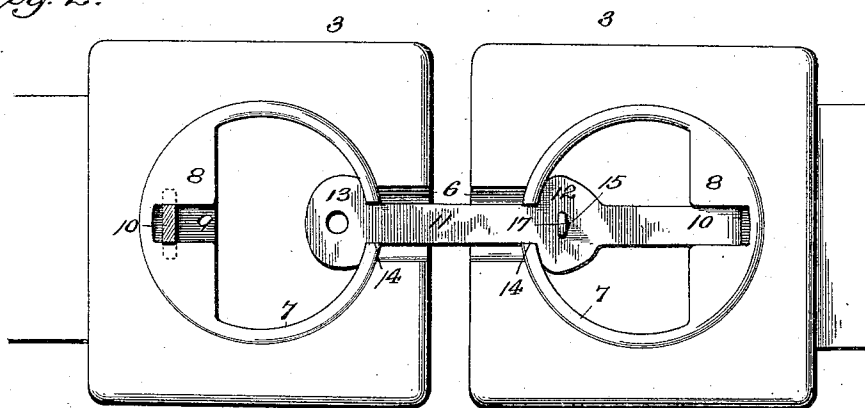


Fig. 3.

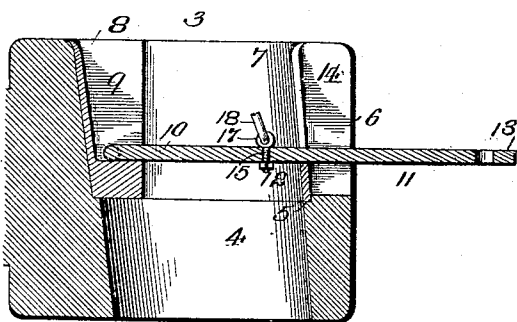
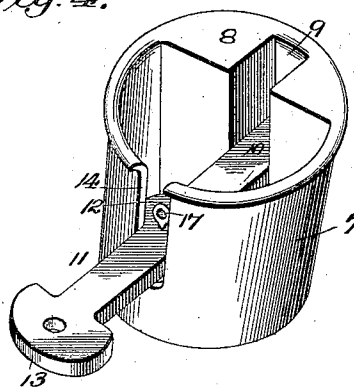


Fig. 4.



Inventor

Witnesses

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HIRAM W. TAYLOR, OF RAMSEY, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 529,427, dated November 20, 1894.

Application filed August 31, 1894. Serial No. 521,847. (No model.)

To all whom it may concern:

Be it known that I, HIRAM W. TAYLOR, a citizen of the United States, residing at Ramsey, in the county of Fayette and State of Illinois, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to an improvement in car couplings, and particularly to that class in which each draw-head is provided with a swinging link or rod adapted to engage with the companion draw-head and thereby effect the coupling operation.

The object of the invention is to provide a coupler which will allow the cars more freedom of action, and which will permit the coupling of cars of different heights, or such wherein their loads cause them to be out of alignment at the draw-heads.

A further object is to improve the general construction of this class of car couplings, and to provide a structure which is both simple and durable.

To these ends the invention consists in certain novel features of construction and combination and arrangement of parts as will be more fully described hereinafter and finally embodied in the claims.

In the accompanying drawings: Figure 1 represents a perspective view of a car coupling constructed after the manner of my invention; Fig. 2, a plan view of two draw-heads, showing them in their co-operative relation and coupled as in practice; Fig. 3, a longitudinal section taken vertically through one draw-head. Fig. 4, is a detail perspective of one of the revoluble link-carrying rings, showing it detached from the draw-head and having the link connected therewith.

The reference numeral 1 indicates the body of a box or house freight-car, and 2 the dead wood thereof, all of which may be of any suitable or preferred construction.

3 indicates the draw-head, which is formed as usual of cast iron and provided with a passage 4, extending vertically through it and tapering slightly toward its lower end. This passage is, in addition to its taper, inclined forwardly as it proceeds downwardly, so that its lower end will be nearer the front end of the draw-head than the upper end.

Formed in the passage 4, and near the

lower end thereof, is the annular shoulder 5, which extends around the interior of the passage, and which is for a hereinafter described purpose.

6 indicates a vertically-extending slot, which is formed in the front extremity of the draw-head 3, and which communicates with the passage 4 and extends downwardly to a point just above the shoulder 5.

Revolubly seated within the passage 4 of the draw-head, is the link-carrying ring 7, which is formed of cast or wrought iron and which is tapered in conformity with the taper of the passage 4. This ring is of a vertical extent equal to the distance between the shoulder 5 and the upper side of the draw-head, and is adapted to have its lower end rested upon said shoulder 5. Formed integral with or rigidly secured to the ring 7, preferably the former, is the block 8, which is substantially crescent-shaped and which has formed in its upper side the slot 9, extending downwardly to a point near the lower end or side of the block. In this slot 9 the shank 10 of the link 11 is pivotally arranged by forming thereon transversely-extending studs or trunnions, and seating the same in corresponding recesses in the blocks 8. The link 11 is capable of swinging in the arc of a circle, and from a horizontal position, such as is shown in Fig. 1, to a vertical position, and has formed thereon the enlargements 12 and 13. The enlargement 12 is located so that it will be within the ring 7 when the link is arranged horizontally, while the enlargement 13 is formed at the end of the link and operates as will hereinafter appear.

Formed in the ring 7, and extending vertically therein for about two-thirds the height thereof, is the slot 14. This slot is adapted to register with the slot 6 of the draw-head and is of about one-half the width thereof, while it is slightly shorter than the slot 6. Through this slot 14 the link 11 is adapted to project, and the location of the enlargement 12 is such that the front side thereof will be directly adjacent to the front side of the ring 7.

Formed in the enlargement 12 is an orifice 15, through which the bolt 16 passes and in which said bolt is rigidly secured. The bolt 16 is formed with an eye 17, to which the rod

18 is pivotally connected. The rod 18 extends upwardly from the link 11 and has its upper end bent slightly rearwardly, as at 19, and formed with an eye 20, which is adapted to form a pivotal connection with the crank 21, of the shaft 22. The shaft 22 is journaled in offset bearings 23, fixed to the front side of the body 1 of the car, and provided at its ends with crank-arms 24, by which it may be oscillated in its bearings. By this construction the rod 18 may be raised up, carrying with it the link 11; and upon swinging the shaft 22 so that its crank 21 will engage with the body of the car, the rod will be moved below the line of the shaft, thus making it impossible to draw the link down until the shaft has been revolved in the opposite direction. These devices are used to keep the link 11 raised when not positively operating.

In the coupling operation the links are raised until the draw-heads of the cars to be coupled engage with each other, whereupon one of the links should be allowed to drop so that its enlargement 13 will project into the ring of the opposite draw-head. The enlargement will bind against the slot 14 thereof, thus securely locking the two parts together. To uncouple the cars, the link should be raised through the medium of the shaft 22, so that it will disengage with the companion draw-head. This will uncouple the cars, as will be understood. It will be observed that owing to the revoluble arrangement of the rings 7, the cars will be allowed free movement laterally—that is to say, all that is necessary for an effective coupling. It will also be observed that a slight longitudinal play is allowed, such as is necessary in the starting of a train of cars. It will be observed that my coupling is capable of use in connection with the old style link and pin device, thus permitting it to be gradually introduced into railway systems and avoiding the necessity of simultaneously equipping all the cars of a railroad with it.

Various changes in the form, proportion, and arrangement of the parts of my invention may be resorted to without departing from the substance thereof. Therefore I desire it understood that I am not restricted to the

precise construction herein shown, but am entitled to all such variations as come within the above definition.

Having described the invention, I claim—

1. In a car coupler, the combination of a draw-head provided with a vertical annular passage, a ring revolubly seated therein, and a link connected to the ring and adapted to engage with the companion coupler, substantially as described.

2. In a car coupler, the combination of a draw-head provided with a vertical and annular passage, a slot in the front side of the draw-head and communicating with said passage, a ring revolubly seated in the passage of the draw-head and having a slot in its side, said slot being narrower than the slot in the draw-head, and a link connected to the ring and projecting through the slots in the draw-head and ring, substantially as described.

3. In a car coupler, the combination of a draw-head having an annular vertical passage therein, said passage having a shoulder at a point below its upper end, a ring revolubly mounted within the passage and having its lower end resting upon the shoulder thereof, whereby the ring is supported, and a link connected to the ring, substantially as described.

4. In a car coupler, the combination of a draw-head provided with an annular and vertical passage and having a slot in its front end, said slot being in communication with the passage, a ring revolubly seated within the passage of the draw-head and having a block rigidly fixed to its interior, said block being slotted vertically, and a link having one end pivoted within the slot of the said block, the ring having in its side, opposite the block, a slot narrower than the slot in the draw-head, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HIRAM W. TAYLOR.

Witnesses:

JOHN LINDHORST,
WILLIAM JAMES.