(No Model.)

J. A. M. THOMPSON.

CAR COUPLING.

No. 420,893. Patented Feb. 4, 1890.

Fig. 1.

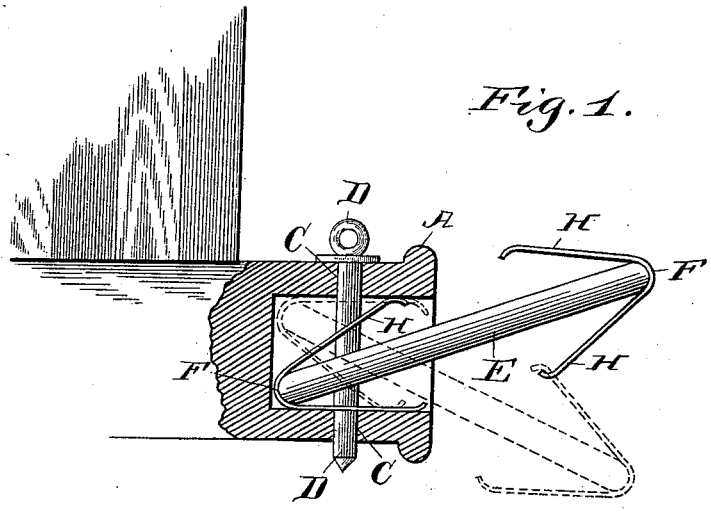
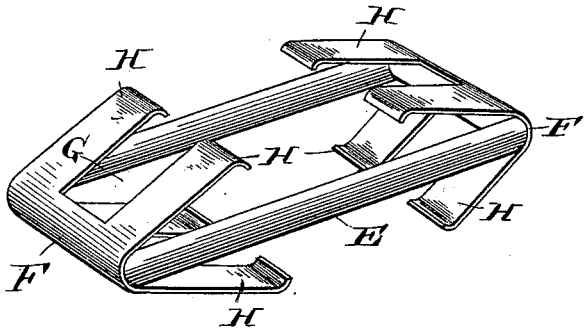


Fig. 2.



Witnesses:
J. B. McGirr.
N. E. Berukoff

Inventor:
J. A. M. Thompson
By his Attorneys
Edson Bros.

UNITED STATES PATENT OFFICE.

JAMES ALFRED M. THOMPSON, OF SAN ANTONIO, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 420,893, dated February 4, 1890.

Application filed November 29, 1889. Serial No. 331,875. (No model.)

To all whom it may concern:

Be it known that I, JAMES ALFRED M. THOMPSON, a citizen of the United States, and a resident of San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Car-Couplings; 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 improvements in car-couplings, and has for its objects to provide a coupling-link which is constructed and adapted to hold itself by frictional contact with a draw-head in any desired position, so as to couple cars whose draw-heads are out of line either vertically or horizontally, and which will not require the attendant to remain between the cars during the operation of coupling.

With these ends in view, and such others as pertain to my invention, it consists of a coupling-link provided at both ends with spring-heads for the purpose of holding the link, by frictional contact with the draw-head, in any desired position to enable two cars whose draw-heads do not align to be coupled.

To enable others to understand my invention I will now proceed to a detailed description thereof in connection with the accompanying drawings, in which—

Figure 1 is a sectional view showing the coupling-link in position in one draw-head to couple a car having a draw-head of a different height. Fig. 2 is a detail perspective view of the coupling-link.

Like letters of reference denote corresponding parts in both figures, referring to which—

A designates a draw-head to receive one end of the coupling-link, and provided with a vertical opening C for the insertion of the coupling-pin D, which is of the ordinary gravity form, and is adapted to pass across the chamber in the draw-head.

E designates the link, to each end of which is secured a spring-head F. Each spring-head is formed in practice of a single piece of spring metal, which is bent into the form of a V and secured at its apex by any suitable means to the link, whereby the two sides or members forming the spring-head are arranged on opposite sides of the link. Both sides of the spring-head are slotted longitudinally, as at G, the slots terminating near the apex formed by the inclined sides of the spring-head, so that the slots in both sides of the spring-head align with the slot in the link. By slotting each spring-head, as described, there are formed on each side of the link E two arms H, which arms are curved downwardly toward the link E at their outer extremities to prevent the spring-head from engaging with any projection or irregularity on the inner surfaces or walls of the draw-head and thus prevent the easy entrance or withdrawal of the link.

The operation of my invention is as follows: To couple together two cars the link is inserted in one draw-head and secured therein by an ordinary gravity coupling-pin, which passes through the slots in the spring-head and the link. The operator now observes whether the draw-head of the car to be coupled is in the same plane of the draw-head to which the link is secured, and if it is not the coupling-link is adjusted vertically or laterally, or both vertically and laterally, as may be required to properly enter the draw-head of the other car. The link is maintained in its position by reason of the frictional contact between the spring-arms G and the draw-head, and is then in a position to enter the draw-head of the other car, the link being secured in the draw-head of the car to be coupled by means of a pin in the latter draw-head.

In addition to the advantage of holding itself in position by frictional contact with the walls of the draw-head to facilitate the coupling of the cars and enable the brakeman to stand alongside of the car instead of between the cars to couple the same, as is the common practice, my improved link possesses the advantage of yielding to the oscillation or movement of the draw-heads when the cars are in motion, while at the same time the link is held against rattling in the draw-head. The coupling-pins pass through the slots in the members of the spring-heads, which slots terminate at or near the end or cross bars of the links, so that the coupling-pins bear against the end bars of the link and do not exert any strain or pull on the spring-heads,

thus leaving the heads free to perform their function and out of engagement practically with the coupling-pins.

Instead of making the spring-heads in one piece of metal, which is described herein as my preferred construction, said heads may be made of two or more parts and suitably united to the link; and the spring-head should be made of such strength and elasticity as to be compressed nearly parallel, if necessary, with the link and again resume the normal positions when released from the draw-head, thus adapting the link to draw-heads of different sizes and promoting the durability and efficiency of the link.

It is obvious that the ordinary coupling-links now in use can be provided or equipped with my improved spring-heads, thus effecting a material saving to the railway companies using my improvement and affording them a convenient and cheap coupling device, which when properly manipulated will avoid the danger and loss of life and limbs among its employés.

I am aware that changes and alterations in the form and proportion of parts and details of construction can be made without departing from the spirit or sacrificing the advantages of my invention, and I would therefore have it understood that I reserve the right to make such modifications as fairly fall within the scope of my invention.

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

1. A link for coupling cars, provided with a spring-head, which is suitably secured thereto, the yielding sides or members of the spring-head being arranged respectively above and below the link, as and for the purpose described.

2. A car-coupling link having a spring-head made from a plate of spring metal and substantially **V** shape in form, said head being secured at its apex to the link and having its inclined sides slotted, substantially as and for the purpose described.

3. A car-coupling link having a slotted spring-head adapted to hold the link in a draw-head by frictional contact therewith, and arranged and adapted to permit a coupling-pin to pass through the slots in said link and its spring-head, for the purpose described.

4. A car-coupling link provided at its end with a spring-head, the yielding members of which are located on opposite sides of the link and provided with slots which align with the opening in the link and terminate at points near or at the end or cross bar of the link, substantially as described.

5. A car-coupling link provided at its end with a spring-head, the outer extremities of the members of said head being bent to form lips which extend toward the body of the link, for the purpose described, substantially as set forth.

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

JAMES ALFRED M. THOMPSON.

Witnesses:

JAY MINTER,

ALLEN WYATT.