

(No Model.)

V. ERBACH.
CAR COUPLING.

No. 512,017.

Patented Jan. 2, 1894.

Fig: 1.

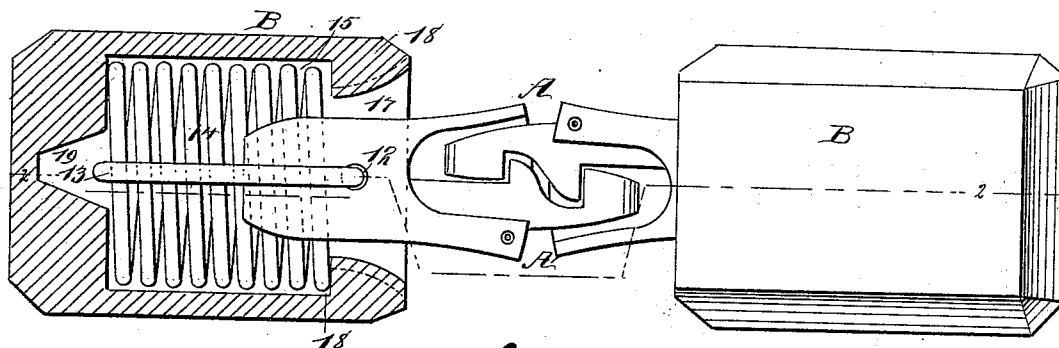


Fig: 2.

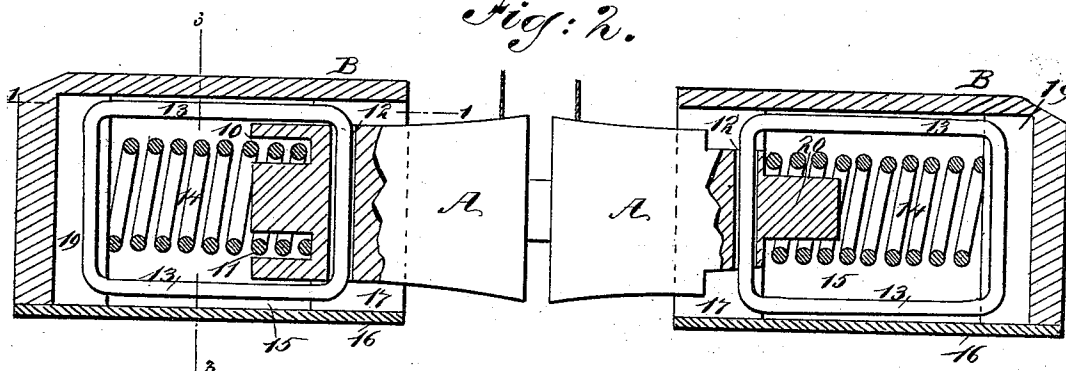


Fig: 3.

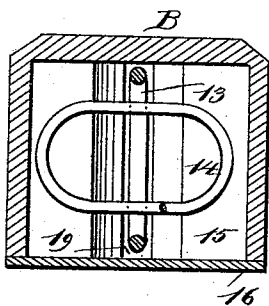
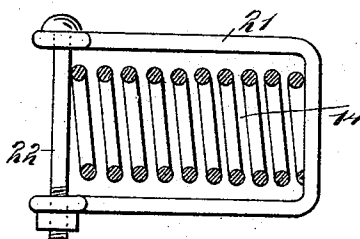


Fig: 4.



WITNESSES:

Chas. Vida.
C. Sedgwick

INVENTOR

V. Erbach
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

VALENTINE ERBACH, OF SCRANTON, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 512,017, dated January 2, 1894.

Application filed October 19, 1893. Serial No. 488,605. (No model.)

To all whom it may concern:

Be it known that I, VALENTINE ERBACH, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Improvement in Car-Couplers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car couplers, and it has for its object especially to provide a drawbar attachment between the drawhead of the coupler and the body of the car, which will admit of the drawhead being carried laterally to any desired angle with respect to a center line taken through the drawhead when the latter stands at a right angle to the sill of the car, thus enabling cars to be coupled or uncoupled upon a curve as well as upon a straight stretch of track, and whereby further the coupling between cars is enabled to accommodate itself to any curvature in the track no matter how abrupt the curve may be.

A further object of the invention is to provide a spring attachment between the drawhead and the body of the car, which will be of exceedingly simple, durable and economic construction, and which will compensate for any sudden jerks which are incident to the starting or sudden stoppage of a train of cars.

Another feature of the invention is to so construct the drawbar attachment that it may be expeditiously and conveniently applied to a drawhead of any description.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 illustrates two drawheads in coupling position, and further illustrates a horizontal sectional view of one of the drawbars and its connection with the drawhead, the section being taken practically on the line 1—1 of Fig. 2. Fig. 2 is a vertical section taken practically on the line 2—2 of Fig. 1, illustrating the drawheads partially in side elevation and partially in section, and a draw-

bar attachment in vertical longitudinal section. Fig. 3 is a transverse section taken through one of the drawbar attachments, essentially on the line 3—3 of Fig. 2; and Fig. 4 is a side elevation of a slight modification in the construction of a portion of the drawbar attachment.

In carrying out the invention the drawhead A may be of any approved type, the type shown in the drawings being that illustrated and described in the application for an improvement in car couplers filed by myself April 12, 1893, Serial No. 470,001, and allowed June 28, 1893. The rear end of the drawhead A, is preferably provided with two horizontal recesses 10 and 11, located one near the top and the other near the bottom; and the drawhead is further provided in advance of the recesses 10 and 11 with an opening or aperture 12, extending through from top to bottom, the said aperture being adapted to receive one member of a link 13, the link being thus pivotally connected with the drawhead.

A spring 14, preferably a coiled spring, is employed in connection with the link, the spring being adapted to enter the recesses 10 and 11, as shown at the left in Fig. 2; and the link 14, extends over the central portion of the spring, embracing its rear end, and the link serves to hold the spring in proper position in engagement with the drawhead. Thus it will be observed that the spring has a pivotal or rocking engagement with the drawhead, or an attachment therewith similar to that of the link 13. The spring in end view is preferably more or less oval, as shown in Fig. 3, but its formation and its character may be varied without departing from the spirit of the invention. The form of spring shown, however, is that which is preferred.

In connection with the inner end of the drawhead and the spring and link a box B, is employed, and the said box is provided with a chamber 15, the said chamber being adapted to receive both the link and the spring when attached to the drawhead, the rear end of the drawhead extending a predetermined distance within the chamber. The drawhead, spring and link are prevented from dropping from the chamber through the medium of a plate 16, or its equivalent, which is secured

upon the bottom of the box B, and closes the bottom portion of the chamber. The box is provided with a front opening 17, which connects with the chamber 15, as shown in Fig. 1; and preferably, the upper wall of the front opening 17, is beveled to a greater or less degree, although the said upper portion of the walls may be straight, but the sides of the opening 17 are flared outward to a greater or less extent, so as to enable the drawhead to move laterally freely as far as in practice may be found desirable. The opening 17, is narrower than the width of the chamber 15, whereby a shoulder 18, is formed, against which the forward end of the spring 14, has bearing, while in the rear of the chamber 15 a recess 19, may be produced, to accommodate the rear end of the link 13.

At the right in Fig. 2 I have illustrated a slight difference in the manner of attaching the spring to the drawhead, and under this latter construction a central tongue 20 is projected from the drawhead, the forward end of the spring being located above and below the said tongue.

In Fig. 4 I have illustrated a modification of the link 13, in which, instead of a link a yoke 21, is employed, to embrace and confine the spring 14, the said yoke being pivotally connected by means of a bolt 22, or its equivalent, with the rear portion of the drawhead at top and bottom portions thereof.

It will be observed that a drawhead, when provided with the drawbar attachment above set forth, will have a cushioned forward and rearward movement, and likewise a spring-cushioned lateral movement in direction of either side of the car, and that the moment that tension is removed from the drawhead, the spring drawbar attachment of the head will assume its normal easy position. The box B, with which the drawhead is connected, is adapted to be attached to the bottom of a car in any approved manner.

The drawbar attachment above set forth is exceedingly simple, durable and economic, and it may be both expeditiously and conveniently applied to any form of drawhead, and when applied will render the operation of the drawhead much more effective, especially upon curves, and will preserve the drawhead against undue wear, since it is spring-con-

trolled, or spring-cushioned in whatever direction it may be compelled to move.

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

1. In a car coupler, a drawhead, a support in which the drawhead has movement, a spring held in the support and having guided bearing upon the drawhead, and a pivotal connection between the drawhead and spring, substantially as shown and described.

2. In a car coupler, the combination, with a supporting block or box, and a drawhead having lateral movement therein, of a spring held within the box, and a pivotal connection between the spring and drawhead, substantially as shown and described.

3. In a car coupler, the combination, with a supporting casing or box, and a drawhead having lateral movement in the box or casing, of a spring held within the box or casing and having bearing against the drawhead, and a yoke carried by the drawhead and encompassing the spring in one direction, substantially as and for the purpose set forth.

4. In a car coupler, the combination, with a box or casing provided with an interior chamber and a flaring front opening connecting with the chamber, of a drawhead having lateral movement in the flaring opening of the said box or casing, a spring confined within the said chamber, and a yoke pivotally connected with the drawhead and extending longitudinally over and back of the spring, as and for the purpose specified.

5. In a car coupler, the combination, with a box or casing provided with an interior chamber and a forward opening having outwardly-flaring sides, of a drawhead having lateral movement in the flaring opening of the box or casing, said drawhead being made to extend within the chamber of the box or casing, a spring located also within the said chamber and having guided bearing upon the inner end of the drawhead, and a link pivoted in the drawhead and extending over, under and back of the spring, confining the same, as specified.

VALENTINE ERBACH.

Witnesses:

B. G. MORGAN,
SAMUEL GRESS.