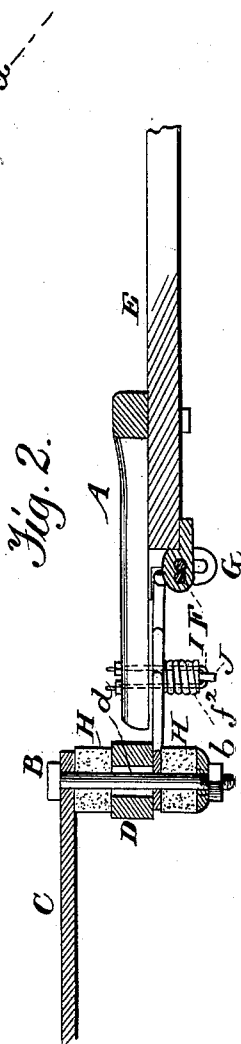
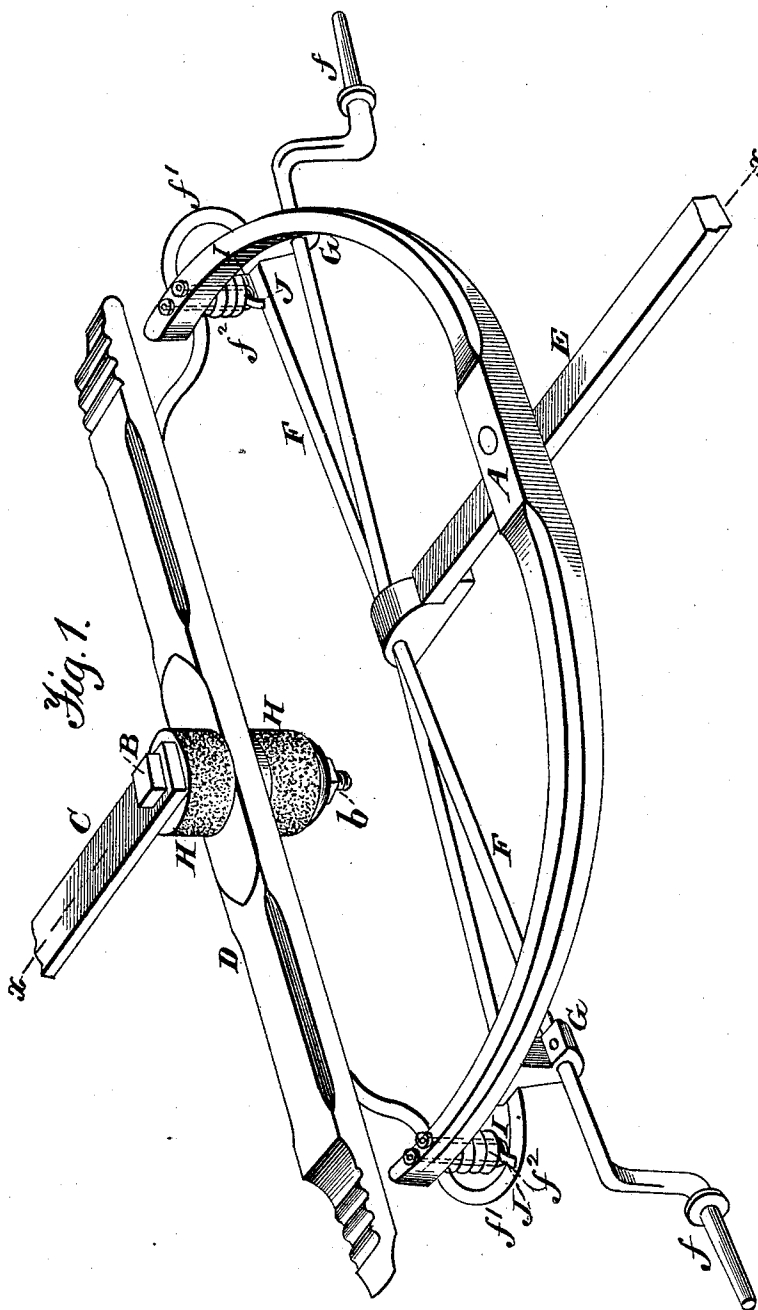


(No Model.)

B. D. SHAW.
ROAD CART COUPLING.

No. 395,296.

Patented Dec. 25, 1888.



Witnesses,
A. Ruppert,
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UNITED STATES PATENT OFFICE.

BENJAMIN DANA SHAW, OF BEVERLY, OHIO.

ROAD-CART COUPLING.

SPECIFICATION forming part of Letters Patent No. 395,296, dated December 25, 1888.

Application filed September 27, 1888. Serial No. 286,592. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN DANA SHAW, a citizen of the United States, residing at Beverly, in the county of Washington and State of Ohio, have invented a new and useful Road-Cart Coupling; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The special object of my invention is to dispense with the ordinary fifth-wheel of vehicles and couple the axles by a reach or pole with a joint, allowing a vertical as well as a horizontal motion to the pole or shaft gear at the front axle. By this means the running-gear, with pole or shafts rigidly attached, may freely turn in a vertical plane and thus allow two or more road-carts of any make to be coupled with ease and convenience.

Figure 1 of the drawings is a perspective view of my invention applied, and Fig. 2 a vertical section on the dotted line *xx* of Fig. 1.

In the drawings, A represents the curved bar, under and to which I make fast the pole E, where two horses are used, or the shafts where only one is employed. Through the rear fastening of said pole pass the transverse axle-rods F F, which are connected by the spacers G G, then extended, and finally bent to form the journals *ff*. The axle-rods F are curved at *f'*, rest on the coiled springs *f*², and have the upper ends fastened to the under side of the bolster or the cart-bed, while the spring is held by nuts in the stirrup I and on the rod by the keys J. The two rods F F thus form an axle which consists of two torsion-springs supporting the frame-bar A, tongue E, and bolster D or cart-seat.

C is the coupling-pole held by the king-bolt B, passing through the middle of the bolster D, and provided with the end nut, *b*. Between the bolster and the bolt-head, as well as the nut, I place a rubber ring or spring, H, which, in connection with the slot *d* in the bolster, allows for the vertical play of the running-gear with rigidly-fastened pole or shafts.

In coupling two road-carts together the king-bolt may be rigidly attached to an axle

or any convenient part of a forward cart and pass through a hole washered, as above specified, in the end of the reach or coupling pole. Of course I can, in the same way, couple the fore and hind gears of a carriage or wagon where the pole is rigidly attached to the front gear, in which case the bed becomes the coupling-pole. The point of coupling must be far enough behind the axle to make the pole and its attachments approximately balance the weight of the persons in the cart.

The advantages of my invention are as follows: First, the readiness with which two or more road-carts may be coupled together, to accommodate a greater or less number of passengers; secondly, the fewness of parts liable to get out of order, rattle, or work loose, and the total absence of a fifth-wheel to rub; thirdly, the relief to the horse in having such a small proportion of the weight to press on his back or neck; fourthly, the free action of the pole vertically and laterally, and the freedom of the cart-bed from being twisted or strained in passing over obstructions in the road; fifthly, the light running and flexibility of the vehicle, which is produced by combining a rigid pole or shafts with a joint allowing a vertical as well as a horizontal motion to the pole or shaft gear.

Having thus described all that is necessary to a full understanding of my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. The combination of the pole E, axle-rods F F, curved bar A, and bolster or cart-seat, all rigidly connected and turning with the axle-journals, substantially as shown and described.

2. An axle formed of two torsion-springs, F F, each carrying a journal, *f*, and bend *f'*, in combination with supporting-springs *f*², spacers G G, and the rear end of tongue E, substantially as shown and described.

3. The combination, with a reach or coupling-pole, C, and a king-bolt, B, of a bolster or seat having the slot *d*, and the rubber rings or springs H, substantially as and for the purpose set forth.

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

BENJAMIN DANA SHAW.

Witnesses:

J. C. PRESTON,
C. M. GRUBB.