(No Model.) 2 Sheets—Sheet 1.

H. K. KNOX.

CAR COUPLING.

No. 493,095. Patented Mar. 7. 1893

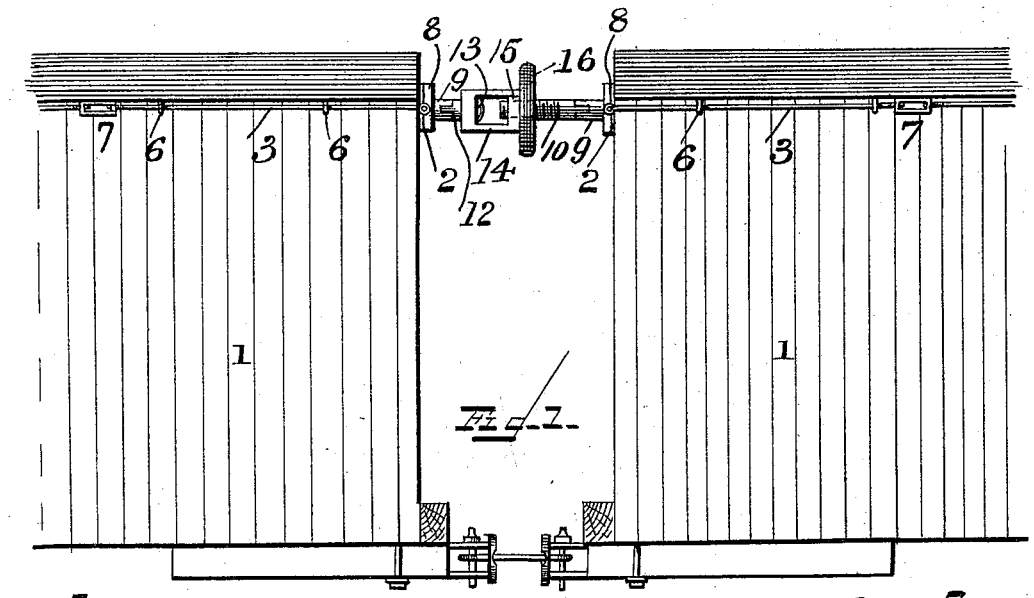

Fig. 1.

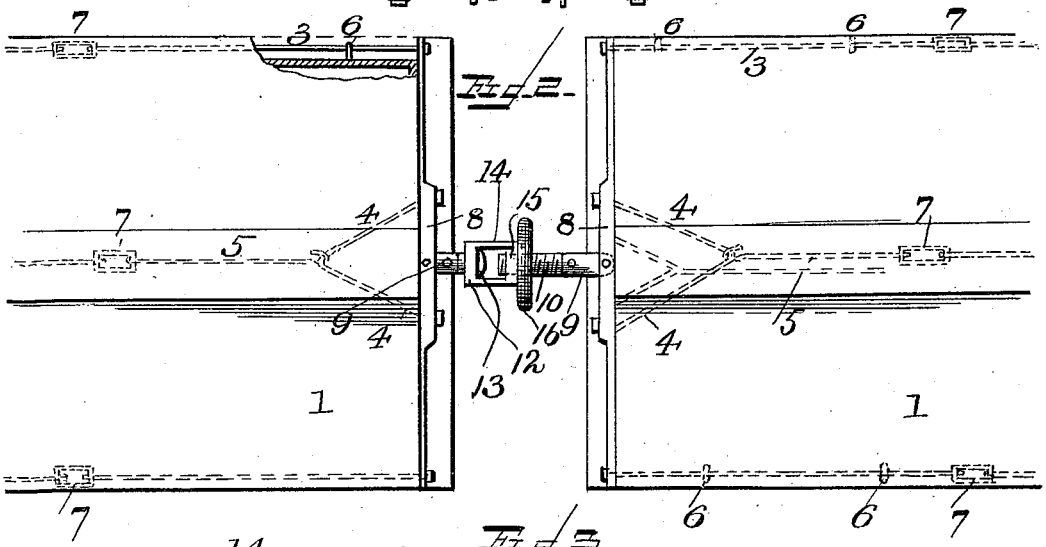

Fig. 2.

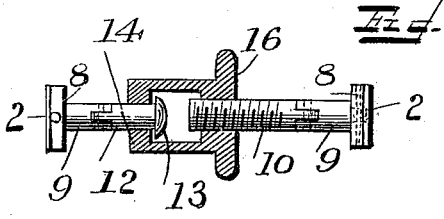

Fig. 3.

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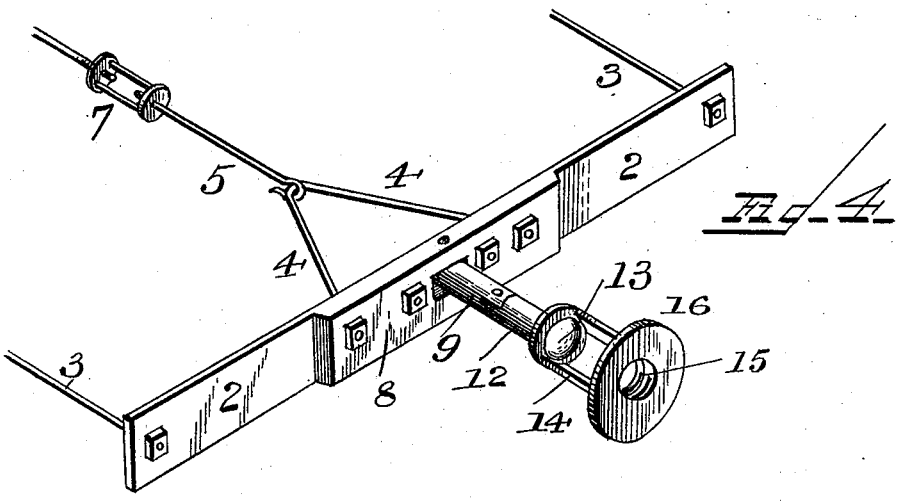

Fig. 4.

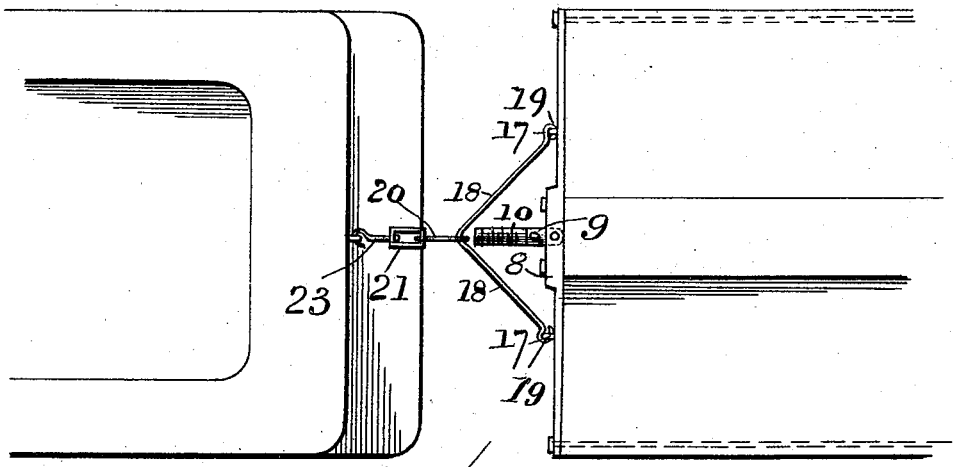

Fig. 5.

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UNITED STATES PATENT OFFICE.

HENRY K. KNOX, OF VEVAY, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 493,095, dated March 7, 1893.

Application filed December 9, 1892. Serial No. 454,635. (No model.)

To all whom it may concern:

Be it known that I, HENRY K. KNOX, a citizen of the United States, and a resident of Vevay, in the county of Switzerland and State of Indiana, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in couplings for connecting the ends of railroad cars, at the tops, whereby the swaying motion of the cars is greatly lessened, especially in going around curves.

The invention is not intended to supersede the ordinary couplings, but is used as an auxiliary thereto, and it consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings: Figure 1 represents a side elevation of the ends of two cars connected together by my improved coupling. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional view of the coupling. Fig. 4. is a view of one half of the coupling detached from the car. Fig. 5 is a plan view, showing means for connecting a tender to a car having my coupling applied thereto.

In the said drawings the reference numeral 1 designates a railroad car of any suitable construction, and is provided with any ordinary coupling. At each end the cars are provided with a transverse bar 2 which bars are connected together at their ends by means of horizontal rods 3, and at their centers by means of two diagonal rods 4, 4, and horizontal rods 5. In passenger cars, the rods 3, extend along the sides of the cars just under the eaves, and the central rod extends through the cars just under the roof, while in freight cars, said rods run along the top thereof. Hooks 6 are secured to the cars at proper intervals to support and hold the bars and rods, and said rods are also provided with right and left-handed screw-swivels, 7, for tightening the same. These bars and rods constitute a rigid frame with which the couplings are connected, thus taking the strain off the ends of the cars. Each of the bars 2 at the center is formed with a reinforcing block or plate 8, provided with outwardly extending lugs 9, which are hinged or pivoted thereto. To one of these lugs is pivoted or hinged a bolt or pin 10, screw-threaded at its outer end. To the other lug is similarly pivoted or hinged a pin 12, having a head 13. Carried by this pin and rotatable thereon, is a metal block 14, which is held in place by the head 13. This block is provided with a hub 15 and a hand-wheel 16, provided with a central screw-threaded aperture with which the pin 10 engages.

The operation is as follows: As the cars are coupled in the ordinary manner, the pin 10 is brought into alignment with the aperture in wheel 16, and the latter is turned so that said pin will engage with the screw-thread in the aperture. By this means the cars are securely coupled at their tops, which will prevent to a great extent, the swaying motion on going around curves, which motion has a tendency to spread the rails apart. The couplings have a slightly sidewise movement upon their pivots, and when not in use, can be turned back against the car, so as to be out of the way. The block 14 is slidable upon the pin 12, as well as rotatable so that it will yield to the motion of the cars caused by jerks and jars, in starting and stopping the train.

For the purpose of connecting the tender or a locomotive to a car containing my improvements, I provide the following means: Secured to the plate 8, are staples or loops 17, with which engage diagonal rods 18, provided with hooks 19. With these diagonal rods engages a hooked rod 20, screw-threaded at its outer end, which engages with a right and left-handed screw-threaded swivel 21, which in turn engages with the threaded end of a hooked rod 23. This bar is secured to a staple on the tender or locomotive. The object of the swivel is to adjust the connecting rods.

Having thus described my invention, what I claim is—

1. The combination with the transverse bars and horizontal rods connected together forming a frame, and secured to a railroad car near

its top, of a coupling connected to said bars, substantially as described.

2. In a coupling for connecting cars together at or near their tops, the combination with the transverse bars and connecting rods, of the lugs secured to said bars, the screw-threaded pin pivoted to one of said lugs, the headed pin pivoted to the other lug, the slidable and rotatable block carried by said headed pin, and the hand-wheel, having a screw-threaded aperture with which the screw-threaded pin is adapted to engage, substantially as described.

3. The combination with the horizontal rods, the transverse bars provided with staples, the diagonal hooked rods engaging with said staples, the screw-threaded rods 20 and 23, and the right and left-handed screw-threaded swivel 21, with which the rods 20 and 23 engage, substantially as described.

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

HENRY K. KNOX.

Witnesses:
DAVID M. HASKELL,
GEORGE W. HASKELL.