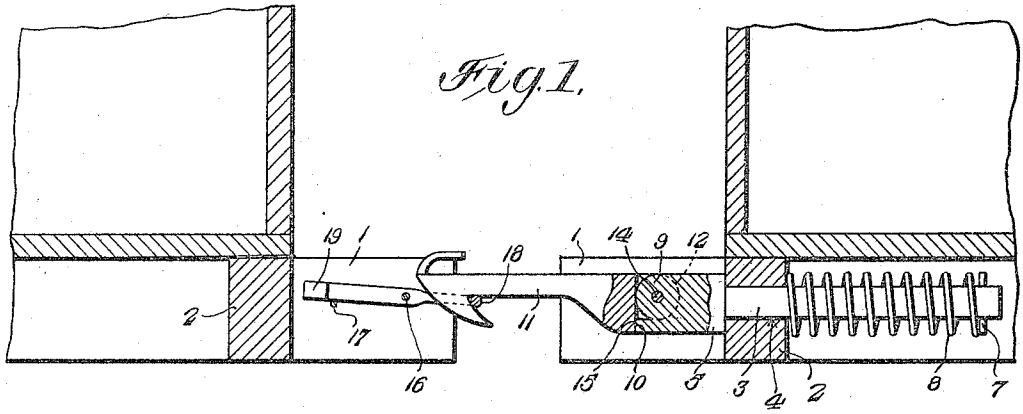
P. W. JOHN.

CAR COUPLING.

APPLICATION FILED MAR. 22, 1916.

1,242,810. Patented Oct. 9, 1917.

Fig. 1.



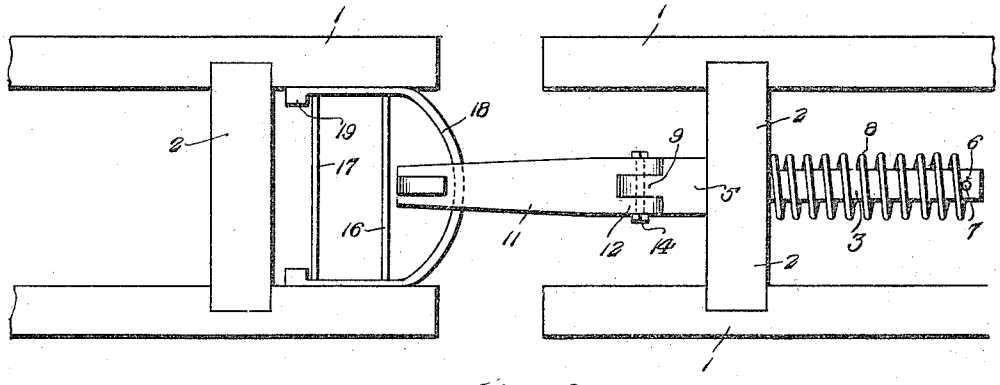


Fig. 2.

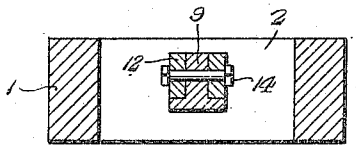


Fig. 3.

Inventor
P. W. John,

Witnesses
J. A. Crawford.
John J. McCarthy

By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

PETER W. JOHN, OF MIDDLEPORT, PENNSYLVANIA.

CAR-COUPLING.

1,242,810. Specification of Letters Patent. Patented Oct. 9, 1917.

Application filed March 22, 1916. Serial No. 85,910.

To all whom it may concern:

Be it known that I, PETER W. JOHN, a citizen of the United States, residing at Middleport, in the county of Schuylkill and State of Pennsylvania, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to improvements in car couplers and has particular application to a coupling device for mine cars.

In carrying out the present invention, it is my purpose to provide a coupling device for mine cars whereby the cars may be coupled together automatically and whereby the cars may move relatively to one another without breaking the coupling.

It is also my purpose to provide a coupling of the class described whereby the cars may round a curve without disrupting the coupling and wherein the component parts of the coupling will be so arranged and correlated as to reduce the possibility of derangement to a minimum.

Another object of my invention is to provide a coupling for mine cars which will be constructed in such manner that jarring or jolting of the cars in the initial pulling thereof will be eliminated, thereby preventing excessive straining of the couplings when taking out the slack between the cars.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter set forth in and falling within the scope of the claim.

In the accompanying drawing;

Figure 1 is a fragmentary longitudinal sectional view through the adjacent ends of two mine cars connected together by means of my improved coupling device.

Fig. 2 is a fragmentary top plan view of the same.

Fig. 3 is a cross sectional view through one of the cars.

Referring now to the drawing in detail, 1, 1 designate the side sills of a mine car, while 2 indicates the end sill at one end of the car interconnecting the side sills 1, 1 and disposed adjacent to the extremities of such sills. My improved coupler comprises a shank 3 slidably mounted within an opening 4 formed in the end sill 2 at one end of the car and having the outer end thereof formed with a head 5 and the inner end formed with a transverse opening 6 in which is removably mounted a pin 7. Surrounding the shank 3 between the pin 7 and the adjacent face of the end sill is a coiled expansion spring 8 acting to hold the shoulder formed at the juncture of the head 5 with the shank 3 normally against the outer side of the end sill. The opposite sides of the head 5 contiguous to the outer end and the upper edge of such head are cut out to form a pivot knuckle 9, while the bottom portion of the head contiguous to the knuckle 9 projects laterally beyond such knuckle and forwardly of the knuckle and the forwardly extending portion forms a shoulder 10. 11 designates a coupling bar having one end bifurcated or forked as at 12 and the lower edge adjacent to the remaining end formed to provide a hook 13. The bifurcated or forked end 12 of the coupling bar receives the knuckle 9 and passed through alining openings in the limbs of the bifurcated end and in the knuckle is a horizontal pivot pin 14 forming a connection between the coupling bar and the shank whereby the coupling bar may swing vertically relatively to the shank. Formed on the lower edge of the coupling bar immediately adjacent to the forked end 12 is a depending shoulder 15 adapted to engage the shoulder 10 when the coupling bar is in horizontal position to hold said bar in horizontal position and prevent downward swinging movement of the bar. Passed through horizontally alining openings formed in the side sills of the car at the end of the car opposite from the shank and coupling bar is a rod 16 and disposed in rear of the rod 16 and parallel therewith is a second rod 17 mounted in horizontally alining openings formed in the side sills of the car. These rods 17 and 16 are disposed in front of the adjacent end sill. 18 designates a substantially U-shaped coupling yoke having the limbs thereof formed, adjacent to the ends thereof, with alining openings that receive the rod 16, while the rear portion of the yoke rests upon the rod 17.

In practice, the rod 17 holds the yoke 18 normally in a substantially horizontal position, while the coupling bar 11 is in either a vertical position or a horizontal position. The ends of the cars to be coupled are brought together and, assuming the coupling bar to be in horizontal position, the hooked extremity of such bar rides over the central member of the coupling yoke and the hook 13 engages such member of the yoke so that the cars may be pulled together.

Should the coupling bar be in vertical position, such bar will drop to horizontal position when the ends of the side sills of the cars abut and when dropping to horizontal position the hook 13 will engage behind the central member of the hook 18. In the initial pulling of the cars, the slack between the cars is taken out and when the hooks 13 of the coupling bars pull upon the coupling yokes initially, the springs 8 are compressed, thereby eliminating a sudden pulling of the cars and preventing unnecessary strain on the parts of the coupling.

It will be seen that the coupling bar and the coupling yoke may swing vertically, while the coupling bar may slide laterally upon the central member of the coupling yoke, thereby enabling the cars to adapt themselves to any irregularities in the roadway and to take curves without disrupting the coupling.

Journaled in horizontally alining bearings carried by one end of the car and arranged above the coupling bar 11 is a rod 19 having one end equipped with an outwardly projecting arm 20 and the other end formed with an oppositely projecting handle 21 movable over a rack 22. The arm 20 is connected through the medium of a wire 23 with the coupling bar 11 so that the coupling bar may be elevated and lowered without necessitating the attendant entering the space between the cars during the coupling thereof.

I claim:

A coupler for mine cars, comprising a yoke extending across the space between the side sills of a mine car and having its arms pivoted upon the confronting faces of said sills at points remote from the ends of the arms, the closed portion of said yoke being arcuate, a bar extending between said sills and disposed below the free ends of said arms, said closed portion being swingable downwardly, and a coupling bar connected with the end sill of the other car to be coupled and provided at its free end with a downwardly extending hook engageable with and slidable laterally upon the arcuate portion of said yoke, said coupling bar being swingable upwardly.

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

PETER W. JOHN.

Witnesses:
WILLIAM HYLAND,
ROBT. J. BOARN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."