May 31, 1927. 1,630,481

J. T. FITZPATRICK

CAR COUPLER UNCOUPLING MECHANISM

Filed Dec. 17, 1923

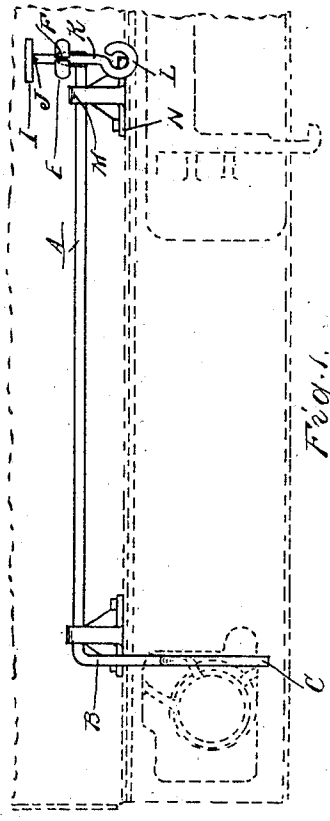


Fig. 1.

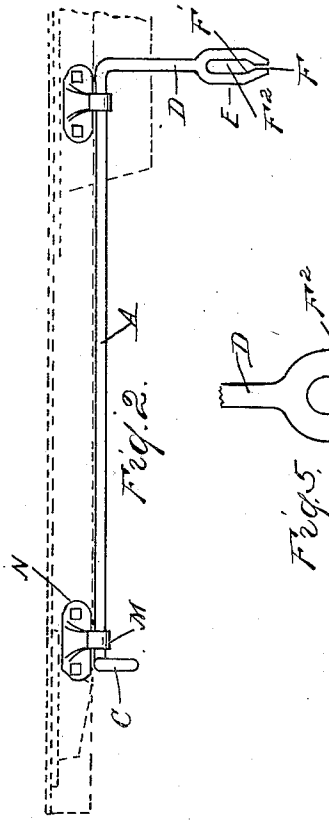


Fig. 2.

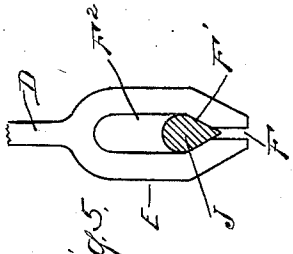


Fig. 5.

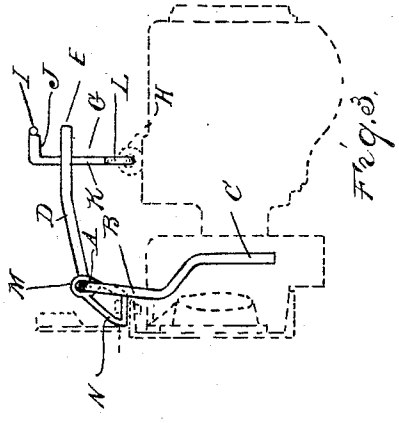


Fig. 3.

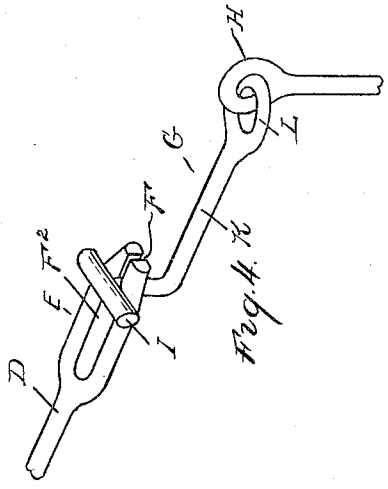


Fig. 4.

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Patented May 31, 1927. 1,630,481

UNITED STATES PATENT OFFICE.

JOHN THOMAS FITZPATRICK, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HUTCHINS CAR ROOFING COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF DELAWARE.

CAR-COUPLER UNCOUPLING MECHANISM.

Application filed December 17, 1923. Serial No. 681,257.

The invention relates to car coupler uncoupling mechanism of that type comprising a rock shaft having an operating handle at the side of the car and an arm at the center of the car operatively connected to the coupling pin. It is the primary object of the invention to provide a construction which will permit automatic separation of the parts of the uncoupling mechanism in case the coupler should break away from its draft rigging. Such parting of the coupler is not an infrequent occurrence and my improved construction is one which will not be destroyed in such an event. The invention further consists in various features of construction as hereinafter set forth.

In the drawings:

Figure 1 is an end elevation of the car with the coupling mechanism mounted thereon;

Figure 2 is a plan view thereof;

Figure 3 is a side elevation;

Figure 4 is a perspective view illustrating the automatic disengagement of the link from its operating arm;

Figure 5 is a horizontal section thereof.

A is a rod extending from the sides to the center of the car and having at its outer end the depending rock arm B outwardly offset at C to provide a handle clearing the end sill of the car. At the inner end this rod is provided with a horizontally extending rock arm D having a bifurcated outer end E, while the outer ends of the furcations are bent inward to form a narrow slot F with a flaring entrance F′ from the wider slot F^2 between the furcations. G is a link for connecting the rock arm D with the coupling pin H. This link is formed with a T-shaped head I having a horizontally extending shank J and the downwardly extending vertical shank portion K terminating in a loop L for engaging the eye of the pin H. The horizontal portion J is of a wedge-shaped cross section such that when the link G is turned horizontally and drawn outward, the portion J will engage with the flaring portion F′ and will spread the furcations passing through the slot F. M are bearing members engaging the rock shaft A and formed integral with supporting brackets N, bolted or otherwise secured to the end sill of the car.

With the construction as described, in mounting the device upon the car the bearings M may be readily engaged with the handle C and sleeved over the rod to their respective positions. This is rendered possible by forming the eye of each bearing with sufficient clearance and sufficiently rounded so as to pass about the bends in the rod. The brackets N are then bolted in position and the link G is engaged with the coupler pin, after which the T-head I may be inserted through the slot F and turned into the position shown in Figure 3. In this position all longitudinal and lateral movements of the coupler incident to the movement of the cars are permitted without throwing any stress upon either the link G or the rock arm D. If, however, the coupler should part from its draft rigging, the outward movement of the pin H will draw the link G into substantially horizontal position and will engage the wedge-shaped shank J with the flaring portion F′. This, as previously described, will result in spreading the furcations E, so that the link will pass through the slot F and be released. Such operation will not seriously damage the mechanism for the furcations E can be readily pressed together again.

What I claim as my invention is:

1. In a car coupler releasing mechanism, the combination with the operating rock shaft and means for pivotally connecting the same to the car body, of a rock arm extending outward from said shaft above the coupler having a bifurcated outer end with the extreme end portions thereof bent towards each other, and a link for connecting the pin to said rock arm having a portion for spreading the furcations upon an abnormal outward movement of the coupler.

2. A car coupler releasing mechanism comprising a pin lifting rock arm and a link for connecting said rock arm to the coupler pin, one of said parts being provided with partly closed furcations and the other with a portion between said furcations adapted to spread the same on an abnormal outward movement of the coupler.

3. A car coupler releasing mechanism comprising a rock arm having a bifurcated outer end partly closed, a link for connecting the coupler lock pin with said rock arm having

a vertical portion normally extending between said furcations, a horizontally extending portion above the furcations and a head portion at the end of said horizontal portion, said horizontal portion being adapted to assume a vertical position upon an abnormal outward movement of the coupler and being of a section for spreading the furcations to effect a release therefrom.

4. A car coupler releasing mechanism comprising a rock arm having a bifurcated outer end partly closed, a link for connecting the coupler lock pin with said rock arm comprising a shank portion having an eye at its lower end engaging the pin, a shank portion normally projecting vertically between the furcations of said rock arm, a horizontally extending portion above said furcations and of a wedge-shaped cross section and a T-head at the end of said horizontal portion, said link being adapted on an abnormal outward movement of the coupler to pull the wedge-shaped portion thereof into a substantially vertical position and to thereby spread the furcations of the rock arm and effect a release.

5. In a car coupler releasing mechanism including a coupling pin, a link connected with said coupler pin, operating means for lifting said pin and a connection between said operating means and said link normally maintaining the link and operating means in engaged relation, said connection including a member adapted to be distorted and moved from its normal engaged position and a member for causing said distortion to permit automatic disengagement between the operating means and link on an abnormal outward movement of the coupler.

6. In a car coupler releasing mechanism including a coupling pin, operating means for lifting said pin including, a member adapted to be distorted, and a second member normally interengaged therewith, said members being provided with cooperating portions for causing said distortion thereby effecting automatic disengagement thereof on an abnormal outward movement of the coupler.

In testimony whereof I affix my signature.

JOHN THOMAS FITZPATRICK.