

J. E. HUDLER.
CAR COUPLING DEVICE.
APPLICATION FILED JAN. 9, 1911.

1,045,556.

Patented Nov. 26, 1912.

2 SHEETS-SHEET 1.

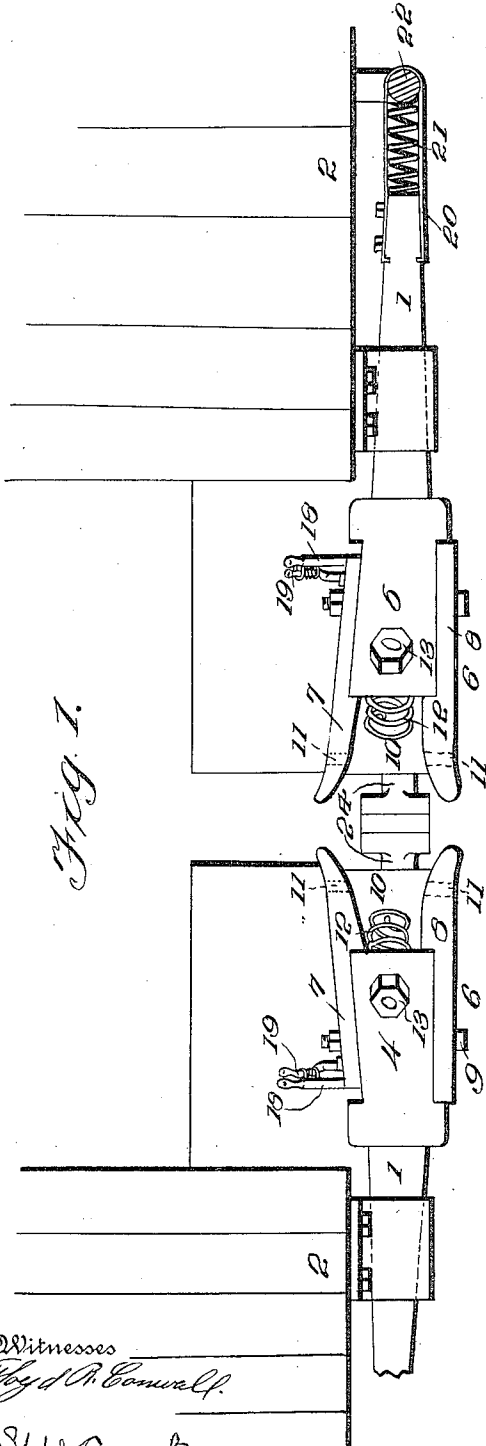


Fig. 1.

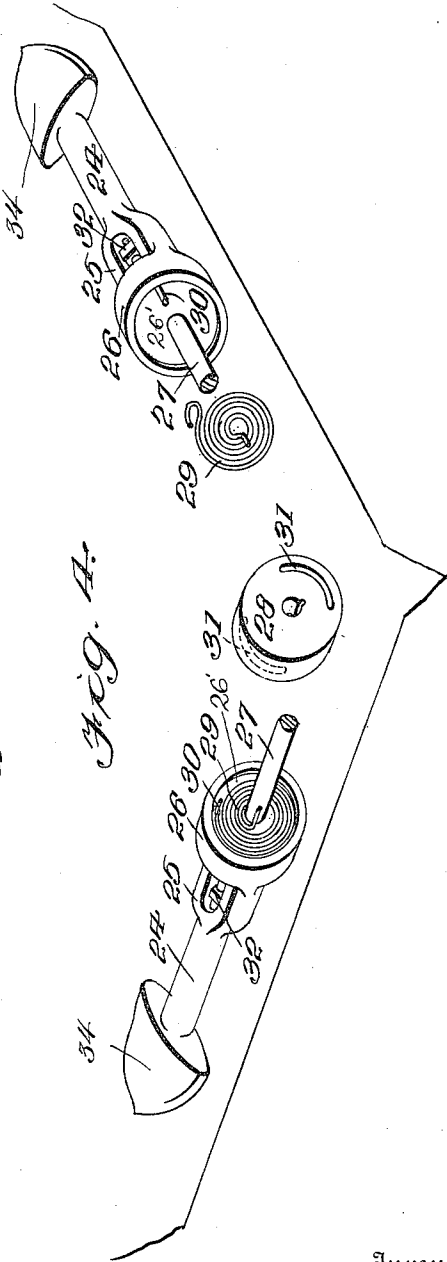


Fig. 4.

Witnesses

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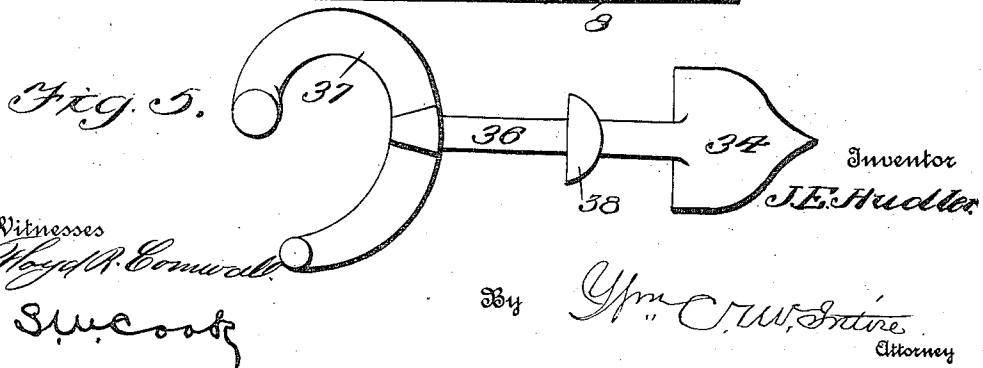
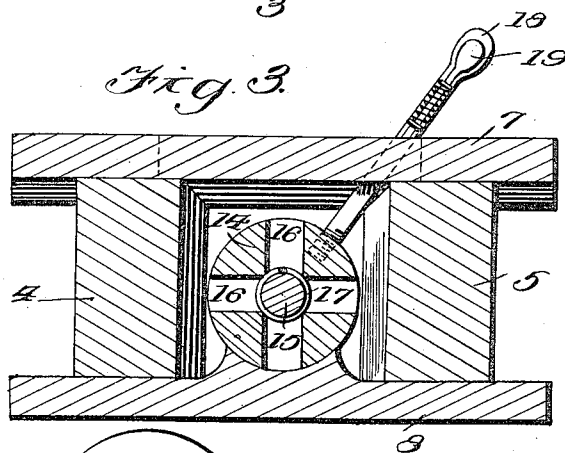
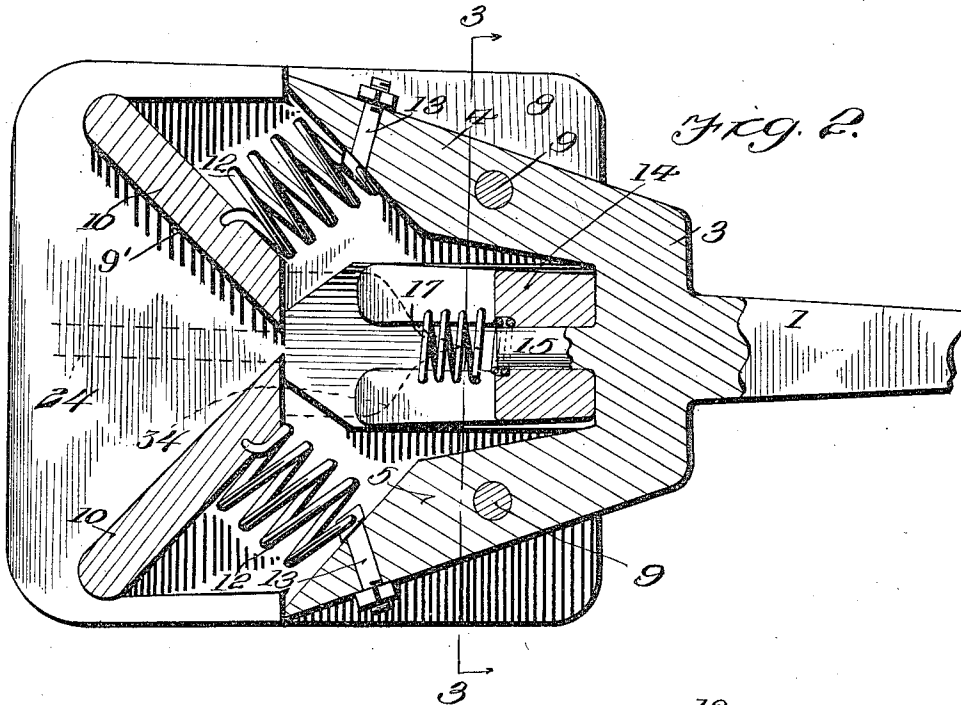
Attorney

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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JAMES E. HUDLER, OF CRUMPLER, NORTH CAROLINA.

CAR-COUPLING DEVICE.

1,045,556.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed January 9, 1911. Serial No. 601,661.

To all whom it may concern:

Be it known that I, JAMES E. HUDLER, a citizen of the United States, residing at Crumpler, in the county of Ashe and State of North Carolina, have invented certain new and useful Improvements in Car-Coupling Devices; and I do hereby 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.

This invention relates to improvements in car couplers, and particularly to that type of couplers commonly known as automatic car couplers.

The object of this invention is to provide improvements and increase the practicability of a similar device set forth in Patent No. 943,079, granted December 14, 1909.

My invention relates to coupling links for railroad cars of the arrow head type, and especially to the links of the class shown in my Patent #943,079, issued December 14, 1909, and has for its object the provision of an improved construction of link by which the rotation of the arrow head terminals of the link is more easily accomplished and the link returned to its normal position after rotation of either arrow head terminal.

My invention will be described in detail hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the abutting ends of two cars showing the draw bars and coupler heads mounted thereon and my improved link shown in connection therewith; Fig. 2, a horizontal sectional view of one of the coupler heads showing my improved coupling link fragmentally and designated by broken lines; Fig. 3, a transverse vertical section on the plane indicated by the line 3—3 of Fig. 2, looking in the direction of the arrows; Fig. 4, a view in perspective of my improved link showing it in a dismembered condition; and Fig. 5, a view in elevation of a modified form of link.

In the drawings similar reference characters will be used to designate corresponding parts throughout the several views. In Fig. 1 I have shown a draw bar 1 mounted on each of the abutting ends of the cars 2 and in Fig. 2 said draw bars 1 are shown with integral fork members 4 and 5 having their free terminals tapered. Secured to the fork members 4 and 5 are top and bottom plates 7 and 8 which have their free terminals

curved upwardly and downwardly as shown in Fig. 1. The fork members 4 and 5 and plates 7 and 8 form the coupling head which is indicated generally in said Fig. 1 as 6. Plates 7 and 8 are each provided with angular depressions 9' forwardly of the terminals of the fork members 4 and 5 and having their adjacent walls converging rearwardly as clearly shown in Fig. 2. Pivotaly mounted in each of the depressions 9' is a jaw 10 by means of pins 11 extending into the plates 7 and 8. 12 indicates a coiled spring having one of its terminals engaging each of the jaws 10, while its other terminal is secured to a bolt 13 engaging the adjacent form member 4 or 5 as the case may be.

14 indicates a sleeve rotatably mounted on a stud 15 extending from the draw bar 1 between the fork members 4 and 5 and having slots 16 therein that are formed radially of said sleeve and terminate at the forward terminal thereof, said slots being as shown arranged with their median lines 90° removed from one another. 17 indicates a spring having one of its ends secured to the stud 15, while its other end engages the sleeve 14 and operates to normally hold said sleeve in position so that one of the transverse slots 16 in the sleeve is always in a horizontal position. 18 designates a lever arm secured to sleeve 14 and adapted to be utilized for rotating said sleeve when it is desired to rotate the coupling link to be hereinafter described, said lever arm being normally held in position so that one of the slots 16 is as heretofore stated, in a horizontal position by means of a finger latch 19 having its lower extremity engaging a suitable latch on the coupling head. The rear terminal of each draw bar 1 is provided with a U-shaped member 20 that engages a transverse bracket 22 on the under side of the car body 2, and 21 indicates a spring mounted in said U-shaped guide and interposed between the terminal of said draw bar and the bracket 22 aforesaid, said construction admitting of longitudinal movement of the draw bar against the resistance of said spring 21, which spring as will be apparent, operates as a cushion to prevent shock in coupling the cars.

In Fig. 4 I have shown my improved coupling link and shall now proceed to describe the same. The coupling link consists of two rods designated 24 having at

one of their terminals an arrow head shaped end 34, while the other terminal of each rod is bifurcated as shown at 25 and formed with an annular casing 26. Rigidly secured in each casing 26 is a disk 26' and rotatably mounted in said disks is a rod 27 having a disk 28. 29 indicates a convolute spring mounted in each casing 26 and having one of its terminals secured to a pin 30 projecting from the disk 26', while the other terminal of said spring engages the rod 27, said pins 30 on the disks 26' also engaging and slidably moving in the arcuate slots 31 on the opposite sides of the disks 28 and diametrically opposite to one another. 32 designates nuts on the terminals of the rod 27 to hold it in engagement with the disks 26'.

In operation, it will be apparent that my improved link will engage with the coupling members 6, the arrow heads 34 when inserted in said heads oscillating the jaws 10 against the resistance of the springs 12 to admit said heads within the member, and as soon as the head passes from engagement with said jaws 10, the springs 12 will return the jaws to their original position so that they will engage the rear portions of the heads 34 and hold the link in a coupling position. When the head 34 enters the coupling member as stated, it will project into the horizontally disposed slot 16 in the sleeve 14 and will remain in said slot while in engagement with the coupling member. When it is desired to uncouple the cars, the lever 18 is oscillated through an arc of 90° and the sleeve 14 will be thereby rotated, and will in turn rotate the coupling head 34 and its connected rod 24 against the re-

sistance of the spring 29 in the casing 26 mounted on the rear extremity thereof. When the coupling head 34 attains a vertical position, it will be apparent that the head will move from engagement with the jaws 10 and the uncoupling operation will be complete. As soon as the coupling head 34 passes from engagement with the jaws 10, the spring 29 will return the rod 24 and the head 34 to its original position, and the device will be in position for another coupling operation.

In Fig. 5, I have shown a modification of my improved coupling link in which the head 34 is mounted on a rod 36 and is provided with a coupling member 37 at the other extremity of said rod 36 from the head 34, 38 indicating a stop intermediate of the ends of said rod 36 to limit the movement of the link when going into a coupling position.

I claim—

A coupling link of the kind described, consisting of rods in alinement with each other, each of said rods having a barbed shaped head at its outer end, a connecting rod in alinement with said rods and rotatably connected with their other ends, a disk mounted on said rod and provided with an arcuate slot on opposite sides thereof, a point on the end of each of the first named rods engaging one of said slots and a coil spring in the end of each of said rods connected therewith and with said connecting rod.

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

JAMES E. HUDLER.

Witnesses:

W. E. McNEILL,
C. A. DICKSON.