(No Model.)

C. F. COMSTOCK.

CAR COUPLING.

No. 457,076. Patented Aug. 4, 1891.

Fig 1

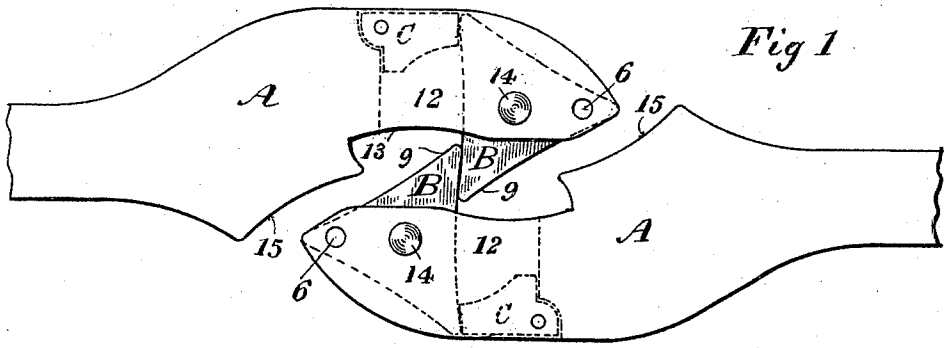


Fig. 2.

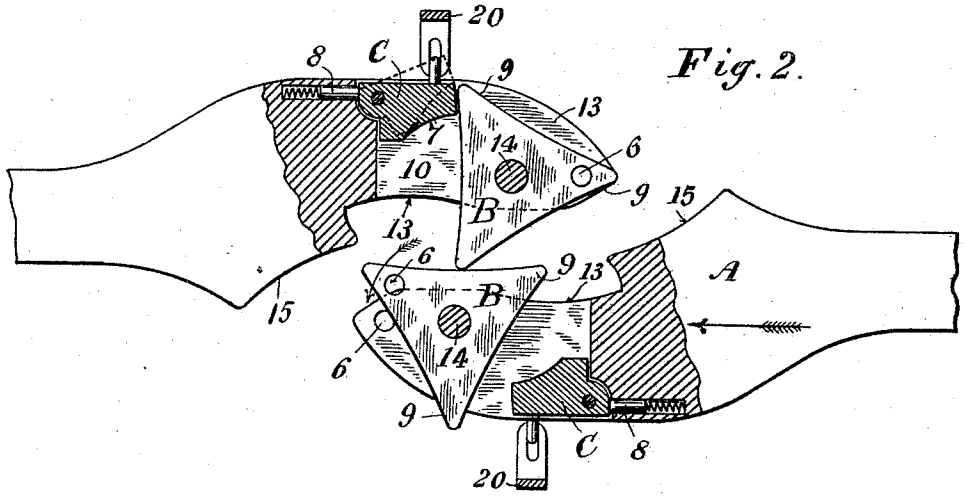
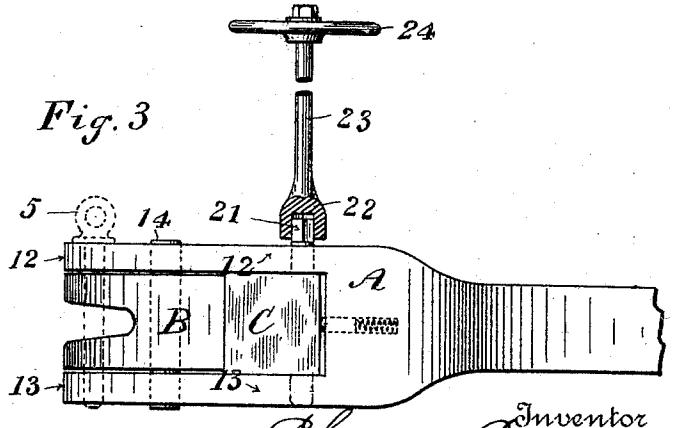


Fig. 3



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES F. COMSTOCK, OF DANBURY, CONNECTICUT.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 457,076, dated August 4, 1891.

Application filed February 12, 1891. Serial No. 381,152. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. COMSTOCK, a citizen of the United States, residing at Danbury, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates generally to car-couplings, and more particularly to that class wherein the coupling is had by the interlocking of a pair of jaws, one carried by each draw-head of the car.

The present invention includes a revoluble jaw of polygonal form adapted to turn in both directions, freely in one direction during the coupling operation and locked from turning in the opposite direction after the engagement of the jaws and while they are coupled. It also includes a lock or removable abutment, which when in position prevents the revolution of the jaw in one direction, and which is such as to permit the free revolution of the jaw in the reverse direction.

As a more ready understanding of the invention will be had by a detailed description of the same, such description will now be given, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a pair of draw-heads with their jaws coupled together. Fig. 2 is a sectional plan view showing a pair of draw-heads in the act of moving together for the coupling of their jaws. Fig. 3 is a side elevation of one of the draw-heads provided with the invention, showing a modified form of the means for removing the lock or removable abutment.

The draw-head A is secured to the draw-bar of the car in any desirable manner, and while, so far as the present invention is concerned, the said draw-head may be rigidly connected to the car, so that it will have no lateral movement, it is obvious that provision may be made by the use of any of the well-known mechanisms for moving the draw-head laterally out of its center line and for its return thereto. At its front end the draw-head is bifurcated to provide a recess or seat 10 between the upper and lower members 12 13 of the head for a revoluble jaw B. This jaw is provided with a pin 14, connecting it with the members 12 13 of the head, so that it may revolve either on the pin or the pin and jaw bodily in the bearings of the pin in the upper and lower members 12 13. This revoluble jaw is of polygonal form, and preferably of triangular shape, so that it presents a plurality of jaw-faces 9, adapted to coact with similar jaw-faces of the co-operating revoluble jaw and draw-head. While the polygonal sides of the jaw B may be straight from end to end, it is preferable that they be slightly concaved, in the manner shown, so that when a pair of opposite jaws are locked together they will have a hooked effect. The triangular form of the jaw B presents an outward inclined face to the jaw of the approaching draw-head in the act of coupling the cars together, so that a glancing effect will be produced, and as both of the jaws are revoluble freely in one direction it results that as soon as the points of either jaw pass the center of the other jaw there will be a tendency to revolve either or both of them, as shown in Fig. 2, so that they will readily pass one another.

In order to cause the jaws to become interlocked, the side face of the draw-head adjacent its co-operating draw-head is shaped to present an abutting face 15 directly in front of the end of the co-operating draw-head, so that the end of its jaw B may contact therewith and by reason of its slope or incline act to partially rotate the jaw, so that one of its jawed faces will be moved behind a jaw-face of the other draw-head, so that upon the pull of one or the other of the cars said jaws will become locked together.

To hold the jaw in a locked position, each draw-head is provided with a stop or removable abutment C, shown in the form of a tongue seated between the members 12 13 of the head immediately in rear of the jaw B and to one side of its pivot. This tongue is pivotally mounted to the head, so that it may be moved to and from active position, as shown by dotted lines in Fig. 2. This movement of the tongue may be had by the connection of the end of a lever 20 therewith, as is usual in many styles of draw-heads, for moving the draw-head laterally in the uncoupling operation; or, as shown in Fig. 3, one end of the pivot of the tongue may project upward above the upper face of the draw-head and be provided with a squared end 21,

that is engaged by the socket end 22 of a revoluble shaft or key-rod 23, extending upward through the platform of the car, with the hand-wheel 24 in position to be grasped by the brakeman or other car attendant to rock the stop or removable abutment out of operative position. When the stop or abutment C is in its normal position, as shown in Fig. 1, it securely holds its jaw in position against revolving by the pull of the co-operating jaw in the movement of the cars; but as soon as either one or both of said stops or removable abutments are moved to one side it immediately frees its respective jaw and permits it to revolve freely in the direction of the pull of the car, and consequently allows the jaws to become uncoupled. The stop or removable abutment C is returned to its normal locking position by a spring-pin 8, bearing against the heel of the abutment. The inner face 7 of the abutment C is inclined, so that in the free revolution of the jaw in its coupling action the ends of the jaw may strike said side and rock it outwardly.

In order to adapt the draw-head to the ordinary link-coupling, one or each of its jawed faces may be slotted, as shown in Fig. 3, to receive the link of the co-operating draw-head, and is perforated in line with perforations 6 in the upper and lower members 12 13 of the draw-head, so as to receive a coupling-pin 5. (Indicated in dotted lines in Fig. 3.)

What is claimed is—

1. In a car-coupling, the combination of a draw-head, a polygonal jaw revoluble in both directions in said head, and a removable abutment adapted to engage the jaw to limit the movement thereof in the direction which permits the separation of the two couplings and to leave it free to turn in the other direction, substantially as set forth.

2. In a car-coupling, the combination of a draw-head, a polygonal jaw revoluble in both directions in said head, a removable abutment adapted to engage the jaw to limit its movement in the direction which permits the separation of the two couplings, and a part or surface adapted to engage and turn into locking position the jaw of the opposing draw-head, substantially as set forth.

3. In a car-coupling, the combination of a draw-head, a revoluble jaw, a removable abutment, and an inclined face 15 for contact of the jaw of the co-operating draw-head, substantially as described.

4. In a car-coupling, the combination of a draw-head, a revoluble jaw, and a pivoted abutment permitting the jaw to revolve in one direction and adapted to lock the jaw upon revolution in the other direction, substantially as described.

In testimony whereof I have hereunto set my hand, this 9th day of February, A. D. 1891, in presence of two witnesses.

CHARLES F. COMSTOCK.

Witnesses:

THOMAS G. BARNUM,

EUGENE C. DEMPSEY.