

(No Model.)

J. J. GAYLORD.
CAR COUPLING.

No. 577,849.

Patented Mar. 2, 1897.

FIG- 1-

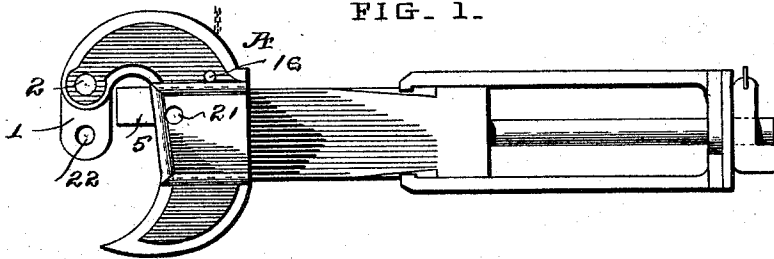


FIG- 2--

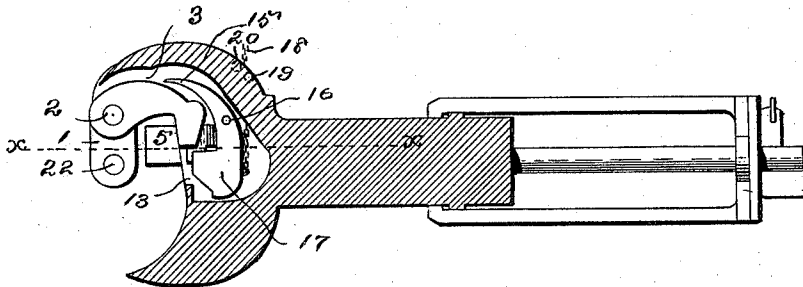


FIG- 3 -

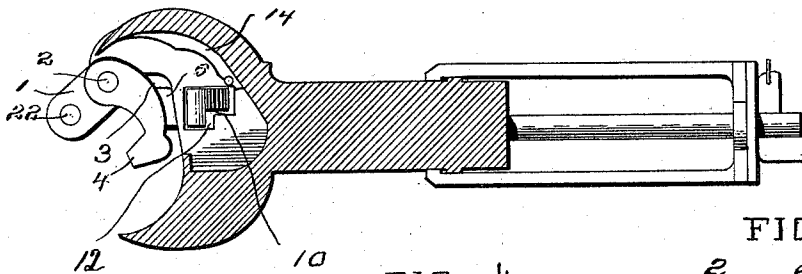


FIG- 4 -

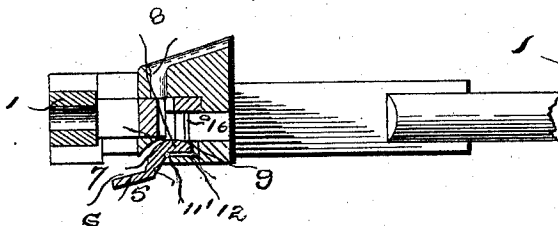
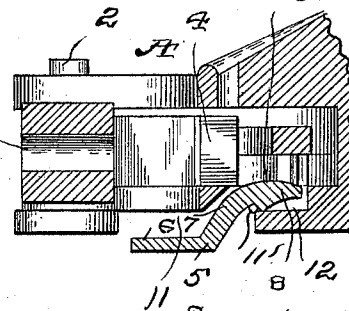


FIG- 5- 9



Witnesses
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UNITED STATES PATENT OFFICE.

JUSTUS J. GAYLORD, OF SAYRE, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 577,849, dated March 2, 1897.

Application filed June 6, 1896. Serial No. 594,560. (No model.)

To all whom it may concern:

Be it known that I, JUSTUS J. GAYLORD, a citizen of the United States, residing at Sayre, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; 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 automatic car-couplers of the "Janney" type.

My object is to provide a simple car-coupler of the class described which will be provided with improved means for locking the knuckle more firmly in position and also for unlocking it quickly.

A further object is to provide an improved and highly-efficient "safety-bracket" for preventing the draw-head from falling on the track should said draw-head break.

Having these objects in view, the invention consists of certain peculiar features and novel combinations appearing more fully herein-after.

In the accompanying drawings, Figure 1 is a plan view; Fig. 2, a like view as Fig. 1, but showing the top of the draw-head removed; Fig. 3, a view similar to Fig. 2, but showing the locking-lever removed and the knuckle open; Fig. 4, a sectional view taken on line X X of Fig. 2, showing the coupler in unlocked position; and Fig. 5 is an enlarged sectional detail view of a portion of the draw-head.

A designates the draw-head, which is of the usual conformation found in couplers of this type.

The knuckle 1 is, as usual, pivoted in between the upper and lower jaws of the coupler by a pin 2. The locking-arm of the knuckle is provided with a cam 3 and a head 4, having a flat face.

My improved safety-bracket 5 is of a shape substantially like that of a letter S, consisting of supporting-arm 6, an upwardly-inclined portion 7, and a tripping-arm 8, having an upper curved cam-surface 9. The tripping-arm is cut away at 10. The supporting-arm and portion 7 are adapted for movement in a recess 11 in the lower face of the draw-head, and the portion 7 projects upward through

the jaw, being fulcrumed at its joint with the tripping-arm on a bolt 11'. The tripping-arm is adapted to lie in a recess 12 in the upper face of the lower jaw when the knuckle is locked. In this latter position the supporting-arm projects out horizontally from the jaw immediately under the knuckle of the twin coupler, so that if the draw-head should break the other coupler will be supported. As the twin coupler is also provided with a safety-bracket the present coupler would be sustained in the event of its breaking.

It will be observed that the draw-head is provided with a vertical shoulder 13 and a shelf 14.

My improved knuckle-lock consists of a curved pointed opening-arm 15, which rests on the shelf 14 and is pivoted to the latter by a pin 16, and a catch-head 17, which is adapted to abut on the shoulder 13 and to ride on the cam-surface of the tripping-arm of the safety-bracket. When the knuckle is locked, the face of its head 4 abuts on the catch-head of the knuckle-lock and the cam 3 rests against the opening-arm.

A chain 18, connected to the catch-head of the knuckle-lock, passes between rollers 19 and 20, journaled in the side of the draw-head, and thence back to the usual lever on the platform of the car. The function of this chain is to operate the knuckle-lock and open the knuckle. I also provide the upper jaw of the draw-head with a pin-opening 21, which receives a coupling-pin to hold the knuckle rigid should the locking mechanism break.

The knuckle is provided with the usual openings 22 to receive a pin for holding the link in place should it be necessary to couple to a link-coupler.

The operation is as follows: Let it be assumed that the knuckle is open. When in this position, the catch-head is thrown back in the draw-head and off from the cam of the tripping-arm of the safety-bracket, so that the supporting-arm of the latter is inclined downwardly and the tripping-arm thrown up. As the arm of the knuckle is closed into the draw-head by the latter being struck by another coupler, the arm comes into engagement with the opening-arm of the knuckle-lock, forcing the same inward on the shelf and throwing the catch-head forward. As the catch-head

moves forward it rides on the cam-surface of the tripping-arm of the safety-bracket and depresses the same, meanwhile throwing the supporting-arm of said bracket upward under the knuckle of the approaching coupler. When the catch-head has come into engagement with the shoulder on the draw-head, the head of the arm of the knuckle has been also locked against the catch-head and the coupling operation is complete. When necessary to uncouple, the chain is pulled. This draws the catch-head of the knuckle-lock inward, at the same time causing the opening-arm to ride on the knuckle-arm and throw the knuckle open, meanwhile releasing the safety-bracket.

Having thus described the invention, what is claimed as new is—

1. In a Janney-type car-coupler, the combination with a draw-head, of a pivoted knuckle, a knuckle-lock for locking and unlocking the knuckle and a safety-bracket operated by the knuckle-lock, substantially as described.

2. In a Janney-type car-coupler, the com-

bination with a draw-head, of a pivoted knuckle, a pivoted knuckle-lock for locking and unlocking the knuckle, and a pivoted safety-bracket thrown into supporting position by the movement of the knuckle-lock, substantially as described.

3. In a Janney-type car-coupler, the combination with a draw-head, of a pivoted knuckle, a pivoted knuckle-lock for locking and unlocking the knuckle, and a pivoted safety-bracket projecting through the lower jaw of the draw-head and provided with a tripping-arm on which the knuckle-lock is adapted to ride and whereby the safety-bracket is thrown into a supporting position, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JUSTUS J. GAYLORD.

Witnesses:

P. M. RAUP,

W. H. ALLEN.