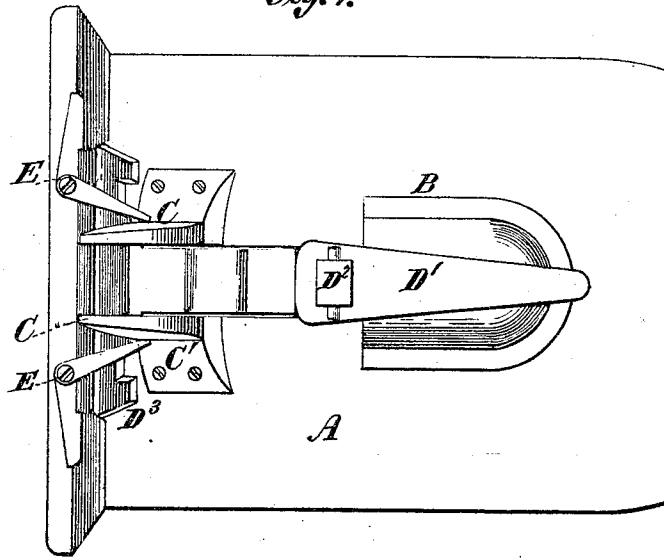


R. GILCHRIST.  
Car-Couplings.

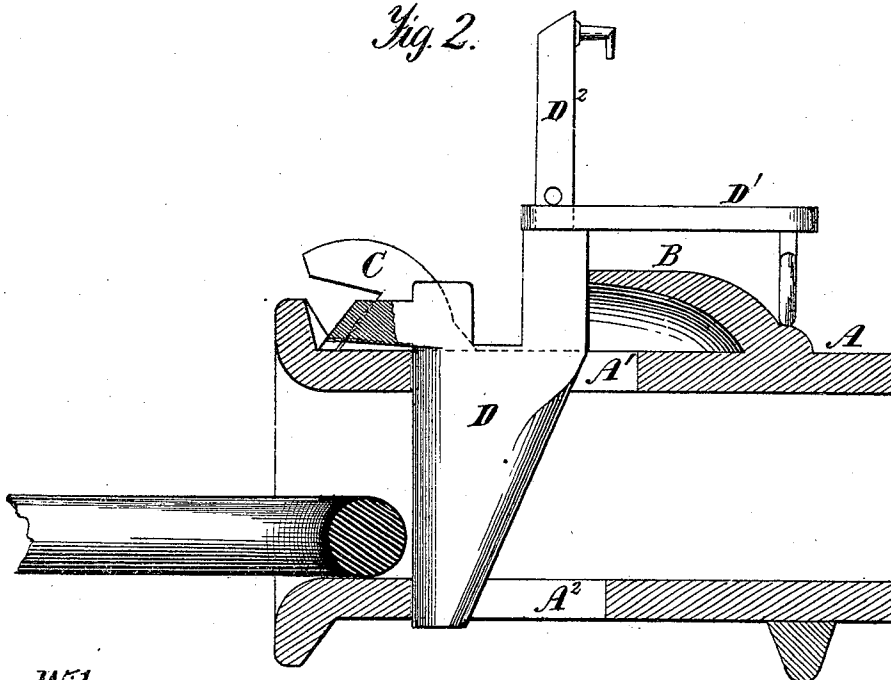
No. 148,205.

Patented March 3, 1874.

*Fig. 1.*



*Fig. 2.*



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Fig. 3.

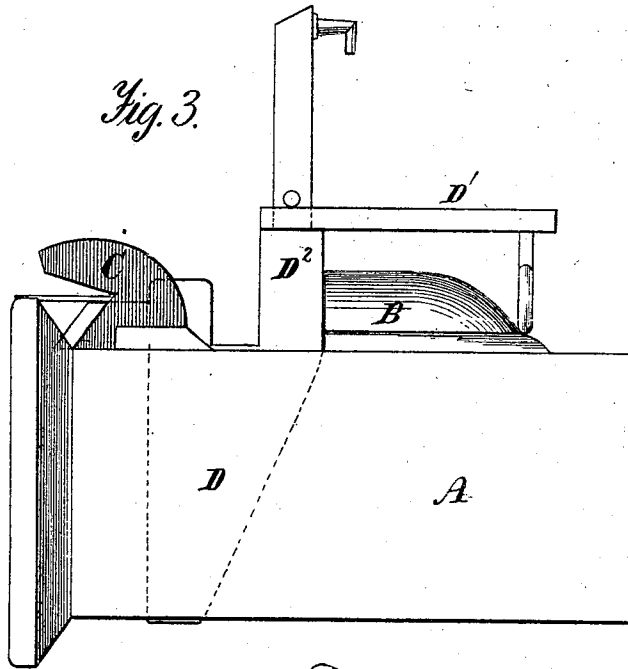
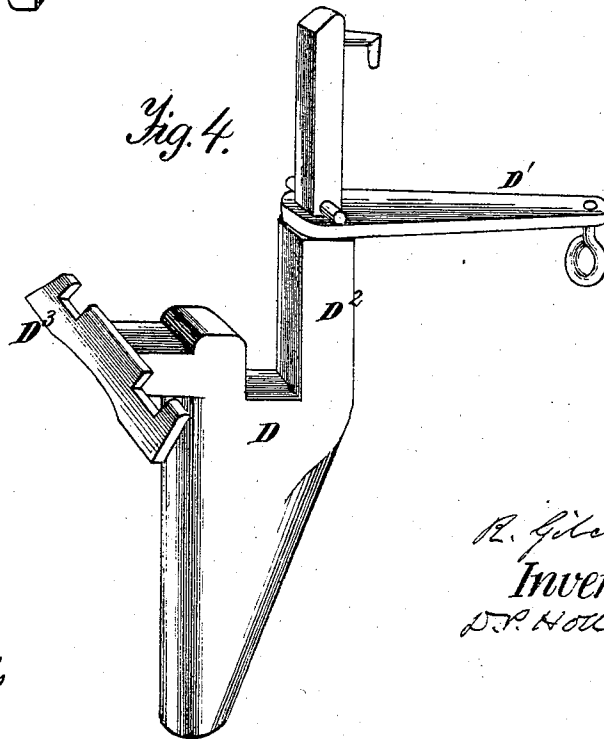


Fig. 4.



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# UNITED STATES PATENT OFFICE.

ROBERT GILCHRIST, OF LOUISVILLE, KENTUCKY.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **148,205**, dated March 3, 1874; application filed January 7, 1874.

*To all whom it may concern:*

Be it known that I, ROBERT GILCHRIST, of Louisville, in the county of Jefferson and State of Kentucky, have invented an Improvement in Car-Couplings, of which the following is a specification:

Figure 1 is a plan view of my improved coupling device, showing a portion of one of the draw-heads, the coupling-bolt, and the dogs for locking it in its place. Fig. 2 is a longitudinal section, showing the construction and arrangement of the parts, with the coupling-link just entering the head. Fig. 3 is an elevation of a portion of the draw-head, the coupling-pin, and an arm attached thereto for uncoupling the cars; and Fig. 4 is a perspective view of the coupling-pin and its arm.

Corresponding letters denote corresponding parts in all of the figures.

This invention relates to that class of devices which are denominated automatic car-couplings; and it consists in the construction of the coupling-pin, and in the combination and arrangement of certain of the parts, as will be more fully explained hereinafter.

In constructing car-couplings of this type, I use a draw-head, A, which may consist of a rectangular box with suitable strengthening-flanges upon its outer end, or it may be of two bars of metal with a head secured to their outer ends. Through the top and bottom plates of this box, or through the two bars of a draw-head, slots A<sup>1</sup> A<sup>2</sup> are formed, for the purpose of allowing the coupling-link to pass through, as shown in Fig. 2; and in order that such link may have the required amount of motion imparted to it, and not be in danger of being thrown out of its place, there is a projection, B, formed upon the upper surface of the box, or bolted upon the bar when wrought-iron is used, it having a reservoir in its under surface for the reception of the lower end of the pin, when it is in position to enter or pass out of the coupling-link. The upper plate or bar of the draw-head is also provided with two projecting ears, C C, which are attached to the head or to a plate, C', secured thereto, said ears projecting upward and forward, as shown in Figs. 1, 2, and 3, they being provided with notches for the reception of a flange upon the coupling-pin. For attaching this draw-head

to the cars, any suitable shank may be attached to its rear end, upon which the spring may be placed. The coupling-pins D, which it is designed to use in connection with the head, is of peculiar construction, its peculiarities being clearly shown in Fig. 4, where it will be seen that that portion thereof which, when it is in position to receive the force applied to move the car, as seen in Fig. 2, is straight and vertical, and that it rests firmly against the ends of the slots A<sup>1</sup> and A<sup>2</sup>, while its opposite side is beveled for the purpose of carrying its opposite or rear edge back far enough to allow the portion D<sup>2</sup> to extend therefrom at the proper point. This last-named portion extends upward above the upper surface of the draw-head for some distance, when it is reduced in size or is supplied with a collar, upon which rests an arm, D<sup>1</sup>, which extends rearward for any required distance, and is furnished with a ring or other suitable device to which to attach a cord or chain, with which to tilt the pin into such a position as to allow the link to pass out of the head, or, in other words, to uncouple the cars, which may be effected by a person standing on the top thereof, or at their sides, it being necessary, in the latter case, to have the cord or chain pass over a pulley or support, or the upper portion, and near the edge of the cars. Upon the front side of the pin there is a projection, to the outer end of which a cross-bar, D<sup>3</sup>, is secured, the lower surface of which rests upon the upper surface of the draw-head, its upper edge being provided with recesses, as shown. When it becomes desirable to uncouple the cars, the necessary force is applied to the cord or chain above alluded to, which causes the pin to vibrate upon the edge of its bars D<sup>3</sup>, and its lower portion is thrown up out of the link and into the recess in the projection B upon the draw-head. When the end of the link has been removed from the head, if the link is freed from restraint, its own gravity will cause it to assume the position shown in Figs. 2 and 3, and if the coupling-link, which is in the draw-head of another car, is brought in contact with it while it is in this position, its lower end will be forced backward until the link will pass it, when it will immediately return to its original position, and the cars will be coupled together without the interposition

of the brakeman or any one else, which will save them from running the risks incurred in coupling cars with draw-bars constructed without automatic couplings.

To prevent this pin from being unintentionally removed from the head, and provide for its ready removal when necessary, latches E E are pivoted to the same, so that when the pin is in position, they may be swung into the proper position over the slots formed in the bars D<sup>3</sup>, and thus prevent the pin from being lifted out of its place.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the draw-head A, having the projecting ears C C', the coupling-pin D, and latches E E, the parts constructed to operate substantially as and for the purpose set forth.

ROBERT GILCHRIST.

Witnesses:

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