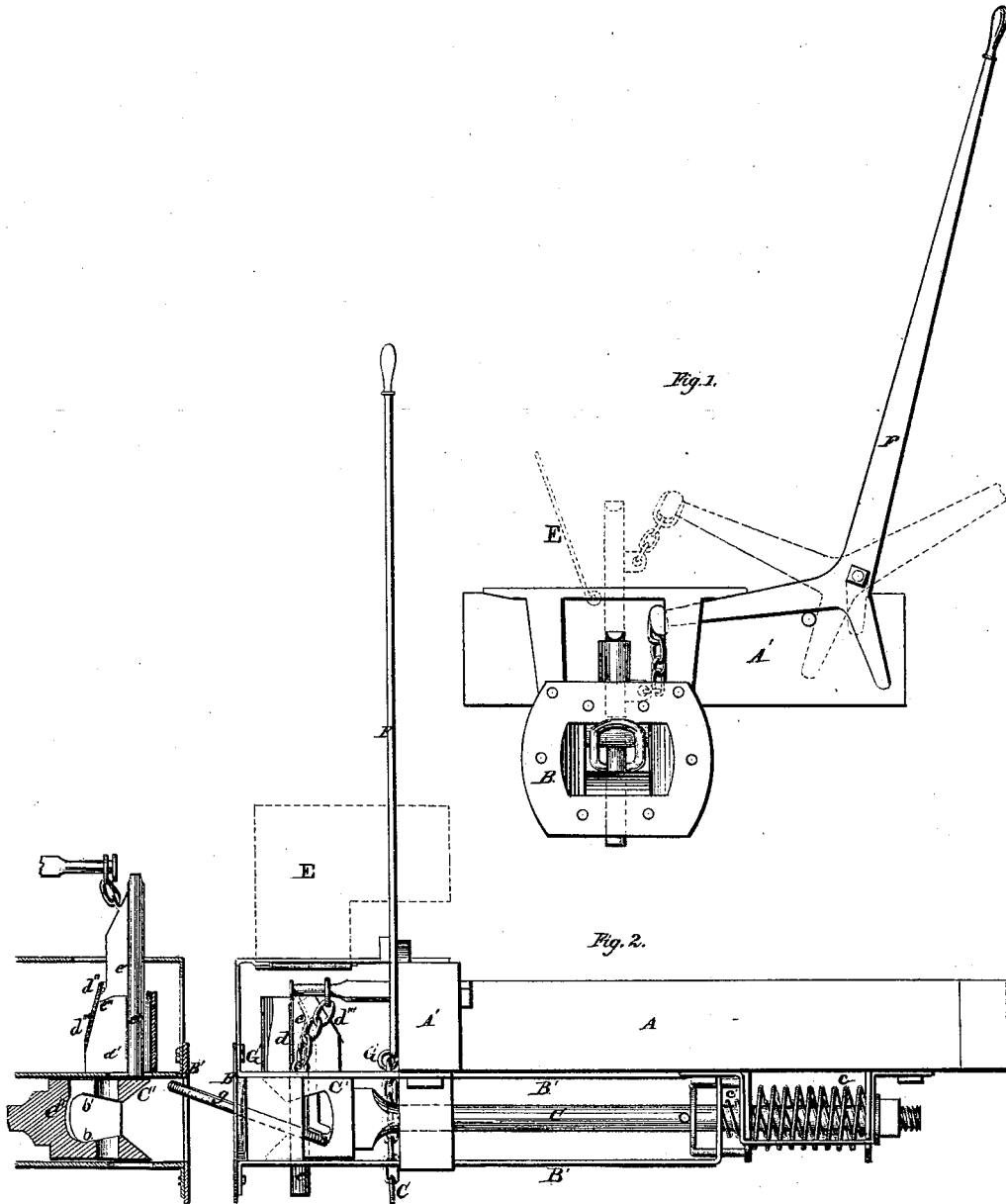


J. B. TRACY.
CAR-COUPLING.

No. 181,606.

Patented Aug. 29, 1876.



WITNESSES:

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IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 181,606, dated August 29, 1876; application filed March 8, 1875.

To all whom it may concern:

Be it known that I, JOSEPH B. TRACY, of Lincoln, in the county of Sussex and State of Delaware, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front view of the head, with the link and pin in position, showing the front of bridge and front beam of platform, with the lever attached to uncouple the cars. Fig. 2 is a side view of the same, the two buffer-heads in a position to couple together, showing the open-headed draw-bar, with springs, plates, stop, and stirrups attached under string-timbers A in Fig. 2, and front beam A'.

The nature of this invention relates to method of coupling railroad-cars, whereby the same are automatically attached, and consists in devices which will be more fully hereinafter described.

In the drawing, A represents the string-timbers, and A' the front beam. B is the buffer-head, made curved or flat, as may be desired. Under the string-timbers are the straps and guides, to sustain the draw-bar C and the springs *c c'*, the latter within the former. The function of *c* is to take the strain of the buffer-head B, which is connected with it by the frame-work B'. The spring *c'* is immediately around the stem of the draw-bar C, and takes the strain upon it. The devices are all found in former patents, and I do not claim them; but the manner in which they have been arranged by me effects a new purpose, which will be hereafter explained. The draw-bar C is open-ended, and so beveled inwardly that, as it is fitted to the inside of the buffer-head B, it forms a flared draw-head to guide the link to its proper position for the coupling-pin *e*, and also with the beveled upper and lower surfaces, to adjust the link for being guided to lower or higher platforms, as may be, and as shown at *b b'* in Fig. 2, where link *g* is shown tilted into an inclined position. The draw-bar C has a shelf, C', which supports the coupling-pin *e*, and in it is a hole for the pin to drop into. In the plate B' of the buffer-head is an elongated slot, through which

the pin *e* projects, and rests upon the shelf C', all as shown in Fig. 2. The pin *e* is constructed with a long web, *e'*, which has at its bottom a hook, *e''*. The pin is guided in a tube, *d*, which has projecting wings, forming a guideway, *d'*, for the web *e'*, and its upper sides are fastened by a pin, *d''*, which serves two purposes: first, to fasten the sides; and, secondly, to arrest the pin *e* by means of the hook *e''*, and prevent the pin *e* from jumping out of the tube. The tube or standard is thus constructed with inclined back *d'''*, so that, as the pin *e* is drawn out to its fullest extent, the hook *e''*, impinging upon the slope *d'''*, brings the pin *e* to its vertical position; and when it is ready to drop—when the draw-head is forced in—there is no friction to detain it or prevent its gravitation at once through the hole. This construction is adapted to the rapid action of the pin, as, in the arrangement previously referred to, it is the purpose of this improvement to couple the cars before the shock of contact, as, in other cases where the buffers receive the whole shock previous to coupling, the recoil of the cars is quicker than the dropping of the pin, and hence the failure to couple; and in this particular is the gist of this improvement. The lower side of hook *e''* is so beveled that, by its pressure on the link *g*, it is tilted, as shown in Fig. 2, or by lifting the pin the link, by its weight outwardly, will come to an angle, the hook *e''* supporting the inner end for high or low platforms. The platform E, as shown in dotted lines, Fig. 2, is hinged so that when the pin *e* is drawn up by the action of the lever F, as shown in Fig. 1, it is thrown up, and serves as a signal that the coupling is open. Its purpose is also to permit the easy withdrawal of the pin should it require removal, &c. When the pin falls in the act of coupling, the platform E will fall also into its normal position by its own weight.

Operation: The chain G, which in Fig. 2 is represented as pendent, should be attached to the rear side of the buffer-head B. The shelf C' supports the pin *e* until it is forced over the hole in draw-bar C, the link *g* being placed in the orifice of draw-bar C and against the curved surface back at *c'*. By inserting a lever in one of the links of chain G and forcing the buffer B inwardly, the pin *e* will drop

through the hole in the shelf *C'* and link *g*, thus attaching the link. The height of the outer end of *g* may be adjusted by the depth of the pin *e*, as before explained. When the cars come together, the buffers *B B* touching, they are each forced inwardly; the one holding the link *g* then takes the strain on both springs, while the uncoupled buffer, acting upon one spring, *c*, is forced inwardly until the pin *e* is carried over the hole in shelf *C'*, and then drops through link *g*, which has been inserted at the first encounter. After the pin drops, the spring *c* of second car receives the shock and recoils; but, the coupling being complete, the cars do not separate.

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

1. The buffer-head sliding over the shelf attached to the draw-bar, in combination with the coupling-pin, whereby the coupling is completed previous to the concussion of the cars, substantially as and for the purpose set forth.

2. The hinged platform *E*, substantially as and for the purpose set forth.

3. The combination of the hinged platform and the bent lever *F*, substantially as and for the purpose described.

4. The combination of the coupling-pin *e*, having the web *e'* and hook *e''*, with the beveled surface *d'''* and pin *d''* of the guide-tube *d*.

JOSEPH B. TRACY.

Attest:

ROBT. V. HUGHES,
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