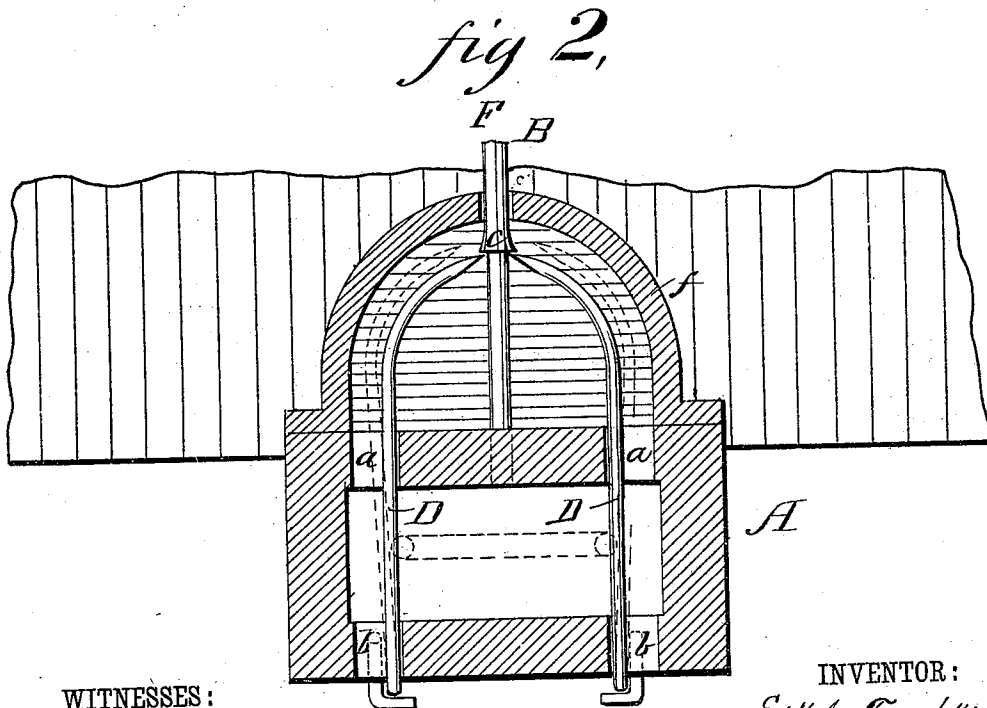
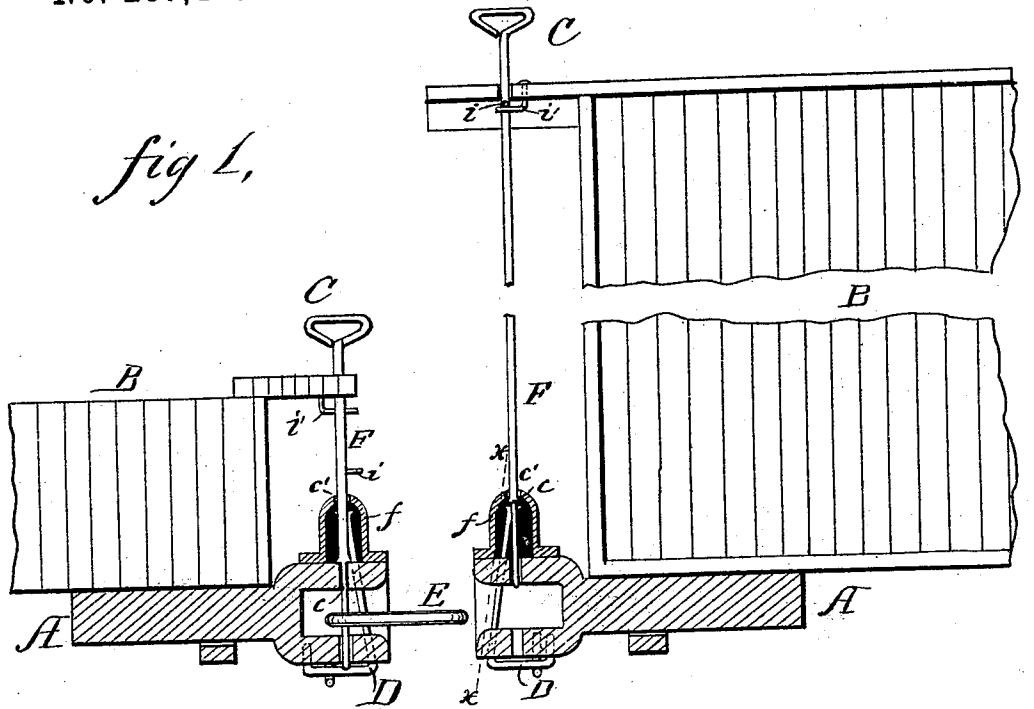


(No Model.)

E. H. C. TOMPKINS.
CAR COUPLING.

No. 287,483.

Patented Oct. 30, 1883.



WITNESSES:

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E. H. CADY TOMPKINS, OF GLEN'S FALLS, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 287,483, dated October 30, 1883.

Application filed February 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, E. H. CADY TOMPKINS, of Glen's Falls, in the county of Warren and State of New York, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The object of my invention is to provide an automatic car-coupling which shall be simple, cheap, durable, certain in its action, easily operated, and which may be attached to the ordinary link-and-pin coupling, or made with the ordinary form of draw-head.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of railroad-cars provided with my new and improved automatic car-coupling, the coupling being shown in central longitudinal sectional elevation; and Fig. 2 is a transverse sectional elevation, taken on the line *x x* of Fig. 1.

A A represent the draw-heads, attached to the bottom of the cars B B by any suitable means. These draw-heads are of the ordinary form, except that they are formed with the slots *a a* and *b b* in their upper and lower walls, respectively, and are provided with the weather-caps or housings *f f*, for protecting the coupling mechanism from rain, sleet, snow, &c.

The coupling-pins F F are by preference extended above the top of the car or above the platform of the car, (according to the construction of the car,) where they are provided with eyes C C, by which they may be conveniently raised and turned from the top or platform of the car for uncoupling, and the coupling-pins are each formed with an offset, *c*, by which they may be held in elevated position for coupling automatically by the clasp-springs D D, and for holding the coupling-pins in elevated position when the clasp-springs are held apart by the connecting-link E. I provide the coupling-pins with the small studs *i*, which may be carried by turning the coupling-pins above the hooks *i*, attached under the platform or top of the car, as shown clearly in Fig. 1.

The clasp-springs D D are attached at their lower ends to the under side of the draw-heads, and are bent and pass up through the slots *a a* and *b b*, made in the walls of the draw-heads,

into the housings *f*, where they are again bent or curved toward each other, so that their upper ends will come against and clasp the coupling-pins F on opposite sides, as shown clearly in Fig. 2.

The slots *b b* in the lower walls of the draw-heads are by preference made nearer the outer ends of the draw-heads than are the slots *a a* in the upper walls, so that the springs D D will slant back and stand partly in front of the coupling-pins, as shown in Fig. 1, so that when the link E is placed in the draw-head A the clasp-springs D D will press against its outer sides, and, being more ridged at their lower ends than at the upper, will thus press harder together at the bottom, will elevate the outer end of the link E to a level, as clearly shown at the left of Fig. 1, and also hold its extended end straight ahead and keep it from swaying sidewise, and thus hold it in position to automatically enter the opposing draw-head at the right of Fig. 1 and make it certain to couple. While it is thus automatically held the springs will allow the cars, when coupled, to sway sidewise, also, up or down, thus giving that free motion of the ordinary pin-and-link coupling. The moment either end of the link E is released it will return to position, ready to couple automatically. The clasp-springs D D will also center the link E as it enters the draw-head when the cars are backed together for coupling.

The coupling-link E is of the ordinary form, and is wider than the distance between the clasp-springs D D, so that on entering the draw-heads for coupling the cars it will spread the springs D D and disengage the upper ends thereof from the offset *c* of the coupling-pin, and thus permit the coupling-pin to drop through the connecting-link, and thus couple the cars.

In arranging the cars for coupling, the link E is to be first placed in one of the draw-heads of the cars to be coupled, as shown at the left in Fig. 1. The coupling-pin of the opposing car is then raised, so that the offset *c* thereof will rest upon the upper ends of the springs D D, as shown at the right in Fig. 1. The cars are then simply to be backed together, which will cause the link E to enter the draw-head of the opposing car between the springs

D D, and, being wider than the distance these springs are apart, it will spread most at the upper ends and release the coupling-pin, which will then drop through the link and couple the cars.

The housings *f f* are formed with a slot or hole, *c'*, in the top, through which the coupling-pin F passes. This being on a perpendicular line with the pin-hole in the draw-head A, (shown clearly in Figs. 1 and 2,) it acts as a guide to steady the pin when raised, and to guide it straight through the pin-hole in the draw-head when it is released from the clasp-springs D D. When the coupling-pin F is raised, its lower end does not come above the lower edge of the upper wall of the draw-head B, as clearly shown at the right of Fig. 1, and this, in connection with the hole through the top of the housing *f*, forms a true guide for the coupling-pin F.

When the connecting-link is in place in the draw-head, if it is desired to hold the coupling-pin elevated, so that the cars shall remain uncoupled, it must be raised and turned, so that the stud *i* thereof will come above and rest upon the hook *i'*, as shown at the right in Fig. 1.

Constructed in this manner, it will be seen that the coupling is entirely automatic, is cheap, simple, and durable, adapted to be applied to the ordinary link and pin and draw-heads in common use, and is very easy and convenient in operation.

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

1. In a car-coupling, the upwardly-projecting springs D D, having their lower ends secured to the draw-head and their upper ends bent inwardly toward each other, substantially as herein shown and described, whereby the pin is adapted to be supported in an elevated position and to be released by the entering link, as set forth.

2. In a car-coupling, the combination, with a coupling-pin provided with an offset, of the upwardly-projecting springs D D, having their upper ends bent inwardly to engage the said pin under the offset, substantially as herein shown and described.

3. The coupling-pin F, formed with the offset *c*, and provided with the stud *i*, in combination with the clasp-springs D D and the hook *i'*, substantially as and for the purpose set forth.

4. In a car-coupling, the combination, with the draw-head A and the coupling-pin F, provided with the offset *c*, of the springs D D, projecting upwardly through slots in the draw-head, and having the upper ends bent inwardly to engage the coupling-pin, substantially as herein shown and described.

5. The draw-head A, formed with the slots *a a* and *b b*, and provided with the clasp-springs D D, as and for the purpose set forth.

6. The slots *b b* in the draw-heads, made nearer the outer end of the draw-head than are the slots *a a*, whereby the springs D D are held in front of the coupling-pin for guiding the connecting-link, substantially as and for the purpose set forth.

7. In a car-coupling, the combination, with the draw-head A, provided with the housing *f*, of the coupling-pin F, passing through the said housing, and the springs D D, projecting upwardly into the same, substantially as herein shown and described.

8. The springs D D, attached to the bottom of the draw-head A, and passing upward through its upper and lower walls, and inside of side walls of the draw-head, substantially as and for the purpose set forth.

E. H. CADY TOMPKINS.

Witnesses:

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