J. H. KENWORTHY.

Improvement in Car Couplings.

No. 120,199. Patented Oct. 24, 1871.

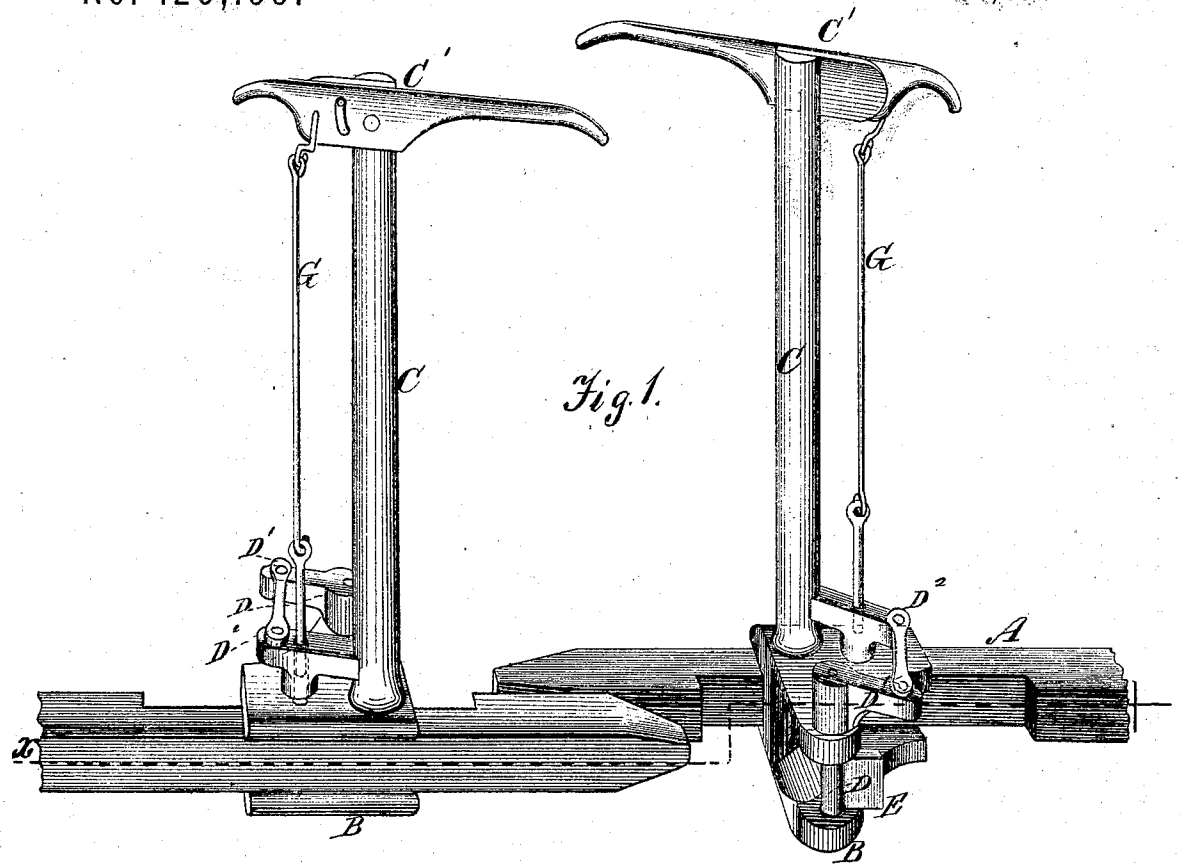

Fig. 1.

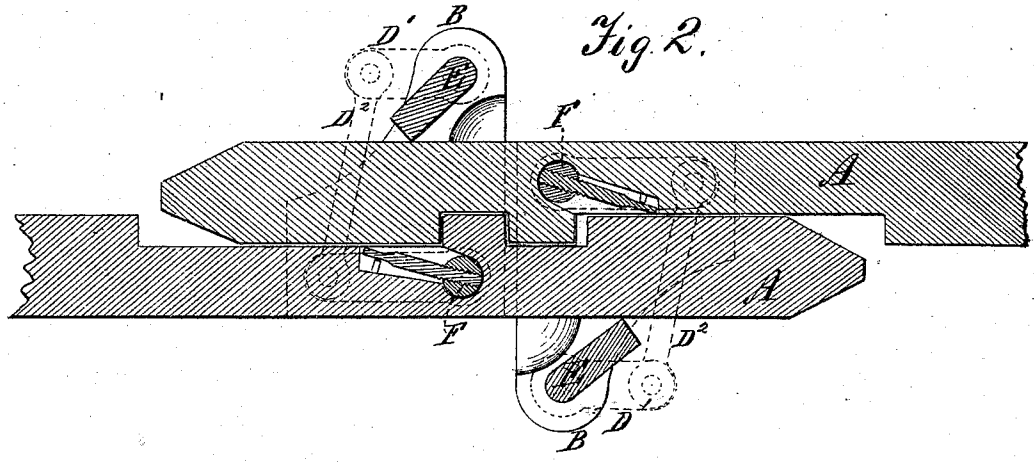

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES H. KENWORTHEY, OF WEST POINT, INDIANA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 120,199, dated October 24, 1871.

To all whom it may concern:

Be it known that I, JAMES H. KENWORTHEY, of West Point, in the county of Tippecanoe, and State of Indiana, have invented a certain Improvement in Automatic Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which—

Figure 1 is an elevation of my improved automatic car-coupling, showing the bars to which the buffer-springs are to be attached, and the mechanism for giving lateral motion to the outer ends of such bars for the purpose of causing them to clutch each other. Fig. 2 is a longitudinal section on line *x x* of Fig. 1, showing the arrangement of the clamping mechanism, and the devices for unclutching the bars.

Corresponding letters refer to corresponding parts in the several figures.

This invention relates to that class of devices which are designed to automatically attach two cars together when said cars are brought together upon a track; and it consists in the construction, combination and arrangement of the parts of which it is composed, as will be more fully described hereinafter.

In constructing my automatic, or partially-automatic, coupler I use upon each end of each car a bar of metal, either cast or wrought, and of the form shown at A A, their inner ends being attached in any suitable manner to the platform of the car, or to the buffer-spring. The outer ends of these bars are beveled or pointed, as shown in the drawing, to facilitate their entrance into a guard which is soon to be described, while upon their inner surfaces recesses are formed, which leave projections upon each which pass into the recesses in the other, and serve to prevent their separation or the uncoupling of the cars while the parts are in the position shown in Fig. 2. Each of the coupling bars A is provided with a guide, B, which is firmly secured thereto, and which projects beyond the inner edge of the bar far enough to allow the opposite bar to pass through it, and also to receive a vertical shaft, D, in its outer ends. These guides are held upon the bars partly by bolts and partly by means of the vertical shaft C, which passes down through them and through the bar, and may be riveted at its lower end, or a nut may be placed upon it. This shaft extends upward so far as to be operated by a lever, C′, from the platform of the car, or from the top of the same. The lever C′ is pivoted to the upper end of the shaft C, and serves to impart to such shaft a partially-rotative movement, and also to elevate the pin which secures the parts in their clamped or coupled position. Upon the lower portion of the shaft C, and just above the guide B, there is an arm projecting at a right angle thereto, to which is pivoted a link, D^2, which extends to and is connected with a crank, D^1, upon the upper end of the short vertical shaft D, so that as the cars are brought together and the coupling-bar upon either enters the guide upon the other the levers C′ may be turned or moved slightly, and thus force the bars into the clutched or coupled position, such transverse movement being given by means of a cam or arm, E, upon the short shaft D, which is placed between the upper and lower portions of the guide B. In order that the transverse movement or the clutching or coupling of the bars A A may be made automatic an arm, F, is secured to that part of the vertical shaft C, which is within the bar A, it working in a slot formed therein, as shown in Fig. 2. This arm is of such a length, and so arranged with reference to the shaft C and the bar B that when the two bars have been unclutched or uncoupled by turning the shaft it will project outward into the guide through which the opposite bar passes and thus cause the transverse or coupling movement above alluded to when the cars are brought together; and it also serves to produce the reverse transverse or uncoupling movement when the lever C′ is turned in such a direction to produce that result. To prevent the cars from being uncoupled or detached when in motion a rod, G, is attached to the short arm of lever C′, and upon its lower end there is suspended a coupling or fastening-pin, which passes down through the arm upon the lower portion of shaft C and into the bar, and thus prevents the shaft from being turned into such a position as to permit the separation or unclutching of the two bars, they being held in their clutched position by means of the cams D, which press against their outer surfaces until the pin is withdrawn and the shaft turned, so as to allow them to separate.

What I claim as my invention, and desire to secure by Letters-Patent, is—

1. The combination and arrangement of the bar A, guide B, short vertical shaft D, and cam E, substantially as and for the purpose set forth.

2. The combination and arrangement of the bar A, guide B, shafts C and D, cam E, and arm F, substantially as and for the purpose set forth.

3. In combination with the bar A and shaft C with arm F, the lever C′, rod G and coupling-pin suspended therefrom, substantially as and for the purpose set forth.

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

JAMES H. KENWORTHEY.

Witnesses:
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