

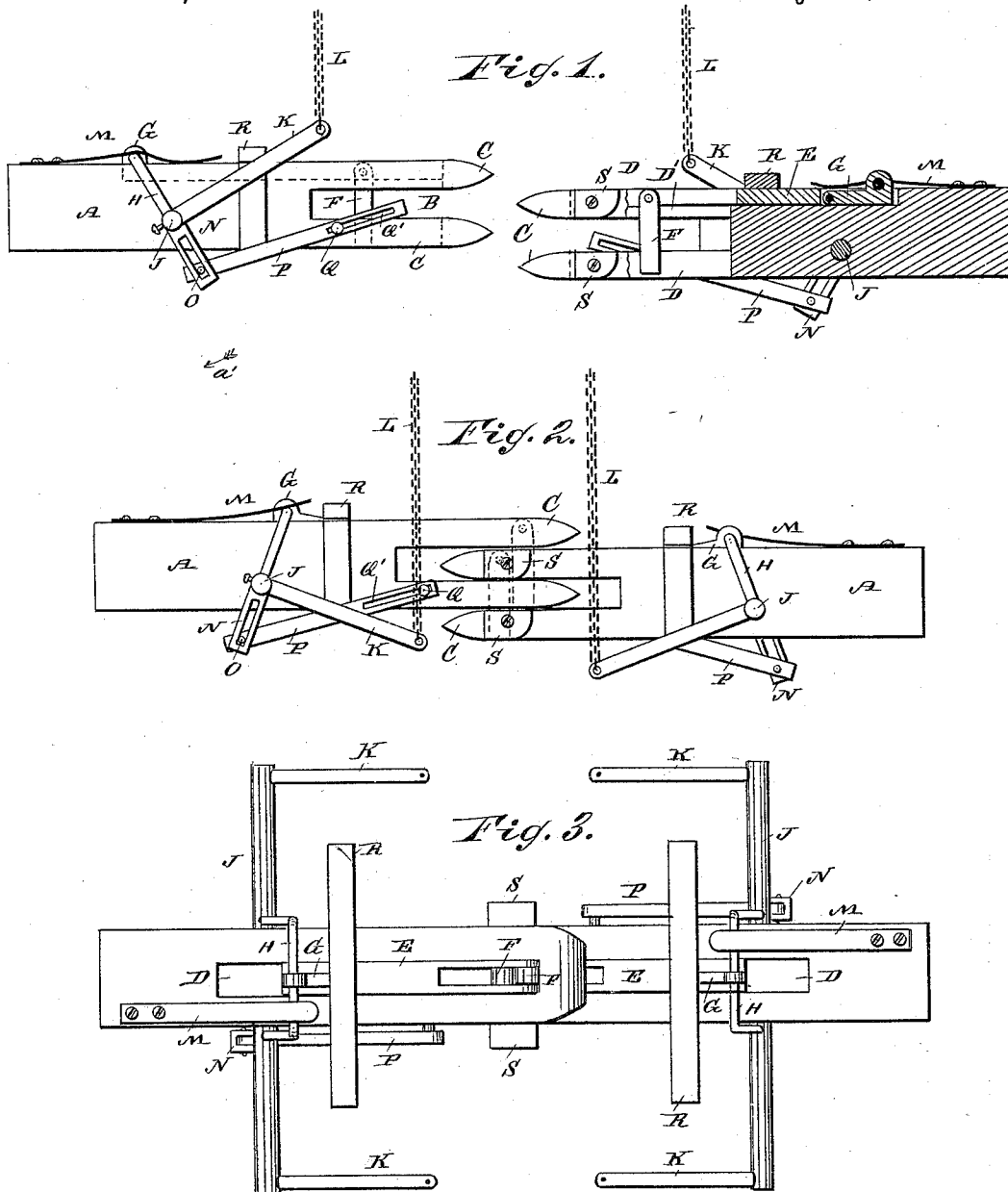
(No Model.)

J. F. FAIRFIELD.

CAR COUPLING.

No. 298,960.

Patented May 20, 1884.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH FLAVIOUS FAIRFIELD, OF ALMA, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 298,960, dated May 20, 1884.

Application filed March 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH F. FAIRFIELD, of Alma, Harlan county, Nebraska, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The invention consists in a car-coupling formed of a forked draw-head in which a sliding bar is held, in the outer end of which a coupling-pin is pivoted. The inner end of the sliding bar is connected with the locking-frame on the draw-head, and the said locking-frame is connected with a bar projecting up on the side of the draw-head, so that when two draw-heads come together and the prongs of one pass between the prongs of the other they will strike the said bars, and thereby move the sliding bars forward and cause the pivoted pins on the same to pass through the slots of the interlocked prongs of the draw-heads.

The invention also consists in various parts and details and combinations of the same, as will be fully described and set forth hereinafter.

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

Figure 1 is a side view of two draw-heads provided with my improved car-coupling, the car-couplings being shown disconnected, and the parts of the coupling being shown in position ready for coupling, parts being broken away and others shown in section. Fig. 2 is a side view of the same, showing the draw-heads coupled. Fig. 3 is a plan view of the same, showing them coupled.

Each draw-head A is provided at the outer end with a transverse horizontal slot, B, forming two prongs, C—one above the other—which prongs are beveled on the upper and lower surfaces and from the side edges. Each prong is provided with a longitudinal vertical slot, D, the sides of the slot D in the upper prong C being provided with an offset or shoulder, D', on which a bar, E, rests, which is adapted to slide in the direction of its length in the said slot, the bar E having its front end forked, and having a coupling-pin, F, pivoted in its free ends, which coupling-pin hangs down ver-

tically and into the slot D of the lower prong C. The inner end of each sliding bar is also forked, and in the inner forked end of the sliding bar E a link-piece, G, is pivoted, through the free end of which the cross-piece of a V-shaped or crank frame, H, passes, which fits over the top of the draw-head, and the ends of which frame are secured in a transverse shaft, J, journaled in the draw-head and projecting from the sides of the same and provided at the outer ends with arms K, from which chains L or rods extend to the top of the car for pulling the said arms upward. A flat spring, M, secured on the top of the draw-head, has its front free end resting on the cross-piece of the crank-frame H, and locks the same in the different positions. From the shaft J a longitudinally-slotted arm, N, projects downward, and into the slot of the said arm a pin, O, passes, which is secured in the end of an inclined rod, P, held on the side of the draw-head by a pin, Q, passing through a slot, Q', in the front upper end of the said bar P, the bar P being held in such a manner that when swung toward the end of the draw-head its front end will be above the upper edge of the bottom prong C of the draw-head. A cross-bar, R, on the draw-head holds the sliding bar E in place, and also serves for securing the buffers, which are arranged between the said bar and the end of the car. On that side of the draw-head opposite the one in which the bar P is held a button, S, is held on the outer surface of each prong C.

The operation is as follows: When the cars are uncoupled, the slides E are drawn back and the coupling-pins hang down a short distance from the outer end of the draw-head. If the draw-heads come together, the upper prong of the lower draw-head passes in between the two prongs of the upper draw-head, and the lower prong of the higher draw-head passes in between the two prongs of the lower draw-heads, the beveled ends of the entering prongs swinging the coupling-pins back. The buttons S then strike the ends of the bars P and swing the lower ends of the bars N in the direction of the arrow α' , thereby swinging the cross-pieces of the V-shaped or crank frames H in the inverse direction of the arrow α' ,

thereby moving the sliding bars E toward the free ends of the draw-heads. As the coupling-pins F are held in the outer ends of the sliding bars E, they will swing forward also, and the coupling-pin F held in the sliding bar E of the upper prong of the upper draw-head drops into the slot D of the upper prong of the lower draw-head, and the coupling-pin F pivoted in the sliding bar E in the upper prong of the lower draw-head drops through the slot D in the lower prong of the upper draw-head, as shown in Fig. 2, the inner edges of the pins will be in contact, and their outer edges will be pressed against the outer ends of the slots D of their respective draw-heads. The cars are thus coupled securely.

If the cars are to be uncoupled, the arms P must be moved upward so as to withdraw the sliding bars E, whereby the coupling-pins F will be swung upward out of the slots in which they rest, thus permitting the draw-heads to be drawn apart.

By means of my improved car-coupling the cars can be coupled automatically, the coupling is not apt to become loosened, and the cars can be uncoupled readily.

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

1. The combination, with a draw-head, of a sliding bar held on the same, a coupling-pin pivoted in the sliding bar, and means for automatically sliding the bar carrying the pin forward when the draw-heads come together,

whereby the pin will be caused to drop into a suitable coupling on the opposite draw-head, substantially as herein shown and described.

2. The combination, with the forked draw-head, of a sliding bar in the top of the same, a coupling-pin pivoted on the outer end of the sliding bar, a crank-frame, H, connected with the rear end of the sliding bar, the spring M, resting on the cross-piece of the frame H, and means for rocking the said frame, substantially as herein shown and described.

3. The combination, with a draw-head, of the sliding bar E, the coupling-pin F, pivoted in the same, the rocking frame H, mounted on the shaft J, the slotted arm N, projecting downward from the shaft J, and the bar P, held on the side of the draw-head and connected with the arm N, substantially as herein shown and described.

4. The combination, with a draw-head, of the sliding bar E, the coupling-pin F, pivoted in the same, the rocking frame H, mounted on the shaft J, the slotted arm N, projecting downward from the shaft J, the bar P, held on the side of the draw-head and connected with the arm N, and the projections or buttons S on the sides of the draw-head, substantially as herein shown and described.

JOSEPH FLAVIOUS FAIRFIELD.

Witnesses:

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