(No Model.)

J. F. PURSLEY.

CAR COUPLING.

No. 482,809. Patented Sept. 20, 1892.

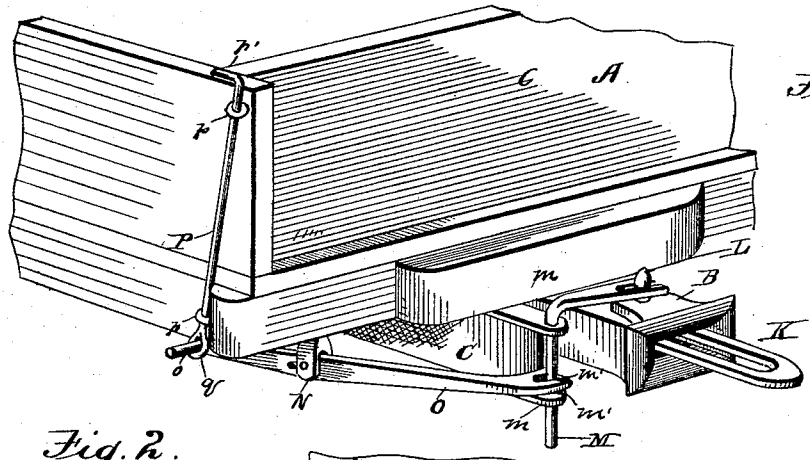


Fig. 1.

Fig. 2.

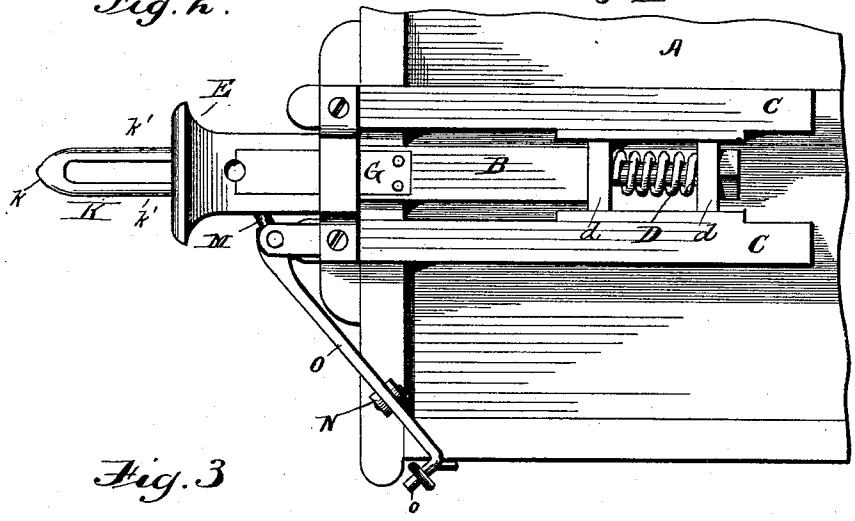


Fig. 3.

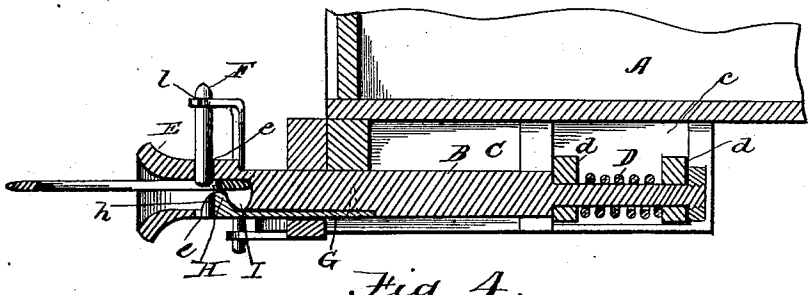
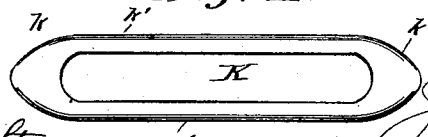


Fig. 4.



Witnesses

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 482,809, dated September 20, 1892.

Application filed December 19, 1891. Serial No. 415,649. (No model.)

To all whom it may concern:

Be it known that I, JAMES FRANCISCO PURSLEY, a citizen of the United States, and a resident of South Pittsburg, in the county of Marion and State of Tennessee, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in car-couplings; and the objects of the invention are, first, to provide a simple and effective coupler which will couple cars whose draw-heads are of different heights, and, secondly, to provide simple means for uncoupling cars either from the top or side thereof.

With these ends in view my invention consists in the combination, with a draw-head provided with a slot or aperture in its bottom, of a spring-plate attached at one end to the under side of the draw-bar and provided at its free end with a lug, which passes through the slot or aperture in the bottom of the draw-head and is provided with a vertical groove, in which the coupling-pin is adapted to fit, a link held in place between the upper surface of said lug and the upper side of the draw-head, a coupling-pin passing through the draw-head and the link and fitting in the vertical groove or recess in the lug or casting on the spring-plate, and means for withdrawing said pin from the link to permit the coupled cars to separate.

My invention further consists in the peculiar construction and arrangement of parts, as will be hereinafter more fully pointed out and claimed.

I have illustrated my improvements in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of the end of a car provided with my improved coupler. Fig. 2 is a bottom plan view. Fig. 3 is a longitudinal vertical sectional view through the draw-head, and Fig. 4 is a detail view of the coupling-link.

Like letters of reference denote corresponding parts in the several figures of the drawing, referring to which—

A designates the body of the car.

B designates a draw-bar, which is arranged between suitable longitudinal guides or braces C. The rear portion of the draw-bar B is reduced in diameter, and around such reduced portion is fitted a coiled pressure-spring D, which is held in place between two plates *d*, which have their ends fitted in guides *c* on the longitudinal braces C, as is common. To the forward end of the draw-bar B is secured the draw-head E. This draw-head is provided in its upper and lower sides with suitable apertures *e*, through which a coupling-pin F is designed to pass. To the under side of the draw-bar, near the forward end thereof, is attached one end of a spring-plate G, and to the free end of this plate is attached or made integral therewith an upwardly-extending lug H, which extends through an aperture or slot I in the bottom of the draw-head and up into the interior or chamber therein. The under side of the draw-bar is preferably recessed slightly, so that the lower side of the spring-plate G normally lies flush with the under surface of the said bar. A vertical groove or recess *h* is formed in the lug H, and this groove or recess aligns with the openings or apertures *e* in the draw-head, and the forward end of such lug is curved or rounded, as shown in Fig. 3.

K designates the coupling-link. It will be noticed that the ends of the link are made tapering and that such ends *k* are of greater width than the sides *k'* of the link. The link K is held in position within the draw-head between the lug H and the upper side of the casting, and the opening or slot in such link aligns with the vertical slot *h* in the lug H and with the apertures *e* in the draw-head. The ends of the link are made of greater width than the sides thereof to enable the lug H to have a firm bearing thereon and hold the link in proper position.

L designates a coupling-pin, which is provided near its upper end with an annular recess *l*. The pin L is supported by a rod M, which is guided in suitable brackets or guides *m*, attached to the frame of the car at one side of the draw-head E and having its upper end bent at right angles and bifurcated at its outer end, said bifurcated end receiving the reduced portion of the pin L.

N designates a short downwardly-extending lug or post, which is attached to the car-frame A and to which is pivotally connected a lever O. One end of the lever O is provided with a suitable handle *o*, and the other end thereof is bifurcated and fits around the rod M. The end of the lever O is prevented from moving vertically on the rod M by means of pins *m'*, which are passed through suitable apertures in said rod above and below the end of the lever O.

P designates a rod, which is fitted in suitable guides *p*, attached to the side of the car, and the lower end of this rod is bent to form an eye or loop *q*, through which the handle *o* passes. The upper end of the rod P is bent to form a handle *p'*, which is adapted to be reached by a person on top of the car.

The operation of my improved coupler is as follows: The link is secured in place within one draw-head and held in place between the lug H and the top of the draw-head. As the cars come together the free end of the link rides over the rounded face of the lug H in the draw-head of the other car and its end passes into the space between such lug and the top of the draw-head. The link is fastened in position by the pins L in the usual manner. It will thus be seen that the draw-heads are not required to be the same distance from the ground to insure coupling of the cars. The pin F can be raised out of engagement with the link by depressing the outer end of the lever O either by the handle *o* or the rod P.

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

1. The combination of a draw-head having a slot formed in its bottom, a spring-plate attached to the under side of the draw-bar and provided with an upwardly-extending lug which extends through the slot in the bottom of the draw-head, a link adapted to be secured between the top of the draw-head and the spring-pressed lug, and a coupling-pin, substantially as described.

2. The combination of a draw-head having a slot formed in its lower side, a spring-plate attached at one end to the under side of the draw-bar and normally lying flush therewith, a lug rigid with the free end of the spring-plate and extending through the slot in the draw-head, a link arranged within the draw-head, and a coupling-pin adapted to be passed through the draw-head and link and fit in a recess in the spring-lug, substantially as described.

3. The combination of a draw-head having a slot formed in its lower side, near the forward end thereof, a flat spring-plate attached at one end to the draw-bar and provided at its free end with an upwardly-extending lug which extends through the slot in the draw-head, the forward end of such lug being curved and provided with a vertical groove or recess, a link, and a coupling-pin adapted to be passed through suitable apertures in the draw-head and the link and fit in the vertical groove or recess in the spring-lug, substantially as described.

4. The combination, with a draw-head and coupling-link, of a coupling-pin provided near its upper end with an annular recess, a rod fitted in suitable guides at one side of the draw-head and bent near its upper end to extend across the draw-head, the end of such bent portion being bifurcated and engaging the coupling-pin, a lever fulcrumed below the car and having one end engaging with the pin-supporting rod, and a vertical rod fitted in guides attached to the side of the car and having its lower end engaged with the lever, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES FRANCISCO PURSLEY.

Witnesses:

A. L. PITTS,

A. A. COOK.