(No Model.) 2 Sheets—Sheet 1

D. P. PRESCOTT.

CAR COUPLING.

No. 261,872. Patented Aug. 1, 1882.

Fig 1

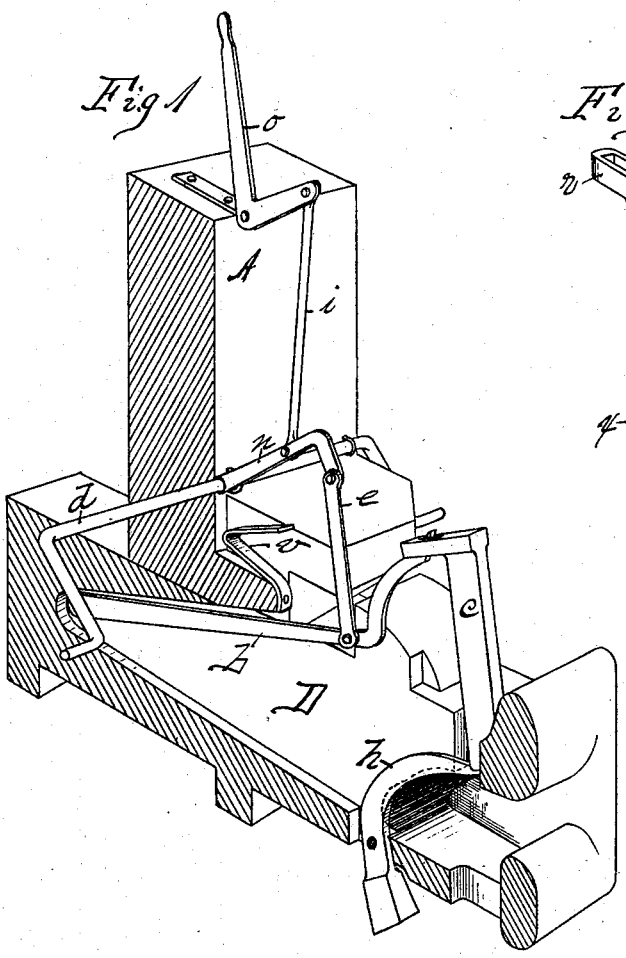
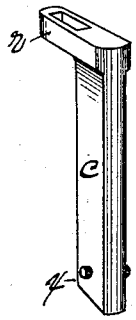


Fig 2



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(No Model.) 2 Sheets—Sheet 2

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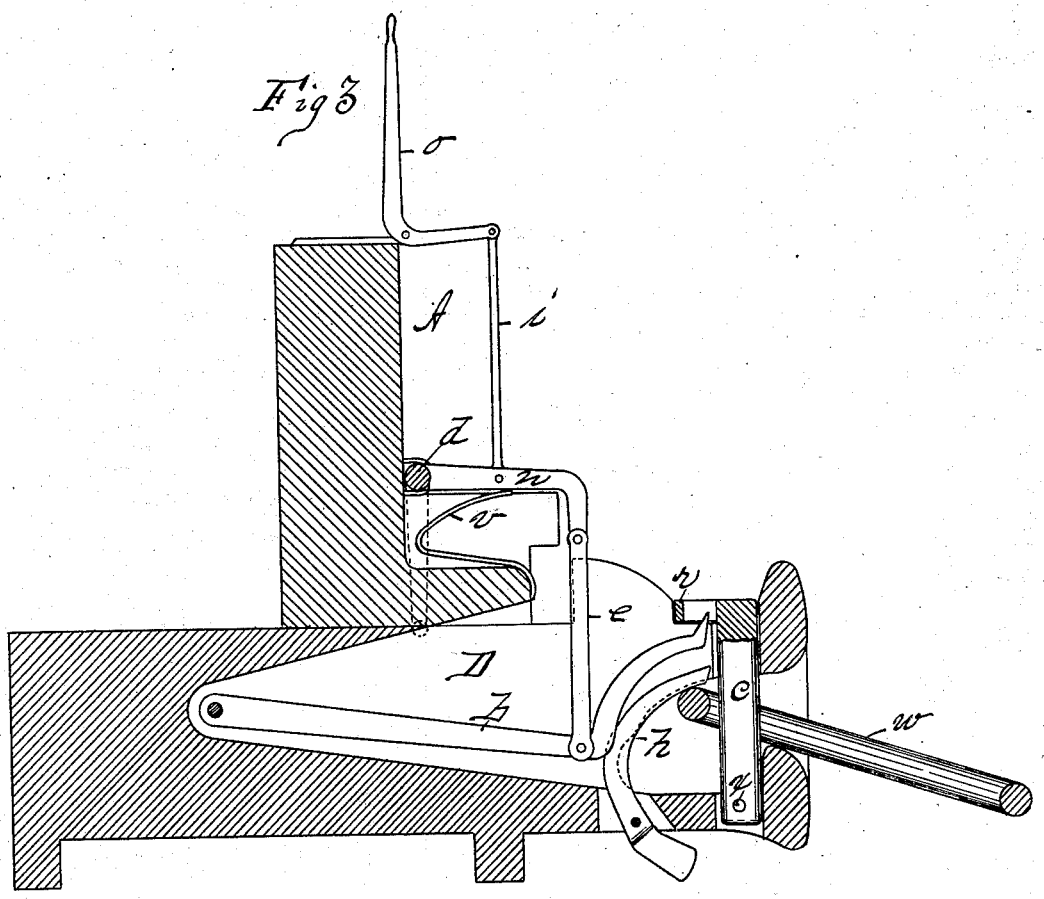
Fig 3



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UNITED STATES PATENT OFFICE.

DANIEL P. PRESCOTT, OF VERNON, VERMONT.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 261,872, dated August 1, 1882.

Application filed January 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL P. PRESCOTT, a citizen of the United States, residing at Vernon, in the county of Windham and State of Vermont, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to improvements in car-couplings and in devices directly connected and operating therewith for lifting and holding up the coupling-pin and for elevating the outer downhanging end of the coupling-link when a coupling upon another car is approaching it and when the end of a coupling is approaching to receive a link to cause said pin automatically to drop through the link, the object being to provide efficient means whereby the coupling pins and links of a car-coupling can be properly operated without requiring men to go between the ends of cars for that purpose either to couple or uncouple cars.

In the drawings forming part of this specification, Figure 1 is a perspective elevation, partly in section, of a car-coupling embracing my improvements. Fig. 2 is a view of an improved coupling-pin. Fig. 3 is a side elevation, partly in section.

In the drawings, D is the draw-bar of the coupling. A represents a portion of the end of a car. *w* is the coupling-link. *c* is the pin. *d* is a crank-shaft. *n* is a lifting-arm. *e* is a connecting-rod. *b* is a pin-lifting lever. *v* is a spring. *h* is a latch. *o* is an elbow-lever. *i* is a connecting-rod. *r* is an arm on pin *c*.

Like letters refer to like parts in the several figures.

I construct the draw-bar D much like those in ordinary use, except that I make the pin-holes in it, which receive the pin *c*, of oblong form with the length of said draw-bar to receive the flat-sided pin *c*, whose form in transverse section is likewise oblong, and I chamber said draw-bar to provide a suitable place directly in the rear of pin *c* in which the long pin-lifting lever *b* may be pivoted and operated, and provide for pivoting the latch *h* in the under side of said draw-bar just back of the mouth thereof. The latch *h* is provided with a weighted lower end, and is made of a curved form, to nearly correspond with the form of the rear side of the opening in the front end of the draw-bar, and oscillates upon its pivot within a slot, the border of which is shown in dotted lines in Figs. 1 and 3, and, when not obstructed in its movements, said latch swings on its pivot and its upper end is thrown forward under the upper pin-hole in the draw-bar, and while in this position its front edge is projected beyond the said borders of the slot in which it swings and the face of the rear side of said opening in the front end of the draw-bar D, as in Fig. 1. The pin-lifting lever *b* has its rear end pivoted within said draw-bar, as shown, and is made of considerable length, so that its front end may swing in an easy radius and not draw the upper end of pin *c* too far back when it lifts it. The front end of lever *b* is curved upward and forward, and when in a downward position its point lies near the rear edge of pin *c* and under the slotted arm *r* thereon. A connecting-rod, *e*, is pivoted to lever *b*, and its upper end is pivoted to the end of an arm, *n*, which is secured to a transversely-located crank-shaft, *d*, properly secured to the end of the car over the draw-bar, so that it may be rocked by seizing a crank upon either end thereof. Said shaft *d* in practice is made of such length that the ends of its cranks will be about even with the sides of the car, and so that a man standing by the sides thereof may easily operate it. To provide convenient means for operating said shaft *d* from the roof of the car, an elbow-lever, *o*, is attached to the end thereof, and its horizontal arm is connected to arm *n* by the connecting-rod *i*. A spring, *v*, is located on the draw-bar or other convenient place upon which arm *n* may drop, and which serves to keep said arm so lifted as to hold the point of lever *b* up under the arm *r* on pin *c* when said pin is down, as shown in Fig. 3. The pin *c* is, as above described, made of oblong form in cross-section, and adapted to be set in the draw-bar D with its edges to the front and rear, so that the force of the pull upon it may be against one of its edges, and liability of breaking be thus very much lessened. Said pin *c* is provided with an arm, *r*, standing at right angles thereto, and slotted vertically to receive the end of lever *b*, which stands within it when the pin is lowered. A stop-pin, *x*, is fixed in the lower end of pin *c* to prevent it from being entirely drawn out of

the draw-bar. The free end of the lever *b* serves a double purpose—viz., that of lifting pin *c*, as above described, and that of bearing down upon the end of link *w*, which is within the draw-bar mouth in the rear of said pin—to elevate its outer end and direct it so that it will properly enter the open end of an approaching coupling. The latter operation is performed by turning shaft *d* so as to bear down the end of arm *n* and press the end of lever *b* against the end of said link in the rear of pin *c*.

The operation of my improvements is as follows: To put the parts of the coupling in proper position to receive the end of a coupling-link which is about to enter it and to become self-coupled to said link when the latter is driven into the mouth of the draw-bar, the shaft *d* is turned, as aforesaid, to lift arm *n*, or lever *o* is pulled rearwardly, and lever *b* and pin *c* are brought to the positions shown in Fig. 1, and when said pin has been lifted sufficiently high latch *h* swings, carrying its upper end under pin *c*, so that when shaft *d* is freed lever *b* will drop, but pin *c* will remain lifted, resting on the point of said latch. When the end of said link enters the mouth of draw-bar D and strikes the edge of the latch *h* the point of the latter is carried from under pin *c* and the latter drops through the link, thus securing the latter to the draw-bar and self-coupling the cars. To uncouple the cars it is only necessary to turn shaft *d* to elevate the end of arm *n*, thereby drawing pin *c* out of link *w*.

What I claim as my invention is—

1. In a car-coupling, the draw-bar D, having a horizontal chamber in the rear of its mouth to receive a pin-lifting lever and a pin-supporting latch, the lever *b*, pivoted within said draw-bar and having its free end extending near to the rear side of the coupling-pin hole therein, the latch *h*, pivoted to hang at the rear side of the draw-bar mouth and to swing therein, the pin *c*, having the slotted arm *r*, and appliances, substantially as described, for swinging lever *b* up and down, all combined and operating substantially as set forth.

2. In combination, the shaft *d*, having the arm *n* thereon, lever *b*, rod *e*, pin *c*, and the link *w*, substantially as set forth.

3. The coupling-pin *c*, having the slotted arm *r* thereon, the lever *b* to engage with said slotted arm, and appliances, substantially as described, for lifting said lever *b*, all combined and operating as set forth.

4. In combination, shaft *d*, having arm *n* thereon, spring *v*, rod *e*, and lever *b*, substantially as set forth.

5. In combination with the draw-bar of a car-coupling having oblong coupling-pin holes therethrough, the flat-sided coupling-pin *c*, provided with the slotted arm *r*, substantially as set forth.

DANIEL P. PRESCOTT.

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