

(No Model.)

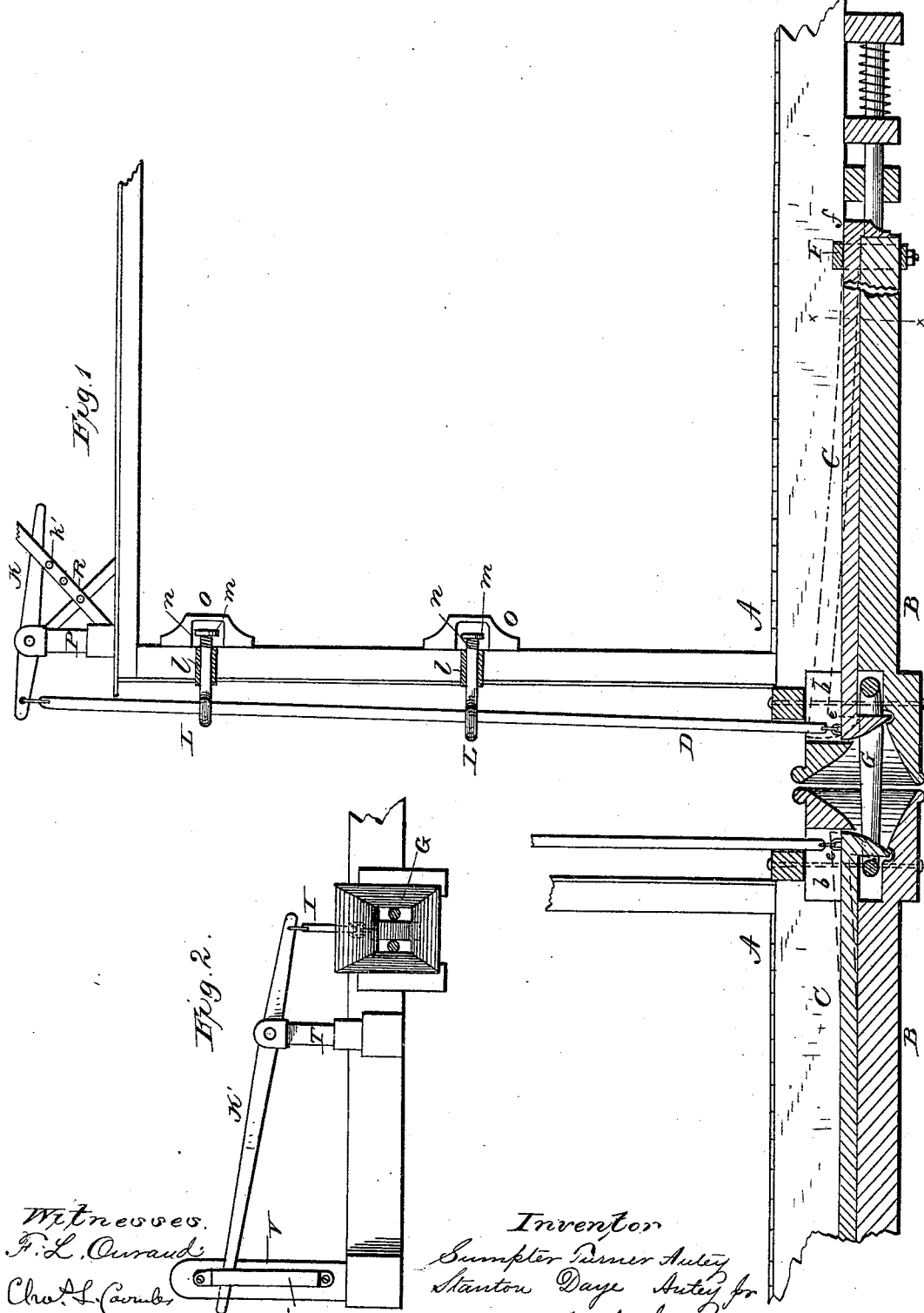
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2 Sheets—Sheet 1.

CAR COUPLING.

No. 250,480.

Patented Dec. 6, 1881.



Witnesses.
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(No Model.)

2 Sheets—Sheet 2.

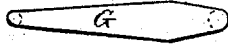
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CAR COUPLING.

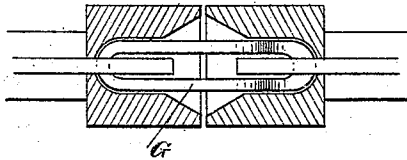
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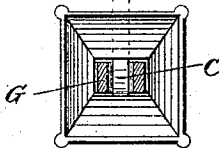
— FIG. 3. —



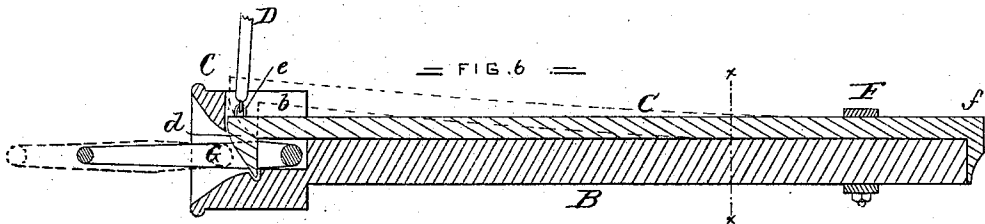
— FIG. 4. —



— FIG. 5. —



— FIG. 6. —



— FIG. 7. —

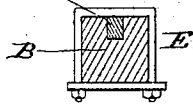
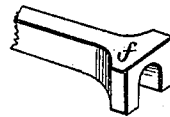


Fig. 8.



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SUMPTER T. AUTEY AND STANTON D. AUTEY, JR., OF NEW ORLEANS, LA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 250,480, dated December 6, 1881.

Application filed June 15, 1881. (No model.)

To all whom it may concern:

Be it known that we, SUMPTER TURNER AUTEY and STANTON DAYE AUTEY, Jr., residents of the city of New Orleans, parish of Orleans, and State of Louisiana, have invented a certain new and useful Improvement in Car-Couplings; and we do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawings, making a part of this specification.

This invention relates to means for coupling cars and means for uncoupling the same, and is designed as an improvement upon the Letters Patent granted to us, No. 239,916, dated April 12, 1881.

Our improvement first consists in the novel construction of the spring draw-bar, in combination with the draw-head, as will be hereinafter more fully described.

Our invention further consists in a link which is much heavier at one end than at the other, and provided with rocking surfaces, so that the heavier end when in the draw-head will hold the outer end in a horizontal plane for entering the draw-head of the approaching car, although of a different height.

Our invention further consists in novel means for operating the draw bar or link from the top of the car, as will be hereinafter more fully described.

Our invention further consists in the novel construction and combination of parts, as will be hereinafter more fully described and specifically claimed.

Figure 1 of the drawings is a vertical longitudinal section of portion of two cars, showing our improvements applied thereto; Fig. 2, the end view of a portion of a car, showing means for operating the draw-bar from the side of a car. Fig. 3 is a side view of our improved coupling-link. Fig. 4 is a horizontal sectional view of two draw-heads, showing our coupling-link in position. Fig. 5 is a front or face view of the draw-head. Fig. 6 is a longitudinal central sectional view of the draw-bar and coupling-link. Fig. 7 is a transverse sectional view taken through the line $x x$ of Fig. 6. Fig. 8 is a perspective view of the gear portion of the draw-bar, showing the forked end straddling the stem-rod of the draw-head.

In the annexed drawings, forming a part of our specification, the letters A A' represent

portions of the frame-work of two cars, to the bottom sills at each end of which are secured the draw-heads B B'. The rear ends of the draw-bars are constructed with the usual stems and collars, and provided with the usual yielding or buffer springs.

The draw-head B (see Fig. 6) is constructed with a slot, b , immediately above the chamber which receives the end of the coupling-link, and provided with the curved shoulder c , the object of which will be hereinafter more fully described.

The letter C represents a draw-bar, constructed, preferably, of spring-steel, and formed at its front end with the hook d and eye or loop e , for the attachment of an operating-lever, D, and formed at its rear end with the forked portion f , (see Fig. 8,) for the purpose of straddling the stem of the draw-head. This draw-bar is attached to the draw-head B, at or near its rear end, by means of one or more straps or clips, F, as seen in Fig. 6. By thus constructing the bar of spring-steel and securing it at its rear end the forward end is permitted to rise under the conditions of an upward force, so that the link can be thrust into the draw-head or removed from the same, as indicated by the dotted lines in Fig. 6.

The letter G represents the coupling-link, having one of its ends beyond the center made much heavier than the other end, for the purpose of balancing or maintaining the outer end of the link in a horizontal position when the said heavier end is engaged with one of the draw-bars or with a coupling-pin. This is accomplished by re-enforcing the metal near one end of the side bars and the adjacent end bar in the process of forging the link, substantially as shown in Fig. 3 of the drawings. Constructing a link in this manner has many advantages in the coupling of cars, among which may be stated, first, that owing to one end being heavier than the other when the heavy end is introduced into the mouth of the draw-head and held therein by means of the draw-bar, (see Fig. 7,) the link will be held in a horizontal position for coupling with the approaching car; second, that it removes the necessity of brakemen or other employes going between the cars and prevents the danger to limb and life.

The letter D represents the vertical rod at

tached to the upper end of the draw-bar C by means of the eye *e*. This rod D (see Fig. 1) passes through eyes formed in the outer ends of the guides, brackets, or rods L L, and is provided at its upper end with a pivoted operating-lever, K, having its fulcrum in the block P. The lever K, which is attached indirectly to the draw-bar, is held in a lower or elevated position by means of a pin, *k'*, passed through perforations in the standard R.

The guide-rods L are attached to the end of the car by passing the same through the end frame and one of the studs thereof, and the inner ends of these guide-rods are furnished with spiral springs *n*, retained in position by means of collars or nuts *m*, and the office of the coil-springs surrounding the guide-rods L is to permit of a limited endwise movement in their respective tubes *l l*, as seen in Fig. 1 of the drawings. The inner end of the guide-rods, with the springs and collars or nuts, are protected from damage or interference by means of brackets or caps O. In some cases it will not be necessary to extend the guide-rods entirely through the studding, in which case the studding would be formed with a small chamber or space for the end-play of the guide-rods.

In Fig. 2 we have shown means consisting of the fulcrum-block T, fulcrum-lever K', and slotted guide-plate *vw*, attached to a link, I, for operating the draw-bar from the side of the car, although in practice in box-cars we prefer to operate the draw-bar from the top thereof, as shown in Fig. 1 of the drawings. The slot *b*, formed in the draw-head B, (see Fig. 6,) permits of the vertical elevation of the forward or hooking end of the draw-bar, and the shoulder *c* of the draw-head forms an abutment for the forward end of the draw-bar.

In Fig. 7, which is a transverse sectional view of Fig. 6, the draw-head is shown with a

groove, into which is fitted the draw-bar to prevent any lateral or sidewise movement of the same.

We claim the right to vary the construction and the arrangement of the parts hereinbefore described and shown without departing from the spirit of our improvements.

What we claim as new, and desire to secure by Letters Patent, is—

1. The steel-spring draw-bar constructed at one end with the hook *d* and at the other end with the forked portion *f*, substantially as described.

2. The draw-head B, constructed with the link-chamber and the vertical slot *b*, in combination with the draw-bar C, attached thereto by means of a clip or strap, substantially as described.

3. The coupling-link hereinbefore described, having one of its ends heavier than the other, and rocking bearing, substantially as described.

4. The combination, substantially as described, of the draw head B, constructed with the slot *b* over the link-chamber, and the steel-spring draw-bar C, constructed with the hook *d*, and the link G, heavier at one end, and provided with rocking surface, substantially as and for the purpose set forth.

5. In combination with the steel-spring draw-bar having at its forward end the hook or staple *e*, the vertical rod D, attached directly to the staple *e* of the draw-bar, and the guide-rods L L, and the operating-lever K, substantially as described.

In testimony whereof we have hereunto signed our names.

SUMPTER TURNER AUTEY.
STANTON DAYE AUTEY, JR.

In presence of—

S. D. AUTEY,
P. J. FINNEY.