

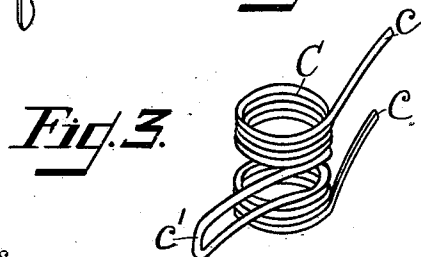
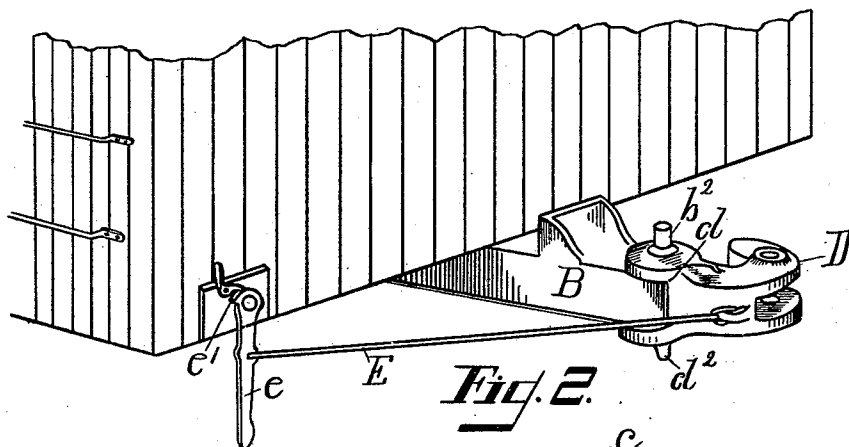
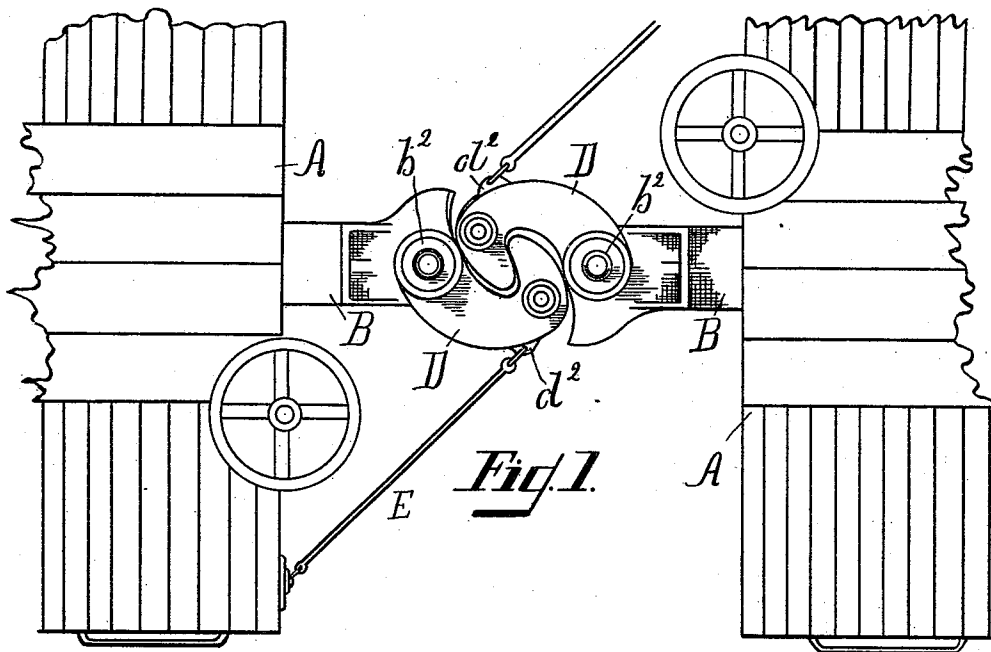
(No Model.)

S. P. HEATH & T. BURR.
CAR COUPLING.

2 Sheets—Sheet 1.

No. 475,239.

Patented May 17, 1892.



WITNESSES
F. Clough.
E. J. Kraft.

INVENTORS.
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Theodore Burr
by Parker W. Burton
his Attorneys.

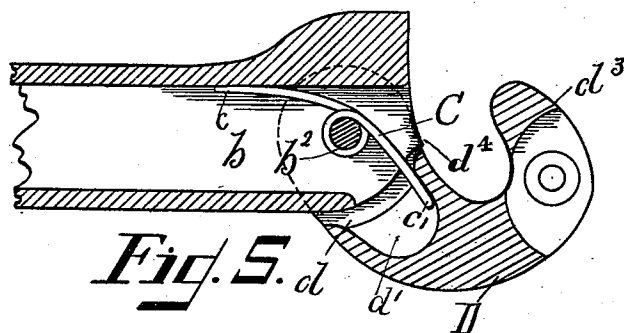
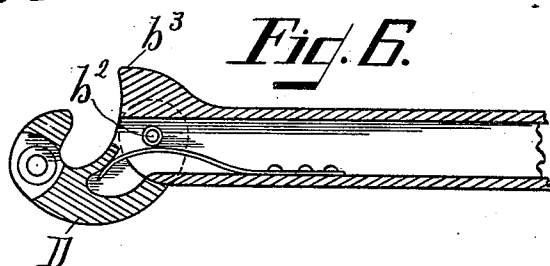
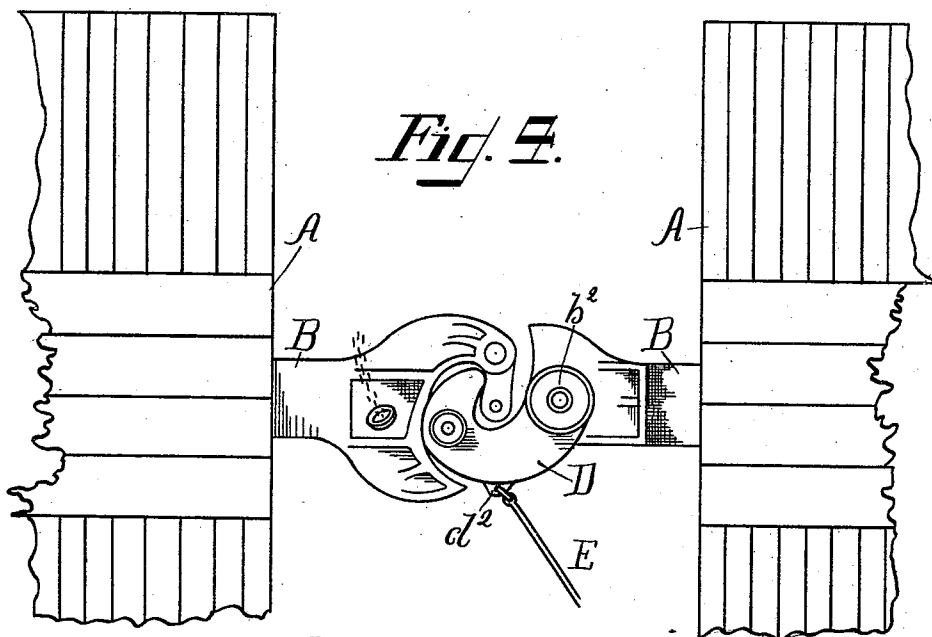
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

SAMUEL P. HEATH, OF SAGINAW, AND THEODORE BURR, OF DETROIT,
MICHIGAN; SAID BURR ASSIGNOR TO SAID HEATH.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 475,239, dated May 17, 1892.

Application filed November 23, 1891. Serial No. 412,785. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL P. HEATH, residing at Saginaw, in the county of Saginaw, and THEODORE BURR, residing at Detroit, county of Wayne, State of Michigan, citizens of the United States, have invented a certain new and useful Improvement in Car-Couplers; and we 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a plan view of the ends of adjacent cars, showing our improved coupler in position on the cars. Fig. 2 is a perspective of the end of the car and of the coupler. Fig. 3 is a perspective of the spring employed. Fig. 4 is a view showing one of our couplers employed with another well-known type, showing its adaptability to use with such forms of couplers. Fig. 5 is a horizontal section showing the spring and the manner of engaging it with the head. Fig. 6 is a variation showing the use of a flat spring.

In the drawings, A A are the ends of adjacent cars. B B are draw-bars. These bars we prefer to make of cast-steel and hollow to provide a recess *b* in which to locate the spring C. The draw-head D is slotted or mortised at *d*, and is pivoted to the bar B on the pin *b*². Heretofore in constructing the head it has been provided with a tongue or tenon to enter a slot or mortise in the draw-bar. This limited the size and strength of the head at its pivotal point, and it was difficult to make it of sufficient strength. By pivoting the head to the outside of the bar, we are able to make the portions of the head engaging with the bar of any desired size and strength.

The bar B is provided with a side extension *b*³ on the side opposite the head to form a buffer. The spring C is a double coil, having the free ends *c c* resting against the walls of the draw-bar and the looped end *c'* extending out from it and into the cavity *d'* of the head and resting against its inner wall. The operation of this spring is to force the point of the hook D toward the buffer *b*³ or against

the inner side of the hook forming the draw-head on the opposite car, and unless forced backward the point of the hook will always lie on the same side of the central line of draft through the pin *b*² as the buffer *b*³.

On the draw-head is a lug *d*² to, which is pivoted the rod E, operated by the lever *e*. This lever is notched at two places, in which the dog *e'* engages to hold it in two positions, one for holding the draw-head open and the other for holding it in its position for locking.

The draw-bar is provided with a suitable stop *d*⁴ to prevent the head swinging too far inward from the action of the spring C.

The draw-head D is formed with an inclined portion *d*³, so that when the couplers on adjacent cars come together the draw-heads meet on this incline and are forced out and by each other and then locked together, as shown in Fig. 1. They are unlocked by drawing one draw-head back by means of the lever *e* and the rod E.

In Fig. 4 we show a plan view of the ends of adjacent cars, one fitted with our improved coupler and the other with what is known as the "Janney" coupler, the object being to show its adaptability to couple with this class of couplers. This figure also shows the distinction between the form employed by us and the other forms, in that our form of hook provides for what we call a "center draft"—that is, so shaping the hook that the point of contact and draft between the opposite hooks is on a line with the pivot and not at right angles to the pivot, as in the coupler shown in Fig. 4.

In Fig. 6 is shown a variation employing a flat spring riveted to the walls of the draw-bar, instead of a coil-spring, as shown in Fig. 5.

What we claim is—

1. In a car-coupler, the combination of a draw-bar, a hooked head pivoted thereto, a side extension on said draw-bar, and a spring adapted to throw the point of said hook toward said side extension and beyond the draft-line, the knuckle part of said hook being double and adapted to receive the perforated end of the draw-bar between the two parts and the knuckle part also being formed

with a mortise d' , within which is received the forward end of said spring, substantially as and for the purpose described.

2. In a car-coupler, the combination of a
5 swinging spring-actuated hooked head, a hollow draw-bar, and an actuating spring inclosed in and protected by said hollow draw-bar, the knuckle part of said hook being double and adapted to receive the end of the draw-bar
10 between its two parts, substantially as and for the purpose specified.

3. In a car-coupler, the combination of a swinging spring-actuated hooked head, a

swinging lever provided with ratchet-teeth, pivoted to the car-body, a pawl also pivoted 15 to the car-body and adapted to engage with said ratchet-teeth, and a link connection between said lever and said coupler-head, substantially as and for the purpose described.

In testimony whereof we sign this specification 20 in the presence of two witnesses.

SAMUEL P. HEATH.
THEODORE BURR.

Witnesses:

C. H. FISK,
MARION A. REEVE.