(No Model.)

D. W. WOODS.

CAR COUPLING.

No. 262,880. Patented Aug. 15, 1882.

Fig. 1.

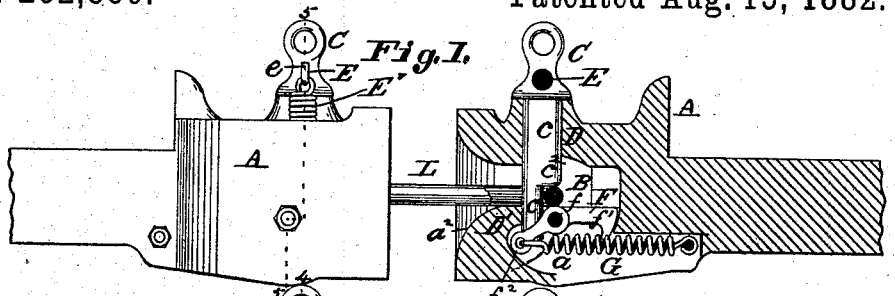


Fig. 2.

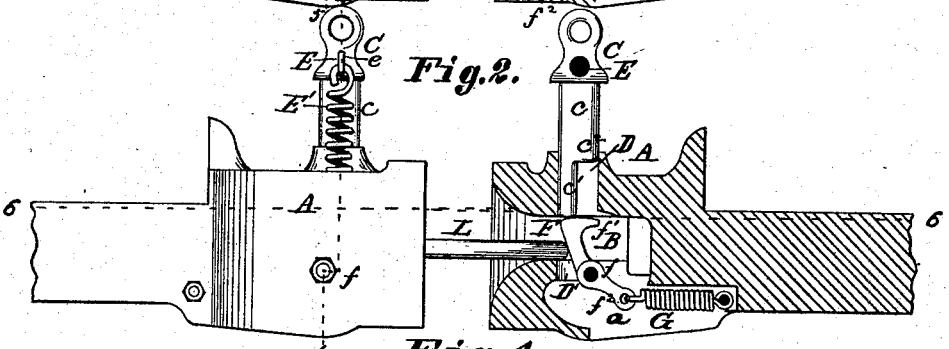
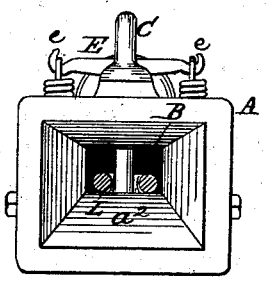


Fig. 4.

Fig. 3.



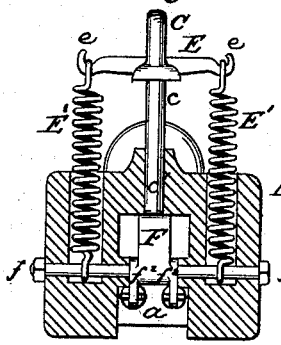


Fig. 5.

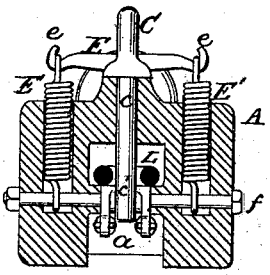


Fig. 6.

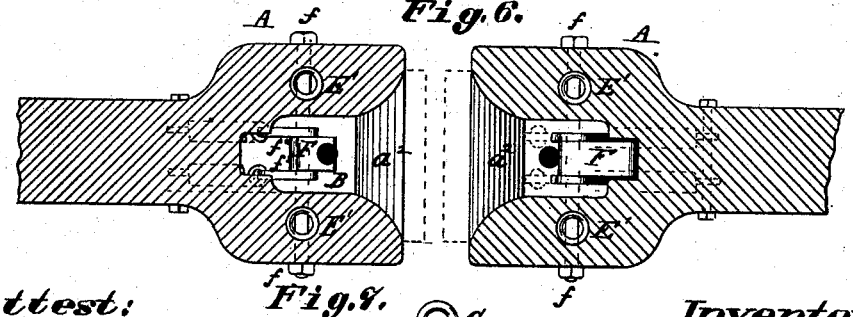
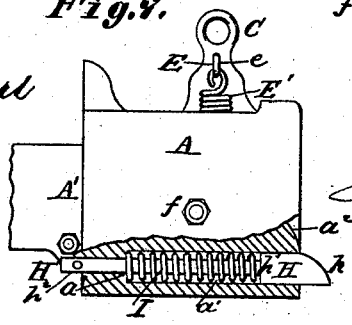


Fig. 7.



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UNITED STATES PATENT OFFICE.

DANIEL W. WOODS, OF ST. LOUIS, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 262,880, dated August 15, 1882.

Application filed May 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. WOODS, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Couplings, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same.

My improvement consists partly of a spring-trip constructed, as described, so as to sustain the coupling-pin until the entering link forces back the trip and allows the coupling-pin to descend; also, the construction of the coupling-pin, the same being made with an offset to hold down the inner end of the link in the draw-head when coupling with another car; also, the construction of the pin with a cross-bar and tension-springs secured to the draw-head and attachable to the cross-bar, said springs operating to press the pin downward; also, the construction of the draw-head with a spring-guide to lift the end of the entering link when required.

In the drawings, Figure 1 is partly in elevation or side view and partly in section, showing the parts coupled. Fig. 2 is a similar view, showing the parts uncoupled. Fig. 3 is a front elevation. Fig. 4 is a vertical section on 4 4, Fig. 2. Fig. 5 is a vertical section on 5 5, Fig. 1. Fig. 6 is a horizontal section on 6 6, Fig. 2, showing the position of the pin when uncoupled and when coupled. Fig. 7 is a side elevation of the head, part being broken away, showing the spring-guide.

A is part of a draw-head that may be connected to the car-body in the usual or any suitable manner.

B is the recess or cavity for reception of the end of the link.

C is the coupling-pin, and D D′ the holes in the upper and lower parts of the draw-head for the reception of the coupling-pin. The coupling-pin has a cross-bar, E, whose ends are turned up in hooks *e* for the retention of the loops of spiral (or other) springs E′, whose other ends are attached to the draw-head. These springs force the pin downward. The upper part, *c*, of the pin is made of elliptical form, its smaller diameter being equal (or about so) with the diameter of the lower part, *c′*, which is circular in section. This construction leaves a shoulder, c^2, that rests upon the inner end of the link L and holds the outer end at a suitable elevation to enter the draw-head of another car in coupling.

I do not confine myself to the precise form of pin described, the essential feature being the shoulder c^2, for the purpose set forth.

F is the trip. This is fulcrumed to the lower part of the draw-head at *f*. It is made with a head, *f′*, fitted to support the pin C when it is in its upper position, as shown in Fig. 2. The trip has arms f^2, working in recesses *a* in the lower part of the draw-head.

G are spiral springs connected at one end to the arms f^2 and at the other to the draw-head, and which act to erect the trip into the position shown in Fig. 2, and to hold it in that position until the entering link forces it back upon its hinge or fulcrum *f*. When the trip is forced into its lower position, as shown in Fig. 1, it occupies a recess in the draw-head.

In Fig. 7 is shown a spring-guide, H, inserted in a socket, *a′*, in the lower part of the draw-head. The spring-guide has an inclined end, *h*, that forms a continuation of the lower flaring face, a^2, of the mouth of the draw-head when the guide is in its outer position, so that the end of an approaching link, on impingement against the inclined end, will be carried up into the mouth of the draw-head. On the mouths of two draw-heads striking together the spring-guides retreat into their sockets, and on the separation of the draw-heads are again projected by the springs I, surrounding their guide-stems H′, and bearing at one end against the shoulder *h′* and at the other end against the inner end of the socket *a′*.

h^2 is a cross-pin passing through the stem H′, and holding the guide in its socket by bearing against the shoulder A′ of the draw-head.

It will be observed that the arms f^2 of the trip are perfectly shielded by insertion in the draw-head, so that no violence can affect them. These arms extend each side of the hole D, that receives the lower end of the coupling-pin. The pin has a ring or eye at top for connection with any suitable device by which it may be raised in uncoupling the car.

I claim as my invention—

1. The trip F, made with a broad top, *f*, and spring-arms playing in recesses in the draw-head and fulcrumed to the draw-head, and the two tension-springs G, working within the draw-head and attached to the same and to the arms f^2, for the purpose set forth.

2. The combination, in with self-coupling car-coupling, of the spring-guide H, constructed to operate as set forth.

DANIEL W. WOODS.

Witnesses:
SAML. KNIGHT,
GEO. H. KNIGHT.