

J. E. KENDALL.

Improvement in Car-Couplings.

No. 128,314.

Patented June 25, 1872.

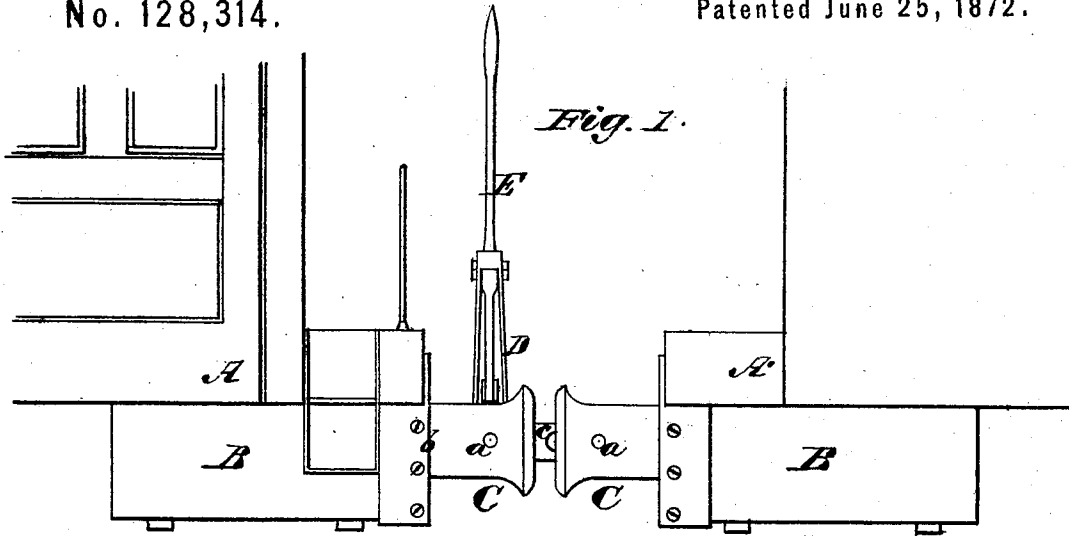


Fig. 2.

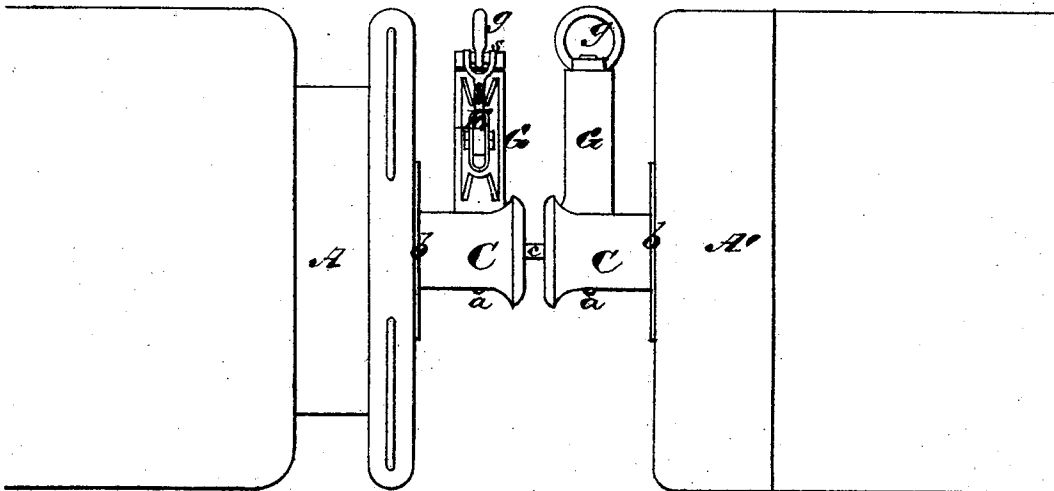


Fig. 3



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by
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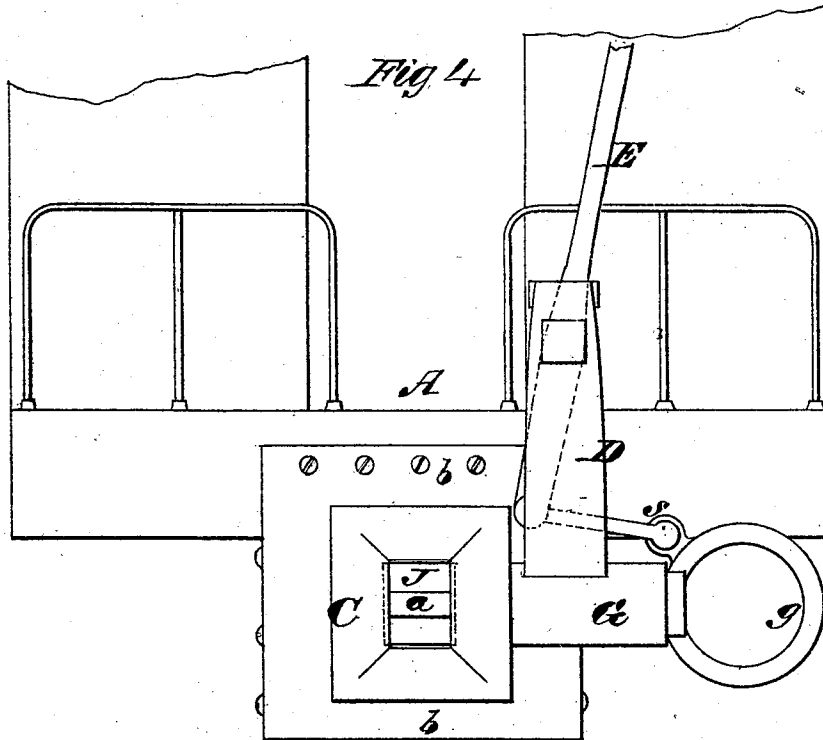
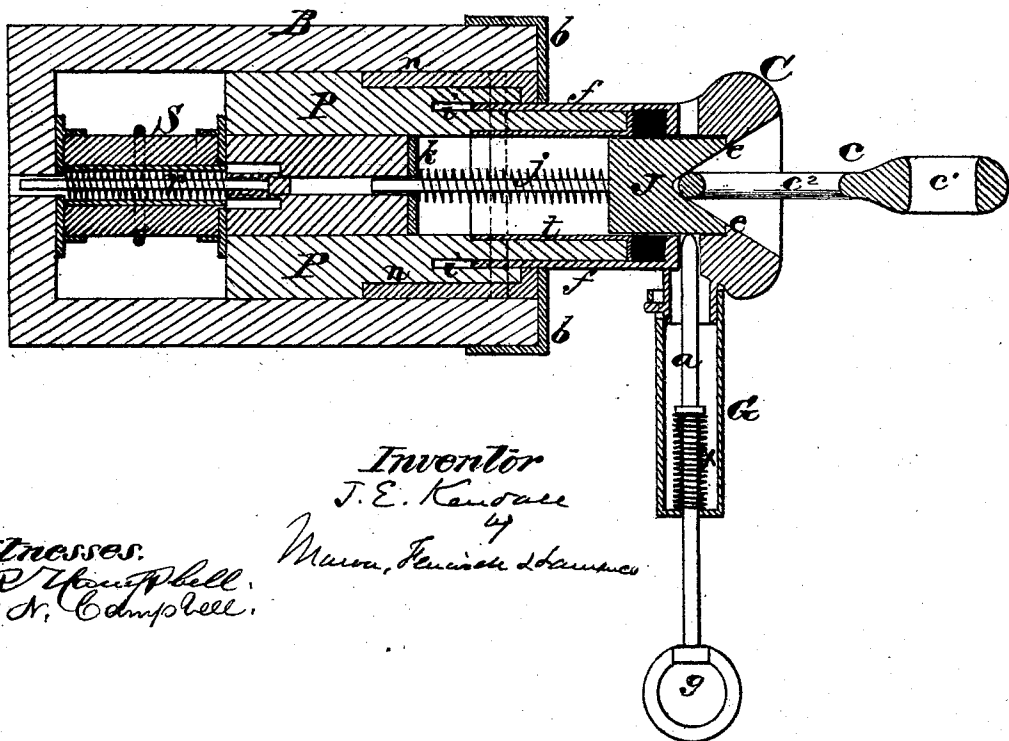


Fig. 5



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Fig. 6

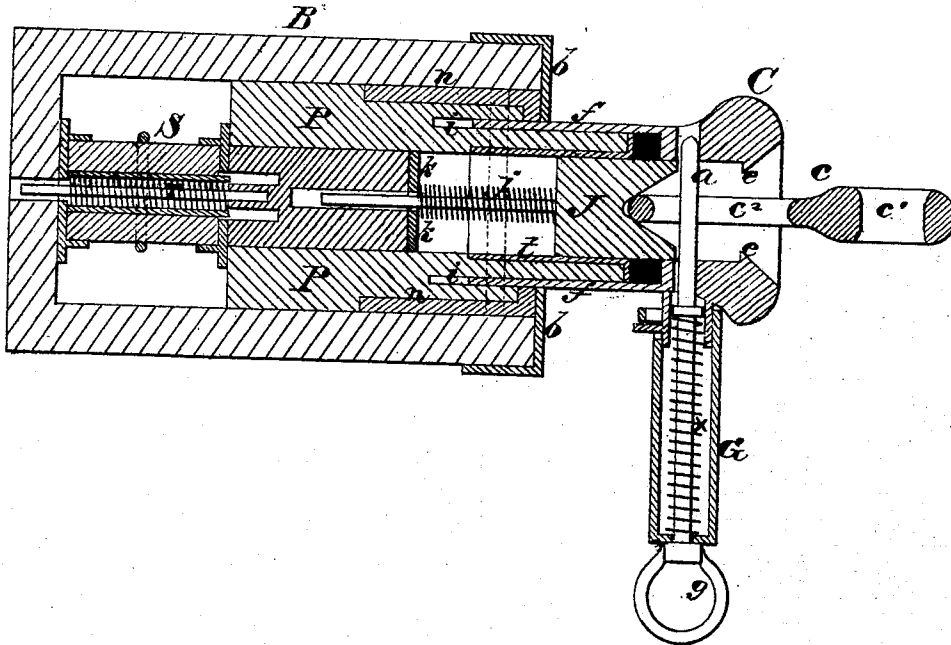
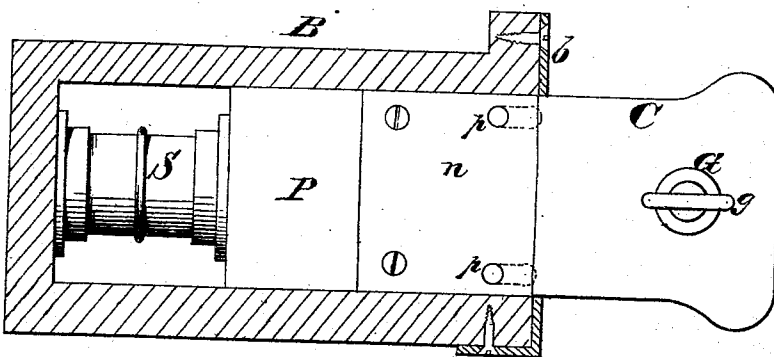


Fig. 7



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH E. KENDALL, OF CAIRO, ILLINOIS, ASSIGNOR TO HIMSELF, REEDER S. BRIGHAM, AND CHARLES COREY, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 128,314, dated June 25, 1872.

To all whom it may concern:

Be it known that I, JOSEPH E. KENDALL, of Cairo, in the county of Alexander and State of Illinois, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, Plate 1, is a side view of the ends of two cars having my improved coupling applied to them. Fig. 2, Plate 1, is a top view of Fig. 1. Fig. 3, Plate 1, are views of the coupling-link. Fig. 4, Plate 2, is an end view of the coupling. Fig. 5, Plate 2, is a section taken horizontally through the buffer and buffer-box, showing the link about to enter the buffer. Fig. 6, Plate 3, is a similar view of the same parts shown in Fig. 5, indicating the link fastened in its place in the buffer. Fig. 7, Plate 3, is a side view of the buffer and buffer-spring as seen by removing one side of the buffer-box.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on railroad car-couplings which will couple automatically when cars are brought together, and which are provided with means whereby persons can readily uncouple the cars without the necessity of getting between them.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing, A A' represent the ends of two cars connected together by my improved coupling. B B are the buffer-boxes, which are rigidly secured to the bottoms of the car-beds, and in which are fitted to slide longitudinally the buffers C C, as shown in Figs. 5, 6, and 7. The two buffers and their boxes are constructed precisely alike, so that a description of the buffer on one car will suffice for that of the other car. The buffer C is constructed with a flaring mouth, terminating in two lateral shoulders, *e e*, and a rectangular throat, in which a bolt, J, slides freely. The front end of this bolt presents a vertical V-shaped notch, the beveled surfaces of which correspond to the flaring surfaces of the buffer, as shown in Fig. 5. To the rear

end of this bolt a guide-rod is secured, which enters a hole made centrally into a square block, *k*, the front end of which later is faced with metal, and around this rod is coiled a spring, *j*, which, by its recoil, forces the bolt J against the shoulders *e e*, as shown in Fig. 5. The buffer is perforated transversely just in rear of the shoulders *e e*, to receive a coupling-pin, *a*, which is acted on by a spring, *x*, inclosed in a tube, G, and which is provided on one end with a ring-handle, *g*. When the pin *a* is drawn out of the throat of the buffer C the spring *j* will force the bolt J past the end of said pin and hold it against the shoulders *e e*. When the bolt J is forced inward the spring *x* will force the coupling-pin *a* across the throat of the buffer, as shown in Fig. 6, and at the same time through one of the slots of a coupling-link, *c*, hereinafter to be described. The tube G and coupling-pin *a* are made long enough to enable a person to grasp the ring-handle *g* and uncouple without the necessity of getting between the ends of the cars. For passenger-cars an uncoupling-lever, E, is employed, which has its fulcrum at the upper ends of a standard, D, rising from the tube G, and which is connected by a link, *s*, to the ring-handle *g* of pin *a*. By means of this lever E and its link *s* a person on the platform of a car can operate the pin *a*. For freight-cars the lever E may be dispensed with. The buffer C is constructed with a sheath, *f*, which receives the front reduced end of a rectangular buffer-stock, P, and which enters slots *i i* in this stock, as shown in Figs. 5 and 6. The buffer is connected to its stock by transverse bolts *p p*, and the interior of the stock is lined with metal, *t*, to afford a good wearing surface for the sliding bolt J. On opposite sides of the stock P, and firmly secured thereto, are metal plates *n*, which afford strength to the stock as well as abutting ends and wearing surfaces therefor. These plates abut against a metal cap, *b*, which is secured to the front end of the case B and buffer-beam of the car-platform. The buffer-stock P slides in the case B, and its front end is forced against cap *b* by means of buffer-springs S *r*, arranged between the rear end of the stock P and the rear end of the case B. The spiral spring *r*, which is inclosed in a tube that passes centrally through the

spring S, is auxiliary to the latter, and is brought into play at the same time as this spring is. Spring S is capped, as shown, and it is prevented from displacement by a rod that passes through the auxiliary spring *r* and through the rear end of case B. When two cars are brought forcibly together the shock will be received and modified by the springs S *r*, resisting by their elastic force the backward thrust of the buffer and its stock. The case B and buffer-stock P are composed of wood strengthened by metal, which affords all the strength and lightness required, and are cheaper than if they were composed of metal. The coupling-link *c* is constructed with special reference to the notched spring-bolts J. It consists of an elongated portion with parallel sides and rounded end, through which portion an oblong slot, *c*², is formed for allowing all the longitudinal as well as lateral and vertical play required. This slotted portion terminates at one end in a perforated eye, *c*¹, which is elliptical and swelled both laterally and vertically, and which also presents a rounded end and an elliptical eye. When the swelled end *c*¹ of this link *c* is confined in place in a buffer, C, by means of the pin *a* and notched bolt J, the shape of the notch in this bolt, together with the pin *a* and spring *j*, will hold this pin *c* in proper position for effecting a coupling when cars are brought together. In other words, the said supports and holder will pre-

vent the long slotted end of the coupling-pin from dropping down so that it would not effect a coupling.

It will be seen from the above description that I combine with a spring-buffer a spring coupling-pin and a spring-bolt in such manner that when the coupling-pin is partly withdrawn from the buffer, to uncouple, the said bolt will spring forward and prevent the pin *a* from returning to the position shown in Fig. 6; and in the act of effecting a coupling the bolt J will be moved back far enough to release the pin *a* and allow it to pass through the link *c*. At the same time the notch in the spring-bolt will cause the link *c* to adjust itself properly to receive said pin *a*.

Having described my invention, what I claim is—

1. The combination of the lever E, link *s*, tubular extension G, spring-pin *a g*, and notched spring slide-bolt J, and shouldered buffer C *c*¹, as and for the purpose herein described and shown.

2. The combination of the buffer C *f*, stock P, bolt J, spring *j*, springs S and *r*, and spring coupling-pin *a*, substantially in the manner described and shown.

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Witnesses:

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