(No Model.)

W. E. GALLAHER.

CAR COUPLING.

No. 482,121. Patented Sept. 6, 1892.

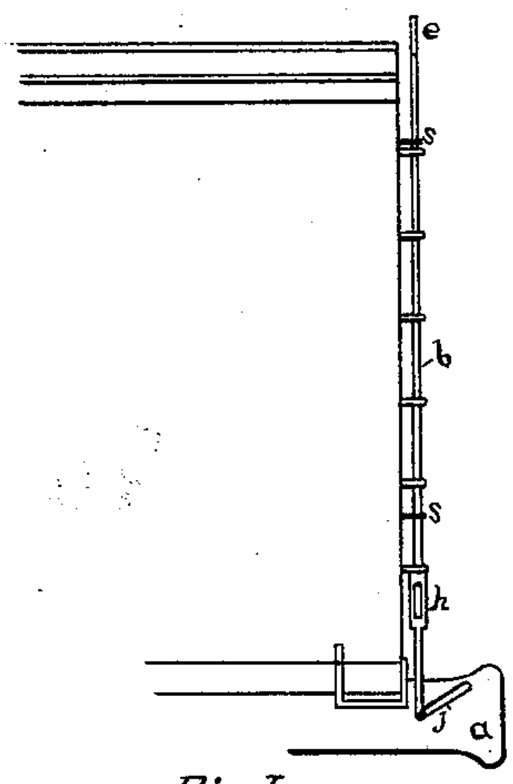

Fig. I.

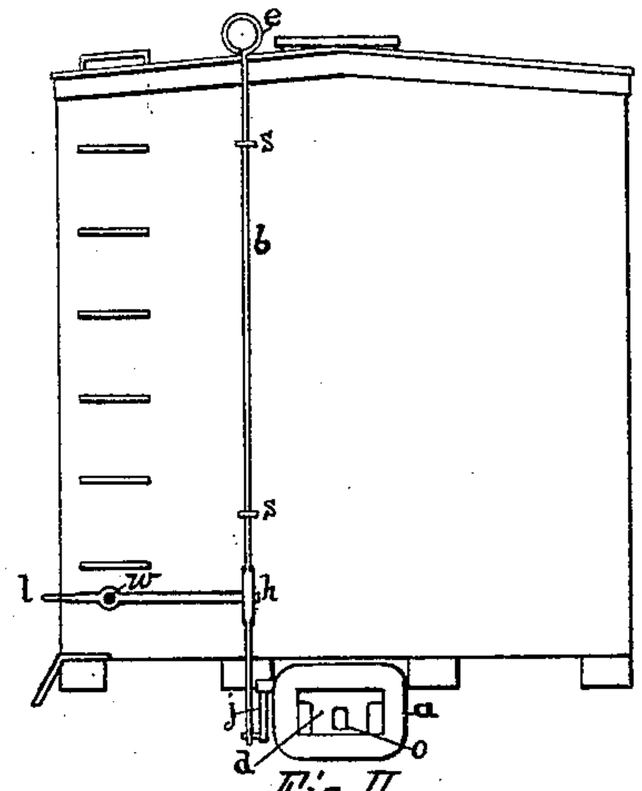

Fig. II.

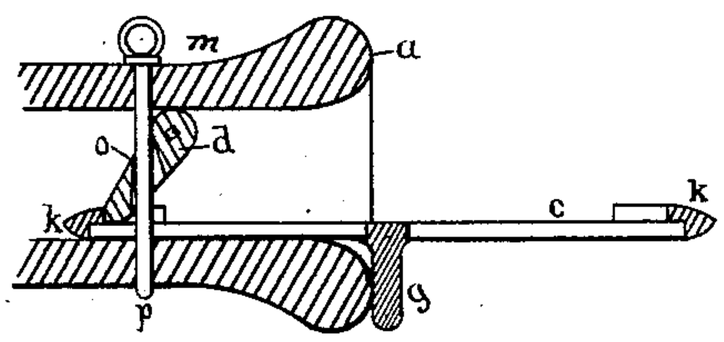

Fig. III.

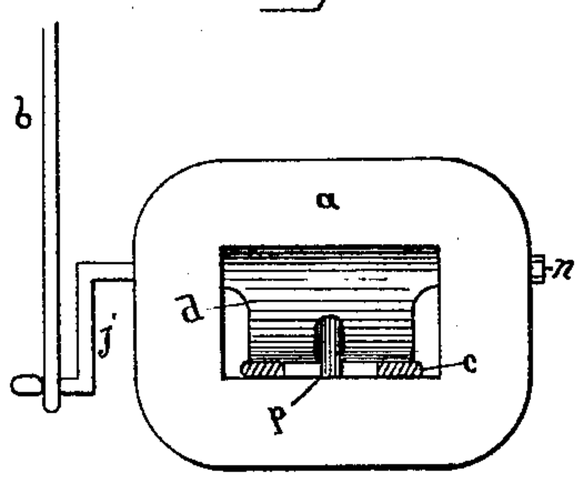

Fig. IV

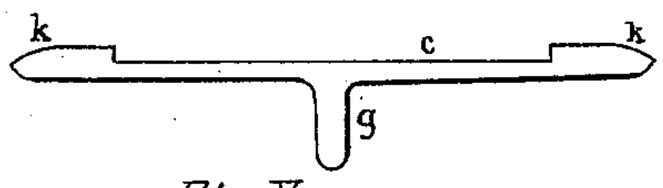

Fig. V.

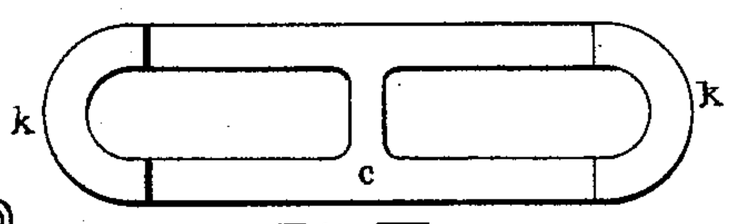

Fig. VI.

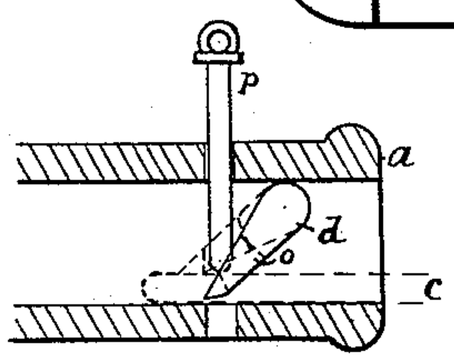

Fig. VII

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 482,121, dated September 6, 1892.

Application filed March 29, 1892. Serial No. 426,976. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. GALLAHER, a citizen of the United States, residing at Crugers, in the county of Westchester and State of New York, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

The object of my invention is to produce a car-coupling in which the coupling devices are simple, strong, interoperative with all forms of link-couplings, and capable of being manipulated with safety to the trainman either from the top of the car, as when certain cars are detached while the train is in motion, (as for the purpose of switching, &c.,) or from the side of the car in the process of making up a train, or in coupling on additional cars. These objects are attained by the means set forth in the accompanying drawings, in which like letters of reference refer to similar parts in the several views.

Figure I is a side view of a portion of a freight-car with my coupling attached. Fig. II is an end view of the same. Fig. III is an enlarged cross-sectional view of my coupling. Fig. IV is an end view of the same. Fig. V is an edge view of the coupling-link shown in cross-section in Fig. III. Fig. VI is a plan view of the same. Fig. VII is a cross-sectional view of my coupling, showing the manner in which it may be adapted to the ordinary coupling link and pin.

Reference to Fig. I will show my coupling to consist of a draw-head *a* not essentially differing in general form from the ordinary form of link-couplings. In fact, my device may be applied to many, if not all, of those already in use. The draw-head is provided with the usual coupling-pin *p* to adapt the draw-head for coupling with the ordinary coupling-link. It is further provided with a swinging pawl *d*, (shown in cross-section in Figs. III and VII,) which has a spindle through it at *m*. The hole to receive the spindle is square and is fitted by the part of the spindle that holds the pawl. The spindle has a bearing *n*, Fig. IV, on one end and at the other end extends outside of the draw-head, where it is provided with a crank *j*, Figs. I, II, and IV. This crank is attached to a rod *b*, Figs. I and II, that extends to the top of the car, as shown, terminating in a handle *e* for the hand. At a suitable height this rod is provided with a loop *h*, which receives the end of a lever *l*, pivoted on the car at *w* and extending to the side of the car, as shown, from where manipulation of the bar will cause a lifting of the pawl. The crank *j* and its rod connections are so arranged that their weight will tend to always maintain the pawl in its normal position, which is that of having its point resting on the bottom of the draw-head, as in Fig. VII. A downward pull on the lever *l* or an upward pull on the handle *e* will lift the pawl either to admit a link or to release one.

Fig. V illustrates a form of link which I employ. It may be a solid plate with catches *k k* on the ends; but I preferably make it of the form shown in Fig. VI, so that it may be adapted to the ordinary link-couplings.

Fig. III shows the coupling in place and the method of its use. To prevent the link passing too far into the draw-head, I add to its center a lug *g*, which will insure enough coupling outside the draw-head to be caught by another draw-head run against it. With the pawl and coupling as shown the pin *p* would not be required; but for adapting the devices to the ordinary plain link the pawl is perforated in line with the holes for the pin in the draw-head *a*—that is to say, the holes will all align when the link is in place; but to avoid the necessity for a trainman going between the cars when coupling with a common link the holes for the pin will be arranged as in Fig. VII, in which the perforation through it is shown not to be in line with the holes in the draw-head when the pawl is in its normal place, so that the pin will rest on the pawl. The passage of a link under the pawl will lift it far enough to allow the pin to drop through the pawl, as shown by the dotted lines in Fig. VII. Thus whether this coupling is to be joined with one of its own kind provided with the form of link to which it is especially adapted or whether it is to be joined with any of the common forms of link-couplings it becomes an automatic coupler.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a car-coupler, of the draw-head *a*, provided with a pawl having a

square spindle-support and a perforation through it for a coupling-pin to align with the holes in the draw-head only when raised by the introduction of a link, the pawl to be manipulated by means of a crank *j*, a rod connecting with the crank and extending to the top of the car and having connection with the lever *l*, by which the rod and pawl may be operated, and a link provided with enlarged ends *k k* and a central lug *g*, substantially as shown and described.

2. In a car-coupling, a draw-head provided with a pawl *d*, suspended on a square spindle having bearings in the sides of the draw-head, the spindle having a crank on one end to be manipulated by a connecting-rod *b* and a lever *l*, the pawl and draw-head being perforated to receive an ordinary coupling-pin, a coupling-pin *p*, and a link *c*, provided with enlarged ends and with a lug *g* at its center, substantially as shown and described.

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