

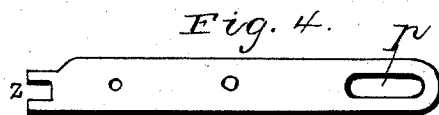
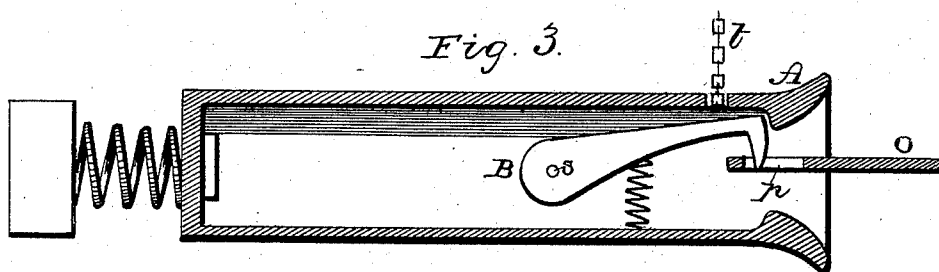
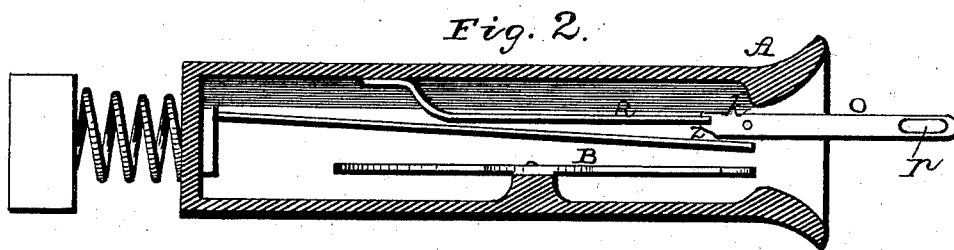
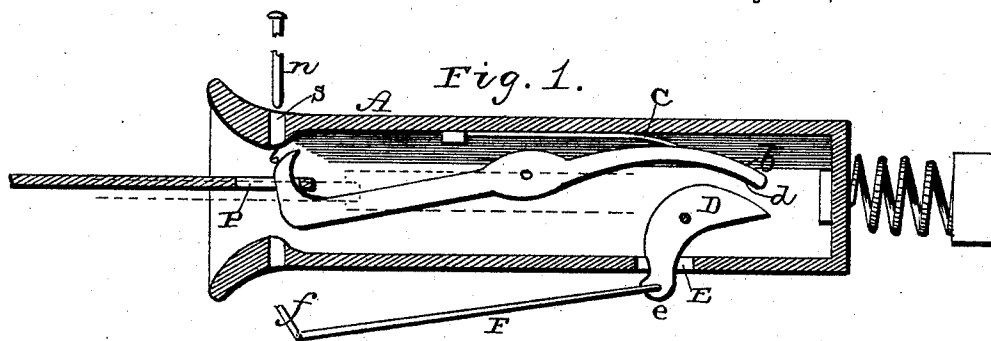
(No Model.)

2 Sheets—Sheet 1.

J. PEIFFER.
AUTOMATIC CAR COUPLING.

No. 586,144.

Patented July 13, 1897.



Witnesses
L. S. Black
Rosam Smith.

Inventor
Jno. Peiffer
M. M. Cady
Attorney.

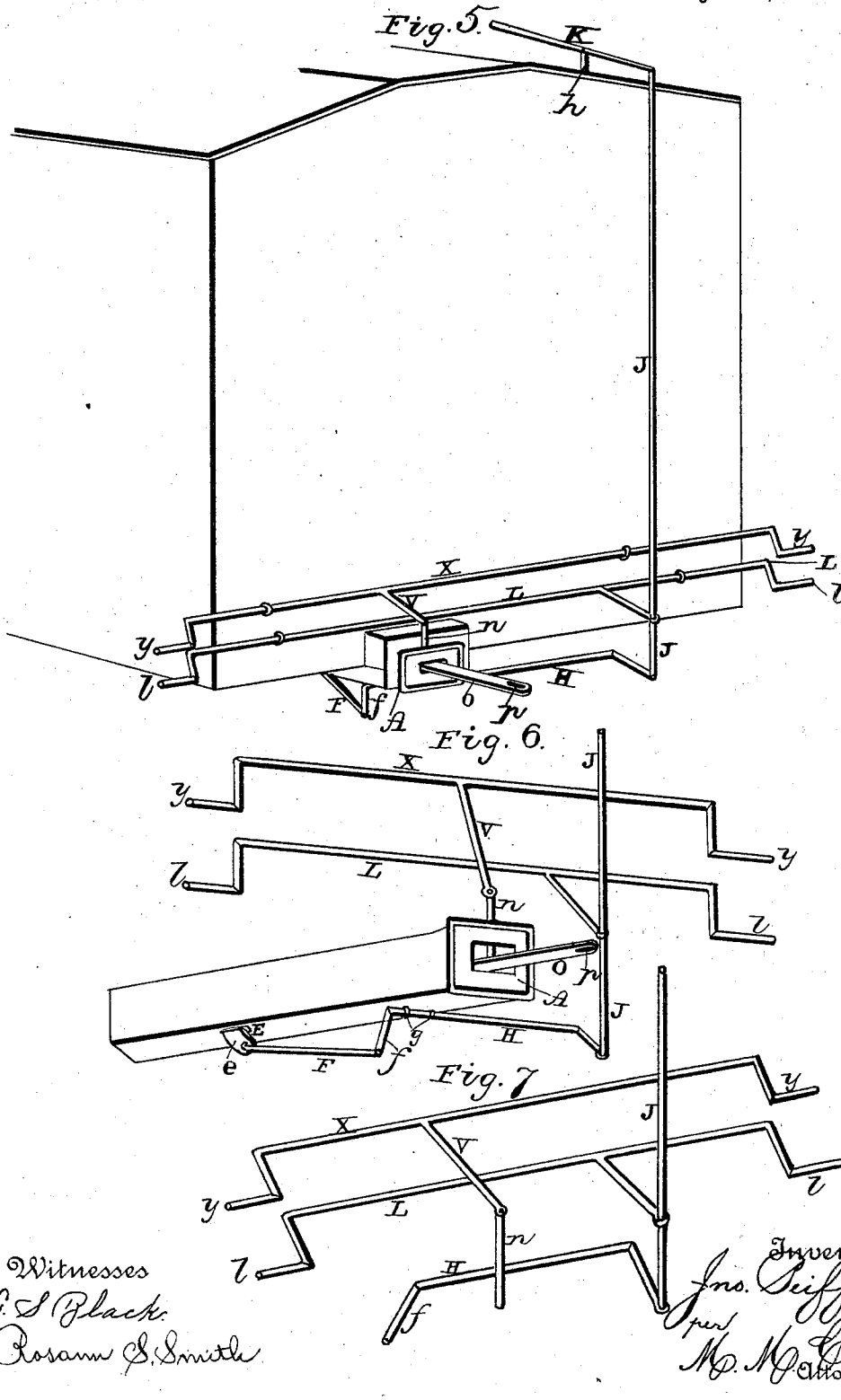
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2 Sheets—Sheet 2.

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AUTOMATIC CAR COUPLING.

No. 586,144.

Patented July 13, 1897.



UNITED STATES PATENT OFFICE.

JOHN PEIFFER, OF DUBUQUE, IOWA, ASSIGNOR OF THREE-FOURTHS
TO PETER APEL, JOHN TOUSSAINT, AND N. J. TOUSSAINT, OF
SAME PLACE.

AUTOMATIC CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 586,144, dated July 13, 1897.

Application filed December 17, 1896. Serial No. 616,082. (No model.)

To all whom it may concern:

Be it known that I, JOHN PEIFFER, a citizen of Germany, residing in the city and county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Automatic Car-Couplers; and I do hereby 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 ap-
10 pertains to make and use the same.

My invention has relation to car-couplers, and has for its object to provide the bumper with means for coupling cars either auto-
15 matically or by the link and pin and also for readily uncoupling the same.

It consists, essentially, in securing within the bumper certain links with hooks and pins for engaging the same and means for operating the hooks and links.

20 The details of the construction of my invention will be fully described in the specification and illustrated in the drawings accompanying the same.

Figure 1 is a vertical and longitudinal section of the bumper with appliances within the bumper. Fig. 2 is a horizontal and longitudinal section of the same. Fig. 3 is a vertical and longitudinal section of a modified form of Fig. 1. Fig. 4 is a plan view of
30 one of the links removed. Fig. 5 is a perspective of the end of the car, showing the attachment for uncoupling. Fig. 6 is a bumper removed, showing the position of the uncoupling attachment after the car has been
35 uncoupled. Fig. 7 is a perspective of the device for operating the couplings removed from the car.

Like letters of reference denote corresponding parts in all of the drawings.

40 In the drawings, A designates the bumper, which is of the ordinary shape of bumpers, but sufficiently recessed out to hold the coupling attachment hereinafter described. To one of the inner vertical sides of the bumper
45 is pivoted a hook B, which projects out to near the end of the funnel part of the bumper. Over the hook B there is secured to the upper inner surface of the bumper a spring C, which is set at a sufficient angle to bear upon
50 the rear end *b* of the hook B. Below the end of the hook B is pivoted a cam D, one end *d*

of which cam is adapted to come in contact with the under side of the end *b* of the hook, and the other end *e* of said cam D projects out through the opening E in the under side
55 of the bumper, and to this end *e* is pivoted a rigid rod F. The rod F is pivoted to the arm *f* of an angle-rod H. This rod H is loosely secured to the under side of the bumper by an eyebolt or ring *g*. The opposite end of
60 the angle-iron H is bent at right angles and is pivoted to a rod J, which projects up to the top of the car and is there secured to a lever K, which lever is pivoted upon a standard *h*, fastened to the top of the car. To the rod J
65 is also pivoted another lever L, which runs crosswise of the end of the car and projects out beyond the same sufficiently to be operated by the handles *l* from outside of the car. Another operating-lever X is loosely secured
70 to the end of the car and is supplied with a lever V, which is pivoted to the top of a coupling-pin *n*.

A link O (shown in Fig. 4) is pivoted to the inner side of the bumper at *k*. There is a
75 slot *z* in the inner end of the link O, which engages with the spring R, which spring is secured to the inner side of the bumper, as shown in Fig. 2. This spring holds the link O in a horizontal position. The outer end of
80 the link O is provided with an oblong hole *p* to engage with the hook B, and also may engage with the pin *n* when necessary. Vertically through the bumper A is a hole S, into which the pin *n* is inserted for engage-
85 ment with the link O or with the link of an ordinary bumper. It will be seen that if said hook B be broken or fails for any reason to operate then the pin *n* can be introduced through the hole S and into engagement with
90 the hole *p* in the link O.

Fig. 3 shows a modified means for operating the hook B. This hook is pivotally secured by pin *s* to the inner side of the bumper. To the under side of the hook is attached one
95 end of a spring Y, the other end of which is fastened to the bumper. For raising the hook from engagement with the link O there is a chain *t* secured to the forward end of the hook and attached to the rod J.
100

The manner of operating my device is as follows: When two cars having my improved

device thereon are to be coupled, the engineer simply brings the two cars together, when the link O in the bumper of one of the cars will slide over the incline *c* of the hook B and engage with it through the hole *p* of the link, and the link within the other bumper will engage with the hook in the opposite bumper automatically. When it is necessary to uncouple the two cars thus coupled, the operator, if standing upon the top of the car, will raise up the outer end of the lever K, which action will force down the rod J, turning the arm *j* of the angle-iron H and forcing backward the arm *f*, which action will also force back the rod F and will turn the cam D, bringing the end of the cam D into engagement with the end *b* of the hook B, and thus withdraw the point *c* of the hook from engagement with the link O, and the same operation upon the opposite car will withdraw the other link and the two cars will be uncoupled.

If the car is to be uncoupled from the side while the brakeman is standing upon the ground, he will grasp the lever L on each car by the handles *l* and turn them downward, which action will force down the rod J and uncouple the same, as previously described. For security against the uncoupling of the cars by breakage of the hook B the brakeman can turn the handles Y of the lever X downward, and this will force the pin *n* down through the hole S and through the hole *p* in the link O.

If one of the cars to be coupled is supplied with my improved coupler and is to be coupled with a car having the ordinary link and pin, then when the two cars are brought together the link O will engage in the bumper of the opposite car and the pin of that car can be inserted through the bumper and through the hole *p*, or the ordinary link of the opposite car, when the cars are brought together, will, if of sufficient length, engage the hook B, and thus automatically couple the car, but if not of sufficient length to engage the hook then the operator from the side of the car will turn the handles Y of the lever X and force the pin *n* through the hole

S and into engagement with the link of the opposite car.

Having now described my invention and the mode of its operation, what I claim, and desire to secure by Letters Patent, is—

1. An automatic car-coupler, consisting of a bumper for each end of the car, a spring-actuated hook pivoted within the bumper a spring-actuated link pivoted within the bumper, a cam pivoted in the bumper and set to engage the rear end of the hook for throwing the hook out of engagement with the link and a lever for operating said cam, consisting of a bar F, angle-iron H, rod J, and levers K, and L, all combined to operate, as and for the purposes shown.

2. The combination of a bumper, hook B, link O, having the slots *p*, and *z*, spring R, cam D, and lever for operating said cam, consisting of the bar F, angle-iron H, pivoted to the base of the bumper, rod J and lever L, and K, all combined to operate as and for the purposes specified.

3. The combination of the bumper, hook B, spring C, link O, provided with slots *p*, and *z*, spring R, cam D, and means, as described for operating the same, a coupling-pin *n*, adapted to pass through the bumper and engage the slot *p*, in the link O, and a lever for operating the pin, consisting of the rod X, with handles Y and arms V, pivoted at one end to said pin, to operate, as and for the purposes specified.

4. An automatic car-coupler, consisting of a bumper for each end of the car, and a spring-actuated hook pivoted within the bumper, and a spring located in the bumper, and the link supported at its rear end by the spring, combined with a cam pivoted in the bumper and set to engage the rear end of the hook for throwing it out of engagement with the link, and a lever for operating the cam, substantially as specified.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN PEIFFER.

Witnesses:

M. M. CADY,

J. R. BALLOUGH.