

(No Model.)

E. J. SITLER.  
CAR COUPLING.

No. 489,421.

Patented Jan. 3, 1893.

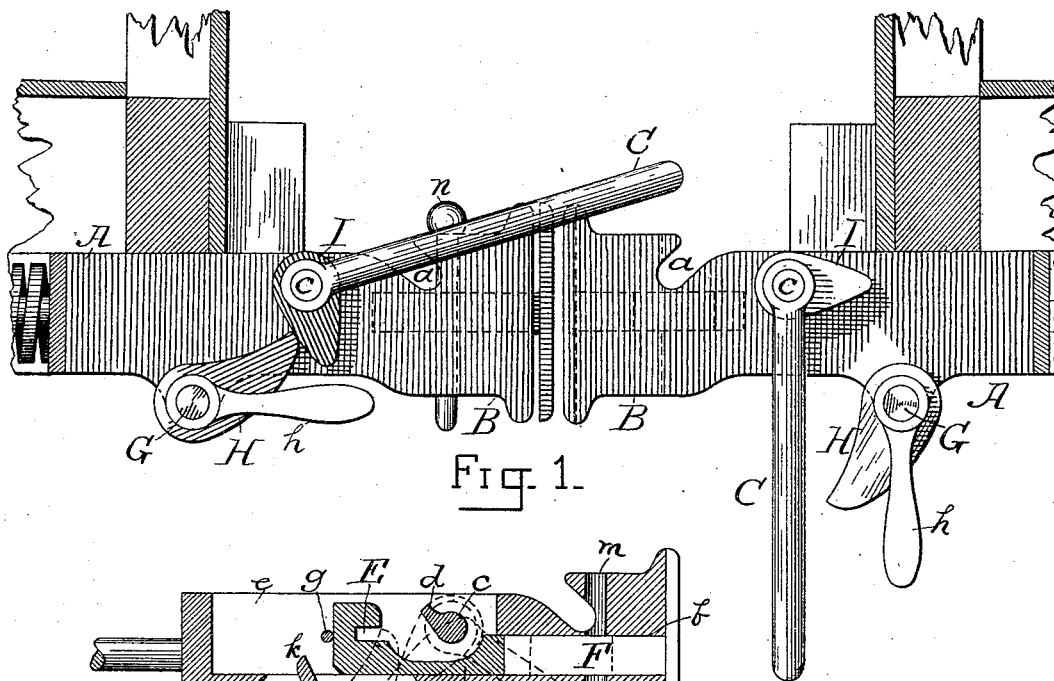


FIG. 1.

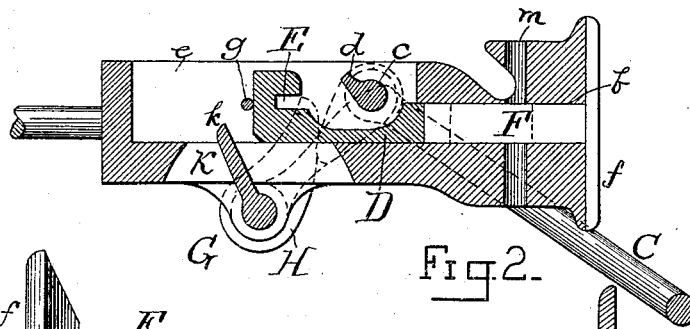


FIG. 2.

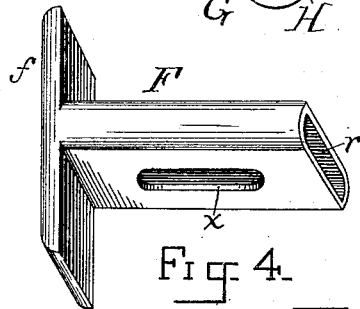


FIG. 4.

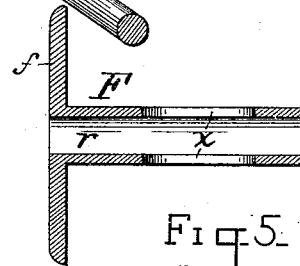


FIG. 5.

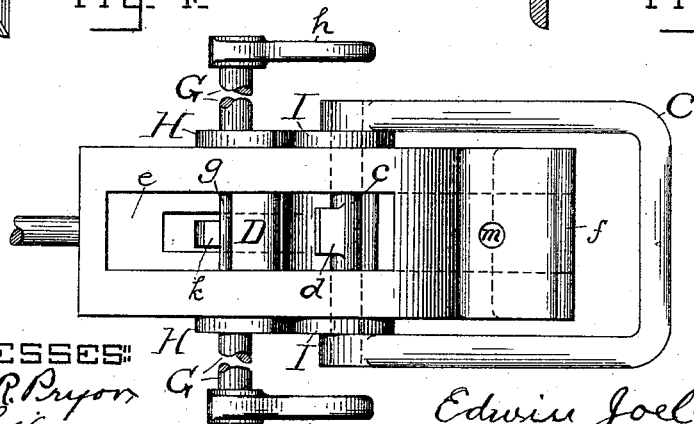


FIG. 3.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWIN JOEL SITLER, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-FIFTHS TO  
HENRY CHARLES MECHTERSHEINER, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 489,421, dated January 3, 1893.

Application filed April 9, 1892. Serial No. 428,486. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN JOEL SITLER, of Chicago, in the county of Cook, State of Illinois, have invented certain new and useful  
5 Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 The object of my invention is to provide a cheap and economical coupling for freight cars principally, which will operate equally well on either end of the car, with either high or low cars; can be readily used with the  
15 common coupling link and pin, either together or in conjunction with the ordinary draw-bar; and which always couples automatically; substantially as hereinafter fully described, and as illustrated in the drawings, in which:—

20 Figure 1, is a side elevation of two of my improved car-couplings, showing them in position to be coupled. Fig. 2, is a horizontal central section through one of the same. Fig.  
25 3, is a plan view thereof. Fig. 4, is a perspective view of the push-block, and, Fig. 5, is a horizontal section through the same.

In the drawings A represents the body of my improved coupling, which, back of the  
30 head portion B thereof, is channeled out longitudinally, so as to give it a U-shape in cross section. The engaging face of the head B of the coupling is substantially the same as that of the ordinary draw-bar, and it is provided in its upper surface, back a sufficient  
35 distance from its engaging face, with a transverse groove *a* extending clear across it, which slants outward from the engaging face of the head and terminates, preferably, just  
40 above the center of the head. The head of my improved coupling is also provided with a throat or longitudinal central passage *b*, extending from its engaging face clear through to the channeled out body-portion A. The  
45 groove *a* provides the head B with an undercut shoulder, which answers all the purposes of a hook, and which serves to confine the transverse outer end portion of the link C, which is of a yoke-shape and has its ends

pivottally attached to the coupler. Each of my improved couplers is provided with one  
50 of these yoke-shaped links C, which has its rear ends permanently secured to the projecting ends of a transverse spindle *c*, which, as shown, is journaled in the side walls of the  
55 channeled body-portion A of my coupler.

Projecting in a rearwardly direction from that part of the spindle *c* coming between the side walls of the body A, is a finger *d*, which  
60 when said link C is in the position shown in Fig. 1 projects in a horizontal direction toward the rear of the coupler. In this position the finger *d* is suitably confined, to keep the yoke raised or lifted ready for engagement, by  
65 means of the tumbler D. This tumbler consists of a longitudinal reciprocal block, which is of a width corresponding (preferably) to the width of the channel or trough *e* in the body, on the floor of which it rests and moves, and it is of the height corresponding to that  
70 of the longitudinal passage *b* in the head, into which its forward end, after passing under the spindle *c*, extends. The rear end of this tumbler is provided with an upward projection, in the forward edge of which is a transverse  
75 recess E, into which, when said tumbler is shot forward, the finger *d*, when in the horizontal position, enters. When finger *d* is in said recess E the yoke-shaped link C is held in the lifted position shown in the left hand  
80 coupler in Fig. 1.

Now when the heads of my improved coupler collide the link C is released, and by virtue of its own gravity drops automatically into the groove *a* of the engaging coupler.  
85 To accomplish the automatic release of link C, I provide the buffer or push-block F, which is of such dimensions that it can rest and move longitudinally in the said passage *b* of the head, and which has its forward end provided with a buffer plate *f*. The plate *f*, when  
90 the block F is pushed back to the limit of its rearward movement, rests in a depressed seat made with reference thereto in the face of the said head. This block F is of such length  
95 that when it is at the limit of its rearward movement the tumbler will have been thrown back, until stopped by the transverse bar *g*,

so as to release the finger *d*. This action takes place when two of my improved couplers collide or engage and causes the push-block to move backward and throw the tumbler back so as to release spindle *c* so that said link C may fall of its own weight. When it is desired to uncouple my improved couplers, the link C may, if desired, be lifted by hand from the groove *a* in the head of the engaging coupler, and dropped to the position shown in the right hand coupler illustrated in Fig. 1. In order to avoid the necessity of placing any part of the person between the cars, however, I have constructed devices which are operated from the sides of the car, and which enable the link C to be lifted, and retained in such lifted position without being touched by the hands. These devices consist of a transverse shaft G, which is journaled in suitable lugs depending from the under side of the body of the coupler, and which is of such length that its end extends beyond the side of the car where they are provided with a crank or arm *h* to turn the shaft with. This shaft is provided on each side of the body of the coupler with sort of leaf-shaped cams H, which engage with the pear-shaped cams I, I, on the ends of the spindle, just inside of where the ends of link C are secured thereto. Shaft G, between its bearings, is also provided with an arm *k*, which projects therefrom in such direction that when said cams engage to lift the yoke-shaped link C (thereby bringing the finger *d* on spindle *c* to a horizontal position) said arm moves up through a slot K in the floor of the channeled body-portion of the coupler, and strikes against and pushes the said tumbler forward to the limit of its forward movement, thereby causing the said pin to enter the recess E of said tumbler to lock the spindle *c* and the link C carried by it. The shaft G after it has been turned to complete one revolution, is in the position shown in the right hand coupler in Fig. 1, in which the handle *h* thereof hangs downward.

In order to enable my couplers to be used in conjunction with the common draw-bars using coupling pins and links, I can remove the push-blocks altogether, and make a vertical opening *m* in the head for the reception of an ordinary coupling pin *n*. The coupling link would then be inserted in the passage *a* of the head and held by the pin *n* in the ordinary manner. However, it is always desirable that the push-block should be inseparably united to my improved coupler by a chain, or by reason of some peculiar construction of its own, otherwise it would soon become misplaced and lost. I prefer, therefore, to make the push-block hollow its entire length, and have it of such proportions that the opening *r* there-through would easily accommodate a link. I also provide it with longitudinally elongated slots *x* in its top and bottom walls for the coupling pin to pass down therethrough; the

length of said slots being commensurate to the longitudinal movement of the push-block.

What I claim as new is:

1. The combination with a car-coupler having its body portion channeled out, and having a transverse groove in the upper surface of its head, of a link having its rear ends secured to a transverse spindle, said transverse spindle journaled in the sides of the channeled out part of said coupler and having a pin projecting therefrom between its bearings, a tumbler and a push-block, as set forth.

2. The combination with a car-coupler having its body portion channeled out, and having a transverse groove in the upper surface of its head, of a link having its rear ends secured to a transverse spindle, said spindle journaled in the sides of the channeled out part of the said coupler and having a pin projecting therefrom between its bearings, and a tumbler engaging said pin, as set forth.

3. The combination with a car-coupler having its body portion channeled out, and having a transverse groove in the upper surface of its head, of a transverse spindle journaled in the sides of the channeled part of said coupler and having a pin projecting therefrom between its bearings, a link having its rear ends secured to the ends of said spindle, a longitudinal reciprocal tumbler engaging said pin, and a transverse shaft, having an arm projecting therefrom, and moving up through a suitable opening in the floor of the channeled out part of the coupler and engaging said tumbler, as set forth.

4. The combination with a car-coupler having its body portion channeled out, having a transverse groove in the upper surface of its head, and having a longitudinal passage extending from its engaging face to said channeled out part, of a transverse spindle having a pin projecting therefrom between its bearings into said channeled out part, a push-block placed and movable longitudinally in said passage, a tumbler engaging said pin and engaged by said push-block, a transverse shaft having an arm passing up through a suitable opening in the floor of said channeled out part and engaging said tumbler, and a link having its rear ends secured to said spindle.

5. The combination with a coupler the upper surface of the head of which is provided with a transverse groove, the body portion of which is channeled out and which is provided with a longitudinal passage extending from its face to said channeled out part, of a spindle *c* having the finger *d* and provided with the cams I, link C secured to the ends of said spindle, shaft G, cams H thereon, and arm *k* projecting therefrom, as set forth.

6. The combination with a coupler the upper surface of the head of which is provided with a transverse groove, the body portion of which is channeled out and which is provided with a longitudinal passage *a* of a spindle *c*

having the finger *d*, the hollow push-block having the longitudinal openings *x* therein, the tumbler D having the recess E in its up-turned rear end, the link C having its rear ends secured to said spindle, and the coupling-pin insertible vertically through a suitable opening in the head made with reference thereto, and passing down through the opening *x* in the push-block, as set forth.

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Witnesses:

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