

C. HOLTZ.
Car Coupling.

No. 58,418.

Patented Oct. 2, 1866.

Fig:1.

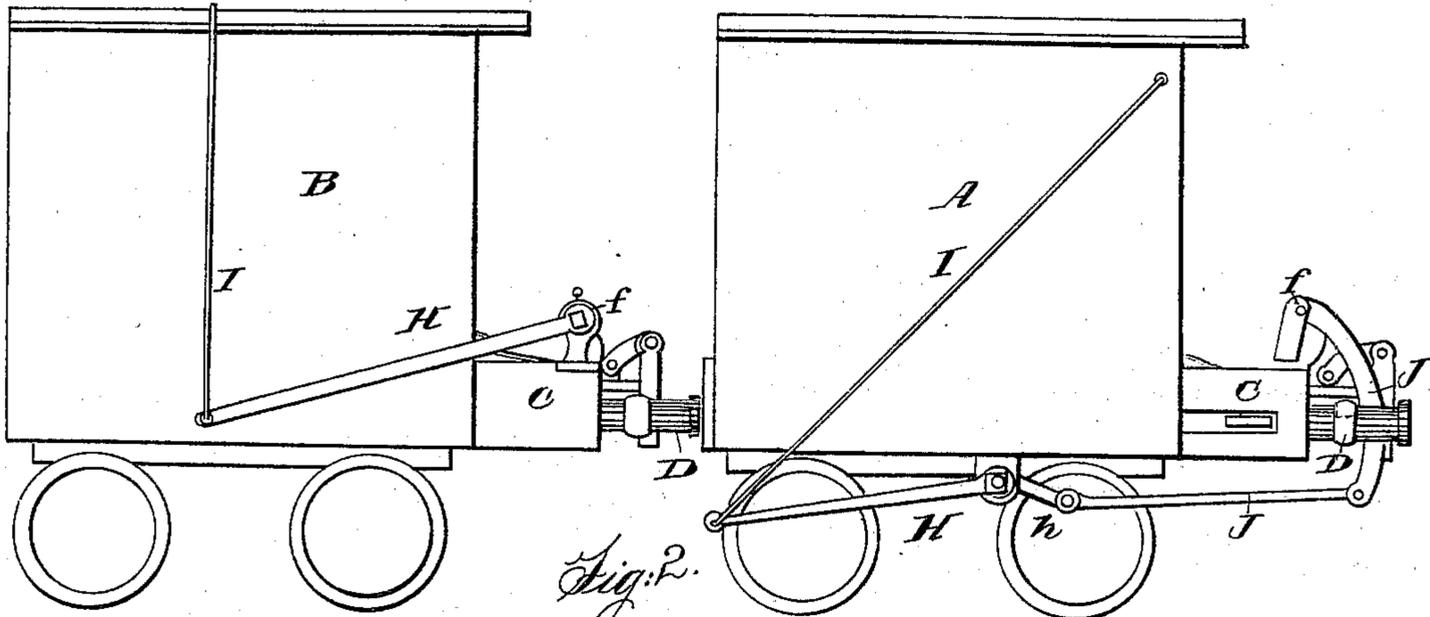


Fig:2.

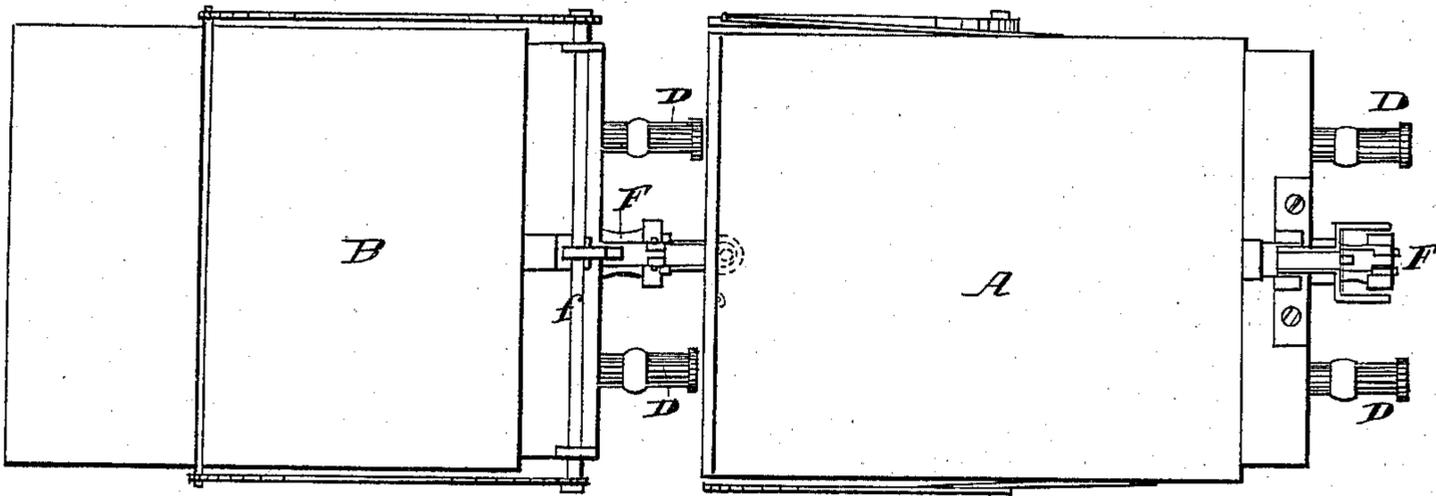


Fig:4.

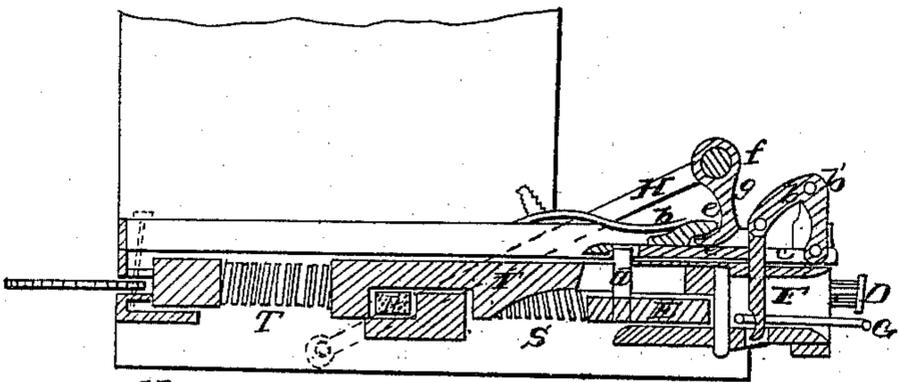
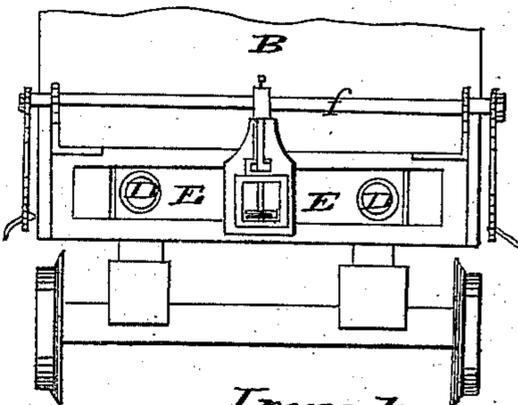


Fig:3.



Witnesses.
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UNITED STATES PATENT OFFICE.

CARL HOLTZ, OF CHICAGO, ILLINOIS.

IMPROVED CAR-COUPLING.

Specification forming part of Letters Patent No. 58,418, dated October 2, 1896.

To all whom it may concern:

Be it known that I, CARL HOLTZ, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Automatic Car-Couplings; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

The nature of my invention consists in providing one end of railroad-cars with adjustable or yielding bumpers, so that when the cars are run together the contact causes said bumpers to recede, and thereby by suitable connections to raise up the coupling-pin to allow the link to enter the recess in the draw-head, and when the pressure upon said draw-head is released the said coupling-pin drops through the link and couples the cars as desired.

To enable those skilled in the art to understand how to construct and use my said invention, I will now proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a side elevation of my invention; Fig. 2, a plan or top view of the same. Fig. 3 is an end view or elevation thereof, and Fig. 4 is a longitudinal central vertical section of the same.

Similar letters of reference in the several figures indicate the same parts of my invention.

A is intended to represent a passenger-car with my invention attached, and B a freight-car, C representing a platform, which must be kept clear in the case of the passenger-car, while it is not necessary in case of the freight-car, the only difference in the two cases being the different arrangement of the devices for uncoupling the cars, which in one case is upon the platform, and in the other case is arranged beneath, as shown in Fig. 1. D represents the aforesaid bumpers projecting from the end of the car, as shown, their rear ends being attached to an adjustable transverse block or bar, (marked E and shown in Fig. 4,) behind which are arranged suitable springs, as shown, so that pressure upon said bumpers causes said block E to recede, while the springs aforesaid throw the said movable bar E for-

ward to its original position, when the pressure upon said bumpers is removed.

F represents a draw-head provided with a suitable recess to receive the coupling-link G, and being arranged in connection with a rubber block or spring, or any other suitable spring, (marked R,) so that the sudden concussion or shock which would otherwise occur in starting the train is obviated.

At the middle point in the movable transverse bar E there projects up through a suitable slot in the draw-head, as shown, a pin, (marked *d*,) whose upper end enters a hole in the reciprocating sliding bar *c*, arranged upon the top of the draw-head, as shown in Fig. 4. At the outer end of said sliding bar is pivoted one end of a bent lever, *b*, which has its fulcrum at *b'*, and is pivoted at its opposite end to the upper end of the coupling-pin *a*, as shown. By this arrangement it will readily be seen that as the contact of the cars in running together forces back the block E, the pin *d* draws back the sliding bar *c*, and thus, by means of the lever *b*, raises up the coupling-pin and allows the coupling-link to enter the recess in the draw-head as desired, and upon the cars moving forward and releasing the pressure from the bumpers the springs S throw the said pin back through said link and secure the cars together.

T represents a spring placed behind the movable block, in the recess in which the opposite end of the coupling-link G rests, to allow the link to recede within said recess, in case it should not enter the draw-head F at first, until it should be fairly entered therein, as desired. Upon the upper side of the aforesaid sliding bar *c* is attached a projection, (marked *e*,) as seen in Fig. 4.

Upon freight-cars a transverse shaft, *f*, provided with a hook, *g*, is arranged across the platform, having arms H upon said shaft at each side of the car, the ends of said arms being connected by a cord passing over the car, as shown, (marked I,) so that a person upon the top of the car, by raising up said cord, may uncouple the cars at pleasure, or in case of impending accident. In such case the hook *g* acts upon the projection *e*, so as to raise said bar up from the pin *d* and draw it back sufficiently to raise the pin *a* and uncouple the cars.

The object of raising the bar *c* up from the pin *d* is to allow the said bar to move back independently of the movable block *E*, the spring *h* operating to throw said bar *c* back into position when the pressure of the hook *g* is removed.

In passenger-cars, from the necessity of keeping the platform clear, the shaft *f* is arranged beneath the car, the cord *I* passing up into the car, so that any one may upon the approach of danger uncouple the cars.

The connection with the coupling-pin *a* is effected by the jointed arm *kj* and the lever *J*, as shown in Fig. 1.

Having described my invention, I will now specify what I claim and desire to secure by Letters Patent:

1. So arranging the coupling-pin, in combination with adjustable or movable bumpers *D*, or their equivalent, that pressure upon said bumpers will raise up the coupling-pin and allow the coupling-link to enter the draw-head when the cars are run together.

2. So arranging the springs *S*, or their equivalent, in combination with the coupling-pin, that said pin is caused or permitted to drop

through the coupling-link to couple the cars when pressure upon the aforesaid bumpers is removed.

3. The combination of the bumpers *D*, the movable bar *E*, the pin *d*, sliding bar *c*, bent lever *b*, and coupling-pin *a*, arranged and operating substantially as specified and shown.

4. The combination and arrangement of the bumpers *D*, cross-bar *E*, springs *S*, pin *d*, slide *c*, lever *b*, and pin *a*, operating substantially as specified and set forth.

5. In combination with the pin *a*, bent lever *b*, and slide *c*, the employment of a projection, *e*, and hook *g* for uncoupling the cars, substantially as specified.

6. In combination with said slide *c*, the employment of a spring, *h*, as and for the purposes described and shown.

7. The employment of the levers or arms *H* and cord *I*, in combination with the shaft *f* and hook *g*, arranged and operating as and for the purposes set forth.

CARL HOLTZ.

Witnesses:

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