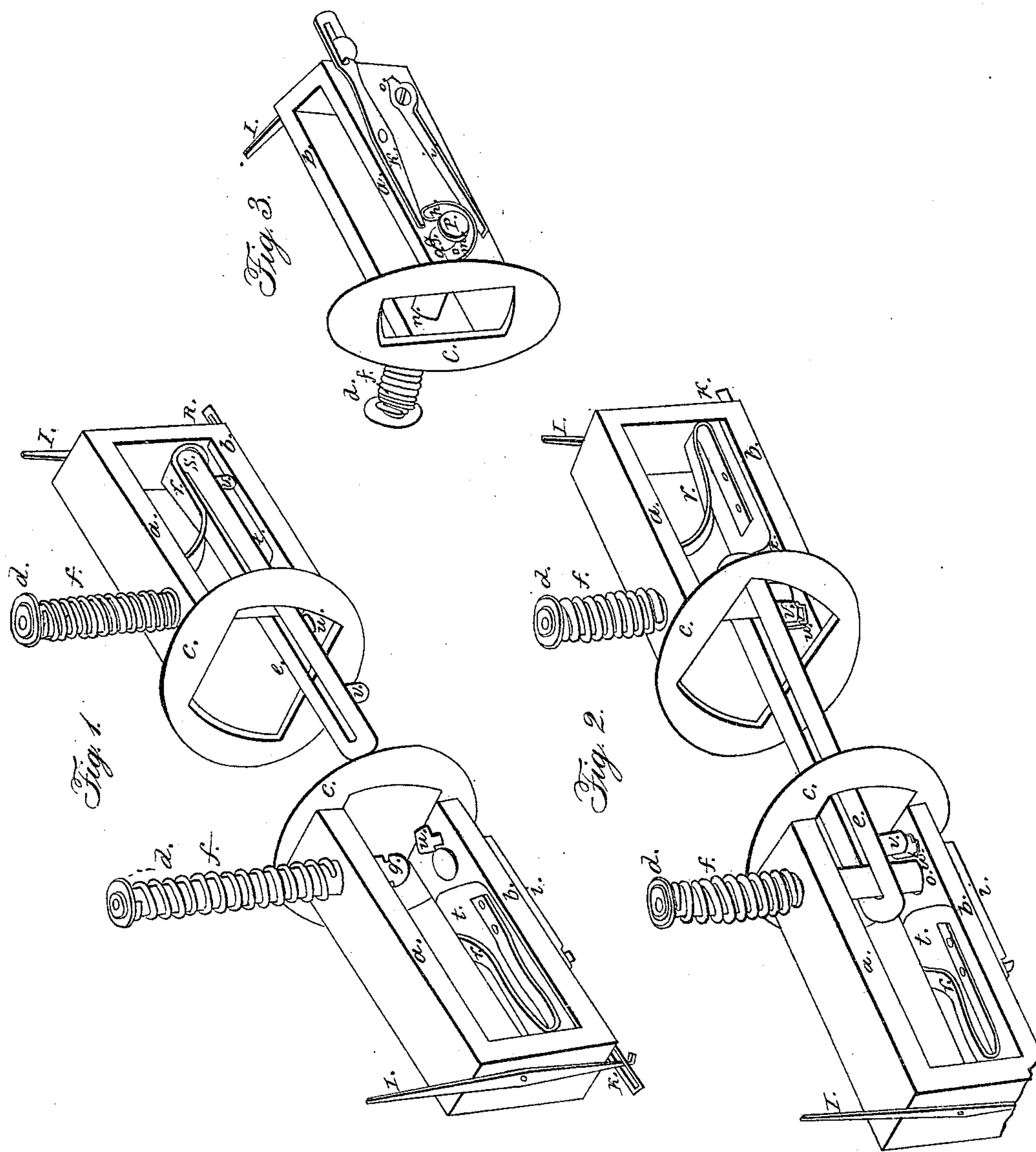


G. W. DOOLITTLE.

Car Coupling.

No. 19,186.

Patented Jan. 26, 1858.



Witnesses:

William Bakerr.  
George H. Conger.

Inventor:

Geo W Doolittle.



# UNITED STATES PATENT OFFICE.

GEORGE W. DOOLITTLE, OF RICHFIELD SPRINGS, NEW YORK.

## RAILROAD-CAR COUPLING.

Specification of Letters Patent No. 19,186, dated January 26, 1858.

*To all whom it may concern:*

Be it known that I, GEORGE W. DOOLITTLE, of Richfield Springs, in the county of Otsego and State of New York, have invented  
5 a new and useful Improvement in Car-Couplers or Apparatus for Connecting One Railroad-Car with Another on the Track.

The nature of my invention consists in providing safe and convenient means for  
10 connecting one car with another while standing on the platform, and without incurring the hazard of standing on the ground, between the cars, as is usual in connecting them. And also in providing cer-  
15 tain agencies, by means of which a car will be self detached on the occurrence of any accident by means of which it is thrown off the track; and I do hereby declare that the following is a full, clear and exact de-  
20 scription of the construction and operation of my improvement, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a perspective view of a pair of  
25 buffer frames with my improvements attached, as they are seen when they are approaching each other for the purpose of being connected. Fig. 2, is a perspective view of the same buffer frames, after they have  
30 been attached, and straightened up, as when in the act of drawing. Fig. 3, is a single buffer frame with the improvements in like manner attached, turned down upon one side so as to show the arrangement of the im-  
35 provements on the under side.

The same letters refer to like parts of the apparatus in all the drawings.

The frame *a*, *b*, *c*, is the same as that ordinarily used; its horizontal length, and  
40 means of attachment to the platform and body of the car are the same as now in use, and may be varied to suit convenience.

*d*, is the draft bolt, which is usually dropped into the link *e*, by aid of the hand,  
45 as the cars are brought together. For the purpose of operating this bolt in connection with my improvements, I place around it the spiral spring *f*, and when the cars approach each other for the purpose of being  
50 connected, and the link *e*, is brought under the draft bolt, the person attending to the connection standing on the platform, places his foot on the head of the bolt, and presses it down, the bolt passing through the link,  
55 and through the lower bar of the frame where it is caught around its neck *g*, by the clasp

*h*, (Fig. 3). This clasp is of a horse shoe shape and is fitted to embrace the neck of the bolt upon one side thereof.

*i*, is a plate spring which presses the clasp  
60 *h*, to its place, and prevents it from losing its hold.

*k*, is a horizontal lever, by which the clasp *h*, is thrust back, by means of the upright  
65 hand lever *l*, when it is desired to drop or disengage a car. The hand lever *l*, passes up through the platform, at any convenient point and may be suddenly operated by hand to uncouple the cars on an emergency.  
70 The clasp *h*, is hung at one end of the crescent, on the pin *m*, and lies flat against the underside of the bar *b*, of the frame.

The neck of the bolt is formed by turning down square shoulders. The diameter of the bolt, including the knob *p*, at its lower end,  
75 is just fitted to move easily in the orifices *n*, and *o*, in the upper and lower bars of the frame. To render this movement of the bolt in both directions, more sure, and to prevent the knob *p*, from catching on either  
80 perimeter of the orifice *o*, both the said perimeters should be slightly beveled or enlarged. The draft bolt being locked, as shown in Fig. 3; and the cars being in mo-  
85 tion, stretching the coupling in the manner shown in Fig. 2; it is plain that by the use of the upright lever *l*, as described, the clasp *h*, which in spite of the continued ten-  
90 sion of the spiral spring *f*, holds the draft bolt down, may be suddenly loosened, and the bolt instantly withdrawn by means of this spring, thus instantaneously uncoupling the cars.

A flat plate spring *r*, shown in Figs 1, and 2, is set between the upper and lower  
95 bars of the buffing frame, and opening forward, as shown in the figure, for the purpose of holding the link *e*, in a proper position when the cars are approaching each other. The manner in which this spring  
100 holds the link *e*, is seen at *s*, (Fig. 1). This must be attended to, and the link thrust back into the spring by hand, which may be done at any time preparatory to a future con-  
105 nection. To give the link *e*, the proper elevation when prepared for coupling, so as to meet with no obstruction on reaching the other car, the bed piece *t*, is laid under the spring *r*; to which this spring is bolted, or welded in a firm manner, the whole being  
110 made strong, and durable.

The arrangement for self uncoupling on



the occurrence of an accident by which a car is thrown from the track, is as follows: The pin *m*, (Fig. 3), which holds the clasp *h*, passes through a slot in the bar of the frame, and widens out at its upper end, immediately above the bar, forming the thumb piece *u*, (Figs. 1, and 2,) the body of this pin, lying within the aforesaid slot, is flat sided, and moves back and forth easily within the slot. In this movement the thumb piece *u*, (Figs. 1 and 2), and the clasp *h*, (Fig. 3) move together as they are held together firmly by the nut and screw seen at *m*. It is immaterial therefore whether the clasp *h*, is pushed back, and its hold upon the draft bolt loosened by pressure at the end *h*, by the use of the hand lever *l*, (Fig. 3,) or by pressure on the thumb piece *u*. Both applications of the required force will equally disengage the coupling. The former mode, as has been shown is adopted when the cars are to be uncoupled by the brakeman, or other hand, on the platform, and the latter is performed by the self operation of the agencies here described.

Near each end of the draft link *e*, is formed, by being welded thereto in a solid manner the pin or dog *v*, of a shape and size suited to press advantageously against the thumb piece *u*; and this pin *v* is so located on the draft link *e*, as, when the cars are in motion, to be opposite, and in near connection with the thumb piece *u*, as represented in Fig. 2.

Now when the cars are moving in a straight line upon the track; or are only deflected from a straight line to pass an ordinary curve, no pressure on the thumb piece *u* will be occasioned sufficient to withdraw the clasp from its hold on the draft

bolt below. But if a car should by any means be thrown from the track, or jostled from its proper position a twisting of the draft link *e*; or an oblique draft upon it, will be occasioned, bringing the pin *v*, to press violently against the thumb piece *u*, at one end of the link or the other, according as the car may be thrown to the right, or the left. This pressure, as has been shown, immediately loosens the hold of the clasp *h*, (Fig. 3), and allows the draft bolt to be withdrawn by the tension of the spiral spring *f*, and the cars are thus uncoupled, leaving the residue of the train on the track, and probably unharmed by the accident.

I do not claim as new the general form of the buffing frame as here shown and described; nor do I claim the use of the draft ling of the plain form as here used, as these are now in common use. But—

I claim as new, and desire to secure by Letters Patent,

1. The mode I have described for inserting the draft bolt, and catching the link while the operator is standing on the platform; as well as the mode of holding the bolt down by the clasp *h*, beneath while drawing, as is also described.

2. I also claim the mode of releasing the hold on the draft bolt which I have described by the self operating agency of the pin *v*, and the thumb piece *u*, acting as a self uncoupler as described, the whole being combined and arranged substantially as herein set forth.

GEO. W. DOOLITTLE.

Witnesses:

WILLIAM BAKER,  
GEORGE H. CONGAR.