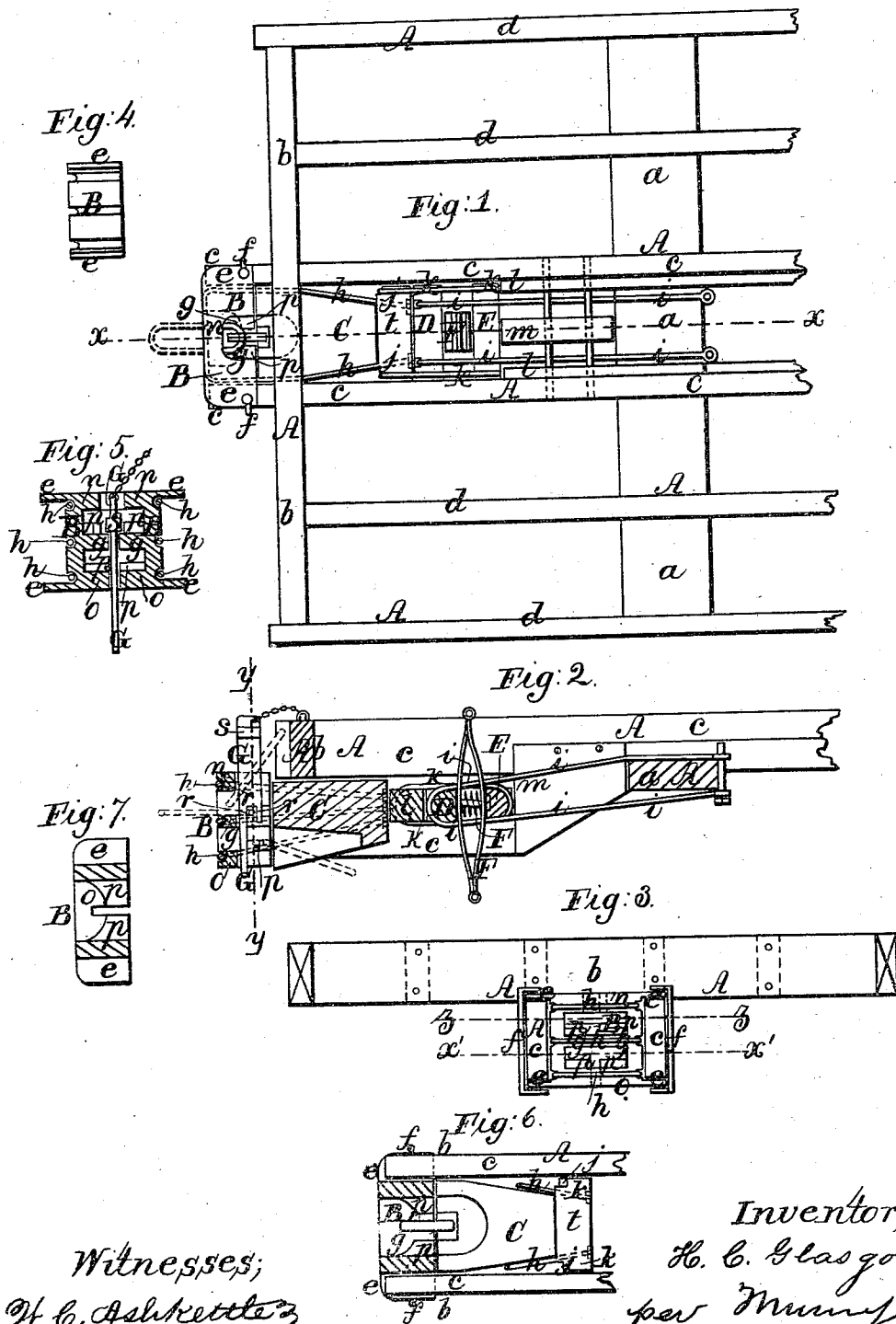


H. C. GLASGOW.
CAR COUPLING.



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H. C. GLASGOW, OF CLEVELAND, OHIO.

Letters Patent No. 82,707, dated October 6, 1868.

IMPROVED CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, H. C. GLASGOW, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented a new and improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which

Figure 1 represents a plan or top view of my improved car-coupling.

Figure 2 is a vertical longitudinal section of the same, taken on the plane of the line $x x$, fig. 1.

Figure 3 is a front view of the same.

Figure 4 is a detailed side view of the coupling-box.

Figure 5 is a vertical transverse section of the same, taken on the plane of the line $y y$, fig. 2.

Figure 6 is a detail horizontal section of the same, taken on the plane of the line $z z$, fig. 3.

Figure 7 is a detail horizontal section of the same, taken on the plane of the line $x' x'$, fig. 3.

Similar letters of reference indicate corresponding parts.

This invention relates to a new car-coupling of that class in which the coupling-box is made backward-and-forward movable, and its object is to so arrange the coupling-box, its connections with the car-body, and the coupling-pin, that the coupling-link can be inserted from above or below, even if the cars to be joined stand close together, to prevent the clamping or fastening of the coupling-pin by the insertion into the box of a link on the opposite car, and to insure safety and convenience by the construction of the devices which connect the coupling-box with the car-body.

The invention consists in such a construction and combination of all the devices pertaining to the car-coupling apparatus that the aforesaid objects may be attained.

A, in the drawing, represents the wooden or other framework of a railroad-car of ordinary or suitable construction.

In this frame, a represents the transom; b , the front cross-bar or sill.

$d d$ are the longitudinal beams connecting the transom a with the front bar or sill b , as is all clearly shown in fig. 1.

To the under side of the two central beams $d d$ are secured two timbers, $c c$, between which the coupling-box is held.

The timbers $c c$ reach beyond the front bar b , so as to form safety chafing-blocks or bumpers for the car. They butt against the transom a , so as to be firmly held in position.

B represents the coupling-box.

The same is made of cast or other metal, and is about as wide as the distance between the timbers $c c$, as shown in fig. 3.

From the sides of the box project flanges, $e e$, which fit respectively above and below the timbers c , so that the box is thus supported by and guided on and between the said timbers.

The projecting flanges $e e$, on either side of the box, are connected with each other by means of bent rods, $f f$, which are, with their ends, pivoted to the respective upper and lower flanges, and which fit around the outside of the timbers c , as is clearly shown in fig. 3.

These rods f prevent the box from being drawn off the frame A if the car gets off the track or goes around a sharp curve.

The box B is, by means of one or more horizontal partitions, g , divided into two or more spaces, as shown in figs. 2 and 5, and is secured in front or is part of a block, C, which extends to the rear between the timbers c .

If the block C is attached to the box B, I prefer to form the connection by means of rods, $h h$, which fit around the front edges of the top and bottom plates of the box and of the partition or partitions g , as shown,

said edges, as well as the sides of the box around which the rods *h* fit, being grooved for their reception, to prevent their displacement, as is clearly shown in figs. 2, 3, 4, and 5.

The rear ends of the rods *h* are fastened in any suitable manner to the block C.

The rear end of the block C abuts against a block, D, which is, by means of links *i i*, connected with the transom *a* in such a manner that it cannot be drawn ahead, but can be freely moved back, the links *i* fitting around the block D and transom *a*, as shown in fig. 2.

On the block C are, by using a cross-head, *t*, or otherwise, formed shoulders, *j j*, to enable links, *k k*, to be fitted around them, said links connecting the block C with a follower, E, as shown.

Between the follower E and the block D is interposed a spring, F, which serves to replace the coupling-box after it has been drawn ahead or pushed back.

The operation of the parts is as follows:

If the coupling-box is drawn ahead, the follower will be drawn forward with it, while the block D will form a fixed abutment, towards which the follower moves, and between which and the follower the spring F is compressed.

When the coupling-box is pushed back by a collision of two cars, its block, C, will strike against the block D, which will be moved back against the spring, the follower E forming the desired abutment, it being prevented from moving back by means of stops, *l l*, which are either formed on the timbers *c*, or by blocks, *m*, that project forward from the transom *a*, as shown, or by both.

The spring F can be of suitable construction, and, if desired, an elliptic spring may be employed.

In that case, it is arranged upright, as shown in fig. 2, whereby the necessity of having the timbers *c c* far apart, to accommodate the length of spring, is overcome.

The upper plate, *n*, of the box is perforated, and the lower plate, *o*, also, in such a manner that the coupling-link can be fitted from top or bottom and from the rear into the coupling-box, as is indicated by red lines in fig. 2. Thereby, if two cars are in contact with each other without being coupled, owing to the absence of a coupling-link, the insertion of such link is greatly facilitated, as the cars need not be drawn apart for that purpose.

Each of the partition-plates, *g*, as well as the bottom plate *o*, is slotted, as shown in figs. 6 and 7, to allow the passage and back-and-forward motion of the coupling-pin G.

Upon each of the plates *g* and *o* are formed stops, *p p*, for the end of the link to strike against, to prevent the same from reaching and holding the pin G, so that it could not be drawn out in case the link from an opposite car enters the coupling-box in which the pin G is suspended.

The pin G is, by such motion of the link, pushed back in the aforesaid slots, which extend far enough back to allow the pin to be moved out of reach of the link.

The coupling-pin has a hook, *r*, formed on it, as shown, which, when the cars are coupled, fits over the link, as in fig. 2. Thereby the link is not only held in the box, but is also prevented from tipping up with its inserted end, and is held in proper position to enter the box of an opposite car while the car is at rest.

As the upper plate *n* of the box is perforated so much that the pin-head cannot rest on it, the head, *s*, of the pin G will, when the cars are not coupled, rest on the lower plate *g* or *o*, as is indicated in fig. 5.

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

1. The quadrangular metallic box B, divided into two or more spaces by the horizontal partitions *g*, and provided with flanges, *e e*, to which the bent bars *f f* are pivoted, embracing the chafing-timbers *c c*, whereby the box is held between and guided upon said timbers, as herein shown and described.

2. The coupling-box B, with or without the block C, in combination with the block D, follower E, links *i* and *k*, spring F and stop *l* or *m*, all made and operating substantially as and for the purpose herein shown and described.

3. So arranging the top and bottom plates, *n* and *o*, of a coupling-box, by perforating the same, that the coupling-link can be inserted from the rear, substantially as herein shown and described.

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