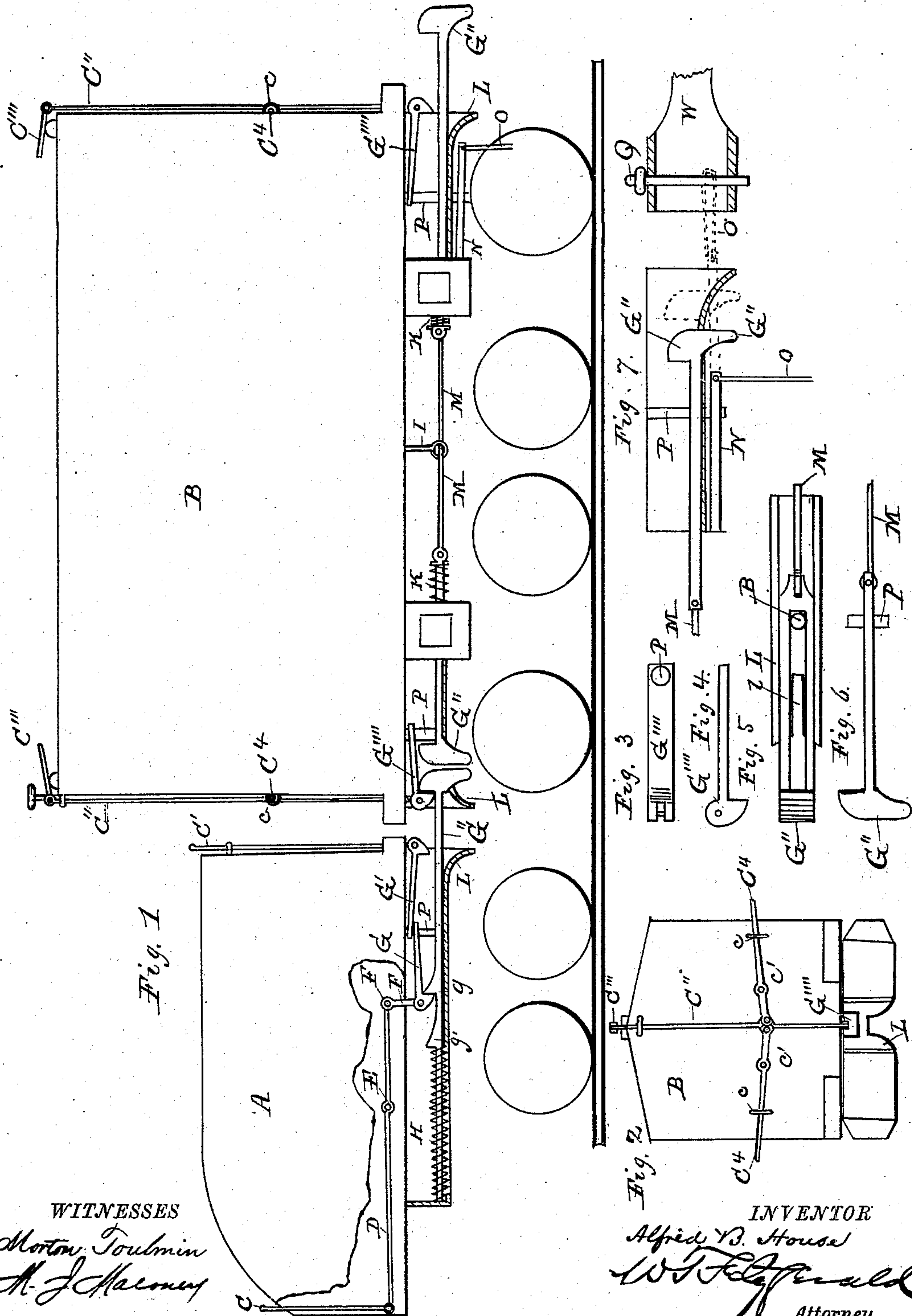


(No Model.)

A. B. HOUSE.  
CAR COUPLING.

No. 284,205.

Patented Sept. 4, 1883.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

ALFRED B. HOUSE, OF JUNCTION CITY, KANSAS, ASSIGNOR OF TWO-THIRDS  
TO JACOB B. CALLEN AND HORACE E. McFARLAND, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 284,205, dated September 4, 1883.

Application filed March 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, A. B. HOUSE, a citizen of the United States, residing at Junction City, in the county of Davis and State of Kansas, 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 appertains to make and use the same.

This invention relates to improvements in car-couplers, and has for its object the automatic coupling of cars and uncoupling them from the top or either side when the train is in motion, or standing still, or going up or down grade, and to enable the engineer to uncouple from the train at any time without getting out of the engine, and to couple to any car without any assistance and without getting out of the engine. These objects are obtained by the mechanism illustrated in the drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a freight-car with a part of the engine-tender in front. Fig. 2 shows the end of the car. Fig. 3 is a detailed view of the catch  $G'''$ , taken from the top. Fig. 4 is a detailed view of the catch  $G'''$ , taken from one side. Fig. 5 is a detailed view of the catch  $G''$  and of the draw-head  $L$ , taken from the top. Fig. 6 is a detailed view of the catch  $G''$ , taken from one side. Fig. 7 is a detailed view of the draw-head  $L$ , and of bar  $N$  and link  $O$ , in dotted lines, when the coupling is made to a car provided with the ordinary coupling-pin,  $Q$ , and draw-head  $W$ .

The letter  $A$  represents a part of the engine-tender;  $B$ , the freight-car.

$C$  is a vertical rod attached to a horizontal rod,  $D$ , which turns upon a pivot at  $E$ . The rod  $D$  is extended back as far as  $F$ , and is connected by the link  $F'$  to the catch  $G$ , which engages with a notch,  $g'$ , in the shank of the catch  $G''$ .

$L$  are draw-heads.

$G'$  is a catch which engages with the catch  $G''$  when the cars are coupled together. The catch  $G'$  is provided with a vertical rod,  $C'$ , by means of which it may be lifted and disengaged from the catch  $G''$ .

$H$  is a spring surrounding the shank of  $G'$ , which acts to force it outwardly.

$G''$  are catches at each end of the car, and are connected to each other by a rod,  $M$ . They slide backward and forward in the draw-heads  $L$ , and are provided with the springs  $K$ , which act in opposite directions, and are intended to keep the catches  $G''$  at equal distances from the center of the car when not coupled. The shanks of the catches  $G''$  are slotted, as shown in Fig. 5. The draw-heads  $L$  have also slots  $l$ , which permit the catches  $G''$  to slide back far enough to allow the catches  $G'''$  to drop into place and couple the cars together.

$G'''$  are catches which are suspended by the vertical rods  $C''$ , by which they may be raised from the top of the car by means of the levers  $C'''$ , or from the sides of the car by means of the levers  $C^4$ , as shown in Fig. 2. The levers  $C^4$  are pivoted at their inner ends to the vertical rods  $C''$ , and have bearings at  $c'$  and guides  $c$ .

$N$  is a bar of iron running under the draw-head proper, and extending back as far as necessary, with a slot in the center, to admit of its playing back and forth on the coupling-pin  $P$ .

$O$  is a link attached to the end of the bar  $N$ , and is made so as to pass on each side of the draw-head at a sufficient angle to let it pass into and couple to the old style of draw-head, as shown in Fig. 7 in dotted lines.

$P$  is a coupling-pin.

The couplers are exactly alike on all the cars, with the exception of those on the engine, which are the same in all respects except they have a double catch,  $g g'$ , and the lever  $D$  and spring  $H$ , which is used for the purpose of forcing out the catch  $G''$ . The rod  $C$  is under control of the fireman or engineer, and operates the lever  $D$ , which is used for the purpose of letting the catch  $G''$  slide back, or to hold it out, when necessary, by means of the catch  $G$ . The spring  $H$  is for the purpose of forcing out the catch  $G''$ , but can be closed up sufficiently to let the catch  $G''$  pass back enough to make the coupling on the engine instead of the car.

The cars when coupled together are only far enough apart to admit of the sharp turning of a curve, (say about three inches apart,) thereby making it impossible for a person to fall or to get between the cars, also thereby shorten-



ing up a train, and preventing the use of fuel in the engine to counteract the force and power of wind striking on the ends of the cars. There is also a saving in pins, which are not liable to breakage or loss.

Should one car jump the track while running, the succeeding car would uncouple before the car jumping the track would have sufficient power to pull it off the track also, thereby preventing risk of great loss, as only one car would be wrecked. As all the parts are simple, none are likely to get out of order. As the lower portion of the catch  $G''$  is elongated for the purpose, it will admit of coupling cars having a difference of eight inches in height, and it can be regulated to give as much or as little slack as desired.

Having described my invention, what I desire to secure by Letters Patent and to claim is—

1. In a car-coupler, the rod C, lever D, link  $F'$ , catch G, draw-bar  $G''$ , having notches  $g' g$ , and spiral spring H, in combination with draw-heads L and catch  $G'''$ , substantially as described, and for the purposes set forth.

2. In a car-coupler, the rod  $C'$ , catch-lever  $G' G$ , coupling-bar  $G''$ , having notches  $g' g$ , and spring H, with draw-heads L L and catch  $G'''$ , as shown and described, and for the purposes set forth.

3. In a car-coupler, the vertical rod  $C''$ , levers  $C^t$ , and catch  $G'''$ , in combination with draw-head L, coupling-bar  $G''$ , having notches  $g' g$ , and spiral spring H, substantially as described, and for the purposes set forth.

4. In a car-coupler, the combination of vertical rods  $C''$ , having levers  $C'''$  and side levers,  $C^t$ , and catches  $G'''$ , with coupling-bars  $G''$ , having springs K and connecting-rod M, as shown and described, and for the purposes set forth.

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

ALFRED B. HOUSE.

Witnesses:

JOHN S. CORYELL,  
A. L. BARNES.