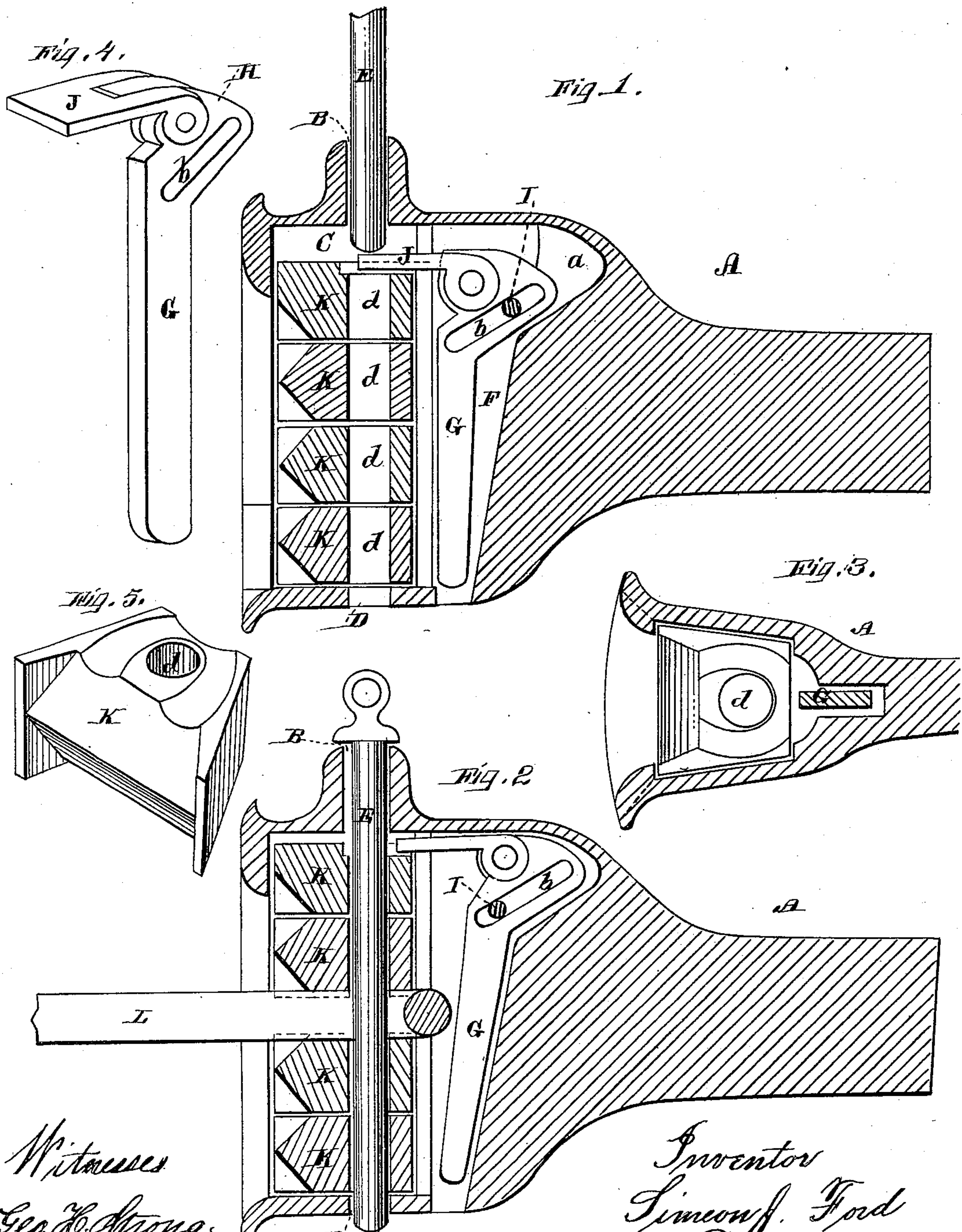


(No Model.)

S. J. FORD.
CAR COUPLING.

No. 246,383.

Patented Aug. 30, 1881.



Witnesses
Geo. H. Strong.
Frank A. Brooks

Inventor
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By Dewey & Co. Attys

UNITED STATES PATENT OFFICE.

SIMEON J. FORD, OF PLACERVILLE, CALIFORNIA, ASSIGNOR OF ONE-HALF
TO GEORGE E. WILLIAMS, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 246,383, dated August 30, 1881.

Application filed February 4, 1881. (No model.)

To all whom it may concern:

Be it known that I, SIMEON J. FORD, of Placerville, county of El Dorado, State of California, have invented an Improved Draw-Head and Coupler for Railroad-Cars; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in draw-heads and couplers for railroad-cars, by which I am enabled to unite cars of different heights by the use of the ordinary link; and it consists in the combinations of devices as hereinafter described and claimed.

A more particular description will hereinafter appear, reference being had to the accompanying drawings, in which Figures 1 and 2 are vertical sections of my device. Fig. 3 is a horizontal section. Figs. 4 and 5 are details of construction.

Let A represent a draw-head having a chamber, C. Within this chamber C are the horizontal plates or blocks K, one above the other, and having beveled front edges and inwardly-beveled end flanges, as shown, and provided with holes *d*, said holes being in line with each other.

In the top of the draw-head is the hole B, and in the floor of the chamber C is the hole D, both of said holes being in line with the holes *d* in the blocks, and are intended for the coupling-pin E, which can then drop through the draw-head and the plates or blocks. These blocks K do not extend the height of the chamber C, but have sufficient vertical play to permit the link, which is here represented by L, to pass between any two of them. The coupling-pin E will also, when dropped, pass through the link L. Thus the column of blocks fit within the chamber C, and are adapted to be raised or dropped by the entrance of the link L, said blocks being guided therein by the side flanges in the chamber C. Thus the link can be directed between the plates at any height between the top and bottom of the draw-head, and will be secured therein by the coupling-pin E passing through the draw-head and all the blocks K.

The rear of the chamber C is provided with a deep groove, F, having its rear wall inclined outward toward the bottom. The upper por-

tion of this groove F is widened, as shown, and terminates above in a deeper depression, *a*, said depression being contracted to the ordinary width of the groove F. Within this groove F fits the upright support G, having a head, H, for retreating within the depression *a*, and provided with an inclined slot, *b*, through which a pin, I, passes, said pin also passing through both sides of the draw-head, as shown, thus securing the support G within the depression or grooves in the rear of the chamber C, while allowing it to move forward and back.

To the forward upper portion of the head H of the standard or support G is pivoted a swinging plate, J, acting as a lock or stop, which extends forward directly under the pin-opening B and rests upon the top block, K, and serves as a support for the coupling-pin E to rest upon when the device is ready to be used.

In the draw-head the blocks K rest upon the floor of the chamber C, the top block being low enough to allow the stop J to rest upon it and cover its aperture *d*. The pin E is supported by the stop J. When the link L is forced against the beveled front edges of the blocks K, no matter where it should happen to strike, it slips between them and raises up those above, which action raises the stop J and forces the support G back, which carries with it the stop J, releasing the pin E, and uncovering the hole *d*, when the pin will drop through all the blocks and through the link L, and into the hole D in the bottom, and thus couple itself. When the pin is raised out and the link L removed the blocks K fall down, the support G falls forward, and with it the stop J, which again covers the hole *d* and supports the pin E.

In the absence of all springs, and the fact that the link may be supported in the draw-head in any place between the top and bottom, rests the advantages of the invention. In this there is no bending of the coupling-pin, because its firm and close support between the blocks prevents it, and to injure it at all requires a blow sufficient to break it, which seldom can occur. The coupling is done automatically, as seen, and the device is not liable to get out of order because of its simplicity.

Another advantage is, that the invention is applicable to any form of the present draw-heads, and will as readily couple the devices now on cars as if both cars were provided with the invention. The blocks K may have their flat surfaces grooved to better receive and hold the link, if found necessary. By constructing these blocks K with beveled front edges and their ends with inwardly-beveled flanges, as shown, the link will be directed properly.

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

1. The upright standard or support G, secured within the groove F of the draw-head by a pin passing from the draw-head through its inclined slot *b*, and carrying the plate or stop J, for resting upon the block K and supporting the pin, whereby the action of the link

will force said stop upward and backward and allow the coupling-pin to fall, substantially as herein described.

2. In a draw-head, the horizontal perforated plates K, adapted to be raised or lowered by the action of the link, in combination with the upright standard or support G, carrying the plate or stop J, for supporting the coupling-pin E, said stop J resting upon the plates K, whereby it is forced upward and backward and the coupling-pin E released, substantially as described.

In witness whereof I have hereunto set my hand.

SIMEON J. FORD.

Witnesses:

GEO. H. INGHAM,
G. W. GALLANOR.