

(No Model.)

R. L. POWEL.
CAR COUPLING.

No. 396,509.

Patented Jan. 22, 1889.

Fig. 1.

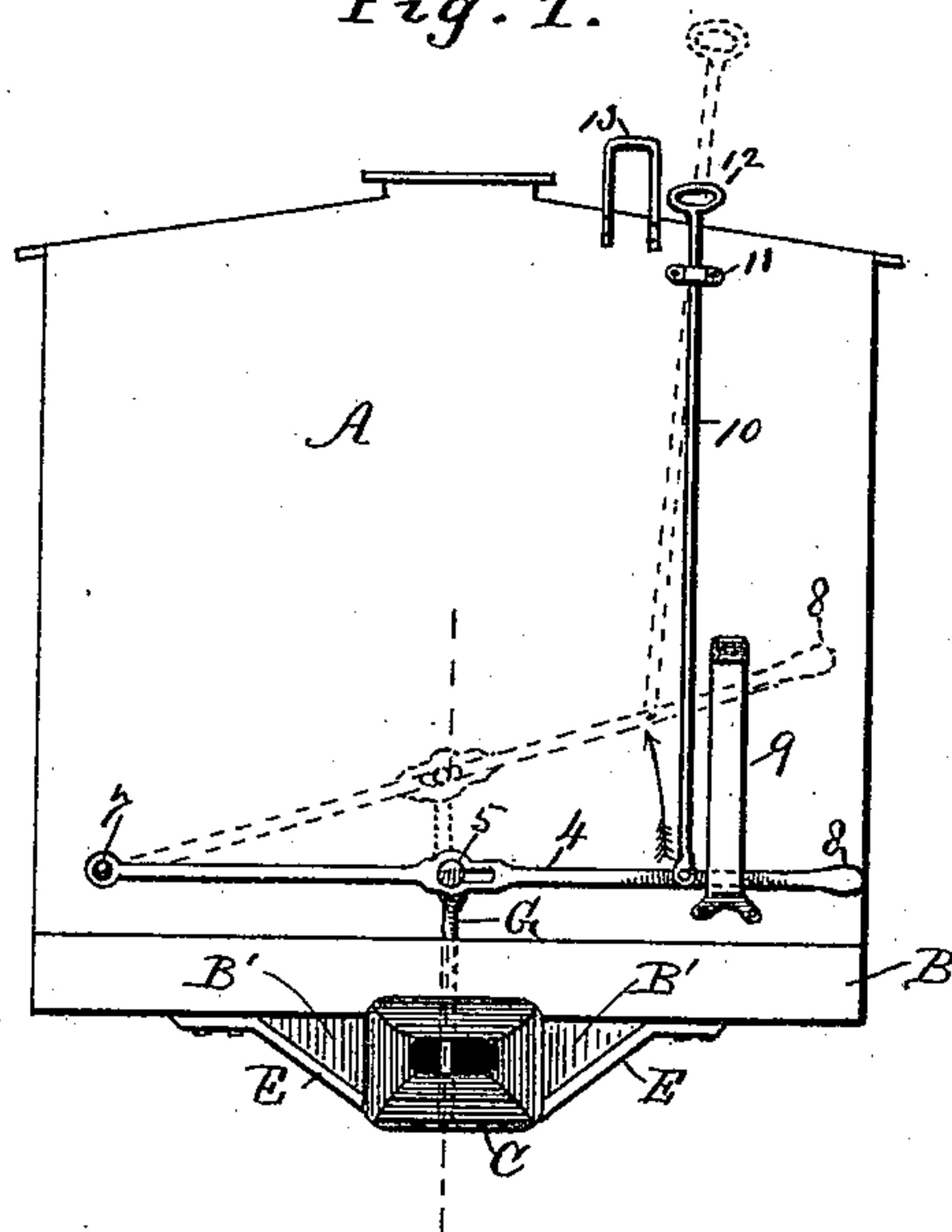


Fig. 2.

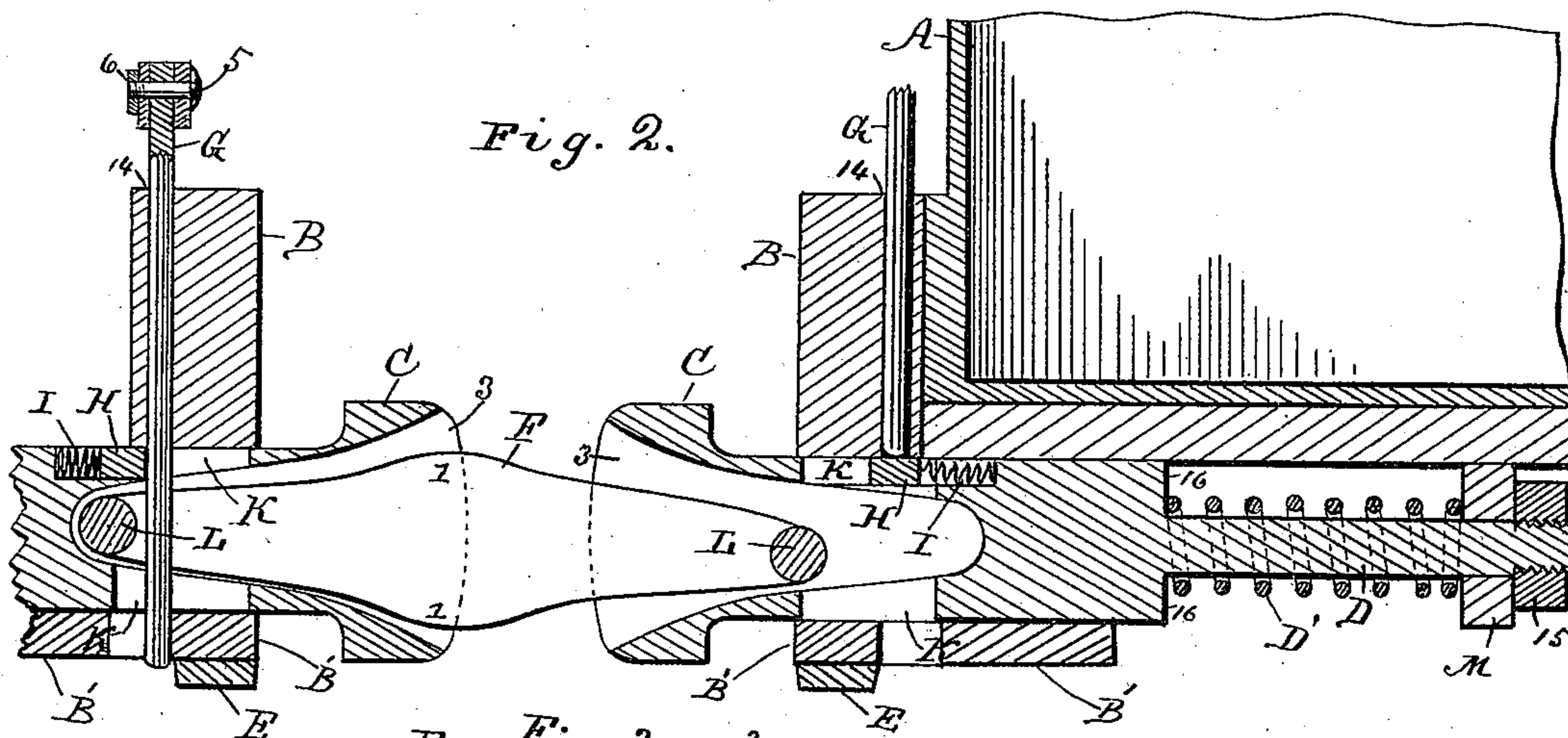
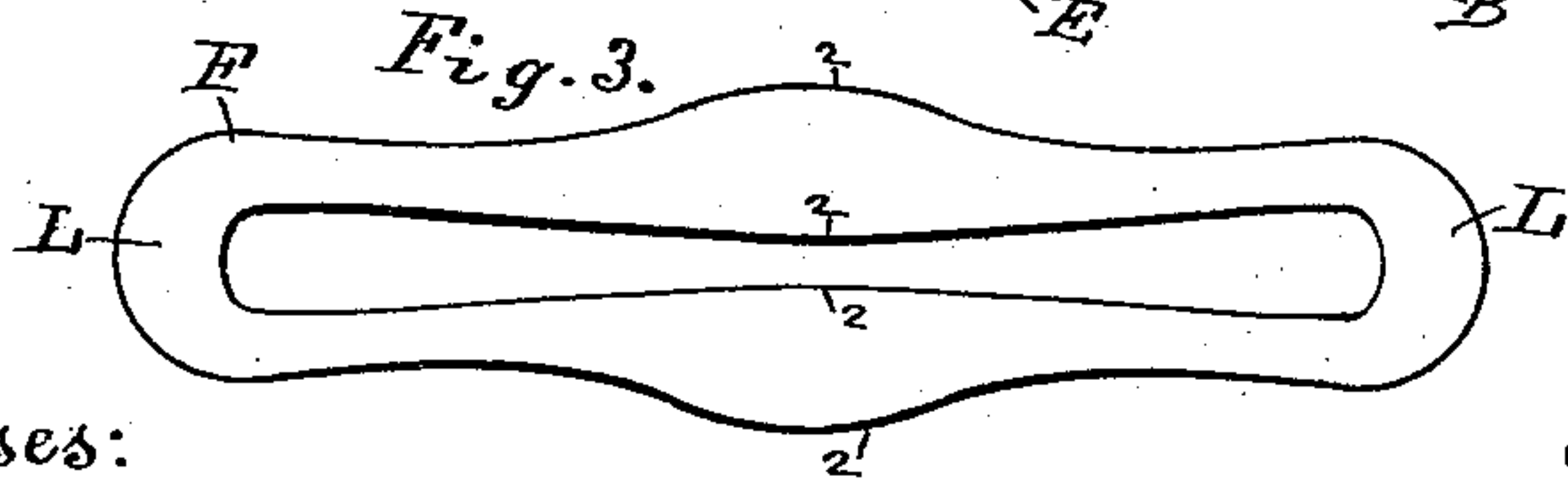


Fig. 3.



Witnesses:

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By his Atty.

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UNITED STATES PATENT OFFICE.

RICARD LLOYD POWEL, OF SILVER CITY, TERRITORY OF NEW MEXICO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 396,509, dated January 22, 1889.

Application filed May 12, 1888. Serial No. 273,646. (No model.)

To all whom it may concern:

Be it known that I, RICARD LLOYD POWEL, a citizen of the United States, residing at Silver City, in the county of Grant and Territory of New Mexico, have invented certain new and useful Improvements in Automatic Car-Couplers; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in automatic railway-car couplings; and it consists in the construction and arrangement of the parts, as hereinafter described and claimed.

In the annexed drawings, Figure 1 is an end view of a railway-car with my invention. Fig. 2 is a central vertical section through the buffers or draw-heads of two separate cars, and a portion of a car, showing the position of the parts in the act of coupling. Fig. 3 is a plan view of the link.

Letter A represents the end of a car with buffer-head C. The buffer consists of a square head recessed for the reception of the link F, with a round shank, D, as shown in Fig. 2 of the drawings, and is supported in the usual manner between the upper sill, B', of the front platform of the car and its lower counterpart sill, which is in turn supported by the brace E, Fig. 1. The shank runs through and is supported by sill M, as shown in Fig. 2. Surrounding the shank D is a coiled spring, D', abutting in the rear against sill M, and at its front end against shoulder 16 of the shank. A nut or cap, 15, in Fig. 2, steadies said shank D and keeps spring D in place. The buffer thus moves as far as permitted in the slot formed by the sills B and the hole in sill M.

The coupling-link F, Figs. 2 and 3, has a long slot extending vertically through it, and is made to conform, with sufficient room for side play, approximately to the shape of the mouth or recess in the buffer-head. Thus the small figures 1 1 of Fig. 2 of drawings indicate the thickest part of the link vertically, and 2 2 of drawings, Fig. 3, indicate the thick-

ness horizontally; and L of Fig. 3 represents the ends of the link, although the shape is not material so that it subserves the purpose.

The coupling-pin G, Figs. 1 and 2 of drawings, when the cars are coupled, passes through a vertical hole in the front sill, B, through the slot K of the buffer-head and the long slot of the intervening link, F, and finally through a hole in the lower sill, B', which hole conforms in position to that in the upper sill, B. The draft thus comes exclusively upon the sills of the platform, as the slot in the buffer is of such length and its position is so adjusted by pressure of the springs D' that no strain comes upon the buffer. Its simple function is to break the jar of the concussion of the cars and to give the coupling-pin G an opportunity by mere gravity to drop into position and couple the cars. This result is effected by means of a small steel block, H, which is secured in the rear or inner end of the recess in the buffer-head, and is attached to said rear end by a coiled spring, I, Fig. 2. The position and adjustment of said block are such that when the car is not coupled the coupling-pin G, passing through upper sill, B, rests upon said block; but when (one car being already coupled) the collision of the two buffer-heads presses the buffer of the uncoupled car inward the block H is carried inward from under the coupling-pin G, and the pin thus left free drops by force of gravity through the slot in the buffer-head and into the hole in the lower sill, B', thus effecting the coupling.

It will be seen that the link F should be of such length that when the cars are coupled the buffer-heads should be in contact, and the slot in the buffer-heads extending beyond the hole in the sills for the reception of the coupling-pin will prevent any pull on the buffers. This contact of the buffer-heads relieves the cars from sudden and violent shocks.

The lever 4, Fig. 1 of drawings, is pivoted at 7 as a fulcrum and attached to the coupling-pin G at 5 by a pivot secured by nut 6 and working in a long slot, and may be operated either by the handle 8, at the side of the platform, or it may be operated from the top of the car by means of ring 12 of rod 10, which works through keeper 11, the operator steadying himself by the hand-support 13.

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

5 In a railway-car coupling consisting of the recessed buffer-head C, shank D, with spring D', and sill B, having the socket for the pin, and the sill B', for the support of the coupling-head, the combination of block H with spring I, coupling-pin G, and a link, whereby
10 the draft is taken off the draw-head entirely and transferred exclusively to the front sills

or frame-work of the car, and the coupling of the cars is effected automatically by the contact of the buffer-heads without the pressure of the link, all constructed and arranged as 15 and for the purpose shown and described.

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

RICARD LLOYD POWEL.

Witnesses:

J. W. CARTER,
HARRY SMITH.