L. HERRING.

Car-Couplings.

No. 153,435. Patented July 28, 1874.

FIG 1.

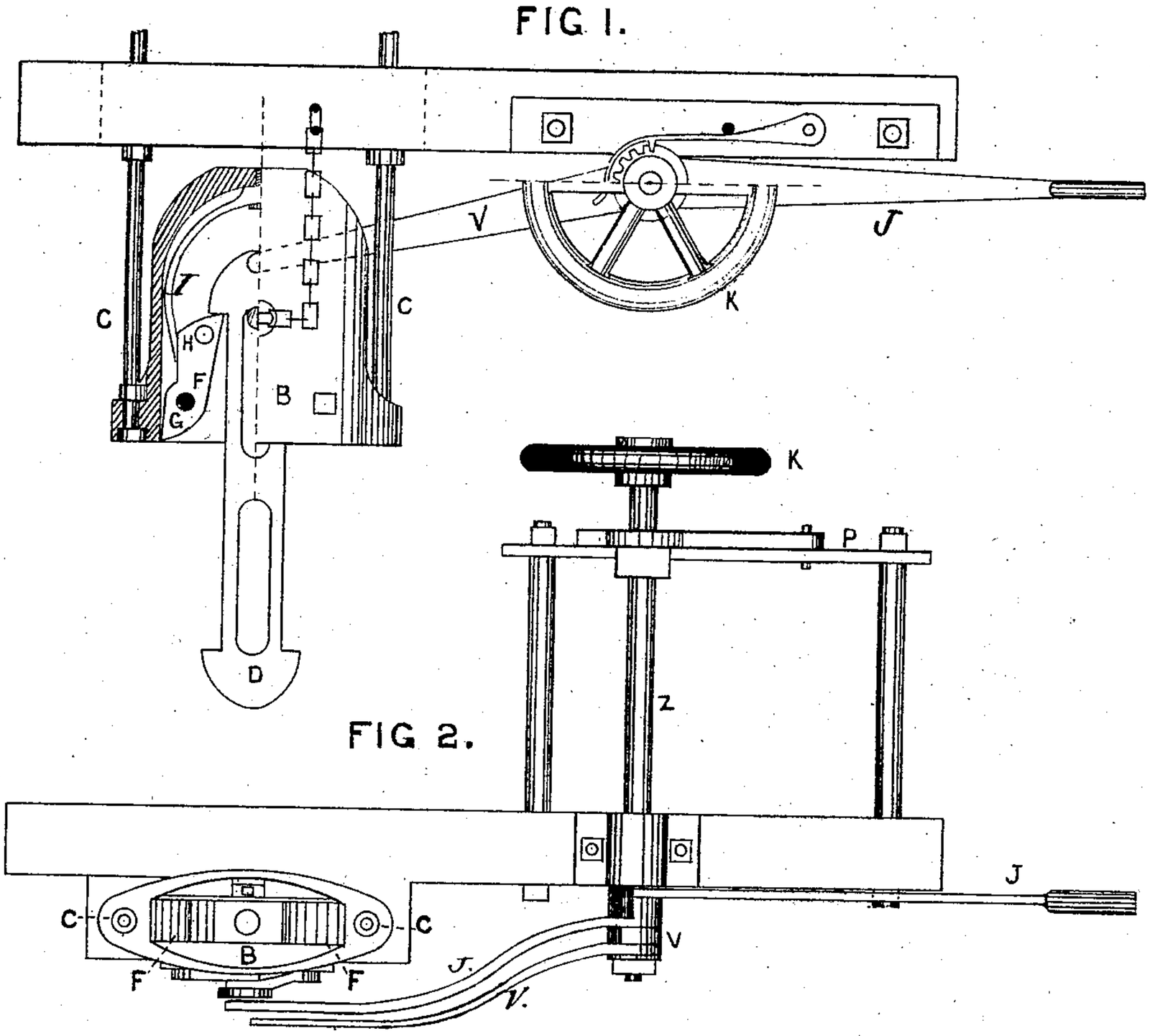


FIG 2.

FIG 3.

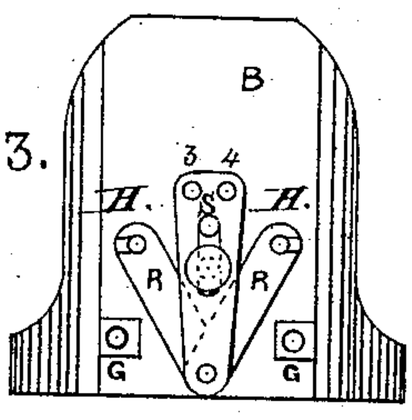
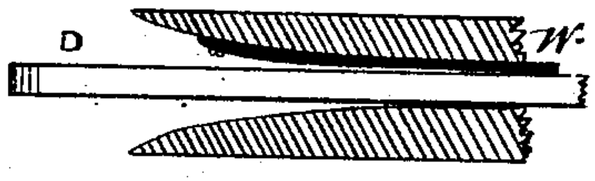


FIG 4.



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UNITED STATES PATENT OFFICE.

LEWIS HERRING, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **153,435**, dated July 28, 1874; application filed March 14, 1874.

To all whom it may concern:

Be it known that I, LEWIS HERRING, of the city of Brooklyn, in the county of Kings, in the State of New York, have invented new and useful Improvements in Automatic Car-Couplings; and I do hereby declare that the following specification, taken in connection with the drawings furnished, is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

My invention relates to that class of automatic couplings whereby railroad-cars may be connected by being pushed or collided together, and their disconnections accomplished from a position on the platform by means of a crank or wheel, or from the side of a car by means of a lever. It has conveniences for supporting the link in a horizontal position, making it unnecessary for personal attention to elevate or guide it. Means are provided to hold the jaws distended to prevent connection when so desired.

Figure 1 represents my improvement, exhibiting a portion of the shell cut away, showing one of the jaws and spring in position. Fig. 2 represents a front-end view of Fig. 1; Fig. 3, bottom view of the shell or socket with its links and connections for opening the jaws. Fig. 4 represents a section of coupling with spring W supporting the link.

To enable others skilled in the art to make and use my invention, I will describe it in detail.

The shell or socket B is made of cast or wrought iron, open-ended, with a flaring bell-mouth to receive and guide the link D within. It has suitable rods C C connected on either side, as shown in Fig. 1, for convenience of attaching the same to the car in accordance with the customary usage. It is also provided with an opening or pin-hole for the reception of the ordinary coupling-pin, as an additional safety-guard to prevent disconnection of the cars in case other parts give out. It is provided with two movable jaws, secured within the shell at each side of the mouth. These jaws are held in position by bolts or pins G G passing through them and the shell. Other pins or bolts are represented at H H, rigidly secured in or near the ends of the jaws, (see Figs. 1 and 3,) the same projecting through elongated holes arranged crosswise through the under side of the shell, to which are attached links, which are operated by means of a slide and other connections through the medium of the lever J or wheel K.

Fig. 1 shows the position and form of the jaws F F and the spring I with the barb-ended link D, while Figs. 1, 2, and 3 exhibit various views, sufficient for others to fully understand its construction. Fig. 4 shows a pressure-spring, W, supporting the link D in a horizontal position. Said spring is secured near the forward part of the mouth or socket.

These devices may be readily applied to the ordinary cars without change of parts or modification.

The means of operating is by the displacement of the jaws F F, caused by the thrust of the barbed link, which is supposed to be in position on one of colliding cars, which enters sufficiently beyond the opening and end of the jaws for them to recede and grasp the same below the barbs. (See Fig. 1.)

The operation of disconnecting is performed by means of the hand-wheel K and its shaft, which is arranged in connection with the platform and its guard in a manner similar to the ordinary brake apparatus. A lever, V, is rigidly secured to the shaft Z, connecting with the slide S by means of chain or its equivalent. A lever acting independent of the former may be applied, (more clearly shown in Fig. 2, represented at J,) which swings loosely on the shaft Z beneath the platform, connections with slide S being made same as in the former case. By operating the wheel K or lever J the slide S is drawn, causing the jaws within the shell to distend through the medium of links R R, which operate somewhat like shears. (See Fig. 3.) A ratchet or toothed wheel is secured to the wheel-shaft at the platform, or resting upon the guard P, upon which a pawl may be secured, which acts in connection with the former to hold the jaws in a distended position, convenient when a connection is unnecessary.

The object of my invention is to produce a reliable automatic coupling, sure in its action, easily operated, compact in its form, with jaws pivoted at a point near the mouth of the shell

for the purpose of securing a more positive hold, its tendency being to grasp the link more firmly as the pull or load is increased; to be operated by levers from the side or platform; with means for holding the jaws distended when to be left standing upon the track to prevent coupling by colliding. Means are also provided for holding the link in a horizontal position, that personal attention may be dispensed with in connecting the cars. (See spring W.)

Having thus set forth my invention, I do not claim, broadly, an automatic coupling. Neither do I claim vibrating jaws, or the use of levers irrespective of their arrangement and combination; but

What I do claim, and desire to secure Letters Patent of the United States for, is—

1. A coupling-socket provided with movable jaws F F, pivoted at a point near the mouth, in combination with the spring I, pins H H, and link-connections R R, to be operated by a lever, substantially as set forth.

2. The combination of socket B, pivoted jaws F F, pins H H, spring I, barbed link D, levers R R and V, slide S, and wheel and shaft K and Z, substantially as set forth.

3. The combination of socket B, jaws F F, pins H H, spring I, link D, levers R R and V, slide S, wheel K, shaft Z, and ratchet and pawl, substantially as set forth.

4. The combination of socket B, spring W, jaws F F, pins H H, spring I, levers R R and and V, and slide S, to be operated substantially as set forth.

In testimony that I claim the foregoing I have hereunto signed my name before two subscribing witnesses this 5th day of March, A. D. 1874.

Witnesses: LEWIS HERRING. [L. S.]

JOHN DANE, Jr.,

MANUEL M. COOKE.