

No. 639,750.

Patented Dec. 26, 1899.

G. MESHAMER.  
CAR COUPLING.

(Application filed May 21, 1898.)

(No Model.)

Fig. 1.

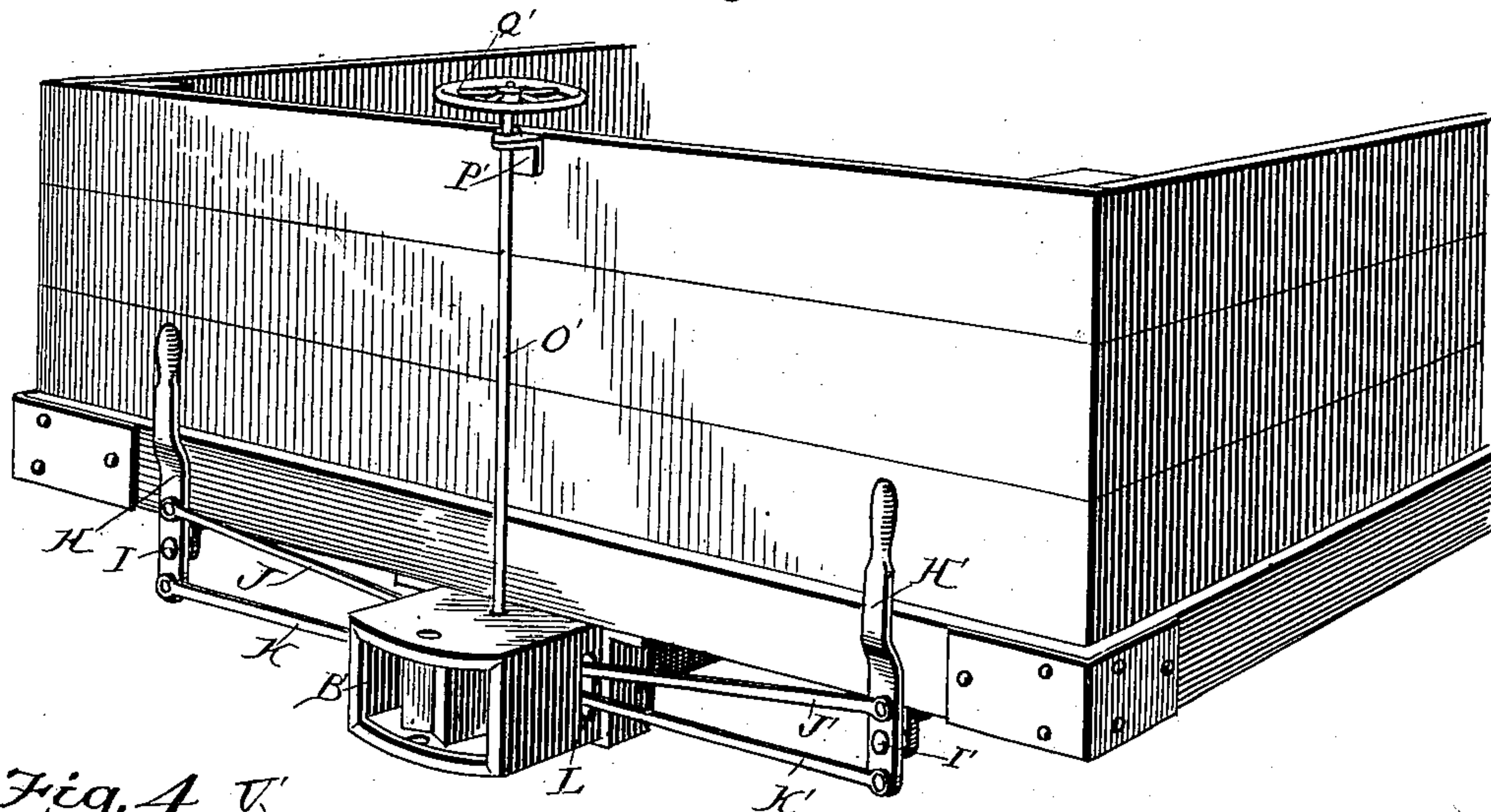


Fig. 4.

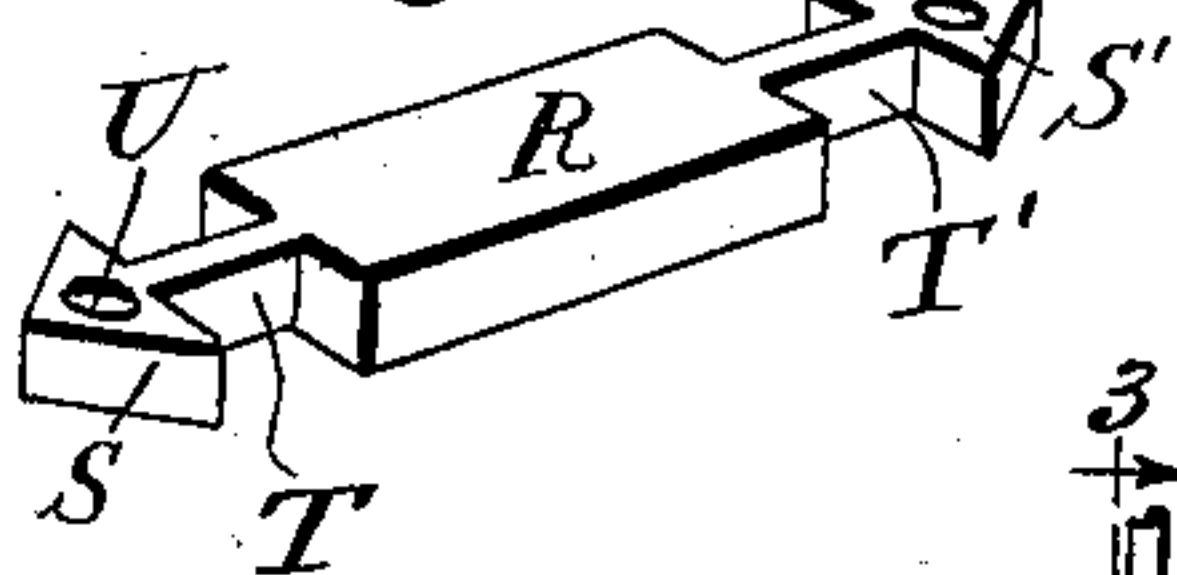


Fig. 2.

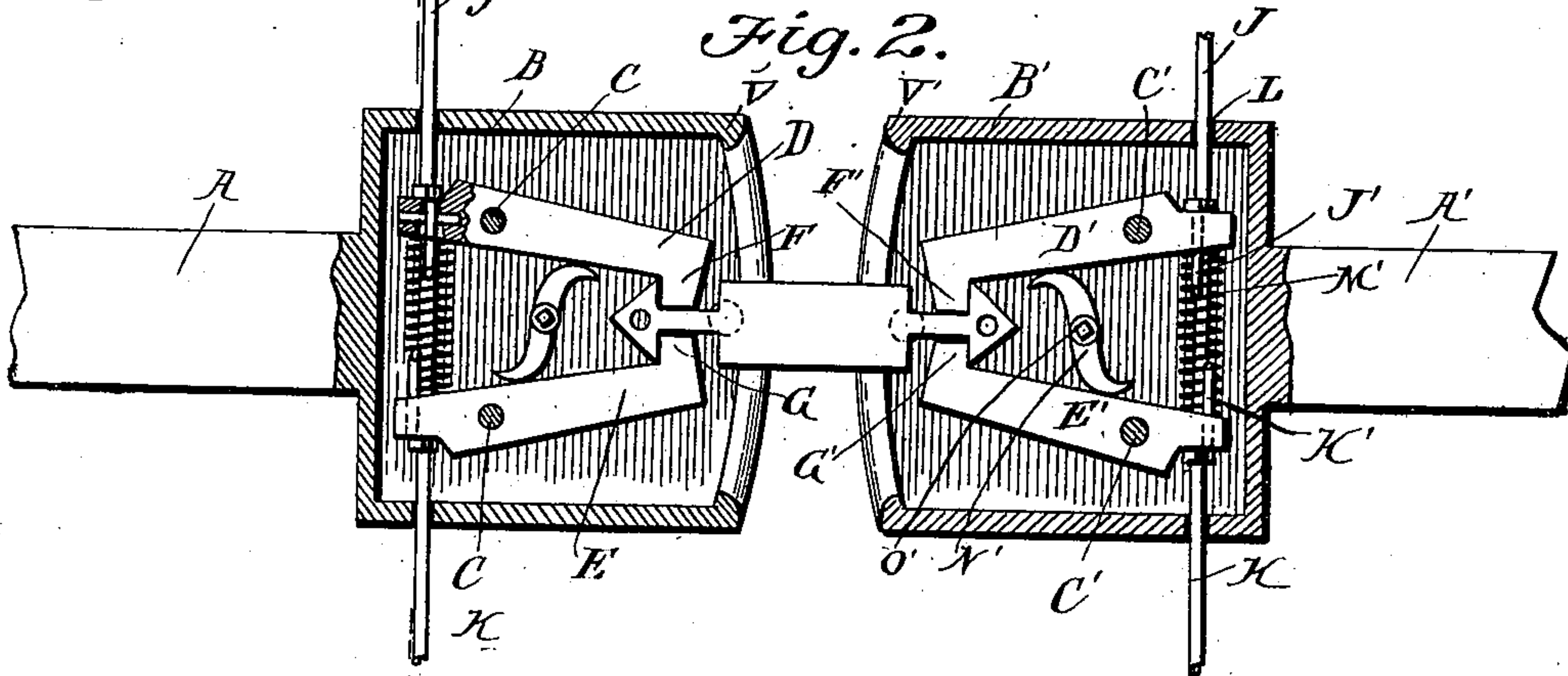
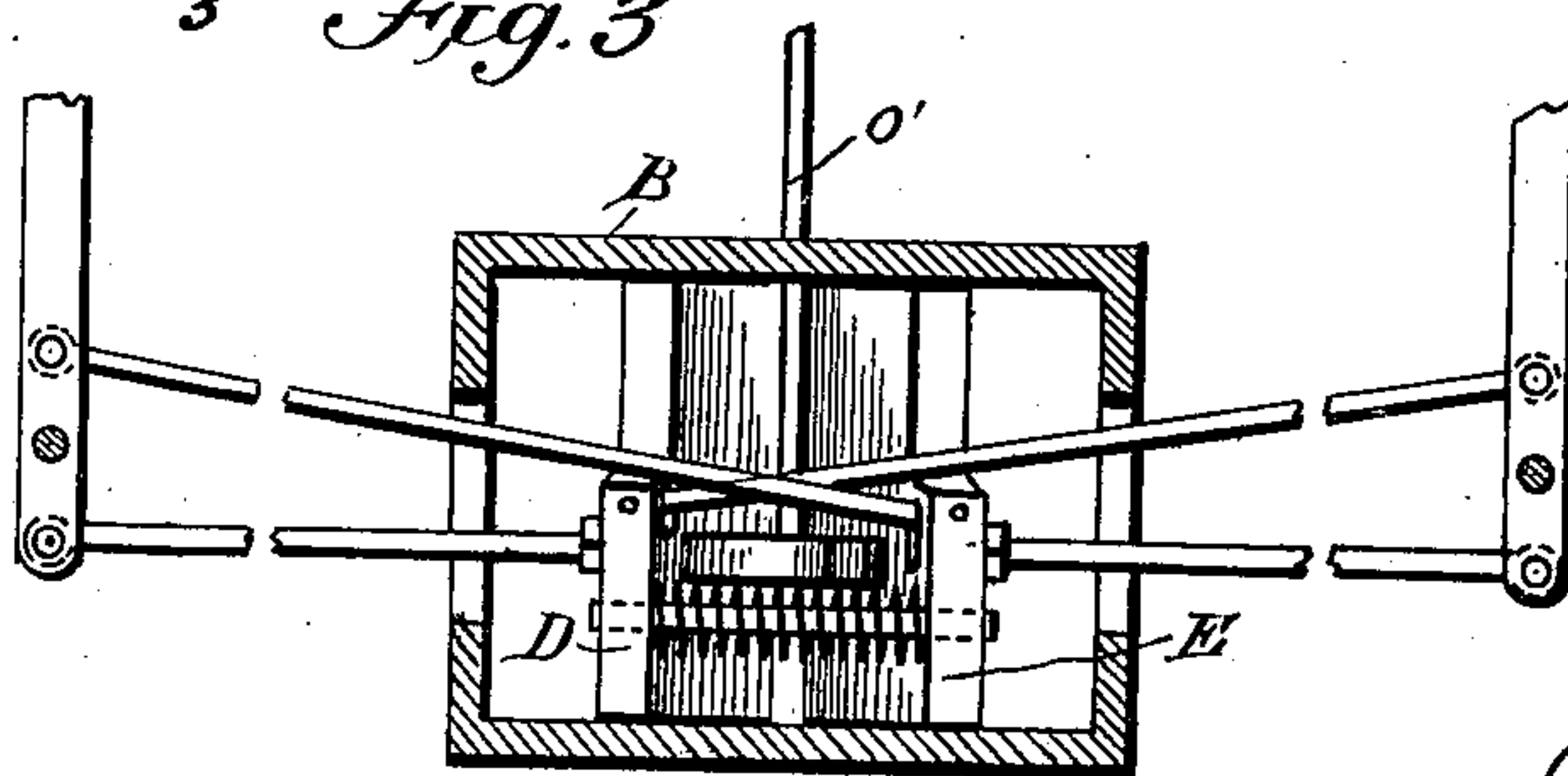


Fig. 3



Witnesses

J.P. Pratt  
Chas. Brock

Inventor

G. Meshamer.

by

Wm. A. Keane  
Attorneys



# UNITED STATES PATENT OFFICE.

• GEORGE MESHAMER, OF NEW CASTLE, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 639,750, dated December 26, 1899.

Application filed May 21, 1898. Serial No. 681,335. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE MESHAMER, a citizen of the United States; residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented a new and useful Car-Coupler, of which the following is a specification.

My invention relates to car-couplers, and has for its object to generally improve, simplify, and cheapen their construction, while rendering them more effective in operation.

With this end in view my invention consists in the improved construction, arrangement, and combination of parts composing a car-coupler, as fully described hereinafter and afterward specifically pointed out in the appended claims, whereby the coupling is rendered operative from the sides or top of the car to connect or disconnect cars having bumpers or draw-heads of different heights, whether fitted with my improved coupling or with the ordinary link, my improved construction also rendering it possible to readily and easily couple adjacent cars whether on straight lines of track or on curves.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of one end of a car equipped with a coupling constructed in accordance with my invention. Fig. 2 is a horizontal sectional view taken on a plane extending through the draw-heads of two adjacent cars connected by my improved coupling. Fig. 3 is a vertical transverse section taken on the plane indicated by the broken line 3 3 of Fig. 2 looking in the direction of the arrows. Fig. 4 is a detail perspective view of my coupling-link.

Like letters of reference mark the same parts wherever they occur in the different figures of the drawings.

Referring to the drawings by letters, A and A' indicate the draw-bars, and B and B' the draw-heads, of two adjacent cars. The draw-heads consist each of a hollow casting in one piece, in which are mounted, upon pivotal pins C and C', jaws D E and D' E', the jaws

D and E being mounted in the draw-head B and the jaws D' and E' in the outer head B'. These jaws are provided with inwardly-projecting ends F G and F' G', the inner jaws of which are at slightly-obtuse angles to the inner faces of the jaws. Hand-levers H H' are pivotally secured at the ends of the cars on pivotal pins I I', parallel with the length of the car, whereby the hand-levers may be swung transversely on said pivots. Links or rods J and K are pivotally secured to the hand-lever H above and below its pivotal pin I and extend inwardly from said lever through a slot L in the side of the draw-head, the inner end of the rod J being connected to the inner end of the jaw E' and the inner end of the rod K being connected to the inner end of the jaw D'. Similar rods or links J' K' are pivoted to the lever H' above and below its pivots and extend inward through a slot L' in the draw-head B', the inner end of the rod J' being connected to the inner end of the jaw D' and the inner end of the rod K' being connected to the inner end of the jaw E'. A spring M' is secured between the inner ends of the jaws D' and E' and has a normal tendency to throw the outer ends or hooks F' and G' of the jaws D' and E' toward each other. A double-ended S-shaped cam N' is located in the draw-head B', between the jaws D' and E', being secured to a vertical rod O', which is pivotally mounted in and passed through the top of the draw-head B', the upper end of said rod being pivotally mounted in a bracket P', secured to the end of the car, a hand-wheel Q' being secured upon the upper end of the rod.

The same construction of rods, spring, levers, &c., is provided in connection with the draw-head B, but not herein illustrated, their construction and operation being identical with those parts, as specifically described in connection with the draw-head B'.

R indicates my improved coupling-link, which is provided with arrow-heads S and S', connected to the main body by narrow necks T and T', the arrow-heads being provided with openings U and U', as particularly shown in Figs. 2 and 4. The draw-heads are each provided with a bell mouth, as at V and V', to facilitate the entrance of the link.

The construction of my invention will be



readily understood from the foregoing description, and its operation may be described as follows: The link R being in position between the hook ends of one set of jaws—say

5 D and E—upon approaching the car upon which the draw-head B' is mounted the beveled end or arrow-point S' will pass between the hook ends F' and G' of the jaws D' and E', the beveled front forcing the jaws open  
10 until the arrow-point has passed between the adjacent ends of the hooks F' and G', when said hooks will be automatically closed behind the arrow-point by means of the spring M'.

It will be noticed that the jaws are of a vertical thickness several times that of the corresponding thickness of the link R, so that the car will automatically couple itself to another having a higher or lower draw-head. It will be further noticed that by reason of  
20 the bell-shaped mouth of the draw-head the link will be properly entered and centered when the cars to be coupled are on a curve.

By reason of the construction of the inner face of the hook ends of the jaws at an obtuse angle to the inner face of the jaws themselves the arrow-heads of the links, each having their rear edges formed at right angles to their stems or body, will hold on the inner face of said hooks until an extreme or excessive resistance is encountered in the shape of  
30 a train too heavy for the material of which the link is composed, when instead of breaking the link the jaws will be forced open, releasing the arrow-point and allowing the cars  
35 to part.

By the provision of the hand-levers and the rods connecting them with the jaws the coupling may be released from either side of the car, a pull outward on the upper end of either  
40 of the levers H or H' serving to draw the inner ends of the jaws together, thus opening their outer ends and releasing the link. The same result may be accomplished by turning the rod O' by means of the hand-wheel Q' at  
45 the top of the car. This will throw the ends of the double S-shaped cam N' simultaneously against the inner sides of the jaws between their hook ends F' and G' and their pivotal pins, thus throwing the hooks apart  
50 and releasing the link.

Should it be necessary to couple a car equipped with my improved coupling to one provided with the ordinary draw-head, (link-and-pin,) the arrow-point of my link R will pass into the draw-head and the pin will engage in the opening, either S or S', as the case may be, in the arrow-point in the same manner as it engages in the ordinary link. 55

While I have illustrated and described what I now consider to be efficient means for carrying out my invention, I do not wish to be understood as limiting myself to the exact details of construction shown and described, but hold that such slight changes or variations as might suggest themselves to the ordinary mechanic would properly fall within the limit and scope of my invention. 60 65

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is— 70

1. In a device of the kind described, the combination with a draw-head secured to a car-body and provided in its side with an elongated slot, of spring-pressed jaws operatively mounted in said head, of a vertical  
75 hand-lever fulcrumed to the car-body adjacent to the side of the draw-head and slot, a short transverse rod pivoted at one end at a point below the fulcrum of said lever, and at the other end to the nearest jaw, a longer  
80 transverse rod pivoted at a point above the fulcrum, extending through the slot and connected to the remaining jaw, substantially as described.

2. In a device of the kind described, the combination with a draw-head secured to a car-body, and having openings in the sides thereof, of spring-pressed jaws operatively mounted in said head, the vertically-fulcrumed lever secured to the car-body, a short  
90 transverse rod pivoted at one end to a point below the fulcrum of said lever, and at the other end to one of the jaws, a longer transverse rod pivoted at a point above the fulcrum, and secured at its other end to the  
95 outer jaw substantially as described.

GEORGE MESHAMER.

Witnesses:

CHAS. C. WELLER,  
S. R. BALDWIN.