

No. 644,348.

Patented Feb. 27, 1900.

J. M. BROWNFIELD.
CAR COUPLING.

(Application filed May 27, 1899.)

(No Model.)

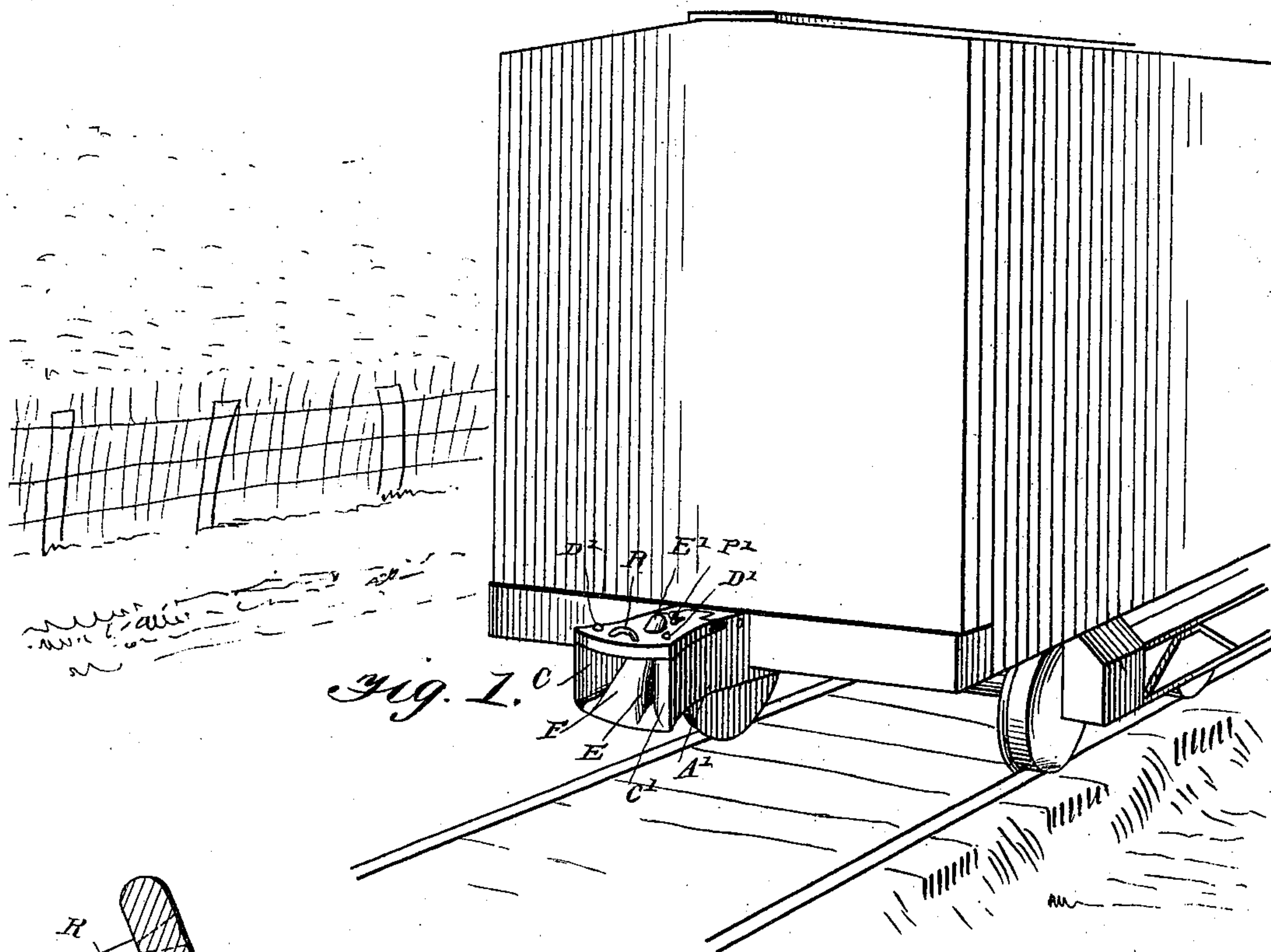


Fig. 1.

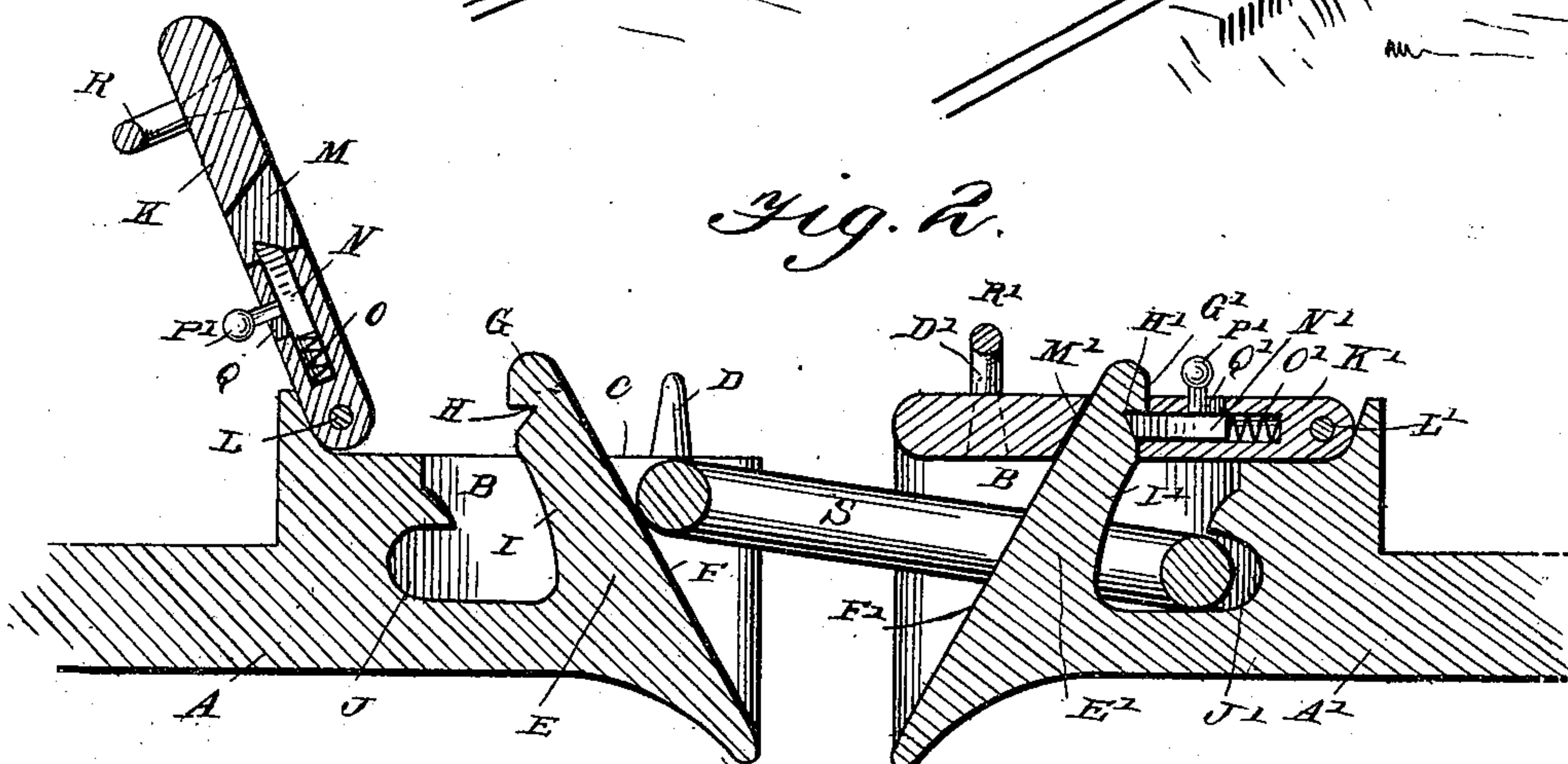


Fig. 2.

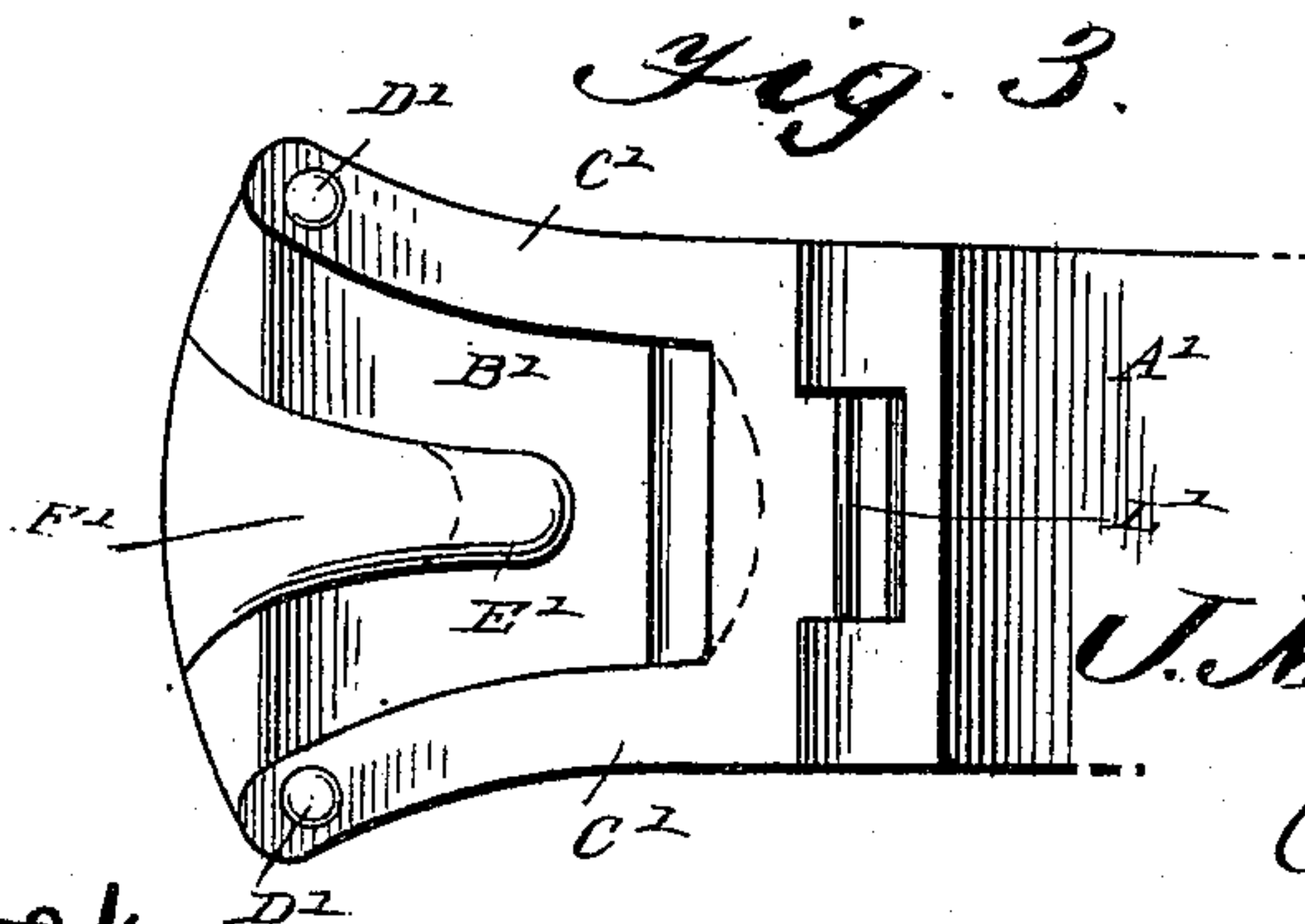


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH MERREL BROWNFIELD, OF PINOS ALTOS, TERRITORY OF NEW MEXICO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 644,348, dated February 27, 1900.

Application filed May 27, 1899. Serial No. 718,546. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MERREL BROWNFIELD, residing at Pinos Altos, in the county of Grant and Territory of New Mexico, have
5 invented a new and useful Car-Coupling, of which the following is a specification.

My invention relates to car-couplings, and has for its object to provide an improved structure whereby the common ordinary or any
10 loose coupling-pin is dispensed with and whereby the coupling-link will be so held in one draw-head that it will engage itself with the draw-head of an approaching car without manual intervention.

15 With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the appended claims.

20 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 hereof, in which—

25 Figure 1 is a perspective view illustrating one end of a car equipped with a coupling constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view
30 on a plane cutting through a complete coupling, two draw-heads and a link being shown, the latch-plate or drop-leaf of one being down and the other raised. Fig. 3 is a top plan view of a draw-head with the latch-plate removed.

35 Like letters of reference indicate the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings, A and A' indicate the draw-heads of two cars, each of which is
40 recessed in its upper face, as at B B', and the recesses being widest at their outer openings, the side walls C C' spreading outwardly and being provided with teats or projections D D' near their outer ends. In the center of the
45 recesses B B' are formed upwardly-projecting stationary pins E E', beveled or inclined on their outer faces, as at F F', provided with vertical inner faces G G' for a short distance from their upper ends, having notches H H'
50 in said vertical faces near their lower limits

and being undercut on their faces below the notches, as at I I'. The recesses B B' are also undercut at their inner ends, as at J J'. The pins E E' project some distance above the top of the draw-heads, and latch-plates K K', piv-
55 oted on bars L L' in extensions of the recesses B B', have openings M M', which fit over these projecting ends when the latch-plates are down. The latch-plates K K' are recessed to receive sliding latch-bolts N N', normally held
60 in their locking or outer positions by means of springs O O', located behind them, the bolts being provided with handle-pins P P', projecting through slots Q Q' in the upper faces of the latch-plates. Staples or half-links R R'
65 are secured on top of the latch-plates for convenience in raising them.

The construction of my invention will be readily understood from the foregoing, and its operation may be described as follows: A
70 link S being placed over a pin—as, for instance, E'—the latch-plate K' is dropped into place, when the spring-bolt N' will snap into notch H' of pin E' and hold the link in position projecting outside of the recess B'. The draw-
75 heads A A' coming together, with latch-plate K raised, as shown in Fig. 2, the link S will ride up the inclined face F of pin E and over the end thereof and will drop into the recess B behind the pin E. The latch K will now be
80 lowered, when the bolt N will snap into notch H and hold the latch-plate in position. Should the draw-heads continue to approach each other after coupling or come together at other times, the ends of link S will be pressed into
85 the undercut recesses J J' and prevented from rising. The undercut inner faces I I' of the pins E E' will prevent the link from rising when the strain of pulling is brought upon it. The pins E E' and teats D D', project-
90 ing through the latch-plates K K', will serve to prevent lateral strain upon their pivotal rods L L'.

Any suitable means accessible from the sides and top of the cars may be used to with-
95 draw the bolts N N' and raise the latch-plates K K' and link S.

By the use of my invention the loose pin is dispensed with and with suitable operating
100 means, as aforesaid, will effect a great saving

on account of the links being never lost and will assure safety in making and breaking the couplings.

While I have illustrated and described what I consider to be the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact forms and constructions shown, as many slight changes therein or variations therefrom might suggest themselves to the ordinary mechanic, all of which would be clearly included within the limit and scope of my invention.

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

1. In a car-coupling, the combination with a recessed draw-head, of a stationary inwardly-inclined pin in said recess having a notch in its inner face, a pivoted latch-plate with a hole to slip over the upper end of the pin and a spring-bolt in a recess in the latch-plate adapted to engage in the notch in the pin, substantially as described.

2. In a car-coupling, the combination with a recessed draw-head, of a stationary pin in said recess projecting above the top thereof,

teats projecting upwardly from the side walls of said recess, a latch-plate pivoted to the draw-head in position to cover the recess and provided with holes to receive the teats, a hole to receive the end of the pin, and a recess communicating with the last-named hole, and a spring-impelled bolt in said recess adapted to engage in a notch in the inner face of the pin when the latch-plate is down, substantially as described.

3. In a car-coupling, the combination with a recessed draw-head, of a stationary inwardly and upwardly inclined pin in said recess, having a notch in its inner face, a pivoted latch-plate secured to the top of the draw-head and having a hole through which the inclined pin projects, a longitudinally-arranged spring-pressed locking-bolt arranged in a slotted recess in the latch-plate, adapted to engage the notch in the pin and an upwardly-projecting pin on the locking-bolt for withdrawing the same from engagement with the first-named pin, substantially as described.

JOSEPH MERREL BROWNFIELD.

Witnesses:

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