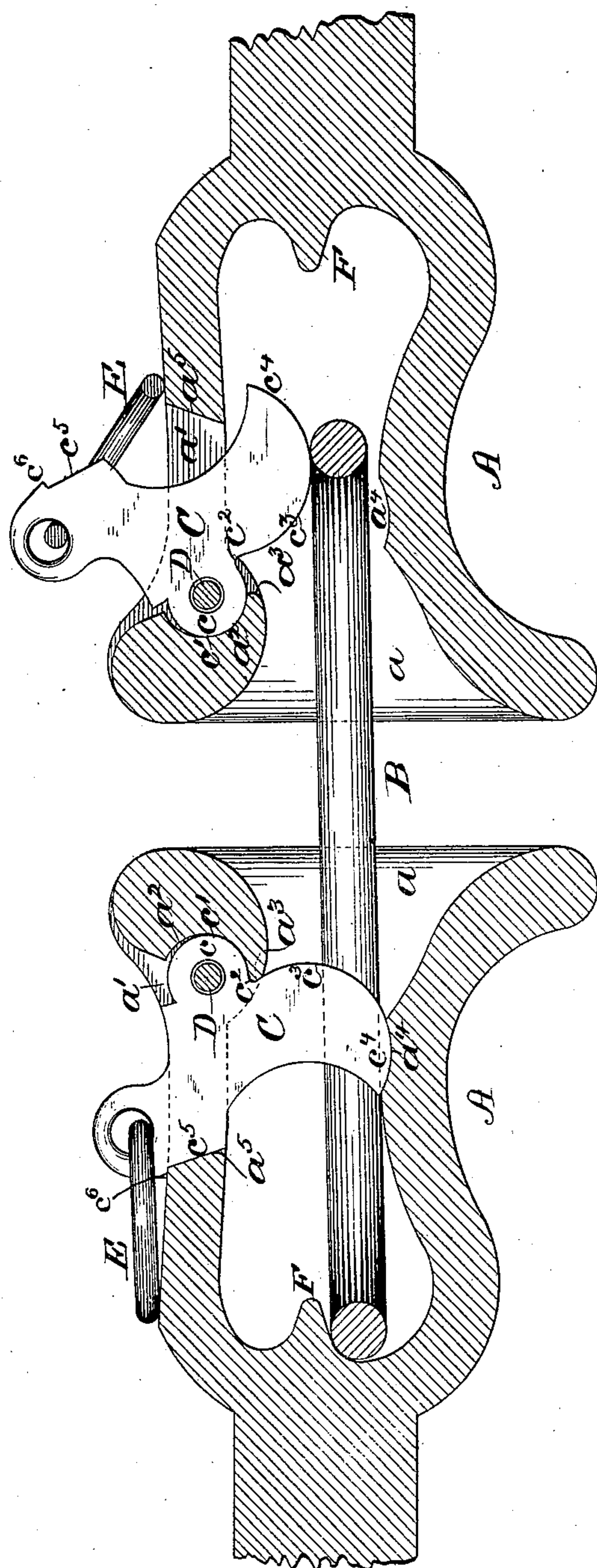


(No Model.)

J. GILMER.
CAR COUPLING.

No. 313,200.

Patented Mar. 3, 1885.



WITNESSES

Wm A. Skinkle
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UNITED STATES PATENT OFFICE.

JOSEPH GILMER, OF BRUNSWICK, GEORGIA, ASSIGNOR TO W. R. KLINE
AND E. R. MITCHELL, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 313,200, dated March 3, 1885.

Application filed March 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GILMER, of Brunswick, in the county of Glynn and State of Georgia, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to automatic car-couplings of that class in which a pivoted hook or latch is employed to engage and lock the coupling-link in the draw-head.

The object of my present improvement is to provide an exceedingly simple automatic coupling possessing great strength and rigidity, whereby cars may be coupled and uncoupled with ease and safety, and when coupled will be connected by a connection of great strength, while all danger of accidental separation of the cars will be avoided.

The matter claimed herein as my invention is first described in detail, and is then particularly recited at the close of the specification.

In the accompanying drawing the figure is a longitudinal section through so much of two draw-heads having my improvements applied thereto as is necessary to illustrate the matter claimed herein.

The draw-head A of the car is provided with a flaring mouth, *a*, as usual, to receive the coupling-link B, and said draw-head is provided with a coupling latch or hook, C, of peculiar construction. This latch C is of substantially a shoe shape, and is pivoted in a vertical slot or recess, *a'*, in the upper side of the draw-head by means of a single bolt, D, the latch being preferably loosely fitted on said bolt. The heel portion *c* of the latch, through which the pivot-bolt passes, has a rounded edge or knuckle-surface, *c'*, fitting a corresponding seat, *a''*, in the draw-head, said seat *a''* being preferably formed by suitably casting the draw-head. The draw-head is also provided or cast with a rounded rib or shoulder, *a'''*, preferably the width of the slot in which the latch C is pivoted, which fits the recess *c''* of the latch when said latch is in its closed or coupling position, as shown in the left-hand draw-head of the drawing. The front edge, *c''*, of the coupling-latch C, below the heel portion *c* thereof, corresponding to the sole of the shoe, is preferably beveled or

tapered, so that when struck by the entering end of the link B the lower or locking end of the latch will be easily forced inwardly and upwardly and permit the link to pass freely into the draw-head. As soon as the end of the link has passed sufficiently far into the draw-head, the coupling-latch falls down into its closed or coupling position and prevents the withdrawal of the link, as the link obviously cannot be withdrawn past the latch, as it engages the preferably curved inner draft edge thereof. The latch is obviously so hung that its weight closes it automatically after being raised and keeps it closed until forcibly raised, as in the act of uncoupling. The extremelower end, *c''*, of the latch C is preferably curved, and when the latch is in its locking position fits snugly in a corresponding seat or recess, *a''*, in the bottom of the draw-head A, and has a firm bearing in said seat; or if the bottom or floor of the draw-head is a plain surface it firmly and squarely rests thereon. The upper end of the latch C, corresponding to the leg or upper part of the shoe, fits snugly in the slot in the draw-head and rests at its rear beveled (preferably) end, *c''*, when the latch is closed, firmly and squarely against a corresponding surface, *a'''*, formed at the end of the slot in which the latch is pivoted; also formed on the latch is the shoulder *c'''*, which catches over the top of the draw-head when the latch is down, and which forms an additional bearing-surface for the latch, and a point of resistance against which the pull of the link is exerted.

I have thus described the peculiar construction of the coupling-latch C and its relation to the several bearings in the draw-head, and it will be seen that the latch when in its locking position has three separate and independent rigid and firm bearings in said draw-head, to wit: first, at the point *c''*; second, at the lower end, *c''*, (or upon the floor of the draw-head;) and, third, at the rear end, *c''*, against the shoulder *a'''* of the draw-head. Consequently the strain produced by the draft of the cars or their tendency to separate is firmly borne or taken up at three separate points and all strain removed from the pivotal bolt of the latch. I prefer that the latch be somewhat loosely pivoted on

its bolt to enable the latch to firmly seat itself in its bearings in the draw-head without requiring extra care in fitting. The upper end of the latch may be provided with a ring, E, 5 to raise it in uncoupling, for example; but any suitable arrangement may be provided for the purpose of operating the latch, for instance, a cord or chain or lever arrangement at the end of the car may be employed. Many such 10 arrangements are well known and are not claimed by me.

In the rear of the opening or mouth of the draw-head I have provided a projecting ledge or shoulder, F, the object of which is to enable 15 the coupling-link to be held and directed to enter the draw-head of the opposite car. When the link is placed at one end under the ledge F, the front or opposite end of the link will be directed or held horizontally or slightly 20 upwardly, while if the end be placed above said ledge the opposite end of the link will be directed downwardly, as will be obvious. This avoids the necessity of holding or guiding the links by hand in coupling cars, which is a 25 dangerous operation.

Provision is obviously made by the above arrangement for guiding the link for high and low cars, the draw-heads of which frequently are of different heights from the track.

30 From what has been said it will be seen that I have provided an exceedingly simple and strong coupling for cars, and that it is automatic in its action as far as the coupling operation is concerned. It is a gravity-coupling, 35 and is always in readiness for a coupling operation, and, when the cars are coupled, the organ-

ization is such that jars and jerks do not affect its relation to a locking position, and the coupling is therefore very secure.

In the drawing the latch of one draw-head 40 is shown as closed to retain the link, while the latch of the opposite draw-head is shown as just in the act of being raised in a coupling operation.

I am aware that pivoted coupling-latches 45 have been suggested having a bearing in the upper part of the draw-head and another bearing at the lower end or toe of the latch in the lower side of the draw-head, and do not 50 broadly claim such a device.

I am well aware that a pivoted latch having a number of bearing-surfaces is not new, and this I broadly disclaim.

My invention consists in the exact shape and construction of the parts shown and described, 55 and I specially limit my claim to this construction.

I claim herein—

The combination of a draw-head, A, having the slot a' and projection F through its top, 60 seat a^2 , shoulder a^3 , and bearings $a^4 a^5$, with the latch C, having the bearings $c' c^4 c^5 c^2 c^6$, the parts being constructed and arranged to operate substantially as shown and described.

In testimony whereof I have hereunto sub- 65 scribed my name this 14th day of March, A. D. 1884.

JOSEPH GILMER.

Witnesses:

BURR WINTERS,
J. M. DEXTER.