

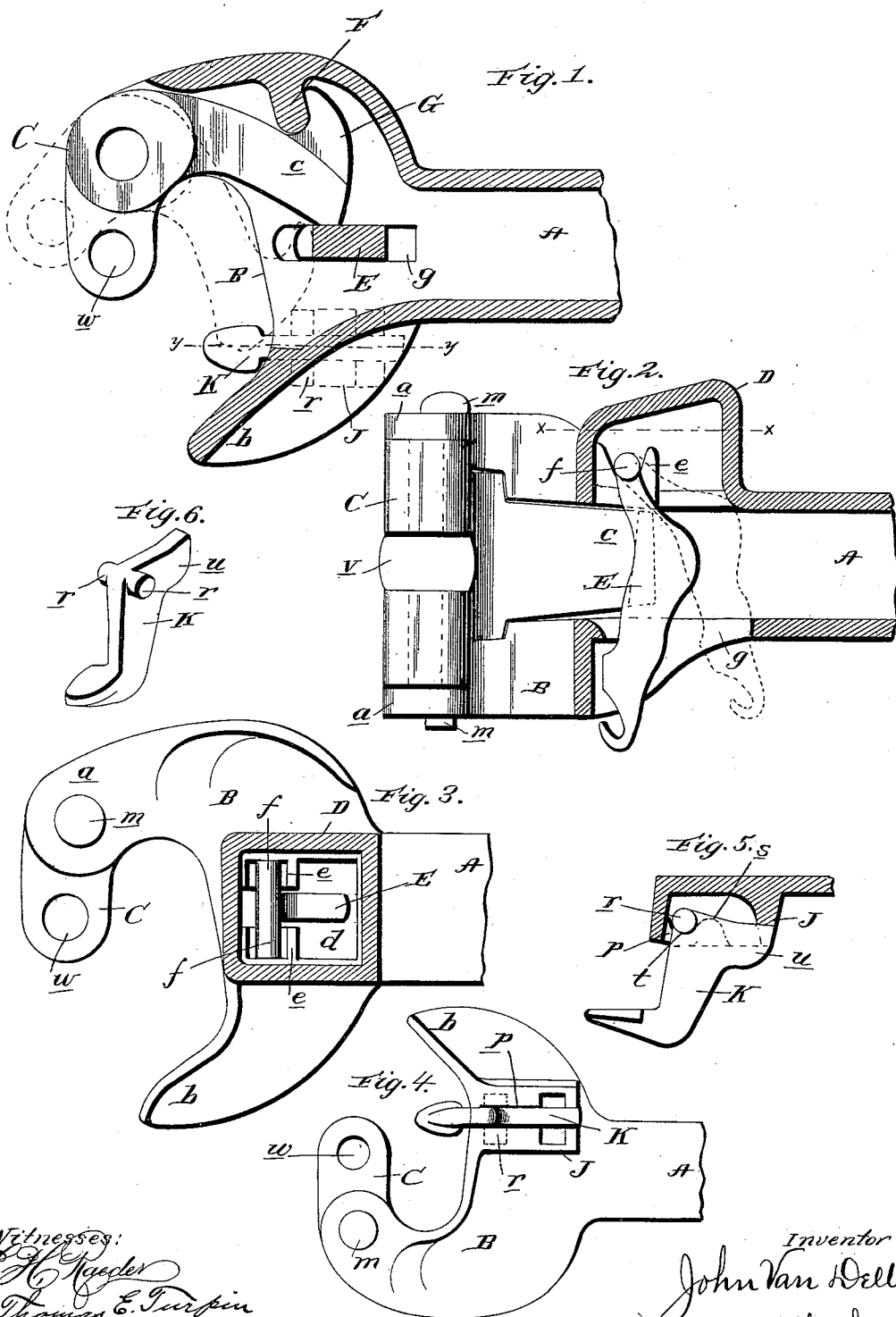
(No Model.)

2 Sheets—Sheet 1.

J. VAN DELL.
CAR COUPLING.

No. 463,782.

Patented Nov. 24, 1891.



Witnesses:
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Thomas E. Turpin

Inventor
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Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 7.

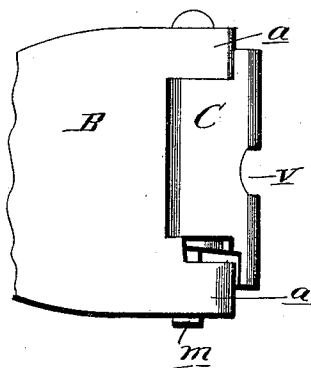


Fig. 8.

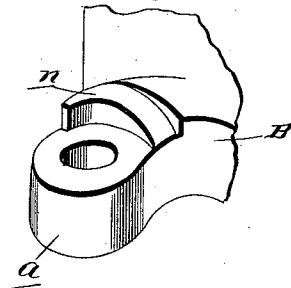
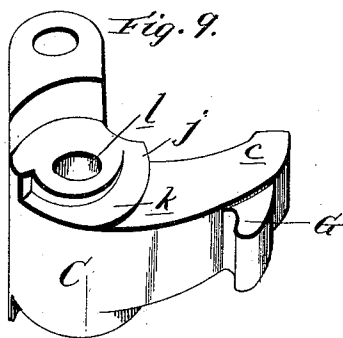


Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN VAN DELL, OF NEW DECATUR, ALABAMA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 463,782, dated November 24, 1891.

Application filed August 3, 1891. Serial No. 401,554. (No model.)

To all whom it may concern:

Be it known that I, JOHN VAN DELL, a citizen of the United States, residing at New Decatur, in the county of Morgan and State of Alabama, have invented certain new and useful Improvements in 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.

My invention has relation to improvements in twin-jaw car-couplers; and it has for its general object to so improve the construction of such devices as to render the same more durable and efficient in practice.

The several specific objects of the invention are to provide a draw-head and swinging jaw of a construction adapted to prevent a casual disconnection of the jaw from the head when in operation, to provide a gravity-latch of a peculiar construction so arranged in the draw-head that it will automatically engage and hold the swinging jaw in a locked position, to provide a draw-head and swinging jaw of such a construction that when said jaw is released by the gravity-latch it will swing to a position to be engaged by the jaw of another coupler, and finally to provide a means for sustaining the draw-head of another coupler in case the tail-bolt or draft-spring of its draw-bar should break.

The improvement will be fully understood from the following description and claims, when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a horizontal section taken through the draw-head and a portion of the draw-bar. Fig. 2 is a vertical longitudinal section through the draw-head and a portion of the draw-bar. Fig. 3 is a horizontal section taken in the plane indicated by the line *xx* on Fig. 2, parts being shown in plan. Fig. 4 is an inverted plan view of my improved coupling. Fig. 5 is a detail longitudinal vertical section illustrating the connection of the supporting step, which step is illustrated in elevation. Fig. 6 is a perspective view of the step for sustaining the draw-head of the opposite coupler in case the draft-spring or tail-bolt of the same should break. Fig. 7 is a detail side elevation of the draw-head with the swinging jaw in the position it occupies

when in operation. Fig. 8 is a detail perspective view of the lower forwardly-extending horizontal branch of the draw-head, together with the curved incline at the rear of the eye therein; and Fig. 9 is a perspective view of the swinging jaw in an inverted position.

In the said drawings similar letters designate corresponding parts throughout the several views.

A indicates the draw-bar of my improved coupler, which may be connected to a car in any ordinary or approved manner, and is provided at its outer end with my improved draw-head B, which is formed on one side at its top and bottom with two forwardly-extending horizontal branches *a* and on its opposite side with a curved guard branch *b*, and is hollow in its center to receive the inner branch *c* of the swinging jaw C, which rests therein while a coupling is maintained.

Formed in the top wall of the draw-head, at about the center thereof, is a longitudinal slot *d*, which is provided at its rear end with a T branch, and cast integral with the draw-head B, above the slot *d*, is a housing D, which is provided on the inside of its side walls adjacent to its forward end with bearings *e* to receive the lateral trunnions *f* at the upper end of the gravity-latch E, which hangs in the draw-head and takes through a longitudinal slot in the bottom thereof. This gravity-latch, which is preferably provided with an enlargement upon its rear side, as illustrated, has a hook or the like at its lower end for the attachment of a chain or the like, which may be connected at its opposite end to a rocking bar or other suitable device for operating the latch from the side of a car. By the provision of the T branch at the end of the slot *d* it will be readily perceived that the latch may be readily removed and replaced without in any manner disturbing the other parts of the coupler.

Formed on the inside of the side wall from which the branches *a* extend is a vertically-disposed rib or projection F, which is designed to be engaged by a hook G upon the inner branch of the pivoted jaw C when said jaw is in a coupled position, whereby it will be seen that should the pivot-pin of the jaw break or become disconnected the jaw will be prevented from pulling out of the draw-head by rea-

son of the fact that the gravity-latch will serve to keep the hook G in engagement with the rib or projection F.

As better illustrated in Fig. 9 of the drawings, the inner branch *c* of the swinging jaw is reduced in thickness with respect to the coupling branch and is provided with shoulders *j* adjacent the coupling branch, the lower one of which shoulders is provided with a curved incline *k* around the vertical bolt-aperture *l*, through which takes the pivot-pin *m*, which connects the jaw to the draw-head.

Upon the upper side of the lower branch *a* of the draw-head and in rear of the eye in said branch I form a curved incline *n*, upon which bears the curved incline *k* of the swinging jaw when the parts are connected, whereby it will be readily perceived that when released from the gravity-latch the branch *c* of the jaw C will swing into an approximate transverse position ready to be engaged by the forward branch of the jaw of another coupler.

Upon the under side of the draw-head, at one side of the slot *g*, is a housing J, which is provided in its under side with a longitudinal slot *p*, having a T-branch adjacent its rear end, whereby the trunnions *r* of the step K may be readily introduced to their bearings.

As better illustrated in Fig. 5 of the drawings, the insides of the side walls of the housing J are recessed, so as to afford upwardly and downwardly curved guides *s*, leading from the T branch of the slot *p* to the bearings *t* in the side walls of the housing adjacent to the forward end thereof, whereby it will be seen that when the trunnions of the step K have been slid to position they will be prevented from casual displacement, and it will be further perceived that a step if broken may be thus readily removed and replaced by another. The rear wall of the housing J is inclined on its inner side, as illustrated, whereby it will be seen that the introduction of the trunnions to their bearings is facilitated. The step K, which extends forwardly into the open portion of the draw-head, is provided at its upper end with a rearwardly-extending branch *u*, which bears against the lower edge of the rear wall of the housing and limits the downward movement of the forward portion of the step, which, by reason of its weight, normally rests in a horizontal position, as illustrated. By the provision of a step, such as K, upon a coupler draw-head it will be readily perceived that should the draw-bar and head of an opposite coupler become disconnected from the car in any manner they will fall upon the said step, which will serve to prevent them from falling to the track and derailing the train.

In the practice of my invention I prefer to provide the forward branch of the jaw C with a horizontal slot *v* and a vertical bolt-aperture *w*, whereby the same may be employed in conjunction with the ordinary link and pin to effect a coupling.

In operation the gravity-latch is drawn back to release the rear branch of the swinging jaw, which falls forward into an approximately-transverse position, which it occupies until engaged and pressed backward by the forward branch of a jaw in another coupling, when it is pressed back and is engaged and held in such position by the gravity-latch.

Although I have specifically described the construction and relative arrangement of the several elements of my improved car-coupler, yet I do not desire to confine myself to such specific construction, as I reserve the right to make such modifications as fairly fall within the scope of my invention.

Having described my invention, what I claim is—

1. In a car-coupler, the combination, with a draw-head having a T-opening in its upper side and a housing covering said opening and a swinging jaw pivotally connected to the draw-head, of a gravitating latch having lateral trunnions adjacent to its upper ends adapted to bear in the housing on the draw-head, so that said latch will hang vertically, substantially as specified.

2. In a car-coupler, the combination, with a draw-head having a T-opening in its upper side and a longitudinal slot in its lower side and a housing mounted on the draw-head so as to cover the T-opening and having bearings on its inner sides, of a gravitating latch having trunnions at its upper end adapted to bear in the housing, so that the said latch will hang vertically in the draw-head and extend through the longitudinal slot in the lower side thereof, substantially as and for the purpose specified.

3. In a car-coupler, the combination, with a draw-head, of a step or support pivotally connected thereto and having the forwardly-extending branch and the rearwardly-extending branch, substantially as and for the purpose set forth.

4. In a car-coupler, the combination, with a draw-head and a housing formed in the lower side thereof having a T-opening in its under side and bearings on the inside of its side walls, of a step or support comprising the forwardly and rearwardly extending branches and having lateral trunnions adapted to bear in the housing, substantially as and for the purpose set forth.

5. In a car-coupler, the combination, with a draw-head, the housing formed on the lower side thereof and having a T-opening in its under side, and the upwardly and downwardly curved guides and trunnion-bearings on the inside of its side walls, of a step or support comprising the forwardly and rearwardly extending branches and having lateral trunnions adapted to bear in the housing, substantially as and for the purpose specified.

6. In a car-coupler, the combination, with a draw-head having the rib or projection F on the inside of one of its side walls, of the jaw C, pivoted therein, and having the hook

G, adapted to engage the rib in the draw-head, and also having the curved incline k on its lower side, said head also having an incline n to be engaged by the incline of the jaw, and the gravitating latch E, pivoted vertically within the draw-head, so as to engage the pivoted jaw, substantially as specified.

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

JOHN VAN DELL.

Witnesses:

ALLEN J. GREEN,
H. L. BROWN.