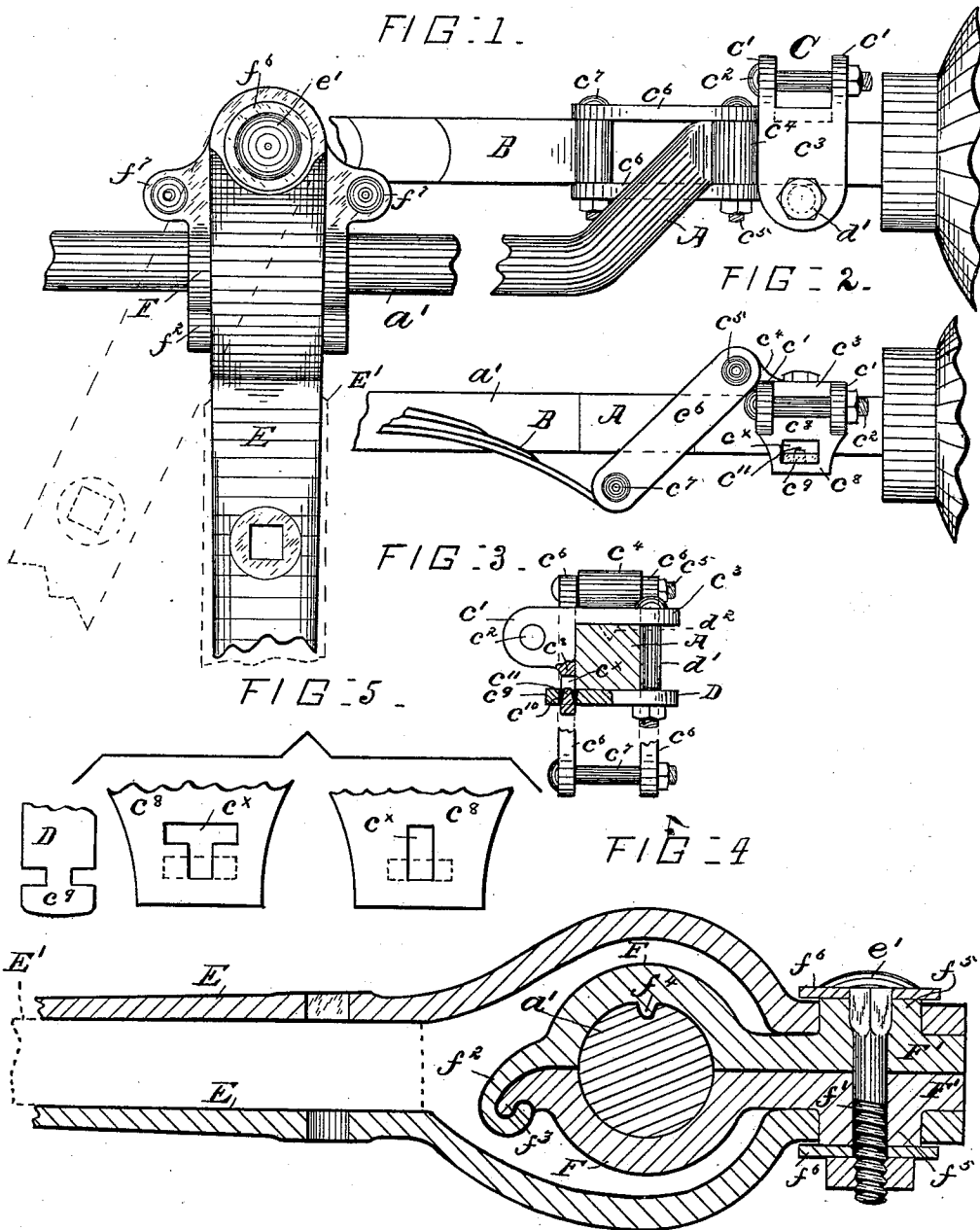


(No Model.)

D. M. PARRY & D. S. REEL.
VEHICLE.

No. 435,366.

Patented Aug. 26, 1890.



Witnesses:
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UNITED STATES PATENT OFFICE.

DAVID M. PARRY AND DANIEL S. REEL, OF INDIANAPOLIS, INDIANA,
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PLACE.

VEHICLE.

SPECIFICATION forming part of Letters Patent No. 435,366, dated August 26, 1890.

Application filed May 19, 1890. Serial No. 352,405. (No model.)

To all whom it may concern:

Be it known that we, DAVID M. PARRY and DANIEL S. REEL, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Vehicles; and we do hereby 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.

This invention relates to vehicles, and especially appertains to improvements in clips for the axles, the chief objects of the invention being to provide a clip for the reach having a pivoted saddle to engage the front axle, which will be specially adapted to axles bent inwardly, and to so construct and arrange the parts thereof that the pivoted point of the reach will be at a point remote from the longitudinal center of the main body of the axle, but substantially aligned with the axis of the wheels and fifth-wheel of the vehicle; also, to provide a combination-spring and thill-coupling for said axle which will enable the hanging of the spring at a point below the central line of said axle and the coupling of the thills to the same piece that supports the springs, to thereby concentrate the pulling and bearing strains.

With these objects in view our invention consists, essentially, in the special construction and in the combination and arrangement of the several parts of the vehicle, substantially as hereinafter described and claimed.

Figure 1 represents in plan view a portion of a vehicle as provided with our improvements, one of the different positions of the reach being shown in dotted lines; Fig. 2, a front view of a portion of the same; Fig. 3, a vertical cross-section of the clip, Figs. 1 and 2, looking in the direction of the arrow; Fig. 4, an enlarged detail of the reach and axle-clip in vertical longitudinal section; and Fig. 5, details, on an enlarged scale, showing modified forms of thill-coupling.

In the drawings, A represents the front axle, which will be bent inward to bring its main central portion a' considerably in the rear of the spindles which form the wheel-axes, and B represents a semi-elliptical spring

secured centrally with relation to the spindles of the axle, as will be hereinafter fully explained.

Secured to the end of the axle near the spindle is a thill-coupling clip C, having two remote outwardly-projecting ears c' , between which ears the heel of the thill (shown in dotted lines, Fig. 1) is pivoted by means of the bolts c^2 , extended longitudinally with relation to the axle, and formed as part of said ears is a plate c^3 to bear upon the upper face of the axle, and formed upon said plate is a transverse drum or cored cylindrical lug or boss c^4 , which extends above from side to side of said axle, and is slightly greater in length than the width of said axle, and pivoted to each end of said cylindrical drum c^4 by means of a bolt c^5 is a depending link c^6 , having openings at their lower end, through which a bolt c^7 is extended, which bolt is engaged by the end of the semi-elliptical spring B. These links c^6 form a shackle, and will preferably extend considerably below the horizontal line of the axle, to enable the spring and the body of the vehicle connected therewith to be hung low.

The clip or thill-coupling will have a depending portion c^8 , preferably at its front side, which portion c^8 will preferably have a slot c^x therethrough to receive the end c^9 of the strap-iron D, said strap-iron extending below the lower face of and supporting the axle and having a hole c^{10} therein, to be entered by the upwardly-projecting teat c^{11} upon the depending portion c^8 of the clip, which teat holds the strap-iron in place, said iron also having a hole at its opposite end, through which the bolt d' , which secures the clip C and strap-iron D to the axle, is extended, said bolt also extending through a hole in the base-plate c^3 of the clip, as clearly shown in Fig. 3. A teat or projection d^2 upon the lower face of the base-plate c^3 enters a detent in the axle and prevents longitudinal movement. By this construction of clip we form attaching-ears for the thill and for the links that support the spring in one piece, and by means of the opening in the depending portion c^8 of the base-plate c^3 and the hole in the end of the strap-iron D, through which the teat c^{11} extends, the plate c^3 and strap-iron D may be

firmly secured to the axle with a single vertical bolt, as shown, thus enabling the quick attachment of the parts.

In securing the coupling C to the axle the upper part c^3 is placed upon the axle with its teat d^2 in the detent, after which the end of the strap-iron D is extended into the horizontal portion of the slot in the depending piece c^8 and allowed to drop into place with its hole c^{10} encircling the teat c^{11} , as shown in Figs. 2 and 3, after which the vertical bolt d' is extended through the plate c^3 and strap-iron D and the parts drawn tightly against the axle by the nut on said bolt. If desired, the depending portion c^8 might have simply an elongated vertical opening therein, and the head of the strap-iron D might be T-shaped and inserted edgewise and turned to a horizontal position after insertion, both of which forms are practical and equivalent.

The clip which secures the axle A and reach E' (shown in dotted lines) together consists, essentially, of a two-part saddle F, having each part a central rearward projection or flange F', having a vertical hole f' there-through and two reach-embracing arms E. These arms preferably extend beyond the main portion of the saddle F and are secured pivotally thereto and held by a bolt e' , which extends through the hole f' in the projections of the saddle and through the said arms, as hereinafter described.

As shown in Fig. 4 of the drawings, the saddle, as before stated, is constructed in two pieces, it being divided centrally and horizontally, one portion of the saddle having a downward hook-shaped projection f^2 at the side most remote from its pivotal point, and the other portion having an outwardly-projecting headed or curved arm f^3 , to be engaged and held by the hook f^2 of the other portion, to thereby form a hinge-connection at this point and obviate the necessity of bolts being used to secure the parts together. The upper portion of the saddle will be provided at its interior (which interior is of a shape corresponding in cross-section to the cross-sectional shape of the axle) with a teat or projection f^4 to enter a detent in the axle, said projection preventing longitudinal movement of the saddle and connecting parts. The horizontally-projecting flanges of the saddle have each at its outer side a vertical boss f^5 , which boss extends through a hole in each of the arms E and terminates slightly beyond the outer faces of said arm and acts as a pivot therefor, washers f^6 being provided between the head and nut of the bolt e' , which bear upon the end of the bosses, securing the parts pivotally together without binding. The upper and lower parts of the saddle will preferably be provided each at its either side with a longitudinal projection through which bolts f^7 will extend to secure the two parts more firmly together and relieve the bolt e' of some of the strain. This construction of reach and axle-clip is especially intended

for horizontally-bent axles, wherein the main body of said axle is in the rear of the axial line of the wheels, the object being to have the reach-arms and saddle which connects the axle pivotally secured together on a line vertically parallel with relation to the central longitudinal line of the spring and central with relation to the fifth-wheel. By this construction of clip the saddle and reach-embracing arms may have an independent movement relative to each other—that is to say, in turning the reach may remain stationary, while the axle and saddle may move at an inclination thereto—which construction and arrangement secures to the vehicle many advantages over the ordinary reach-clip in common use, as by securing a saddle to the axle and pivotally connecting the reach-embracing arms thereto a central support is formed for the axle, obviating any tendency of the bent portion thereof dropping downward, and as it is, as we believe, entirely new with us to provide a saddle which tightly engages the axle at its center, connect reach-embracing arms thereto and bring the pivotal points of said parts directly central with relation to the center of the fifth-wheel, it is desired to draw a claim of sufficient breadth to cover not only the construction shown, but any mechanical modifications thereof which would secure the same result.

It will be obvious that instead of having hook-shaped ends and being hinged together, as shown, the two parts of the saddle might have flanges at their rear ends and be secured together by a bolt; but the hinge-connection is preferable, as it dispenses with a bolt. Therefore it is not desired to limit ourselves to a two-part saddle hinged at one end, as shown and described.

Instead of slotting the depending portion c^8 of the clip C and providing it with a projection to enter a hole in the strap-iron, as shown in Figs. 2 and 3, the said portion might have a T-shaped slot to be engaged by a T-shaped head on the strap-iron, as shown in Fig. 5, or, as stated, the depending portion might have a vertical slot and the T-shaped head be inserted edgewise, as explained.

We claim—

1. In a vehicle, the combination, with the bent axle A, of the clip C, having the horizontal drum c^4 , to which the spring-supporting links c^6 are pivoted, as shown, and having the horizontally-projecting ears c' , to which the heel of the thill is pivoted, and having a depending portion c^8 , with the T or other shaped slot therein, with a projection c^{11} and a strap-iron to extend beneath the axle having an end to enter said slot and a hole to be entered by said projection c^{11} , which iron is bolted to the base-plate of the clip, all substantially as and for the purpose set forth.
2. In a vehicle, the combination, with the axle, of the two-part saddle F, having interlocking hooks at one end and horizontally-projecting flanges at the opposite end, and

the reach-embracing arms E, pivotally secured to the flanges of the saddle, substantially as shown, and for the purpose described.

3. In a vehicle having an inwardly-bent axle, and having a body-supporting spring secured thereto in a line central with relation to the axis of the spindle, the combination therewith of the saddle F, having an inward projection to enter a dent in the axle, and having the outwardly-projecting flanges F', with the bosses f^5 thereon, the reach-embracing arm E, extended above and below said saddle and having openings in their ends to embrace the bosses thereon, and a bolt or pivot extended through the projections f' , and bosses to pivotally secure the parts together, all of which is arranged so that said pivotal point will be in a line central with relation to the axis of the spindles of the axle, substantially as and for the purpose described.

4. In a vehicle, the combination, with an axle bent inwardly at its center and a reach, of reach-embracing arms pivoted at one side

of the main body of the axle and in a line central with relation to the spindles thereof, and secured to said axle in the manner shown, and substantially as described.

5. In a vehicle, the combination, with the inwardly-bent axle, of the reach-embracing arms E and axle-engaging saddle F, pivotally secured together in a line central with relation to the spindles of the axle, substantially as described.

6. In a vehicle, the combination, with the axle and reach-embracing arms, of the two-part saddle pivoted between said arms engaging the axle and having a projection to enter a detent in said axle to prevent movement thereon, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

DAVID M. PARRY.
DANIEL S. REEL.

Witnesses:

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J. A. MINTURN.