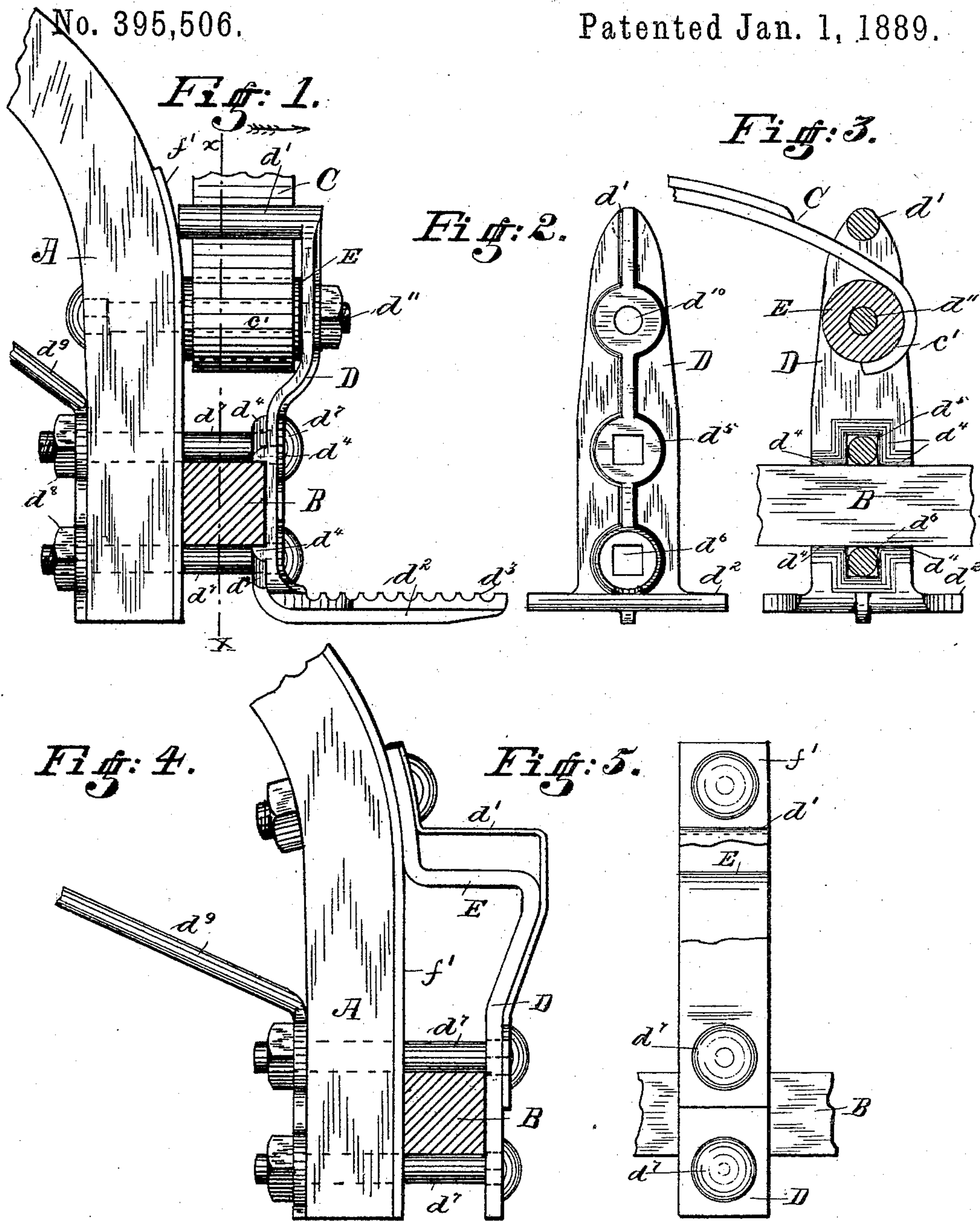


(No Model.)

D. M. & T. H. PARRY.
TWO WHEELED VEHICLE.

No. 395,506.

Patented Jan. 1, 1889.



Witnesses:

W. C. Whitney
E. C. Roper

Inventors:

David M. Parry & *Thomas H. Parry*
by *Joseph A. McInturn*
Attorney

UNITED STATES PATENT OFFICE.

DAVID M. PARRY AND THOMAS H. PARRY, OF INDIANAPOLIS, INDIANA.

TWO-WHEELED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 395,506, dated January 1, 1889.

Application filed November 17, 1888. Serial No. 291,161. (No model.)

To all whom it may concern:

Be it known that we, DAVID M. PARRY and THOMAS H. PARRY, 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 Two-Wheeled 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 appertains to two-wheeled vehicles, and relates to improvements in the construction, combination, and arrangement of the spring upon which the seat or body of the vehicle rests, its support, and the step, the object of the invention, primarily, being to form a combined anti-friction spring-support and a step which shall be cheap, strong, and durable, that may be quickly applied or removed from the shaft, and whereby the spring has a moving bearing and may be readily removed, as hereinafter fully set forth.

Another object of the invention is to so construct and arrange the spring-support and step that the greatest weight is brought upon the rear side of the shafts near the axle, or approximately in a vertical plane with relation to the center of the axle, so as to relieve the front ends of the shafts of weight and create practically a balance.

With these objects in view the invention consists in the special construction, combination, and arrangement of the shafts, axle, spring, spring-support, and step, substantially as hereinafter described, and set forth in the claims.

In the drawings we have illustrated sufficient of the parts of a two-wheeled vehicle to show the construction and arrangement of the parts we desire to claim as our invention, said drawings showing, in—

Figure 1, a side elevation, partially in section, of a combined spring-support and step as attached to the shafts and axle of a two-wheeled vehicle, a portion only of the shaft and vehicle-spring being shown; Fig. 2, a front view of the spring-support and step detached; Fig. 3, a vertical section of the devices, taken on dotted line *x x*, Fig. 1, looking in the direction of the arrow; Fig. 4, a side elevation

of a modified form of spring-support, the same being shown without a step and the spring being omitted; and Fig. 5, a front view of the same, a portion being broken away.

The shafts A and axle B are and may be of usual construction. The spring C, which is of the semi-elliptic form, comprising a series of leaves secured together, is bent at its extreme ends in the form, preferably, of a half-circle, as shown at *c'* in Figs. 1 and 3, for the purpose hereinafter set forth.

Secured to the axle B and shafts A at the rear side, near the lower ends of the shafts, as shown in Fig. 1, is a plate, D, which will preferably be constructed of cast metal, it having a forwardly-projecting portion, *d'*, at its extreme upper end, and a rearwardly-projecting portion, *d''*, at its extreme lower end, the upper end, *d'*, being shown as round, and the lower end, *d''*, being shown as wide and flat, with a corrugated or ribbed upper face, *d'''*. This upper forwardly-projecting lug, *d'*, forms a guard to prevent the vehicle-spring from becoming displaced by vertical movement, as hereinafter more fully explained, and the lower rearwardly-projected corrugated portion, *d''*, forms the step upon which the driver rests when entering the vehicle.

Formed upon the rear face of the spring-support and step-plate D are preferably two transverse horizontal flanges, *d⁴*, one of which bears upon the upper and one against the lower face of the axle B, as shown in Fig. 1. Formed in the plate D, just above and below the flanges *d⁴*, respectively, is a bolt-hole, *d⁵*, *d⁶*, which hole will preferably be square to admit the upper square end of the shank of a bolt, *d⁷*, which extends through the plate D and shaft A and bears against the upper face of the axle B, as shown, there being one bolt to bear against the upper face and one to bear against the lower face of the axle, they both extending through the shaft and being secured by nuts *d⁸*, the usual brace-rod, *d⁹*, being bolted to the front of the shaft A by the same bolts.

Formed in the plate D and shaft A, at a point just below the guard-lug *d'*, is a bolt-hole *d¹⁰*, through which a bolt, *d¹¹*, is extended. Mounted upon this bolt *d¹¹* is a roller, E, which is loosely engaged by the partially-circular

end c' of the spring C, said roller being loosely mounted upon the shank of bolt d^{11} and forming an anti-friction bearing for the end of the spring, said spring end being entered between the guard d' and resting at its lower face upon the roller, thus freely reciprocating under various resilient conditions. The guard-bar d' prevents the accidental displacement of the spring in a vertical direction, and the curved end c' of the spring prevents longitudinal displacement.

By this construction and arrangement of the plate D, it being secured to the shaft A at the rear, near the lower end, and the axle being interposed and secured between the plate D and shaft, it will be seen that the center of the spring C is approximately in a vertical line with the axle, and that the weight upon the seat, which is connected to the spring, (said seat not being shown,) will come on a line with and a little in the rear of the axle, thus relieving the horse of weight and securing comfort and ease in riding.

In Figs. 4 and 5 the plate D is shown as constructed from bar-iron bent to form a spring-support, E, at its upper end and a separate guard-plate, d' , secured thereto, to form a guard, said guard portion being remote from the support E to allow the insertion of the spring C. In these figures the plate D is shown without a step, but is secured to the axle and shaft in a manner similar to that shown in Fig. 1. The plate D shown in this modification might have a rearwardly-projecting step portion, if desired, and might be constructed of cast metal instead of wrought bar-iron.

The constructions illustrated in the drawings being both practical and somewhat equivalent, we do not desire to limit ourselves to the exact construction of either one, but desire to make a claim of sufficient breadth to cover both. In practice an elongated metal washer, f' , will be interposed between the inner edges of the shaft and plate D. This washer may be separate from or form a part with the plate D, if desired.

By our construction and arrangement, as hereinbefore set forth, it will be seen that by loosening the nuts upon the bolts the shafts may be drawn from the axle, and that all the parts may be quickly disconnected or replaced.

We claim—

1. In a two-wheeled vehicle, the combination, with the shaft and spring, of a metallic plate secured to the rear side of the shaft, near the lower end, and having a spring-supporting projection at its upper end, substantially as described, and for the purpose set forth.

2. In a two-wheeled vehicle, the plate D, having a spring-supporting portion at its upper end and secured to the rear side of the shaft, near the lower end, the spring C, movably engaging said plate D, and the axle B, secured between the plate and shaft, substantially as described.

3. In a two-wheeled vehicle, the combination, with the shaft A, of a plate, D, having the loosely-mounted friction-roller E at its upper end, the spring C, loosely engaging said roller, and the axle B, secured between the plate D and shaft, substantially as set forth.

4. The combination, with the shaft A, of the plate D, having the forwardly-projecting spring-supporting portion E and guard d' at its upper end and being secured to the rear side of the shaft at its lower end, and the axle B, secured between said plate and shaft approximately in a vertical line with the spring-supporting portion E, substantially as and for the purpose set forth.

5. In a two-wheeled vehicle, the combination, with the shaft A, of a plate, D, having a spring-supporting portion at its upper end, and a step portion, d^2 , at its lower end, and the axle B, interposed between the plate D and shaft A, the whole being preferably secured together by bolts, substantially as described.

6. In a two-wheeled vehicle, the plate D, having the friction-roller E removably secured near its upper end, and the guard d' and the step portion d^2 at the upper and lower ends of the plate D, as shown, all secured to the rear of the shaft and to the axle, substantially as described.

7. The combination, with the shaft A, of the plate D, having a spring-supporting portion and a guard at its upper end, the washer f' , formed a part with or separate from the plate D, the axle B, interposed between the plate D and shaft, and the spring C, having the bent end c' , all secured and arranged substantially as shown and described.

8. The plate D, having the spring-support E and guard at its upper end, and the transverse horizontal flanges d^4 at the inner face, the axle B resting between said flanges and the shaft A, all secured and arranged substantially as shown and described.

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

DAVID M. PARRY.
THOMAS H. PARRY.

Witnesses:

W. O. SHIREY,
N. E. C. WHITNEY.