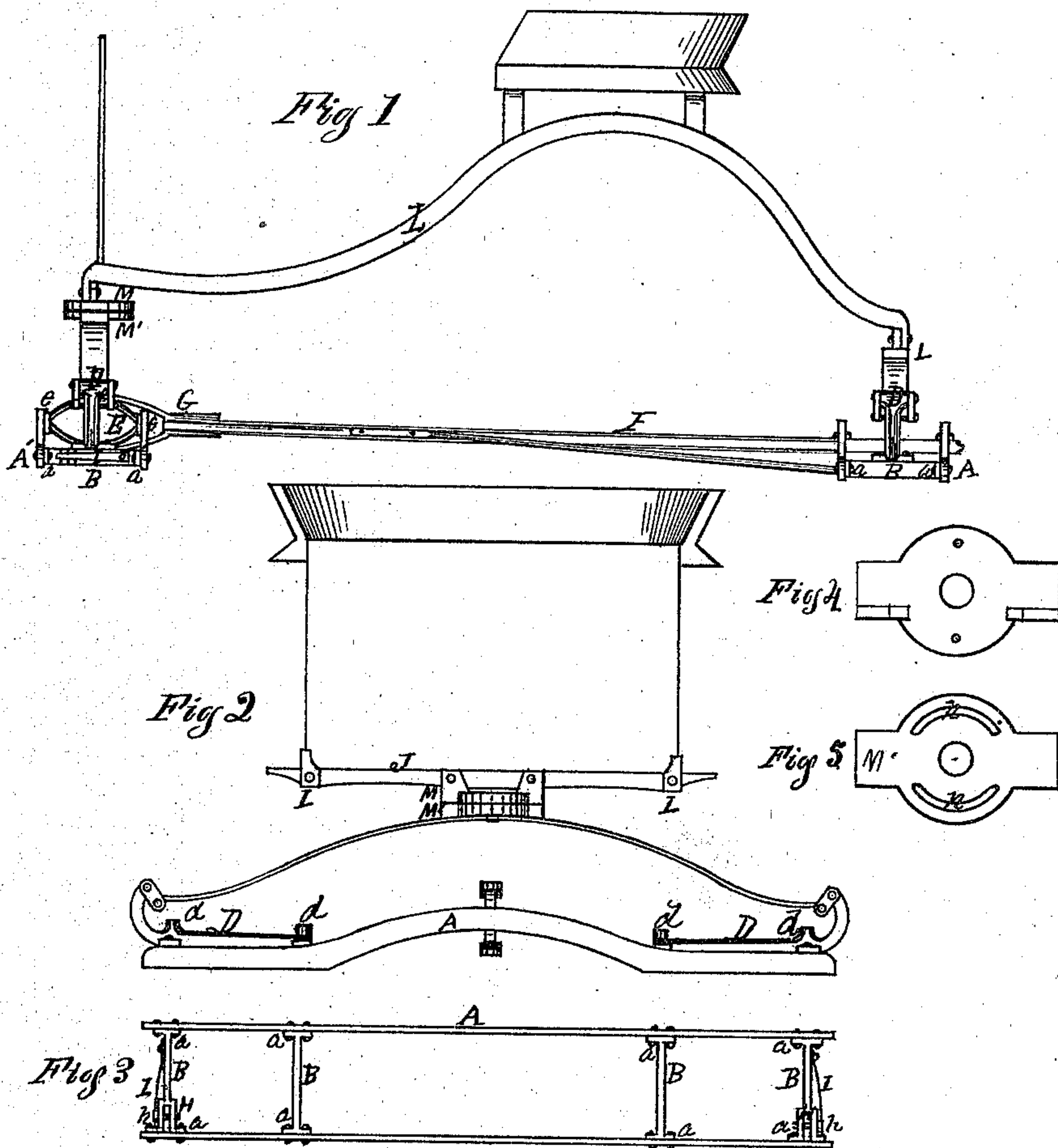


J. B. WITHEY.

Improvement in Carriages.

No. 131,728.

Patented Sep. 24, 1872.



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UNITED STATES PATENT OFFICE.

JEROME B. WITHEY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN CARRIAGES.

Specification forming part of Letters Patent No. 131,728, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JEROME B. WITHEY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carriages; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation of a portion of a carriage embodying my said improvement; Fig. 2 is a front elevation of the same; Fig. 3 is a top view of the frame carrying the axles; and Figs. 4 and 5 are enlarged views of the truck-plates detached.

Similar letters of reference indicate like parts in the several figures of the drawing.

My invention relates to an improvement in running-gear for carriages; and consists in a pair of light metal frames, which extend across the body of the vehicle under each end and connected by a tubular reach; also, in the arrangement of the outer bearing-bars of the forward frame, in connection with a bolt and spring whereby the thills are properly secured; it further consists in the novel construction of the truck-plates uniting the forward spring to the spring-bar, whereby the same may be loosened or tightened to insure a uniform movement in turning; also, further, in combination with the said metal frames and tubular reach, of an elliptic ring, to which the reach is pivoted in such a manner as to insure movement in turning the vehicle; also, further, in combination with metal spring-bars, of metal arches supporting the body of the vehicle, all of which will be more fully understood by the following description:

In the drawing, A and A' are arch-frames, which extend across from wheel to wheel. These frames are made of flat bars of steel or wrought-iron, arranged parallel to each other, as shown in Fig. 3. B B are bearing-bars, which may be made from any suitable metal, either wrought or cast. These bars are provided at each end with flanges or projections *a a*, through which are passed suitable bolts, the same passing through the arch-pieces of the frame A, thereby firmly uniting the same. D D are the spring-supporting jacks, which

are firmly secured to the upper surface of the bars B B, as shown in Fig. 2. The outer ends of these jacks are curved upward and inward toward the center, and are provided with an aperture, through which is passed a bolt, upon which the springs are secured. These jacks are secured to the bars immediately over the axle or shafts, and are provided at each point of contact with the bars with oil-cups *d d*. E is an elliptic ring, which is provided at each end with flanges or projections *e e*, through which are passed suitable bolts, the same passing through the arch-pieces of the frame A, by which means the said ring is firmly secured. F is the reach, which is made of tubular iron or steel. The rear end of this reach is provided with a solid or flat portion, which extends across the rear frame A, and is also provided with flanges or projections so arranged as to clasp or come against the opposite sides of the arch-pieces, through which are passed suitable bolts, by which means the reach is firmly secured thereto. G is a wrought or cast iron fork, which is made in two separate sections. The inner portion of each section is concaved in such a manner as to clasp the forward end of the reach, and is firmly secured thereto by suitable bolts or rivets passing through the same. The forward extremity of each section of the fork is provided with an aperture corresponding with a like aperture formed in the upper and lower portion of elliptic ring E, through which the king-bolt is passed, thereby connecting the reach to the forward frame A'. H is a socket, which is formed in the forward end of each outer bearing-bar of the forward frame A. This socket is so arranged as to receive the end of the thill-iron, through which is passed an iron pin or bolt, *h*, the same also passing through the sides of the bearing-bar, as shown in Fig. 3. Firmly secured to the outer side of each outer bearing-bar of the forward frame is a spring, I, the forward end of which bears against the end of bolt *h*, thereby holding the same firmly in position. J is a spring-bar, formed of a flat bar of steel placed upon its edge. This bar is attached near the ends to the ends of the arch-bars L of the body (or to the body-loops of wooden bodies when used) by means of suitable bolts. L is a spring-plate, made of either cast or wrought iron. This plate is firmly secured to

the spring, and is provided with raised flanges or projections, to which the spring-bar J is firmly secured. M and M' are the truck-plates for the forward springs. The plate M' is firmly secured to the upper and central portion of the spring, and the plate M is firmly secured to the spring-bar. Firmly secured within the plate M' are set-screws, which extend upward through grooves or slots *n n* formed through plate M. These screws or bolts are screw-threaded upon the upper end, and are provided each with a suitable nut, by which means the said plates are secured in such a manner as to enable the same to be loosened or tightened at pleasure. The lower plate M' is provided at its center with a boss, which fits into an aperture or recess formed in the center of the lower portion of the upper plate M, thereby forming a pivot or center by which a smooth and uniform movement is secured in turning. L L are steel arches, the ends of which are secured to the ends of the spring-bars in the usual manner. These arches are made of flat bars of steel placed upon the edge, as shown in Fig. 1. To these arches are attached the seat and dash in the usual manner.

What I claim as my invention is—

1. In a vehicle, the arch-frames A A', when constructed of flat bars of metal and united by the bearing-bars B B, substantially as specified.
2. In combination, with the arch-frames A A' of the tubular reach F and elliptic ring E, all arranged as specified.
3. The bearing-bars B B, when provided with the socket H for receiving the thill-iron, in combination with spring I and bolt *h*, as described.
4. In combination with a flat metal spring-bar and springs of the truck-plates M M', arranged as described.
5. In combination with the spring-bars, arranged as described, of the flat-metal arches L for supporting the seat, substantially as specified.

The above specification of my invention signed by me this 5th day of June, A. D. 1872.

JEROME B. WITHEY.

Witnesses:

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