J. WALKER.

Spring-Vehicle.

No. 160,488. Patented March 2, 1875.

FIG. 1.

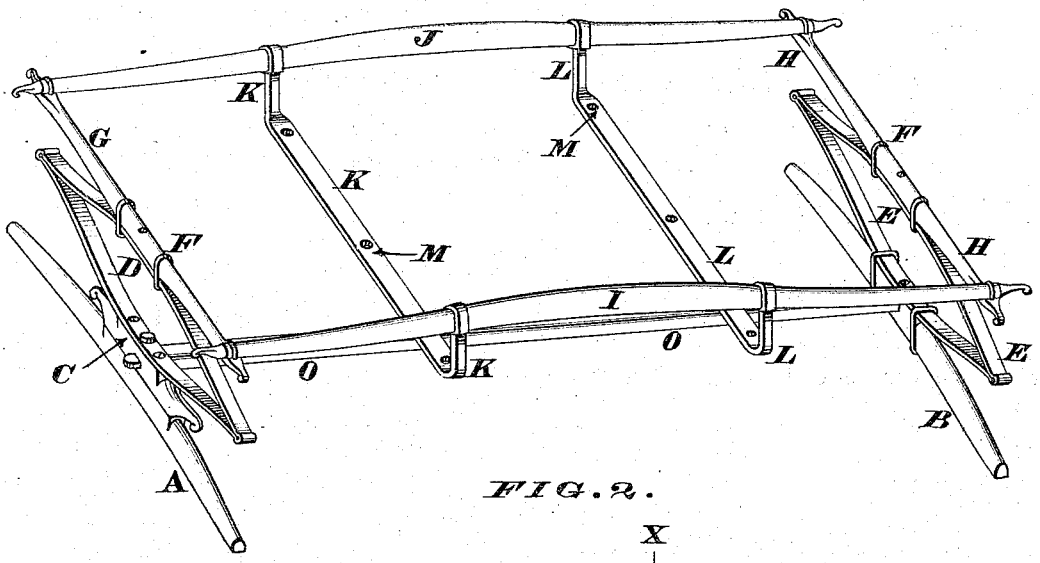


FIG. 2.

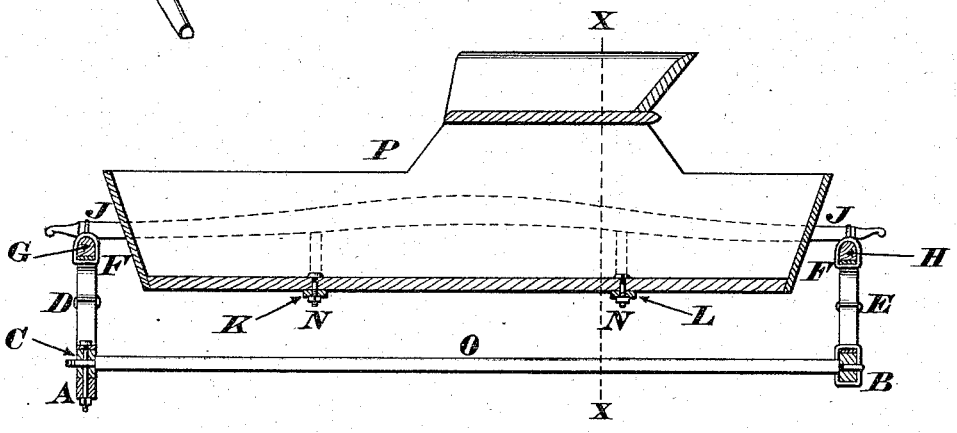


FIG. 3.

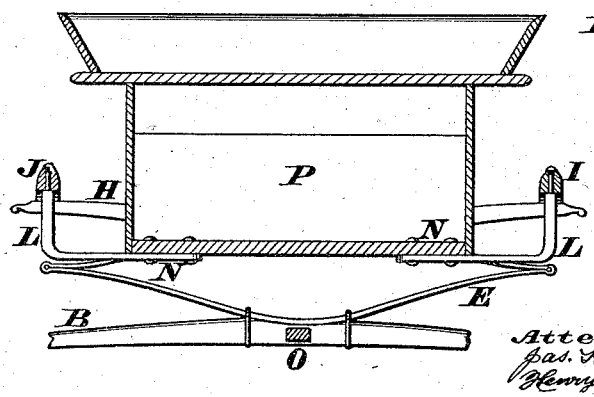
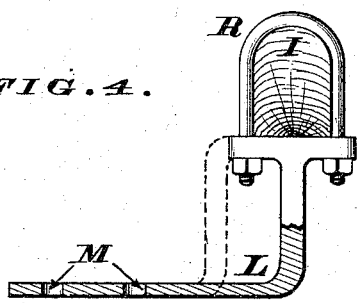


FIG. 4.



Attest
Jas. N. Layman
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James Walker
By Knight Bros.
Att'ys.

UNITED STATES PATENT OFFICE.

JAMES WALKER, OF CINCINNATI, OHIO.

IMPROVEMENT IN SPRING-VEHICLES.

Specification forming part of Letters Patent No. **160,488**, dated March 2, 1875; application filed February 4, 1875.

To all whom it may concern:

Be it known that I, JAMES WALKER, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Spring-Vehicles, of which the following is a specification:

My invention is an improvement in the class of vehicles or carriages in which the bed or body is supported on spring side bars, which are attached to or rest upon suitable connections with the bolster and the rear axle; and my invention consists in an arrangement which secures a low-down body susceptible of great freedom, both of vertical and lateral oscillation, with respect to the running-gear, so as to combine security and ease to the rider with durability of the vehicle.

In the accompanying drawing, Figure 1 is a perspective view of my improved carriage part, the wheels and the body being omitted. Fig. 2 is a longitudinal section of the same with the body in position. Fig. 3 is a cross-section. Fig. 4 shows, by a partially-sectional elevation on a larger scale, my preferred mode of coupling the body-bearers to the side bars.

The following parts may be of customary construction, to wit: the front and rear axletrees A and B, head-block or bolster C, elliptic springs D and E, perch O, and body P. To the upper members of the springs D and E are firmly secured, by clips F or other means, two spring cross-bars, G and H, of some tough and elastic wood. Attached to and resting upon the bars G and H, near their extremities, are my side or longitudinal spring-bars I and J, also of elastic wood. Attached to the bars I and J, at points intermediate between their middle and end portions, are two downwardly-bent bearing-bars of iron or other metal, K and L. These bearing-bars are secured directly and rigidly to the spring side bars by means of clips R or other means; and said bearing-bars, at their point of junction with the side bars, may take the form of either the strong or dotted lines in Fig. 4, or, where there is sufficient room between said side bars and the body, may assume an ogee or other curve.

The bearing-bars are, preferably, extended quite across the body, as in Fig. 1, but may extend only partially across the same, as in Figs. 3 and 4. In either form, that portion of them which supports the body has orifices M for bolts N, or for rivets or clips, whereby the said bearing-bars are rigidly attached to the body.

It is manifest that the portions of the side and cross spring-bars which intervene between their points of attachment to the bearing-bars and the elliptic springs, respectively, constitute, in effect, four springs, which coact with the elliptic springs in imparting a high degree of vertical resilience to the body, while the side spring-bars serve to relieve the body from the action of any abrupt lateral jolts.

The body being attached rigidly to the side spring-bars by the bars L and M, any strain on the body will be received by the side bars directly, and so prevent so much jogging.

I claim as new and of my invention—

The combination of bent bearing-bars K and L, attached rigidly to the spring side bars I and J at points intermediate between their middle and end portions, said bars I and J resting upon the extremities of spring cross-bars G and H, connected by elliptical springs D and E with the bolster and the rear axle, respectively, substantially as set forth.

In testimony of which invention I hereunto set my hand.

JAMES WALKER.

Attest:

GEO. H. KNIGHT,

WALTER H. KNIGHT.