

J. M. MILLER.
Spring Vehicles.

No. 134,916.

Patented Jan. 14, 1873.

Fig. 1.

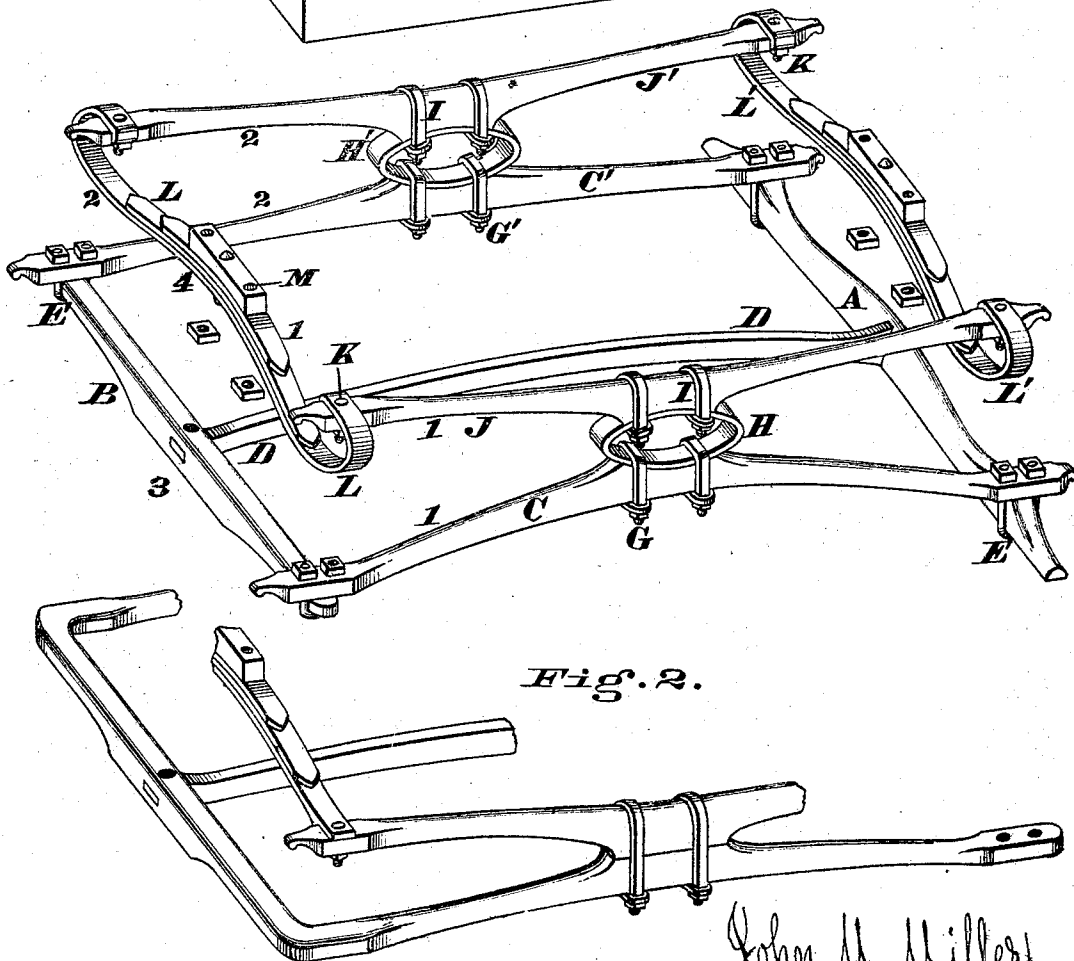
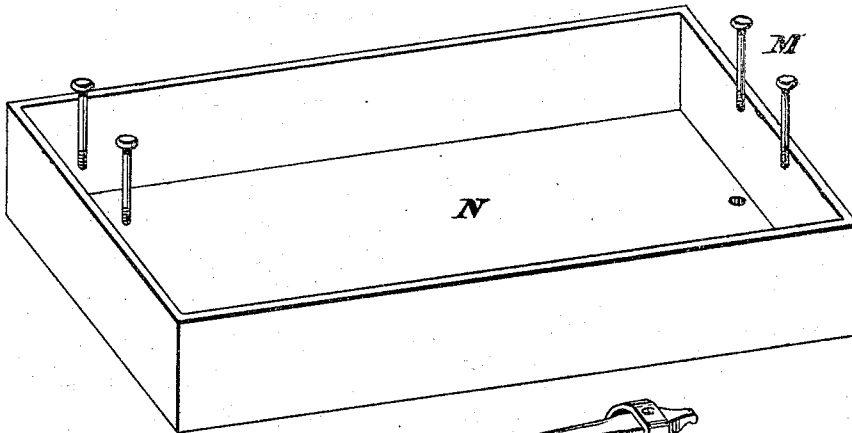


Fig. 2.

Attest.

John H. Gayman
R. L. Knight

John H. Miller
By Knight Bros.
Att'ys.

UNITED STATES PATENT OFFICE.

JOHN M. MILLER, OF CINCINNATI, OHIO.

IMPROVEMENT IN SPRING-VEHICLES.

Specification forming part of Letters Patent No. 134,916, dated January 14, 1873.

To all whom it may concern:

Be it known that I, JOHN M. MILLER, of Cincinnati, Hamilton county, Ohio, have invented an Improvement in Spring-Vehicles, of which the following is a specification:

Nature and Objects of the Invention.

My invention is designed more particularly as an improvement on buggies and other light spring-vehicles; and consists in a construction of the parts which connect the body with the running-gear, which combines the advantages of high elasticity with those of economy, lightness, and elegance.

General Description.

Figure 1 is a perspective view of a "carriage-part" embodying my invention. Fig. 2 represents a portion of a similar, but slightly modified, carriage-part.

A rear axle-tree, A, of customary form, is connected to the head-block B by means of two side bars or reaches, C C', and preferably, in addition to these side reaches, by a central reach or perch, D, which perch may be mortised into said axle-tree and head-block in the usual way. The reaches C C' are attached to the axle-tree A and to the extremities of the head-block B by means of clips E, or by other suitable fastening. The reaches C C' are thickened at their mid-lengths for the support and attachment, by means of clips G, of elliptical metallic springs H H', which support and have attached to them, by clips I, side spring-bars J J', whose extremities support and have attached to them, by bolts K, metallic "half-springs" L L', which are bolted, M, by their middles, to the under side of any bed or body, N. The members C C' J J' are of ash, hickory, or other tough and elastic timber, and, in conjunction with the metallic portions H H' and L L', are of such form and proportions,

and are so united rigidly to each other and to the rear axle, the head-block, and the body, respectively, as to constitute a single highly-effective spring whose most yielding portion is nearest the body. The front half of this composite spring may be considered to be composed of two yielding members, 1 and 2, each above six feet long, and having in common, a fixed point, 3, and a movable point or extremity, 4. The entirely open space between the head-block B below and the half-spring L above, while making a comparatively low body compatible with great freedom of vertical motion, imparts also an exceedingly light and graceful appearance to the vehicle.

It will be seen that the yielding metallic members L and L', beside acting as springs, also discharge the functions of body-irons, (body-loops.)

The above-described preferred form of my improvement may be varied in non-essential particulars. For example: The members C and C' may be, as in Fig. 2, attached directly to the members J and J' without the intervention of the metallic portions H and H'. The reaches and head-block may constitute a single bent wooden bar. The recurved extremities of the springs L L' may be omitted. (See also Fig. 2.)

Claim.

I claim as new and of my invention—

The combination of the transverse springs L L', spring-bars J J', lower spring-bars or reaches C C', axle A, and bolster B, all constructed and arranged to operate as and for the purposes specified.

In testimony of which invention I hereunto set my hand.

Attest:

JOHN M. MILLER.

GEO. H. KNIGHT,
JAMES H. LAYMAN.