M. THROOP & W. H. DOYLE.

SIDE-SPRING VEHICLE.

No. 192,033. Patented June 12, 1877.

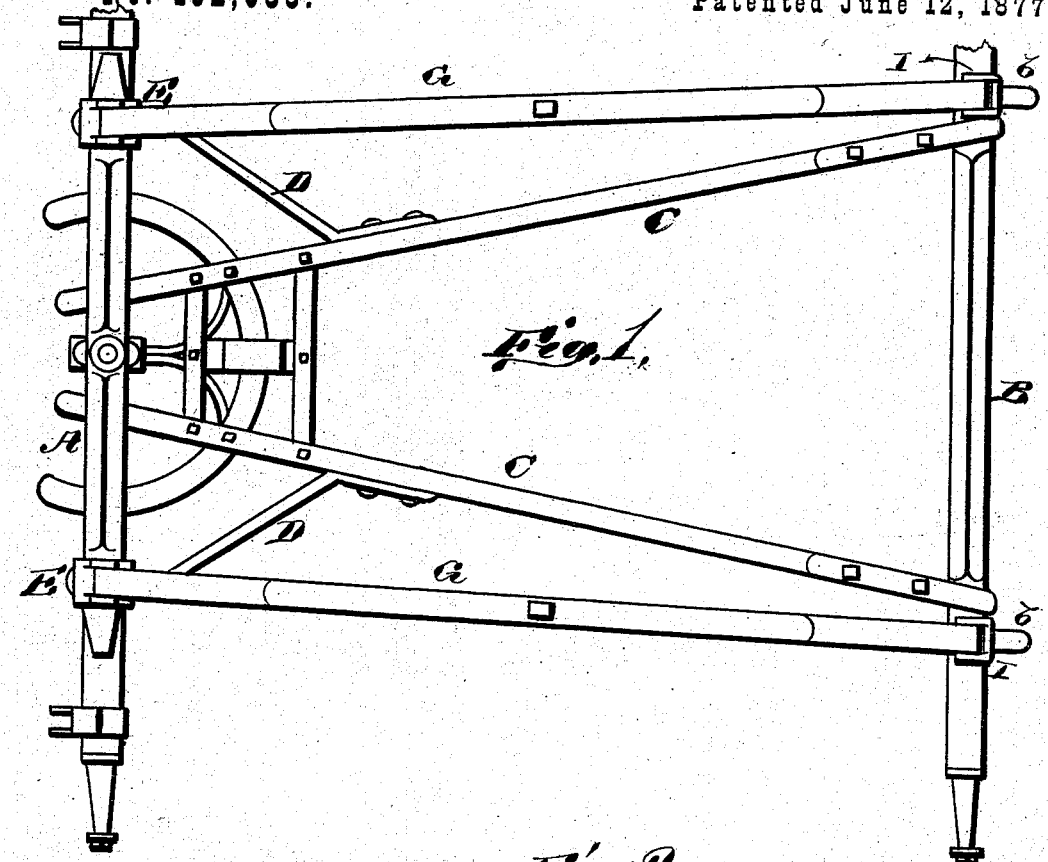

Fig. 1.

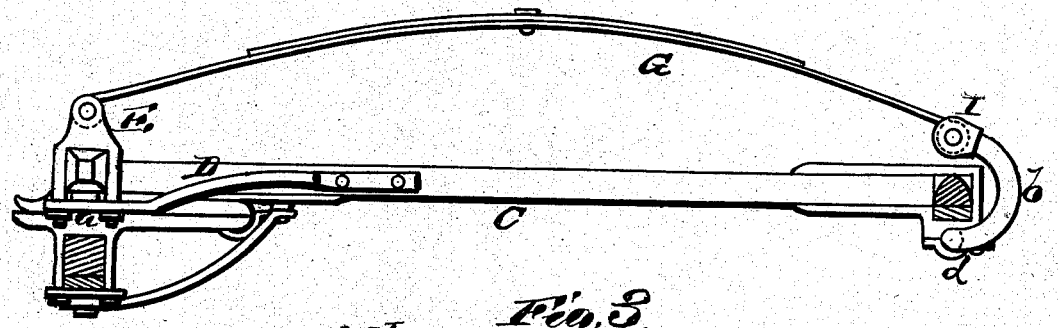

Fig. 2.

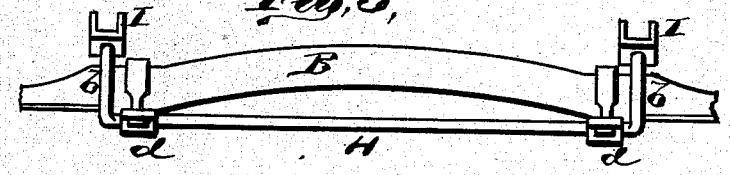

Fig. 3.

WITNESSES

H. Bates

Eugene M. Johnson

INVENTORS.

Monroe Throop.

Wm H. Doyle.

Munn & Co.

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MONROE THROOP AND WILLIAM H. DOYLE, OF BANTAM FALLS, CONN.

IMPROVEMENT IN SIDE-SPRING VEHICLES.

Specification forming part of Letters Patent No. **192,033**, dated June 12, 1877; application filed May 26, 1877.

To all whom it may concern:

Be it known that we, MONROE THROOP and WILLIAM H. DOYLE, of Bantam Falls, in the county of Litchfield and State of Connecticut, have invented a new and valuable Improvement in Side-Spring Buggy-Gears; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of our side-spring buggy-gear. Fig. 2 is a side view, partly in section; and Fig. 3 is an end view of the same.

The nature of our invention relates to side-spring buggy-gears; and it consists in an improvement in hanging side-spring buggies, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates our invention.

A represent the front head-block, and B is the rear axle, connected by means of the inclined reaches C C. The front ends of these reaches are comparatively close together, while their rear ends are spread farther apart, as shown.

D D represent braces, which connect the front ends of the reaches C C with the ends of the head-block, said braces being attached to the head-block by means of clips *a a*, which form jacks E E on top of the head-block.

These jacks are stationary on the head-block, and the front ends of the side springs G G are pivoted to them; hence the front ends of said springs will not work forward and back.

The rear ends of the springs G are pivoted in jacks I I, formed on the ends of crank-arms *b b* upon the ends of a rod or shaft, H, hung in boxes *d d* under the center of the hind axle B. This prevents all swaying motion forward or sidewise, or tipping on one side.

The rod or shaft H is hung under the center of the axle, and the arms *b*, with the jacks I, are of such shape that the spring-eye comes over the center of the axle on top when the buggy is not loaded; and as the buggy is being loaded, and the springs lengthen, the rod turns perfectly easy, equalizing the weight on both springs, and there is no strain on the gear endwise.

The ordinary way of hanging brings a heavy strain on the reaches, and usually three reaches have to be employed, one near each spring and one in the middle. By our invention only two reaches are needed, arranged in the manner shown.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a side spring buggy, the combination, with the head-block A and hind axle B, of the side springs G G, the stationary jacks E E on the head-block, and the shaft H under the hind axle, provided with arms *b b* and jacks I I, substantially as and for the purposes herein set forth.

2. The combination of the block A, hind axle B, reaches C C, braces D D, jacks E E, springs G G, and the shaft H with arms *b b* and jacks I I, substantially as and for the purposes herein set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

MONROE THROOP.
WILLIAM H. DOYLE.

Witnesses:
HENRY B. GROVER,
L. M. JOHNSON.