W. H. LEWIS.

Carriage-Spring.

No. 43,919. Patented Aug 23, 1864.

Fig: 1.

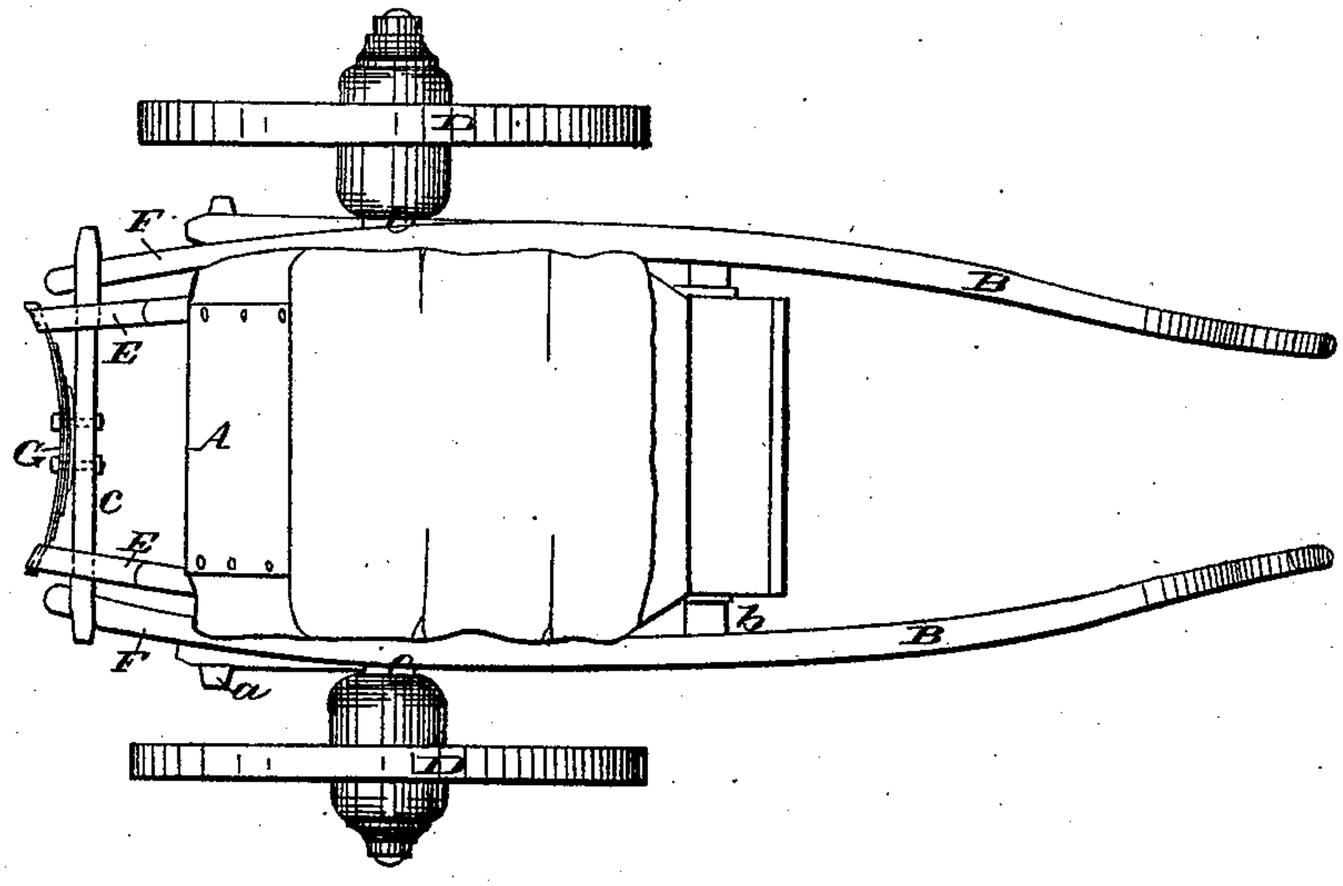
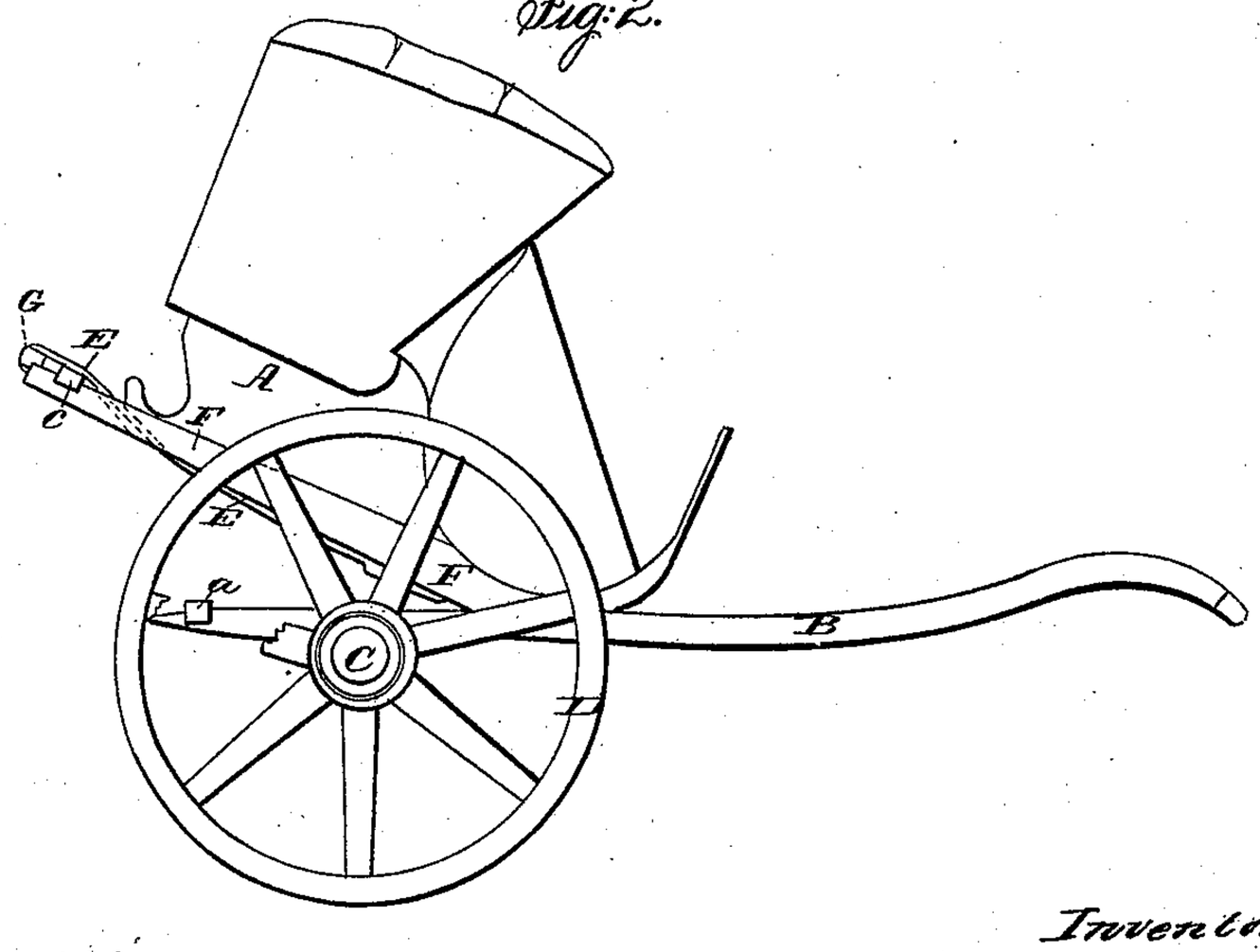


Fig: 2.



Witnesses

Frederick Curtis.

F. P. Hale Jr

Inventor

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by his attorney

R. H. Eddy

UNITED STATES PATENT OFFICE.

WILLIAM H. LEWIS, OF GREENWOOD, MASSACHUSETTS.

IMPROVEMENT IN WHEEL-CARRIAGES.

Specification forming part of Letters Patent No. **43,919**, dated August 23, 1864.

To all whom it may concern:

Be it known that I, WILLIAM H. LEWIS, of Greenwood, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Chaises or Wheel-Carriages of Like Nature; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, and Fig. 2 a side view, of a gig or chaise provided with my invention, the nature of which consists in the combination and arrangement of a semi-elliptic spring with the thorough-braces, the side springs, and the cross-bar of such side springs, the whole being as hereinafter explained.

In the drawings, A denotes the chaise or gig body, B C the shafts, C the axle, and D D the wheels, the shafts being supported on the axle and extended backward therefrom and connected at or near their rear ends by a cross-bar, *a*. The body A rests on two thorough-braces or leather bands, E E, which heretofore have been secured not only to a front cross-bar, *b*, but also to the cross-bar *c* of the two wooden side springs, F F, which are arranged at an acute angle with and project from the shafts.

Instead of looping the thorough-braces directly to the cross-bar *c* of the two side springs, F F, I loop them on or connect them immediately with the two free ends of a semi-elliptic spring, G, applied against the rear side of and fastened at its middle to the cross bar *c*. Each of the thorough-braces spans the bar *c*.

Another mode in which I have contemplated the application of my invention is to attach the semi-elliptic spring to the front cross-bar, *b*, and to have the thorough-braces connected to the free extremities of such spring, and also to either the cross-bar *c* or to a semi elliptic spring applied to the said cross-bar *c*.

It is found in practice that the ordinary side springs, F F, when used alone with the thorough-braces, and these latter are directly affixed to the back bar, do not afford sufficient elasticity. In other words, a person sitting in the vehicle while it may be passing over a rough road or pavement will often experience sudden and disagreeable shocks or jolts, which, with the auxiliary elliptic spring applied to the side springs and thorough-braces are scarcely noticeable. The auxiliary spring therefore effects a very important improvement in the chaise or gig having its body supported on thorough-braces, and having the wooden side springs of the kind described. The auxiliary spring acts with the side springs and their thorough-braces in sustaining the body, and the whole co-operate to render the motions of such body very easy.

I claim as my invention—

In the chaise or gig, the combination of the semi-elliptic spring G with the thorough-braces E E, the side springs, F F, and their cross-bar *c*, the whole being arranged and so as to co-operate substantially as hereinbefore explained.

WM. H. LEWIS.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.