2 Sheets—Sheet 1.

G. D. GRIFFIN.
Carriage-Spring.

No. 208,390. **Patented Sept. 24, 1878.**

Fig. 1.

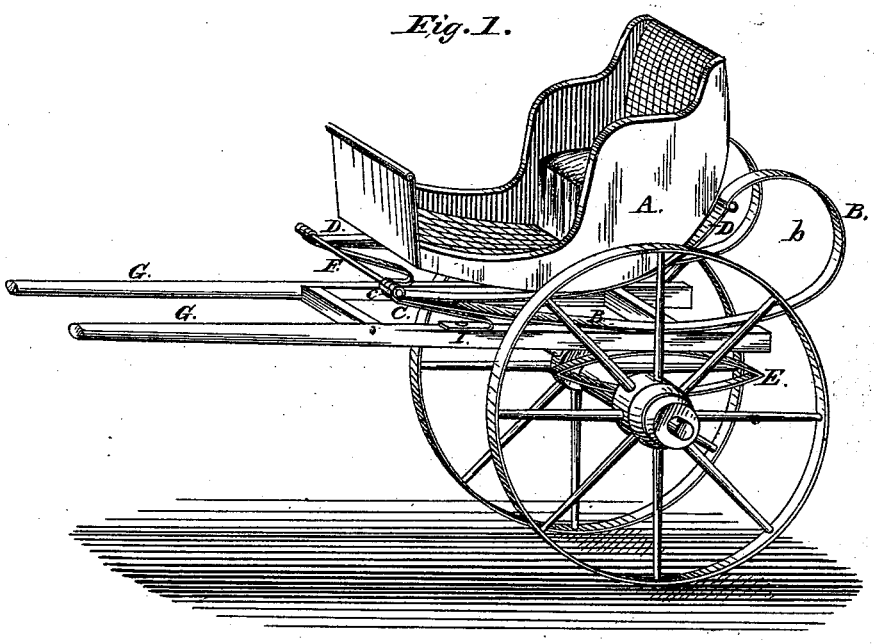
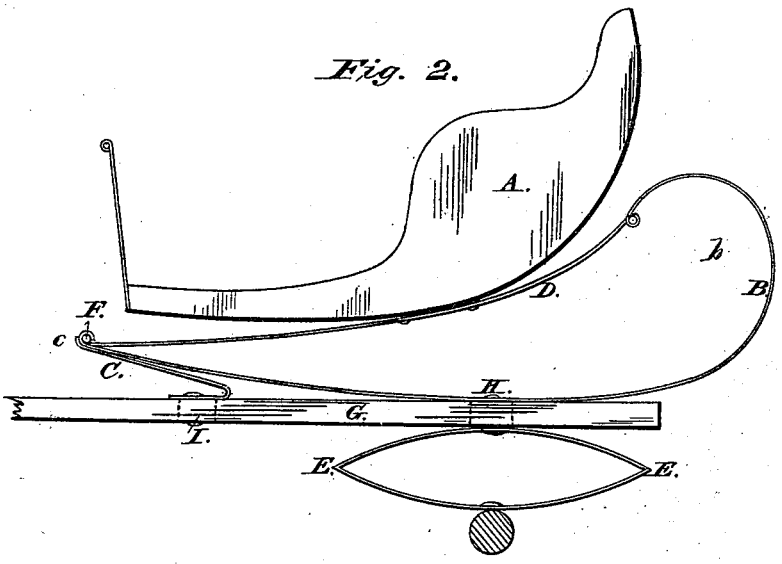


Fig. 2.



Witnesses:
T. C. Brecht.
J. A. Rutherford.

Inventor:
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Attorney.

2 Sheets—Sheet 2.

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Fig. 3.

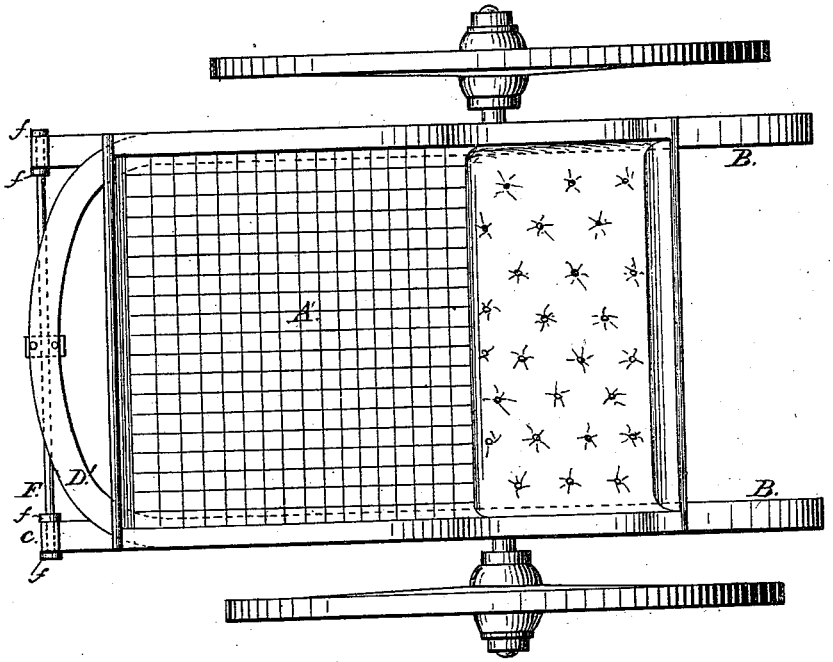
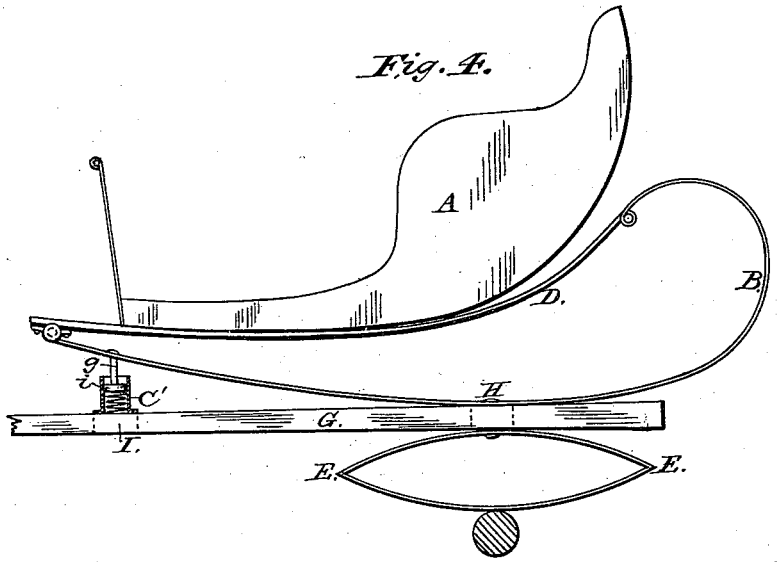


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE D. GRIFFIN, OF HAMILTON, ONTARIO, CANADA.

IMPROVEMENT IN CARRIAGE-SPRINGS.

Specification forming part of Letters Patent No. **208,390**, dated September 24, 1878; application filed March 16, 1878.

To all whom it may concern:

Be it known that I, GEORGE D. GRIFFIN, of Hamilton, in the county of Wentworth, Province of Ontario, Canada, have invented certain new and useful Improvements in Gigs or Chaises, of which the following is a specification:

This invention relates to that class of chaises or gigs in which the box or body is mounted on springs; and its object is to give to the body of such a vehicle an easy spring-rocking motion and relieve it of the forward jolt incident to the forms of construction now in use.

In the accompanying drawing, Figure 1 is a perspective view of a gig constructed according to my invention, and Fig. 2 is a side elevation with the wheels omitted. Figs. 3 and 4 show modifications.

The letter A indicates the body of the gig, and G the shafts, resting upon and secured in the ordinary manner to the elliptical springs E, which are secured to the axle-tree of the vehicle. Upon the top of each shaft is secured, intermediately of its length, a band-spring, B, the front portion of which curves slightly upward away from the shaft, while the rear and longer portion extends rearward beyond the end of the shaft, and is bent over forward to form a loop, *b*. Connecting the two ends of this spring, and attached thereto by hinge-joints, is a spring-bar, D. These two jointed springs form a loop-spring, and one of such springs is arranged between each side of the bottom of the chaise box or body and one of the shafts, said box resting upon and being secured to the spring-bars D. The two loop-springs are connected and held in positions parallel to each other by straight cross-bars F, the ends of which form the pins connecting the hinge-joints of the respective parts D B of each loop. To the top of each shaft is secured at I a spring-arm, C, inclining forward and upward, and having its free end *c* curved to form a seat, upon which rests the front hinge-joint of the loop-spring, thus re-enforcing the main supporting-springs of the body or box, and relieving said box of the forward jolt incident to this class of vehicles heretofore.

In the modification shown in Fig. 3, which construction is preferable for narrow chaise-bodies, the bar D′, which supports the body, is formed in one piece, bent in front, and attached at its center to the cross-bar F, the ends of which are provided with double collars *f f*, which rest upon the upward curved ends of the springs B.

In Fig. 4 is shown a mode of applying spiral auxiliary springs C′ instead of the band-springs C, in which construction the spring B should be provided with lugs *g*, which enter the casings *h* of the springs and rest upon the disks *i* or covers, which fit over and upon the tops of the said springs. When this construction is used the front portions of the springs B may be dispensed with, if desired, and the lugs *g* project downward directly from the body.

What I claim is—

The combination, with the body and shafts of the vehicle, of the metallic loops, formed of the two parts D and B, hinged together, the auxiliary springs, arranged between the front end of said loops and the shafts, and the elliptical springs E, arranged between the shafts and axle.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

GEORGE D. GRIFFIN.

Witnesses:

F. R. D. ESPARD,

H. M. GRIFFIN.