(No Model.)

J. B. BAYNES.

VEHICLE SPRING.

No. 343,791. Patented June 15, 1886.

Fig. 1.

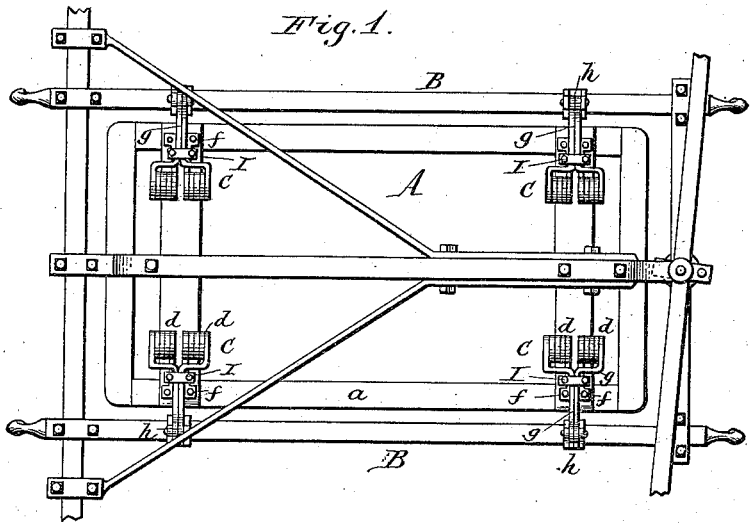


Fig. 2

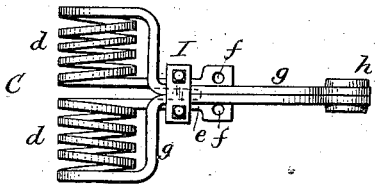


Fig. 3.

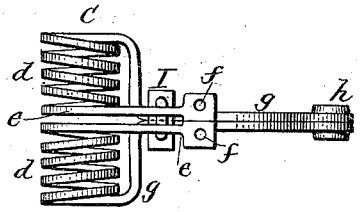


Fig. 4.

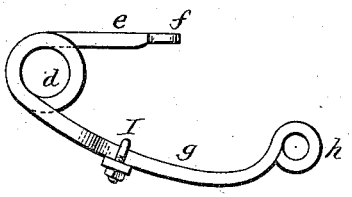
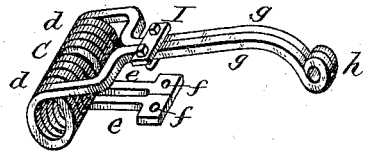


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES B. BAYNES, OF BUFFALO, NEW YORK.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 343,791, dated June 15, 1886.

Application filed February 9, 1886. Serial No. 191,331. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. BAYNES, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Vehicle-Springs, of which the following is a specification.

This invention relates to an improvement in that class of vehicle-springs which consist of two spiral springs having end arms which are secured to the body of the vehicle, and which are connected with their opposite arms to the side bar of the vehicle by a pivoted connection, the side-bar arms of the springs being rigidly secured together to form a reliable connection with the side bars. Springs of this character are described and shown in Letters Patent of the United States Nos. 258,823 and 292,147, dated, respectively, May 30, 1882, and January 15, 1884. In the springs described and shown in these patents the arms which are secured to the body of the vehicle are formed on the extreme outer ends of both coils, and the inner adjacent arms of the springs are connected with the side bars. This construction necessitates the employment, in the vehicle-body, of an attaching-piece of hard wood, which is longer than both coils of the springs.

The object of this invention is to shorten the connection of the coils with the vehicle-body without sacrificing the strength and rigidity of the side-bar arms of the coils; and my invention consists, to that end, of the improvements which will be hereinafter fully set forth, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a bottom plan view of a vehicle provided with my improved springs. Fig. 2 is a bottom plan view of one of the springs on an enlarged scale. Fig. 3 is a top plan view thereof. Fig. 4 is a side elevation of one of the springs. Fig. 5 is a perspective view showing one of the springs inverted.

Like letters of reference refer to like parts in the several figures.

A represents the vehicle-body, and *a* the bottom frame thereof.

B represents the side bars, and C the springs connecting the vehicle-body with the side bars. Each spring C consists of two spiral coils, *d*, arranged in line with each other, and having their adjacent inner arms or ends, *e*, extending outwardly from the upper side of each coil and provided with eyes *f*, through which pass fastening bolts or screws, by which the arms *e* are secured to the under side of the frame *a* of the body in close proximity to each other. The outer arm or end, *g*, of each coil *d* is bent inwardly along the front side of each coil until both arms *g* meet. From this point both arms *g* extend outwardly toward the side bar, B, and terminate in an eye, *h*, which is provided with a suitable bushing, and to which the hanger attached to the side bar is pivoted in a well-known manner. The two contiguous arms *g* are rigidly secured together at their point of junction in front of the coils by a clip, I, or other suitable fastening, and at their outer ends by the bushing passing through the eye *h*, or other suitable means, so that the portions of the arms *g* which extend outwardly from the coils to the side bars form a single rigid arm, which transmits all strains to both coils equally and simultaneously. The inner arms, *e*, are secured to the body, side by side, to a comparatively short piece of hard wood, thereby forming a compact and reliable fastening at less cost than heretofore.

It is obvious that the springs C may be arranged so that the arms *g* will project from the ends of the body instead of from the sides thereof, and be attached to the rear axle and to the front bolster instead of the side bars.

I am aware that the inner ends of spring-coils have been attached to the vehicle-body side by side, and I do not broadly claim such construction.

I am also aware that the outer arms of the coils have been extended outwardly in an inclined position to the side bar, as shown in Letters Patent No. 328,238, October 13, 1885, and I do not claim such construction.

I claim as my invention—

A vehicle-spring composed of two coils, *d* *d*, having their inner ends, *e*, extending outwardly, side by side, from the upper sides of the coils and adapted to be secured to the ve-

hicle-body, and having their outer arms, *g*, bent inwardly along the front side of the coils and secured together by a clip, I, and then extended outwardly and adapted to be attached to the side bar, whereby the outer arms, *g*, of the coils form a single rigid arm connecting both coils with the side bar, substantially as set forth.

Witness my hand this 26th day of January, 1886.

JAMES B. BAYNES.

Witnesses:
OSCAR SCHAUB,
CARL F. GEYER.