

PEARSALL & BRIGGS.

Carriage Spring.

No. 110,934.

Patented Jan. 10, 1871.

Fig. 2.

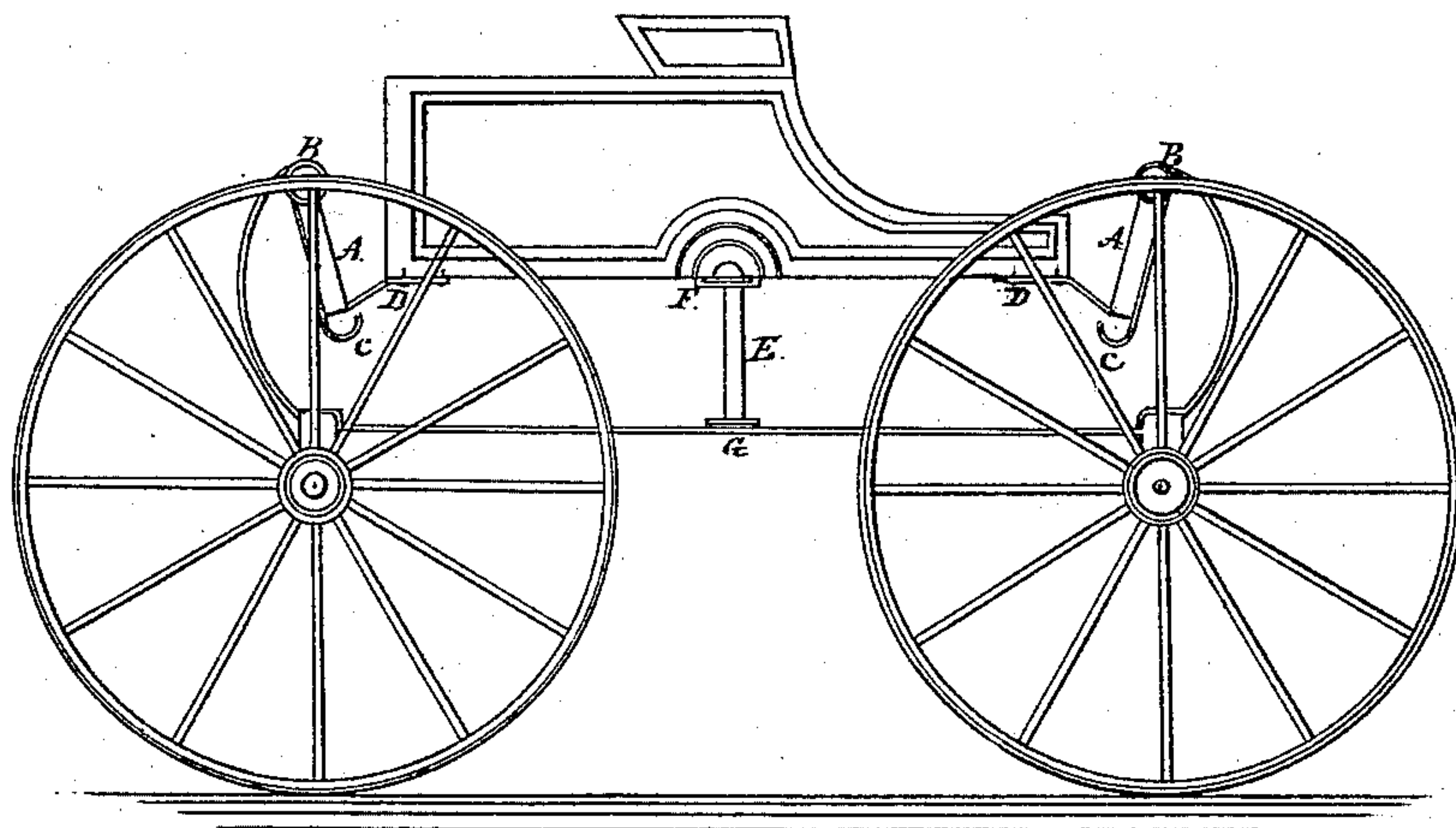


Fig. 3.

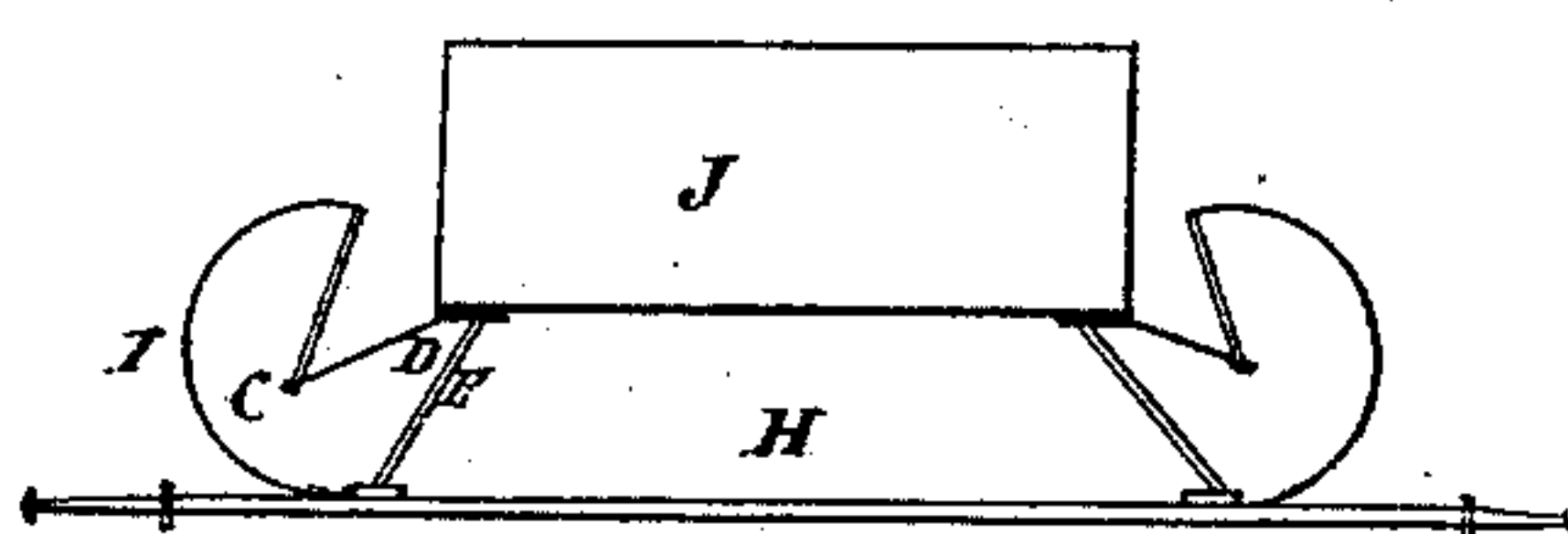


Fig. 4.

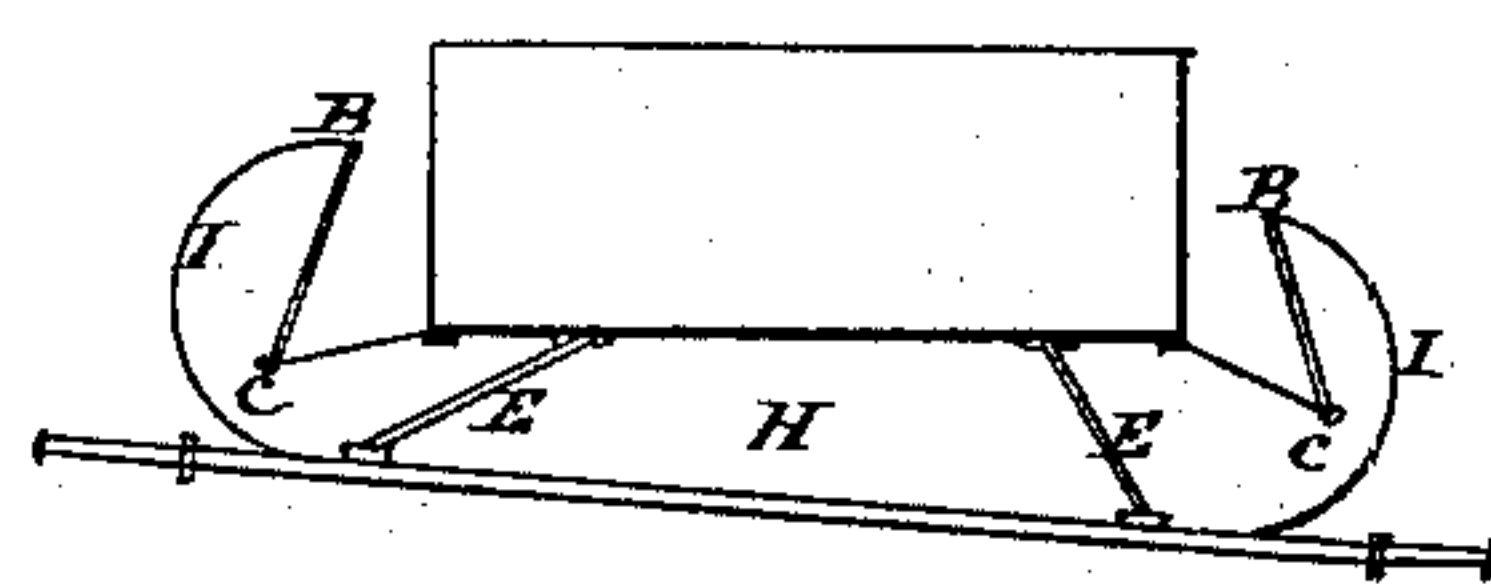
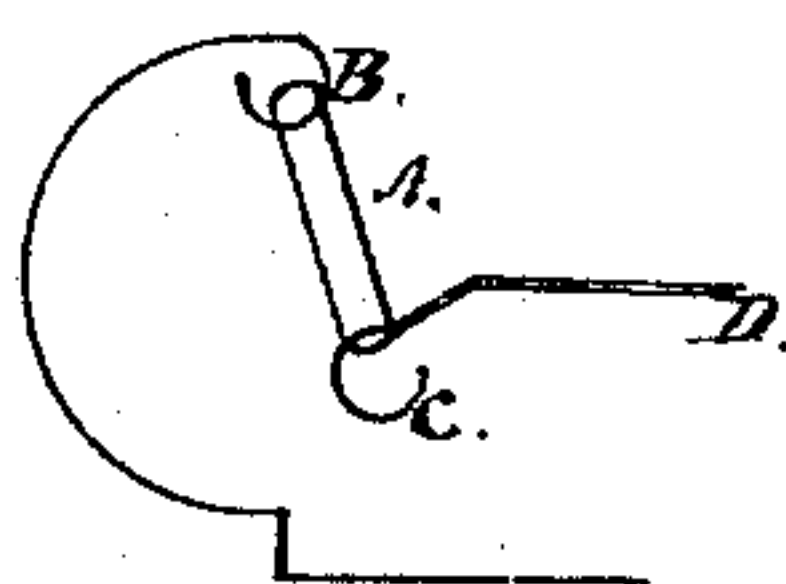


Fig. 1.



Witnesses.

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SAMUEL J. PEARSALL AND SILAS P. BRIGGS, OF SARATOGA SPRINGS,
NEW YORK.

Letters Patent No. 110,934, dated January 10, 1871.

IMPROVEMENT IN SPRINGS FOR WAGONS AND CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, SAMUEL J. PEARSALL and SILAS P. BRIGGS, of Saratoga Springs, in the county of Saratoga and State of New York, have invented a new and improved kind of Springs for Wagons, Carriages, and other Vehicles, and a new and improved mode of confining and steadying the bodies of said vehicles; and we do hereby declare the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of our invention consists—

First, in elongating elastic springs to support the bodies of wagons or other wheeled vehicles and make them easy riding.

Second, in elongating elastic springs to confine the bodies to the under-gearing and make them more steady and easy riding.

Third, in an arrangement of these elongating elastic springs, so as to keep the bodies more erect than they ordinarily are when passing over uneven ground.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

We construct any vehicle requiring springs so that the body can be conveniently suspended and confined by elongating springs. These springs may be made of India rubber or steel, and the supporting and confining sets may be used separately if desired.

Figure II is the side view of a wagon, and A A are two elongating springs, made of India rubber, attached at B and B to bows on the axles, and at C C to arms on the lower corners of the body. These arms and bows may be used stiff or as springs. These supporting springs may be used in any desired position.

We propose to suspend the body by these springs, hung in any convenient line of suspension, and to make them of any convenient materials and form, and to use different modes of attachment in applying the springs to different kinds of vehicles, and in applying them to the same kind of vehicle when used for light or heavy loads.

Their position on the sulky and buggy, now used by applicant, Dr. Pearsall, is similar to that of the thorough-braces in common use. The springs are attached to the body and gearing-frame without any bows or arms. The rubber on both, when not stretched, is about two inches wide and three-fourths of an inch thick.

The size of steel spiral or other-shaped suspenders must vary with the load to be carried, and can be easily determined by a practiced mechanic in that manufacture.

Indeed, we claim these elastic suspenders, of any shape, material, kind, form, or position or connection answering our purpose, to be applied alone or in connection with the elastic straps hereinafter described. They are, in fact, an elastic substitute for the common non-elastic thorough-brace, and so used by us without other connection in the buggy and sulky above mentioned; but when arranged for keeping the body more erect, or to prevent it from tipping sidewise as much as the wheels and gearing will when going over rough ground, the upper ends of the springs must be nearer the lengthwise perpendicular center-plane of the wagon than the lower ends.

The effect produced by this arrangement is seen in Figures III and IV, representing the hind-axle H, hind end of box J, elongating elastic springs B C and B C, and bows I I, which bows are here placed upon the axle in its perpendicular plane, bowing outward. The position of the bows is not material.

Fig. IV represents the relative positions of the body J and the axle H when one wheel stands higher than the other.

In fig. II, at E, is seen one of the elongating elastic springs confining and steadying the motion of the body, connected to the body at F and to the reach at G. The same is seen in Fig. IV, where the effect of these springs is shown in keeping the body more erect when the wheels one side are higher than the other, as the swaying of the body tends comparatively to tighten the spring on the upper side and make it draw downward, while the spring on the other side loosens and lets that side of the body keep a higher elevation than otherwise. To produce this effect the upper ends of these springs must be nearer the lengthwise perpendicular center-plane of the body than the lower.

Two of these springs will answer in some cases, in others four may be required.

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

1. The spring B C, in Figs. III and IV, with the lower ends extending from the body further than the upper ends, as described, in connection with the spring connections under the body, arranged as and for the purpose set forth.

2. The arrangement of the spring connection under the body, marked E in Figs. II, III, and IV, with the reaches or frame-work, and the body of the vehicle, with the devices of the first claim, as set forth.

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Witnesses:

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