

(Model.)

C. C. KING.
VEHICLE SPRING.

No. 282,904.

Patented Aug. 7, 1883.

Fig. 1.

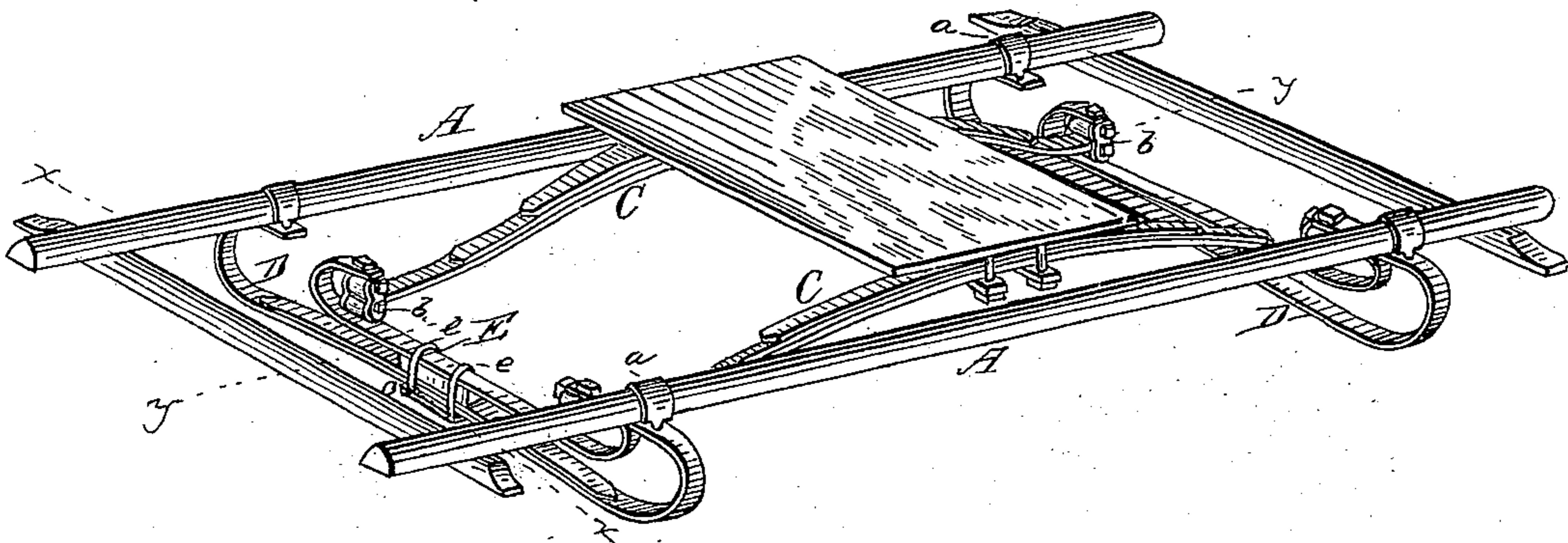


Fig. 2.



Fig. 3.

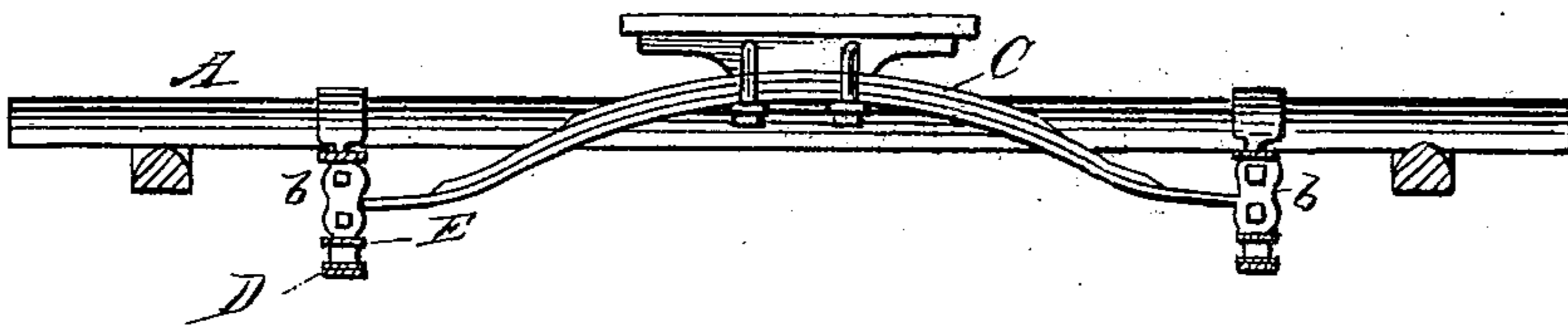
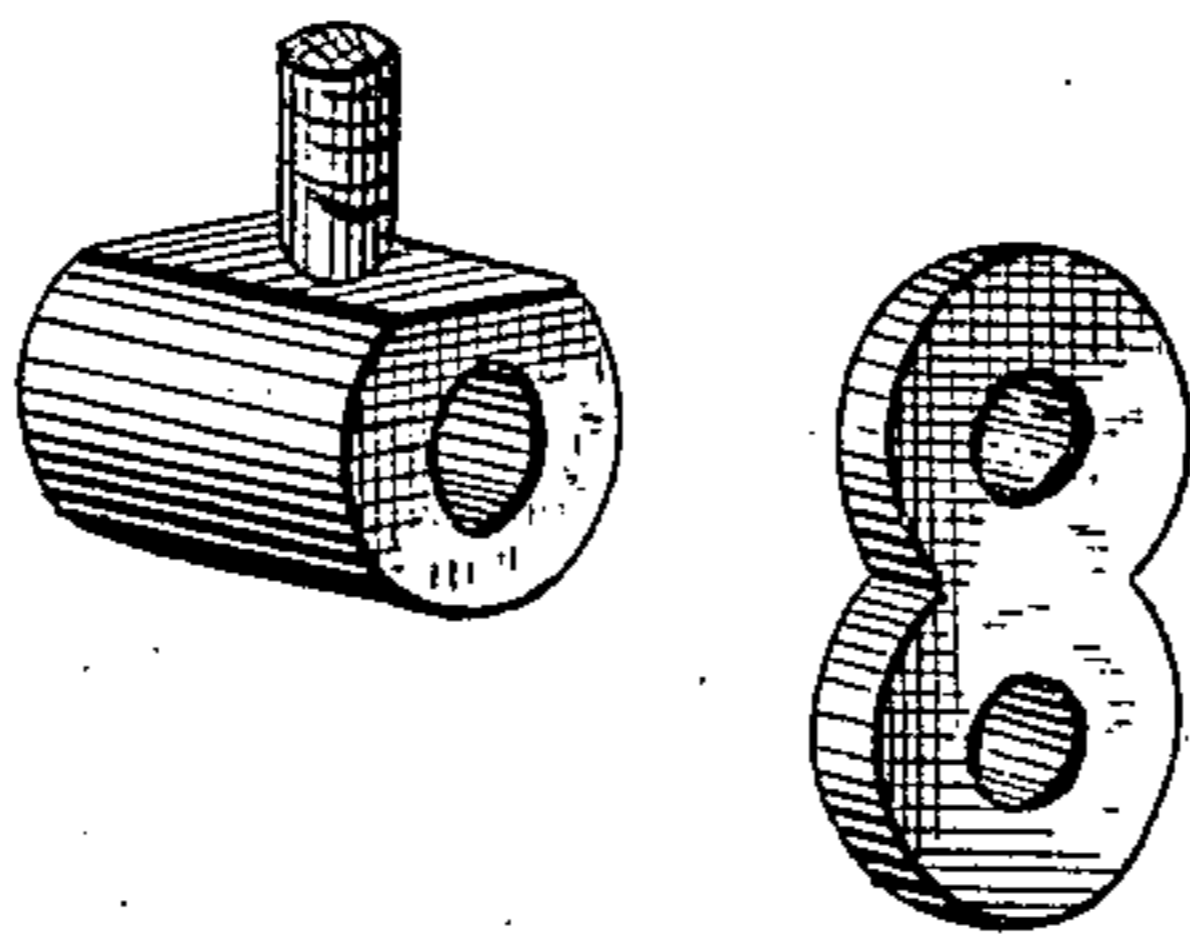


Fig. 4.



Inventor:

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Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES C. KING, OF SHELBY, OHIO.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 282,904, dated August 7, 1883.

Application filed June 14, 1883. (Model.)

To all whom it may concern:

Be it known that I, CHARLES C. KING, a citizen of the United States of America, residing at Shelby, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Buggy-Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in vehicle-springs, the same being adapted to be applied to that class of vehicles known as "side-bar;" and my invention consists in providing a side-bar vehicle with two transverse springs of different lengths which are united to each other, the larger spring being attached to the side bars at its end, while the inner spring is attached to the same and to longitudinal springs.

My invention also consists in the construction and the combination of the springs and the attachment, as will be hereinafter more fully set forth, and pointed out in the claims.

In the annexed drawings, which illustrate my invention, Figure 1 is a perspective view. Fig. 2 is a sectional view taken through the line *x x*, and Fig. 3 is a longitudinal section taken through the line *y y*. Fig. 4 is an enlarged detailed perspective view.

In the accompanying drawings, A A represent the side bars, which are of ordinary construction, and are attached to each other at their ends by means of bolsters which rest upon the axles or running-gear in the usual manner. Attached to these side bars, at a suitable distance from the ends thereof and within the bolsters, are transverse springs D D, which are provided with a suitable number of leaves, and are shaped so as to be elliptic near their central portion, while the other ends are curved upwardly, said ends terminating horizontally under the side bars, and are provided with perforations through which pass the ends of the clip *a* for attaching the same thereto. These springs project beyond the outer side of the side bars A, as shown. Immediately above

these transverse springs D D is attached another similarly-shaped spring, E, which is of less length and is provided with smaller curves than the spring D upon which it rests. These transverse springs are separated from each other by a block, *c*, the aforesaid springs and block being securely united to each other by means of clips *e e*, which encircle the same. The curve of this upper spring terminates horizontally and about on a line with the lower edge of the side bars, which ends are provided with perforations or means for attaching clips, as shown at *b*, the construction of which will be hereinafter fully set forth.

To the ends of the springs E are attached longitudinal springs C, which are raised in their center, as shown, and are provided at their end with eyes, whereby they may be attached to the clip *b*. To these longitudinal springs C, at their central portion, are attached by means of suitable clips *sills*, to which the body of the vehicle is attached. These longitudinal springs C may be formed of as many leaves as desired, and the sills may be attached thereto by the same clips which are used to unite the leaves. The longitudinal springs C and the inner transverse springs, E, are attached to each other by what I term "double clips," the end of the spring E being provided with an eye provided with an upwardly-projecting portion which passes through the end of the transverse spring and is secured thereto by a nut. To the side of this eye are secured two links which embrace the sides of the same, and are pivoted thereto by means of a transverse bolt which passes through perforations in these links and the eye which is attached under the transverse spring. Through the lower perforations in these links passes a bolt, which also passes through the eye in the end of the longitudinal spring, by which means the parts are united so as to allow a slight forward and rearward swing, which will compensate for and entirely overcome the forward motion which is imparted to the running-gear, known as the "draft strain," and these clips, when attached to the inner transverse swings, render it unnecessary to provide compensating-bars, as has been done upon this class of vehicles; and it is evident that by the construction of the said swings I avoid the side motion and provide a

gear which is elastic and comfortable and has an easy swinging motion, the longer transverse spring taking up the larger portion of the motion imparted from the axles.

5 The advantages of my construction will be obvious to those skilled in the art of carriage building.

Having thus described my invention, what I claim as new, and desire to secure by Letters
10 Patent, is—

1. In a side-bar vehicle, the transverse springs D and E, united to each other and provided with longitudinal body-supporting springs C, substantially as shown.

15 2. In a side-bar vehicle, the transverse spring D, having upturned ends attached to the side bars and extending outwardly beyond the same, and transverse spring E, with upturned end, located within the side bars, said springs
20 being connected to each other, in combination with the longitudinal springs C, supporting the body, the parts being organized substantially as shown.

3. The transverse springs D and E, united
25 to each other at the center and having an intermediate block, *c*, and longitudinal spring C, substantially as shown.

4. In a side-bar vehicle, the longitudinal springs C, parallel with the side bars and ex-

tending above the same, in combination with 30 the transverse springs B and E, located under the side bars and having upturned ends which are attached to the side bars and to the ends of the longitudinal springs, as shown.

5. The longitudinal springs C, located with- 35 in the side bars and attached to the end of the spring E by means of swinging clips, in combination with the spring D, attached to the side bars, substantially as shown.

6. In a side-bar vehicle, the longitudinal 40 spring C, located within the side bars and being parallel therewith, the inner transverse spring, E, having inwardly-turned end and connected to the longitudinal spring by a swinging clip, and the spring D, having curved 45 outer ends, which extend beyond the side bars and are attached thereto, said transverse springs being united to each other at their center and provided with a block, *c*, the parts being combined and arranged substantially as 50 shown.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES C. KING.

Witnesses:

WESLEY FICKES,
PHILIP STENTZ.