(No Model.)

C. M. BLYDENBURGH.

VEHICLE SPRING.

No. 375,256. Patented Dec. 20, 1887.

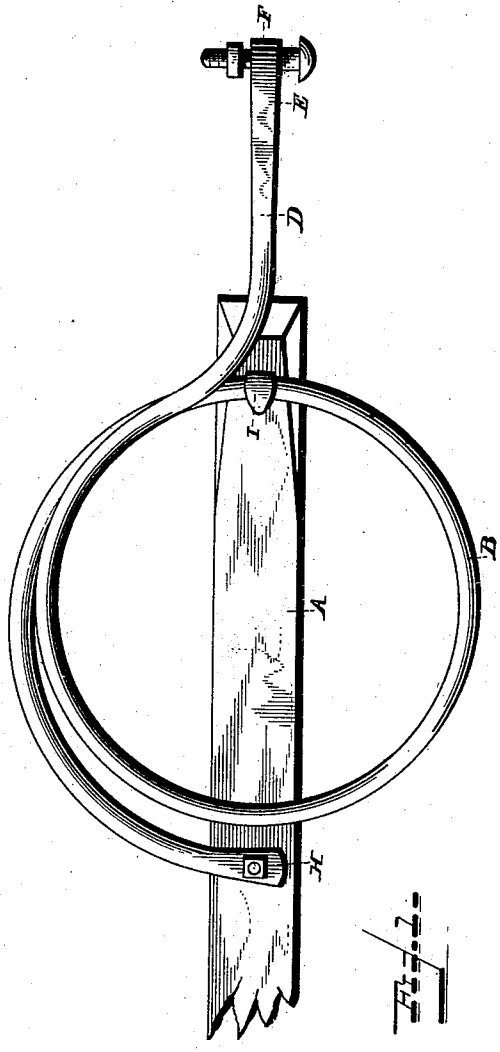

Fig. 1.

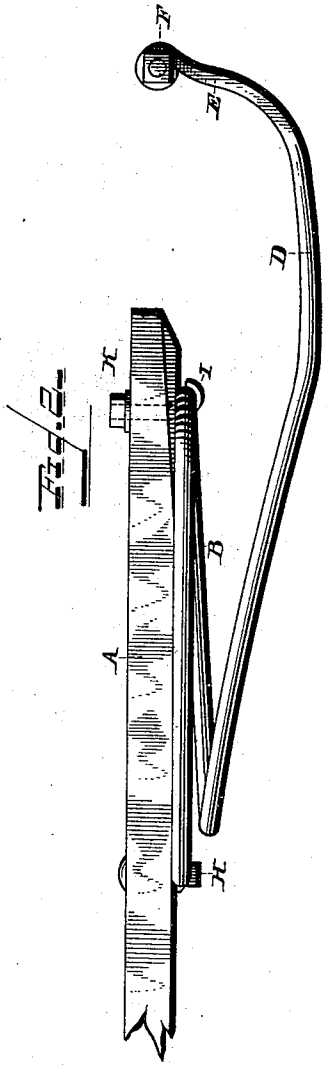

Fig. 2.

WITNESSES

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VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 375,256, dated December 20, 1887.

Application filed January 14, 1887. Serial No. 224,361. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. BLYDENBURGH, a citizen of the United States, and a resident of Riverhead, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in Vehicle-Springs; and I do 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.

Figure 1 of the drawings is a representation of a bottom plan view. Fig. 2 is a side elevation.

My invention relates to improvements in vehicle-springs, the main object being to provide a simple spring and attach it to the vehicle in such manner that there will be no vertical strain on either side of the attachments of the spring to the parts of the vehicle, so that the said parts will not be liable to split at said attachments, as there will be no twisting strain upon them; and it consists in the construction and novel combination of parts as hereinafter set forth.

Referring by letter to the accompanying drawings, A designates a portion of the spring-bar of a vehicle-body, which is sufficient to illustrate the application of the improved vehicle-spring to the body of the vehicle.

B is the coil-spring, which is made of a single piece of steel of uniform weight throughout its entire length. The spring B consists of one and one-half coil curving and opening downwardly, and is provided with an arm, D, which extends in the plane running through the points of attachment of the spring to the spring-bar radially to the coil. The said arm runs downwardly and then curves upwardly at its outer end, E, which end E is provided with an eye, F, to receive the bolt by which the outer end of the coil-pring B is secured to the running-gear of the vehicle. At its inner end the spring B is flattened and provided with a bolt-hole, through which a bolt, H, is passed and secured in place by a nut. At a point diametrically opposite the bolt H a clip-bolt, I, is passed through the spring-bar A and engages the spring B, a nut, K, on the upper end of the clip-bolt securing the latter in place.

The clip-bolt, as shown in Fig. 2, does not bind the spring so closely to the spring-bar as to prevent all torsion between said bolt and the bolt H.

The action of the spring is a combination of torsion, compression, and bending, all working together and relieving any undue strain of either quality, so that the spring is not liable to break.

The springs automatically adjust themselves to the weight of the load, giving a perfect riding buggy for either one or three persons, and, being jointless, there is no noise and but little friction.

In this spring the arm can be extended as far as necessary to produce an easy riding spring, and by setting the coil back under the body the carrying capacity of the spring can be easily regulated. Furthermore, there are no right and left springs, as is necessary in other constructions of this class.

The attachments by the bolts H and I, being in a right line with the attachment at F to the running-gear, there can be no vertical strain on either side of said attachment, as there would necessarily be were the attachment to the spring-bar out of line with the attachment to the running-gear. The coil, as described, must necessarily consist of just one coil and a half of the steel bar, of which it is composed.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. A vehicle-spring consisting of one and one-half coil of steel bar curved downwardly from its points of attachment to the spring-bar and provided with an arm extending in the plane passing through the two points of attachment to the spring-bar radially to the coil, and provided with an attachment-eye at its upwardly-curved end, substantially as specified.

2. The combination, with the spring-bar of a vehicle, of the spring consisting of one and one-half coil secured at its inner end to said bar and also at a point diametrically opposite thereto, and having an arm extending outward in a plane passing through said attachments

radially to the coils, and provided with an eye at its end for attachment to the running-gear, substantially as specified.

3. The combination, with the spring-bar A, the spring D, consisting of one and one-half coil of steel bar, and the arm D, provided with an eye, F, at its upwardly-bent end, the bolt H, the clip-bolt I, and nut K, substantially as and for the purpose specified.

4. A vehicle-spring composed of a steel rod formed with a coil having one and one-half turn the inner end being secured to the vehicle-body and the outer end projecting radially from the coil, curving downwardly, then upwardly, and terminating in an eye for connection with the side bar, the connection with the body and side bar being both in the same transverse plane, substantially as specified.

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

CHARLES M. BLYDENBURGH.

Witnesses:

EDWARD HAWKINS, Jr.,

JAMES H. CORWIN.