(No Model.)

C. M. BLYDENBURGH.

VEHICLE SPRING.

No. 372,059. Patented Oct. 25, 1887.

Fig. 1.

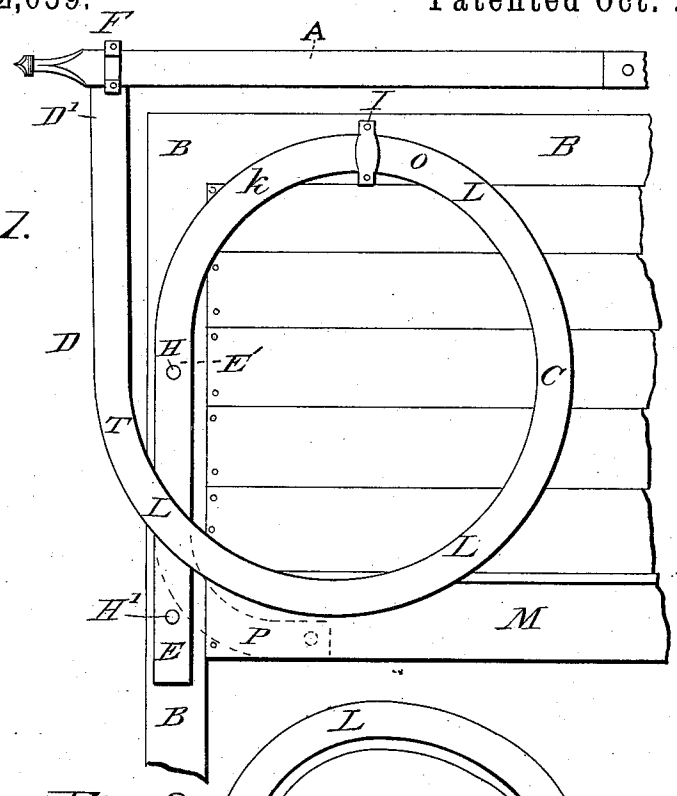


Fig. 2.

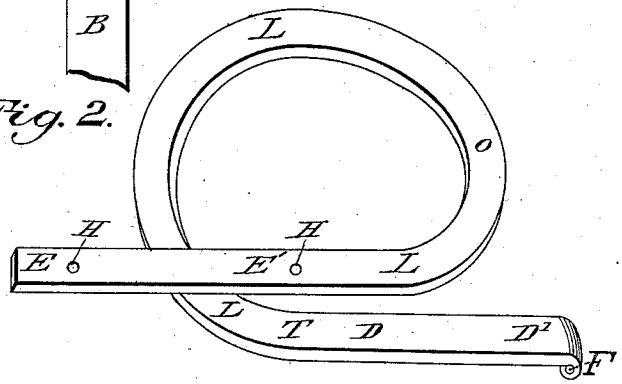


Fig. 3.

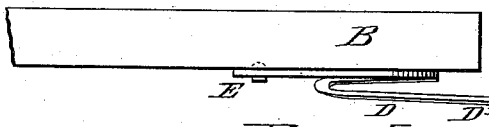


Fig. 4.

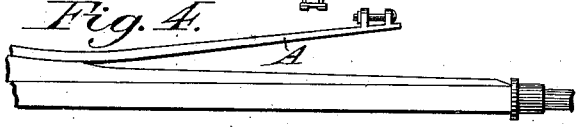
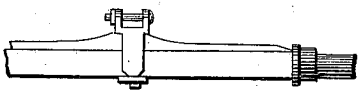


Fig. 5.



Witnesses:
E. F. Ferry
E. S. Ferry.

Inventor:
Charles M. Blydenburgh.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES M. BLYDENBURGH, OF RIVERHEAD, NEW YORK.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 372,059, dated October 25, 1887.

Application filed March 21, 1887. Serial No. 231,801. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. BLYDENBURGH, 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 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.

The object of my invention is to produce a vehicle-spring that will be light, of few parts, and of small initial cost, and so shaped that it may be used in hanging up buggies or other spring-vehicles, and dispense with the use of side bars, yet retain the low-hanging feature of the side-bar carriage.

In the accompanying drawings, Figure 1 represents a bottom view of a portion of vehicle-body and bolster-bar with my spring attached. Fig. 2 is a perspective view of my spring. Fig. 3 is a side view of a portion of vehicle body and end spring with free arm of my spring attached to the front end spring or bolster-bar. Fig. 4 is a rear view of a portion of back axle, semi elliptical or end spring, with lugs between which the eye or free arm of my spring is to be attached. Fig. 5 is a rear view of a portion of back axle, showing lugs between which the eye of my spring is coupled, said lugs clipped directly to the axle.

Referring by letter to the accompanying drawings, A designates the bolster-bar or end spring of the running-gear of a vehicle; B, the bottom or frame of a vehicle-body. C designates the coil-spring.

The spring C consists of a single coil, L L L, made in a flattened spiral form, the spirally-inclined portion extending from about point O around to about point T, and thence to eye F, preferably in a straight line.

The coil portion of my spring is about one turn in length, its continuation at one end forming the arm D D′, which arm terminates in eye F, said eye being adapted to couple in the usual manner to a bolster-bar, end spring, or other suitable support at the front end of, and to an axle or end spring at the back end of a vehicle-gear. The tail or attachment arm E E, is a continuation of the opposite end or the upper front portion of coil L L L, and extends backwardly, to or beyond the rear portion of the coil, in a line preferably straight and nearly parallel with arm D D′, and is adapted to fasten to the bottom of the body B by means of bolts or clips. The arm D D′ passes under and usually out laterally beyond the tail or attachment arm E E′ a distance sufficient to allow the body B, when loaded, to pass by its inner side without danger of contact. The flat front portion of the coil, as at K, to point O, and tail or attachment arm E E′, are made in a flat or horizontal plane and form a longitudinally and laterally braced base, and are adapted to fit and be attached by clip I and bolts H H to the front and side sills or to the bottom direct of vehicle-bodies of any form or construction.

The attachment arm E E′ may, when necessary to have a broader attaching-base, as in heavy vehicles, be curved laterally, as shown in dotted lines at P, and fasten in the usual manner to transverse bar M. My springs are made of spring metal of any suitable shape.

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

1. In a vehicle, a flattened coil torsion-spring the terminal ends of which extend in opposite directions tangentially from one side of the coil, forming at one end the free arm D D′, which arm is provided with eye F, and at the opposite end the tail or attachment arm E E′, the arm D D′ being located outside of or beyond the vertical plane of the arm E E′, substantially as set forth.

2. In a vehicle, the combination, with a body, of a coil torsion-spring the terminal ends of which extend in opposite directions from one side of the coil, and form, respectively, the free arms D D′ and straight attachment arms E E′, the arms D D′ being located outside of and beyond the vertical plane of the arm E E′, and a clamping device securing the spring to the body at a point where the latter bends downwardly away from the body and serving as a clip and a bearing, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES M. BLYDENBURGH.

Witnesses:

EDWARD F. TERRY,

JNO. M. CAMPBELL.