

Equalizers for the Springs of Vehicles.

Patented March 3, 1874.

A diagram of a beam balance. It features a horizontal beam labeled *B.* supported at its ends by two vertical stands. A curved beam, labeled *C.* at both ends, is pivoted at its center on a vertical support labeled *A.* and *R.* The curved beam is shown in a slightly elevated position, with a small weight *P.* hanging from its center. The vertical support is labeled *R.* at its base and *A.* at its top. The curved beam is also labeled *C.* at its ends.

A perspective view of the machine. It shows a rectangular frame with a top bar labeled 'A.' and a bottom bar labeled 'R.'. On the left and right sides of the frame are vertical supports. At the top of these supports are rollers labeled 'r.'. Below the rollers are vertical rods labeled 'c.'. At the bottom of these rods are adjustment screws or knobs labeled 'c.'. The frame is supported by a base with curved ends labeled 'B.'. The entire machine is shown in a perspective view, with the rollers and rods clearly visible.

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IMPROVEMENT IN EQUALIZERS FOR THE SPRINGS OF VEHICLES.

Specification forming part of Letters Patent No. **148,033**, dated March 3, 1874; application filed July 23, 1873.

CASE C.

To all whom it may concern:

Be it known that I, EGBERT P. CARTER, of Arcade, in the county of Wyoming and State of New York, have invented certain Improvements in Equalizers for Buggy or Carriage Springs, of which the following is a specification:

The object of this invention is to provide a cheap and efficient device to cause carriage or buggy bodies to move parallel to themselves vertically; and it consists mainly in attaching a roller laterally to the reaches, and connecting two straps to the roller and to the body or to the cross-bar, and also attaching one end of two other straps to the roller, and their opposite ends to the pendent ends of two hangers which are attached to the body or to a cross-bar.

Figure 1 is a longitudinal vertical section of an ordinary side-spring buggy, having my invention attached. Fig. 2 is a transverse sectional view of the same.

I employ rigid reaches B, in connection with the side springs C, in adapting this style of equalizer to the vehicle. The springs C may be hung at each end, as shown, or in any other suitable manner. The bar A represents a section of the body bottom, if a body is used; or, if only a seat is used, that would answer the same purpose for attaching the upper portion of the equalizing devices to. These consist of the roller R, belts or straps *c* and *c'*, and the pendent rods *b*, to which one end of the straps *c* and *c'* are attached, the opposite ends being attached to the roller or shaft R. This roller is suitably journaled upon the reaches, either to the upper or under side, as may be desired. One end of the strap C is fixed to the shaft R, and their other ends are adjustably attached to the cross-bar A, as shown in the drawings, which is by a staple, *r*, and wedge *n*, or any other suitable clamp may be used, or they

could be buckled to short straps fixed to the bar. The straps *c'* might also be adjustably attached to the pendent ends of the rods *b*, if desired, so as to be taken up or lengthened. The straps *c* and *c'* may be made of leather, webbing, or other suitable material. The roller or shaft R may be provided with pulleys or enlargements for either or both pairs of straps to work upon, or said straps may be wound several times around the rod or roller before leading off to their other attachments.

It is obvious that the roller might be attached to the springs, and the other connections reversed, without departing from the character of my invention.

The operation is as follows: When either side of the body of the vehicle is borne down, as when the weight of a person is thrown upon that side, or from any other cause, the roller is forced to turn by the rod *b* and strap *c'*, on that side, and that causes the winding up of the strap *c* at the other end of the rod, which draws that side of the body down, producing a more or less parallel movement, vertically, in proportion to the degree of tension at which the straps are buckled or clamped.

What I claim as my invention is—

1. In combination with the reach and side springs C, the roller or equalizing shaft R, straps *c* and *c'*, and the pendent hangers or rods *b*, or their equivalent, arranged to operate substantially in the manner and for the purposes set forth.

2. The equalizing-shaft R, rods *b*, and straps *c*, in combination with a fastening composed of staple *n*, and wedge *r*, or their equivalent, for adjusting and securing said straps *c*, as and for the purposes set forth.

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Witnesses:

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