

H. JEFFREY.
Vehicle-Spring.

No. 166,780.

Patented Aug. 17, 1875.

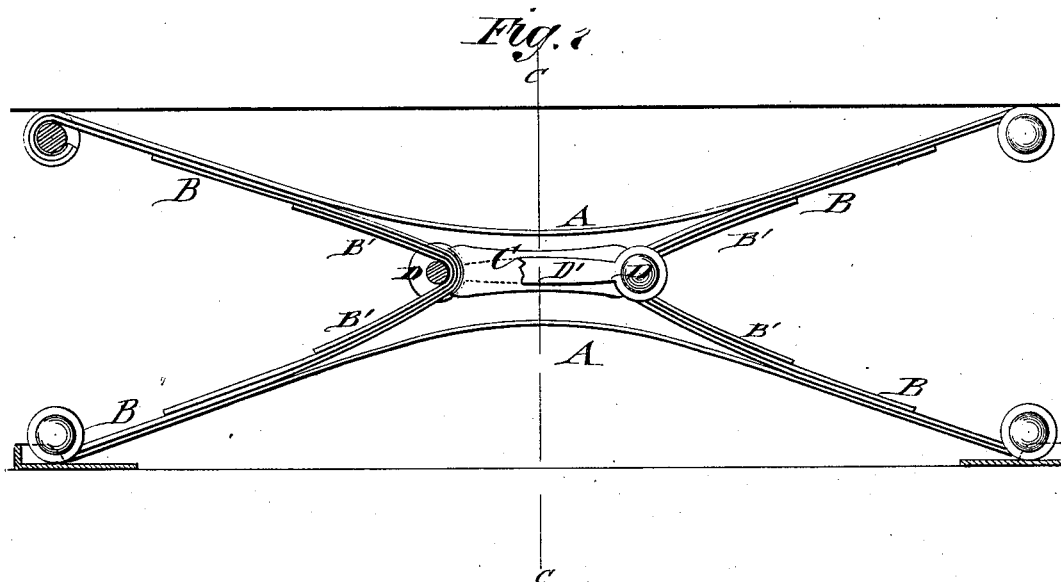
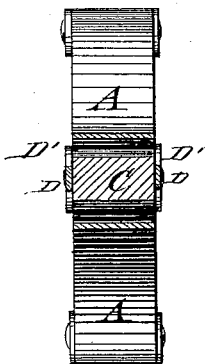


Fig. 2



WITNESSES:

Francis McArdle.
A. F. Terry

INVENTOR:

H. Jeffrey
BY *[Signature]*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY JEFFREY, OF SEYMOUR, INDIANA.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **166,780**, dated August 17, 1875; application filed June 12, 1875.

To all whom it may concern:

Be it known that I, HENRY JEFFREY, of Seymour, in the county of Jackson and State of Indiana, have invented a new and Improved Carriage-Spring, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front view of my improved carriage-spring; and Fig. 2, a vertical transverse section of the same, taken on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with drawing, and then pointed out in the claim.

In the drawing, A represents the flat top and bottom tension-springs of my improved compound carriage-spring, and B the V-shaped bearing-springs, which are interposed between the end of the tension-springs. Both the flat tension and V-shaped bearing springs are made of semi-elliptic shape, and joined at the outer ends by being bent around the bolts of the clips, to which they are applied or connected in any other suitable manner. The clips are set into casings of the carriage body and frame. The bearing-springs B are ar-

ranged symmetrically to the center of the tension-springs, and seated against a solid central shoe part, C, that is concaved at the ends to support the interior curved part of the springs. The bearing-springs may be strengthened by additional semi-elliptic leaves B', of decreasing size. They are retained on shoe C by cross pins or bolts D, connected by outer links D', passing sidewise of shoe C. The main bearing-spring and strengthening-leaves preserve full freedom of action without bands to hold them, and produce, in connection with the tension-springs, a compound spring with a high degree of resistance, flexibility, and duration.

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

The top and bottom tension-springs A A, combined with intermediate leaf-springs, connected by shoe C, bolts D, and links D', as and for the purpose specified.

HENRY JEFFREY.

Witnesses:

HENRY COWE,
ALEX. C. JEFFREY.