E. R. WHEELER.

Vehicle-Spring Braces.

No. 205,594. Patented July 2, 1878.

Fig. 1.

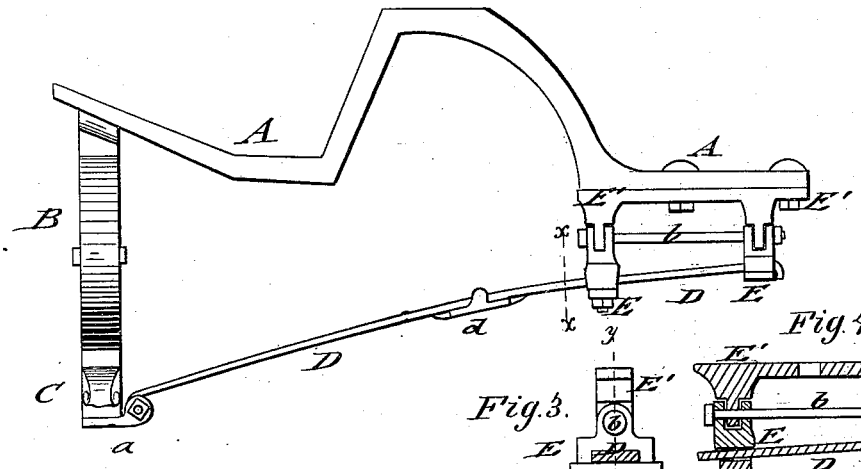



Fig. 3.

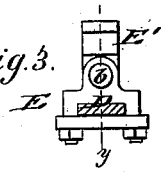



Fig. 4.

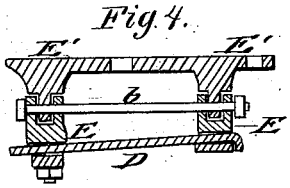



Fig. 2.

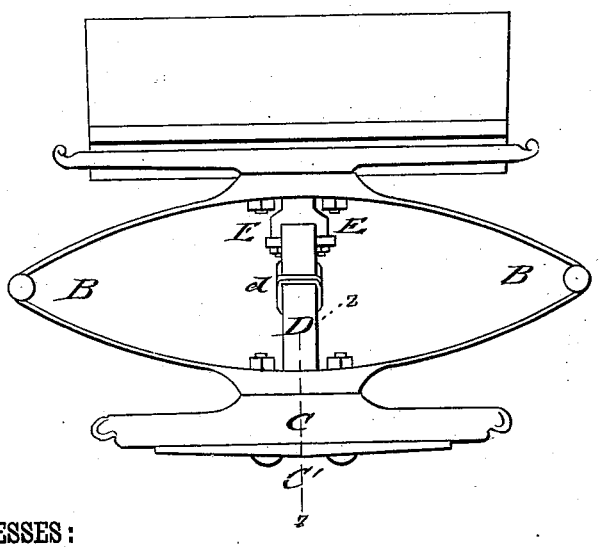
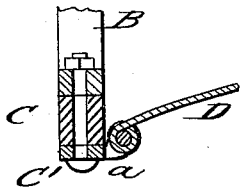



Fig. 5.




WITNESSES:

Henry N. Miller

C. Sedgwick

INVENTOR:

E. R. Wheeler

BY Munn & Co

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

EDWIN R. WHEELER, OF MERRIMAC, MASSACHUSETTS.

## IMPROVEMENT IN VEHICLE-SPRING BRACES.

Specification forming part of Letters Patent No. **205,594**, dated July 2, 1878; application filed June 13, 1878.

*To all whom it may concern:*

Be it known that I, EDWIN R. WHEELER, of Merrimac, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Hanging Carriage-Bodies, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of a carriage-body, showing my improved method of hanging the same; Fig. 2, a front view of the body and hanging devices. Figs. 3 and 4 are respectively a detail end view, partly in section on line *x x*, Fig. 1, and a vertical longitudinal section on line *y y*, Fig. 3, of the double rear shackle, that connects the center spring to the carriage-body; and Fig. 5 is a vertical transverse section of front bolster and bolster-plate on line *z z*, Fig. 2, showing shackle-connection with center spring.

Similar letters of reference indicate corresponding parts.

This invention relates to an improved device for hanging the body of carriages having a so-called "cut-under" or wheel-house, such as a common rockaway, extension-top phaeton, coupé-rockaway, &c., so that one or more elliptic springs may be used, and the ordinary perch or platform gearings be dispensed with; and the invention consists of a center spring, that is shackled to the lower rear part of the head-block or bolster-plate and extended back of the cut-under or wheel-house to the center of the body, being secured thereto by a double flexible shackle applied longitudinally to the center of the body.

Referring to the drawing, A represents the body of a rockaway or other carriage having a cut-under or wheel-house, and B are one or more elliptic springs, on which the front part of the body A is supported.

The spring B is secured to the head-block or bolster C, which is provided with a central plate, C′, at the under side. The plate C′ is made at the rear part with a shackle, *a*, to which the front end of a center spring, D, is applied by a pivot-bolt.

The center spring D is extended from the head-block to the body of the carriage, and applied back of the cut-under or wheel-house to a double shackle, E E′, which is centrally and longitudinally attached to the body A.

The lower part, E, of the double shackle is clipped to the rear end of the center spring D, and hung, by means of one or two shackle-bolts, *b*, to the upper shackle E′, that is firmly screwed to the body A. To the center spring is clipped, at the proper point, a chafe-iron, *d*, for the wheels.

The lower shackle portion and center spring are by the shackle-bolts flexibly connected to the rigid upper shackle portion, and thereby the twisting of the spring prevented when the body rolls, or when one wheel runs into a gutter or is otherwise dropped lower or lifted higher than the other wheels.

The center spring serves as a brace, that removes a great part of the weight and strain from the wheel-house, which is at present considered to be the weakest part of the body. It also imparts elasticity and freedom to the body in all its movements.

The connection of the body by the center spring and shackle with the fore bolster keeps the front of the carriage in position, does away with the humming noise so frequently experienced in the common carriage by the springing of the perch, and furnishes not only a cheap, but a reliable and handsome, construction for hanging carriage-bodies.

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

1. As an improvement in hanging carriage-bodies, the combination of a carriage-body having a cut-under or wheel-house, and being supported on one or more elliptic front springs, with a center spring that extends from a shackle of the front head-block back to a double flexible center shackle of the body, substantially as and for the purpose set forth.

2. The combination, with the front head-block of a carriage-body supported on an elliptic front spring or springs, of a center spring that is shackled at the front to a bottom plate of the head-block and at the rear to lower flexible shackles pivoted to upper fixed shackles of the carriage-body, substantially as specified.

EDWIN RUTHVEN WHEELER.

Witnesses:
F. HERBERT CRAM,
BENJ. ATKINSON KELLY.