

(No Model.)

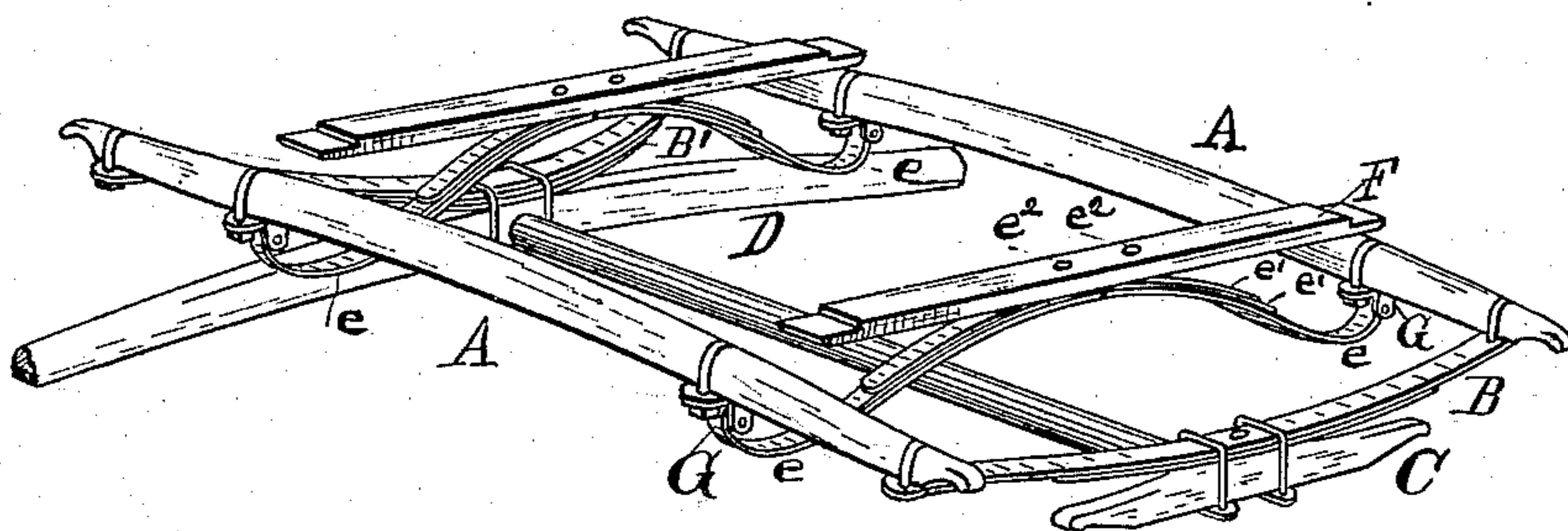
M. R. MAXSON.

CARRIAGE GEAR.

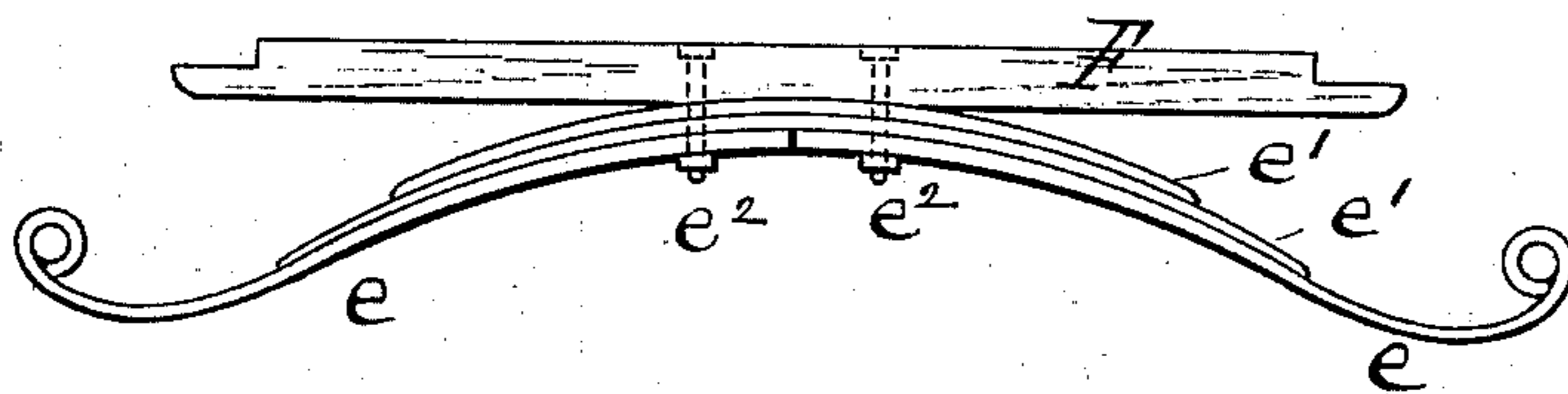
No. 261,937.

Patented Aug. 1, 1882.

*Fig. 1.*



*Fig. 2.*



Witnesses:

*E. B. Stocking*  
*Chas. Hunt*

Inventor:

*Mill R. Maxson*

*By*

*[Signature]*  
*J. L. L.*

# UNITED STATES PATENT OFFICE.

MILTON R. MAXSON, OF HORNELLSVILLE, NEW YORK.

## CARRIAGE-GEAR.

SPECIFICATION forming part of Letters Patent No. 261,937, dated August 1, 1882.

Application filed April 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MILTON R. MAXSON, a citizen of the United States of America, residing at Hornellsville, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Carriage-Gear; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of gear known as "side-bar gears" for carriages or similar vehicles; and it consists in certain features hereinafter described, and specifically set forth in the claims.

Figure 1 is a perspective of a gear embodying my invention, and Fig. 2 is a front elevation of one of the springs.

Like letters of reference indicate like parts in both figures.

A A are the side bars, which are connected at their ends by semi-elliptic springs B B', the former of which is suitably secured to the bolster C and the latter to axle D, the connection of these parts of the gear being after the usual construction in this class of mechanism, and therefore not requiring further description.

At a suitable distance from each end of each side bar is secured one end of a quarter-elliptic spring, *e*, which extends one-half the distance from one of the side bars to the other. The quarter-elliptic springs *ee* (see Fig. 2) are surmounted by one or more (in this instance two) semi-elliptic springs, *e' e'*, which are bound to the quarter-elliptic springs, and to the sill F by bolts or clips. In this instance the former is illustrated at *e<sup>2</sup> e<sup>2</sup>*; but the latter may, if desired, be employed. The end of each quarter-elliptic spring is formed into an eye, and thus is adapted to be attached or hung to the side bar by means of a loop or shackle, G, as preferred.

It is well known that in side-bar gearing as more commonly constructed the springs are apt to have a quick stiff action, and one of the advantages secured in the gearing herein shown and described is that in consequence of the division of the lower leaf of the spring and the firm connection of the same with the superimposed leaves and the sill, together with the yielding support to the lower quarter-elliptic springs rendered by the semi-elliptic springs each side of the center and the shackle or loop connection to the side bar, the action of the springs is smooth and gradual.

It is evident that the springs *ee* are as applicable to a rigid gear—one in which the side bars are connected directly to the forward bolster and to the rear axle—as to the gear herein shown, and I should deem the attachment of the same thereto as within my invention.

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

1. In a side-bar gear, the combination of the bars A A, sill F, shackles or loops G, quarter-elliptic springs *ee*, semi-elliptic springs *e' e'*, and clips or bolts *e<sup>2</sup>*, substantially as shown and described.

2. The combination of the sill F, semi-elliptic springs *e' e'*, resting upon and secured to the lower quarter-elliptic springs, *ee*, and means, substantially as shown and described, for connecting said springs *ee* to the side bars, as and for the purpose set forth.

3. As an article of manufacture, a spring comprising a lower pair of quarter-elliptic springs and superimposed semi-elliptic springs, means for securing the same together, and means for connecting the quarter-springs to a vehicle-gear, all substantially as shown and described.

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

MILTON R. MAXSON.

Witnesses:

DANL. DE WITT,  
D. F. ABBOTT.