

F. J. NARAMORE.
SPRING-WAGON.

No. 174,282.

Patented Feb. 29, 1876.

Fig. 1.

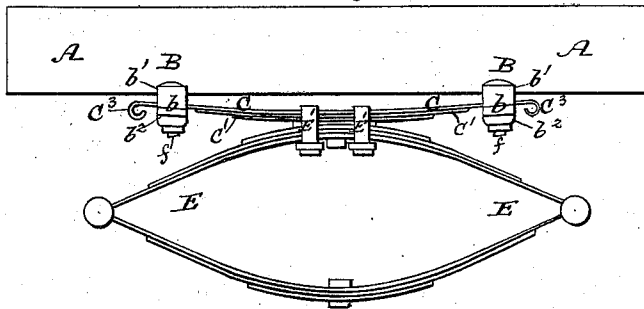


Fig. 2.

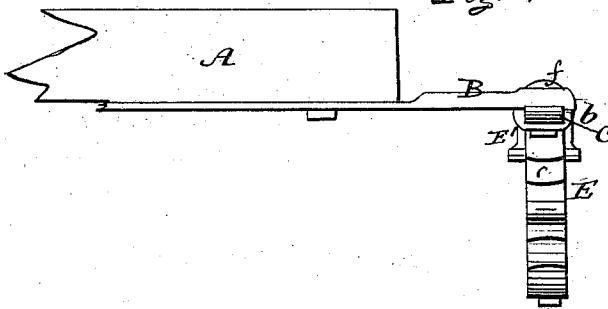


Fig. 3.

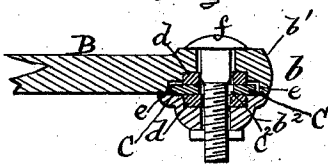


Fig. 4.

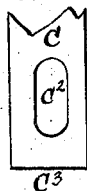


Fig. 6.

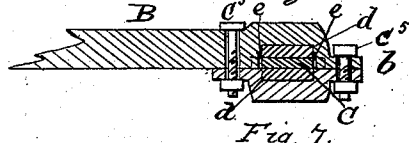


Fig. 7.

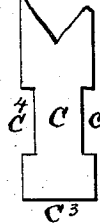
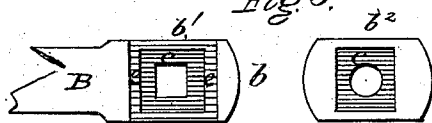


Fig. 5.



Witnesses:
F. B. Sommeud
J. W. Farleigh

Inventor:
Frank Julian Naramore
by his attorney
Colborne Brooks

UNITED STATES PATENT OFFICE.

FRANK J. NARAMORE, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN SPRING-WAGONS.

Specification forming part of Letters Patent No. 174,282, dated February 29, 1876; application filed January 28, 1876.

To all whom it may concern:

Be it known that I, FRANK JULIEN NARAMORE, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Spring-Wagons, Buggies, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in spring-wagons, buggies, phaetons, and other similar vehicles, the nature of which will be fully explained by reference to the accompanying drawings, in which—

Figure 1 represents an end view, and Fig. 2 a side view, of so much of a buggy as will illustrate my invention. Figs. 3, 4, and 5 show detail views of parts of the same. Figs. 6 and 7 represent a slight modification.

In each of the views similar letters of reference are employed to indicate corresponding parts wherever they occur.

A represents the body or box of a buggy or other vehicle, which is supported by and attached to body-loops B, the heads *b* of which are formed in two parts, *b*¹ *b*², the parts *b*¹, by preference, being attached to and forming part of the loops B, while the parts *b*² are separate therefrom. The two parts *b*¹ *b*² of the head *b* are constructed with square or other suitably-formed recesses *c*, adapted to receive suitable elastic washers or packing *d*. *e* is a transverse slot formed in one or both of the halves of the heads *b* of the loops B, and adapted to receive one end of the spring cross-bar C. *f* is a bolt passing through the two halves *b*¹ *b*² of the head *b*, the washers or packing *d*, and the spring cross-bar C, for the purpose of holding the parts correctly in position. The spring cross-bar C is formed of one or a series of leaves or plates, C¹, and is provided with elongated slots C² in each of its ends C³, adapted to allow of the free play of the ends C³ in the transverse slots *c* of the heads *b* of the loops B. The spring cross-bar C is connected centrally by means of clips E' to an elliptic

or other suitable spring, E. The cross-bar C may, however, in some cases be connected directly with the axle, which, in this case, would, by preference, be bowed.

By this peculiar construction of the heads *b* of the loop B, and by the employment therewith of a spring cross-bar, C, attached, as shown, centrally to an elliptic spring, E, all danger of snapping or breaking of the spring E by reason of sudden upward jerks or jolts is avoided; free play is also obtained to the spring cross-bar C, and all danger of breaking or straining of the bolts *f* is avoided by reason of the parts *b*¹ *b*² of the heads *b*, forming an extended bearing both on the under and upper side of the ends of the cross-bar C, and preventing the strain of the loops and the bolt *f* bearing against the sides of the slot *c*, and straining the cross-bar or spring C. The packing or washers *d* serve to obviate any rattling or noise, while, at the same time, they prevent the too free play of the ends of spring or cross-bar C in the heads *b* of the loops B.

In Figs. 6 and 7 I have shown a slight modification of my invention.

In this case the ends of the cross-bar C are slotted on the outer edge, as shown at C⁴, in place of being provided with central slots, as in the previous figures. The two halves *b*¹ *b*² of the head *b* are also retained in position by external bolts *c*⁵; or, if desired, clamps or other suitable connecting means may be employed.

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

1. A body-loop, B, provided with a head, *b*, having washers or packing *d*, and adapted to receive the end of a spring or cross-bar, C, with capability of horizontal motion therein between the washers or packing *d*, substantially as described.

2. A body-loop, B, provided with a head, *b*, formed in two halves, *b*¹ *b*², and having recesses *c* and washers or packing *d*, and adapted to receive the end of a spring or cross-bar, C, with capability of horizontal motion between the washers or packing *d*, substantially as described.

3. The combination, with an elliptic spring, E, and a spring cross-bar, C, of the body-loops B, provided with heads *b*, having washers or packing *d d*, and adapted to receive the ends of a spring cross-bar, C, with capability of horizontal motion between the washers or packing *d d*, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FRANK J. NARAMORE.

Witnesses:

F. E. FITCH,
R. T. CLARKE.