

S. T. BRUCE.  
Spring-Braces.

No. 150,747.

Patented May 12, 1874.

Fig. 1.

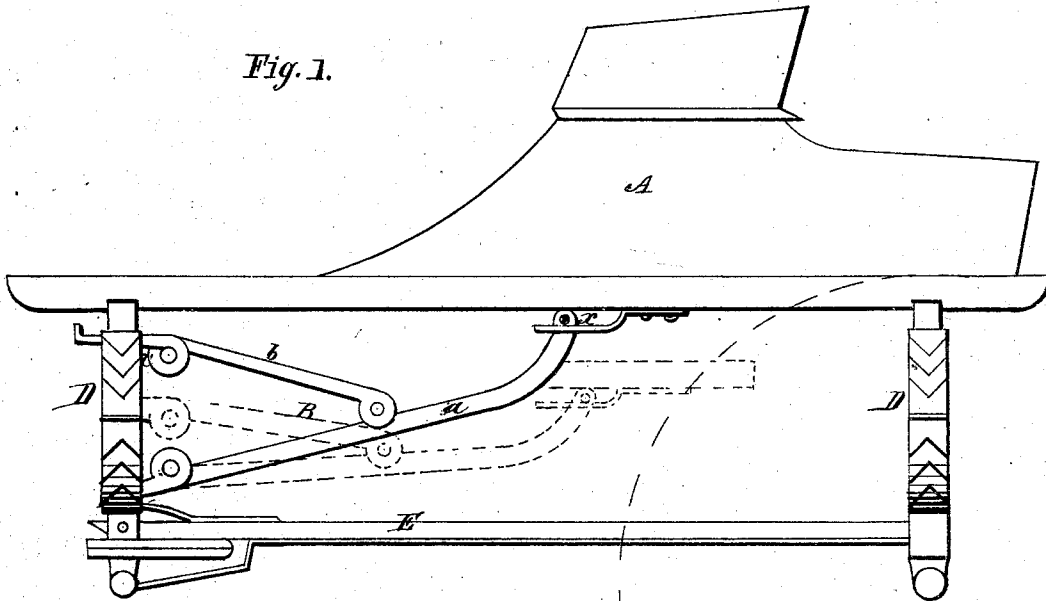


Fig. 2.

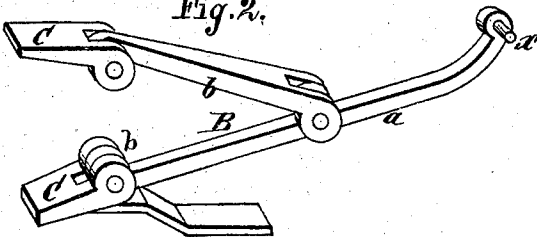
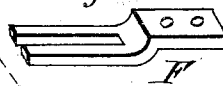


Fig. 3.



Witnesses,

*S. D. Duggins*  
*Wm. Alexander.*

Inventor,

*Edney T. Bruce.*

# UNITED STATES PATENT OFFICE.

SIDNEY T. BRUCE, OF MARSHALL, MISSOURI.

## IMPROVEMENT IN SPRING-BRACES.

Specification forming part of Letters Patent No. **150,747**, dated May 12, 1874; application filed December 13, 1873.

*To all whom it may concern:*

Be it known that I, SIDNEY T. BRUCE, of Marshall, in the county of Saline, in the State of Missouri, have invented a new and Improved Carriage-Brace; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side elevation of a carriage-body mounted on springs, and having my improved brace applied thereto. Fig. 2 is a perspective view of the brace proper detached from the carriage-body. Fig. 3 is a like view of the slotted guide-plate.

In the class of carriage-braces to which my invention belongs no adequate provision has been heretofore made for avoiding intermitting strain on the bolts that connect the body or springs to the axles, which occurs at each vertical movement of the body in consequence of the free end of the brace moving through the arc of a circle. I obviate the difficulty by connecting the brace to the carriage-body adjustably, by means of a slotted or grooved plate, as hereinafter described.

In the drawing, the brace B is shown constructed in the usual manner, of a long bar, *a*, and a short bar, *b*, jointed to it near the middle of the former. Short plates C are jointed to the front or opposite ends of bars *a* *b*, by means of which the brace is attached

to both the upper and under half or portion of the elliptical forward spring D. Said bars may, however, be attached to the forward ends of the carriage-body A and reach E, if preferred. The upper and free end of the long bar *a* has a laterally-projecting cross-pin, *x*, and works in an open slot of the plate F, which is attached to the under side of the carriage-body. The front half of this plate is bent downward, as shown, to accommodate the pin *x* above it. Thus, the bottom and top of the front spring being both fastened to a common point behind, whatever depresses the body of the vehicle similarly depresses the free or upper end of the inflexible bar *a*, which cannot go forward so as to enforce a perpendicular motion of the carriage-body. The bars being fastened to the springs at the top and bottom in front, and to each other at the center, no force can project the springs either front or rear.

What I claim is—

The combination, with the slotted guide-plate attached to the spring-supported carriage-bed, of the jointed brace B, provided with the pin *x*, all as shown and described, to operate as specified.

SIDNEY T. BRUCE.

Witnesses:

D. D. DUGGINS,  
M. J. ALEXANDER.