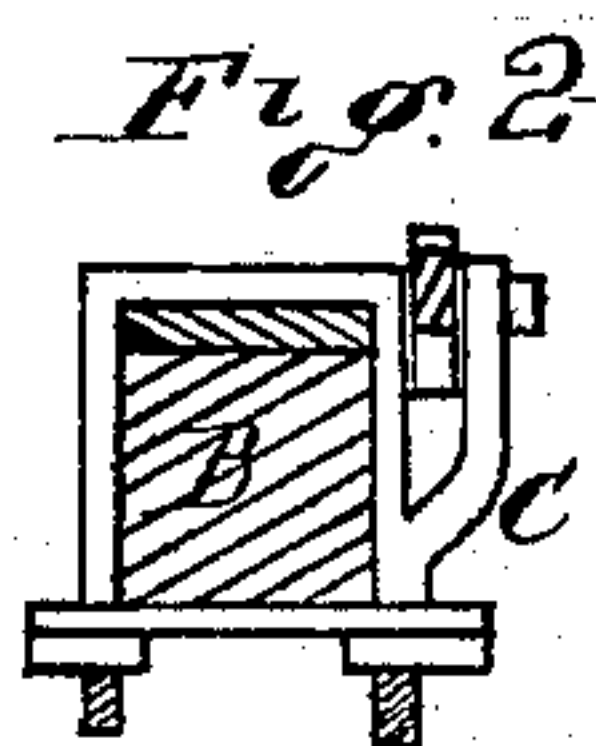
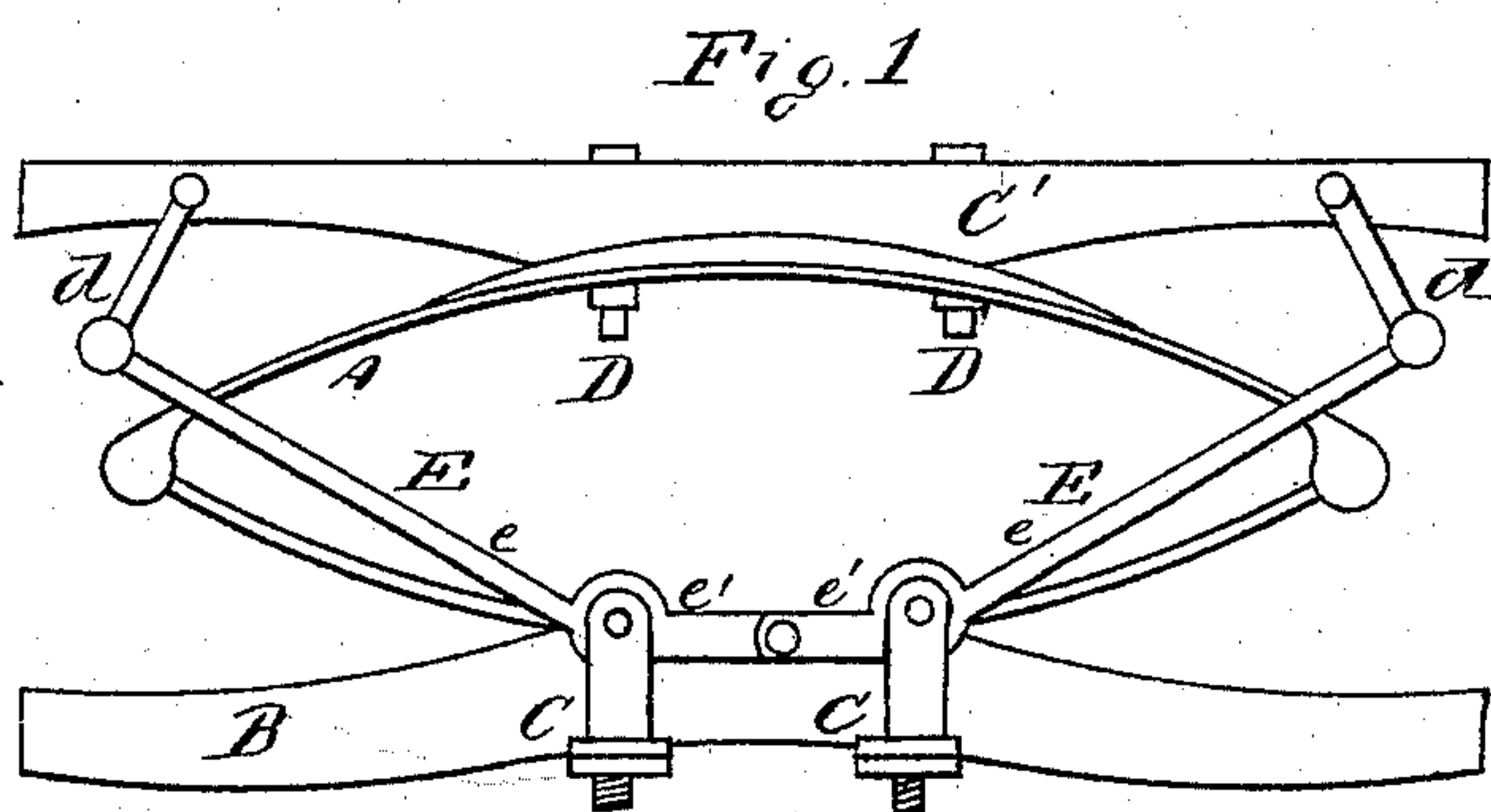


H. DAVIS.  
Spring-Equalizers.

No. 143,966.

Patented Oct. 28, 1873.



Witnesses  
J. B. Connolly  
A. Connolly

Inventor  
Horace Davis  
by Connolly Bros.  
Attys.

# UNITED STATES PATENT OFFICE.

HORACE DAVIS, OF BERLIN, WISCONSIN.

## IMPROVEMENT IN SPRING-EQUALIZERS.

Specification forming part of Letters Patent No. **143,966**, dated October 28, 1873; application filed May 20, 1873.

*To all whom it may concern:*

Be it known that I, HORACE DAVIS, of Berlin, in the county of Green Lake and State of Wisconsin, have invented certain new and useful Improvements in Spring-Equalizers; and I do hereby declare that the following is a full, clear, and exact description thereof, that 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.

Referring to the drawings, Figure 1 is a front view, and Fig. 2 a vertical transverse sectional view, of my invention.

This invention has relation to spring-equalizers for wheel vehicles; and it consists in the construction and novel arrangement of levers, and other devices connecting the bolster and axle, or other equivalent parts having the spring located between them, in such a manner that any strain or pressure applied to the spring through the body or wheels of the vehicle, will be properly equalized or distributed, and the spring thereby protected from injury, and rendered more available than heretofore.

Referring to the drawings, A designates an ordinary elliptic spring, secured to the axle B by means of clips C, and to the bolster C' by means of bolts D. The clips, as shown in the drawings, are enlarged at one side, and slotted to receive the elbows of the bent levers E E,

which are pivoted thereto. The levers E E have each two arms, *e e'*, diverging at an oblique angle. The long arms rise obliquely from the clips, or diverge toward the ends of the bolster, which has pivoted to it the short arms or links *d*, to which are jointed the ends of the long arms. The short arms project towards each other, and are pivoted together. Now, when pressure or strain is applied or brought to bear on either side of the middle of the bolster or wagon-body, half of said strain or pressure is immediately transmitted through the levers to the other side, and the equalization of the pressure upon the spring effected. The levers may in some cases be pivoted to other devices than clips.

Having fully described my invention, I claim—

The slotted spring-clips C embracing the axle B, in combination with the elliptic spring A, the bent or V-shaped levers E, having the connected arms *e'*, and pivoted to the clips, and the short pivoted links *d*, all constructed and arranged to operate substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of April, 1873.

HORACE DAVIS.

Witnesses:

O. F. SILVER,  
H. C. SNOW.