

(No Model.)

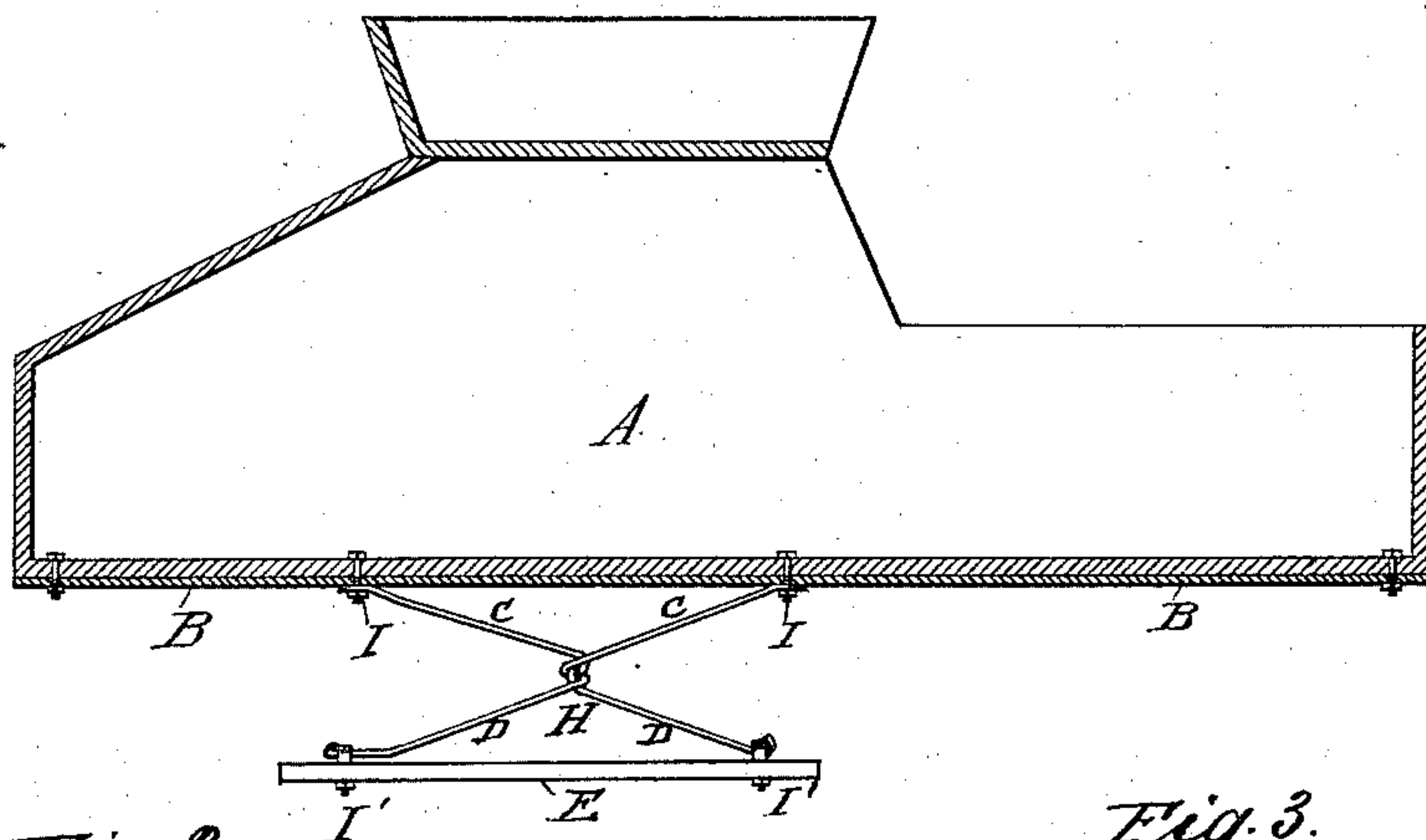
E. J. STRONG.

SPRING BRACE FOR VEHICLES.

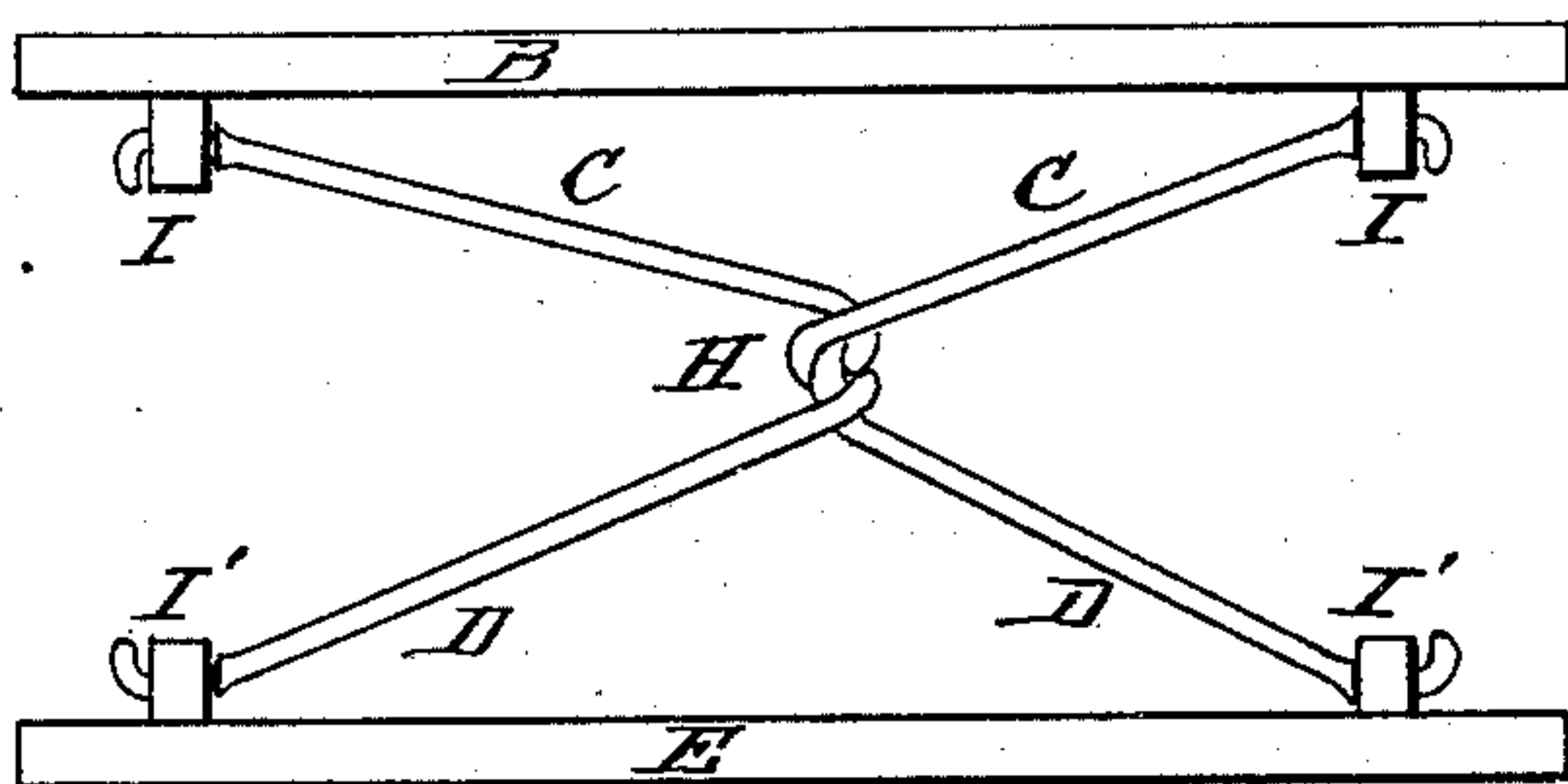
No. 317,040.

Patented May 5, 1885.

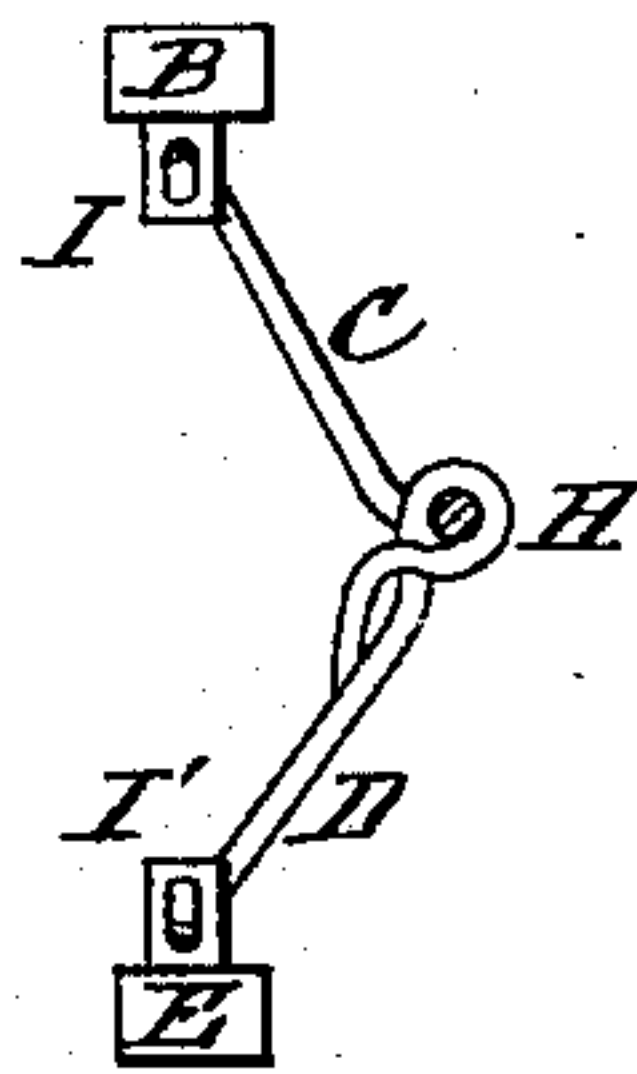
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
L. A. Davis  
Sarah A. Davis

Inventor.  
Edmund Strong

# UNITED STATES PATENT OFFICE.

EDWIN J. STRONG, OF BERESFORD, DAKOTA TERRITORY.

## SPRING-BRACE FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 317,040, dated May 5, 1885.

Application filed May 1, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN J. STRONG, a citizen of the United States, residing at Beresford, in the county of Union, Dakota Territory, have invented certain new and useful Improvements in Spring-Protectors, of which the following is a description.

The object of this invention is to relieve the springs of a carriage from the strain consequent to endwise motion, and too much upward motion of the carriage-body relative to the supporting-gear.

To this end my invention consists in the construction and combination of a system of hinged braces to be attached to a carriage or other vehicle, as hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of a carriage-body, showing my braces in side elevation. Fig. 2 is a side elevation of the braces, and Fig. 3 is an end view of the same.

A represents the body of the carriage, provided with a longitudinal tie-piece, B, which may be secured directly to the carriage-bottom, as shown, or it may be secured below the frame to the carriage-body.

C and D are my braces, consisting of rods of round iron twisted together centrally to form an eye or hinge-joint, H, and secured at their ends from longitudinal motion, but permitted to swing transversely to the carriage in eyebolts I I'. The bolts I are fixed to the body of the carriage, and the bolts I' to the running-gear E, or that portion of the car-

riage which supports the springs. By this means the carriage-body is prevented from rising higher than enough to straighten the braces into a vertical plane, thereby saving the springs from being pulled apart, and the carriage-body is braced against endwise movement relative to its supporting-gear, while it has free play vertically within limits safe to the springs.

The braces C C and D D may be four separate braces hinged centrally and at their ends, as before described, the points I being at fixed distances apart longitudinally, preventing the braces yielding endwise, because each pair of upward braces forms with the carriage-bottom a fixed triangle, and each pair of lower braces forms with the running-gear supporting it a fixed triangle.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with a pair of hinge-eyes fixed relative to each other longitudinally to the body of a vehicle supported on springs, and another pair of hinge-eyes fixed relative to each other longitudinally upon the gear which supports the springs of the said vehicle, of braces hinged together at a point centrally between the said hinge-eyes, and hinged at their ends to the said eyes, substantially as and for the purpose specified.

EDWIN J. STRONG.

Witnesses:

LUCIUS M. STRONG,  
PHILANDER STRONG.