JOHN STEPHENSON.

Improvement in Elastic Check for Car-Axle Boxes.

No. 127,523. Patented June 4, 1872.

Fig: 1.

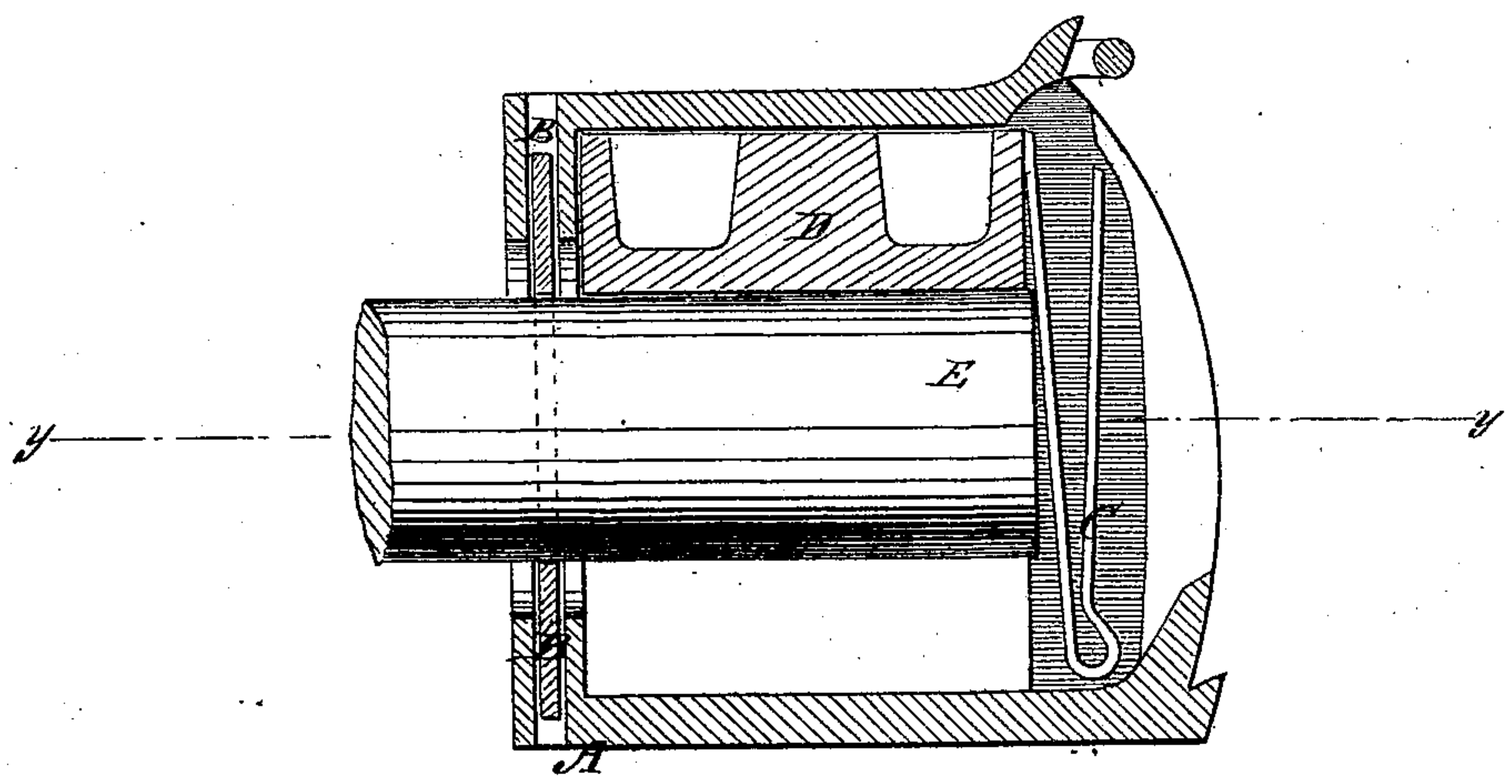


Fig: 2.

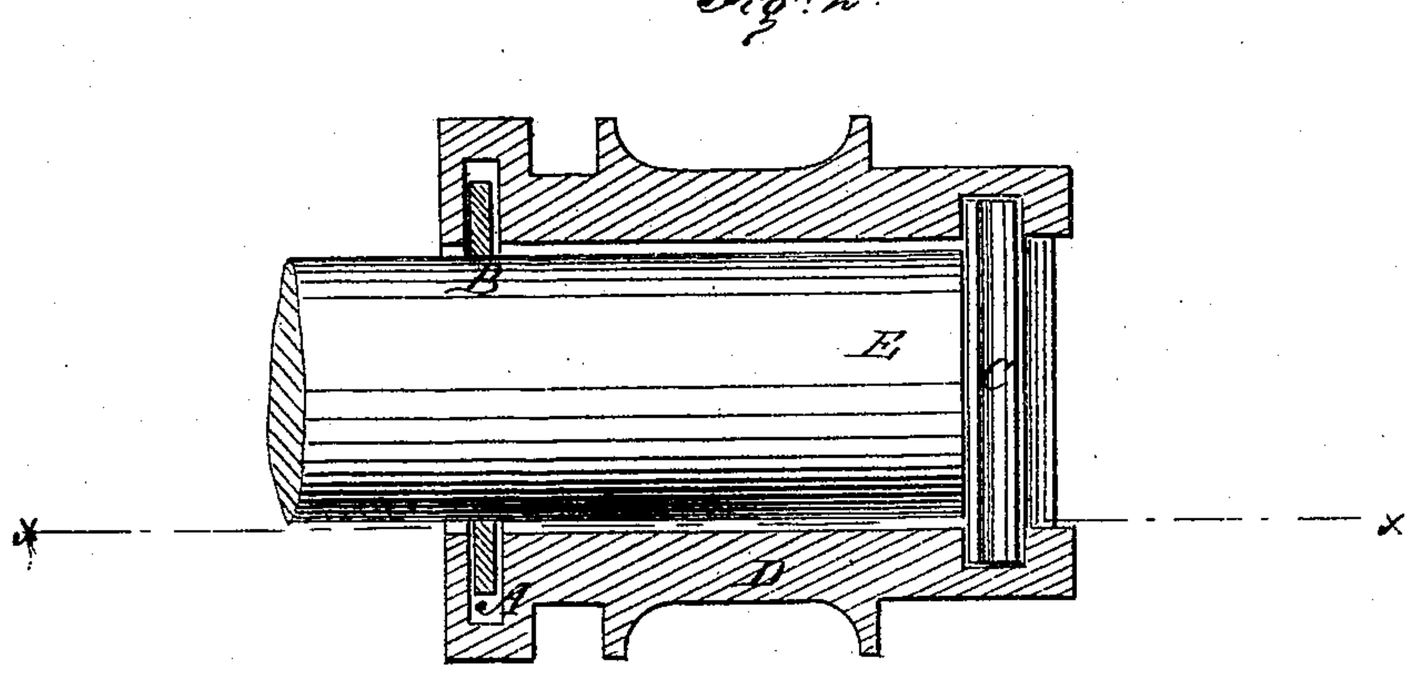
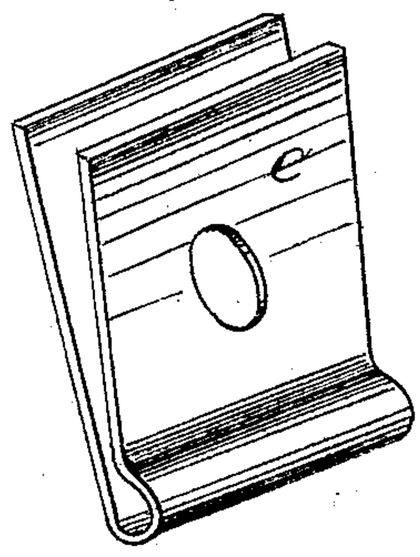


Fig: 3.



Witnesses:

Chas. Nida
Alex F. Roberts

Per

Inventor:

J. Stephenson

Munn & Co

Attorneys.

127,523

UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

IMPROVEMENT IN ELASTIC CHECKS FOR CAR-AXLE BOXES.

Specification forming part of Letters Patent No. 127,523, dated June 4, 1872.

Specification describing a new and useful Improvement in Street-Car Elastic Check, invented by JOHN STEPHENSON, of the city, county, and State of New York.

This invention relates to a new and useful improvement in the construction of street-cars; and consists in the provision made for lessening the lateral jolting or jarring of the car.

In the accompanying drawing, Figure 1 is a vertical section of the axle-box and pedestal taken on the line *x x* of Fig. 2. Fig. 2 is a horizontal section taken on the line *y y* of Fig. 1. Fig. 3 is a view of the check or spring detached.

Similar letters of reference indicate corresponding parts.

Modern engineers are active in introducing the elastic element in railway road-beds and in rolling stock not only by bearing-springs of great excellence, but by such an arrangement as will relieve the ever-recurring side shock and concussion of the cars. Hence, in cars for steam-roads the swing-bolster and similar devices, and in street-cars the various kinds of trucks, to secure the swing or free motion. Trucks for street-cars of this description have not been successful because of complication and additional weight. The two rails of a street railway seldom continue on the same plane, but are constantly changing, each change of plane forcing the car to the lower side with violence, causing discomfort to passengers and injury to the car, roadway, and motive-power. These evils I successfully relieve by making the axle-journal without a shoulder and placing a spring-check at its end.

I pass the journal through a dust-chamber, A, in the rear of the axle-box, in which chamber is an elastic collar, B, which gripes the axle and forms a shut-off to exclude dust from the box. The journal passes beyond the bearing and the end of the axle, and is cushioned against a spring-check, C. D are the journal-bearings. E is the axle. This spring-check I make of ordinary spring-steel, or equivalent material, of proper length, width, and thickness, doubled near the middle, with the two ends approaching each other, but standing apart about one-half an inch, (more or less.) The spring-check C is placed in a groove or chamber in the axle-box, at the end of the axle, held by shoulders which are in said groove, and preferably with the open end of the check upward, as represented. As the car is forced from side to side the concussions are relieved by the yielding of the spring-check.

I do not confine myself to the precise form or arrangement of this spring-check, as it may be varied in many ways without departing from my invention.

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

1. The axle-box D, having the groove provided with shoulders to hold the spring C, as set forth.

2. The spring-check C adapted to the grooves of the axle-box, as set forth.

3. The shoulderless axle-journal E, in combination with the spring-check C, as set forth.

JOHN STEPHENSON.

Witnesses:

T. B. MOSHER,

ALEX. F. ROBERTS.