

L. J. FRAZEE.

Bumper-Springs.

No. 134,471.

Patented Dec. 31, 1872.

Fig. 1.

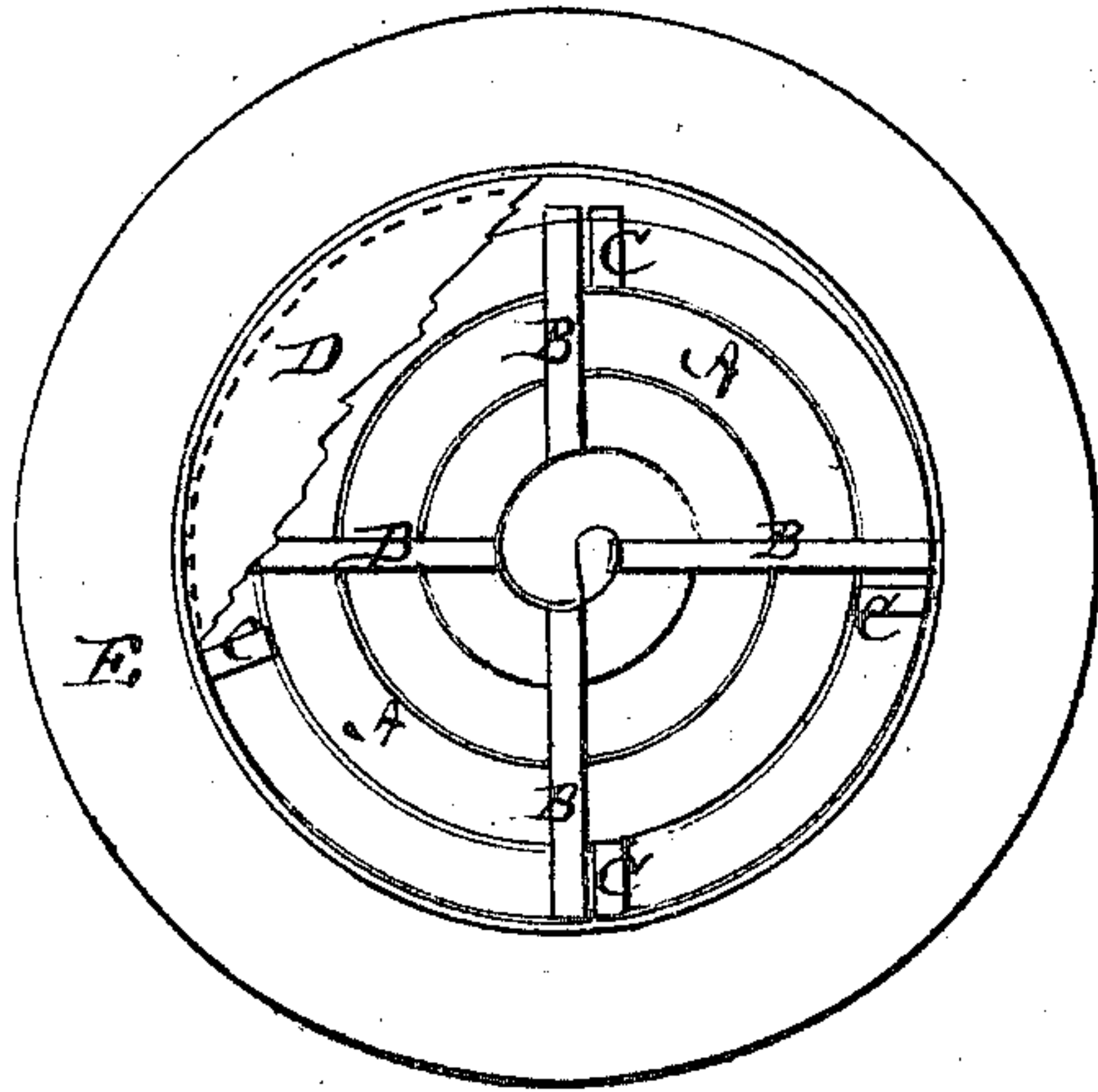
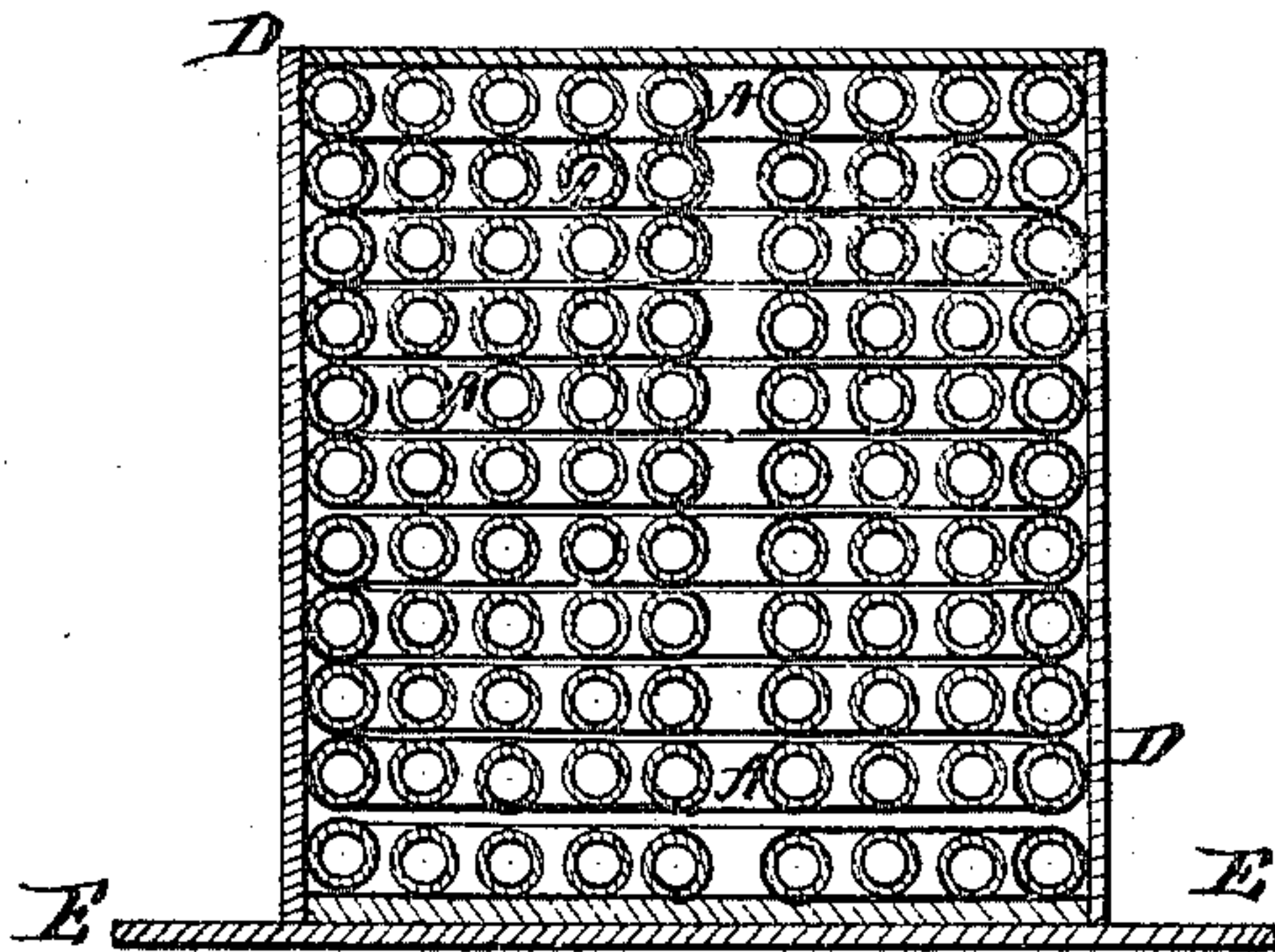


Fig. 2.



Witness:

for E. Hutchinson
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per
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UNITED STATES PATENT OFFICE.

LEWIS J. FRAZEE, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN BUMPER-SPRINGS.

Specification forming part of Letters Patent No. 134,471, dated December 31, 1872.

To all whom it may concern:

Be it known that I, LEWIS J. FRAZEE, of Louisville, in the county of Jefferson and in the State of Kentucky, have invented certain new and useful Improvements in Elastic Fenders for Railroad Cars, Steam and Sailing Vessels, &c.; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of an elastic fender to lessen the concussion resulting from a railway car, locomotive, steam or sailing vessel coming in sudden contact with any stationary or moving body or solid substance, and rendering such concussion harmless.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is an end view of my fender with a part of the covering removed, and Fig. 2 is a longitudinal section of the same.

A A represent a series of coils of elastic rubber tubing placed one against the other. Each coil is maintained in position by means of tapes or strings B B interwoven around

each fold of the coil or in any other suitable manner. The several coils are held together in the same way by means of tapes or strings C C interwoven between the coils, or in any other suitable manner. The coils are incased in a strong covering, D, of leather, rubber, or other suitable material designed to hold them more firmly in position, and provided with an extended rim or collar, E, at one end, by which the fender is to be attached to cars, vessels, or other movable objects.

When such car, vessel, or object provided with my fender comes in sudden contact with any stationary or moving body or solid substance, the shock of the concussion is in a great measure taken off and the concussion rendered perfectly harmless.

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

The combination of the elastic coiled tubes A A, tapes B B and C C, or their equivalents, and the casing D with flange E, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of October, 1872.

LEWIS J. FRAZEE.

Witnesses:

RICHARD A. LOGAN,
RICHD. C. GWATHMEY.