F. W. SCHROEDER.

Laminated Railway Bearing Cushion.

No. 213,841. Patented April 1, 1879.

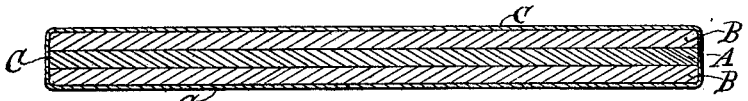

Fig 1

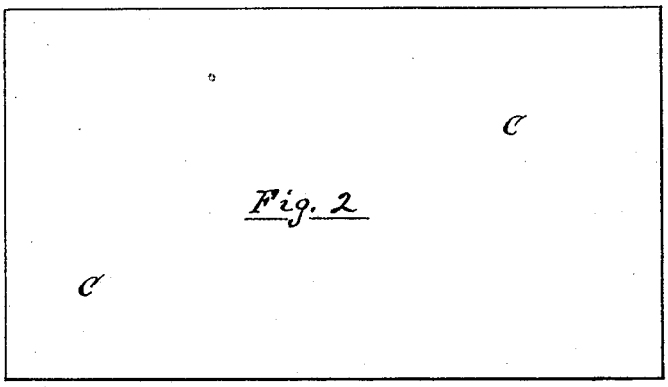

Fig. 2

Witnesses

M. Randolph

Hora E. Thomas

Inventor

Frederick William Schroeder

UNITED STATES PATENT OFFICE.

FREDERICK W. SCHROEDER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS RIGHT TO ADOLFO HEGEWISCH AND DOMINGO M. MONJO, OF SAME PLACE.

IMPROVEMENT IN LAMINATED RAILWAY-BEARING CUSHIONS.

Specification forming part of Letters Patent No. **213,841**, dated April 1, 1879; application filed October 10, 1878.

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM SCHROEDER, of the city, county, and State of New York, have invented a new and useful Improvement in Laminated Railway-Bearing Cushions; and I hereby declare the following to be a full and clear description of the same.

This invention has for its object the production of a cushion which may be interposed between the ties and rails of a railway, and also between the various bearings of the trucks of railway rolling-stock, and between the bearings of the cars upon the trucks, for the double purpose of easing the shocks or concussions that would naturally arise by reason of the train passing over asperities of the track, and reducing the noise attendant thereon.

These cushions may also be used with very beneficial effect in the bearings between a roadway and a bridge, or other similar elevated structure, as well as in a variety of other places that would readily suggest themselves to an engineer.

The nature of this invention will be fully understood by the accompanying drawings and the subjoined description.

Figure 1 of the drawings is a sectional elevation of one of the improved laminated cushions. Fig. 2 is a general plan of the same.

This cushion consists of a central sheet, A, of india-rubber, and two contiguous covering-sheets, B, of wood, cork, felt, leather, or some similar elastic material which will protect the india-rubber and keep it from vulcanization or other injury, and a covering-envelope, C, formed, preferably, of canvas.

In constructing these cushions, the rubber sheet A is first prepared of the desired size and form, and then the two covering-pieces B are made to coincide in size and contour with the piece A, and are firmly cemented upon its opposite sides with some suitable water-proof cement—as, for instance, soluble india-rubber cement. These three united pieces are then coated with or plunged into a bath of a solution called "water-glass," or some other similar solution which will thoroughly protect the cushion from the oxidating influence to which it would be severely exposed by reason not only of its being used in the open air, and frequently in close proximity to salt-water, but also by reason of its contact with iron bearings, the oxide of iron acting to speedily destroy the cushion unless it were thus protected.

The water-glass solution above referred to consists of a mixture of seven parts of silicate of soda and one part of the whites of eggs.

After the three pieces A B B are thoroughly dried, after the coating above referred to, the covering-envelope C will be stretched tightly around the said pieces A and B, and its ends overlapped and thoroughly cemented together by means of some suitable water-proof cement, and then the exterior of this canvas covering will also be coated with some suitable water-proof solution similar or equal to that above described as and known by the name of "water-glass," or any cement which is impervious to water.

I am well aware that laminated cushions of various materials have been heretofore used in England in connection with stone sills or bases, and that alkaline solutions have been employed to coat and protect fibrous cushions of various formations from atmospheric injury; also, that cork-cuttings, and wood, and india-rubber have been used for the construction of cushions of various forms; but to none of these features do I lay any claim in the forms in which they have been commonly or particularly used.

The coating which I have described as water-glass is especially best adapted to the coating of these cushion when they are to be used in journal-boxes, for the reason that it is a non-conductor of heat, and cannot, consequently, act as a transmitter of heat from a hot axle.

Having described my invention, I claim—

The laminated cushion A B B, formed of a central sheet, A, of india-rubber, with two contiguous elastic pieces, B B, firmly cemented, respectively, upon its opposite sides, the whole covered with an envelope, C, and coated with a protecting solution, substantially as and for the purpose set forth.

FREDERICK WILLIAM SCHROEDER.

Witnesses:

M. RANDOLPH,

ABNER C. THOMAS.