

S. J. SEELY.
Carriage-Spring.

No. 38,245.

Patented Apr. 21, 1863

Fig. 1.

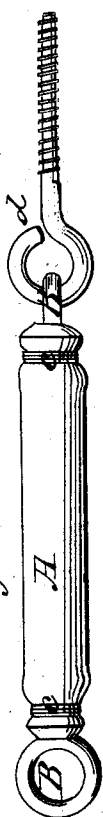


Fig. 2.

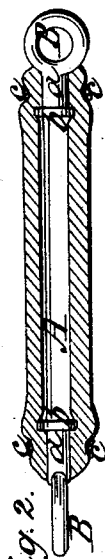
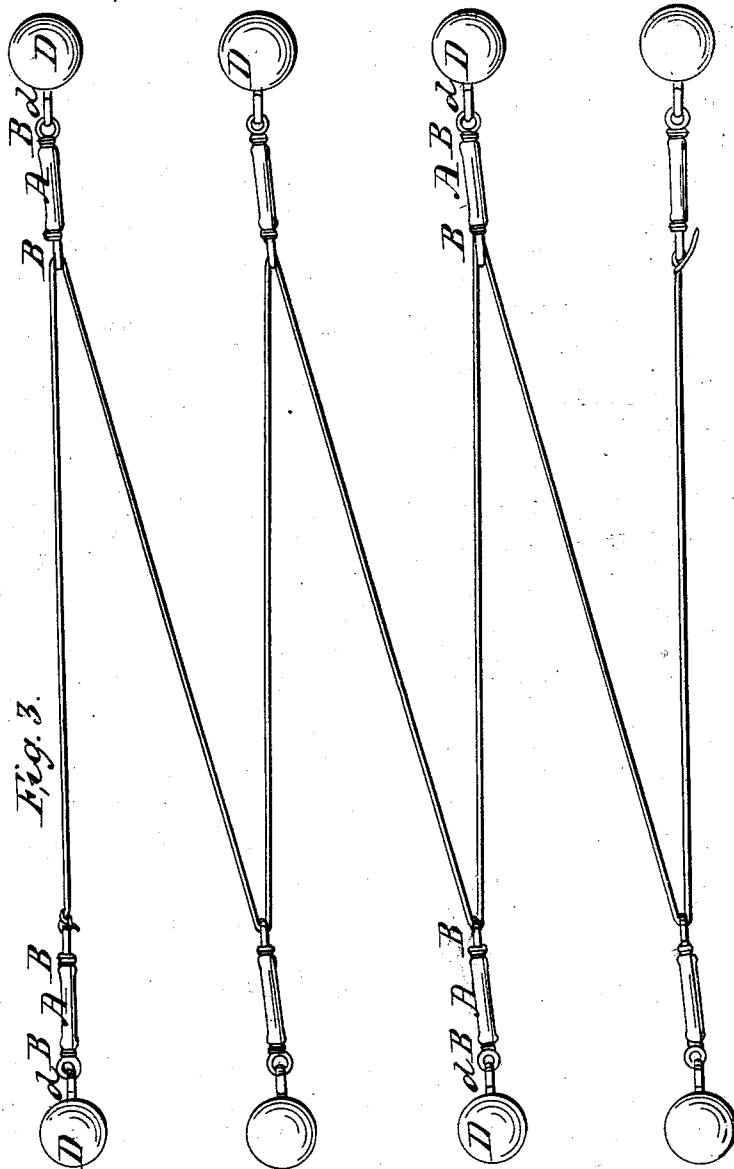


Fig. 3.



Witnesses:
W. L. Partridge
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UNITED STATES PATENT OFFICE.

SAMUEL J. SEELY, OF BROOKLYN, NEW YORK.

IMPROVED RUBBER SPRING.

Specification forming part of Letters Patent No. 38,245, dated April 21, 1863.

To all whom it may concern:

Be it known that I, SAMUEL J. SEELY, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in India-Rubber Springs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of a spring constructed according to my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a plan view showing the application of my springs to clothes-lines and posts to preserve a proper tension of the lines and prevent the drawing of the posts out of plumb by the shrinkage of the lines.

Similar letters of reference indicate corresponding parts in the several figures.

A great difficulty has been heretofore experienced in the general application of india-rubber to the manufacture of springs which operate by tension, owing to the want of some suitable mode of constructing the ends of the springs which would provide for their convenient attachment and for wear, and render the ends of the springs as strong and durable as the other parts.

The object of this invention is to remedy this defect; and to this end it consists in a spring composed of a piece of india-rubber tubing with an eye, or its equivalent, of metal attached to each end by means of a shouldered shank inserted into the tubing, and a seizing or band applied around the exterior of the tubing between the shoulder of the shank and the eye.

To enable others to construct and apply my invention, I will proceed to describe it with reference to the drawings.

A is the india-rubber tubing. B B are the eyes made with shanks *a a*, at the ends of which are the shoulders or collars *b b*; and *c* are seizings of wire by which the shanks are secured in the tubing. The shanks *a a* are made of somewhat smaller diameter than the interior of the tubing, and the shoulders or collars *b b* of somewhat larger diameter than the said interior, and the said shoulders are forced into the tubing as far as permitted by the eyes, and the seizings *c c* of wire are then wound tightly around the exterior of the tub-

ing between the ends of the tube and the shoulders or collars, and as near as possible to the latter, and their ends fastened by twisting them together, or in any other suitable manner. The seizings should be drawn so tight that their interior circles should be no larger, or very little larger, than the exteriors of the shoulders or collars, and it will then be impossible to draw the shanks out of the tubing. Springs thus constructed are applicable as door-springs, and to all purposes to which india-rubber tension-springs have been heretofore applied, and to many purposes for which such springs have not heretofore been applicable, as the metal eyes B B may be attached to or serve for the attachment of almost any article. Among the several purposes to which they are applicable may be mentioned the standing and other rigging of ships and other vessels, or to any cordage which is liable to extension and contraction by changes in the condition of the atmosphere, and which requires to be kept always taut without being itself unduly strained or producing an undue strain on its supports; also, to the cords of bedsteads and to clothes-lines. In the application to the last-mentioned purpose the springs are attached to the posts D D or other supports by staples *d d*, and the lines are either fastened to or rove through the eyes at the other ends, and in their application to other purposes the eyes may be attached to hooks, pins, rings, ropes, or other means of attachment, as occasion may require, in any case the eyes B B, or their equivalents, which are composed of metal, being the only parts subject to wear.

The shanks *a a* of the eyes B B, instead of being provided with shoulders or collars *b b* of larger diameter, may be made with grooves to form the necessary shoulders for the retention of the seizings.

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

A spring composed of a piece of india-rubber tubing, having eyes B, or their equivalents, of metal provided with shouldered shanks *a b*, inserted into its ends and secured by seizing or bands *c*, substantially as herein specified.

SAML. J. SEELY.

Witnesses:

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