

J. A. STEVENSON.  
Springs for Seats, &c.

No. 160,123.

Patented Feb. 23, 1875.

Fig. 1

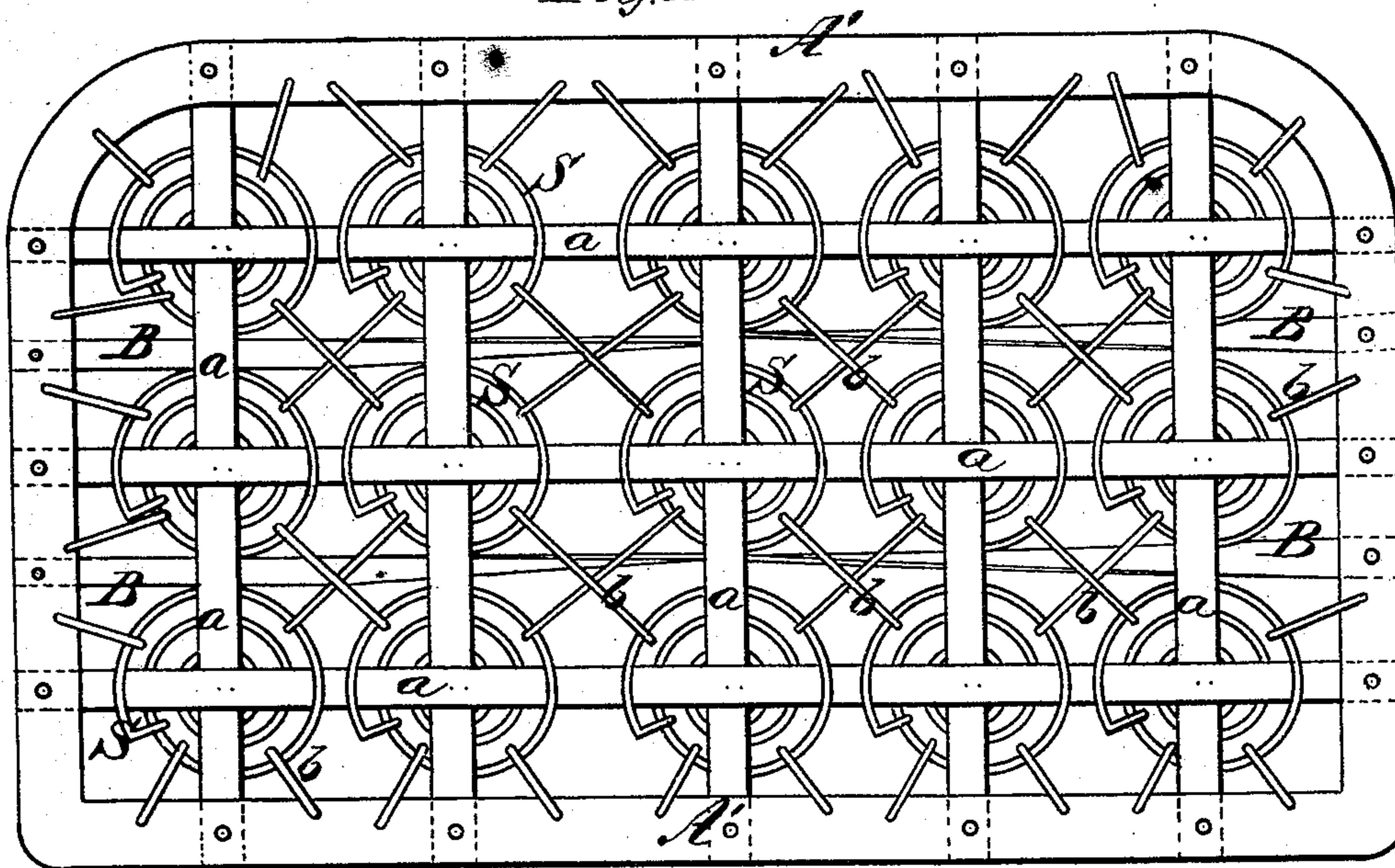


Fig. 2

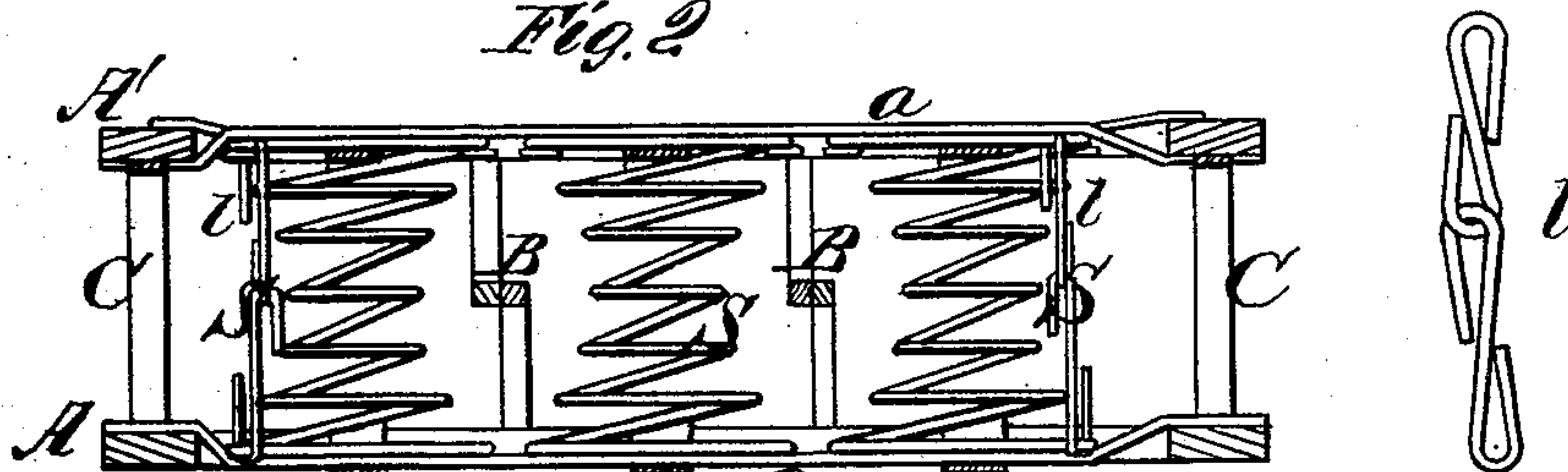


Fig. 3

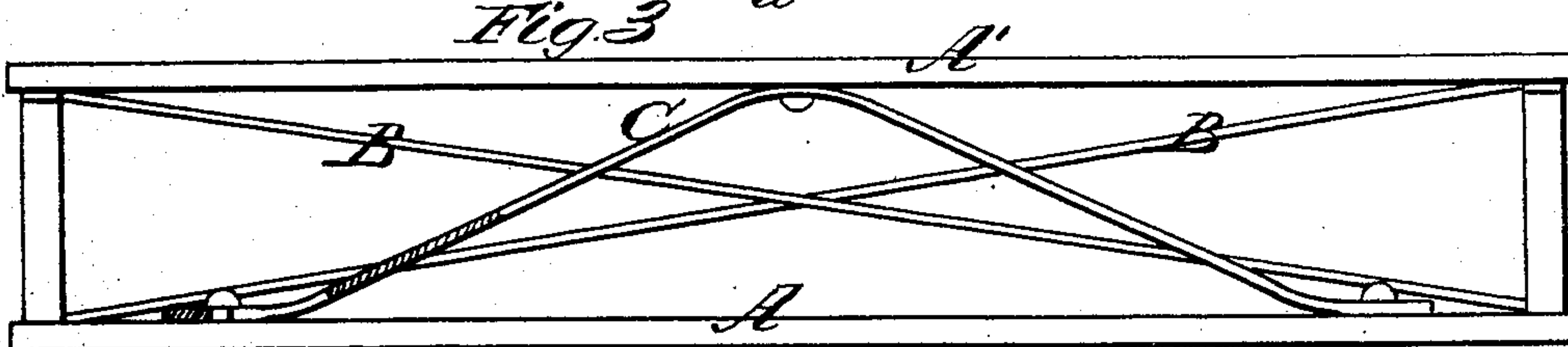
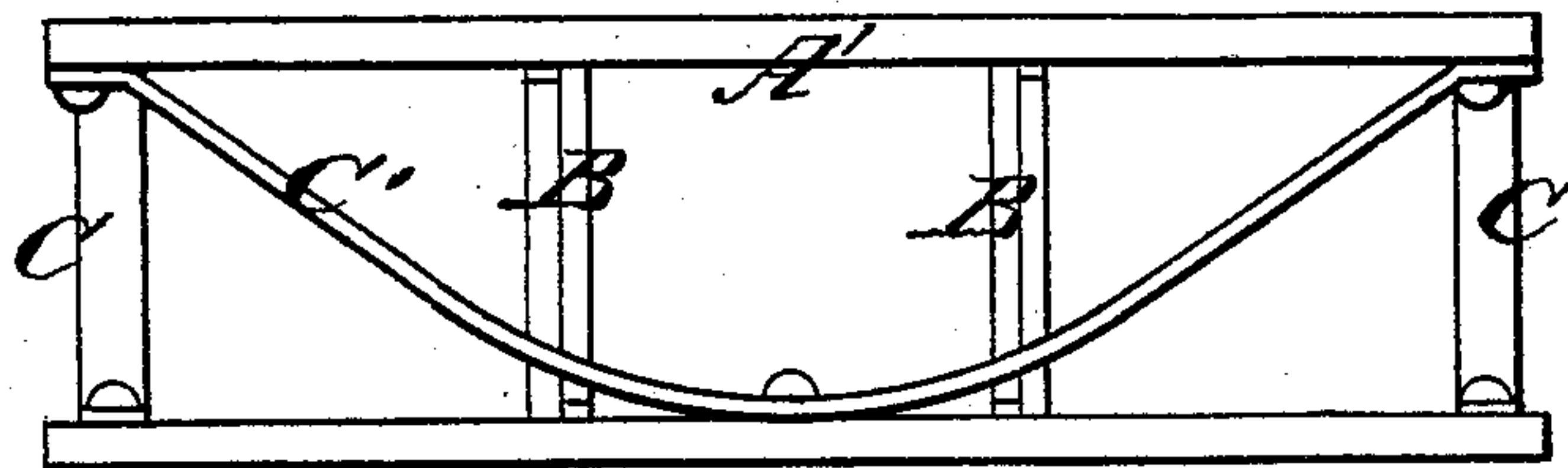


Fig. 4



WITNESSES  
*E. H. Bates*  
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INVENTOR  
*John A. Stevenson,*  
*Chipman & Co.,*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

JOHN A. STEVENSON, OF BELVIDERE, NEW JERSEY, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN J. KLINE, OF SAME PLACE.

## IMPROVEMENT IN SPRINGS FOR SEATS, &c.

Specification forming part of Letters Patent No. **160,123**, dated February 23, 1875; application filed October 10, 1874.

*To all whom it may concern:*

Be it known that I, JOHN A. STEVENSON, of Belvidere, in the county of Warren and State of New Jersey, have invented a new and valuable Improvement in Spring-Seat for Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view of my seat. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a front view, and Fig. 4 is an end view, of the same.

This invention has relation to seats for vehicles; and it consists in combining in a seat the following elements, to wit: two braced frames tied together by diagonal braces; horizontal semi-elliptic springs at the front and rear sides and the ends of the frames, as will be understood from the following description.

In the annexed drawings, A A' designate two open frames, which may be made of metal or other suitable material, and shaped to correspond to the place in a vehicle for which the seat is intended. Each frame is provided with crossed strips *a*, arranged to form squares, and secured in their places, as shown in Fig. 1. B B designate two pairs of braces, which extend diagonally between the ends of the frames A A', and are crossed, so that they prevent the top frame from lateral displacement, although they allow the top frame to rise and descend freely. C C and C' C' des-

ignate semi-elliptic springs, which are applied between the frames for adding to the ease and comfort of the seat. The rear one of the springs C has its extremities slotted, so that this spring can extend and contract readily. S S designate a number of spiral springs, the upper and lower ends of which are suitably secured to the crossed strips *a* of the two frames. The ends of the springs are tied together by means of crossed wires *b*, which steady these springs and keep them in their places. Short wires, *b*, are also used for tying the springs to the frame A', as shown in Fig. 1.

To resist an undue extension of the springs S, I connect the upper and lower ends of each spring together by means of links *l*, which are shown in Fig. 2. These links are preferably shaped as shown in Figs. 2 and 5—that is to say, they are S-shaped.

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

The combination of the two spring-seat frames A A', tied together by interior oblique spring-braces B B, and exterior semi-elliptical spring-braces at the front and rear sides and at the ends of the frames, whereby all longitudinal and lateral movement of the seat-frames is prevented.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN A. STEVENSON.

Witnesses:

W. H. TRUMAN,  
S. J. RAULS.