

(No Model.)

C. S. PAINE.  
SPRING SEAT.

No. 553,762.

Patented Jan. 28, 1896.

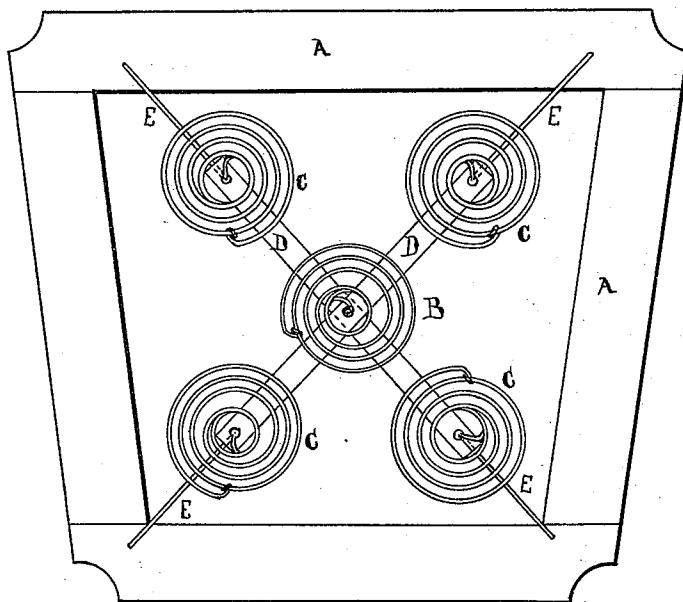


Fig. 1.

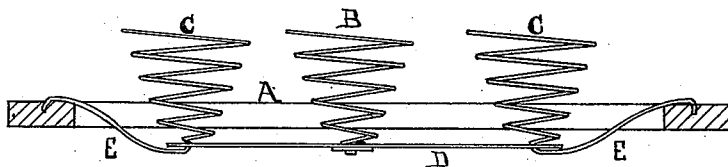


Fig. 2.

Witnesses

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By *Edward Teggart*  
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# UNITED STATES PATENT OFFICE.

CHARLES S. PAINE, OF GRAND RAPIDS, MICHIGAN.

## SPRING-SEAT.

SPECIFICATION forming part of Letters Patent No. 553,762, dated January 28, 1896.

Application filed May 13, 1895. Serial No. 549,145. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES S. PAINE, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Spring-Seats, of which the following is a specification.

This invention relates to a new and useful spring and spring-support, the same being peculiarly adapted for use in connection with chairs and seats and analogous pieces of furniture.

The invention consists in combining with a seat-frame spring-supports and springs, and the object of the invention is to simplify the construction of spring-seats adapted for the articles of furniture above enumerated. This object I accomplish by means of the mechanism and structure illustrated in the accompanying drawings, in which—

Figure 1 shows a plan view of a seat-frame with a spring attached in accordance with my invention; and Fig. 2 shows a sectional view of the said frame, the same showing three of the springs in side elevation.

Similar letters refer to similar parts throughout the views.

A A represent the frame of the chair-seat, which is constructed of wood or any suitable material and of any suitable shape.

D D represent suitable supports for the coil-springs. In the example of my invention shown in the drawings I have shown D D composed of two flat strips of metal crossing each other at right angles and supporting the coil-springs C C, B showing the center spring, in the example of my invention illustrated in the drawings, and C C, &c., showing the outer springs; but instead of using the two flat strips D D crossing each other, any other form may be used in place thereof, and instead of using four outer springs a larger number may be used, if desired.

The outer springs C C are each provided with an extension made integral with the spring itself, (shown in the drawings by E,) such extension forming the connection between the spring-supports D and the frame A, the extension E preferably passing through the supports from the upper side, bent upward, and carried outwardly, having its outer end engaging with the frame A, as shown.

If desired a clip or other means may be used in addition to the hooked outer end of the extension E, although in ordinary use the form shown in Fig. 2 will suffice to attach the springs to the outer frame.

It will be evident that instead of using the coil-spring shown in the drawings the same method of attaching might be used with springs of different shapes, the invention consisting in using an extension of the spring itself as a means of attaching the center-spring supports to the frame.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. In a spring-seat, the combination with a suitable frame, of the spring-supports arranged within the area of the frame, and a series of springs resting upon said spring-supports and having a downward and outward extension made integral therewith, said extensions serving the purpose of attaching the springs and spring-supports to the frame of the seat, substantially as described.

2. In a spring-seat, the combination with a suitable frame, of the spring-supports having apertures through their ends and a series of springs resting upon said supports, some of which have downward extensions which pass through the apertures in the supports, said extensions then bent outward and having their ends secured to the seat-frame, substantially as described.

3. In a spring-seat, the combination with a suitable frame, of the spring-supports crossing each other and arranged within the area of the frame, apertures formed in said spring-supports, a series of coiled springs resting upon and having their lower ends passing through said apertures, and outward extensions made integral with the outermost springs, said extensions passing through the apertures in the supports and serving the purpose of attaching the springs and supports to the frame, substantially as described.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

CHARLES S. PAINE. [L. s.]

Witnesses:

EDWARD TAGGART,  
CHRISTOPHER HONDELINK.