No. 816,075. PATENTED MAR. 27, 1906.

J. H. COOK.

SPRING SEAT STRUCTURE.

APPLICATION FILED DEC. 4, 1905.

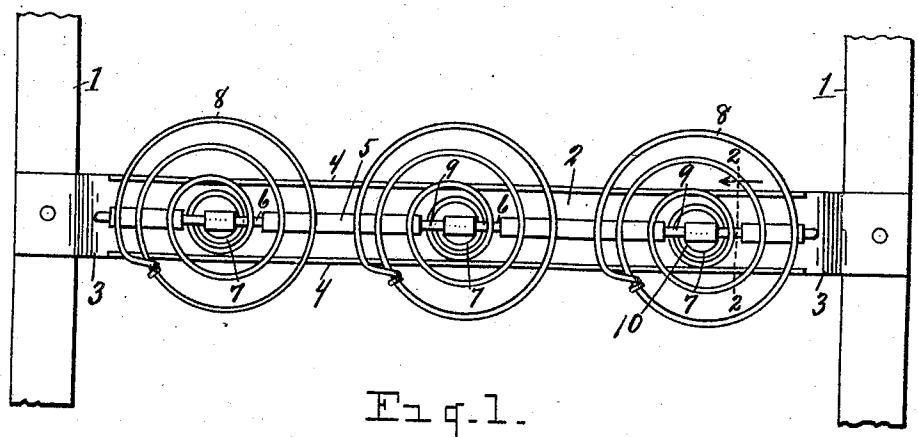


Fig. 1.

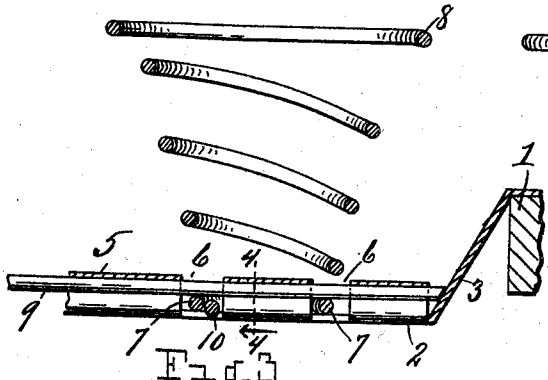


Fig. 3.

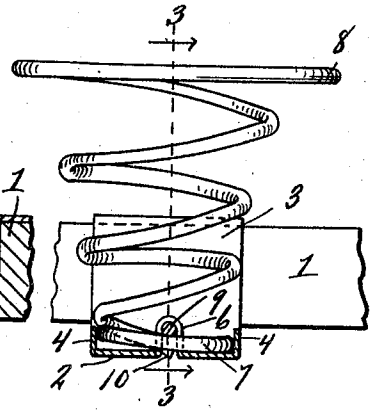


Fig. 2.

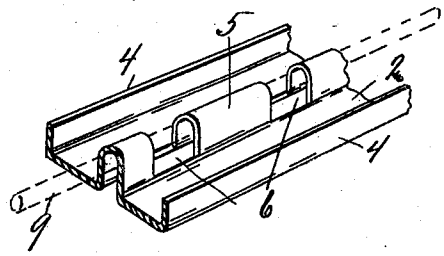


Fig. 5.

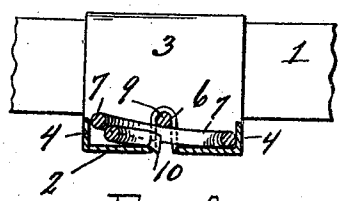


Fig. 4.

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UNITED STATES PATENT OFFICE.

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SPRING-SEAT STRUCTURE.

No. 816,075. Specification of Letters Patent. Patented March 27, 1906.

Application filed December 4, 1905. Serial No. 290,192.

To all whom it may concern:

Be it known that I, JAMES H. COOK, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Spring-Seat Structures; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a device for mounting upholstery-springs in the building of spring-seats and analogous articles; and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide simple and efficient means for mounting the ordinary stock springs used in upholstery so as to firmly secure them in position in a seat-frame, the arrangement being such as to form a truss-bar on which the springs are mounted and to which said springs may be detachably secured in a manner to hold them in an upright position and restrain them against lateral displacement.

The above object is attained by the structure illustrated in the accompanying drawings, in which—

Figure 1 is a fragmentary view in plan, showing a portion of a seat-frame, a cross-bar attached to the opposite rails thereof, and a row of springs mounted on said bar in accordance with my invention. Fig. 2 is a transverse section through said bar, as on line 2 2 of Fig. 1. Fig. 3 is a vertical section through the bar and spring, as on line 3 3 of Fig. 2. Fig. 4 is a fragmentary view, in transverse section, through the bar and lower coil of the spring, as on line 4 4 of Fig. 3. Fig. 5 is a fragmentary view in perspective of the cross-bar, the truss-rod which serves to lock the springs in position showing in dotted lines.

Referring to the characters of reference, 1 designates the rails of a seat-frame, between which extend the cross-bars 2, of which there may be as many as required, and which at their ends are secured to the rails of the frame, the end portions of said bars being inclined, as shown at 3, in order to cause the bars to depend within the seat-frame below the plane of the upper face of the rails thereof. That portion of each of the bars between the inclined terminals is provided with the vertical side flanges 4 and with the centrally-disposed longitudinally-extending loop 5, forming a hollow bead or rib rising above the plane of the upper face of said bar. Said central bead or rib is cut through transversely at intervals to form the openings 6, in which the lower coil 7 of the spring 8 is adapted to lie, said spring being confined therein by the longitudinally-extending truss-rod 9, which is passed through said hollow central rib over the coil 7 of the spring, as clearly shown in Figs. 2 and 3, said rod extending the whole length of the bar and being common to all of the springs mounted thereon, as shown in Fig. 1. The presence of the rod 9 within the hollow central bead or rib 5, extending the entire length of the bar and which by the coils of the springs is held tightly in contact with the upper inner arc of said hollow rib, serves as a truss for said bar, which adds materially to its supporting strength and which, together with the side flanges 4, renders said bar sufficiently rigid to enable it to be formed of comparatively light material.

The flanges 4 not only serve to strengthen the bar, but also prevent lateral displacement of the spring whose lower coil lies between said flanges, while the transverse openings 6 in the hollow rib prevent the spring working longitudinally of the supporting-bar.

It will be observed that the flat surface of the bar 2 serves as a seat for the spring, which tends to hold it in a vertical position, while the truss-rod 9 securely locks the spring in place.

In order to prevent the spring rotating about its axis sufficiently to disengage its lower coil from under the rod 9 by a movement similar to that of retracting a screw, the extreme end 10 of the coil 7 (see Fig. 4) is caused to engage the margin of one of the openings 6 formed by cutting through the rib 5, whereby the spring is locked against accidental rotary movement.

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

1. The combination in a spring-seat structure, of a spring-supporting bar, a spring seated on said bar and locked thereto, and a strengthening-rod extending longitudinally of said bar and so associated therewith as to serve as a truss.

2. In a spring-seat structure, the combination with the spring-supporting bar, a spring

seated thereon, and a truss-rod extending longitudinally of the bar to truss the same, said rod serving to lock the spring thereto.

3. In a spring-seat structure, the combination of a spring-supporting bar, a spring seated thereon and a truss-rod extending longitudinally of the bar, said rod engaging the lower coil of the spring to detachably lock the spring to said bar.

4. In a spring-seat structure, the combination of the spring-supporting bar having a hollow central rib provided with transverse openings, a spring seated on said bar having its lower coil lying in said openings, and a locking-rod extending longitudinally of the hollow rib across the coil of said spring.

5. In a spring-seat structure, the combination of the spring-supporting bar, having marginal flanges and a central hollow rib provided with transverse openings, a spring seated in said openings, and a locking-rod lying in said hollow rib and crossing the coil of said spring.

6. In a spring-seat structure, the combination of the spring-supporting bar having marginal flanges and a hollow central rib provided with a series of transverse openings, a plurality of springs seated on said bar, the lower coils of which lie in said openings and are confined between said flanges, and a locking-rod extending through said hollow rib common to all of said springs and crossing the coils thereof.

In testimony whereof I sign this specification in the presence of two witnesses.

JAMES H. COOK.

Witnesses:
E. S. WHEELER,
I. G. HOWLETT.