No. 647,912. Patented Apr. 17, 1900.

W. VOGLER.

SPRING SEAT OR SUPPORT FOR FURNITURE, &c.

(Application filed Apr. 24, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

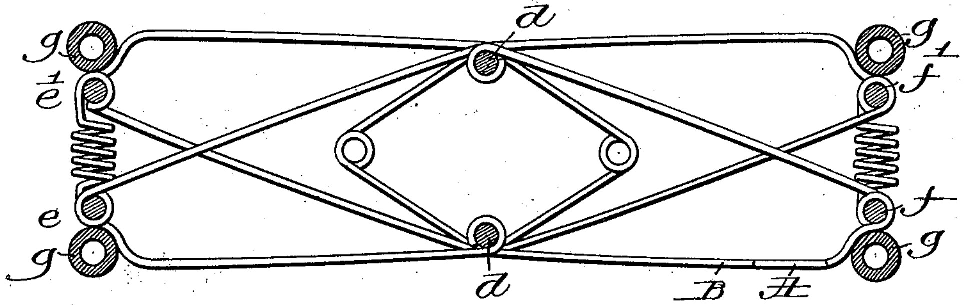

Fig. 2.

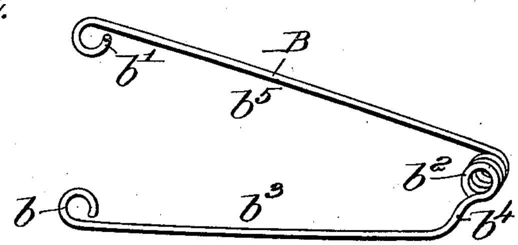

Fig. 3.

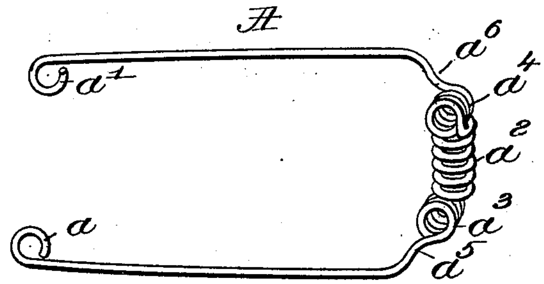

Fig. 4.

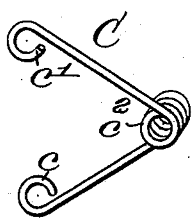

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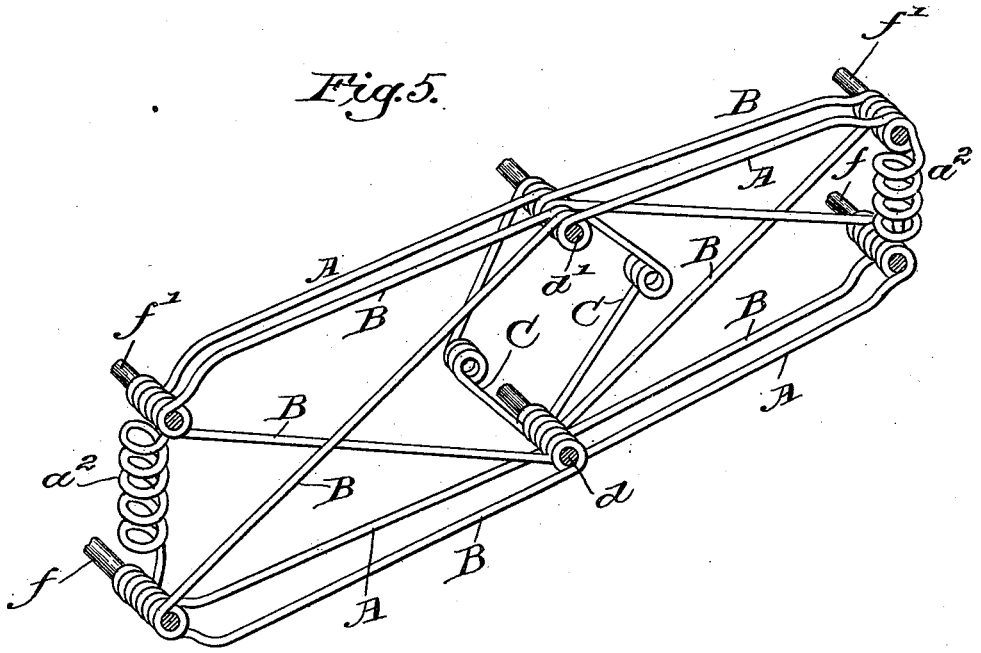
Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM VOGLER, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO GEORGE N. PHELPS, OF BOSTON, MASSACHUSETTS.

SPRING SEAT OR SUPPORT FOR FURNITURE, &c.

SPECIFICATION forming part of Letters Patent No. 647,912, dated April 17, 1900.

Application filed April 24, 1899. Serial No. 714,172. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM VOGLER, of Somerville, county of Suffolk, State of Massachusetts, have invented an Improvement in Spring Seats or Supports for Furniture, &c., of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to a novel spring-seat adapted for use in connection with furniture and to take the place of seats such as usually made containing hour-glass springs.

My improved seat is made up, as herein shown, of three varieties of springs, the open free ends of which are connected with parallel stay-rods arranged substantially central in the seat, the uppermost of said rods being freely movable toward the undermost rod when it is applied to the seat. The central portion of the wire used in the production of the said springs is provided with a spring coil or coils to define the moving sets of said springs, and such coils in some of the springs receive through them suitable edge rods. The stay or middle rods and edge rods are made to unite a large number of these springs side by side to form a seat, which may be of any desired length or width and of any desired strength of stiffness, that depending upon the strength of the wire used. The wire entering into the formation of the springs connected with the edge rods is bent near the junction of said springs with said rods to constitute seats for a flexible edge former or buffer, which may be an india-rubber tube or a roll of any flexible material.

Figure 1 represents an end view of a seat composed of springs made up and united in accordance with my invention, a part of one of the springs B being broken out to show part of a spring A behind it. Figs. 2, 3, and 4 show separately the springs employed in the seat, and Fig. 5 is a perspective view of part of the seat with the buffers omitted.

For the production of my improved seat I take wire of the proper thickness and temper, according to the weight to be supported by the completed seat, and I bend the same to produce a series of differing springs A B C. The wire spring A is bent substantially midway its eyed ends a a' to produce a compression-spring a^2, and at opposite ends of said compression-spring the wire is bent to form spring-coils a^3 a^4, and close to one end of said spring-coils the wire is bent to leave two concaved seats a^5 a^6, and from said seats to the eyed ends of the wire the arms of the spring are substantially parallel. The wire spring B is bent between its eyed ends b b' to form a spring-coil b^2, and the flange b^3 of said spring has a seat b^4, the two flanges b^4 and b^5 diverging at one side of the spring-coil. The spring C is bent between its eyed ends c c' to present a spring-coil c^2. These springs are united, as in Fig. 1, to form a seat by means of stay-rods d d' and edge rods e e' f f'. In assembling these springs on said rods let it be supposed that two springs C have their eyes c and c' put on the stay or middle rods d and d', the spring-coil of said springs standing in opposite directions. Then I may apply to the stay-rods the eyed ends b b' of several of the springs B—for instance, two or three pairs of said springs—their spring-coils projecting in opposite directions alternately. Thereafter I may apply to the stay-rods d d' the eyed ends a a' of two of the springs A, leaving the spring-coils a^3 a^4 thereof extending oppositely from the said stay-rods, and thereafter I may apply other two of the springs C and then other springs B and A in the desired order.

In applying the springs B, I apply them alternately, so that each spring shall present at the outer side of the seat its concaved portion.

The spring-coils of the springs A and B, in line at a distance from the stay-rods d d', receive within them edge rods e e' and f f', such construction and connection of the springs leaving the compression coils and springs A interposed between the pairs of edge rods e f and e' f'.

The springs, assembled as described, present at their ends at top and bottom the series of seats before described made in the wire near the spring-coils, and in these seats I lay the flexible edge former or buffer g, preferably composed of an india-rubber or equivalent tube; but it may be any flexible roll. The edge-former prevents contact of the body with the ends of the springs and

forms a yielding edge or buffer. This invention is not limited, however, to the particular number of springs employed in the seat nor to the particular arrangement of the springs in sequence on the stay and edge rods, and they may be applied one after the other, as desired, according to the particular strength required for the seat.

The springs C offer resistance at the center line of the seat, and they may be put upon the stay-rods at any desired position in assembling the springs A and B constituting the main body of the seat.

The seat composed of the assembled springs may have applied to it any usual or suitable foundation to sustain hair or equivalent.

The entire seat and flexible edge or buffer may be inclosed in any usual or suitable cloth or furniture-covering fabric.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a spring-seat, a pair of middle stay-rods, rods disposed in pairs at opposite sides of the middle rods, oppositely-disposed spring members located at opposite sides of the middle rods, and certain of said spring members being connected to one end pair of rods and to the middle rods, and certain other of said spring members being connected to the other pair of said end rods and also to the middle rods, and certain of said spring members consisting of two branches disposed approximately in parallelism and compression-springs uniting the same, and springs disposed between and connected to said middle rods.

2. In a seat, stay-rods and a series of springs having their free ends engaged with said stay-rods, and said springs being bent substantially midway their length to present a compression-spring and two spring-coils, and stay-rods extended through the said two spring-coils.

3. In a seat, stay-rods, and a series of springs having their free ends engaged with said stay-rods, and said springs being bent substantially midway their length to present a compression-spring and two spring-coils, the wire entering into said springs being also bent to form seats, and stay-rods extended through the said two spring-coils of each spring.

4. In a seat, stay-rods and two series of different springs connected therewith, the springs of one series presenting substantially midway their length spring-coils, the springs of the other series presenting substantially midway their length a compression-spring and spring-coils, and edge rods extended through the spring-coils of said different springs, substantially as described.

5. In a seat, stay-rods, two series of different springs connected therewith, the springs of one series presenting midway their length spring coils and seats, the springs of the other series presenting substantially midway their length a compression-spring, spring-coils, and seats next said spring-coils; and edge rods extended through the spring-coils of said different springs, substantially as described.

6. In a spring-seat, stay-rods, a series of substantially-similar springs engaging said stay-rods, and each having a spring-coil, the eyes or openings of the spring-coils being disposed in two horizontal planes, and two edge rods extended through the eyes of said spring-coils, and a central series of springs connected only with said stay-rods and presenting spring-coils located between the arms of the springs connected with both the stay-rods and edge rods.

7. In a seat, stay-rods and two series of different springs connected therewith, the springs of one series presenting substantially midway their length spring-coils, the springs of the other series presenting substantially midway their length a compression-spring and spring-coils and edge rods extended through the spring-coils of said different springs, and a central series of springs connected only with said stay-rods, and presenting spring-coils located between the arms of the springs connected with both the stay-rods and edge rods, substantially as described.

8. In a seat, stay-rods and edge rods, springs connected to said rods and presenting next said edge rods seats, and a flexible edge former or buffer located in said seats, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM VOGLER.

Witnesses:
GEO. W. GREGORY,
MARGARET A. DUNN.