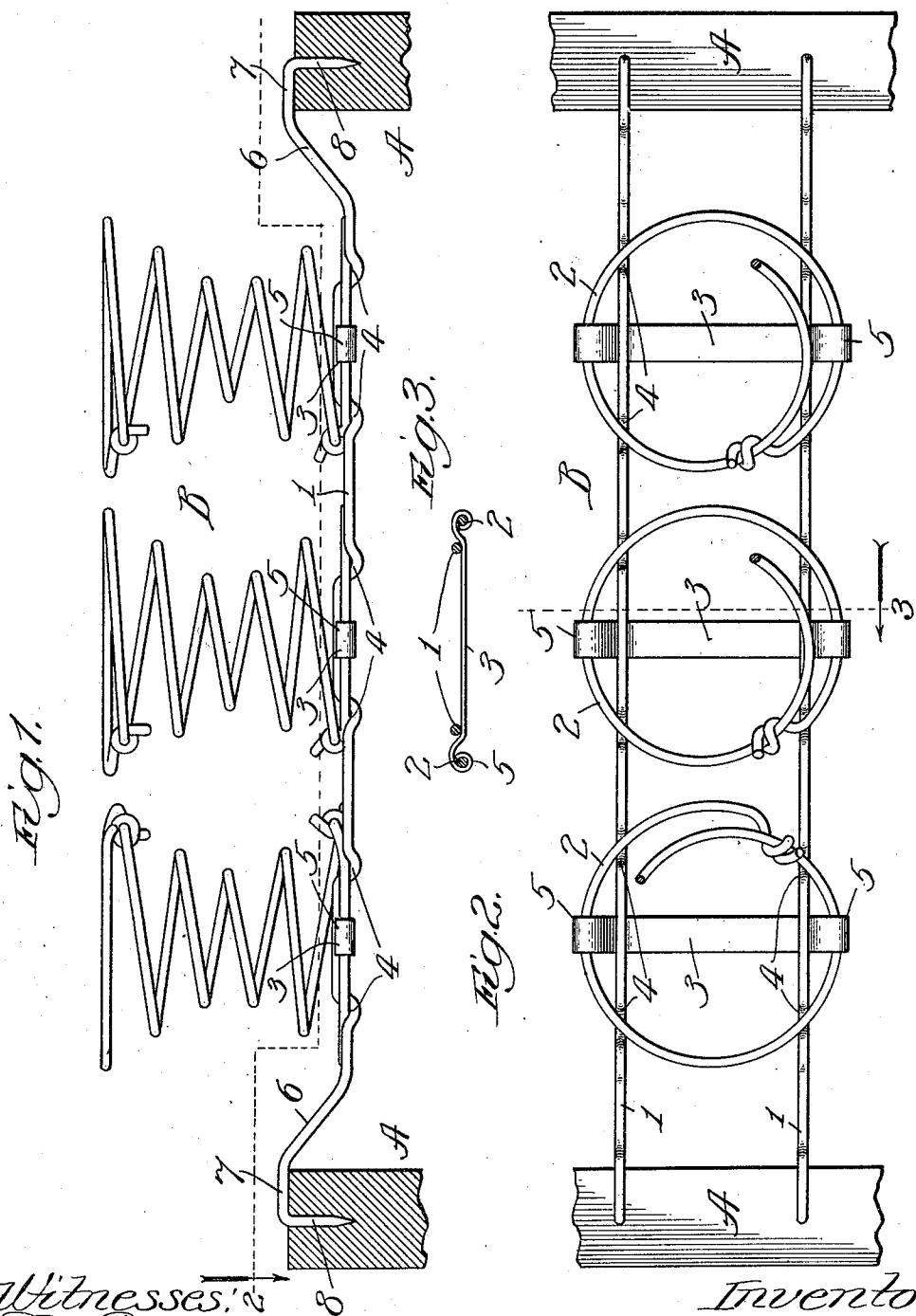


B. F. WINDSOR.
SPRING BOTTOM OR SEAT CONSTRUCTION.
APPLICATION FILED DEC. 23, 1910.

999,422.

Patented Aug. 1, 1911.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. WINDSOR, OF KENOSHA, WISCONSIN.

SPRING BOTTOM OR SEAT CONSTRUCTION.

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Specification of Letters Patent.

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Application filed December 23, 1910. Serial No. 598,992.

To all whom it may concern:

Be it known that I, BENJAMIN F. WINDSOR, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented a new and useful Improvement in Spring Bottom or Seat Construction, of which the following is a specification.

My invention relates particularly to upholstered seats, such as chair-seats, carriage-cushions, etc., and my primary object is to provide an improved construction of this character facilitating the attachment of the upholsterers' springs to the base or frame-structure.

The invention is illustrated in its preferred embodiment in the accompanying drawing, in which;

Figure 1 represents a vertical sectional view of a seat or spring bottom constructed in accordance with my invention; Fig. 2, a broken plan section, taken, as indicated, at line 2 of Fig. 1; and Fig. 3, a section taken, as indicated, at line 3 of Fig. 2.

In the construction illustrated, A represents a frame or base; and B upholsterers' springs mounted thereon in accordance with my invention.

The frame may be of any desired construction. As shown, it comprises wooden bars adapted to support the spring units in a manner to be presently described. Each spring unit preferably comprises a pair of rods 1; helical coil springs 2, of hour-glass form and corresponding in number with the distance to be spanned by the spring unit; and spring-attaching bars or members 3 which serve to secure the base ends of the springs to the rods 1. Each rod is provided with a series of pairs of depressions or offsets 4. The members of each pair of offsets or depressions are separated from each other a distance somewhat less than the diameter of the end-ring of the coil, and the pairs of offsets of the two rods 1 are in alignment with each other, so that the end-ring of the spring will seat in the two pairs of corresponding offsets of the two rods, as will be clearly understood from Fig. 2. The tie-members 3 preferably comprise short sheet metal strips, which extend diametrically across the lower rings of the coils and have their extremities curved about the rings of the coils, as indicated at 5, the intermediate portions of the strips passing beneath those portions of the rods 1 which

lie within the base-rings of the coils. The depressions 4 are formed by striking the metal of the rods downwardly, and the strips 3 serve to securely bind the base-rings of the coils in the bearings or depressions 4 of the rods. Thus it will be understood that the base-ring of each coil has a four-point bearing on the rods 1 and is securely tied to the rods, so that it is impossible for the coils to shift with relation to the rods or to be dislodged from their bearings.

Where the spring units are designed for use in connection with a wooden frame, it is preferred to bend the end-portions of the rods 1 upwardly to form the inclined portions 6, and the raised horizontal portions 7, the extremities 8 of the rods being bent downwardly at right angles to the portions 7 and pointed, so that the points can be driven into the wooden supporting bars, as clearly shown in Fig. 1. It will be understood, of course, that as many spring units may be employed as the size of the seat-frame or bottom to be equipped may require. In practice, the upper portions of the springs are tied together in any suitable manner.

Experience has demonstrated that a construction of this character is very secure and stable, cheap to manufacture, and the parts are readily assembled. Moreover, no injury to the springs results in this character of invention, and the spring is well balanced, strongly supported, and thoroughly anchored in its bearings. The advantages of the construction will be at once appreciated by those familiar with the practical manufacture and use of this class of structures.

The foregoing detailed description has been given for clearness of understanding only, and no undue limitation is to be understood therefrom; but the appended claims are to be construed as broadly as permissible in view of the prior art.

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

1. In a structure of the character set forth, a spring unit comprising a pair of rods provided with corresponding pairs of offset bearings, a coil spring having a base-ring supported in said bearings, and a diametrically disposed tie-member passing beneath said rods and having its ends curved about the base-ring of the spring.
2. In a structure of the character set

forth, the combination of a pair of substantially parallel rods provided with series of pairs of alined offset bearings, coil springs having enlarged base-rings supported in 5 said bearings, and diametrically disposed tie-strips passing beneath said rods and having their ends curved about the base-rings of said springs.

3. In a structure of the character set 10 forth, the combination of a pair of rods, each provided with a series of pairs of offset bearings, the pairs of bearings of the two rods being in transverse alinement with re-

lation to the rods, coil springs having base-rings supported in said bearings, and metallic tie-strips extending diametrically across the base-rings of said coils and having their ends secured to said base-rings and their intermediate portions disposed beneath the portions of said rods lying within 15 20 said base-rings.

BENJAMIN F. WINDSOR.

In presence of—
J. G. ANDERSON,
R. A. SCHAEFER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
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