

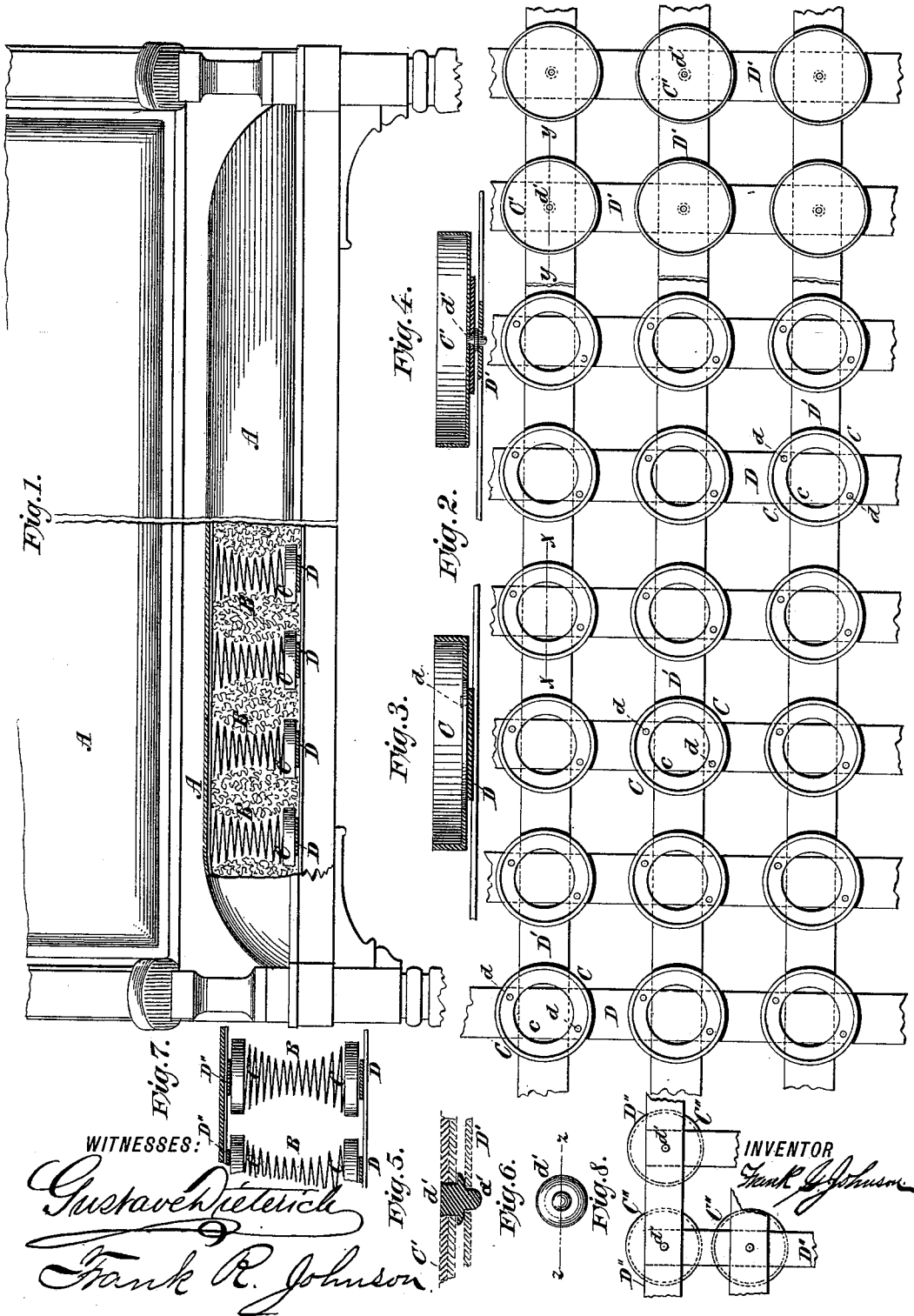
(No Model.)

2 Sheets—Sheet 1.

F. G. JOHNSON.
UPHOLSTERING CHAIRS.

No. 394,578.

Patented Dec. 18, 1888.



WITNESSES:

Gustave Pieterich
Frank R. Johnson

INVENTOR

Frank R. Johnson

(No Model.)

2 Sheets—Sheet 2.

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Fig. 8.

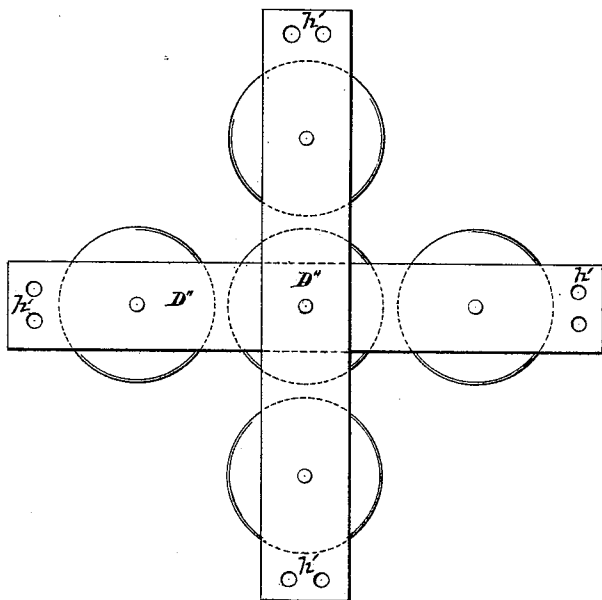
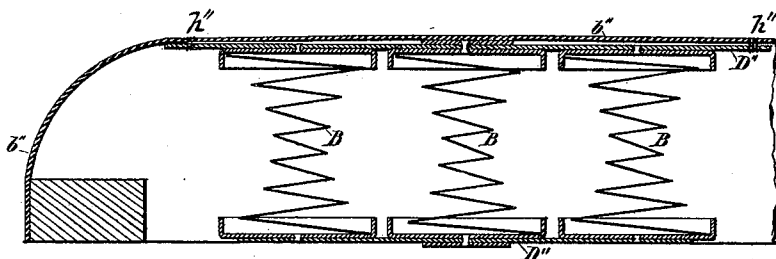


Fig. 10.



WITNESSES:

Gustav Dietrich.
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INVENTOR

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UNITED STATES PATENT OFFICE.

FRANK G. JOHNSON, OF NEW YORK, N. Y.

UPHOLSTERING CHAIRS.

SPECIFICATION forming part of Letters Patent No. 394,578, dated December 18, 1888.

Application filed July 14, 1888. Serial No. 280,000. (No model.)

To all whom it may concern:

Be it known that I, FRANK G. JOHNSON, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Improvement in Upholstering Chairs, Sofas, and other Articles of Furniture, of which the following is a specification.

My invention relates to that class of chairs the seats of which are upheld by spiral steel-wire springs, which said springs usually rest upon and are supported vertically by webbing, which in the form of strips are crossed and recrossed and the ends fastened to the seat-frame, and the springs secured laterally thereto by means of twine. The objections to this method are that the twine wears off, rots, and breaks, which allow the springs to become misplaced and stand out of vertical position, that the webbing stretches and allows the seat to sag, whereby the elasticity of the springs is rendered greatly ineffectual to support the seat until the webbing is taken off and tightened up or renewed, which can be done only by skilled labor.

The object of my invention is to obviate these objections and render upholstered chairs and sofas more durable, to secure and support the springs in such a manner that they will not become misplaced, that the seat will not sag, and to avoid the need of repairs, which I attain by placing each and every spring in its own respective position and securely holding the same in such position both vertically and laterally as will appear from the following specification and accompanying drawings, in which—

Figure 1 represents a sofa, partly broken away, showing a longitudinal vertical section; Fig. 2, a plan view of the bottom of the sofa, looking downward; Fig. 3, an enlarged horizontal section on the line $x x$ of Fig. 2; Fig. 4, an enlarged horizontal section on the line $y y$ of Fig. 2; Fig. 5, a transverse section showing a peculiar form of rivet through the line $z z$ of Fig. 6. Fig. 6 is a plan view of the rivet; Fig. 7, a vertical section, of which Fig. 8 is a plan view, the two figures (7 and 8) showing the method of applying the metal sockets to the top as well as to the bottom of the springs in chairs. Figs. 9 and 10 illustrate

the method of holding laterally the upper ends of the springs.

Similar letters refer to similar parts throughout the several views.

A A, Fig. 1, represents the upholstered portion of a sofa, a portion of the covering of the seat being removed.

B B B are the ordinary upholstering spiral springs.

C C C are sheet-metal cup-like sockets, slightly less in diameter than the lower coil of the springs, in which, as seen in Fig. 1, the lower ends of the springs are placed, the lower coil being sprung a little by the hands to insert it into the socket.

D D D are end views of thin sheet-metal straps, like ordinary hoop-iron, sufficiently long to reach transversely across the sofa, (from back to front.) Upon these metal straps D D D, at suitable distances from each other, are riveted the sheet-metal cup-like sockets C C C, there being usually three springs from front to back on sofas, standing in a right line with each other. The sheet-metal straps, having the three or more of the said sockets riveted thereto, are now ready to be fastened to the back and front rails of the sofa or other articles, as chairs and divans, by means of suitable nails or screws. More or less of the central portion of the bottom of these cup-like sockets may be left out or cut away, as shown in Fig. 2, in which case the said sockets will be riveted to the sheet-metal straps D D D by two rivets, as shown in left-hand portion of Fig. 2 and in Fig. 3; or if no part of the bottom of the sockets is left out or cut away, then they (the sockets) will be riveted to the straps, with only one rivet passed through the center of the bottom of the socket C, as shown at d' in the right-hand portion of Figs. 2 and 4.

If the longitudinal straps D' D' D' (shown in Figs. 2 and 4) should be considered necessary to give additional support to the transverse straps D D D, they (the said longitudinal straps) need not be riveted to the sockets C C C or to the transverse straps D D D, but only fastened at their ends to the cross main rails of the sofa or chairs, as the lateral support of the springs in all transverse directions will be secured by their riveted attachment

to the transverse straps D D D; but to furnish additional lateral support to the sockets C C C without riveting the sockets or transverse straps to the longitudinal straps I employ a peculiar rivet, d' , (best seen in Figs. 5 and 6,) provided with a nipple or stem, d'' , on the head of the same, which (when the longitudinal straps are employed) pass through corresponding holes in the longitudinal straps, as shown in Fig. 5 and in the right-hand portion of Fig. 2, but not riveted thereto.

The sheet-metal sockets C C C, when employed to receive and hold the top ends of the springs, as shown in Fig. 7, $C'' C''$, are made and riveted, in the same manner as above described, to thinner sheet-metal straps, $D'' D''$, Figs. 7 and 8, that they may easily yield and deflect to conform to the weight put upon the top of the seat of the chair or sofa, and to increase the flexibility of these straps $D'' D''$ their ends are not to be fastened to the frame of the seat, but only to the buckram or other fabric employed for covering the seat of the chair or sofa. These straps are provided with holes at or near the ends, as shown by $h' h' h'$ in Fig. 9, through which the straps can be lashed to the buckram $b'' b''$, Fig. 10, with suitable twine, as shown at $h'' h''$, by which means the straps, and so the sockets riveted thereto, are laterally held in the vertical position. By this means of laterally holding the springs their free individual vertical action is not prevented, while each one of them is kept in a vertical position and securely held from lateral misplacement; but my chief object in holding the upper ends of the springs in this manner is to provide an extended base on which to rest the buckram $b'' b''$, which is the surface of the straps $D'' D''$ and the inverted sockets $C'' C''$, instead of the mere top turn of a thin stiff steel wire. By this device the seat is

also rendered more agreeable to the occupant of the chair, even when but little material is employed to cushion the chair.

I am aware of Patent No. 384,259, issued June 12, 1888, to myself, in which I employ metallic sockets for receiving and holding the bottom ends of spiral springs in upholstered furniture, the said sockets being a part of a plate to which they are connected, and the said plates having the said sockets are held up but not fastened thereto by straps of metal fastened to the frame-work of the chair. Therefore I do not claim metallic sockets when connected with and making a part of a socket-plate detached from the metallic straps which support the springs and the said sockets.

I am also aware of Patents No. 4,286, to W. Wright; No. 16,310, to E. Adler, and No. 333,557, to Sibley and Wells, and I am also aware of the English Patent No. 1,183 of 1872. Therefore I do not claim, broadly, the use of sockets for holding the ends of spiral springs irrespective of the manner of making and employing the same; but

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

In upholstered chairs and sofas, the combination of the sheet-metal straps $D'' D''$, having the holes $h' h' h'$, inverted sheet-metal cap-like sockets $C'' C'' C''$, placed over the upper ends of the spiral springs, and buckram $b'' b''$, having the string fastenings $h'' h''$, and having the buckram placed over the said sockets, and the said metallic straps, substantially in the manner and for the purpose set forth.

FRANK G. JOHNSON.

Witnesses:

FRANK R. JOHNSON,
CHARLES A. RUNK.