(No Model.)

F. G. JOHNSON.

UPHOLSTERING CHAIRS.

No. 393,984. Patented Dec. 4, 1888.

Fig. 1.

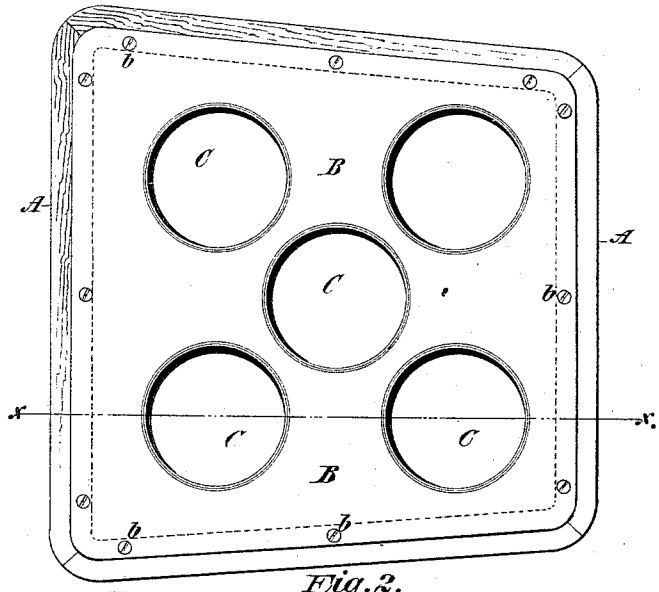


Fig. 2.

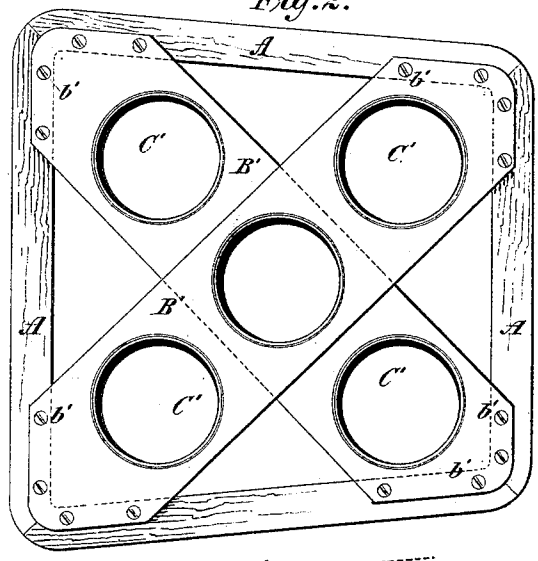


Fig. 3.

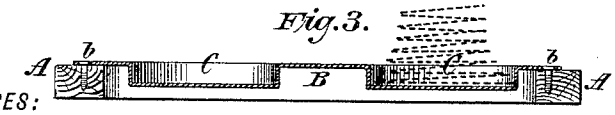
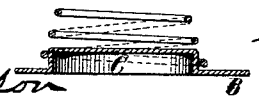


Fig. 4.



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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. 393,984, dated December 4, 1888.

Application filed July 14, 1888. Serial No. 279,999. (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, sofas, and divans the seats of which are upheld by metallic spiral springs, which said springs usually rest on and are supported by strips of webbing, the springs being held in position laterally by being lashed to the webbing with twine, the webbing being crossed and recrossed and the ends fastened to the seat-frame of the various articles of furniture in which said springs are employed. The objections to this method of supporting and fastening the springs are that the twine wears off, rots, and breaks and allows the springs to become misplaced and stand out of the vertical position, and 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 to render upholstered chairs and sofas more durable, to secure and support the springs in such a manner that they never become misplaced, that the seat never sags, and that the furniture (so far as the springs and their support are concerned) will never require repairs, which I attain by a method that places each and every spring in its own respective position, and securely holds the same in such position from ever deviating therefrom, vertically or laterally.

The nature of my invention consists in providing sheet-iron or other thin metallic supports for holding the springs in such upholstered articles, and having in such metallic supports cup-like sockets for receiving and vertically supporting and laterally holding the lower ends of the usually-employed spiral springs, the said sockets being formed and provided by depressing the said sheet-metal supports at such regular intervals as may be required to correspond with the desired position of the springs into the form of shallow cup-like depressions or sockets, which said sockets shall be practically flat on the bottom and practically perpendicular on the sides, and about a quarter of an inch deep, and of such diameter as to receive the end coil of the spiral springs. These sheet-metal supports thus provided with the said sockets are to be nailed onto the frame-work of the seat of the chairs. For articles of furniture not too large, like common chairs, the sheet-metal support having such sockets may be made large enough to reach to all sides of the frame-work and be nailed or secured thereto on all sides thereof; or, if the articles of furniture be larger, like sofas, the sheet-metal support can, for convenience and economy and lightness, be cut up into sections or strips sufficiently wide to be thus provided in the same manner with such sockets—that is, by having the strips or sections wide enough to have a reasonable margin of the sheet outside of the said sockets to give them tensile strength. These sheet-metal supports thus provided with the said sockets can be employed either side up. If the concavity of the sockets be uppermost, the lower coil of the springs will rest within the socket. If the convexity of the sockets be uppermost, then the lower coil of the springs will go on or around the outside of the concavity; but preferably the springs would be placed within the sockets, as illustrated by the accompanying drawings, in which—

Figure 1 represents a plan view showing the sheet of metal screwed at its edges to the top of an ordinary chair and provided with five of the said cup-like sockets located in position to receive the bottom ends of the five spiral springs as they are commonly located in upholstered chairs. Fig. 2 represents the sheet cut into two sections or wide strips and crossed and nailed to the chair-frame and having the same sockets. Fig. 3 represents a vertical section on the line $x\ x$ of Fig. 1, the dotted lines representing a portion of a spiral spring standing in one of the cup-like sockets. Fig. 4 shows the convexity of the socket turned uppermost and the spring placed around or over it.

Similar letters refer to similar parts throughout the several views.

A A represents the seat-frame of an ordinary chair.

B B, Fig. 1, shows a thin metallic sheet, which I will term the "support," covering the entire frame or the opening of the frame A A, and fastened thereto at its edges by the screws *b b b*, and C C C represent the cup-like sockets.

This method of employing but one sheet or piece of metal to cover the whole area of the frame may be preferably used in ordinary chairs when a central spring is employed, but in larger articles of furniture, as sofas, lounges, and divans, in which the springs are usually placed in parallel rows, it is preferable to cut the metallic sheet into sections sufficiently wide, as shown by B′ B′ B′ in Fig. 2, and to make the sockets in the same, as shown by C′ C′ C′.

The strips B′ B′ B′, having the cup-like sockets C′ C′ C′, are fastened to the seat-frame of the various articles of furniture by suitable nails or screws, *b′ b′ b′*, Fig. 2. In the illustrations the metal supports are represented as being fastened to the top side of the seat-frame; but they can be fastened as well to the bottom side of the same.

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

In upholstered chairs and sofas, a supporter of spiral springs, consisting of a single blank piece of sheet metal, B B, having cup-like sockets C C C, with vertical sides struck up therefrom to receive the springs and vertically support and laterally hold them in their respective positions, whereby a single piece of sheet metal furnishes both vertical and lateral support to the springs without the employment of slats, webbing, or twine or other supports and fastening, substantially in the manner and for the purpose set forth.

FRANK G. JOHNSON.

Witnesses:
FRANK R. JOHNSON,
CHARLES A. RUNK.