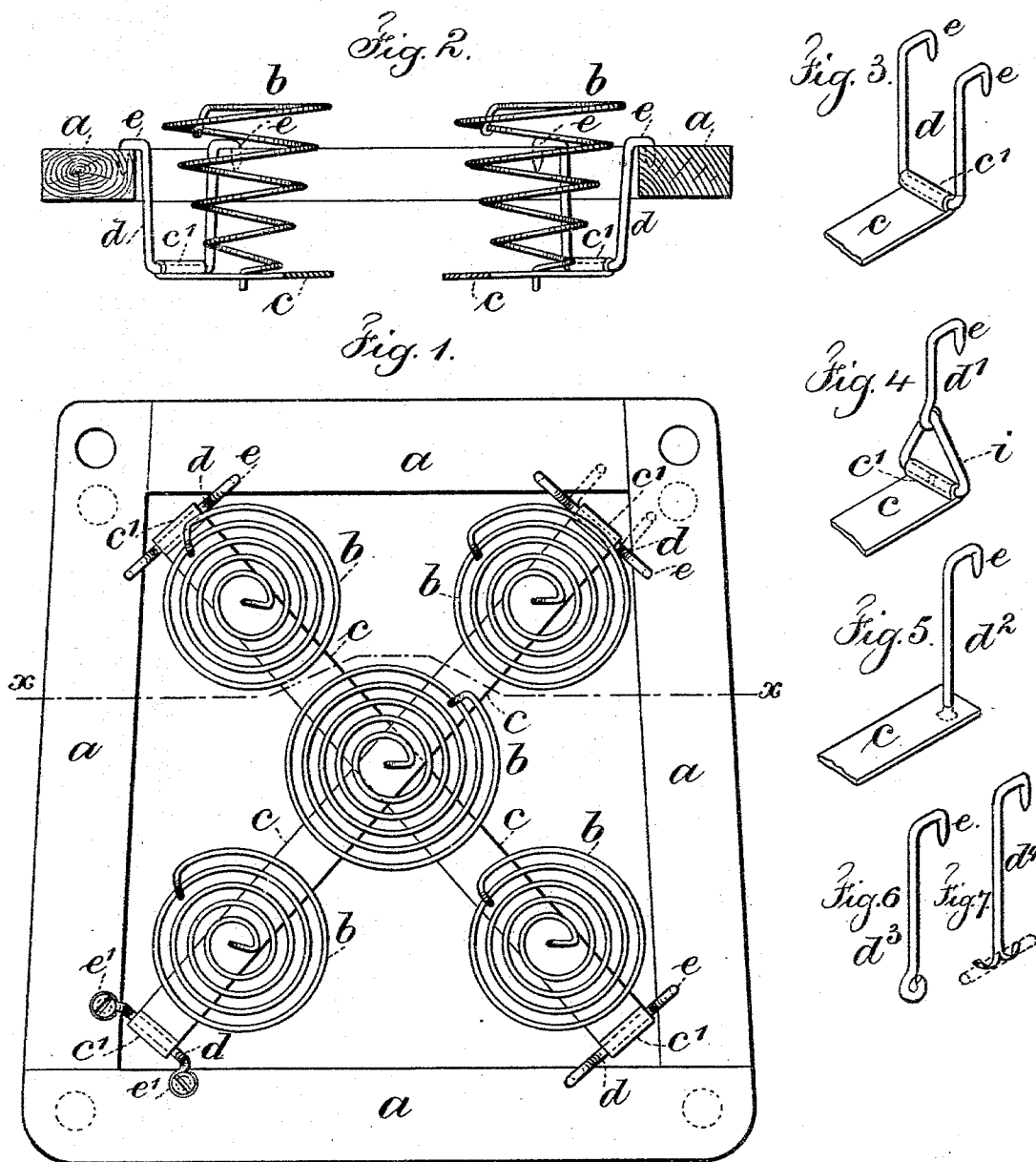


(No Model.)

J. A. STAPLES.
SPRING SUPPORT FOR UPHOLSTERY.

No. 516,030.

Patented Mar. 6, 1894.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN A. STAPLES, OF NEWBURG, NEW YORK.

SPRING-SUPPORT FOR UPHOLSTERY.

SPECIFICATION forming part of Letters Patent No. 516,030, dated March 6, 1894.

Application filed November 7, 1892. Serial No. 451,176. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. STAPLES, a citizen of the United States, residing at Newburg, in the county of Orange and State of New York, have invented a new and useful Improvement in Spring-Supports for Upholstery, of which the following is a full and exact description.

Upholstery springs have heretofore been carried in furniture frames by bands of metal the ends of which were upturned and connected to the said frames. These band supports were necessarily made in pairs right and left and had to be bent to fit each seat or other furniture frame and also had to be bent at an angle to fit the corners of the frames and were secured by nails or other similar fastenings. With these bands ordinary springs could be employed.

In Letters Patent granted to me May 10, 1892, No. 474,536, and September 20, 1892, No. 482,908, wire spring supports are set forth but with these a special form of spring had to be employed that was capable of being engaged with the wire supports. In my present invention I combine with a band or flat strap of metal, wire end hangers that extend upwardly and laterally and the free ends of the hangers project downwardly and are pointed to be driven into the seat frame. The hangers are connected to the respective ends of the metal bands in any desired manner, and with these metal bands and hangers I am enabled to use the ordinary "pin spring" or a spring of similar construction.

In the drawings, Figure 1 is a plan view of a seat frame showing my improvement. Fig. 2 is a cross section of the same at the line x, x , of Fig. 1. Fig. 3 shows one end of the metal strap and hanger, and Figs. 4, 5, 6 and 7 illustrate by perspective views modifications of my improvement.

The seat frame is represented at a . This may be the seat frame of a chair, sofa or other article of furniture where upholstery and springs therefor are employed and in which it is essential to support the springs at such a point below the plane of the seat frame as will provide the necessary depth for the springs below the upholstery surface. The springs b are supported by and rest upon the flat strips or horizontal bands of metal c , to

whose respective ends are connected the wire end hangers d, d . These metal bands c are in length of approximately the size of the opening in the seat frame. These wire end hangers are preferably connected flexibly and extend upwardly and pass laterally over or upon the seat frame, and their ends are provided with devices for connecting them to the seat frame. These may consist of the downwardly projecting and pointed ends e to be driven into the seat frame, or the eyes e' for attaching screws. These ends e may be bent, as shown in Figs. 1 and 2, or as shown in Fig. 3 and by dotted lines in Fig. 1. The wire end hangers d, d , may be of U shape, as shown in Figs. 1, 2 and 3, and the ends of the straps of metal c may be bent at c' into tubular portions to surround, engage and be suspended from the U shaped wire hangers and thus be flexibly connected. I prefer this construction.

In Figs. 4, 5, 6 and 7, I have shown modifications of the wire end hangers. In Fig. 4 the wire end hanger d' is made with an eye and is connected with the tubular end of the strap by a bent wire i of triangular shape, thus providing a central support with one driving or attaching end. In Fig. 5 the wire end hanger d^2 is headed at its lower end and is passed through a central hole in the strap c which rests upon and is supported by the headed end of the hanger. In Fig. 6 the wire end hanger d^3 is made with an eye at the end to pass through a central hole in the strap, and in Fig. 7 the wire hanger d^4 is split at its lower end and the parts are bent laterally to form a support for the strap, or this hanger may, as shown in dotted lines, be made with a T or cross bar for a like support, or the central part of the tubular end c' of the strap may be removed and this cross bar be engaged by the tubular portions thus formed.

Any suitable connection may be employed between the hangers and the ends of the strap supports.

I have shown the springs b as having pin ends passing down through holes in the strap supports c and these supports are shown as crossing in a chair seat with the wire end hangers at the angles or corners of the seat frame. The tops of the springs b are connected in the usual manner by interlacing of cords.

I am aware that wooden slats for bedsteads have been supported at their respective ends by hangers pivotally connected to said slats, said hangers consisting of loops or hooks connected to fixed points upon the bedstead. In these cases there was no seat frame or springs and no downwardly projecting points passing into holes in the seat frame. In all instances the upper ends of the wire hangers can be bent with ease in any direction and pass over the surface of the frame to a greater or less extent to the place of attachment which is a great convenience over the flat metal bands which cannot be bent in this manner.

I claim as my invention—

1. As a new article of manufacture, a seat spring support composed of a flat strip or band of metal and wire hangers connected to the respective ends of such metal band and extending upwardly and laterally and terminating in downwardly projecting points for passing into holes in the seat, substantially as specified.

2. The combination with the seat frame and the springs, of flat horizontal supports for such springs, wire hangers connected pivotally to the respective ends of such supports

and extending upwardly and laterally and terminating in downwardly projecting points passing into holes in the seat frame, substantially as specified.

3. The combination with the seat frame *a* and springs *b*, of the flat horizontal metal bands *c* bent up to form tubular ends, the U-shaped wire hangers *d d* passing through the respective tubular ends and extending upwardly and laterally and terminating in downwardly projecting points passing into holes in the adjacent connected members of the seat frame, substantially as specified.

4. The combination with the seat frame *a* and springs *b*, of the flat horizontal metal bands *c* bent up to form tubular ends, the wire hangers passing through the respective tubular ends and extending upwardly and laterally and terminating in devices for attachment to the seat frame, substantially as specified.

Signed by me this 21st day of October, A. D. 1892.

JOHN A. STAPLES.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.