

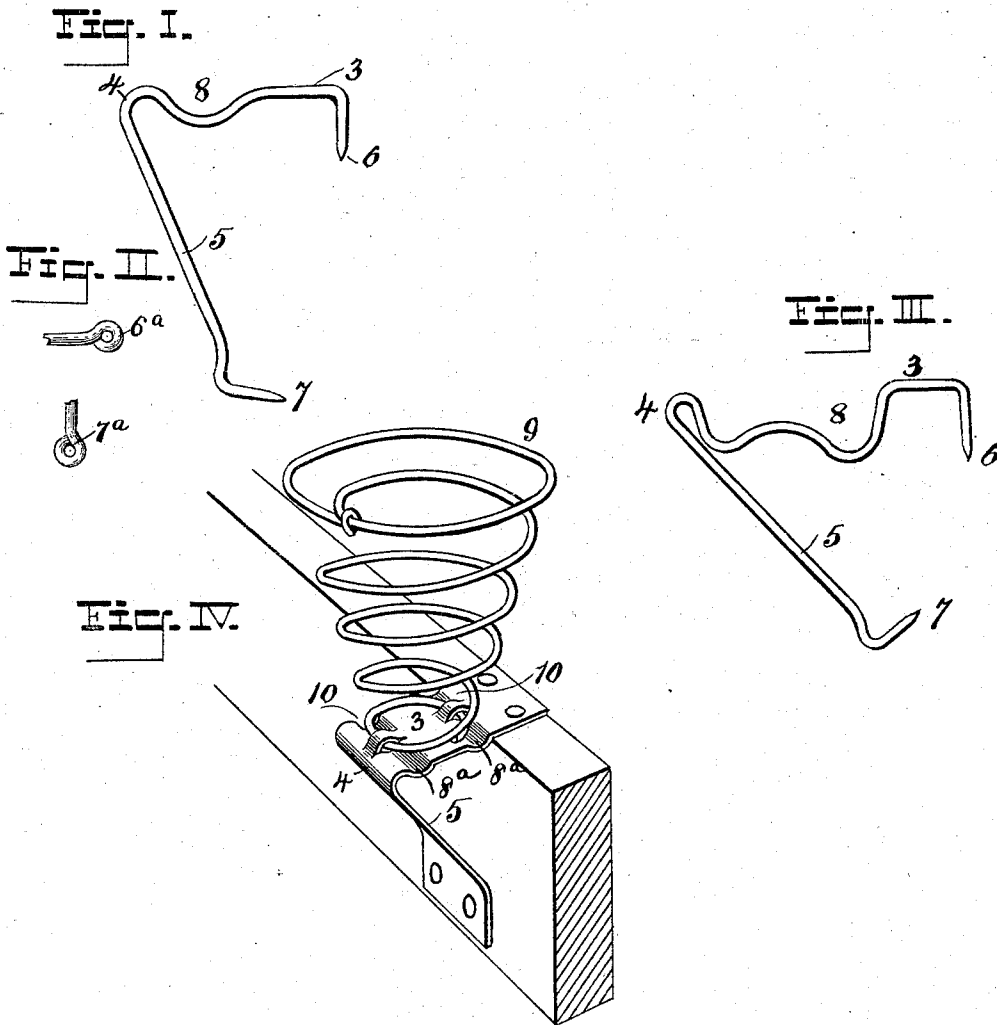
(No Model.)

2 Sheets—Sheet 1.

J. A. STAPLES.  
UPHOLSTERY.

No. 542,115.

Patented July 2, 1895.



WITNESSES:

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INVENTOR

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BY

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ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

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Fig. V.

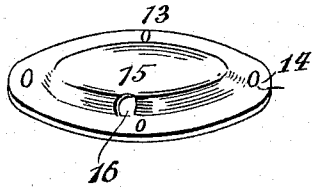


Fig. VII.

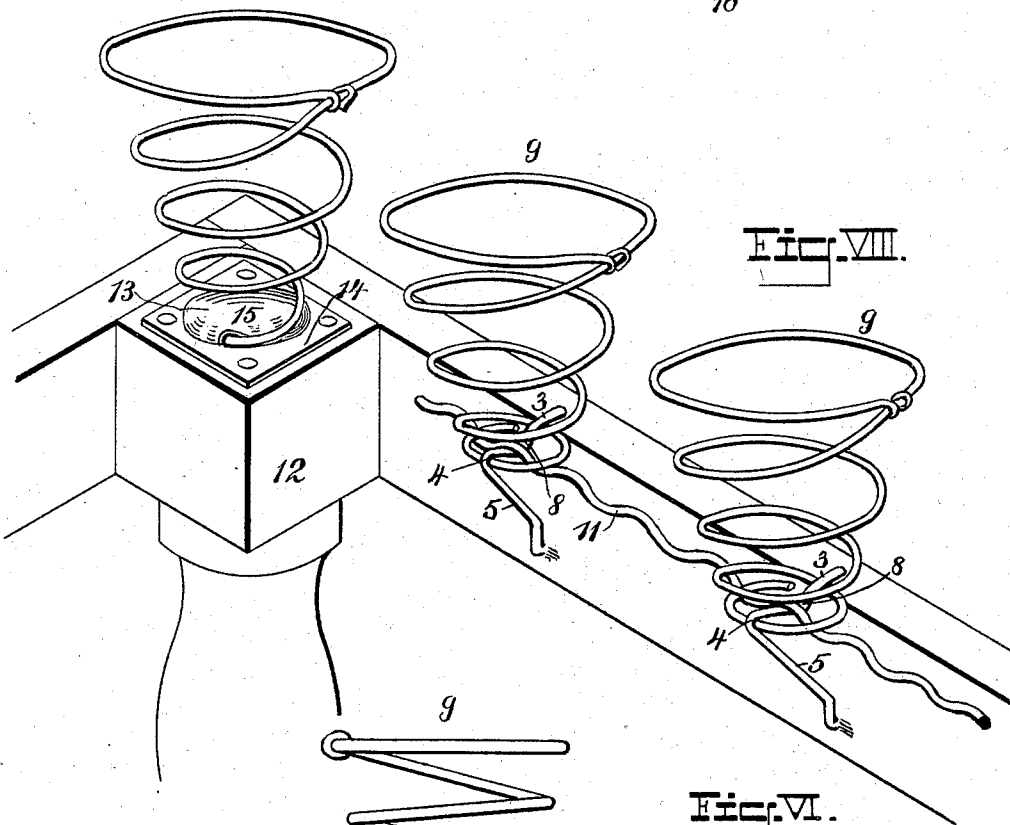
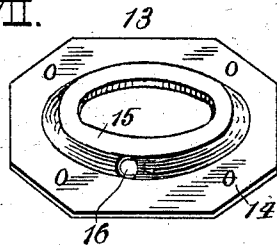


Fig. VIII.

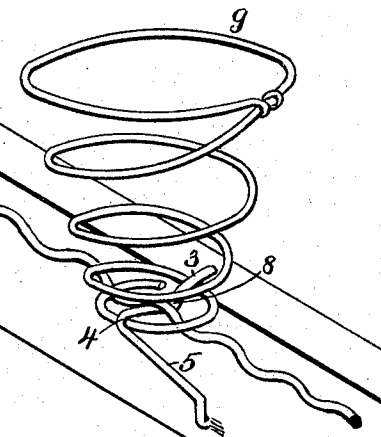


Fig. VI.

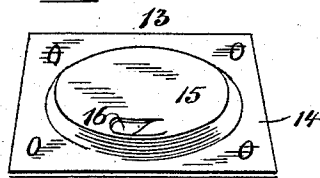
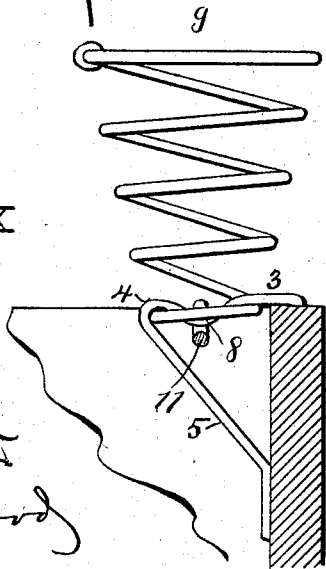


Fig. IX.



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# UNITED STATES PATENT OFFICE.

JOHN A. STAPLES, OF NEWBURG, NEW YORK.

## UPHOLSTERY.

SPECIFICATION forming part of Letters Patent No. 542,115, dated July 2, 1895.

Application filed February 23, 1895. Serial No. 539,386. (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 certain new and useful Improvements in Upholstery, of which the following is a specification, reference being made to the accompanying drawings, in which—

Figure I is a view in elevation of my spring-supporting angle-bracket in its simplest and preferred form. Fig. II is a detail view showing a modification in which eyes are substituted for the points. Fig. III is a view in elevation representing a modified form of bracket. Fig. IV is a perspective view representing a still further modification of the form of the bracket with a cone spring applied thereto. Fig. V is a perspective view of my improved corner spring-attaching plate. Figs. VI and VII are similar views showing modified forms thereof. Fig. VIII is a perspective view of portion of a lounge-frame, to the edge of which springs are applied in accordance with my invention. Fig. IX is a sectional elevation thereof.

My present invention relates particularly to the placing of springs along the edges of upholstery frames in such a manner as shall greatly facilitate the labor, reduce the cost of materials, and improve the quality of what is known in the art as "spring-edge" work.

Fig. I shows an angle-bracket made out of wire, with a laterally-extending arm 3, an elbow-bend 4, downwardly and inwardly extending oblique arm providing a brace 5, and points 6 7 to drive, respectively, into the upper and inside vertical surfaces of the frame-piece, and having a corrugated place 8 to assist in securing the small end of a cone spring 9 to the bracket. This bracket may also be made with eyes 6<sup>a</sup> 7<sup>a</sup> in the ends, as shown in Fig. II, to admit of being secured to the frame with nails or screws, or it may be made, as shown in Fig. III, with the place 8 for attaching the spring lying somewhat below the upper surface of the wood. I have shown this bracket with a corrugation in the top to secure the spring thereto, in connection with the crossing-wire similarly corrugated, as illustrated in my Patent No. 482,908, dated September 20, 1892.

However, as there are very many ways of securing a spring to a wire, and as the general form of this bracket is what I desire to protect, I do not wish to limit myself to any special method of attaching a spring thereto.

Fig. IV shows a similar bracket made from a band of strap-iron or similar flat sheet of metal with a provision for attaching a spring thereto. These brackets may be readily attached by nails or screws, as shown. As in the case of the wire bracket, I do not wish to confine myself to any special method of attaching the spring to this metal bracket. In both instances it will be seen that the upper horizontal part of the bracket extends inward from the inside vertical edge of the frame far enough to admit of securing a spring thereto, and thence backward in a sloping direction to attach to the frame. I have here shown portions 10 bent up from the corrugations 8<sup>a</sup> in the top of the bracket 5 to receive the lower coil of the small end of the spring 9.

In the bracket, as shown in Figs. I, III, VIII, and IX, there is a dent or corrugation 8 where the spring is intended to be secured, which, in connection with a crossing-piece 11 of wire, similarly corrugated, enables me to screw on the small ends of the springs 9 at the crossing very securely.

By running the piece of corrugated wire 11 along from bracket to bracket in this way a series of springs 9 can be placed along the edge and bound firmly together at the crossings, as shown in Fig. VIII. It will be seen that if a spring of proper diameter be used and placed in this manner a natural edge is produced with the spring in proper position with no loss of materials.

In nearly all upholstery-frames there are blocks secured on the inside corners to give additional security to the joints. In the case of couches and lounges it is customary to have the legs 12 project up to form these blocks to nail to, as shown in Fig. VIII. In order to have the corner spring on a spring-edge job come out properly at the corners in these instances, it is customary to secure an hour-glass spring to the top of this block by means of double-pointed tacks. This makes an insecure fastening, and also the large coils near

the bottom of such springs will make a clicking noise against the wood support when the spring is vibrated unless some tow or other soft material be placed where these coils strike the wood. In order to be able to use a cone-shaped spring in such instances, I provide a metal cup-shaped plate 13 with a flange 14 around the outer edge of the circular cup-shaped center 15, such flange being perforated with holes to admit of being secured to the wood by means of nails or screws, as shown in Fig. VIII. The plate 13 has a hole 16 made at one side or at other suitable point of the raised circular part 15 sufficiently large to admit of the reception of the end of the small coil at the lower end of the cone-shaped spring 9. The cup-shaped part of the plate is on the inside approximately the size of the first coil of the spring and preferably slightly greater in diameter. As the spring enters the cup, as shown, and is screwed on, the coils of the spring increase in diameter and wedge against the inside rim of the circular-shaped cup and also downwardly against a wood bottom and upwardly against the top of the plate, making a most secure fastening and one cheaply made and easily applied.

It is not absolutely necessary to have the top of the cup-shaped part of the plate entirely closed, as it will be equally effective if only a rim or flange were thrown inward, as shown in Fig. VII.

The advantages of being able to use a cone-shaped spring secured in this manner are that in many cases there is not room enough to provide space for the base of a regular hour-glass or double cone spring and also that the single cone is a more effective and stiffer spring to carry the edge at the corner and is far more securely fastened to the wood, standing perfectly upright, and there being no noise when it is vibrated.

Having thus described my invention, the following is what I claim and desire to secure by Letters Patent:

1. The combination with a frame-piece; of a bracket extending laterally from the frame-piece, having its top approximately in the plane of the upper surface of the frame-piece and a spring seated upon and secured to the bracket by a coil at its small end, substantially as described.

2. The combination with a frame-piece; of an angle bracket comprising an upper arm extending laterally from the upper surface of the frame-piece, and a downwardly and inwardly extending oblique arm providing a brace, and a cone spring seated on and secured to the bracket by a coil at its small end; substantially as described.

3. The combination of an angle-bracket, consisting of a laterally extending arm 3 having means for securing it to the upper surface of a frame-piece, a corrugation for seating the spring, and a downwardly extending

oblique arm providing a brace 5 having means for securing it to the vertical surface of the frame-piece, and a spring seated upon and secured to the bracket at its small end; substantially as described.

4. The combination of an angle-bracket, consisting of a laterally extending arm 3 having a downwardly projecting point 6 for securing the bracket to the upper surface of a frame-piece, a corrugation for seating the spring, and a downwardly extending oblique arm providing a brace 5 having a projecting point 7 for securing the bracket to the vertical surface of the frame-piece, and a spring seated upon and secured to the bracket at its small end; substantially as described.

5. The combination of the frame piece with a bracket made of wire, one end of such bracket being turned downward to enter the upper surface of the frame piece and also extending inward from the inside edge of the frame piece a sufficient distance to admit of securing a spring to its horizontal or nearly horizontal surface, and thence downwardly and back in a sloping direction to the inside vertical edge of the frame and having an end turned inward toward the frame-piece adapted to be driven into the same, and a spring adapted to be secured to the horizontal or nearly horizontal surface of said bracket, substantially as set forth.

6. The combination with the frame piece of a bracket formed of wire, resting on the upper surface of the frame piece and having means for attaching it thereto, a substantially horizontal inward extension corrugated to receive a spring and a downward and backward sloping portion adapted to be fastened to the inside vertical surface of the frame piece, a spring attached to the upper surface of such bracket by means of the corrugations in the horizontal portion of the wire and a similarly corrugated crossing piece of wire; the bracket, the cross-wire and the base of the spring being interwoven at such crossing, substantially as set forth.

7. The combination with a frame-piece; of the spring supporting arm extending laterally from the surface of the frame-piece, a spring supported on the arm at one side of the frame-piece, and a brace extending from the arm to the frame-piece, and secured to the latter beneath the arm, substantially as described.

8. The combination with a frame-piece; of the spring supporting bracket, comprising an arm extending laterally from the surface of the frame piece, and a downwardly and inwardly inclined arm, and a spring seated and supported on the bracket at one side of the frame piece; substantially as described.

9. A plate for securing the springs of upholstery formed with a cup-shaped center having a hole at one side for the insertion of the small end of the coil of a volute spring; substantially as described.

