L. A. YOUNG.

UPHOLSTERY SPRING CONSTRUCTION.

APPLICATION FILED FEB. 10, 1919.

1,329,874.

Patented Feb. 3, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

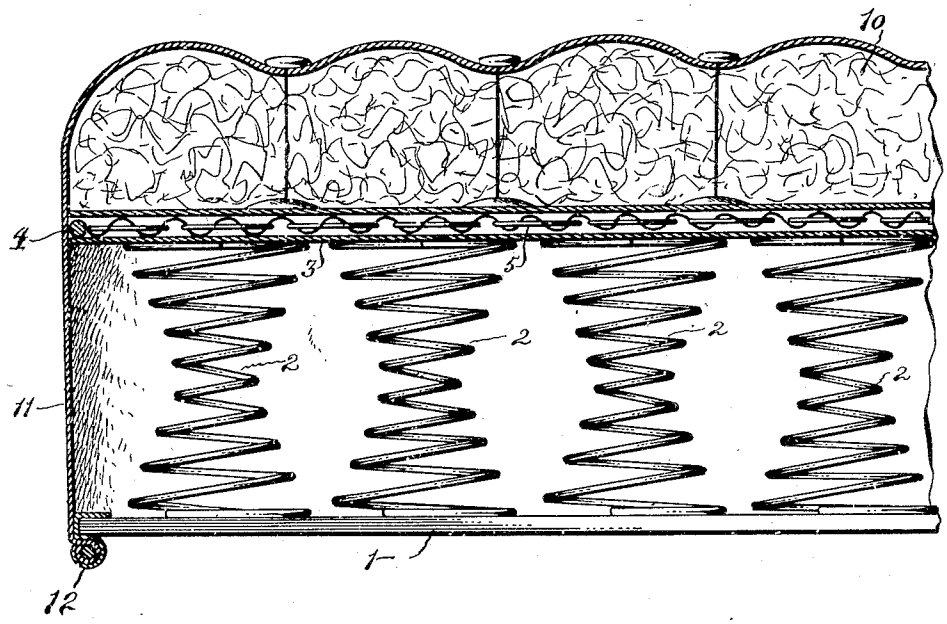
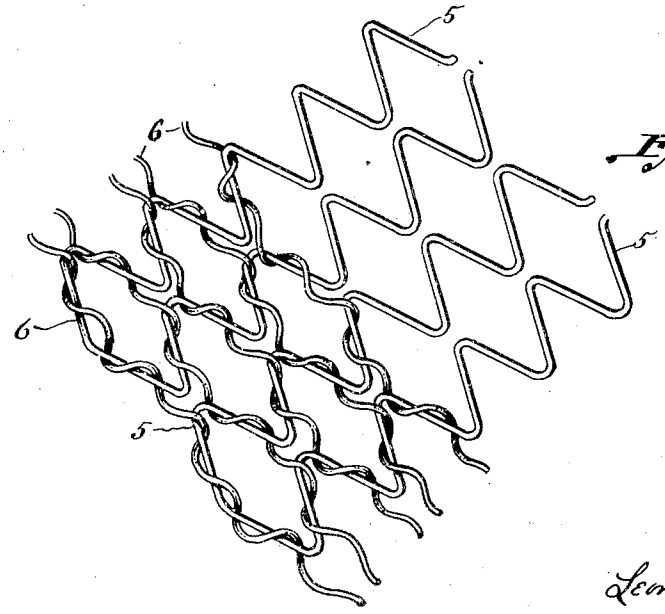


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

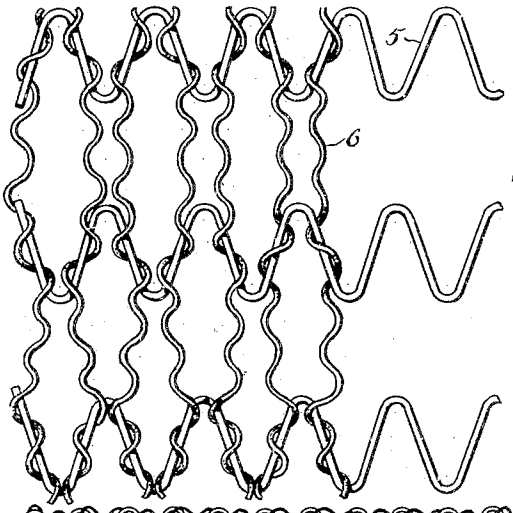
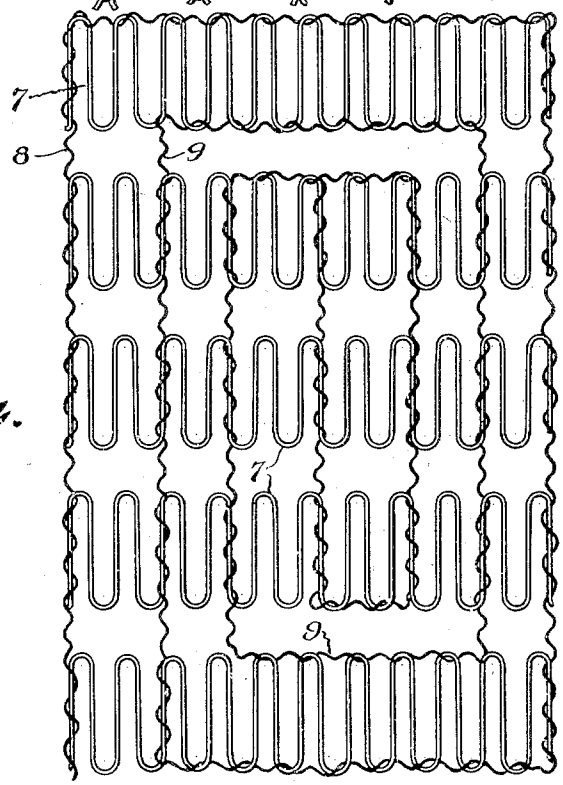


Fig. 4.



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UNITED STATES PATENT OFFICE.

LEONARD A. YOUNG, OF HIGHLAND PARK, MICHIGAN.

UPHOLSTERY-SPRING CONSTRUCTION.

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Application filed February 10, 1919. Serial No. 276,227.

To all whom it may concern:

Be it known that I, LEONARD A. YOUNG, a citizen of the United States, and resident of Highland Park, Wayne county, State of Michigan, have invented certain new and useful Improvements in Upholstery-Spring Constructions, of which the following is a specification.

In the application of upholstery over the tops of upright body springs, common in seats and the like, it is advisable to so carry the upholstery over spaces where no direct support is afforded it, that it does not tend to bunch or mat or sag, but preserves its initial condition and position.

This invention relates to upholstery spring constructions and more especially to a mat for carrying the upholstery on the body springs or like supporting means in such a way that local depressions are obviated while at the same time the supporting means is elastic in all directions and is capable of yielding generally with the rest of the spring structure when under load and shock.

The invention consists in matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a view, partially in longitudinal section and partially in elevation, of a portion of an upholstery construction that embodies features of the invention;

Fig. 2 is a view in detail of a portion of a supporting mat;

Fig. 3 is a view in detail showing slight modifications in the disposition of the elements of the mat; and

Fig. 4 is a view in detail largely diagrammatic, showing further modifications in the arrangement and disposition of the mat parts.

In the drawings, which are largely diagrammatic, a supporting frame 1 of any preferred and suitable construction, carries upright body springs 2 of hour-glass or other desired type.

A sheet 3 of flexible fabric may be placed upon the body springs 2 and the latter may carry a rim frame 4 also suitably clipped or otherwise secured thereto in any well known manner. The sheet 3 is herein shown diagrammatically as if it is perfectly straight although of course it is not taut enough for this, but conforms to slight irregularities in the carrying members.

A spring mat lies upon the body springs and the interposed sheet 3, if the latter is used. The mat is made up of strips 5 consisting each of a wire or like thin spring ribbon, bent transversely into crimps or flutes, all in substantially the same plane whereby each strip is longitudinally elastic and whereby each flute is likewise capable of local movement in and out of its plane in relation to the rest of the strip. Strands 6 connect the fluted strips, each strand being a wire spiral such as is commonly used in the ordinary woven wire fabric, the convolutions of the strands encircling portions of the flutes of the ribbons or strips 5. The latter may be close together, or as indicated in Fig. 3, there may be a considerable interval between adjacent strips.

Furthermore the form of the crimps or flutes may be varied, and as indicated in Fig. 4, the arms 7 of the successive flutes may be substantially parallel.

In Fig. 4 also, a different disposition of the connecting strands is shown, as at 8 and 9, certain of the flutes of the strips only being engaged by the convolutions of the strands.

The usual upholstery, indicated generally at 10, is placed upon the mat and the cover 11 thereof may be brought down and secured in any convenient manner to the base frame, as for example, by insertion in the groove of an S-strip indicated at 12, a member of the base frame 1.

As a result of this construction, the upholstery is afforded perfect support throughout its entire area by a mat which bridges intervals between the main body springs and prevents local depression in the upholstery while at the same time the elasticity thereof, both longitudinally and lateral, allows the mat to conform generally to any deformation of the construction as a whole when under load.

Obviously, changes in the details of the construction may be made without departing from the spirit of the invention and I do not care to limit myself to any particular form or arrangement of parts.

I claim:

1. In an upholstery spring construction, a mat for reinforcing and supporting the

upholstery on the body springs comprising a plurality of longitudinally elastic flat bands of crimped and fluted wire secured in spaced relation and connected by transversely disposed spiral wires.

2. In an upholstery spring construction a mat comprising strips formed of wire having flat flutes and connected in substantially parallel spaced relation by spiral wire, the convolutions of which encircle portions of the flutes of adjacent strips.

3. In an upholstery spring construction, a body of upright coiled springs, a sheet of flexible fabric on the springs, a mat on the sheet formed of fluted wire strips held together in spaced relation by wire spirals woven around corresponding portions of adjacent strips, and upholstery superposed on the mat.

4. In an upholstery spring construction, a base frame, upward coil body springs on the frame, a mat formed of longitudinally expansible wire strips extending from end to end thereof in spaced relation and longitudinally expansible wire spiral strands woven around the longitudinal members in transverse relation to the wire strips, upholstery filling resting on the mat and an upholstery cover on the filling inclosing the sides of the structure.

5. In an upholstery spring construction, a base frame, upright body springs mounted thereon, a sheet of flexible fabric running on the body springs, a mat resting on the sheet formed of a set of longitudinally expansible metal members extending from end to end thereof and interwoven with and held in spaced relation by longitudinally expansible spiral metal members extending from side to side of the mat, and upholstery resting on the mat.

6. In an upholstery spring construction for supporting the upholstery on the body springs comprising a set of flat strips formed of wire bent into flutes transverse to the strip, each band being longitudinally elastic and transverse wire spirals through which corresponding flutes of wire strips are threaded and held in spaced relation, the mat being longitudinally and laterally elastic.

LEONARD A. YOUNG.