

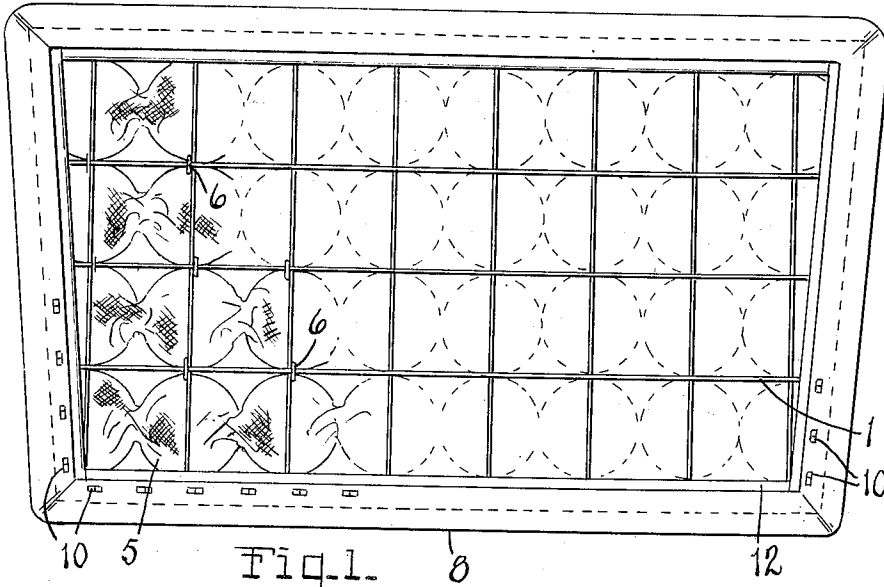
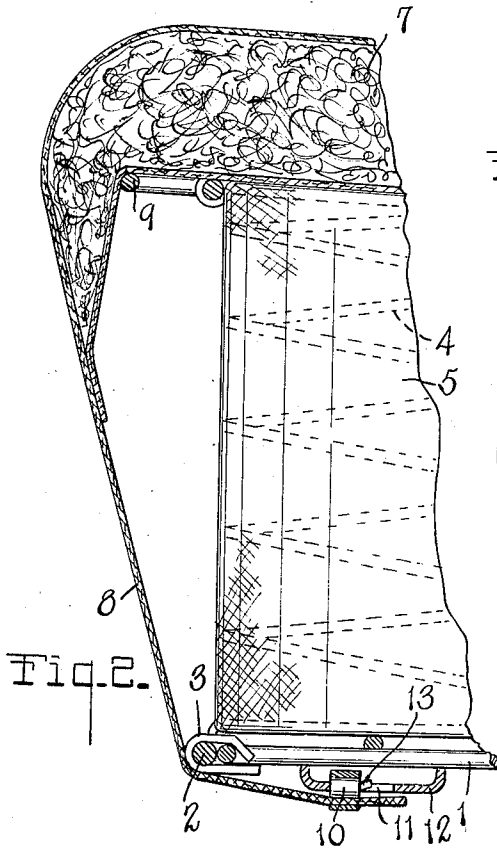
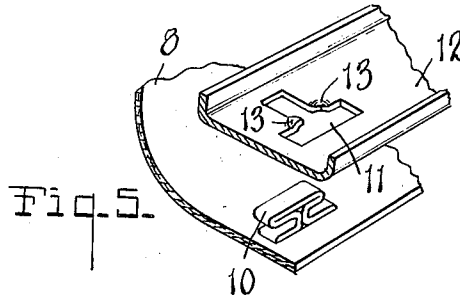
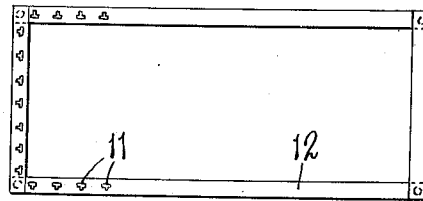
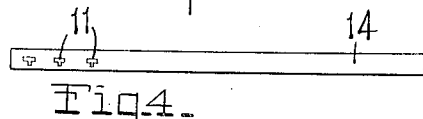
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2,101,124

SPRING STRUCTURE

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SPRING STRUCTURE

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10 Claims. (Cl. 155—180)

This invention relates to improvements in spring structures.

The main objects of this invention are:

First, to provide a spring structure of the automobile seat cushion or chair seat type in which the upholstery may be quickly and easily attached by an unskilled workman and quickly detached should occasion require for purposes of renewal or replacement of upholstery or repairing of the springs.

Second, to provide a spring structure of this character in which the upholstery is very effectively and neatly secured.

Third, to provide a spring structure having these advantages in which the upholstery may be provided with fastening members at the edge of the skirt thereof for engagement with an upholstery attaching member disposed on the under side of the spring unit, but not attached thereto except as it becomes attached through the engagement of the upholstery therewith.

Fourth, to provide a structure having these advantages which is simple and economical in its parts and greatly facilitates the application of the upholstery to the spring units.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is an inverted view of a spring cushion structure embodying the features of my invention, parts being shown conventionally and parts omitted for convenience in illustration.

Fig. 2 is an enlarged fragmentary section showing the relation of the springs to the base, the upholstery and the attaching means.

Fig. 3 is a plan view of the preferred form of upholstery attaching member, a portion only of the fastener receiving slots being shown.

Fig. 4 is a plan view of a modified form of attaching member, a portion only of the fastener receiving slots being shown.

Fig. 5 is a perspective view showing the upholstery skirt and attaching members in disassembled relation but illustrating the manner of engagement thereof.

In the embodiment of my invention illustrated I provide a base consisting of a grid 1 and a wire border frame 2, the grid being provided with attaching clips 3 engaging the border frame. The springs 4 are arranged in pockets 5 and these are mounted upon the base and secured as by

clips 6. The upholstery 7 is provided with a skirt 8 which embraces and encloses the springs and, also, it is drawn around the border frame of the base and lapped upon the under side thereof.

The top border frame 9 is provided for supporting the upholstery and is carried by the springs. The skirt is provided with a plurality of studs 10, preferably T-shaped, spaced so as to be engaged with the key-hole slots 11 in the upholstery attaching frame 12. This upholstery attaching frame is preferably of channel cross section, as illustrated, and the slots are arranged with their restricted or smaller portions outwardly so that the heads of the studs may be inserted through the cross portion of the slots and slipped outwardly into the restricted portions, thereby effectively securing the skirt to the attaching frame. The edges of the slots are preferably struck up at 13 forming snap detents over which the head springs as it slips into the restricted portions of the slots.

In practice the upholstery is placed in an inverted position upon a bed or table with the skirt turned outwardly, the spring assembly is then placed in inverted position on the upholstery and the springs compressed by means of a suitable press or ram. The attaching frame is then laid upon the base of the springs in free floating engagement therewith, and the skirt is drawn around the border frame of the base and its studs engaged with the openings in the attaching frame. When the press is released the springs are held under tension by the upholstery and the parts effectively held in assembled relation.

It not infrequently happens that in automobiles the cushions may be injured or become soiled, and it is desired to renew the same. With this assembly an unskilled workman, that is, one not skilled in upholstering, can easily remove the old upholstery and replace it; or, should the springs become displaced the upholstery can be readily removed by a person unskilled in this particular work and repaired, and the upholstery readily replaced. Further, in the original assembly the work can be done by others than skilled upholsterers.

In the modification shown in Fig. 4 the upholstery attaching member is in the form of a bar 14 instead of being in the form of a complete frame, the bar being arranged on the under side of the base and the upholstery engaged therewith. The base can be provided with means

engaging the bar or the several bar members with means for engaging each other.

The studs or fasteners 10 can be readily applied by means of machinery and the upholstery thus made ready at any convenient time prior to the assembly.

I have not attempted to illustrate various modifications or adaptations of my improvements which I contemplate as it is believed that this disclosure will enable those skilled in the art to embody my invention as may be desired.

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

1. In a spring cushion structure, the combination with a spring supporting base comprising a border frame, of body springs assembled on said base, upholstery supported by said springs and provided with a depending skirt having T-studs secured at the edges thereof, the skirt being drawn around the base border frame, and an upholstery attaching frame of channel section disposed on the under side of said base within the border frame and facing upwardly, said upholstery attaching frame having key-hole slots therein disposed with their reduced portions outwardly and receiving said studs, portions of the edges of the slots being struck inwardly to provide detents for said studs.

2. In a spring cushion structure, the combination with a spring supporting base comprising a border frame, of body springs assembled on said base, upholstery supported by said springs and provided with a depending skirt having studs secured at the edges thereof, the skirt being drawn around the base border frame, and an upholstery attaching frame disposed on the under side of said base within the border frame, said upholstery attaching frame having slots slidably receiving said studs.

3. In a spring cushion structure, the combination with a spring supporting base comprising a border frame, of body springs assembled on said base, upholstery supported by said springs and provided with a depending skirt having studs secured at the edges thereof, the skirt being drawn around the base border frame, and a floating upholstery attaching frame disposed on the under side of said base within the border frame, said upholstery attaching frame having openings receiving said studs.

4. In a spring cushion structure, the combination with a supporting base, of body springs carried by said supporting base, upholstery supported by said springs and provided with a skirt embracing the edges of said base, an upholstery attaching frame member disposed on the under side of said base and having key-hole slots therein disposed with their reduced portions outwardly, and T-studs on said upholstery skirt engaging said slots,

portions of the edges of the slots being struck up to provide detents for said studs.

5. In a spring cushion structure, the combination with a supporting base, of body springs carried by said supporting base, upholstery supported by said springs and provided with a skirt embracing the edges of said base, an upholstery attaching frame member disposed on the under side of said base and having openings therein, and studs on said upholstery skirt slidably engaging said openings.

6. In a spring structure, the combination with a supporting base comprising a wire border frame, of body springs assembled on said base within said border frame, upholstery on said springs provided with a depending skirt drawn around the said border frame, and a floating upholstery attaching member on the under side of said base, said attaching member and upholstery skirt having coacting stud and opening engagement.

7. In a spring structure, the combination with a supporting base, of body springs carried by said base, upholstery on said springs provided with a depending skirt embracing the base and lapping the under side thereof, and an upholstery attaching frame disposed on the under side of said base for floating engagement therewith, said upholstery skirt being provided with a plurality of fastener elements detachably engageable with said upholstery attaching frame.

8. In a spring structure, the combination with body springs, of a supporting base therefor, upholstery on said springs provided with a depending skirt drawn around the said border frame, and a floating upholstery attaching member on the under side of said base frame, said attaching member and skirt having coacting relatively slidable engaging members.

9. In a spring structure, the combination with body springs, of a supporting base, upholstery on said springs provided with a depending skirt embracing the base and lapping the under side thereof, and an upholstery attaching member at the under side of said base having slots therein, said upholstery skirt being provided with a plurality of fastener elements detachably and slidably engageable in the slots of said upholstery attaching member, the tension of said springs tending to maintain the engagement of said elements in said slots.

10. In a spring structure, the combination with body springs, of a supporting base, upholstery on said springs provided with a depending skirt embracing the base and lapping the under side thereof, and an upholstery attaching member at the under side of said base, said upholstery skirt and said attaching member being provided with co-engaging detachable and slidable fastener means at a plurality of spaced points.

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