SPRING UNITS FOR FURNITURE

Inventors: Roderick James Hartley, 1 Fieldhead Drive, Cross Hills, near Keighley; George Charters, 6 Wood View Embsay, Skipton, both of England

Assignee: Silentnight Limited, Colne, Lancashire, England

Filed: Jan. 19, 1971

Appl. No.: 107,705

References Cited

UNITED STATES PATENTS
1,795,881 3/1931 Murray, Sr..........................5/270 X
2,635,258 4/1953 Anspacher..........................5/260
3,358,725 12/1967 Bussard et al.........248/345.1

Primary Examiner—Casmir A. Nunberg
Attorney—Holman & Stern

ABSTRACT

A spring unit for furniture in which a plurality of helical springs are disposed on parallel axes in which adjacent upper and lower helices are integrated by channel elements having opposed legs of the spring into tangential, gripping relation to the helices; the channel elements having free ends isolating the spring effect, and in which the channel elements are produced from an extruded plastic material.

3 Claims, 4 Drawing Figures
SPRING UNITS FOR FURNITURE

This invention is concerned with improvements in or relating to spring units for furniture. It is well known in the manufacture of articles of furniture such as beds, divans, couches, settees, armchairs and the like to utilize a prefabricated spring unit comprising a plurality of Furniture springs which are interconnected with the spring axes parallel, into a dimensionally stable unit with the aid of, inter alia wire perimeter frames one of which is secured to the outer coil portion of each boundary spring at the one end thereof and a second of which is likewise secured at the other end of each boundary spring, securement of the frames to the spring coils being effected by suitable fasteners.

The production of said perimeter frames requires specialized forming machinery which together with the large number of fasteners required serves to increase the production costs of the spring units. It is an object of the present invention to reduce the production costs of spring units for furniture by dispensing with the wire perimeter frames and employing alternative and less costly means for dimensional stabilization of the spring units.

According to the present invention, there is provided a spring unit for an article of furniture, comprising a plurality of interconnected furniture springs having their spring axes parallel, the perimeter of the unit at opposite ends of the springs being defined by strips adapted to accept and locate the end coils of said springs.

Embodiments of the present invention will now be described by way of example only with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of part of a spring unit in accordance with the invention;
FIG. 2 is a perspective view of a first embodiment of securing strip for uniting the spring ends at the perimeter of the unit;
FIG. 3 is a perspective view of a second embodiment of securing strip and also illustrates the clamping clip, and
FIG. 4 is a perspective view of a third embodiment of securing strip.

A spring unit 1, for example for a seat is of substantially rectangular box shape and comprises four parallel rows each consisting of five furniture springs 2 (only three are shown in FIG. 1 for the sake of simplicity). The springs 2 are disposed vertically and adjoining springs in each row are interconnected in conventional fashion at their upper and lower ends by means of four upper and four lower coiled wires (not shown) crossing the rows.

In accordance with the invention, the perimeter of the unit at opposite ends of the springs is defined by strips 3 and there are provided eight such strips to accept and locate the end coils of the boundary springs along the eight edges of the box-shaped unit, each such strip being made of synthetic plas2ic material extruded in U, V, L, or other section which permits said end coils to be received between two webs of the strip.

The coils may be held in position along the strips by various means. In a first embodiment of the invention (FIG. 2) the coil-receiving webs 3a, 3b of the strips 3 are welded together (as at 4) at spaced locations therealong to prevent disengagement of the strips 3 from the springs 2.

In a second embodiment of the invention (FIG. 3) the strips 3 are secured to the coils by metal clips 5 and, in a third embodiment of the invention (FIG. 4) securement is by means of wire 6 coiled in a helix around the full length of each strip 3 after the coils have been located therein.

In a fourth embodiment (not shown) the strips are so formed that the webs thereof exert a clamping effect on the coils received therebetwenn and no additional securing means are required.

What is claimed is:

1. A spring unit for use in an article of furniture comprising an array of helical springs disposed on spaced, vertical, parallel axes, the upper and lower helices of said springs normally being disposed in the same upper and lower plane, the improvement consisting of elongated channel elements having opposed upper and lower integral webs normally urged together, said channel element webs embracingly engaging in tangential relation adjacent upper and lower helices whereby said springs are retained in operative relation as a unit.

2. The structure as claimed in claim 1 in which said helical springs are disposed in a rectangular array comprising parallel rows of said springs, said array of springs being assembled by means of eight of said elongated channel elements, said channel elements terminating in free ends.

3. The structure as claimed in claim 1 in which said channel elements comprise an extruded, synthetic plastic material.