Jan. 23, 1934. J. P. SALMON 1,944,614

UPHOLSTERY CONSTRUCTION

Filed Nov. 26, 1930

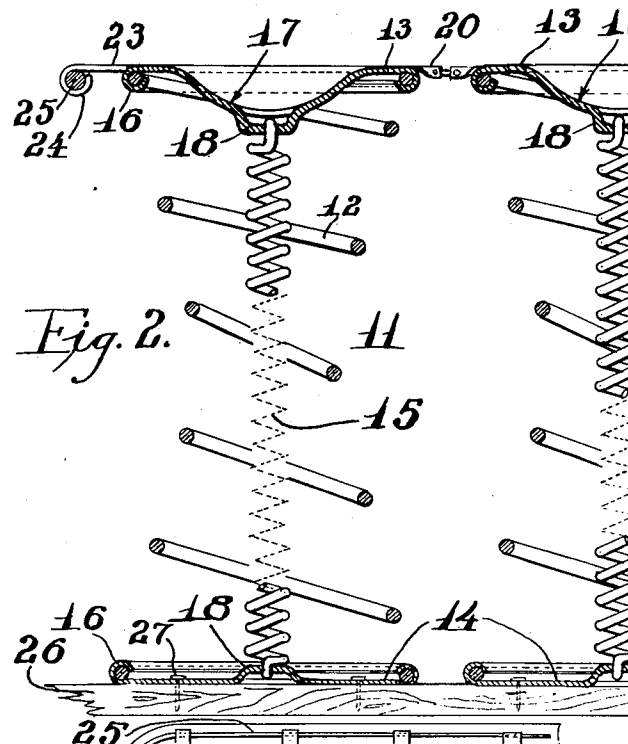


Fig. 2.

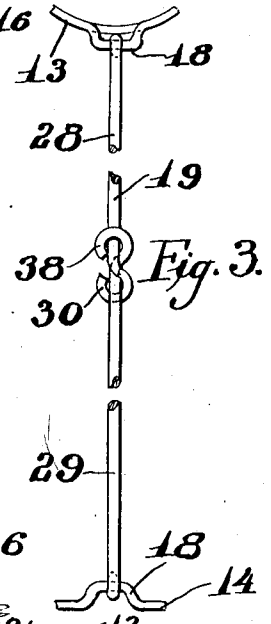


Fig. 3.

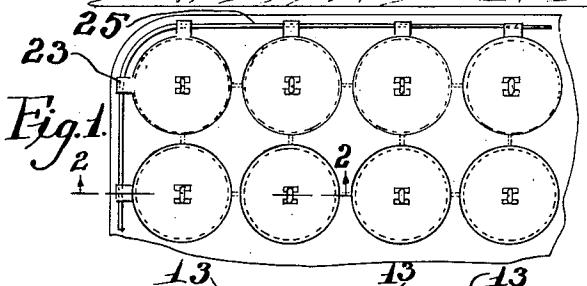


Fig. 1.

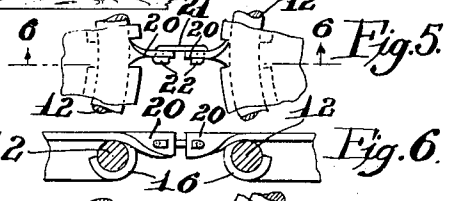


Fig. 5.

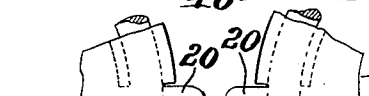


Fig. 6.

Fig. 7.

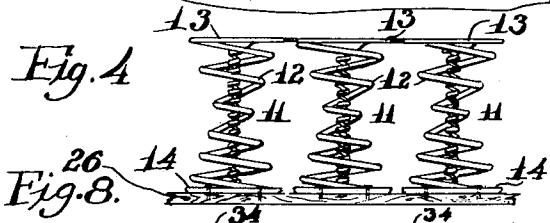
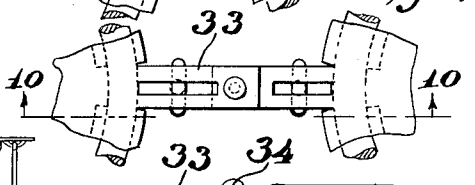
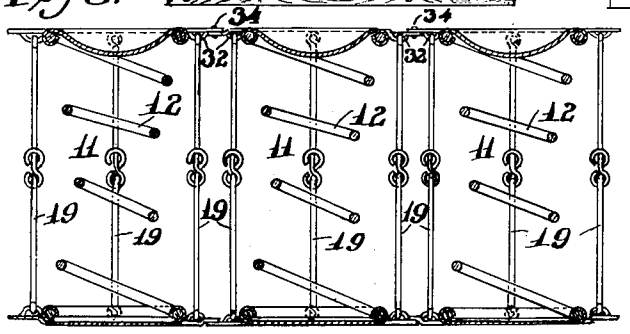


Fig. 4.

Fig. 9.

Fig. 8.





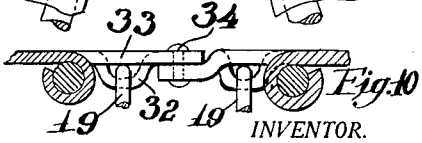


Fig. 10.

INVENTOR.

James P. Salmon

BY

Leonard L. Kalish

ATTORNEY.

Patented Jan. 23, 1934 1,944,614

UNITED STATES PATENT OFFICE

1,944,614

UPHOLSTERY CONSTRUCTION

James P. Salmon, Philadelphia, Pa.

Application November 26, 1930
Serial No. 498,224

1 Claim. (Cl. 5—258)

My invention relates to certain new and useful improvements in upholstery construction, whereby a more efficient and effective spring cushioning may be obtained, and whereby the durability of the resultant construction is increased, and whereby also the cost of production and, more particularly, the cost of assembling or installation of the springs is greatly reduced.

The object of my invention is to produce an upholstery construction, which may be quickly assembled in place on any suitable frame, whether it be the frame of an automobile seat or the frame of any other article requiring upholstering.

A further object of my invention is to produce individual spring units, which in themselves are complete and "tied", and ready to be assembled to the frame and secured to each other in succession by quickly applicable connecting means.

With the above and other objects in view, which will appear more fully from the following detailed description, my invention consists of an upholstery construction comprising a series of spring units, each comprising a main helical compression spring intermediate a pair of opposed metallic or composition terminal discs, the edges of which are flanged and turned, so as to permanently engage the last convolution of the corresponding end of the helical compression spring, said metallic discs having anchorages pressed therefrom, for receiving the opposed ends of a collapsible spring retainer whereby the helical compression spring may be kept under suitable compression at all times.

My invention further consists in quickly applicable connectors intermediate the series of adjacent metallic discs, whereby the successive series of spring units may be flexibly united by means which will nevertheless be durable.

For the purpose of illustrating my invention I have shown in the accompanying drawing, forms thereof which are at present preferred by me, since the same have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring to the drawing in which like reference characters indicate like parts, Figure 1 is a fragmentary top plan view of an upholstery construction embodying my invention. Figure 2 represents a section on line 2—2 of Figure 1 on a much enlarged scale.

Figure 3 represents a vertical elevation of a modified form of collapsible spring retainer. Figure 4 represents a vertical elevation of Figure 1. Figure 5 represents a top plan view, on an enlarged scale, of one form of flexible connecting means intermediate the adjacent terminal discs of adjacent spring units. Figure 6 represents a section on line 6—6 of Figure 5. Figure 7 represents a top plan view of a modified form of flexible connecting means. Figure 8 represents a vertical section of an upholstery construction of modified form, embodying my invention. Figure 9 represents a top plan view, on an enlarged scale, of the connecting means and spring retainer anchorage of the modified form shown in Figure 8. Figure 10 represents a section on line 10—10 of Figure 9.

In carrying out my invention, I first form a series of spring units or spring "assemblies", designated generally by the numeral 11, each comprising a helical compression spring 12 of any suitable size or form, the top and bottom terminal discs 13 and 14 respectively, and the collapsible spring retainer 15 intermediate the top and bottom discs 13 and 14.

Each of the terminal discs 13 and 14 may be formed of sheet material, by stamping or otherwise, with the peripheral edges 16 turned in, around the last helical convolution at each end of the compression spring 12. By this means the discs 13 and 14 are permanently affixed to the ends of the helical compression spring 12.

The top disc 13 is preferably dished or depressed downwardly in the center thereof, as indicated at 17, so as to form a cavity for the reception of padding material, such as hair, felt, or the like.

An eyelet 18 is pressed or punched out of the sheet material forming the discs 13 and 14, in a manner shown in Figure 2, so as to form durable and permanent anchorages for the collapsible spring retainers 15, or for the collapsible spring retainers of modified form shown in Figure 3, and identified by the reference character 19.

Formed integrally with the disc 13, (and also with the disc 14 if desired) a series of perforated lugs or ears 20 are formed, preferably four on each disc placed equidistantly around the periphery of the disc. The ears or lugs 20 carry a perforation, through which the wire links 21 are adapted to pass. Thus, in assembling the spring units 11 the wire links 21 are connected between successive adjacent discs 13 (and also 14 if desired), with the ends 22 thereof bent around. By this means a permanent and durable flexible connection may be obtained in a quick and ready

manner by the application of the links 21, which, as will be seen, are really hingedly or pivotally connected to each of the discs 13.

Some of the top discs 13, adapted to be used along the edge of the finished upholstered product, are also provided with integral brackets 23, as indicated particularly in Figures 1 and 2. The brackets 23 project outwardly and their free ends 24 are wrapped around a border or edge rod 25 extending around the upper peripheral edge of the finished product, for the purpose of defining said upper peripheral edge.

The individual spring units 11 are mounted upon any suitable frame or base 26, by nailing or otherwise securing the lower disc 14 to the frame, as by means of the nails 27. After these units have thus been secured to a frame 26, the upper discs 13 are connected by the loose or flexible metallic connecting links 21.

The collapsible spring retainer may be either in the form of a spring 15 as shown in Figures 2 and 4, or in the form of the means 19 shown in Figures 3 and 8. The collapsible spring retainer 19, comprises a pair of similar rigid rods or wires 28 and 29, which are slidably connected to each other by means of corresponding loops 30 and 38 respectively which encircle the opposed rod. By this means a slidable or collapsing action can be obtained. The other ends of the rods 28 and 29 are looped around the anchorages 18.

If desired, instead of placing a single spring retainer through the axis of the helical compression spring 12, as shown in Figures 2, 3 and 4, each helical compression spring 12 may be retained by three or four circumferentially arranged retainers on the outside of the spring 12, as shown particularly in Figure 8. In this case the retainer anchorages are provided on the outer edges of the discs 18 and may be stamped out of the sheet material as shown particularly in Figures 9 and 10, wherein the retainer anchorages 32 are pressed out of lugs or ears 33, which also serve as a means for flexible connection between spring units. In this case a rivet or other suitable fastener 34 is passed through the overlapping ends of the lugs or ears 33, in a loose manner, so as to permit a reasonable amount of flexing between the discs.

In Figure 7 I have shown a further modification of the construction shown in Figures 5 and 6, wherein the links 21 are applied to horizontal ears or lugs instead of vertically arranged ears or lugs.

The spring units according to my invention may be made up completely assembled and handled, shipped and sold ready for use. The upholstered product may then be made up on any suitable frame, or even without a frame, by connecting flexibly both top and bottom discs. Any number of these spring units may be applied quickly by reason of the novel details of construction herein shown.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiments to be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

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

In an upholstery construction, the combination of a series of helical compression springs, a terminal disc affixed to each of the two opposed terminal convolutions of each of said helical compression springs; one of each of said pair of terminal discs being affixed to a common base, and the other disc of each pair of discs being dished to receive padding; a plurality of circumferentially spaced retainer anchorages provided on each of said pair of terminal discs, said anchorages being disposed a distance from the center of said discs greater than the external radius of the terminal convolution of the helical compression spring affixed thereto and arranged on opposite discs to form vertically opposed pairs, a collapsible retainer for each such pair operatively interposed between the opposed terminal discs and secured to similarly disposed anchorages thereof, and a flexible metallic connection intermediate adjacent terminal discs.

JAMES P. SALMON.