Jan. 15, 1924. 1,480,753

W. A. FALLS

SPRING STRUCTURE

Filed Jan. 12, 1923

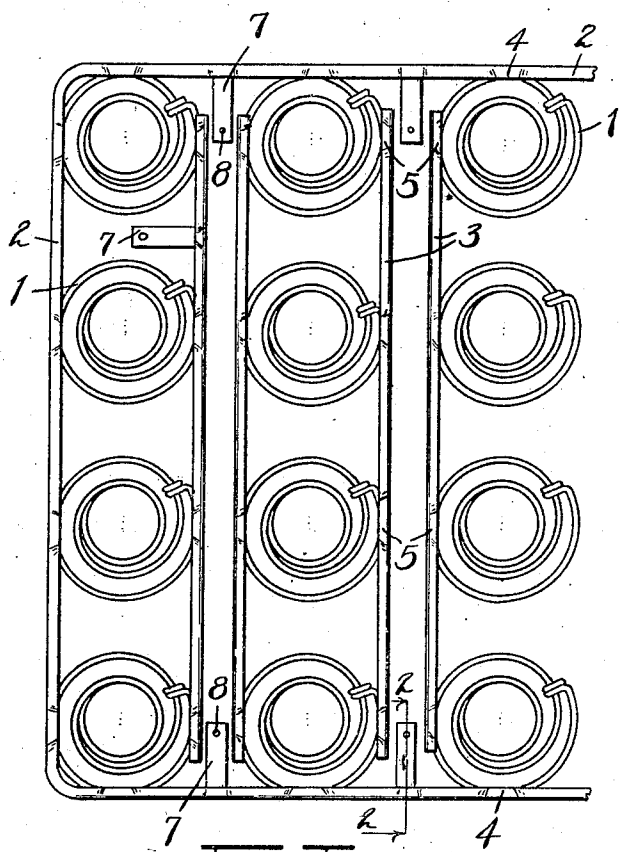


Fig. I.

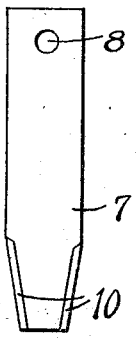


Fig. IV.

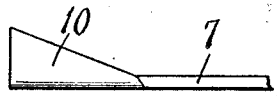


Fig. V.

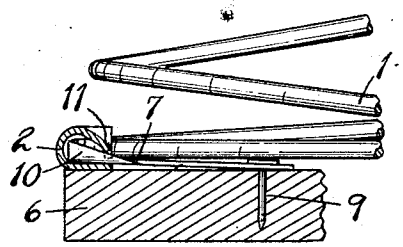


Fig. II.

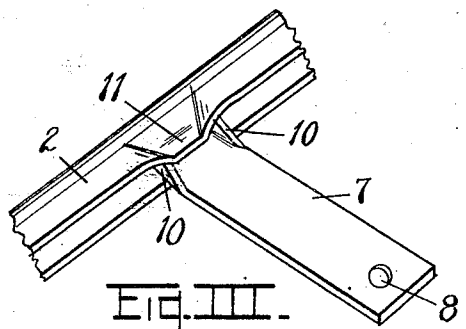


Fig. III.

Inventor

William A. Falls

By Chappell Hearl

Attorneys

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UNITED STATES PATENT OFFICE.

WILLIAM A. FALLS, OF DETROIT, MICHIGAN, ASSIGNOR TO THE L. A. YOUNG INDUSTRIES, INC., OF DETROIT, MICHIGAN.

SPRING STRUCTURE.

Application filed January 12, 1923. Serial No. 612,183.

To all whom it may concern:

Be it known that I, WILLIAM A. FALLS, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented certain new and useful Improvements in Spring Structures, of which the following is a specification.

This invention relates to improvements in spring structures.

The main object of the invention is to provide in a spring structure of the type used in automobile seats, upholstering and the like an improved means of securing the spring structure to a frame or support.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. I is a fragmentary plan view of a spring structure embodying the features of my invention.

Fig. II is a detail enlarged vertical section on a line corresponding to line 2—2 of Fig. I, showing a support in connection with the parts shown in Fig. I.

Fig. III is a detail perspective view showing structural details.

Fig. IV is a plan view of one of the attaching members.

Fig. V is an edge view of one of the attaching members.

In the drawing similar reference characters refer to similar parts throughout the several views.

Referring to the drawings, the springs, shown conventionally at 1, are of the type usually employed in cushion springs, bed springs and the like. I provide a support for these springs comprising a border frame 2 of U cross section. The cross strips 3 are also of U cross section. The outer springs are disposed with their bottom coils arranged within the U border frame, which is clamped thereon, as indicated at 4, thereby securing the springs thereto.

The crossed supports 3 are arranged to embrace the bottom coil of the row of springs and are clamped thereon at 5.

6 represents a base frame or support on which the spring structure is mounted. To secure the spring structure to the frame or support I provide a plurality of attaching members 7 formed of flat pieces of metal and having holes 8 at their inner ends adapted to receive the nails 9. The outer ends of these attaching members have their edges turned up at 10 providing outwardly converging inwardly tapered flanges which are arranged and indented between the channels as indicated at 11, thereby effectively securing the attaching members to the strips.

This securing of the attaching members to the support may be effectively done by means of a plier-like tool which may also be used for clamping the support members to the springs. The attaching means may be positioned as desired, usually being secured to the border frame 2 but may also, if desirable, be secured to the cross members.

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

1. In a spring structure, the combination with the springs, of a support therefor comprising a border frame of U cross section disposed facing inwardly, the bottom coils of the outer springs being disposed within and clamped by said border frame, and attaching members adapted for attachment to a support for the spring structure and formed of flat strips of metal having their edges turned up at one end providing inwardly tapering outwardly converging flanges, said flanged ends of said attaching members being disposed within the channel of the frame, the upper flange of which is indented between the flanges thereby securing the attaching members to the frame.

2. In a spring structure, the combination with the springs, of a support therefor comprising a border frame of U cross section disposed facing inwardly, the bottom coils of the outer springs being disposed within and clamped by said border frame, and an attaching member adapted for attachment to a spring structure and formed of a flat strip of metal having parts struck up at one end, such end members being dis-

posed within the channel of the frame which is clamped thereon, thereby securing the attaching member to the frame.

3. In a spring structure, the combination with the springs, of a support therefor comprising a frame member of a U cross section clamped upon coils of the springs, and a securing member adapted to be attached to a support for the spring structure and having opposed up-turned outwardly converging flanges at its outer end disposed within said channel shaped supporting member and secured thereto by clamping the said supporting member between said flanges.

4. In a spring structure, the combination with the springs, of a support therefor comprising a border frame of U cross section disposed facing inwardly and clamped upon the bottom coils of the springs, and securing members adapted for attachment to a support for the spring structure formed of flat strips having up-turned portions at one end disposed within the channel of said frame and secured thereto by clamping the frame thereon.

5. In a spring structure, the combination with the springs, of a support therefor comprising a supporting member of U cross section engaging coils of the springs, and an attaching member adapted for attachment to a support for the spring structure and having one end disposed within the channel of said supporting member and conformed to receive an indented part thereof whereby the attaching member is secured to the support member.

6. In a spring structure, the combination with the springs, of a support therefor comprising a member of U cross section, and securing members adapted for attachment to a support for the spring structure and formed of flat strips having up-turned portions at one end disposed within the channel of said support member and secured thereto by clamping the support member thereon.

7. In a spring structure, the combination with the springs, of a support therefor comprising a supporting member of U cross section engaging coils of the springs, and an attaching member adapted for attachment to a support for the spring structure and having one end disposed within the channel of said supporting member and conformed to receive a part of the supporting member clamped thereon whereby the attaching member is secured to the support member.

In witness whereof I have hereunto set my hand and seal.

WILLIAM A. FALLS. [L. S.]