Feb. 28, 1933. W. A. FALLS 1,899,188

SPRING STRUCTURE

Filed Nov. 30, 1931

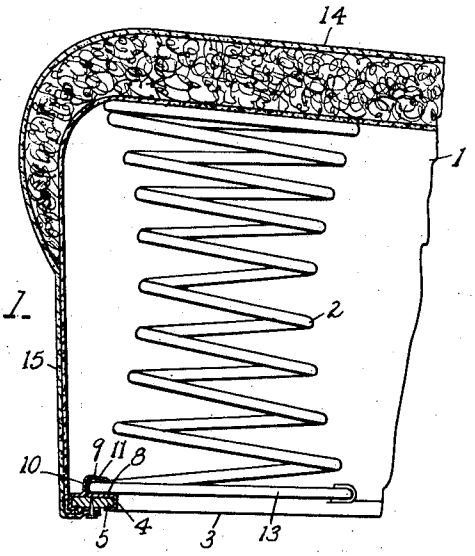


Fig. 1.

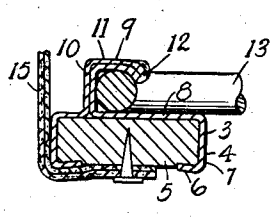


Fig. 2.

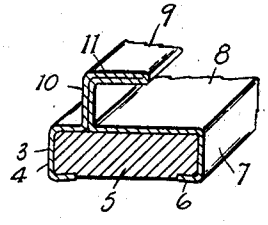


Fig. 3.

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UNITED STATES PATENT OFFICE

WILLIAM A. FALLS, OF DETROIT, MICHIGAN, ASSIGNOR TO L. A. YOUNG SPRING & WIRE CORPORATION, OF DETROIT, MICHIGAN

SPRING STRUCTURE

Application filed November 30, 1931. Serial No. 577,999.

The main object of my invention is to provide an improved spring structure of the type disclosed by my Patent No. 1,665,539, dated April 10, 1928.

Another object is to provide in a spring structure a border frame that is not only very strong and rigid but which is at the same time very compact.

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

A structure which is a preferred embodiment of my invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a fragmentary vertical section of a structure embodying the features of my invention.

Fig. 2 is an enlarged fragmentary vertical section illustrating structural details, and

Fig. 3 is a fragmentary perspective view of the border frame before assembly.

Referring to the drawing, numeral 1 indicates a cushion which is provided with body springs 2 supported by a base comprising the border frame 3. The border frame 3 is of sheet metal folded or conformed to provide a downwardly facing channel 4 for housing the tacking strip 5 of wood, fiber or the like, The lower edges 6 of the flanges 7 are turned inwardly to embrace the tacking strip 5 as illustrated.

A mid-portion of the web 8 of the downwardly facing channel 4 is folded directly upon itself and in overlapping metal-to-metal contact throughout to form the integral inwardly facing channel 9. The web 8 constitutes one flange of the channel 9, while the web 10 and other flange 11 thereof consist of the folded web portion of double thickness and angle or inverted L shape. The flange 11 is adapted to be crimped or clamped at 12 over the end coils 13 of the body springs 2 as illustrated by Fig. 2.

The upholstery 14 is provided with a skirt 15 which is wrapped upon the frame and secured thereto by tacks 16 driven into the tacking strip 5.

My improved border frame is very strong and rigid, owing to the fact that the web portion of the channel 4 forming the inwardly facing channel 9 is folded directly upon itself in metal-to-metal contact throughout, the structure effectivelv resisting bending and twisting movements. If desired the parts constituting the angle or L shaped portion of the inwardly facing channel 9 may be welded or brazed together to increase the strength of the frame.

Another advantage of the present structure resides in the fact that the edge portion 12 of the upper flange 11 may be readily crimped or turned over the end coils 13 of the border springs and with little possibility of the loosening of the latter in use.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiments of my invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

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

1. A border frame for spring structures comprising a downwardly facing sheet metal channel of rectangular cross section and having an integral clamping flange for a supported part resting on the top of the channel, said channel having a tacking strip fitting therein, the edges of the flanges of the channel being folded on the under side of the tacking strip to retain the same and to expose a midportion thereof, said clamping flange being formed of a midportion of the web of the channel folded into a continuous longitudinal double walled angular flange inwardly spaced from the outer edge of the channel forming with said web an inwardly facing groove for said part and providing an angular longitudinal stiffening rib in opposed relation to the exposed face of the tacking strip.

2. A border frame for spring structures comprising a downwardly facing channel and an integral angular clamping flange inset from the outer edge of the channel and formed by folding a midportion of the web

of the channel longitudinally upon itself with the folds in direct metal to metal contact and constituting an angular unitary reinforcing element and a clamping means for a spring or other element to be supported arranged upon the web of the channel and within the inwardly facing groove formed by the web and clamping flange, there being a tacking strip fitting within the channel and secured therein by clamping the edges of the flanges of the channel upon the under side of the strip, the clamping flange being offset from the outer edge of the channel to substantially the width of the outer tacking strip retaining flange.

3. A border frame for spring structures comprising a downwardly facing channel, and an integral angular stiffening rib and clamping flange positioned in spaced relation from both edges of the channel and formed of a mid-portion of the web of the channel folded longitudinally upon itself with the folds in direct metal to metal contact forming with the web an inwardly facing groove and coacting as a unitary element, and a tacking strip fitting within said channel, the edges of the flanges of the channel being folded upon the under side of the tacking strip, there being an exposed portion of said tacking strip between said infolded edges of the channel and in opposed relation to said clamping flange and reinforcing rib.

In witness whereof I have hereunto set my hand.

WILLIAM A. FALLS.