

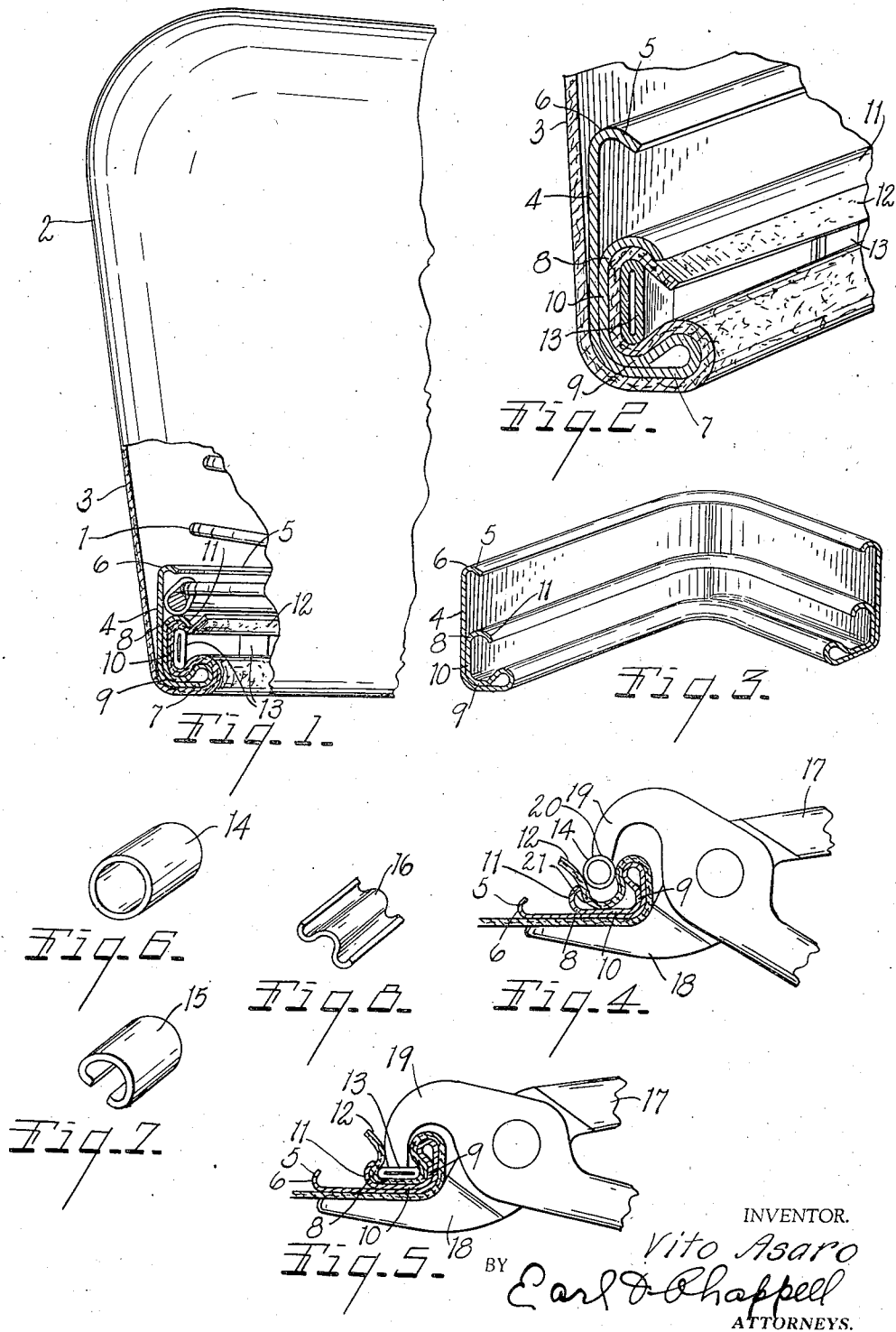
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SPRING STRUCTURE

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SPRING STRUCTURE

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2 Claims. (Cl. 155—180)

This invention relates to improvements in spring structures.

The main objects of this invention are:

First, to provide an improved spring or cushion structure in which the upholstery may be very quickly applied to the spring unit by unskilled workmen and at the same time is very securely retained.

Second, to provide a structure having these advantages in which worn or damaged upholstery may be removed if desired for the purpose of permitting the application of new upholstery.

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

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

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

Fig. 2 is an enlarged fragmentary inside perspective view showing structural details and details of the means for securing the upholstery to the frame.

Fig. 3 is an inside perspective view of the cushion base or border frame.

Fig. 4 is a fragmentary sectional view illustrating one of the steps of applying a preferred form of upholstery clamping member or one of the steps of securing the upholstery.

Fig. 5 is a fragmentary sectional view corresponding to that of Fig. 4 showing another step of securing the upholstery.

Fig. 6 is a perspective view of a desirable form of upholstery securing member.

Fig. 7 is a perspective view of a modified form of securing member.

Fig. 8 is a perspective view of a still further modification of the clamping or securing member.

The embodiment of my invention illustrated comprises body springs 1 and an upholstery covering 2 having a skirt portion 3. The base or border frame is formed of sheet metal suitably conformed to provide an upstanding side or facing member 4 having an intumed flange 5 at the top thereof which adds to the rigidity of the structure and also provides a rounded upper edge 6.

This border frame is provided with an inwardly extending bottom portion 7 of substantial width which is reversely folded upon itself and conformed to provide an inwardly facing channel 8. The bottom portion 9 of this channel is

in supported engagement with the bottom 7 of the frame while the web portion 10 of the channel is in supported engagement with the inner side or upright side portion 4 of the frame.

The top or free flange 11 is downwardly curved thereby providing a channel having a mouth of less width than the greatest internal dimension of the channel which is preferably vertical, as shown.

The upholstery skirt is wrapped around the bottom 7 and is disposed within the channel preferably so that a portion thereof, as indicated at 12, projects from the channel. This insures that the upholstery is disposed so as to be effectively engaged by the retaining means therefor.

This retaining means comprises the upholstery clamping members 13, which, it will be noted in their engaged position as shown in Fig. 2, are flat, their width being such that they wedgingly engage the upholstery and wedge it into the largest dimension portion of the channel, effectively wedgingly or clampingly retaining the upholstery. There are a plurality of these clips arranged in suitably spaced relation to retain the upholstery without permitting substantial distortion thereof between the members 13.

The members 13 are, in the now preferred embodiment shown in Fig. 2, in the form of collapsible or deformable tubes 14. They may, however, be split and have a flattened section, as is the case with the member 15 shown in Fig. 7, or a corrugated section as the member 16 in Fig. 8. These members are forced into the channel and deformed therein which results in their being expanded in one plane to wedgingly clamp the upholstery. They are non-resilient; that is, they are not resilient in any material sense so far as their clamping wedging function is concerned.

In Fig. 4 I illustrate a plier-like tool 17 having one jaw 18 adapted to supportingly engage the outer side of the upholstery, the other jaw 19 being hook-shaped and provided with a face 20 for engagement with the clamping members. After the upholstery is disposed over the channel and preferably partially disposed therein as indicated at 21 in Fig. 4, the retaining members are positioned in the mouth of the channel and forced into the channel and deformed therein into the position shown at 13. The members 15 and 16 shown in Figs. 7 and 8 respectively may also be deformed and expanded in one plane within the channel to wedgingly clamp the upholstery. It should be understood, however, that the members may be initially formed in ap-

proximately the shape shown in Figs. 1 and 2 and forced and expanded into the channel, the channel flange springing and yielding enough to make this operation possible. The upholstery when thus secured is very effectively retained, at the same time the clamping members may be pried out if it is desired to reupholster the spring structure. In such case, new wedging or clamping members would be preferred in the reupholstering as they are very economical and are likely to be distorted in prying them out so as to render them undesirable for a second use.

I have illustrated and described my improvements in embodiments which I have found very satisfactory. I have not attempted to illustrate or describe various modifications or adaptations as it is believed that this disclosure will enable those skilled in the art to embody or adapt my improvements 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 cushion structure the combination of a border frame having an upholstery receiving

channel, the maximum dimension of which exceeds the entrance thereto, upholstery having a portion thereof disposed within said channel, and deformable clamping members disposed within said channel whereby they are deformed in one dimension to clamp the upholstery within the channel, said clamping members prior to the deforming thereof being of non-split tubular section and flattened to expand them in the clamping position within the channel.

2. In a cushion structure the combination of a border frame having an upholstery receiving channel, the maximum dimension of which exceeds the entrance thereto, upholstery having a portion thereof disposed within said channel, and deformable clamping members disposed within said channel whereby they are deformed in one dimension to clamp the upholstery within the channel, said clamping members prior to the deforming thereof being of tubular section and flattened to expand them in the clamping position within the channel.

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