Aug. 20, 1929. P. RISSMANN 1,725,480

CUSHION FRAME

Filed Jan. 24, 1927 2 Sheets-Sheet 1

Fig. 1.

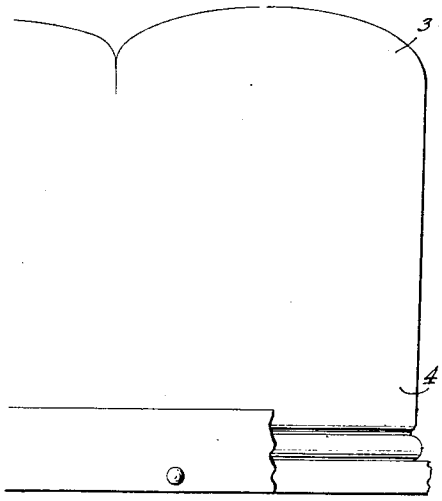
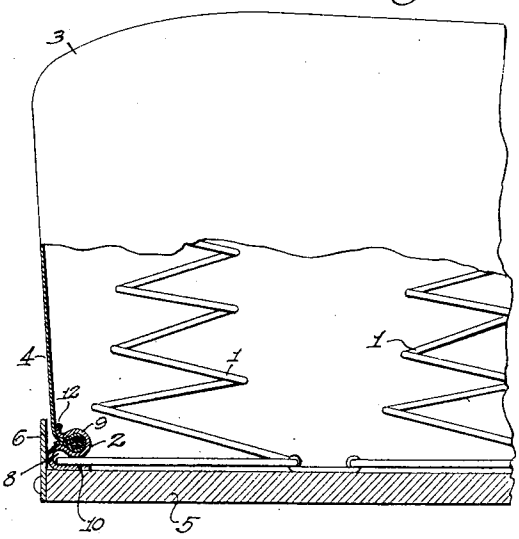


Fig. 2.



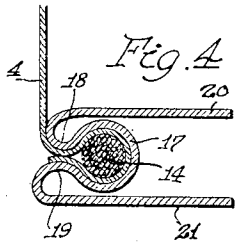


Fig. 4.

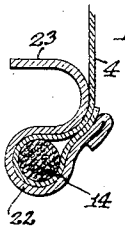


Fig. 5.

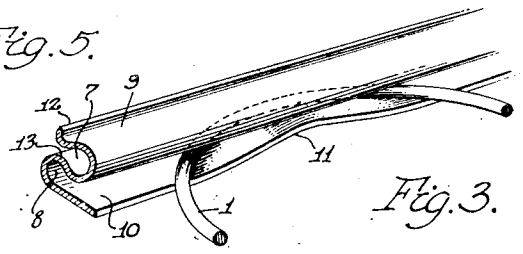


Fig. 3.

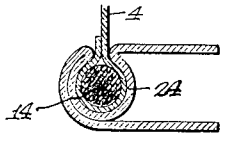


Fig. 6.

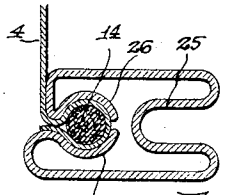


Fig. 7.

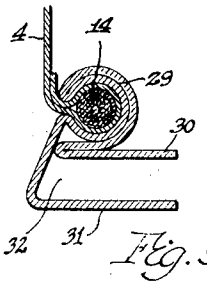


Fig. 9.

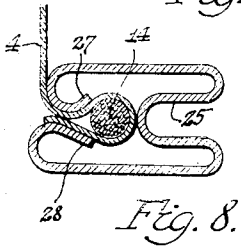


Fig. 8.

Inventor

Paul Rissmann,

By Dorsett & Buchs

Attorneys

Aug. 20, 1929. P. RISSMANN 1,725,480

CUSHION FRAME

Filed Jan. 24, 1927 2 Sheets-Sheet 2

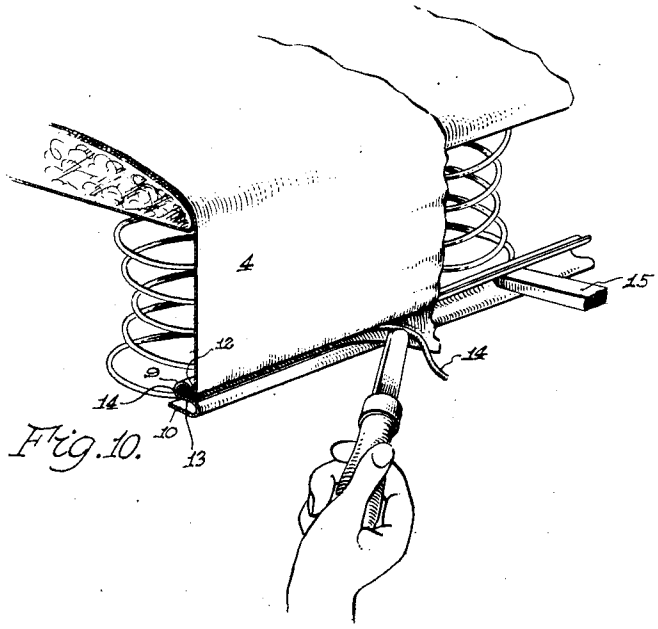


Fig. 10.

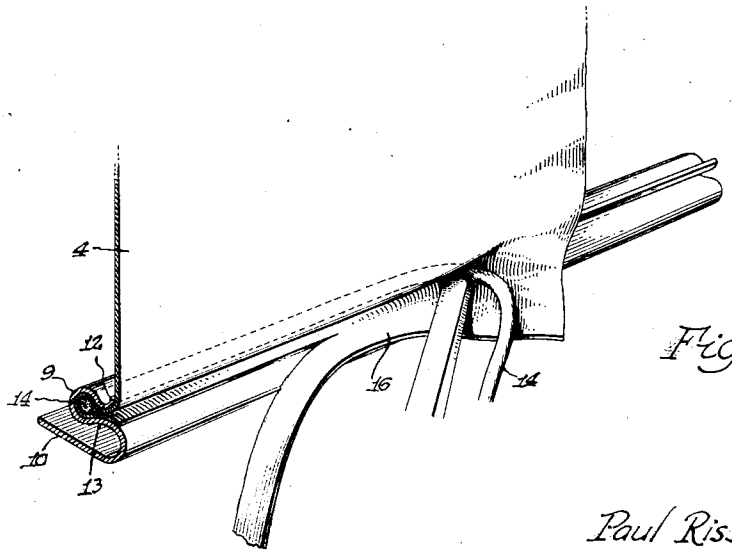


Fig. 11.

Inventor
Paul Rissmann,
By Pritchett & Pritchett
Attorneys

Patented Aug. 20, 1929. 1,725,480

UNITED STATES PATENT OFFICE.

PAUL RISSMANN, OF DETROIT, MICHIGAN, ASSIGNOR TO PREMIER CUSHION SPRING COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

CUSHION FRAME.

Application filed January 24, 1927. Serial No. 163,043.

This invention relates to the upholstery of cushion and similar constructions, more especially of the type wherein springs with or without other filling are mounted within the confines of a frame outlining the base of the device, and the spring assembly concealed by suitable upholstery including an apron forming or concealing the side walls of the construction.

Many suggestions have been offered from time to time for the securing of the lower edge of this apron to or about the frame of the construction, considerable attention having been given to the matter of obtaining simplicity and cheapness in the attachment, and it has been suggested among other ideas to provide the lower frame of the construction with a lip forming a receiving groove for the lower edge of the apron and to insert such edge into the groove and thereafter clamp the said lip on to the material of the apron in the groove to prevent its withdrawal therefrom, this involving an extra operation after the insertion of the material of the apron into the groove before the securing of the same was completed. In other cases the material has been passed over or around the frame and secured by nailing, adhesive or other means thereto; or the material has been entered into a groove or channel and held therein by a bar or retainer, especial means being provided to lock such retainer in position within the channel. All these means are attended with operations which add materially to the cost of the device and detract from the speed with which the device may be made, and in very many cases have been found to be unsatisfactory in their method of operation or efficiency in subsequent use; and it is the object of the present invention to provide a simple frame construction and method of assembling the apron thereto which will provide a neat and adequate securing of the material and which will at the same time permit the operation of effecting such securing to be accomplished very speedily and without requiring the exercise of especial skill in connection therewith, so that the said invention lends itself to the requirements of high production which exist at this time and which it has long been the endeavor of manufacturers of cushions and similar constructions to cope with.

Further objects subsidiary to or resulting from the aforesaid objects or from the construction or operation of the invention as it may be carried into effect, will become apparent as the said invention is hereinafter further disclosed.

In carrying the invention into effect, I may provide a cushion construction with a frame characterized by its including a channel having a restricted longitudinal opening thereto and introducing the material of a cushion skirt into the channel through the said opening with the said material folded on a core such as a cord whereby the core and its surrounding material are of substantially greater thickness than the width of said opening, the wall of the channel being sufficiently resilient to admit of the said opening being distended sufficiently for the passage therethrough of the material and its core into the channel and sufficiently rigid to maintain the enclosed material and core against withdrawal therefrom, except inasmuch as they may be removed by special endeavor.

All of which is more particularly described and ascertained hereinafter, by way of example, having reference to the accompanying drawings, wherein—

Figure 1 is a fragmentary elevation of a cushion constructed in accordance with this invention mounted on a base-board having an edge member, part of which is shown broken away;

Figure 2 is a fragmentary sectional elevation of such cushion construction;

Figure 3 is a detail view of part of the frame and spring of such cushion construction;

Figures 4, 5, 6, 7, 8 and 9 are sectional detail views of modified forms of frames embodying the said invention;

Figure 10 is a fragmentary perspective detail view indicating a method of applying the fabric to the frame; and

Figure 11 illustrates similarly another method which may be adopted for that purpose.

Similar characters of reference indicate similar parts in the several figures of the drawings.

A common cushion construction includes coil springs 1 which are connected or attached to a base frame, which, in Figures 1 and 2 is generally numbered 2, the arrangement of coil springs being enclosed by upholstery 3

including a skirt 4 extending around the sides of the spring construction; and 5 indicates a base-board or support for the cushion proper, which support is in many cases provided with an upwardly projecting edge member 6 of metal to retain the cushion in correct position on the support. The present invention has direct relation to the construction and use of the frame.

In Figures 1, 2 and 3 this frame is indicated as being of sheet metal and bent to form upper and lower channels 7 and 8 respectively, the upper part 9 of the strip extending outwardly, and the lower part 10 inwardly of the cushion construction, so that the channel 8 may receive the lower convolutions of springs which may be clinched therein as at 11, or secured or connected thereto in any suitable manner, the upper channel 7 being intended to receive the lower marginal portion of the said skirt 4 of the cushion.

It will be noted that the marginal portion of the upper part 9 of the frame is bent upwardly at 12 to present a smooth surface which will not be liable to cut the fabric of the skirt 4, and that the marginal portion of the upper part 9 of the frame approaches the intermediate portion 13 of the said frame to restrict the opening to the said channel and forming a narrow throat through which the material of the skirt will extend into the said channel 7. The marginal portion of the skirt is provided with a welt which may be formed at the time of assembling the skirt to the said frame by folding the material of of the skirt over a core such as a cord 14.

Ordinarily the thickness of the welt is such that it could not pass through the throat of the channel 7 but the material of the frame is sufficiently resilient that with the application of sufficient force in the proper manner thereto, the said throat may be temporarily distended for that purpose, and upon relief of such pressure the throat will be again restricted by the reflex action of the material of the frame, and in its again retracted condition prevent the withdrawal of the welt from the channel 7.

In Figure 10 I show how the entrance of the welt into the said channel 7 may be effected by inserting into the throat of the frame a spreading implement 15 and drawing this implement along the frame at the same time following it with the welted marginal portion of the skirt and progressively introducing this welted portion into the channel 7 as its throat is so distended. As the resiliency of the material causes it to again assume its normal form as the spreading implement is removed to a sufficient extent beyond a certain point, the marginal portion of the upper part 9 of the frame closes down over the said welt progressively as it is introduced into the said channel, securing it in the desired manner, so that when the spreading implement has been passed through the complete length of the throat followed by the insertion of the welt of the fabric into the channel, the said fabric is eventually secured to the frame throughout its length without any further operation on the frame being necessary to complete the attachment of the skirt to the frame. Any free edge of the skirt as at 16, extending from the throat of the frame may afterwards be cut off, so that the remaining edge of the material will be substantially concealed in the throat of the frame, and especially is this so where a pile fabric is used in the skirt, and if thought necessary or desirable, the material may be so folded around the core that the edge of the material in its assembled relation to the frame may extend over the upper lip of the channel and be concealed beneath the skirt as indicated in Figure 9.

To accomplish the purposes of this invention, many modifications of form of the frame may be resorted to, a number of examples of which are illustrated in the drawings, and in Figure 4 the welt receiving channel 17 is formed in the intermediate part of the metal strip of the frame, which strip is doubled upon itself as at 18 and 19 to form beads or lips approaching one another to provide the restricted throat for the channel 17, and the upper and lower portions 20 and 21 of the frame extending rearwardly for the reception therebetween or attachment thereto of springs or connections for springs.

Figure 5 may be considered as a reversal of the form shown in Figures 1, 2 and 3, in that the welt receiving channel 22 is formed in the lower part of the frame, and the spring receiving channel 23 in the upper part of the frame; and in Figure 6 a welt receiving channel 24 is formed with its throat extending upwardly in the direction in which the skirt of the cushion extends.

In Figure 7 a spring receiving channel 25 is formed in the intermediate part of the metal strip of the frame, the welt receiving channel 26 being provided by inwardly bending the marginal portions of the said strip, the said inwardly bent portions being formed to provide a substantially tubular channel within the structure of the frame; and in Figure 8 this is somewhat modified by abbreviating the inwardly turned marginal portions of the strip as at 27 and 28 to simply form abutments resisting the outward movement of the welt from within the frame.

In Figure 9 a welt receiving channel 29 is shown formed by the doubling of an intermediate portion of the strip upon itself to provide a double wall, which double wall is bent into channel formation, and the mar-

ginal portions 30 and 31 of the strip bent rearwardly in spaced relation to provide the spring receiving channel 32.

Thus it will be seen that the welt receiving channel may be formed in the upper or lower part of the frame or intermediate of the height of the frame and formed from almost any part of the metal strip entering into the construction of the frame, and this may also be said of the arrangement and formation of the spring receiving channel, but it is desired that it be understood that the use and arrangement of the spring receiving channel is secondly to that of the welt receiving channel as far as this invention is concerned, and in fact any convenient means of attaching or connecting of the springs to the frame may be adopted without departing from the essence of this invention, which resides in the means and method of attaching the skirt to the frame.

This invention may be developed within the scope of the following claims without departing from the essential features of the said invention, and it is desired that the specification and drawing be read as merely illustrative and not in a limiting sense, except as necessitated by the prior art.

What I claim is:—

A border frame member fabricated of a single piece of resilient sheet metal and being folded on one side thereof to provide an outwardly-opening spring-receiving recess and an oppositely-disposed outwardly-opening upholstery-receiving recess, the recess last mentioned comprising oppositely and inwardly curved lips through which the apron of upholstery material and its welt may be passed and gripped, the edges of said lips being spaced from the innermost portion of the recess first mentioned.

In testimony whereof I affix my signature.

PAUL RISSMANN.