

Oct. 20, 1931.

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1,828,634

CUSHION SEAT CONSTRUCTION

Filed Oct. 31, 1928

3 Sheets-Sheet 1

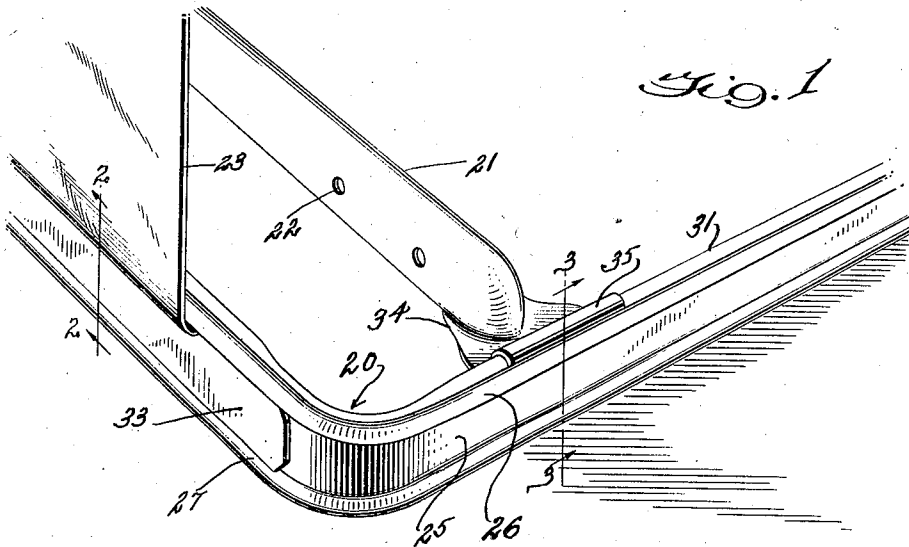


Fig. 1

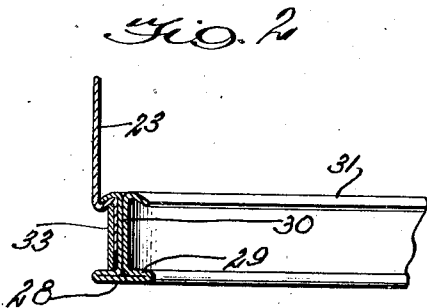


Fig. 2

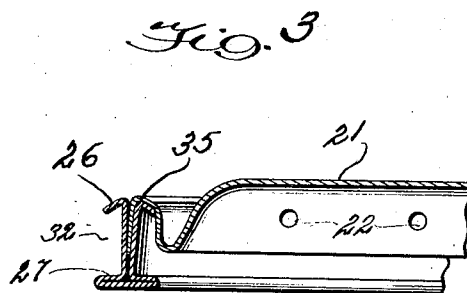


Fig. 3

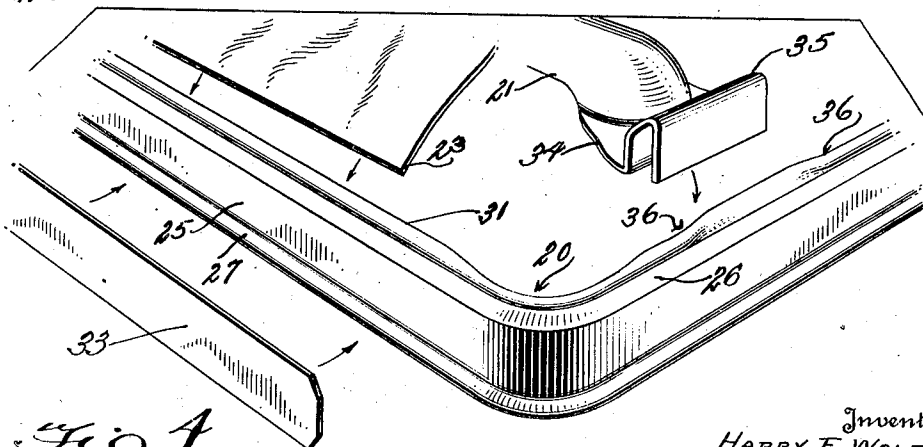


Fig. 4

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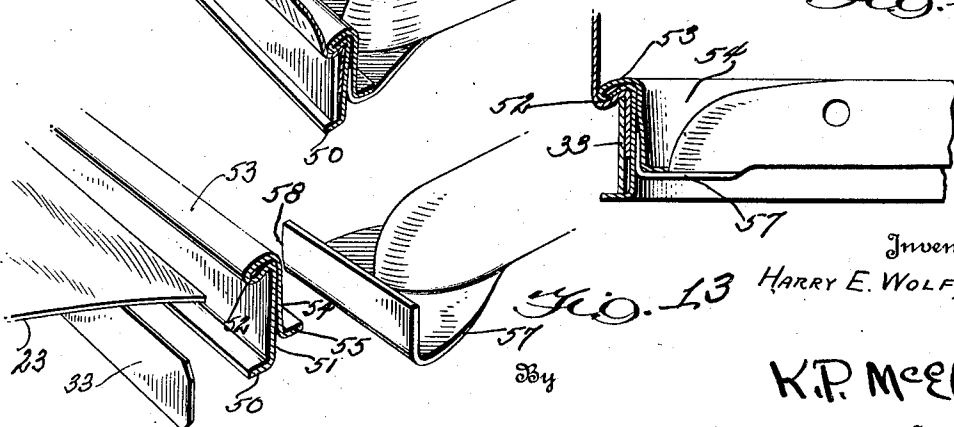
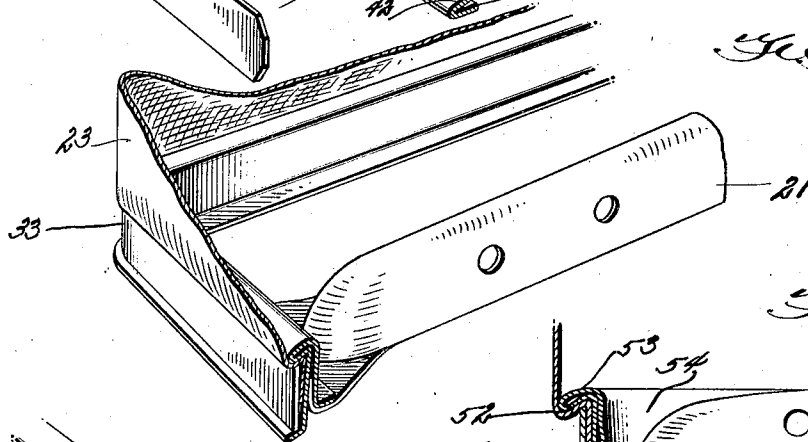
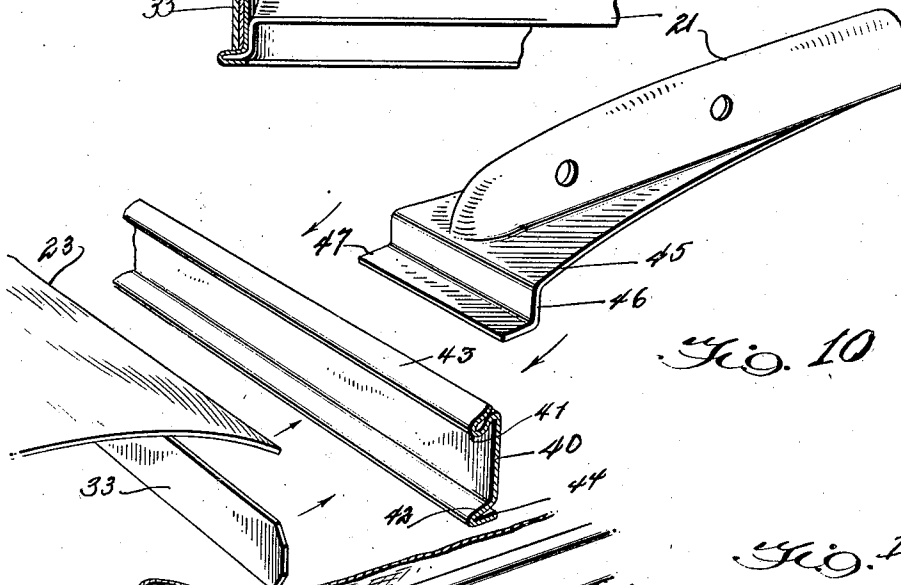
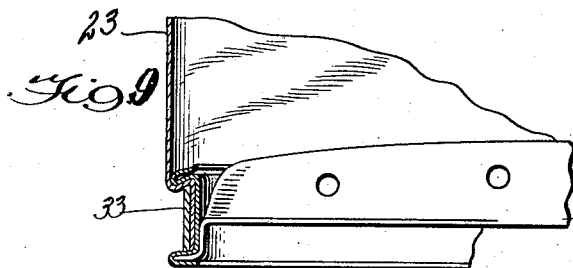
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CUSHION SEAT CONSTRUCTION

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3 Sheets-Sheet 3



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CUSHION SEAT CONSTRUCTION

Application filed October 31, 1928. Serial No. 316,196.

This invention relates to cushion seat constructions; and it has particular reference to a border frame for a cushion seat comprising a metallic member having a web portion and external flanges adapted to receive a cover for the seat and means to secure the cover in the space between the flanges, and further comprises a border frame wherein the flanges are reversed on themselves and bent to provide a socket for the reception of a cross bar for the springs of the seat; all as more fully hereinafter set forth and as claimed.

Cushion seats comprise seats wherein a number of coiled springs are mounted within a border frame and are covered with suitable padding and a fabric. Usually the springs are mounted on cross bars extending between opposite sides of the lower border frame, and the fabric cover for the entire seat is secured adjacent the lower border frame. The present invention contemplates the provision of a lower border frame adapted for use in cushion seats.

Various embodiments of the principles of the invention are illustrated in the accompanying drawings, wherein

Fig. 1 is a fragmentary view in perspective of a lower border frame and seat elements immediately associated therewith;

Fig. 2 is a cross-sectional view taken along the line 2—2 of Fig. 1;

Fig. 3 is a cross-sectional view taken along the line 3—3 of Fig. 1;

Fig. 4 is a fragmentary expanded perspective view of the elements shown in Fig. 1;

Fig. 5 is a fragmentary perspective view of another form of border frame with associated elements;

Fig. 6 is a cross-sectional view of the structure shown in Fig. 5 and taken adjacent the junction of the border frame and cross-bar;

Fig. 7 is a fragmentary expanded view in perspective of the structures shown in Figs. 5 and 6;

Fig. 8 is a fragmentary view in perspective of a third embodiment of the invention;

Fig. 9 is a cross-sectional view of the construction shown in Fig. 8 taken adjacent the junction of the border frame and cross-bar;

Fig. 10 is a fragmentary expanded view

in perspective of the structure as shown in Figs. 8 and 9;

Fig. 11 is a fragmentary view in perspective of a fourth embodiment of the invention;

Fig. 12 is a cross-sectional view of the cross-bar and border frame shown in Fig. 11; and

Fig. 13 is a fragmentary expanded view in perspective of the elements shown in Figs. 11 and 12.

The construction shown in Figs. 1 to 4 inclusive comprises a border frame, referred to generally by the reference numeral 20, and a cross-bar 21 provided with pairs of apertures 22 adapted to receive coiled springs, not shown, which extend upwardly against padding, also not shown. A cover 23 of suitable material, hereinafter simply called the fabric, is drawn over the upholstery on the top of the springs, straight down the sides of the cushion and is secured to the border frame 20 by means presently to be described.

The border frame 20 consists of a rectangular member of rolled steel, which has an external vertical web 25 defined at its upper portion by an outwardly extending and downwardly turned flange 26, which marks one edge of the metal originally used to form the border frame. The lower portion of the web 25 merges into an outwardly extending and substantially horizontal flange 27 which is sharply reversed on itself to provide a base portion 28. This portion, in turn, is sharply reversed on itself to form an interior lower flange 29 which turns upwardly to form an interior vertical web 30 which finally terminates in an inwardly extending and downwardly turned flange 31. It will be observed, that generally, the cross-section of the border frame is similar to the letter I, save that the upper flanges 26 and 31 are turned downwardly and so converge toward the lower flanges 27 and 29. The space between the outer flanges 26 and 27 may be referred to as the recess 32.

The fabric cover 23 which is drawn down around the sides of the cushion seat is tucked within the recess 32, as best illustrated in Fig. 2. It is here secured by means of a resilient and rather thin strip of steel 33

which is slightly wider than the minimum distance between the flanges 26 and 27, and which is simply sprung between these flanges to hold the fabric 23 in place.

5 The cross-bar 21 is advantageously of inverted U-shape in cross-section and has flattened ends 34 which are bent first upwardly and then downwardly to form hooked portions 35 which are inserted between the webs 10 25 and 30. It will be observed that the bent end of the cross-bar 21 engages the flange 31, which, as originally pointed out, is formed by reversing one of the exterior flanges (27) and subsequently bending the 15 reversed portion to form a socket in which the end of the cross-bar is inserted. In the instant case, the socket is defined by the space between the webs 25 and 30.

20 When the cross-bars are positioned, the webs may be clamped tightly together at either side of the ends of the cross-bars as illustrated best in Fig. 4 by the reference numeral 36. Or, the metal may be punched or the parts welded or other expedients re- 25 sorted to prevent the cross-bar from slipping. The springs, padding and cover are then positioned, and the fabric 23 is secured by the resilient strip 33, as indicated above. The spring clip 33 may, of course, be of any 30 length desired, and may be bent to pass around the corners of the frame.

Another form of border frame is shown in Figs. 5, 6 and 7. In this case, the upper 35 inner flange 31 is omitted, and the inner extremity of the metal originally forming the border frame terminates with the upper edge of the inner web 30a. The cross-bar 21 is formed with an end portion provided with a very sharp bend 38. The remaining de- 40 tails of the construction and method of assembly are believed to be obvious in view of what has been said with respect to the construction shown in Figs. 1 to 4 inclusive. These views also show a bottom fabric 23a, 45 which may be included in air bound seats, and secured in the recess 32 with the fabric 23.

The modification shown in Figs. 8, 9 and 10 consists of a single vertical web 40 hav- 50 ing upper and lower outwardly extending and converging flanges 41 and 42, both of which are sharply reversed on themselves, as indicated at 43 and 44. The cross-bar 21 has a flattened end portion 45, which is bent 55 downwardly and then outwardly as indicated by the flange portions 46 and 47. In assembly, the flange 47 is thrust in the space between the flanges 42 and 44 of the border frame. The flange 47 is of such length as to permit of close contact of the flange 46 60 with the inner face of the web 40. Thereafter the cross-bar 21 is secured to the border frame by clamping, welding, or like expedient. The fabric 23 is secured between the

outer converging flanges 41 and 42 in the manner previously described.

The modification shown in Figs. 11, 12 and 13 comprises a lower border frame having a 70 lower outwardly extending flange 50, exterior vertical webs 51, and an upper outwardly extending flange 52 converging toward the flange 50 to provide a recess for positioning a resilient clamping strip 33, all in a man- 75 ner similar to that previously described. The upper flange 52 is sharply reversed on itself as indicated at 53 and is then bent downwardly to form an interior vertical web 54 merging into an inwardly projecting lower 80 flange 55. The cross-bar 21 is provided with a horizontal flat portion 57 which is turned upwardly to provide a flange 58 adapted to be seated in the socket formed by the webs 51 and 54, and to be aligned by the inwardly 85 projecting flange 55. The method of assembly is the same as that previously described.

From the foregoing description, it will be seen that the invention provides a lower border frame in which there are a pair of out- 90 wardly extending flanges adapted to receive the seat fabric, and further, that one of the flanges is reversed and bent to form a socket adapted to receive the end of a cross-bar. 95 various modifications and departures may be made from the various embodiments herein described for the sake of example, and accordingly it is intended that the invention should be limited only by the following 100 claims, and not to the specific constructions shown and described.

What I claim is:

1. A cushion seat comprising a lower border frame having a vertical web and exterior upper and lower flanges, one of said flanges 105 inclined towards the other, thereby forming a recess to receive a seat cover, a clamping strip adapted to be inserted between the flanges to secure the cover to the frame, the other flange being reversed and bent to form 110 a socket for the end of a cross-bar and a cross-bar having an end in said socket.

2. A cushion seat including a lower border frame having an exterior and interior vertical web interconnected at one end by a later- 115 ally extending flange formed on the exterior web and reversed on itself to merge into the interior web, said webs defining a socket for the end of a cross-bar and contacting on opposite faces thereof to secure 120 the cross-bar to the border frame and a flange at the top of the exterior web forming a channel with the laterally extending flange adapted to receive a seat cover, and a resilient clamping strip adapted to be sprung into said 125 channel to secure the seat cover to the frame.

3. A cushion seat including a lower border frame having an exterior and interior vertical web interconnected at one end by a later- 130 ally extending flange formed on the exterior web and reversed on itself to merge

into the interior web, said webs defining a socket for the end of a cross-bar and contacting on opposite faces thereof to secure the cross-bar to the border frame, and a second laterally extending flange formed on the exterior web and inclined outwardly and downwardly towards the first-named flange, said flanges forming a recess adapted to receive a seat cover, and clamping means for the cover comprising a strip of resilient metal of greater width than the entrance to the recess and adapted to be snapped into the recess between the flanges to secure the seat cover to the frame.

4. A cushion seat including a lower border frame having an exterior and interior vertical web interconnected at one end by a laterally extending flange formed on the exterior web and reversed on itself to merge into the interior web, said webs defining a socket for the end of a cross-bar and contacting on opposite faces thereof to secure the cross-bar to the border frame, and a second laterally extending flange formed on the exterior web and spaced from the first named flange, said flanges forming a recess adapted to receive a seat cover, and a clamping strip of resilient material adapted to be sprung into said recess to hold the cover in place.

5. A cushion seat comprising a lower border frame having a vertical web merged into exterior upper and lower flanges, one of said flanges inclined towards the other, said flanges and said vertical web being rigid and defining a recess adapted to receive a seat cover, and a flat, thin, narrow, resilient, retaining and clamping strip adapted to be bent slightly longitudinally and sprung between the flanges of said border frame, said strip being retained between said flanges by stress engagement therewith to engage and clamp the seat cover to the frame.

In testimony whereof, I have hereunto affixed my signature.

HARRY E. WOLF.

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