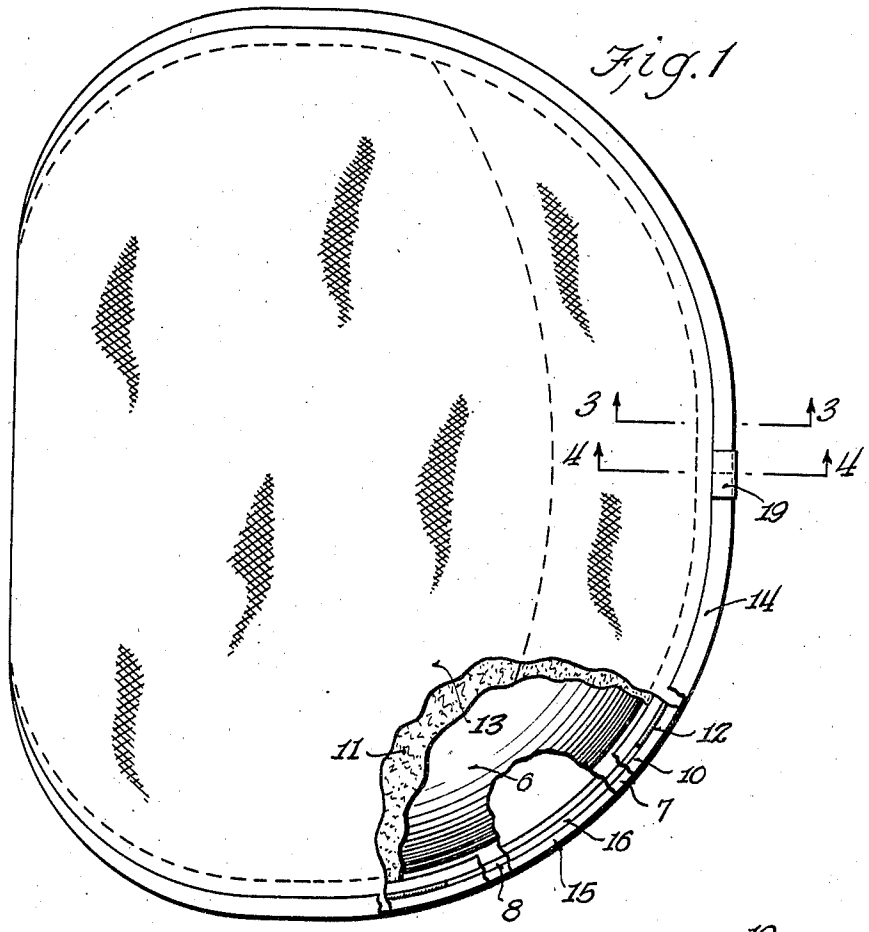
April 25, 1944. J. E. BLOOMBERG 2,347,538

SEAT AND METHOD OF MAKING THE SAME

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Fig. 1



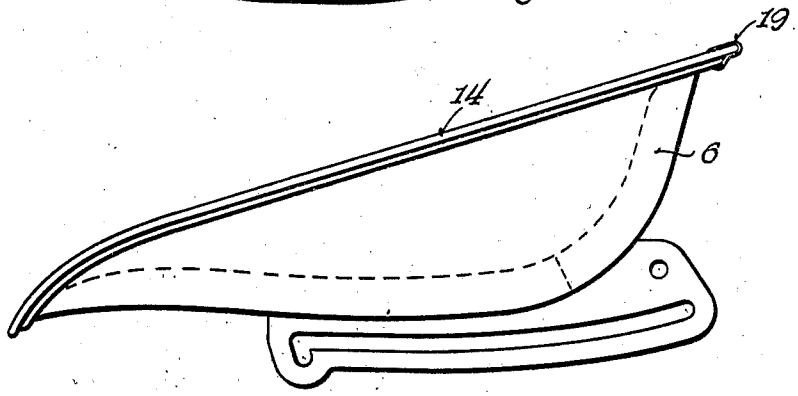


Fig. 2

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Fig. 3

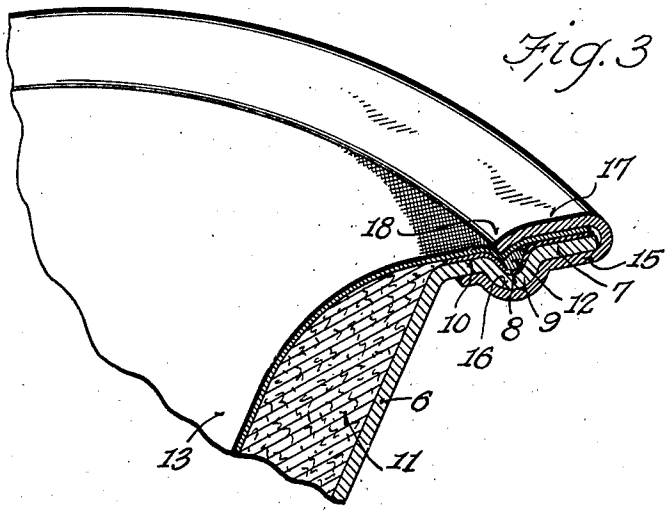
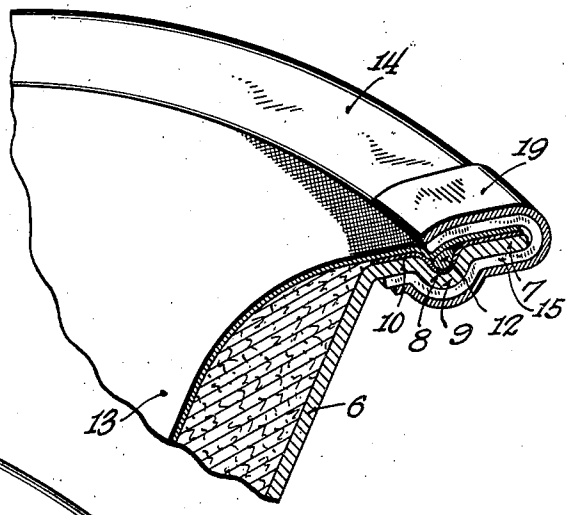


Fig. 4



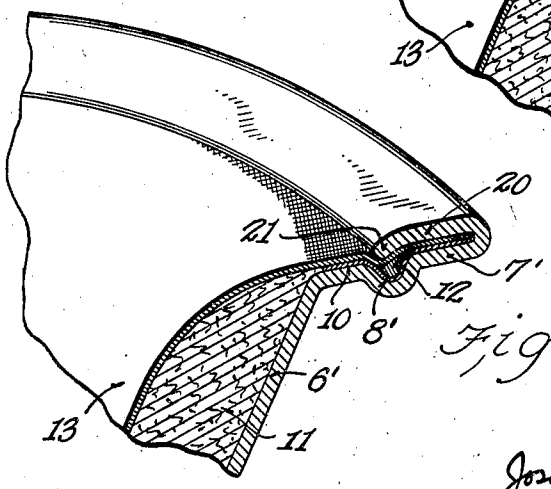


Fig. 5

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Patented Apr. 25, 1944 2,347,538

UNITED STATES PATENT OFFICE

2,347,538

SEAT AND METHOD OF MAKING THE SAME

Joseph E. Bloomberg, Milwaukee, Wis., assignor to Milwaukee Saddlery Company, Milwaukee, Wis., a corporation of Wisconsin

Application April 6, 1940, Serial No. 328,176

5 Claims. (Cl. 155—184)

The invention relates to cushioned seats and a method of making the same.

The general object of the invention is to provide a new and improved cushion structure for metal seats, more particularly deeply dished metal seats and an expeditious method of producing this structure and particularly to simplify the method heretofore proposed by me in my prior U. S. application Serial No. 123,140, filed January 30, 1937, which has now matured into Patent No. 2,246,662, issued June 24, 1941, of securing the covering over the cushion and to the edge portion of the seat. More particularly, according to the present invention, the edge of the seat covering is firmly bound to the seat body by a metal binding formed as a part of the metal seat body itself or a metal binding ring secured to said seat body, thus doing away with the riveting and subsequent stitching operations of the prior application and the leather binding thereof without, however, incurring danger of the binding cutting or otherwise injuring the covering, and so that the covering is firmly, yet yieldingly, held at its outer edge portion.

A further object of the invention is to provide an upholstered metal seat in which all stitching, tacks, rivets, nails, and the like have been eliminated.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a plan view of a seat embodying the invention, parts being broken away;

Fig. 2 is a side elevation view of the seat shown in Fig. 1;

Fig. 3 is a detailed sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a detailed sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a view similar to Fig. 3 showing certain modifications.

Referring to the drawings, the numeral 6 designates a seat body of stamped sheet metal which is deeply dished and curved for comfort and is provided with a flanged edge portion 7 which has an annular curved groove 8 formed therein on its upper side which forms a bead 9 on its lower side, the outer edge of this part 7 due to stamping being relatively sharp. Over the top surface of the flanged edge 7 I secure a wear and anchor strip 10 which is cemented to said body by a coating of naphtha-rubber cement or other suitable adhesive not specially shown in the drawings but disposed between said strip and body. The anchor strip 10 is of heavy canvas, cut on the bias and placed on said top surface so as to form a lining therefor including the groove 8, the strip 10 thus forming a band substantially coextensive with said edge 7 with its ends forming either a butt or lapped joint. After cementing this strip to the body, these parts are allowed to stand for a considerable time until the cement has set, for example a period of twelve hours.

The cushioning material 11 may be of any suitable kind, such as any suitable animal or vegetable fiber or rubber such as sponge rubber. Where animal or vegetable fibers are used, they are preferably felted together in any suitable manner. The cushioning material herein shown is hair felt and is secured by a coating of naphtha cement (not specifically indicated) to the metal seat body and extends over the entire seat cavity and terminates on about a level with the flanged edge portion 7. This cushioning material may be secured to the seat body by cementing it thereto at the same time that the anchor strip 10 is secured to the body, that is, the whole top surface of the body is given a coating of naphtha cement by respective portions of which the strip and cushion are secured to the body.

After the anchor strip 10 is secured to the body, a cord 12 of yieldable material, such as rubber, hemp, cotton, or other suitable fibrous material, is either first coated with naphtha cement and then laid in and along the groove with its ends forming a butt joint or the groove portion of said strip is coated with naphtha cement and the cord then laid in the groove.

Thereafter, a covering 13 of heavy duck canvas has one side coated with a latex rubber cement, which coated side is laid over the top of the cushioning material, the cord 12, and the anchor strip 10, and then directly after stripped therefrom leaving a coating of latex on the burlap covered side of the cushioning material as well as on the anchor strip and cord. Then these cement coated parts are allowed to stand until they become tacky, and then in this condition the cover is applied to cement the coated side of the cushion, first at its center, and then outwardly along the sides, and then pressed against said material by a heavy weight. While thus weighted, the covering is stretched and drawn out over the edge portion of the seat and brought down into adhesive engagement with the anchor strip and cord while drawing it over the top edge of the cushioning material.

Thereafter, the covering 13 is given a heavy

coating of latex which is allowed to stand and become rubber by cold vulcanization, making the top of the seat completely waterproof.

Thereafter, in order to protect the exposed edge of the cover and insure a firm engagement of said cover with the edge portion of the casing, a metal binding means is provided which tightly clamps the cover between it and the top of the edge portion of the seat body.

As shown in Figs. 1 to 4, inclusive, the metal binding means comprises a band 14 of soft steel, brass, or other suitable metal which before its application to the seat is bent into a form generally U-shaped in cross section with its lower side 15 of greater width than its top and provided with a lengthwise extending groove 16 which fits over and against the bead 9 and forms an interlocking connection therewith. The top side 17 of the band initially formed so as to slip over the top portion of the seat is so positioned, and then while holding the lower side 15 against the edge portion 7, the top side 17 is bent down into the clamped position shown in the drawings with its front edge 18, which may be initially slightly bent downwardly, engaging the top covering above the cord 12, and in the finished assembly putting this cord under compression by bending the front edge 18 of the band downwardly over said cord, thus firmly interlocking the covering and cord between the seat body and the band. The end of the band may have a butt joint or lap joint, but a butt joint with a clip 19 over the joint and spot welded or tightly crimped thereto as shown in Figs. 1, 2, and 4 is preferred.

Instead of the separate band 17 I may form a seat body 6', as shown in Fig. 5, with an extended edge 20 which is bent down over the covering 13 and cord 12 after these parts have been positioned on the seat body in the same manner as the first described construction, the edge portion 7' of the body having the groove 8' formed therein similar to the groove 8 of the first construction. The extended edge 20 when bent down has its front edge 21 bent downwardly in the same way the front edge 18 is formed on the ring 17 and acts in the same way to tightly clamp the covering and cord between it and the opposite edge portion of the body.

From the foregoing it will be noted that I have provided a cushion seat structure in which the binding for the top covering is of metal and will last practically as long as the metal seat body.

It is further to be noted that the metal binding means when brought into clamping engagement with the covering acts to force it into the groove 8 and in doing so acts to draw the covering out smooth around the upper edge of the seat. It is also to be noted that the groove 8 or 8' forms a bead in the outer edge portion of the seat body, and this has the very important advantage of acting to greatly reinforce the seat body, so that it will not become bent out of shape while in service and so that it may be made out of light enough gauge as to permit ready stamping. It is further to be noted that this beaded or corrugated edge is still further reinforced in the modified form shown in Fig. 5 by the bent over extension 20.

I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claims.

What I claim as my invention is:

1. In a seat, the combination of a dished metal seat body having a flanged edge portion provided with a groove coextensive therewith, a fabric anchor strip cemented to the top surface of said flanged portion over an area including said groove, cushioning material secured to said body, a compressible member mounted in said groove, a covering of flexible material adhesively secured to said cushioning material and to said anchor strip, and metallic binding means for firmly clamping said covering between it and the grooved edge portion of said body, said binding means having a downwardly inclined edge portion engaging said covering above said compressible member.

2. In a seat, the combination of a dished metal seat body having a flanged edge portion provided with a groove coextensive therewith, a fabric anchor strip cemented to the top surface of said flanged portion over an area including said groove, cushioning material secured to said body, a compressible member mounted in said groove, a covering of flexible material adhesively secured to said cushioning material and to said anchor strip, and a metallic binding member having an interlocking connection with the reverse side of said groove and a clamping engagement with said covering including an edge portion compressing said compressible member and forcing said covering downwardly into the groove.

3. In a seat, the combination of a dished metal seat body having a flanged edge portion provided with a groove coextensive therewith, a fabric anchor strip cemented to the top surface of said flanged portion over an area including said groove, cushioning material secured to said body, a compressible member mounted in said groove, a covering of flexible material adhesively secured to said cushioning material and to said anchor strip, said seat body having a binding edge portion clamping said anchor strip and covering between it and the outer edge of said body and acting to press said covering into firm engagement with said compressible member.

4. In a seat, the combination of a metal seat body having an edge portion provided with a groove coextensive therewith and set back from the outer edge thereof, a yieldable cord member mounted in said groove, a cushioning pad for said body, a covering of flexible material for said pad extending over said member to the outer edge of said seat body and adhesively secured to said edge portion and to said member, and metallic binding means securing said covering to the edge portion of said body by holding said covering in yielding engagement with said yieldable member.

5. In a seat, the combination of a metal seat body having an edge portion, a cushioning pad for said body, a flexible covering for said pad secured at its outer edge portion to the edge portion of said body, and means for tightly clamping said covering to said body inwardly of the outer edge of said covering comprising a peripherally extending seating groove in the edge portion of said body, a compressible cord member mounted in said groove beneath said covering and metallic binding means having an edge portion for drawing said covering over the inner edge of said groove and against the inner side thereof while pressing said covering into compressible engagement with said cord member.

JOSEPH E. BLOOMBERG.