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CUSHIONED PAD FOR USE IN JEWELRY
BOXES AND METHOD OF MAKING SAME
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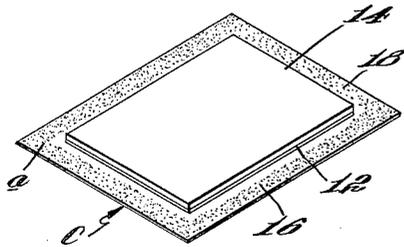


Fig. 1

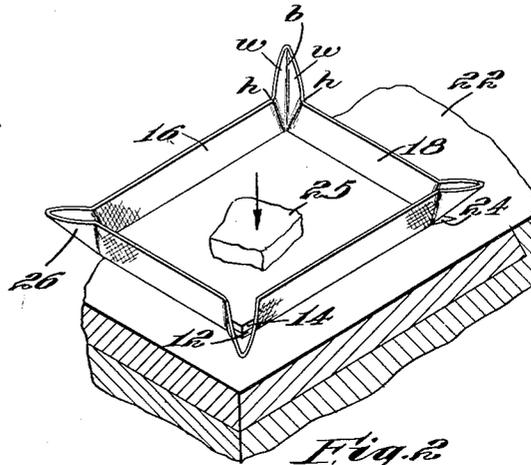


Fig. 2

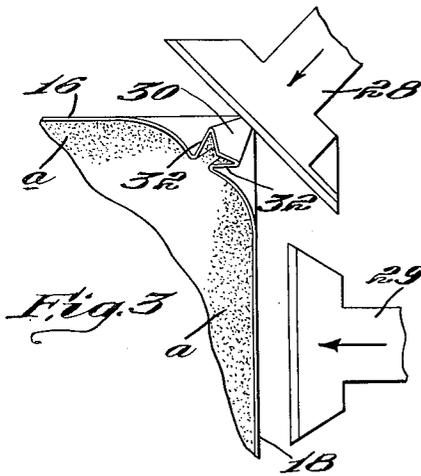


Fig. 3

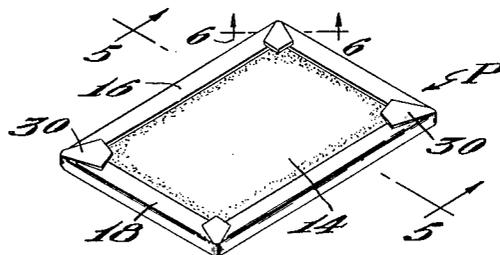


Fig. 4

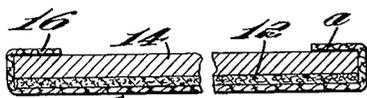


Fig. 5

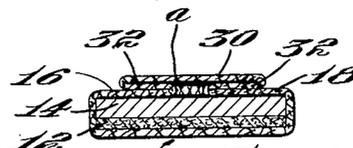


Fig. 6

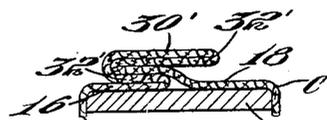


Fig. 7

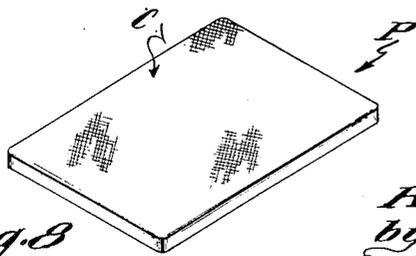


Fig. 8

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CUSHIONED PAD FOR USE IN JEWELRY BOXES AND METHOD OF MAKING SAME

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12 Claims. (Cl. 154—117)

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This invention relates to an article of manufacture and method of making the same and more especially to ornamental or decorative cushioned pads for use in jewelry boxes and the like and to an improved method for making the same.

One of the chief difficulties encountered heretofore in making such pads was that in wrapping the covering material about the stiff backboard with or without the cushion layer, puckers or wrinkles were formed at the corners due to the surplus of material at these points. One method of correcting this undesirable condition was to apply the material to the backing and then to hand clip the material to remove the surplus at the corners. Another method was to die out the covering material prior to application thereof to the backing to remove the surplus material. A third method was to tuck the side margins of the covering material near the corners under the end margin manually or with mechanical fingers just prior to these margins being adhered to the backboard.

The principal objects of this invention are to provide an article of the foregoing kind, the display surface of which will have smooth, unwrinkled corners and edges and the under side of which will have smooth, unwrinkled marginal edges and corners wherein the surplus material will be disposed in flat, compact, uniform folds, and to provide a method of applying a covering material to a backboard with or without cushioning material in such manner that it will conform smoothly to the edges and corners without wrinkling and without having need for the additional operation of hand clipping surplus material from the corners, or tucking the side margin of the covering material near the corners under the end margin of the covering material manually or with mechanical fingers just prior to these margins being adhered to the backboard.

According to the method herein illustrated, the flexible covering material is placed against one surface of a backboard of a desirable stiffness, size and configuration with its marginal portions bent over against the edge faces of the backboard and the cushion layer, if the latter is included, and while the marginal edges are held in this position the projecting portions of the covering material at the corners are wiped in against the opposite surface of the backboard followed by a wiping in of the intermediate portions of the covering material. A pressure-sensitive, heat-sensitive or otherwise activated adhesive is applied to the inner marginal portions of

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the covering material and/or to the facing surface of the backboard itself prior to or after the parts have been assembled so as permanently to secure the in-wiped edges and corners to the backboard.

The invention also contemplates a novel article of manufacture comprising a laminated pad, the component parts of which include a stiff, multi-sided board, a cushion applied to one surface thereof and a flexible covering material placed about the cushion and adhesively secured to the marginal edges of the board characterized in that the fullness or surplus of the covering material at the corners overlie the intermediate portions and are situated in the form of triangular multilayer folds substantially intermediate the converging edges at the corners, adhesively secured to each other and/or to the underlying material. It is to be understood that the cushion may be omitted from this pad.

The invention will now be described in more detail with reference to the accompanying drawings in which:

Fig. 1 is an isometric view showing the initial step in the preparation of the pad wherein a stiff backboard and cushion material are placed flat upon a sheet of covering material;

Fig. 2 is an isometric view showing the covering material bent upwardly about the peripheral edges of the backboard with the surplus material at the corners projecting outwardly in the form of ears;

Fig. 3 is a fragmentary plan view showing the excess material at the corners being wiped inwardly over the bottom of the backboard;

Fig. 4 is an isometric view of the bottom of the pad with the corners and the marginal edges of the covering material completely wiped in and adhesively secured to the backboard;

Fig. 5 is a vertical section taken on the line 5—5 of Fig. 4;

Fig. 6 is a vertical section taken on the line 6—6 of Fig. 4, showing the ideal disposition of the material;

Fig. 7 is a vertical section taken on the line 6—6 of Fig. 4 showing the actual disposition of the material as a result of normal working conditions; and

Fig. 8 is an isometric view of the completed pad right side up.

In order to form a cushioned pad P (Fig. 8) of the kind conventionally used in jewelry boxes which will have smooth, unwrinkled edges and corners at the display side thereof, a stiff backboard 14 of suitable size and configuration (Fig.

1) and a soft cushioning material 12 of commensurate size and configuration, if the latter is to be used, are placed flat upon a sheet of covering material C of such size as to provide a substantially uniform margin entirely around the backboard, the margins at the sides and ends being marked 16 and 18 respectively. To this margin and/or to the facing surface of the backboard there is applied an adhesive *a*. The adhesive may be any one of several kinds commonly available, for example an adhesive which is pressure-sensitive or heat-sensitive or it may be sensitized by some other means such as a solvent. Preferably a heat-sensitive adhesive is employed herein. The marginal edges 16 and 18 are then bent upwardly substantially at right angles to the plane of the backboard and so as to be pressed into engagement with the vertical edge faces of the backboard in any suitable manner, for example as shown in the copending application for Machine For Covering Pads, Serial No. 52,110, filed September 30, 1948, wherein the superimposed parts are forced into a shallow, substantially rectangular cavity formed in a plate 22 which constitutes part of a forming die, the walls of which are vertical and at right angles to the bottom. A plunger 25, a fragmentary portion of which is shown in Fig. 2, is employed for forcing the assembly into the die cavity. As illustrated in said application, the corners of the cavity are relieved by provision of inclined recesses 24 rising from the bottom and extending outwardly from the corners to accommodate the fullness of the upwardly bent covering material at these points. The peaks or ears 26 thus formed at the corners of the pad are now wiped inwardly over the bottom of the backboard as illustrated in Fig. 3, and if ideal conditions could be had, for example, uniformly flexible covering material, symmetrical and perfectly cut corners, etc., plus uniformly applied folding pressure on the material as it was wiped inwardly, a gathering of the surplus material in folds at each corner, such as shown in Fig. 6, would in all probability take place. That is, the surplus loop of material at each corner, consisting of the walls W—W hinged at H—H to the marginal edges 16 and 18 and connected to each other along the crease *b*, is bent inwardly and flattened down by an accordion-like folding of the walls W—W upon themselves and on the hinges H—H so as to form a top diamond-shaped panel 30 situated substantially on the line bisecting the angle at the corner, subjacent substantially triangular panels 32—32 which are joined at their outer edges to the top panel and at their inner edges to the intolced marginal material 16 and 18. As thus folded, there is a space between the inner edges of the panels 32—32 and the marginal material. The gathered folded material is held flat by the adhesion of the under side of the upper panel 30 to the top sides of the subjacent panels 32—32 and the exposed surface of the backboard 14 in the space between the inner edges of the subjacent panels. In Fig. 6 this space is greatly exaggerated by reason of the necessity of showing the material as having thickness and so as to assist discernment of the exact construction. Actually the material is soft, thin and when pressed down, is so flattened that the space between the under side of the top panel and the backboard is negligible so that there is no question but that the surfaces are united by the adhesive carried thereby.

In practice it is doubtful that a symmetrical fold is formed such as shown in Fig. 6 except by

accident and that what usually takes place is a gathering of the material into folds such as shown in Fig. 7. As shown in Fig. 3, the material at the fold line *b* in Fig. 2 flattens out as before but the side walls, instead of doubling evenly and uniformly in opposite directions in symmetrical folds, fold in the same direction so that one is interleaved with the other. As thus formed, the gathering consists of a pile in which there is a substantially diamond-shaped top panel 30' situated substantially on a line bisecting the angle at the corner and subjacent, triangular panels 32'—32'. The marginal portions 16 and 18 of the material overlap each other and one of the triangular panels 32' is situated therebetween. The adhesive on the under side of the marginal portions 16 and 18 serves to secure the marginal material substantially into the corner, the adhesive on the marginal portion 18 serves to secure that part thereof overlying the sandwiched panel 32' and the panels 30' and 32' are adhesively united by the adhesive on their contacting surfaces. Again as in the previous case, the gathered folds are exaggerated in thickness for the sake of clarity in disclosing the nature of the folds but in actual practice a very flat, thin formation is secured. The folding is accomplished by wiping the side walls 16 and 18 inwardly following inward wiping of the corner portions. As explained fully in the aforesaid copending application, while the marginal edges are firmly held against the edgefaces of the backboard, corner wipers 23 (Fig. 3) are first advanced inwardly into engagement with the surplus material at the corners so as to fold it inwardly over the backboard and then just before the corner folds are completed, side and end wipers 29 are advanced inwardly to wipe the marginal material at the sides and ends inwardly into contact with the backboard and beneath the folds at the corners. If a pressure-sensitive adhesive is employed the pressure exerted by the wipers against the material as they wipe the material inwardly will be sufficient to consummate the bond. If a heat-sensitive adhesive is used the wipers may themselves be heated by suitable means or the die plate within which the pad is held may be heated sufficiently to activate the adhesive. Where it is desirable to use a liquid activant, auxiliary means may be provided for spraying, wiping or otherwise applying the activating liquid to the adhesive surface prior to or during the inwiping operation.

The multifolded material at the corners as thus formed will not spring upwardly or pull away from the corners even though rough handled, due in part to the adhesive bond between the layers of the folds, if the adhesive is applied to the marginal edges of the covering material rather than the backboard as heretofore pointed out, in part to the pressure which forms sharp creases, and in part to the heat and/or moisture which serves to set the folds at the creases.

Following completion of the corner and side and end wiping, an article such as shown in Fig. 8 is produced having a smooth display surface and an under surface constituted by smoothly wiped-in end and side margins, the materials at the corners being folded inwardly to overlie the side and end wall portions of the material.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. An article of manufacture comprising a stiff backboard, a coextensive cushion superposed thereon, and a flexible covering material applied to the cushioned side of the backboard characterized in that the marginal edges at the ends and sides are adhesively secured to the uncushioned side of the backboard and that the excess fullness of the covering material at the corners is gathered and adhesively secured to the uncushioned side of the backboard in the form of panels comprised of an outer panel situated intermediate the converging edges at the corner, a pair of spaced subjacent intermediate panels joined along their outer edges to the edges of the outer panel and along their inner edges to the infolded material at the side and end at that corner, that the intermediate panels are united to the outer panel by adhesive between their contacting surfaces and that the center portion of the outer panel is united to the backboard in the space between the inner edges of the intermediate panels by the adhesive on the under surface of the outer panel.

2. An article of manufacture comprising a stiff backboard, a coextensive cushion superposed thereon, and a flexible covering material applied to the cushioned side of the backboard, characterized in that the marginal edge of the covering material along one edge is infolded and lies next to the backboard throughout substantially the entire length of that edge up to the intersection of that edge with the adjacent edge, that the marginal edge of the covering material along the adjacent edge contacts that edge throughout substantially its entire length except for the portion near its intersection with the first edge which overlies the infolded marginal edge of the covering material along the first edge and that the excess fullness at the intersection of the edges is gathered and folded on itself and then folded over onto the infolded portion of the covering material along the second edge so that a substantially triangular multiple fold is formed which is situated substantially intermediate the converging edges at the corner and above the infolded marginal edges.

3. An article of manufacture comprising a stiff polygonal backboard, and a flexible similarly shaped covering material applied to one surface thereof, said covering material being larger than the backboard by a margin extending throughout its periphery, said margin comprising side portions folded over the sides of the backboard and corner portions folded over the corners of the backboard, characterized in that the excess fullness of the covering material at each corner joining the side portions is gathered in the form of a substantially triangular multiple fold situated intermediate the converging edges at that corner.

4. An article of manufacture comprising a polygonal backboard, and a similarly shaped piece of covering material over the backboard, said piece being larger than the backboard by a margin extending throughout its periphery, said margin comprising side portions folded over the sides of the backboard and corner portions folded over the corners of the backboard, the folded side and corner margins being interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles.

5. An article of manufacture comprising a polygonal backboard, and a similarly shaped piece of covering material over the backboard, said

piece being larger than the backboard by a margin extending throughout its periphery, said margin comprising side portions folded over the sides of the backboard and corner portions folded over the corners of the backboard, the folded side and corner margins being interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles, the folded corner portions overlapping said gussets.

6. An article of manufacture comprising a rectangular backboard, and a rectangular piece of covering material over the backboard, said piece being larger than the backboard by a margin of approximately uniform width throughout its periphery, said margin comprising side portions folded over the sides of the backboard and corner portions folded over the corners of the backboard, the folded side and corner margins being interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles.

7. A method of manufacture comprising a rectangular backboard, and a rectangular piece of covering material over the backboard, said piece being larger than the backboard by a margin of approximately uniform width throughout its periphery, said margin comprising side portions folded over the sides of the backboard and corner portions folded over the corners of the backboard, the folded side and corner margins being interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles, the folded corner portions overlapping said gussets.

8. A method of making a cushioned pad comprising forming a polygonal backboard, applying over the backboard a similarly shaped piece of covering material which is larger than the backboard by a margin extending throughout the periphery, bending the marginal material into engagement with the edge faces of the backboard except for the excess material at the corners which is left unconstrained, folding the unconstrained corner material inwardly in the form of a pleat over the bottom of the backboard while the intermediate material is held constrained and thereafter folding the intermediate material into engagement with the backboard and tucking the portions thereof adjacent the corner beneath said pleats.

9. The method of making an article of the character referred to which comprises forming a polygonal backboard, applying over the backboard a similarly shaped piece of covering material which is larger than the backboard by a margin extending throughout the periphery, folding the side portions of said margins over the sides of the backboard and folding the corner portions over the corners of the backboard with the folded side and corner margins interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles.

10. The method of making an article of the character referred to which comprises forming a polygonal backboard, applying over the backboard a similarly shaped piece of covering material which is larger than the backboard by a margin extending throughout its periphery, folding the side portions of said margins over the sides of the backboard and folding the corner portions over the corners of the backboard with the folded side and corner margins interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles and

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the folded corner portions overlapping said gussets.

11. The method of making an article of the character referred to which comprises forming a rectangular backboard, applying over the backboard a rectangular piece of covering material which is larger than the backboard by a margin of approximately uniform width throughout its periphery, folding the side portions over the sides of the backboard and folding the corner portions over the corners of the backboard with the folded side and corner margins interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles.

12. The method of making an article of the character referred to which comprises forming a rectangular backboard, applying over the backboard a rectangular piece of covering material which is larger than the backboard by a margin of approximately uniform width throughout its periphery, folding the side portions over the sides of the backboard and folding the corner portions

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over the corners of the backboard with the folded side and corner margins interconnected by folded gussets which substantially meet at their fold lines along the bisectors of the corner angles and the folded corner portions overlapping said gussets.

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