

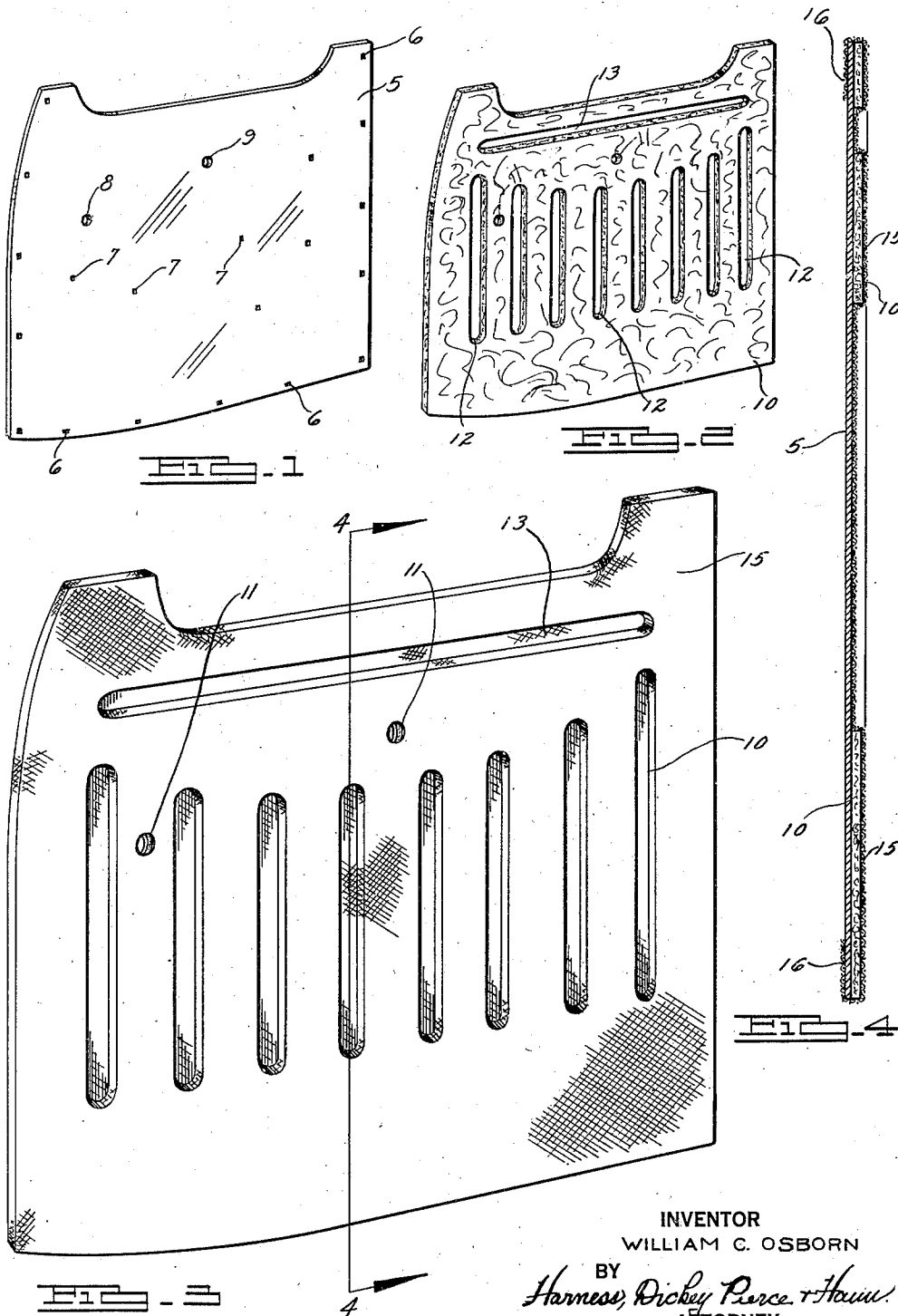
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TRIM PANEL CONSTRUCTION

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TRIM PANEL CONSTRUCTION

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This invention relates to inner trim panel constructions primarily intended for use in automotive vehicles. More particularly it relates to a novel and improved form of inner trim panel, which is of particularly simple construction and attractive appearance.

Inner trim panels of the type with which the invention of the present application is concerned, generally comprise a relatively stiff backing sheet member of cardboard or other similar, suitable, stiff sheet material, to which is applied a substantially coextensive layer of fibrous, non-woven, loosely felted padding material. A section of cloth or suitable fabric finish trim material is stretched tightly over the surface of the padding material and in its marginal edges is adhesively secured to the rear surface of the backing sheet, in order to retain the trim panel as a whole in assembled position and provide a unitary construction. It is a primary object of the present invention to provide a trim panel construction of this general type, in which apertures are provided in the padding material in order that the fabric finish material may be directly secured to the backing sheet at isolated points throughout its surface in order to more firmly retain the padding material in proper position and at the same time provide a particularly attractive and unique finish appearance.

In accordance with the practice of the present invention, the backing sheets are blanked out by means of a conventional blanking press and the sections of padding material are blanked out from a section of felted material to provide an outer configuration substantially identical with the backing sheets. The present invention contemplates the provision of an inner trim panel construction in which the fabric finish material provides substantially the sole means for securing the layer of padding material in predetermined, superimposed position with respect to the backing sheet with which it is associated.

Many other and further objects and advantages of the present invention will become clearly apparent from the following specification when considered in connection with the accompanying drawing forming a part thereof.

In the drawing:

Figure 1 is a perspective view of a backing sheet particularly adaptable for use in the formation of the improved inner trim panels;

Fig. 2 is a perspective view of a section of padding material blanked out to form, for application to the backing sheet shown in Fig. 1;

Fig. 3 is an enlarged perspective view of a

completely assembled inner trim panel, utilizing the backing sheet and padding section shown in Figures 1 and 2; and

Fig. 4 is a transverse sectional view taken substantially on the line 4—4 of Fig. 3, illustrating in detail the manner in which the respective parts in the improved inner trim panel construction are assembled.

It will be appreciated that inner trim panels, such as the specific embodiment illustrated in the drawing, are primarily adapted for the purpose of providing an attractive surface finish for the interior portion of automotive vehicle bodies. While the present invention relates primarily to an inner trim panel construction, it will be readily appreciated that certain features thereof will find wide and practical utility in other fields.

The inner trim panel construction shown in the drawing comprises a backing sheet 5, which, as is conventional in the art, is formed of cardboard or other suitable relatively stiff sheet material, and, as is seen in Figure 1, this sheet is blanked out to a configuration the same as the configuration of the particular portion of the exterior of the vehicle which the finally completed inner trim panel is adapted to cover. In the specific embodiment of the invention shown, the particular trim panel is of a shape adapted to cover the lower portion of an automobile door and consequently the cardboard backing sheet 5 is shaped accordingly. As is conventional in constructions of this kind, the backing sheet is provided around its marginal edge with a plurality of holes 6 which holes are adapted to receive metallic fasteners used for the purpose of mounting the inner trim panel in position upon the door of the vehicle with which it is later to be associated. In addition to the holes 6 adjacent the marginal edges of the backing sheet, a plurality of suitable holes 7 may be provided at various points throughout the sheet in order to secure the central portion of the sheet in position on the door, as may be desired.

In addition, the backing sheet is reformed to provide a pair of holes 8 and 9, respectively, which holes serve to permit the passage of the shafts for operating the door latch and window regulator mechanism, such as is conventional in vehicle door constructions.

A layer of padding material 10 is provided which is adapted to be superimposed upon the backing sheet 5. The padding material generally used for this purpose is preferably jute and in the present instance, the padding material is generated by means of Garnett machines, which

provide a plurality of layers which are subsequently adhesively bonded together in order to give some rigidity and body to the pad thus formed, in order that it may be blanked out in a conventional die press to the desired form. It will be noted that the section of padding material 10 is blanked out to provide an outer configuration substantially identical with the outer configuration of the backing sheet 5 with which it is to be associated, and it is noted that the layer of padding material 10 is provided with holes 11 adapted to register with the holes 8 and 9 for the window regulator and latch control mechanism. In addition to the holes 11, the padding layer 10 is blanked out to provide a plurality of elongated apertures 12, which apertures are shown in the drawing as extending in a vertical direction and substantially symmetrically arranged with respect to the padding material as a whole. In addition to the vertically extending apertures 12, the padding material may be blanked out to provide a horizontally extending aperture 13 extending transversely of the width of the padding material underneath the upper marginal edge thereof.

It will be readily appreciated that the apertures 12 and 13 may assume any desired form or arrangement in order to provide an attractive surface appearance to the finished panel, as will hereinafter be more clearly seen.

In the assembly of the improved panel, the layer of padding material 10, after it has been blanked out to substantially the finally desired form, is superimposed upon the coextensive backing sheet 5 and a section of fabric finish trim material 15 is stretched over the assembled backing sheet and padding.

The fabric finish trim material is preferably of cloth to provide an attractive exterior appearance to the panel as a whole and is preferably cut out to a form substantially similar in shape to the backing sheet and the padding layer only being formed sufficiently large so that a marginal edge is available for assembling the parts together. As will be clearly seen by reference to Figure 4, the marginal edge 16 of this fabric finish material is folded over and around the marginal edge of the padding material and backing sheet and is preferably adhesively secured to the rear surface of the cardboard backing sheet 5. The fabric finish material may conveniently be adhesively secured to the face of the backing sheet 5 in the apertures 12 and 13, consequently forming the fabric finish material to substantially the surface configuration of the blanked out section of padding material. It will therefore be seen that the apertures 12 and 13 stamped in the padding material provide surface irregularities in the fabric finish material which create a particularly attractive and effective appearance in the completely assembled trim panel as a whole.

Further, it will be appreciated that the securing of the fabric finish trim material to the backing sheet in these apertures serves to provide means by which the fabric finish material and the backing sheet may be secured together at a plurality of points throughout the surfaces thereof in order to accurately and permanently retain the relatively soft padding material in position with respect to the backing sheet. Moreover, it will be further appreciated that the securing of the padding material in these apertures tends to tension and stretch the same in order that the exterior appearance of the trim panel as a whole will be smooth and attractive.

It will be readily appreciated that the apertures 12 and 13 are merely illustrative of a certain specified form and arrangement of apertures which have been found to provide a trim panel of attractive appearance when completely assembled, and that very effective results may be obtained by a substantial departure from the specific arrangement of apertures shown.

While but one specific embodiment of the invention has been illustrated and described, many other and further embodiments thereof, falling within the scope of the subjoined claims, will be apparent to those skilled in the art.

What is claimed is:

1. A trim panel construction including, in combination, a relatively stiff cardboard backing sheet, a layer of loosely felted non-woven padding material adhesively secured to said backing sheet, said padding material having a marginal configuration substantially congruent to said backing sheet, said padding being formed to provide an aperture therein, spaced inwardly from the marginal edge thereof, and a section of fabric finish material covering said padded backing sheet, the marginal edges of said fabric finish material being secured to said backing sheet, said fabric finish material being further secured to said backing sheet in said aperture.

2. A trim panel construction including, in combination, a relatively stiff cardboard backing sheet, a layer of loosely felt non-woven fibrous padding material adhesively secured to said backing sheet, said padding material having a marginal configuration substantially congruent to said backing sheet, said padding being formed to provide a plurality of spaced, separate apertures therein, and a section of fabric finish material covering said padded backing sheet, the marginal edges of said fabric finish material being secured to said backing sheet, said fabric finishing being further secured to said backing sheet in said apertures to retain the padding material in position thereon.

3. A trim panel construction including, in combination, a relatively stiff backing sheet, a section of loosely felted fibrous padding material having a plurality of apertures therein adhesively secured to said backing sheet, and a section of fabric finish material having the marginal edges thereof secured to the side of said backing sheet, said fabric finish material being further secured to said backing sheet in the apertures formed in said padding material thus serving to retain said fabric finish material in predetermined position on said backing sheet.

4. A trim panel construction including, in combination, a relatively stiff cardboard backing sheet, a layer of loosely felted non-woven fibrous padding material adhesively secured to one surface thereof, said padding material having a marginal configuration substantially congruent to said backing sheet, said padding material having strips cut therefrom along lines substantially parallel to the marginal edges of said backing sheet and spaced inwardly therefrom, and a section of fabric finish material secured over said padded backing sheet and secured to said backing sheet in the zones from which said padding material has been removed.

5. A trim panel construction including, in combination, a relatively stiff cardboard backing sheet, a preformed section of loosely felted non-woven fibrous padding material secured thereto, said section of padding material having elongated apertures therein disposed substantially parallel

to the marginal edges thereof and spaced inwardly therefrom, and a section of fabric finish material stretched over the surface of said padded backing sheet and secured to said backing sheet
5 in said elongated openings to retain the padding material in position with respect to said backing sheet.

6. A trim panel construction including, in combination, a relatively stiff cardboard backing
10 sheet, a layer of loosely felted non-woven fibrous padding material adhesively secured thereto, said

padding material having a plurality of apertures therethrough, said apertures being spaced inwardly from the marginal edges of said section of padding material and distributed throughout the surface thereof, and a section of fabric finish
5 material tensioned over said padding material and adhesively secured to the backing sheet through said apertures to retain said padding material in position thereon.

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