

Aug. 6, 1946.

C. N. CROSS

2,405,409

PICTURE MOUNT

Filed Oct. 14, 1942

3 Sheets-Sheet 1

Fig. 1.

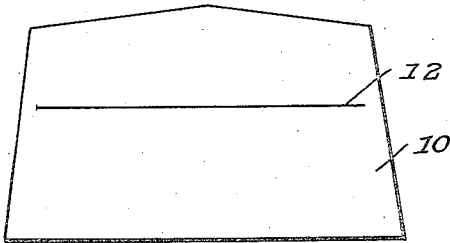


Fig. 2.

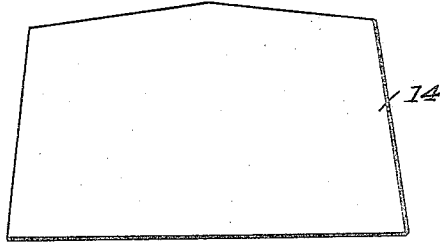
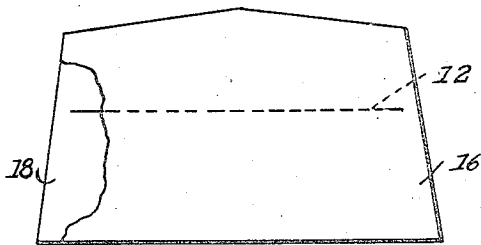


Fig. 3.

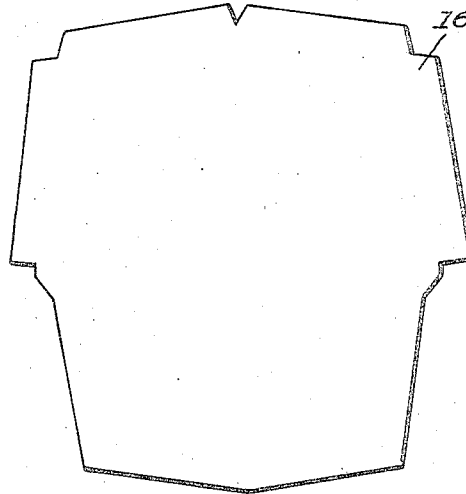


Fig. 4.

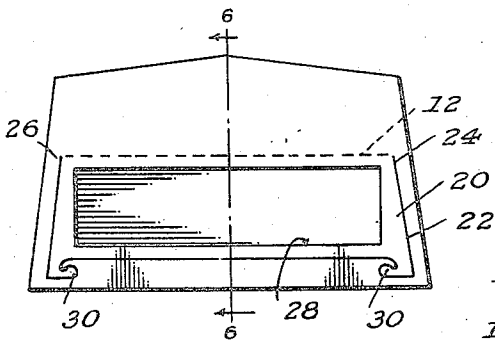


Fig. 5.

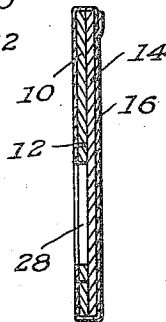


Fig. 6.

Inventor
CARROLL N. CROSS

By *Hindinger and Pless*
Attorneys

Aug. 6, 1946.

C. N. CROSS

2,405,409

PICTURE MOUNT

Filed Oct. 14, 1942

3 Sheets-Sheet 2

Fig. 7.

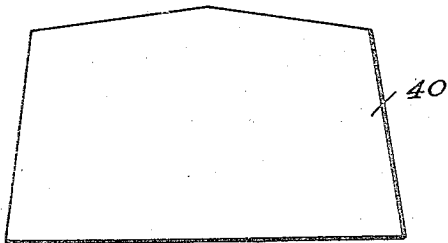


Fig. 8.

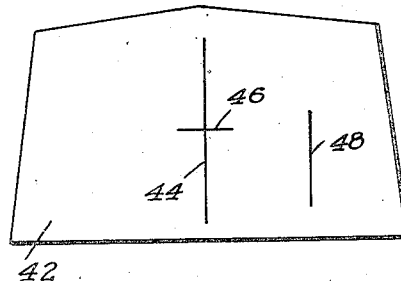


Fig. 10.

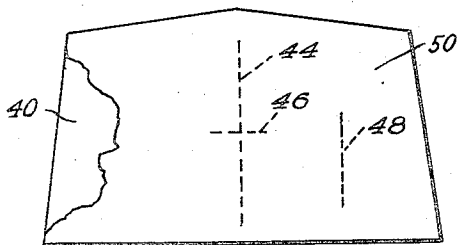


Fig. 9.

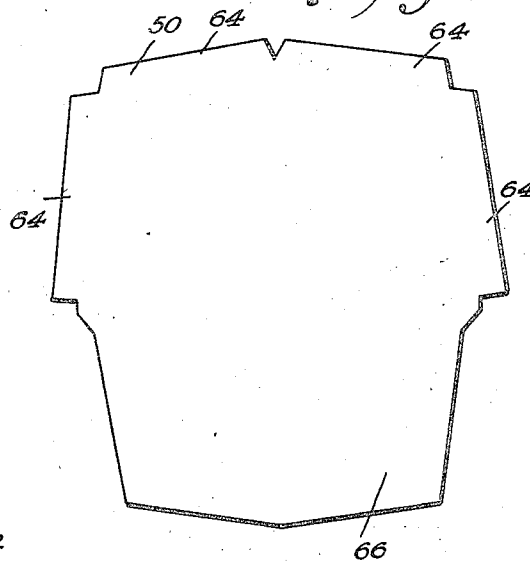
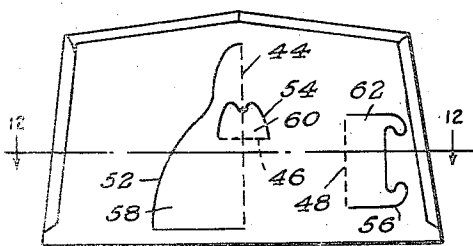


Fig. 11.

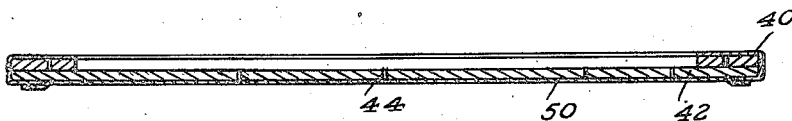


Fig. 12.

Inventor
CARROLL N. CROSS

By *Hensinger and Pillars*
Attorney

Aug. 6, 1946.

C. N. CROSS

2,405,409

PICTURE MOUNT

Filed Oct. 14, 1942

3 Sheets-Sheet 3

Fig. 13.

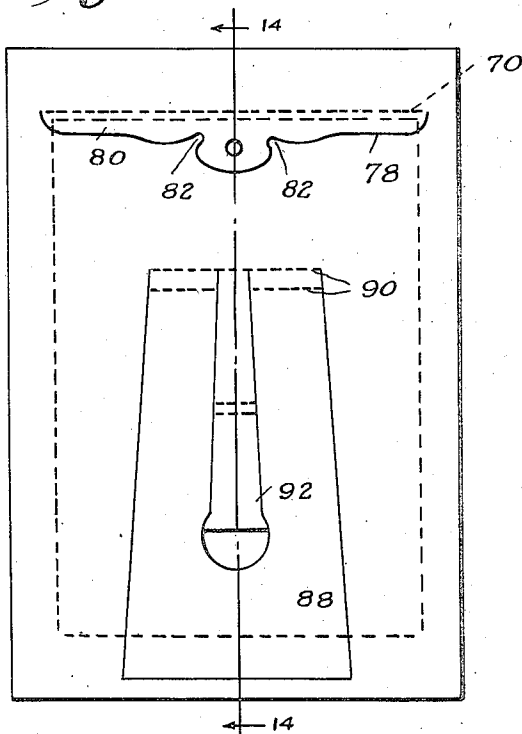


Fig. 14.

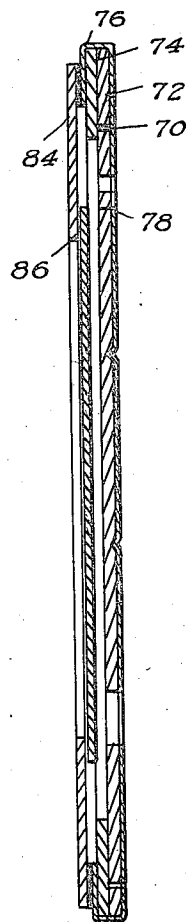
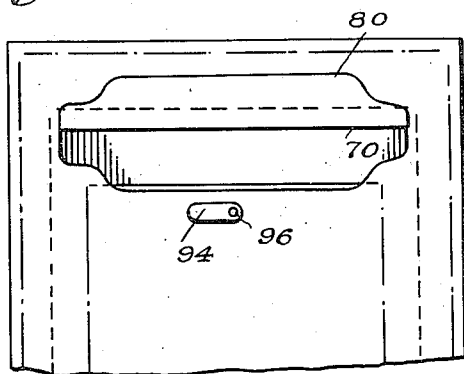


Fig. 15.



Inventor
CARROLL N. CROSS

By Henninger & Pillars

Attorney

UNITED STATES PATENT OFFICE

2,405,409

PICTURE MOUNT

Carroll N. Cross, Middleboro, Mass.

Application October 14, 1942, Serial No. 461,984

3 Claims. (Cl. 40—152)

1

This invention relates to display mounts and more particularly pertains to the hinged panel or door sections embodied in the display mounts.

Heretofore display mounts have embodied hinged portions such as picture or calendar insert portions, easel portions, hang-up tab portions, and the like. Mounts of the display type, and particularly those used for advertising purposes, must be produced at a minimum cost and for this reason, for want of a better expedient, it has been the practice to score the mount material to form a hinge line. However, a hinge line formed by a scoring operation is not entirely satisfactory because movement of a mount section about such a hinge places a great strain on the adjacent portion of the mount. In many instances this strain is sufficient to destroy the utility of the mount in a short time, for such mounts are usually made of cardboard having no great inherent strength.

This invention is based on the appreciation of the fact that strain on mount constructions can be largely eliminated by eliminating the necessity of bending the mount material at the conventional score lines utilized heretofore as hinges. In mounts composed of two or more superimposed boards that are bound together into a unit by a relatively thin, flexible binding that extends over and is attached to the exterior surfaces of the mount, the bending stresses may be eliminated by partially or completely severing the hinge line from its base and by utilizing the relatively thin, flexible binding material as the main hinge medium about which such section may swing. The use of this simple concept has been complicated in its embodiment in mount constructions, however, by the fact that manufacturing difficulties in the way of many additional and separate operations increase the cost of the final product so greatly as to have precluded its use heretofore.

Furthermore, in hinged mount sections according to the previous practice that utilized a score line on which the hinged section swung, there has been an inherent tendency for the hinged section to spring to an open or partially open position unless the same is held closed in a positive manner such as by the utilization of turn buttons, snap fasteners, or the like. This previous construction also exhibited the tendency of the hinged sections to remain partially open unless positively closed by means of turn buttons or the like. By precutting the hinge line for hinged sections, there is no resistance to the opening and closing of the hinged section because the inherent resistance to the flexing of the material has been removed.

2

The primary object of the invention is to provide mounts having hinged sections that are either partially or completely severed from the adjacent mount material and that are adapted for angular movement about a thin, flexible hinge strip that puts no substantial strain on the adjacent mount structure.

The manner in which this and other objects of the invention are accomplished will become clear by reading the following description with reference to the accompanying drawings in which like reference numerals indicate like parts in the several figures and in which:

Figure 1 is a plan view of a face board constituting a mount element;

Figure 2 is a plan view of a back board;

Figure 3 is a plan view of a thin, flexible binding material adapted to unite the face board and the back board into a unit;

Figure 4 is a plan view of a mount after having the binding material attached to its exterior surface;

Figure 5 is a face view of a completed mount in accordance with the invention;

Figure 6 is a cross sectional view on line 6—6 of Figure 5;

Figure 7 is a plan view of a face board forming a part of a mount in accordance with the practice of the invention resulting in different hinge mount sections;

Figure 8 is a plan view of a back board forming a part of the mount resulting from the modified practice of the invention;

Figure 9 is a plan view of thin, flexible binding material adapted to unite the face board and the back board into a unit in accordance with the modified practice of the invention;

Figure 10 shows the elements of the mount united as a unit in accordance with the modified practice of the invention;

Figure 11 is a plan view of the rear surface of a mount made in accordance with the modified practice of the invention;

Figure 12 is an enlarged cross sectional view on line 12—12 of Figure 11;

Figure 13 is a plan view of the back structure of a mount resulting from the practice of the invention;

Figure 14 is a cross sectional view of line 14—14 of Figure 13; and

Figure 15 is a fragmentary view of a mount similar to that shown in Figure 13 wherein a hinged section is shown in open position, and wherein a closure fastener forms a part of the construction.

In Figure 1 of the drawings there is shown a face board constituting a display mount element which is preferably cut from cardboard stock although the practice of the invention is not limited to the use of any particular material. While the face board 10 is being cut to the desired outline, as by a die cutting operation, a hinge line 12 is cut partially or entirely through the material constituting the face board. As illustrated, the hinge line 12 is disposed horizontally across the width of the face board to provide a line about which a hinged section may be moved. It is obvious, of course, that should it be desired to have the hinged section swing about a vertical line, the line 12 would be disposed in a vertical position.

A back board 14 is provided, and as illustrated, the back board may be of the same contour as the face board but, of course, this is not essential. In Figure 2 of the drawings the back board is illustrated as having therein no precut hinge lines but in this connection it is to be noted that the form of the invention illustrated in Figures 7 through 12 may be practiced with respect to the back board 14 and the manner in which the method illustrated in these figures of the drawings may be practiced will become clear from the description hereinafter.

It is customary to provide a facing for display mounts of various kinds and in many instances these faces, which generally consist of a thin, flexible and decorative material such as a leatherette paper, extend over the entire external surface of the mount and are attached to the contacting surfaces throughout their areas. In Figure 3 of the drawings is shown a blank 16 cut of suitable decorative facing material and so shaped and notched as to permit the same to fold neatly and snugly over the surfaces of the mount. The face board 10 and the back board 14 are next assembled in superimposed relation after which the facing material 16 is attached to the external surfaces of these boards thus forming a composite structure 18 as illustrated in Figure 4 of the drawings. It will be noted that the facing material 16 now overlies the precut hinge line 12 that previously has been formed in the face board. If the precut hinge line extends only partially through the board, the facing material will, of course, overlie the hinge line on the face of the board opposite that from which the cut has been made. Subsequent operations are designed to produce the hinged section adapted to swing on that portion of the facing material 16 overlying the hinge line 12.

The hinged panel section 20 is now formed in the face board of the assembled mount elements and this section is formed by lines 22 that are cut through the facing material and the face board along suitable and predetermined contours and whose ends intersect the precut hinge line 12 at remote points as at 24 and 26. In the present case an indicia-display window 28 is formed in the hinged panel section 20 by cutting therefrom the body portion thereof preferably at the same time that the line 22 is cut through the facing material and the face board. With this construction it is evident that the hinged section 20 can be swung angularly about the line 12 without transmitting any stress or strain to that portion of either the hinged section or the face board lying on opposite sides of the hinge line 12. Manipulation of the hinged section 20 can be accomplished for the purpose of inserting a picture, calendar or other flat object under that section for display through the display window 28. If the object to be displayed has any sub-

stantial thickness, it is of course apparent that the face board and the back board constituting the principal elements of the display mount can be spaced in any well known or suitable manner to provide an object-receiving pocket of the desired depth.

It follows that the hinged panel section 20 will swing with great freedom because of the fact that the line 12 in the face board about which it is adapted to swing is completely severed or sufficiently so as to eliminate stress on the adjacent portions of the mount and from the further fact that the main hinge medium on which the same swings is that portion of the thin facing material overlying the hinge line 12. In order to prevent the hinged section 20 from swinging about the hinge line 12 when such movement of the section is not desired, the hinged section 20 is provided with one or more locking tongues 30 that are adapted to engage complementary notches in the adjacent surface of the face board. These tongues 30 are preferably located at a point that is remote from the hinge line 12 and their construction is such that the hinged section 20 is securely held in the plane of the face board by the frictional engagement of the tongues 30 and their adjacent complementary face board surfaces.

By providing an object-inserting door in the face board of the mount as distinguished from the usual passage provided in back boards, of such constructions, the added advantage of a strengthened construction is realized. By eliminating the usual weakening incisions from the back board of such constructions, the entire sustaining strength of the back board is retained for the purpose for which the same is intended, namely, the strengthening of the mount as a whole and the elimination of warping and twisting frequently found in constructions wherein both the face board and the back board have been somewhat weakened by the cutting of passages therethrough.

The practice of the invention may result in different types of hinged sections and these sections may be located in the back board of the mount as shown in the modified form of the invention illustrated in Figures 7 through 12. In these figures of the drawings a face board 40 has been illustrated which in general construction and contour corresponds to the face board 10. A back board 42 is cut to any desired or suitable contour and dimensions and herein the same is illustrated as being of the same shape and size as the face board 40. In order to provide hinged sections such as picture-inserting portions or supporting easels in the back board 42, there is formed in that back board one or more incisions extending therethrough or partially therethrough from the front to the rear and being adapted to form the lines in said board about which such sections are to swing. Particularly, the back board 42 is provided with a vertical incision 44 located substantially along the medial line of the board. The incision 44, in this case, is made for the purpose of providing an easel, and in order to provide a hinge line for an easel locking tongue the line 44 is intersected by a horizontal line 46. A picture-inserting door may be formed in the back board 42 to swing about an incision 48.

The face board 40 and the back board 42 are then superimposed and a flexible binding material 50 which has previously been cut to the proper shape and size to permit the same to be

5

folded about the exterior surfaces of the superimposed face board 40 and back board 42 is then folded about the surfaces and the contacting areas of the binding material and the boards are attached to each other as by gluing.

The unitary structure resulting from the foregoing steps, and as illustrated in Figure 10 of the drawings, is then subjected to a further cutting operation, as for example a die cutting operation, to form the respective sections adapted to swing about the hinge lines 44, 46 and 48. Particularly, these cutting operations are performed along line 52 to produce an easel, along line 54 to produce an easel locking tongue, and along line 56 to produce a picture-inserting door. It will be noted that in the case of each of cuts 52, 54 and 56 that they intersect the lines 44, 46 and 48, respectively, at remote points to define their respective elements. These operations result in a mount supporting easel 58, an easel locking tongue 60 and a picture-inserting door 62. The easel 58 is adapted to swing on the line 44, the easel locking tongue 60 is adapted to swing on the horizontal line 46 and the picture-inserting door 62 is adapted to swing along the vertical line 48. In operation, the manipulation of the easel, the easel locking tongue and the picture-inserting door places no strain on adjacent surfaces in either themselves or the surrounding back board.

In the preferred embodiment of the invention the margins 64 of the facing material 50 are adapted to fold about the edges of the boards 40 and 42 and to be glued against the face of the back board. The portion 66 of the flexible material 50 is then preferably folded over the back board in such manner that the margins thereof overlie the marginal edges 64.

The mount shown in Figures 13 to 15 of the drawings is constructed by precutting a hinge line 70 at least partially through the back board 72 and by assembling the back board 72 and a marginal spacing board 74 into superimposed relation whereafter the boards 72 and 74 are joined into a unit by means of a thin, flexible binding material 76, as in the previous practice of the invention. The extreme ends of the pre-cut hinge line 70 are then intersected by means of an incision 78 extending through the binding material 76 and the back board 72, the incision 78 being of such contour as to provide a picture-inserting passage normally covered by a hinged closure 80. The closure 80 is adapted to swing angularly about the hinge line 70 and in Figures 13 and 14 the same is normally held in closed position by means of the complementary friction latches 82.

In that form of the invention shown in Figure 15, the closure fastener means is illustrated as consisting of a turn button 94 that is adapted to pivot on a turn button rivet 96. This form of closure fastener may be used advantageously because of the manufacturing advantages presented over previous mount passage closures that utilized turn button fasteners. With the closure 80 located near an edge of the mount panel and being adapted to swing outwardly about the weakened hinge line 70, it becomes possible to locate the turn button rivet 96 in that portion of the mount panel that lies entirely within the panel area defined by such marginal members as the spacing board 74 and the face board 84. In previous constructions it has always been necessary to resort to special manufacturing technique to locate turn button rivets at the

6

margin of the mount where two or more board thicknesses complicated the rivet-inserting operation.

The marginal edges of flexible binding material 76 appearing on the face of the marginal spacing member 74 are suitably concealed by means of a face board 84 that has provided therein a picture-display window 86. In the form of the invention shown in Figure 13 the mount is provided with an easel 88 adapted to swing about hinge lines 90 and that is adapted to be held in open position by an easel locking tongue 92.

In this form of the invention it will be seen that a closure for a picture-inserting passage has been provided to swing outwardly on a pre-cut hinge line thereby placing no substantial strain on that section of the back board adjacent the hinge line. The elimination of strain in mounts of this construction is particularly important where, as in the present form, the hinged section is located near one of the marginal edges of the mount for when such sections are located near the marginal edges of a mount, there is usually an insufficient amount of material between such hinged section and the margin of the mount to stand the strain that would be inherent in the angular movement of such hinged section about a score line.

The practice of the invention has been herein described in connection with the production of a specific mount but it is, of course, obvious that its teaching may be applied to the manufacture of different kinds of mounts.

I claim:

1. In a display mount, a back board, a superimposed face board, a panel section completely severed from one of said boards and occupying an aperture in said board of the same outline as the panel section, a flexible covering material extending about the edges of said boards and over the face of the panel section and over the face of the board in which the panel section is formed securing said boards together, said covering material being severed along all but one side of the perimeter of said panel thereby constituting a hinge about which said panel section may turn, complementary interlocking elements formed in the panel section and in the adjacent board having edges substantially at right angles to the face of said board and to the face of said panel section and constituting a friction latch to maintain said hinged panel section in a closed position.

2. In a display mount, a back board, a superimposed face board, a panel section completely severed from one of said boards and occupying an aperture in said board of the same outline as the panel section, said panel section being located inwardly from the edges of the board in which the panel is formed, a flexible covering material extending about the edges of said boards and over the face of the panel section and over the face of the board in which the panel section is formed securing said boards together, said covering material being severed along all but one side of the perimeter of said panel thereby constituting a hinge about which said panel section may turn, complementary interlocking elements formed in the panel section and in the adjacent board having edges substantially at right angles to the face of said board and to the face of said panel section and constituting a friction latch to maintain said hinged panel section in a closed position.

3. In a display mount, a back board, a superimposed face board, a panel section completely severed from one of said boards and occupying an aperture in said board of the same outline as the panel section, said panel section being located inwardly from the edges of the board in which the panel is formed, a flexible covering material extending about the edges of said boards and over the face of the panel section and over the face of the board in which the panel section is formed securing said boards together, said covering material being severed along all but

one side of the perimeter of said panel thereby constituting a hinge about which said panel section may turn, complementary interlocking elements formed in the panel section and in the adjacent board at a point remote from said hinge having edges substantially at right angles to the face of said board and to the face of said panel section and constituting a friction latch to maintain said hinged panel section in a closed position.

CARROLL N. CROSS.

51

53

55

57

59

61

63

65

67

69

71

73

75