April 14, 1970 J. I. DEAN 3,506,528

COMPOSITE CONTRAST COLOR EMBOSSED DISPLAYS

Filed Feb. 1, 1965

Fig. 1.

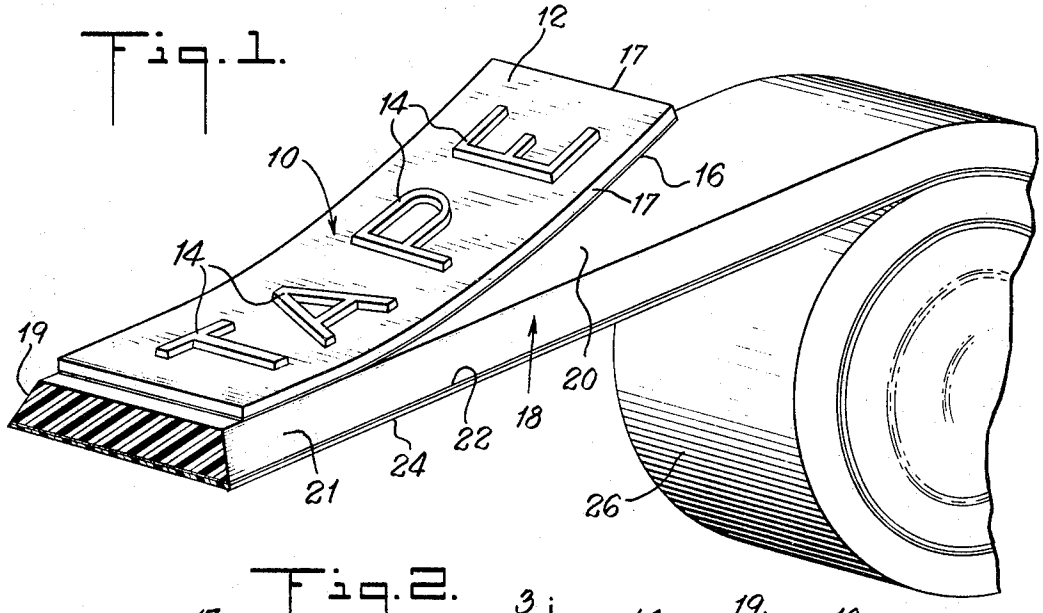
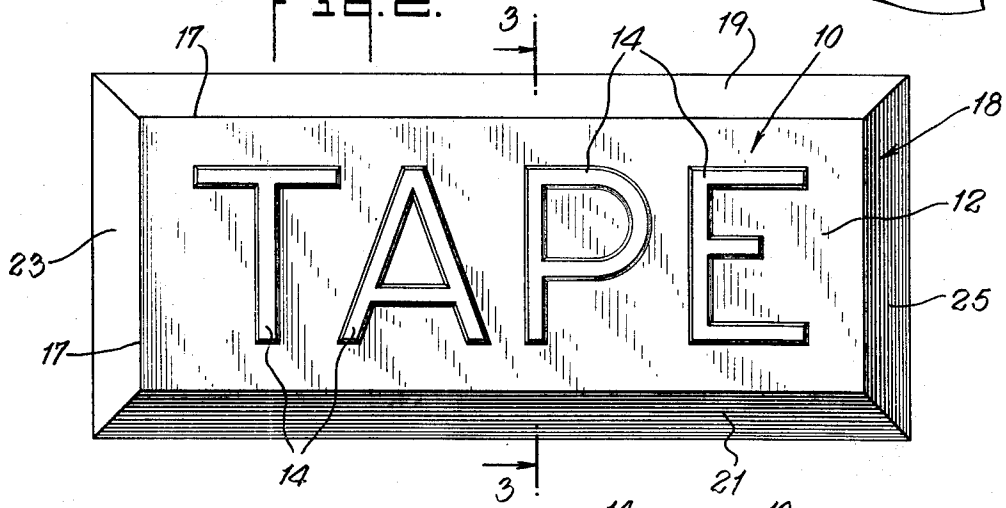


Fig. 2.



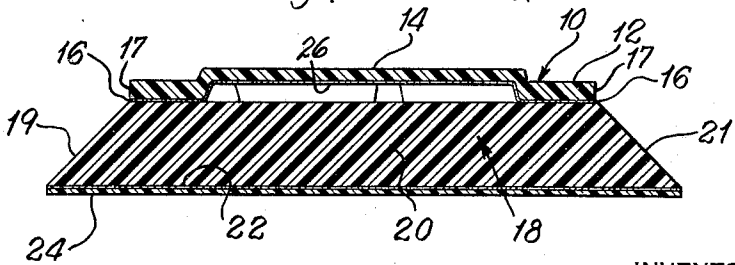


Fig. 3.

INVENTOR
JOHN I. DEAN
BY Samuelson & Jacob
ATTORNEYS

United States Patent Office 3,506,528
Patented Apr. 14, 1970

3,506,528

COMPOSITE CONTRAST COLOR EMBOSSED DISPLAYS

John I. Dean, San Francisco, Calif., assignor to Dymo Industries, Inc., Emeryville, Calif., a corporation of California

Filed Feb. 1, 1965, Ser. No. 429,487
Int. Cl. B32b 3/02
U.S. Cl. 161—44 4 Claims

ABSTRACT OF THE DISCLOSURE

A backing strip for a composite contrast color embossed display, the backing strip comprising a plastic sheet of predetermined width and thickness and indeterminate length, the sheet having first and second surfaces and a substantially uniform color throughout the thickness thereof. Beveled margins are provided along edges defining the width of the strip. Each of the surfaces is treated so as to enable a pressure sensitive adhesive to be attached thereto. A layer of pressure sensitive adhesive is attached to one of the surfaces and a detachable protective backing is removably adhered to the exposed surface of the adhesive layer. The plastic sheet is preferably fabricated of a low density polyethylene.

The invention relates to composite contrast color embossed displays and in particular to such embossed displays in which the embossed display is framed by an outer border of suitable color.

It is now well known that a contrast color embossment may be provided in certain sheeted thermoplastic resins by means of cold dies. In this manner, plastic displays such as labels, signs, plates, badges, tags, etc. having contrasting color embossments are provided quickly, conveniently and without complex or expensive equipment.

The plastic sheet materials which are generally employed in the manufacture of such articles are usually supplied in the form of relatively thin tapes and most frequently have a substantially uniform background color upon which the contrast color lettering or enfigurement is embossed.

While displays fabricated of such materials have proved quite acceptable, it has been found that displays having greater aesthetic appeal can be derived from the use of such materials and techniques by affixing the embossed plastic sheet, by means of a pressure sensitive adhesive on its back, to the face of a second plastic sheet, or backing strip, having a color contrasting with the background color of the first sheet. By making the second sheet somewhat larger in area than the first sheet, a border of contrasting color can be provided around the first sheet. The effect is enhanced by providing a second sheet of relatively greater thickness than the first sheet and beveling the peripheral edges thereof. If the second sheet has a contrasting color throughout its thickness, such beveling will produce a beveled margin of contrasting color and establish an aesthetically appealing frame around the perimeter of the first sheet. The assembled first and second sheets thus form a composite contrast color embossed display.

The backing is formed of flexible sheeting to facilitate its adherence to curved surfaces and is of such a material which will be non-migratory so that none of its elements will migrate into and damage the pressure sensitive film. A pressure sensitive adhesive is applied to the back of both the contrast color tape and the backing tape and suitable release films are laminated to the back side of the pressure sensitive adhesive for protection of the adhesive film before application to the surface to which the tape is to be affixed.

The invention may be described briefly as a backing strip for a composite contrast color embossed display, the backing strip comprising a palstic sheet of predetermined width and thickness and indeterminate length, the sheet having first and second surfaces and a substantilly uniform color throughout the thickness thereof. Beveled margins are provided along edges defining the width of the strip. Each of the surfaces is treated so as to enable a pressure sensitive adhesive to be attached thereto. A layer of pressure sensitive adhesive is attached to one of the surfaces and a detachable protective backing is removably adhered to the exposed surface of the adhesive layer. The plastic sheet is preferably fabricated of a low density polyethylene.

It is an important object of the invention to provide a backing tape of single color onto which a contrast color embossed tape may be affixed so that the embossed tape is framed by the backing tape.

It is a further object of the invention to provide such a backing tape which is beveled on all sides surrounding the embossed tape to enhance the framing effect.

It is a still further object of the invention to provide a composite contrast color embossed display in which the background color of the embossed tape is framed by contrasting color.

It is a still further object of the invention to provide such a composite contrast color embossed tape which may be used for labels, tags, signs, plates, etc. and which may be easily and readily applied to surfaces of various conformation and texture.

These and other objects, features, advantages and uses will be apparent during the course of the following description when taken in conjunction with the accompanying drawings wherein:

FIGURE 1 is a perspective view of the contrast color embossed tape being applied to the surface of the backing tape which is being dispensed from a roll of indeterminate length;

FIGURE 2 is a plan view of a finished composite framed, contrast color, embossed display of the invention; and

FIGURE 3 is an enlarged sectional view taken on the line 3—3 of FIGURE 2, viewed in the direction of the arrows.

Contrast color tape **10** is seen to comprise plastic sheet **12** on which are embossed enfigurements **14** of contrasting color to that of the background of plastic sheet **12** and pressure sensitive adhesive **16**. Plastic sheet **12** has a length and width defined by peripheral edegs **17** which are generally perpendicular to the face of sheet. A release film is laminated to the back of pressure sensitive adhesive **16** for protection of the adhesive film before the tape **10** is applied to the backing tape or to any other surface. Plastic sheet **12** is of the order of .003" to .02" thick and adhesive film **16** is of the order of .002" thick.

Backing sheet **18** is fed from a roll of indeterminate length **26** and comprises flexible sheeting **20** to the under surface of which is applied pressure sensitive adhesive film **22**. Release backing film **24** is laminated to the back of the pressure sensitive adhesive to protect the adhesive film before application. Flexible sheeting **20** is provided with longitudinal 45° bevels **19** and **21**. Bevels **23** and **25** are cut in the sheet **20** using a suitable tool capable of severing the sheet and establishing the bevels.

Plastic sheet **20** is formed of any flexible material which is flexible enough to permit it to be easily applied to curved surfaces. The color of sheet **20** is chosen to contrast with the background color of sheet **12** and extends throughout the thickness of the sheet **20**. Low density

polyethylene is preferred because it possesses non-migratory properties in that it contains no plasticizers or other materials which will migrate into and damage the pressure sensitive adhesive. The surfaces of sheet **20** are electrostatically treated, chemically oxidized, flame treated or otherwise processed to produce surfaces having maximum adhesion to the pressure sensitive adhesive. Sheet **20** is of the order of .025" thick and the bevel is preferably at 45°.

Pressure sensitive adhesive **22** is a film approximately .002" thick and is formed of a material which has good aging properties when exposed to heat, air and light. Release film **24** is preferably formed of polyethylene and is of the order of .004" thick. It serves to protect the adhesive film prior to applying the tape to another surface.

Finished composite contrast color embossed displays of the invention may be produced as follows: tape sheet **10** is embossed in the manner well known in the art; the release film on the back of sheet **10** is removed thereby exposing the pressure sensitive film **16**. Embossed tape **10** is applied to the top surface of backing sheet **18** until it is applied thereto along its total length such that tape sheet **10** is adhered to the top surface of backing sheet **18** with the embossed enfigurements **14** raised from the top surface of the backing sheet as illustrated at **26** in FIGURE 3. Then, the backing sheet is severed from the roll and the bevels **23** and **25** are established along lateral edges of the sheet. Now, the release film **24** is removed from the back of the sheet and the combination is applied to the desired surface.

Since the perimeter of the backing sheet must be greater than that of the embossed sheet, it is obvious that the backing sheet must be slightly wider than the embossed sheet and the severed length of the backing sheet must be slightly longer than the embossed sheet. Because the color of the backing sheet **20** extends throughout the thickness of the sheet and the bevels **19**, **21**, **23** and **25** extend from the peripheral edges **17** to the full length and width of the backing sheet **18**, the beveled margin along the peripheral edge of backing sheet **20** will establish a frame of color around the perimeter of sheet **12**, with the color of the frame contrasting with the background color of sheet **12**.

While a particular embodiment of the invention has been shown and described, it is apparent to those skilled in the art that modifications are possible without departing from the spirit of the invention or the scope of the subjoined claims.

What is claimed is:

1. A composite contrast color embossed display comprising in combination:

a first plastic sheet of predetermined length and width having a face of substantially uniform background color and at least one embossment thereon raised from said face and having a color contrasting with the background color, said length and width defining peripheral edges which are generally perpendicular to said face;

a second plastic sheet of a length and width greater than the respective length and width of the first plastic sheet and having color throughout the thickness thereof contrasting with said background color of the first sheet, said second plastic sheet having opposite first and second generally planar surfaces;

a first layer of pressure sensitive adhesive securing said first sheet to said first surface of said second sheet with said embossment raised from said first surface;

beveled margins along the peripheral edges of said second sheet extending between the peripheral edges of the first sheet and the length and width of said second sheet thereby establishing a frame of contrasting color around the perimeter of said first sheet;

a second layer of pressure sensitive adhesive attached to the second surface of the second sheet; and

a detachable protective backing removably adhered to the exposed surface of said second adhesion layer.

2. A composite contrast color embossed display of claim **1** wherein said second plastic sheet is fabricated of a low density polyethylene.

3. A backing strip for use in a composite contrast color embossed display, which display includes first and second plastic sheets secured to one another by means of a first layer of pressure sensitive adhesive, the first plastic sheet being of predetermined length and width and having a face of substantially uniform background color with at least one embossment thereon raised from said face and having a color contrasting with the background color, said length and width defining peripheral edges which are generally perpendicular to said face, said backing strip comprising:

a second plastic sheet of predetermined width greater than the width of the first sheet and indeterminate length having color contrasting with said background color, said second plastic sheet having opposite first and second surfaces;

beveled margins along edges defining said width and extending between the first and second surfaces to establish a first surface of a width corresponding to the width of the first plastic sheet and a second surface of said greater width;

the contrasting color of said second sheet extending throughout the thickness of the sheet such that said sheet may be severed to establish a backing strip of any predetermined length with beveled margins along the peripheral edges thereof and with said contrasting color displayed throughout said beveled margins;

the first surface of the second plastic sheet being capable of receiving the first plastic sheet with the first adhesive layer maintaining said first and second sheets secured to one another with said embossment raised from said first surface and the beveled margins establishing a frame of contrasting color around the perimeter of said first sheet between the peripheral edges of the first sheet and the second surface of the second sheet;

a second layer of pressure sensitive adhesive attached to the second surface of the second sheet; and

a detachable protective backing removably adhered to the exposed surface of said second adhesive layer.

4. A backing strip of claim **3** wherein said second plastic sheet is fabricated of a low density polyethylene.

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ROBERT F. BURNETT, Primary Examiner

R. J. ROCHE, Assistant Examiner

U.S. Cl. X.R.

40—125, 135, 136; 161—116, 145, 406