

1 MCGUIREWOODS LLP  
2 A. BROOKS GRESHAM SBN #155954  
3 bgresham@mcguirewoods.com  
4 1800 Century Park East, 8th Floor  
5 Los Angeles, CA 90067-1501  
6 Telephone: 310.315.8200  
7 Facsimile: 310.315.8210

8 ANDREWS KURTH LLP  
9 Frederick S. Frei (Application pro hac vice to be filed)  
10 frederickfrei@andrewskurth.com  
11 1350 I Street NW, Suite 1100  
12 Washington, DC 20005  
13 Telephone: 202.662.2700  
14 Facsimile: 202.662.2739

15 Attorneys for Plaintiffs  
16 Clear Focus Imaging, Inc., and Stephen G. Nelson

17 UNITED STATES DISTRICT COURT  
18 CENTRAL DISTRICT OF CALIFORNIA

19 CLEAR FOCUS IMAGING, INC., a  
20 California Corporation, and Stephen G.  
21 Nelson, an Arizona resident,

22 Plaintiffs,

23 vs.

24 FLEXCON COMPANY, INC., a  
25 Massachusetts Corporation,

26 Defendant.

EDCV12-1372DDP(OPx)

CASE NO.

COMPLAINT FOR PATENT  
INFRINGEMENT

JURY TRIAL DEMANDED

BY FAX

BY: \_\_\_\_\_

CLERK OF DISTRICT COURT  
CENTRAL DISTRICT OF CALIF.  
LOS ANGELES

12 AUG 16 PM 3:04

EMFN

1 Plaintiffs Clear Focus Imaging, Inc. (“Clear Focus”) and Stephen G. Nelson  
2 (“Nelson”), for their causes of action against Defendant FLEXcon, Company, Inc.  
3 (“FLEXcon”), state and allege as follows:

4 **JURISDICTION AND VENUE**

5 1. This is an action for patent infringement arising under the patent laws  
6 of the United States, Title 35, United States Code. This Court has jurisdiction over  
7 the subject matter of this action under Title 28 U.S.C. §§ 1331 and 1338(a).

8 2. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391(b)-  
9 (c) and 1400(b).

10 **PARTIES AND BACKGROUND**

11 3. Clear Focus is a corporation duly organized in California, doing  
12 business in and having its principal place of business at 60 Maxwell Court, Santa  
13 Rosa, California 95401. Nelson is an Arizona resident and resides at 4819 E.  
14 Calle Redonda, Phoenix, Arizona 85018.

15 4. Clear Focus manufactures and sells perforated, one-way vision  
16 products that are used for displaying images on one side of the one-way vision  
17 product and are see-through when viewed from the opposite side. Clear Focus  
18 manufactures both exterior mount and interior mount one-way vision products.  
19 Clear Focus’ one-way vision products can be mounted on, for example,  
20 windows of a bus or a store. Clear Focus products are marked with the patent  
21 numbers under which they are made and comply with 35 U.S.C. § 287(a).

22 5. Clear Focus owns or is the exclusive licensee of many patents  
23 directed to its one-way vision product technology. Included among these patents  
24 are the three patents identified in Counts I, II and III herein. On information and  
25 belief, FLEXcon has had actual notice of these patents since at least 2002.  
26 Nelson is the owner of the patent identified in Count III.

27 6. Defendant FLEXcon is a corporation duly organized in  
28 Massachusetts, doing business in and having its principal place of business at 1

1 FLEXcon Industrial Park, Spencer, Massachusetts 01562-2642. FLEXcon  
2 advertises, markets and sells its infringing products throughout the United States,  
3 including California. It has a sales and distribution facility in this Judicial  
4 District located at 12840 Reservoir Street, Chino, California 91710. Substantial  
5 acts of infringement have occurred in this Judicial District. FLEXcon does not  
6 have a registered agent for service of process in California. Pursuant to Rules  
7 4(e)(1) and (h)(1)(A) and (B) of the Federal Rules of Civil Procedure and Section  
8 416.10(b) of the California Code of Civil Procedure, service of process may be  
9 made by serving Neil McDonough, President and CEO, FLEXcon Company,  
10 Inc., 1 FLEXcon Industrial Park, Spencer, MA 01562-2642.

11 7. Defendant FLEXcon manufactures and sells perforated, see-through  
12 infringing window films, including SEETHRU-SIGN® STSCF2, STSWBF2 and  
13 STSWB7030 and STSWB7030T.

14 8. FLEXcon's website, FLEXcon.com, promotes the use and sale of its  
15 infringing products. This is an exceptional case within the meaning of 35 U.S.C.  
16 § 285.

### 17 **COUNT 1**

#### 18 **Infringement of U.S. Patent No. 5,609,938**

19 9. Clear Focus realleges paragraphs 1 through 8, as though set forth  
20 here.

21 10. On March 11, 1997, United States Letters Patent 5,609,938 (the  
22 "'938 patent"), entitled "Image Display Apparatus With Holes For Opposite Side  
23 Viewing," was duly and legally issued to inventor Rodney M. Shields. Clear  
24 Focus owns all right, title and interest in the '938 patent. A true and correct copy  
25 of the '938 patent is attached hereto as Exhibit A.

26 11. FLEXcon has directly, indirectly, contributorily, and/or by  
27 inducement infringed one or more claims of the '938 patent, including claim 1,  
28 through its manufacture and sale of products, including SEETHRU-SIGN® S

1 STSCF2.

2 12. The infringement of the '938 patent by FLEXcon has injured Clear  
3 Focus in an amount to be determined at trial. Furthermore, by these acts,  
4 FLEXcon has irreparably injured Clear Focus, and the injury will continue unless  
5 the Court enjoins FLEXcon.

6 13. The infringement of the '938 patent by FLEXcon has injured Clear  
7 Focus in an amount to be determined at trial. Furthermore, by these acts,  
8 FLEXcon has irreparably injured Clear Focus, and the injury will continue unless  
9 the Court enjoins FLEXcon.

10 **COUNT II**

11 **Infringement of U.S. Patent No. 5,773,110**

12 14. Clear Focus realleges paragraphs 1 through 13, as though set forth  
13 here.

14 15. On June 30, 1998, United States Letters Patent 5,773,110 (the "'110  
15 patent"), entitled "Window Painting Apparatus And Method," was duly and  
16 legally issued to inventor Rodney M. Shields. Clear Focus owns all right, title and  
17 interest in the '110 patent. A true and correct copy of the '110 patent is attached  
18 hereto as Exhibit B.

19 16. FLEXcon has directly, indirectly, contributorily, and/or by  
20 inducement infringed one or more claims of the '110 patent, including claim 13,  
21 through its manufacture and sale of products, including SEETHRU-SIGN®  
22 STSWBF2 and STSWBF7030.

23 17. The infringement of the '110 patent by FLEXcon has injured Clear  
24 Focus in an amount to be determined at trial. Furthermore, by these acts,  
25 FLEXcon has irreparably injured Clear Focus, and the injury will continue unless  
26 the Court enjoins FLEXcon.

27 18. On information and belief, FLEXcon has had actual knowledge of  
28 the '110 patent and has willfully infringed the patent by engaging in objectively

reckless conduct when it continued making and selling the infringing products in the face of an objectively high risk that it was infringing Clear Focus' valid '110 patent.

### **COUNT III**

#### **Infringement of U.S. Patent No. 6,258,429**

19. On July 10, 2001, United States Patent No. 6,258,429 (the "'429 Patent"), entitled "One-Way See-Thru Panel and method of Making Same," was duly and legally issued to inventor Nelson, who is the owner of all right, title and interest in the patent. Clear Focus is the exclusive licensee of this patent and has the right to sue for infringement thereof. A true and correct copy of the '429 patent is attached hereto as Exhibit C.

20. FLEXcon has directly, indirectly, contributorily, and/or by inducement infringed one or more claims of the '429 patent, including claim 1, by its manufacture and sale of products, including STSWB7030T.

21. The infringement of the '429 patent by FLEXcon has injured Clear Focus in an amount to be determined at trial. Furthermore, by these acts, FLEXcon has irreparably injured Clear Focus, and the injury will continue unless the Court enjoins FLEXcon.

22. On information and belief, FLEXcon has had actual knowledge of the '429 patent and has willfully infringed the patent by engaging in objectively reckless conduct when it continued making and selling the infringing products in the face of an objectively high risk that it was infringing Clear Focus' valid '429 patent.

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs Clear Focus and Nelson pray for judgment against Defendant FLEXcon as follows:

1. For a declaration that FLEXcon has directly, indirectly, contributorily and by inducement, infringed the '938 patent, the '110 patent and the '429 patent,

1 that such infringement has been willful, and that this is an exceptional case within the  
2 meaning of 35 U.S.C. § 285;

3 2. For an order permanently enjoining FLEXcon, its subsidiaries, affiliates,  
4 parents, successors, assigns, officers, agents, servants, employees, attorneys, and all  
5 persons acting in concert or in participation with FLEXcon from infringing,  
6 contributing to the infringement of, and inducing infringement of the '938 patent, the  
7 '110 patent and the '429 patent, and specifically from directly or indirectly making,  
8 using, selling, offering for sale or importing, any products embodying the invention of  
9 these patents during the life of the patents, without the express written authority of  
10 Clear Focus;

11 3. A judgment and order requiring Defendant FLEXcon to pay damages  
12 under 35 U.S.C. § 284, including treble damages for willful infringement as  
13 provided by 35 U.S.C. § 284, with interest and costs; attorneys' fees pursuant to  
14 35 U.S.C. § 285; and pre- and post-judgment interest.

15 4. For any other and further relief the Court deems appropriate.

16 **DEMAND FOR JURY TRIAL**

17 Pursuant to Fed. R. Civ. P. 38(b), Clear Focus and Nelson demand a trial by  
18 jury of all issues so triable.

19  
20 DATED: August 14, 2012

MCGUIREWOODS LLP

21  
22 By: 

A. Brooks Gresham

23 Attorneys for Plaintiff Clear Focus  
24 Imaging, Inc., and Stephen G. Nelson  
25  
26  
27  
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## EXHIBIT A



United States Patent [19]  
Shields

[11] Patent Number: 5,609,938  
[45] Date of Patent: Mar. 11, 1997

[54] IMAGE DISPLAY APPARATUS WITH HOLES  
FOR OPPOSITE SIDE VIEWING

4,940,622 7/1990 Leavitt, Sr. .... 428/137

FOREIGN PATENT DOCUMENTS

[75] Inventor: Rodney M. Shields, Lafayette, Calif.

51-86049 2/1976 Japan .

54-93255 2/1979 Japan .

[73] Assignee: Creative Minds Foundation, Inc.,  
Wilmington, Del.

44089 2/1992 Japan .

2118096 10/1983 United Kingdom .

OTHER PUBLICATIONS

[21] Appl. No.: 324,889

[22] Filed: Oct. 18, 1994

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 81,728, Jun. 23, 1993,  
abandoned.

[51] Int. Cl.<sup>6</sup> ..... B32B 3/24

[52] U.S. Cl. .... 428/138; 428/131; 428/137;  
428/195; 428/201; 428/203; 428/204; 428/918;  
428/913; 428/38; 428/41.8; 428/42.1; 359/839;  
359/594; 359/601; 40/219; 427/243

[58] Field of Search ..... 428/131, 137,  
428/195, 201, 203, 204, 918, 913, 38, 138,  
41.8, 42.1; 427/243; 359/839, 594, 601;  
40/219

Smith, Turk, "Screen Acts Like A Mirror", *The Arizona Republic*, p. 10-E, Mar. 8, 1979. Phoenix, Arizona.  
Shadow Screen Co., Inc. Catalog, Month Unknown 1979,  
Phoenix, Arizona.

American Scenics Catalog, ©Month Unknown 1979.

Advertising for 3M-France One-Way Vision Film, Month  
Unknown 1988.

DECO ADER Product Brochure for Perforated One-Way  
Vision Self-adhesive Panel Assembly, France, publication  
date circa month unknown 1980.

Primary Examiner—William Watkins

Attorney, Agent, or Firm—Thomas C. Feix

[57] ABSTRACT

One or more panels define a support for an image layer and  
a relatively dark layer. Holes extend through the panel and  
the layer. The holes allow viewing through the panels in one  
direction without seeing the image, yet the image can be  
viewed by looking at the panel assembly from the opposite  
direction. Thus, the image is suitable as an advertising  
medium as applied to the transparent windows of buildings,  
vehicles and the like. A person sitting in a building or in a  
vehicle cannot see the image on a window by looking  
outwardly through the window. Looking in the opposite  
direction, from outside to inside the vehicle, a person will  
see the image through the assembly of panels.

7 Claims, 7 Drawing Sheets

References Cited

U.S. PATENT DOCUMENTS

728,063	5/1903	Wilson	359/839
809,698	1/1906	Kelley	359/839
1,199,882	10/1916	Frey	359/839
3,451,877	6/1969	Herschman	161/3
3,853,675	12/1974	Edwards	161/3
4,261,649	4/1981	Richard	350/276 R
4,321,778	3/1982	Whitehead	52/397
4,358,488	11/1982	Duncklin et al.	428/31
4,673,609	6/1987	Hill	428/187
4,925,705	5/1990	Hill	427/259

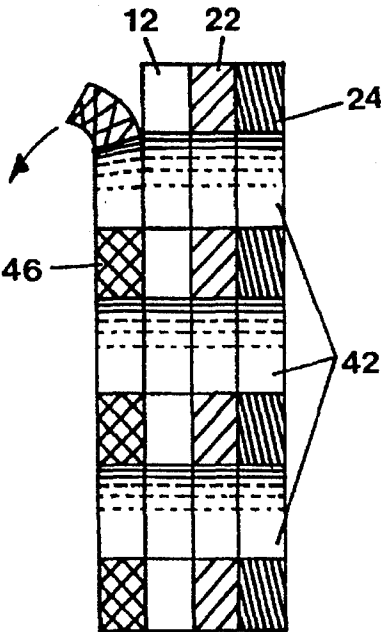


EXHIBIT A

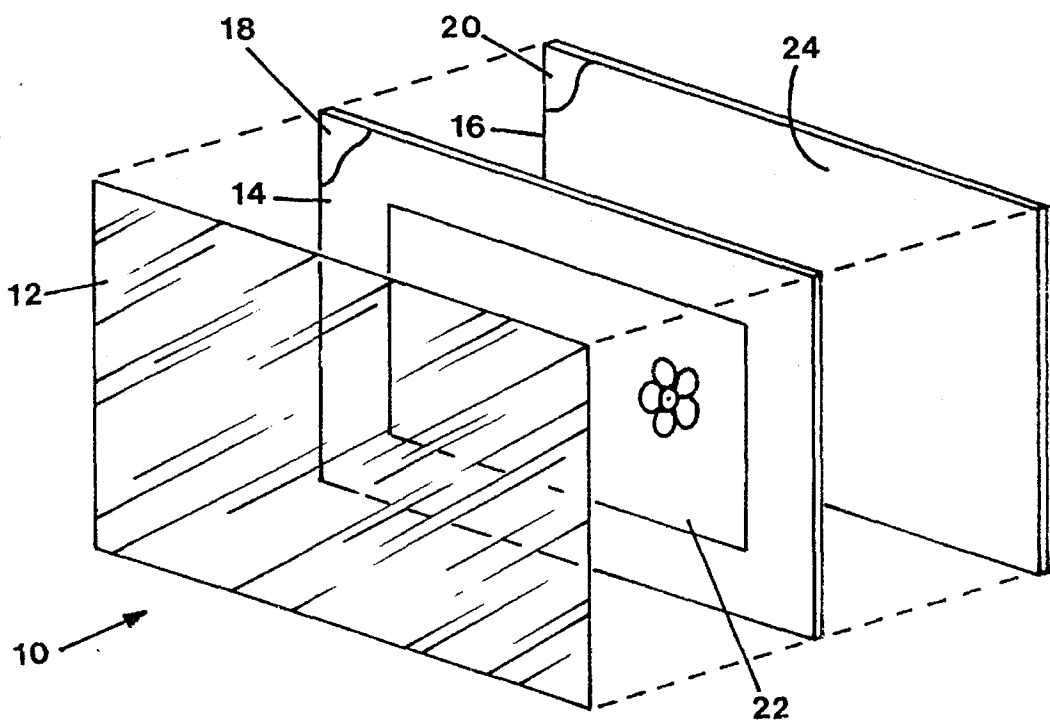


FIG. 1

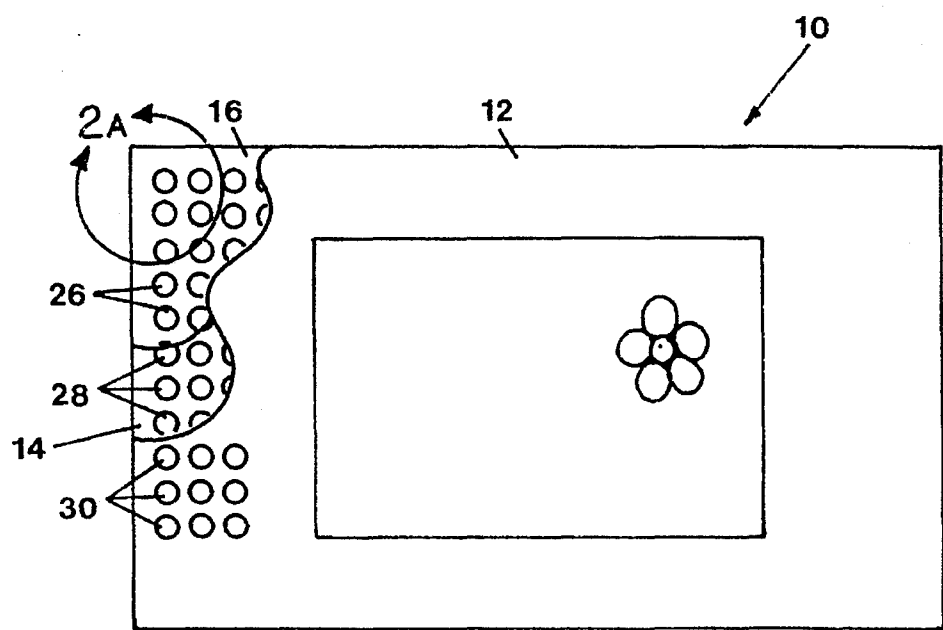


FIG. 2

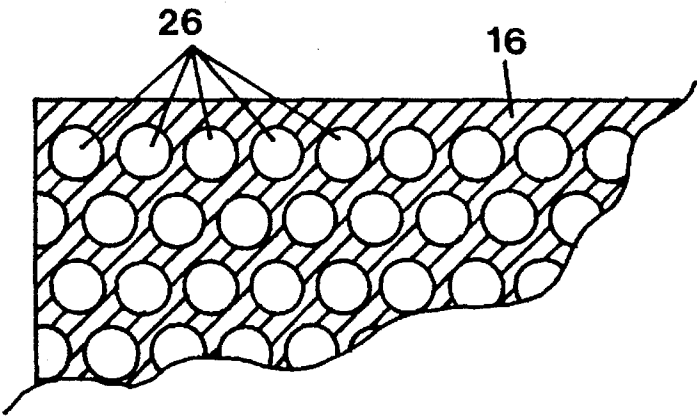


FIG. 2A

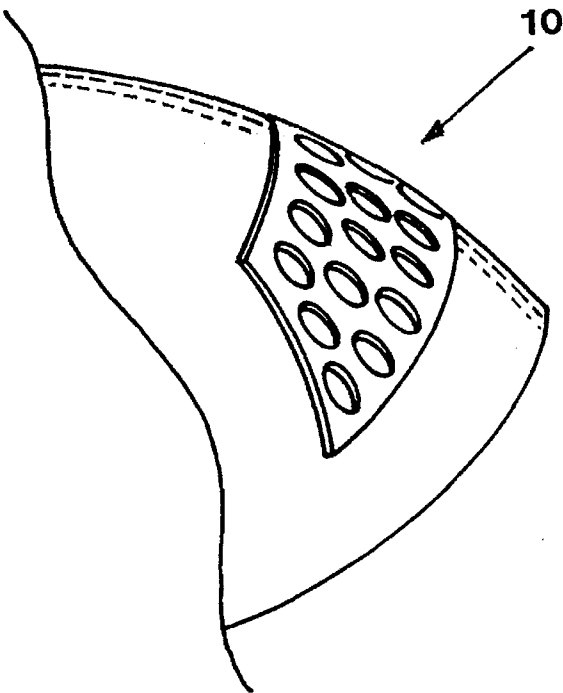


FIG. 2B

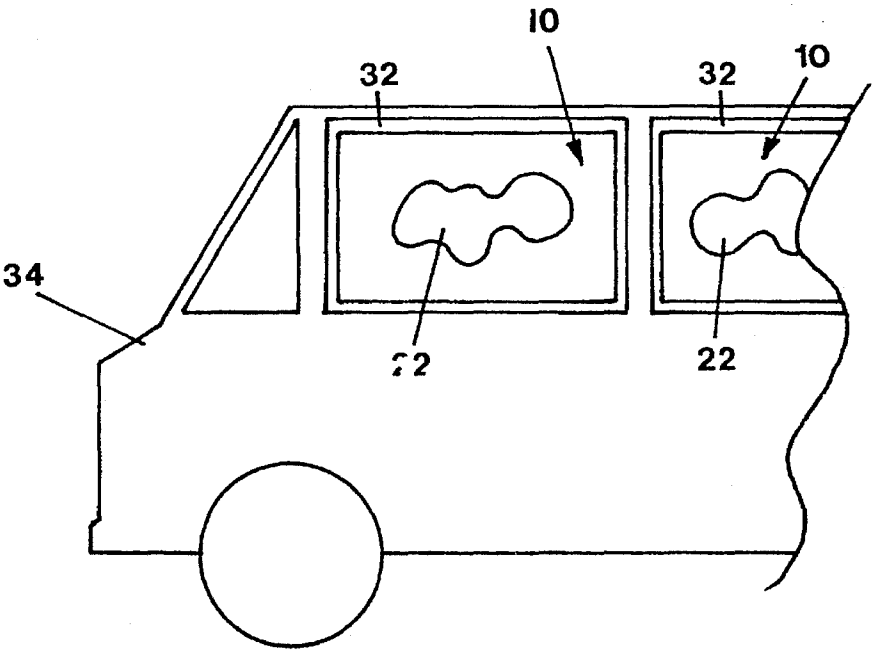


FIG. 3

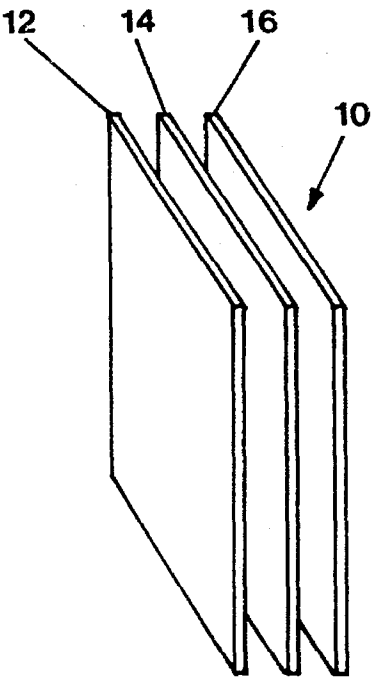


FIG. 4

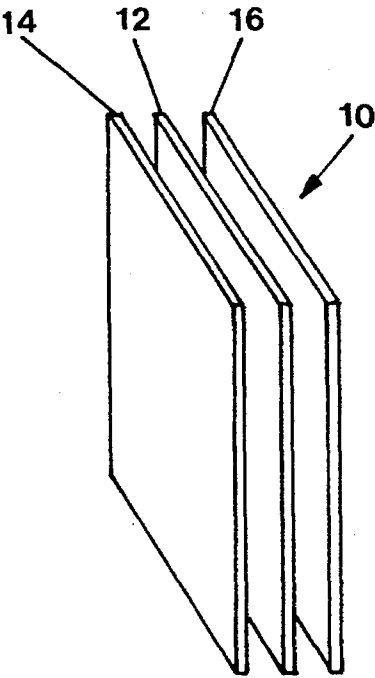


FIG. 5

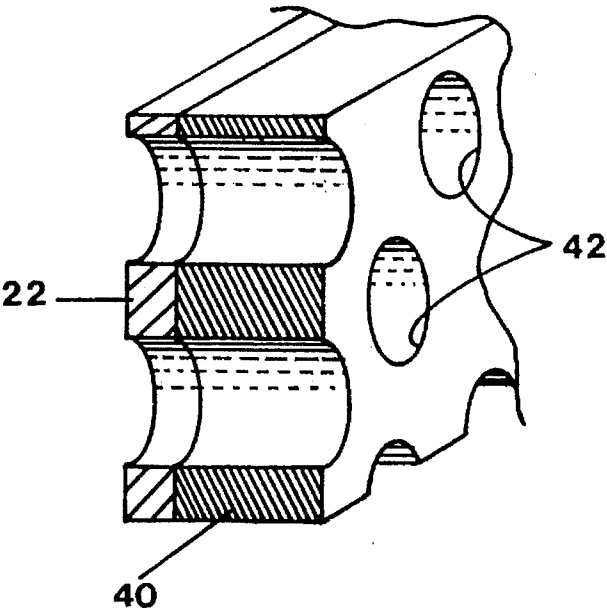


FIG. 6

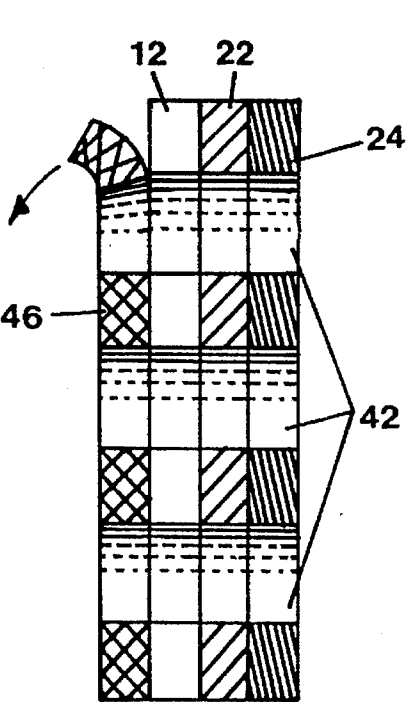


FIG. 6A

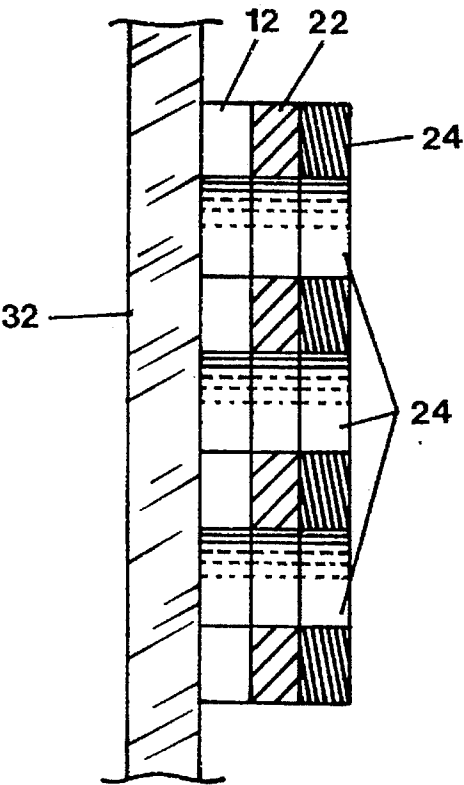


FIG. 6B

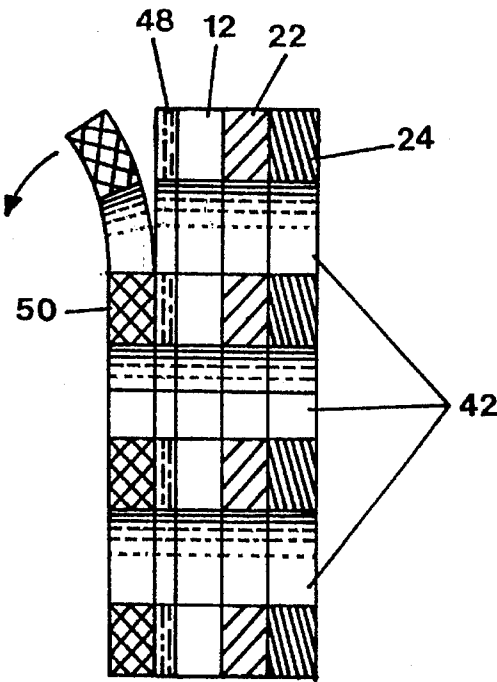


FIG. 6c

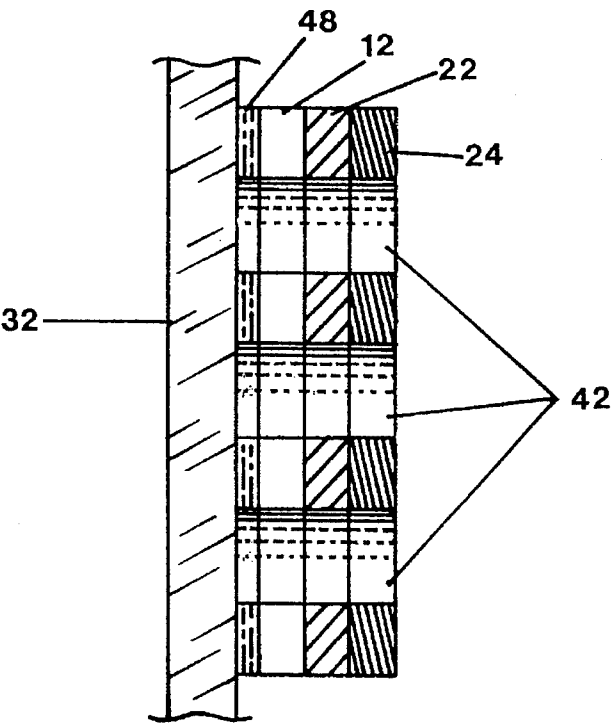


FIG. 6d

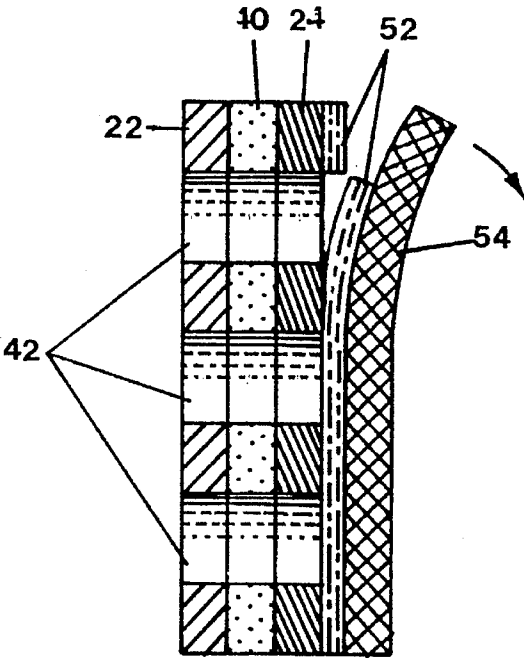


FIG. 7

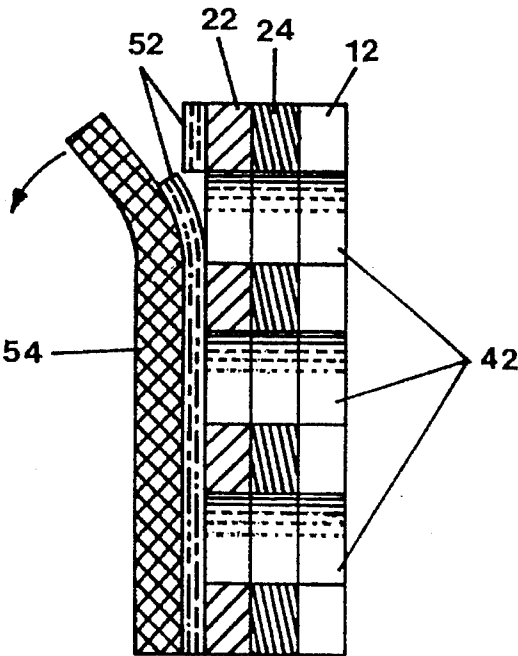


FIG. 8

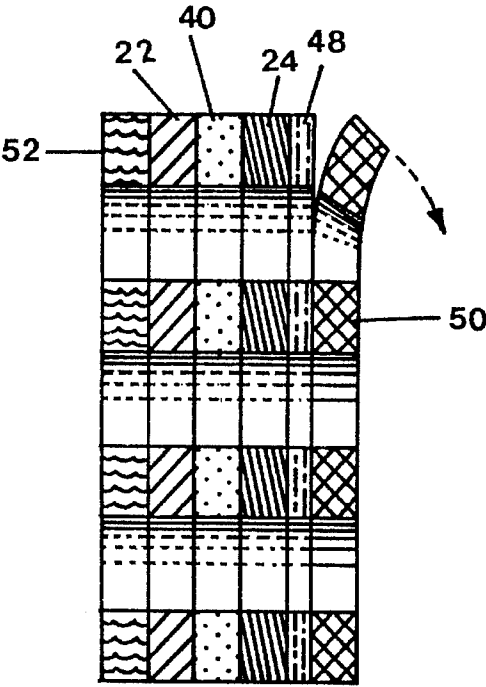


FIG. 9

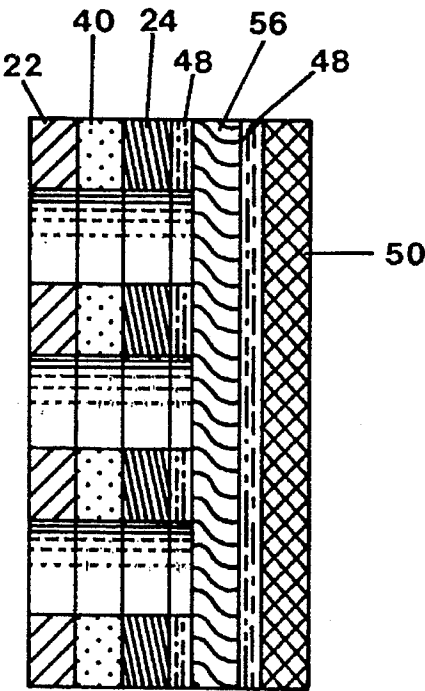


FIG. 10

5,609,938

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IMAGE DISPLAY APPARATUS WITH HOLES  
FOR OPPOSITE SIDE VIEWING

CROSS REFERENCES TO RELATED U.S.  
APPLICATIONS

This is a continuation-in-part of application(s) Ser. No. 08/081,728 filed on Jun. 23, 1993 abandoned.

This application is a continuation in part of co-pending application Ser. No. 08/081,728 filed Jun. 23, 1993 abandoned and entitled "Image Display Apparatus With Holes For Opposite Side Viewing", Rodney Shields, inventor.

FIELD OF THE INVENTION

This invention relates to improvements in the display of images of various types for different purposes, such as for advertising purposes and, more particularly, to an assembly of panels having a see-through capability and which are arranged to allow viewing of an image when looking in one direction but are arranged to prevent the viewing of the image when looking in the opposite direction. The control of the way in which the image can be viewed can be achieved by the proper positioning of the panels with respect to each other.

BACKGROUND OF THE INVENTION

in advertising practices, it is desirable to utilize the surfaces of a transparent display medium, such as the interior or exterior surfaces of a window of a building, bus, streetcar, truck and the like, to support films or panels which have images on them to be displayed. Generally, the panels having the displays block any view through the window or surface, be it transparent or otherwise, on which the panel is placed. Thus, on a bus for instance, any panel having an image thereon which is viewable from a location outside the bus will block the view of the person sitting in the bus looking outwardly through a window. This is an objectional feature of images applied to panels and which are secured by adhesive or otherwise to the outer surface of a window. Such image-laden panels are rarely used.

Typically, only refrigeration doors of supermarkets and the like use panels of this type since the panels themselves are transparent and the images on the panels usually are in color. There is no need to have any more than a single panel with an image on it because rarely does a person stand inside a refrigeration cabinet of a supermarket or the like. There is, therefore, no need on the part of the person to look outwardly through the door and past the panel containing the image thereon. It is for this reason, panels with images on only one surface for refrigeration doors and the like have had some success but are of limited success because of the restrictions on the use of such panels.

It is desirable to use such transparent surfaces, such as windows of buildings, buses, streetcars, trucks and the like, as an advertisement medium or billboard support in order to display images of various types in order to maximize the advertising value of the use of such surfaces.

One-way vision display panels of the type which are constructed from plastic film material and which contain a printed image that is visible when viewed from one direction and which appears transparent when viewed from a second, opposite direction are known from the prior art. Such one-way vision display panels are advantageously used in advertising since they may be easily applied to and dis-

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played on any smooth transparent surface, such as the windows of buildings, buses, streetcars, trucks and the like.

Published UK Patent Application GB 2 118 096 and U.S. Pat. No. 4,673,609 disclose similar one-way vision display panel assemblies which are fabricated from a plurality of glued together transparent plastic materials and which include a display image that is disposed at the interface of two transparent panels of the panel assemblies. In each of the above referenced designs the display image is visible when the panel assembly is viewed from one direction but is not seen when viewed from the opposite direction. In both designs the display image is formed as a pattern of two-color opaque dots which are applied by screen, litho or similar printing process at the panel interface. The opaque dots appear white or light in color on one side and black on the other. Light incident on the light color side of the panel is scattered and reflected thereby permitting an image formed by the dot pattern to be seen when viewed from this direction. Light incident on the opposite or black side of the panel is absorbed such that the light transmitted through the transparent portions of panel permit through-viewing in the direction from the black color side to the light color side. When applied to a bus window, the black color side faces the passenger while the light reflective color image side faces the outside.

A disadvantage with such dot pattern display panels as described above is that the visual clarity in the through-viewing direction of the display panel is not very good. The reason for this is that the multiple plastic and intermediate adhesive layers of the panel assembly cause undesirable light refraction and diffraction resulting in a dim and blurry grey tone when viewing the display panel in the through-viewing direction (i.e. in the direction from the darker side towards the image side).

A second disadvantage with such dot pattern display panels is that they are relatively stiff and inflexible due to their solid panel construction and thus are not suitable for application on surfaces having compound curvature since they will form wrinkles. Another disadvantage is that it requires an etching or washing process that diminishes color intensity.

It is also known in the art to fabricate a one way vision display panel from a metalized plastic film that is screen printed on one side and perforated with an ordered pattern of holes. The perforated metalized plastic film is then applied to an exterior surface of a window using either a double sided tape or spray adhesive. The ordered hole pattern, being arranged in straight grid-like columns and rows, provides only about a 37% open area for light transmission through the display panel. Also, the through-viewing clarity is adversely effected by the presence of glue or tape between the display panel and the window.

Accordingly, there is a definite need in the art for a one way vision display panel which allows a company to take advantage of the availability of public, transparent surface areas, such as window surfaces of buildings, vehicles and the like, and which overcomes the problems of the prior art.

SUMMARY OF THE INVENTION

Objects

The primary object of the present invention is to provide an improved one way vision display panel made up of a number of sandwiched panels which are bonded together and wherein one of the panels has an image which can be

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viewed when looking in one direction through the panel assembly but which cannot be observed when looking in the opposite direction through the panel assembly.

Another object of the present invention is to provide a display assembly of the type described wherein the assembly is suitable for mounting on display mediums such as windows, doors and the like having transparent panes or mounting surfaces so that an image can represent advertising materials which can be placed on the panels in a manner such that the view through the assembly of panels can be in one direction to view the advertising materials but such materials are blocked out when looking in the opposite direction.

Methods and apparatus which incorporate the features described below and which are effective to function as described above constitute specific objects of this invention.

The present invention is directed to a one way vision display panel assembly comprising a number of stacked panels, including a first panel provided with a light-reflective color image and second panel provided with a light-absorbing dark or black coating. The panels are stacked together before the image is placed on the first panel and the black or dark coating has been placed on the second panel. The panels are perforated with a plurality of through-holes which allow light transmission through the panel assembly. The holes can be placed through the panels either before or after they are assembled. Typically, the holes are formed after the panels have been assembled into the panel assembly.

The holes allow viewing through the panel assembly in one direction without seeing the image, yet the image can be viewed by looking at the panel assembly from the opposite direction.

A one-way vision display panel constructed as a perforated plastic panel assembly having a rear surface provided with a light-absorbing color coating (e.g. a black color coating) and a front surface provided with a light-reflective color image as described herein offers superior optical through-vision properties as compared to the conventional one-way vision display panels of the prior art as mentioned at the outset. The reason for this is that fewer optical losses due to diffraction and refraction are experienced when light is transmitted virtually unobstructed through the holes of the perforated panel assembly as compared to when light is transmitted through the numerous transparent plastic and adhesive layers and adhesive tape of the prior art one-way vision panels.

In accordance with the method aspects of the present invention, the display panel is constructed as a stacked assembly of individual plastic panel layers that are either extruded together, heat laminated together, glued together by intermediate adhesive layers or otherwise bonded together. The panel assembly may be adapted for either exterior or interior mount applications.

For the exterior mount embodiment, the light-reflective image panel and light-absorbing or black layer are bonded to opposite sides of an intermediate white opaque panel. A paper or other protective backing or liner can be adhered by a transfer adhesive layer to the remaining free surface of the light-absorbing layer. The panel assembly is then perforated with a plurality of through holes. The protective paper backing can then be peeled back to expose the underlying adhesive layer whereupon the panel assembly may be applied, sticky or black side down, to the exterior surface of the window. A substantially transparent panel or coating can be provided as a protective covering for the image layer.

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For the interior mount embodiment, a transparent panel is coated on one side surface with a light-reflective color coating as a first layer and followed by an opaque (e.g., black) light-absorbing coating as a second layer. A paper or other protective backing or liner can be then adhered by a transfer adhesive layer to the remaining free side surface of the clear plastic panel. The panel assembly is then perforated with a plurality of through-holes. The protective backing can then be peeled back to expose the underlying adhesive layer whereupon the panel assembly may be applied, sticky or clear side down, to the interior surface of the window.

The panels of the assembly can be of tough, wear resistant materials, such as a heavy duty plastic sheet such as vinyl. Moreover, simple adhesives can be used for bonding the assembly of panels to windows of buildings, vehicles and the like. Alternatively, the various panels may be laminated together.

Various other combinations or variations of the panels can be used, if desired. For instance, additional transparent or clear plastic panels or coatings may be used as protective covers/coatings for the image and/or light-absorbing panels or layers. Also, one or more of the panels may comprise static cling material for direct adhesion to a window without need for an adhesive layer.

In one embodiment, the panel assembly may include a light-reflective layer which functions as a screen for receiving one or more projected images which can be projected thereon using well known projection techniques including, but not limited to, video, movie and slide projection techniques.

In one embodiment, the panel assembly may include a non-perforated one way mirror layer with the mirror side oriented towards the light reflecting direction, i.e. towards the image layer. The mirror layer provides security in that it prevents vision through the panel assembly in one direction. This embodiment may be used to provide building security. For example, the panel assembly may be placed on the windows of a kiosk or room within a casino or store. In such an environment, the panel assembly may be used to conceal hidden cameras or security personnel on the other side of the window.

In another alternative embodiment, the display panel assembly may comprise a single perforated membrane, preferably flexible plastic sheet material. The membrane is printed on one side with a light-reflective color image and printed or coated on a reverse side with a light-absorbing dark color coating.

In addition, the image layer may provide a three-dimensional effect by using known methods such as lenticular lens processes or hologram processes.

The present invention thus provides one-way viewing of images in a substantially unobstructed manner as a person views outwardly from the interior of the building or the vehicle. This phenomenon can be used for advertising purposes in as much as the surface areas of windows of buildings and vehicles can be utilized for displaying the images without impairing substantially the view of the person inside the building or the vehicle. The present invention can also be used on refrigerator and freezer glass doors in supermarkets.

Advantages

It is an advantageous feature of the present invention to perforate the panel assembly in accordance with a staggered hole pattern.

Another advantage of the invention is that the amount of light transmission and visibility through the panel assembly is increased from about 37% open area of the prior art to about 50% to 70% open area.

Another advantage of the invention is that the staggered hole pattern appears to the human eye as being more random and less discernible thereby enhancing the through-viewing feature of the panel assembly since distracting grid-like patterns are not readily detectable. Also, by eliminating the ordered vertical and horizontal lines of a conventional straight line hole pattern, the eye is less distracted when viewing the light-reflective color image side of the panel assembly, especially in situations where the color image itself contains straight lines which are coincident with the ordered rows and columns of the hole pattern.

Still another advantage of the invention is the resultant increase in the thickness of the web or bar portions disposed between the staggered holes. This provides increased tensile strength and improved resistance against shear. Thus, the panel assembly of the present invention can be installed on and removed from a window or other surface more easily without tearing than is currently possible with the one way vision display panel designs of the prior art.

Yet another advantage of the invention is that the perforated panel assembly is much more flexible than prior art display panel designs thereby enabling the display panel of the present invention to be stretched over and applied to surfaces having a compound curvature, such as for example a bubble shaped window, without wrinkling.

Other and further objects, advantages and benefits of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawings, which by way of illustration, show preferred embodiments of the present invention and the principles thereof and what are now considered to be the best modes contemplated for applying these principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective, exploded view of one embodiment of the one way vision display panel assembly of the present invention;

FIG. 2 is a front elevational view of the one way vision display panel assembly (in assembled form) of the embodiment of FIG. 1;

FIG. 2A is an enlarged view of the encircled region of one of the perforated panel layers shown in FIG. 2 showing the perforations arranged in a staggered hole pattern;

FIG. 2B is a perspective view illustrating how the staggered hole pattern enables the one way vision display panel assembly to conform to a surface having a compound curvature;

FIG. 3 is a side elevational view of the display panel assembly of FIGS. 1 and 2 shown being applied to a vehicle window to illustrate details of use;

FIG. 4 is a perspective view of another embodiment of the display panel assembly of the present invention;

FIG. 5 is a perspective view similar to FIG. 4 but showing another embodiment of the display panel assembly of the present invention with a slightly different orientation of the panels with respect to each other;

FIG. 6 is a fragmentary perspective view, on an enlarged scale, of a single panel with an image layer coated on one face thereof;

FIGS. 6A-6B shows a series of cross-sectional views of one alternate embodiment of the one way vision display panel assembly of the present invention which includes a release liner or backing layer (FIG. 6A) which when peeled-off exposes an underlying transparent static cling panel layer adapted for adhering the display panel assembly to a window (FIG. 6B);

FIGS. 6C-6D shows a series of cross-sectional views of another alternate embodiment of the one way vision display panel assembly of the present invention which includes a release liner or backing layer (FIG. 6C) which, when peeled-off, exposes an underlying transparent adhesive layer adapted for adhering the display panel assembly to a window (FIG. 6D);

FIGS. 7 and 8 are cross-sectional views through other embodiments of the present invention similar to FIGS. 6A-6D but showing the inclusion of a non-perforated transfer adhesive and associated backing or release liner;

FIG. 9 is a cross-sectional view through another embodiment of the invention similar to that shown in FIGS. 6C-6D but showing the adhesive-backed release liner or backing layer on the opposite side surface of the panel assembly; and

FIG. 10 is a cross-sectional view through another embodiment of the invention similar to that shown in FIG. 9 and further including a non-perforated mirror layer.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A one way vision display panel assembly constructed in accordance with one embodiment of the present invention is broadly denoted by the reference numeral 10 in FIGS. 1-4.

The display panel assembly 10 includes a first panel 12, a second panel 14, and a third panel 16. Panels 12, 14 and 16 comprise relatively thin, flexible sheet material including but not limited to transparent or translucent plastic sheet material with poly-vinyl chloride (PVC) sheet material being a preferred material. The panels 12, 14 and 16 are bonded together by some suitable bonding process, such as by heat lamination, co-extrusion, or by an adhesive, and preferably a clear adhesive.

As best seen in FIG. 1, an adhesive layer 18 bonds panels 12 and 14 together, and an adhesive layer 20 bonds panels 14 and 16 together. The panels can be of any shape, such as rectangular, as shown in FIG. 1. However, they can be of circular, hexagonal, square or other shapes as desired.

The panels 12, 14, and 16, when bound together by the adhesive layers 18 and 20, form the composite or panel assembly 10 in which the panel 14 is disposed between panels 12 and 16.

Panel 12 is preferably transparent or clear in the sense that it has no coating thereon which blocks the passage of light through panel 12.

Panel 14 has an image 22 of an object, such as a flower (as shown), which is printed or otherwise applied to one face of panel 14. For purposes of illustration, image 22 is applied to the side facing panel 12. Moreover, the image 22 preferably comprises a coating of colored inks or dyes which reflect incident light in order to create a desired visual impression. The image 22 may be applied by laser inking process, an image transfer process or by a silk screen, litho or similar ink printing process. The transparent panel 12

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forms a protective layer or cover for the image 22 on the panel 14. The transparent panel 12 also preferably includes ultra violet (UV) protective properties to help prevent against sun damage to the inks or dyes which form the image 22.

In another embodiment, panel 12 comprises a coating. Panel 16 has an opaque light-absorbing or dark coating 24 thereon, such as a coating of black paint. The black or dark coating 24 covers the entire surface of panel 16.

Each of the panels 12, 14 and 16 (and intermediate adhesive layers 18 and 20) of the display panel assembly 10 is perforated with a plurality of holes. As shown in FIG. 2, holes 26 are provided in panel 16, holes 28 are provided in panel 14, and holes 30 are provided in panel 12. Coordinate holes 26, 28 and 30 of the respective panels 12, 14 and 16 are aligned with each other to form continuous light passages or through-holes through the formed display panel assembly 10.

There are many different holes in the assembly of panels. For instance, there could be 200-400 holes per square inch of panel space. The size of the holes is preferably on the order of 0.001 inch to 1.0 inch or larger.

FIG. 2A is an enlarged view of the encircled region of panel 16 shown in FIG. 2 showing the perforations (in this case holes 26) arranged in a staggered hole pattern. The staggered hole pattern of the present invention offers many advantages including:

- (1) an increase in the amount of light transmission and visibility through the display panel assembly from about 37% open area of the prior art to about 50% to 70% open area;
- (2) a more pleasing psychological impression as compared to the grid-like hole patterns of the prior art as the staggered hole pattern of the present invention appears to the human eye as being more random and less discernible thereby enhancing and facilitating the through-viewing feature of the panel assembly; and
- (3) an increase in the thickness of the web or bar portions disposed between the staggered holes which increases the tensile strength of the panel assembly and improves resistance to shear by eliminating ordered and continuous tear lines.

Another advantage of the staggered hole pattern of the present invention, is that the staggered hole pattern enables the display panel assembly 10 to conform to surfaces of a display medium (e.g. a window) having compound curvature without wrinkling. This is best seen with reference to FIG. 2B.

In accordance with the method of fabrication of the invention, the panels are arranged separately from each other and the image 22 is applied to panel 14 while the opaque light-absorbing coating 24 is applied to panel 16. The panels are then bonded to each other by the various adhesive layers 18 and 20, respectively, to form the assembly 10 as shown in FIG. 2. The perforations or through-holes are preferably made after the various panels have been glued or otherwise laminated together.

As one embodiment, the display panel assembly 10 is applied to the outside surface of a window 32 of a bus 34 or other vehicle (see eg. FIG. 3). In this example, the transparent panel 12 is at the outermost side of the display panel assembly 10 and the innermost surface of panel 16 will be secured by an adhesive (not shown) to the exterior surface of window 32.

Alternatively, any or all of the panels 12, 14 and 16 may comprise self-adhesive or static cling film, such as, for

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example, poly-vinyl chloride sheet material, such that the completed panel assembly may be removably applied to a surface (i.e. inside or outside surface) of a window 32.

To passengers seated inside the bus 34, the display panel assembly 10 appears transparent as the perforations or through-holes permit the transmission of light therethrough without significant reflection. Thus persons inside the bus 34 typically will not notice the presence of the display panel assemblies 10 on the bus windows 32.

A person outside the bus 34, however, will clearly see the image embodied in the image layer 22 when looking at the display panel assemblies 10 on the bus windows 32 as the light incident on the color surface of the image layer 22 will be reflected. The reason for this is that the image layer 22 will be contiguous with a black dark background 24 of panel 16 and the person will not have a perception of looking through the holes 26, 28, and 30 of the panels 12, 14 and 16, respectively, of the display panel assembly 10 because of the prominence of the dark background surrounding the image layer 22. In effect, therefore, the image is seen looking in only one direction, namely in the direction toward panel 16 from panel 12. In such a case, the image is observable and this image can be used for advertising and other purposes.

FIG. 5 shows an alternate embodiment of the three panel assembly 10' wherein the positioning of the transparent panel 12 and the image-coated panel 12 are reversed.

FIGS. 6-10 show a number of alternate embodiments of the present invention.

In FIG. 6, the display panel assembly comprises a single plastic panel or membrane 40 which is opaque black in color. The panel 40 has a light-reflective color coating 22 forming an image layer along one side surface thereof. The black panel 40 is perforated with plural through-holes 42 of some suitable sort. The through-holes 42 extend completely through the black panel 40 and the image coating 22. The through-holes 42 are cylindrical and can be formed either before or after the image coating 22 is applied to the black panel 40. The through-holes 42 permit light to be transmitted through the panel assembly. Since the through-holes 42 extend completely through the entire panel assembly, there are no glue or plastic layers which will contribute to undesirable refraction or diffraction as light is transmitted therethrough resulting in improved optical performance. This is especially beneficial where the display panel assembly is to be adhered to a window, since the additional glass layer of the window compounds the problem of controlling undesirable light refraction and diffraction when looking through both the panel assembly and the window.

FIGS. 6A-6B and 6C-6D illustrate examples of two interior mount embodiments of the display panel assembly of the present invention.

FIG. 6A shows a display panel assembly comprising a single transparent panel 12. The transparent panel 12 has a light-reflective color image coating or layer 22 applied to or printed on one side surface thereof followed by an opaque light-absorbing color coating) or layer 24 (e.g. black paint). The transparent layer 12 can comprise a static cling material layer. A peel-off liner or backing 46 can be laminated or otherwise applied to layer 12 as shown. As before, the entire assembly is perforated with through-holes 42. FIG. 6B shows the embodiment of FIG. 6A with the peel-off liner 46 removed and the assembly mounted to a window 32.

FIG. 6C shows a display panel assembly comprising a single transparent panel 12 similar to the embodiment of FIGS. 6A-6B. As before, the panel 12 has a light-reflective color image coating or layer 22 applied to one side surface (i.e the right side thereof) followed by an opaque light-

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absorbing color coating or layer 24. A transfer adhesive 48 and peel-off liner (e.g. a paper backing) 50 are applied to the remaining free side surface (in this case the left side surface) of the transparent panel 12. The entire assembly is perforated with through-holes 42. FIG. 6D shows the embodiment of FIG. 6C with the peel-off liner 50 removed and the assembly mounted to a window 32.

In the two interior mount embodiments of FIGS. 6A-6B and 6C-6D, the image contained in the image coating or layer 22 is visible when the display panel assembly is viewed from outside the window 32 in a direction through the window 32 and transparent panel 12 towards the image coating or layer 22. The display panel assembly appears transparent when viewed from the opposite direction (i.e. from inside the window. That is, a person on the right side of the panel assembly may see through the panel assembly with virtually no noticeable obstruction.

In addition, a non-perforated backing layer (not shown) may be applied to the perforated backing layers 46 and 50 as shown in the embodiments of FIGS. 6A & 6C to facilitate handling of the panel assembly during fabrication of the panel assembly.

FIG. 7 shows an example of an exterior mount embodiment comprising an opaque white panel 40 having opposed flat faces with an image coating 22 on one face and an opaque light-absorbing color coating 24 on the opposite face. Coating 24 may also comprise a light-absorbing material layer. As shown in FIG. 7, an optional transfer adhesive layer 52 and non perforated peel-off protective liner 54 may be applied to an exposed side surface of the assembly (in this case the light-absorbing color coating or layer 24). The protective liner 54 facilitates handling of the assembly before it is applied to a display medium (eg. a window).

It is important to note that when the protective liner 54 is removed, those portions of the adhesive layer 52 which overlie the through-holes 42 are also carried away along with the liner 54 so that the clarity of vision through the display panel assembly in the through-viewing direction (i.e. from right to left) is not impaired.

FIG. 8 shows a view similar to FIG. 7 but showing the through-holes 42 in the assembly with the image layer 22 being on the outer face of the light-absorbing or darkened layer 24. In this embodiment, the panel 12 is preferably transparent.

In all cases with respect to the embodiments shown in FIGS. 6-8, a person looking in the through-viewing direction (i.e. from right to left) will not see the image on the image coating or layer 22 but will see the field of view to the left of the assembly by looking through the through-holes 42. On the other hand, a person looking from left to right in each of the embodiments illustrated in FIGS. 6-8, will view the image on the image coating or layer 22.

FIG. 9 shows another embodiment of the invention which is adapted for exterior mount applications and which includes a outer transparent protective layer 52 provided to the image coating 22. The outer transparent layer 52 preferably has ultra violet (UV) protective properties to protect the inks and dyes of the image coating 22 from color degradation due to prolonged exposure to sunlight.

FIG. 10 shows another embodiment of the invention similar to that shown in FIG. 9 but which includes a non-perforated one way mirror layer 56. In this embodiment, the mirror side of the one way mirror layer 56 is oriented towards the light reflecting direction, i.e. towards the image coating 22. The mirror layer 56 provides security in that it prevents vision through the display panel assembly in one direction. This embodiment may be used to provide building

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security such as by placement on the windows of a kiosk or room within a casino or store. In such an environment, the display panel assembly may be used to shield from public view hidden cameras or security personnel which are monitoring the events that occur within the casino or store. Alternatively, the one way mirror layer 56 can also be incorporated within other panel assembly embodiments such as those disclosed herein as desired.

It should be understood that various modifications within the scope of this invention can be made by one of ordinary skill in the art without departing from the spirit thereof. We therefore wish my invention to be defined by the scope of the appended claims as broadly as the prior art will permit, and in view of the specification if need be.

What is claimed is:

1. A one way vision display panel assembly specially constructed for pressure sensitive application onto a window of a building or vehicle, said one way vision display panel assembly comprising:

- a) a perforated panel assembly including:
  - i) a perforated transparent panel formed of a flexible plastic sheet material having a front surface and a rear surface;
  - ii) a perforated protective liner;
  - iii) pressure sensitive adhering means disposed between said front surface of said perforated transparent panel and said perforated protective liner for removably adhering said perforated transparent panel to said perforated protective liner so that said perforated protective liner can be peeled off from said perforated transparent panel to permit pressure sensitive application of said perforated transparent panel to a clear substrate;
- b) said rear surface of said perforated transparent panel having applied thereon a first coating of light-reflective color bearing an image followed by a second coating of an opaque color sufficiently dark for absorbing light, wherein:
  - i) said perforated panel assembly appears substantially transparent when viewed from a first direction;
  - ii) said image is clearly visible when said perforated panel assembly is viewed from a second, opposite direction; and

c) a non perforated backing layer removably attached to said perforated protective liner, wherein said non perforated backing layer being effective to facilitate handling of said perforated panel assembly.

2. A one way vision display panel assembly according to claim 1 which includes a non perforated mirror film layer disposed between said perforated protective liner and said non perforated backing layer.

3. A one way vision display panel assembly according to claim 1 wherein said non perforated backing layer comprises mirror film material.

4. A one way vision display panel assembly according to claim 1 wherein:

- a) the perforated panel assembly is provided with through-holes of a substantially uniform hole size in a range of about 0.001" to 1.0"; and
- b) said though-holes are arranged in a staggered hole pattern to provide an open area in a range of about 40% to 70% and to permit the perforated panel assembly to conform to compound curved surfaces of a clear substrate without wrinkling.

5. A one way vision display panel assembly according to claim 1 wherein said pressure sensitive adhering means

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comprises static cling properties provided to said perforated transparent panel.

6. A one way vision display panel assembly according to claim 1 wherein said pressure sensitive adhering means comprises a layer of perforated transfer adhesive material.

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7. A one way vision display panel assembly according to claim 1 wherein said perforated transparent panel has ultra violet (UV) protective properties.

\* \* \* \* \*

## EXHIBIT B



US005773110A

# United States Patent [19]

## Shields

[11] **Patent Number:** **5,773,110**[45] **Date of Patent:** **\*Jun. 30, 1998**[54] **WINDOW PAINTING APPARATUS AND METHOD**[75] Inventor: **Rodney M. Shields**, Lafayette, Calif.[73] Assignee: **Creative Minds Foundation**,  
Wilmington, Del.[\*] Notice: The term of this patent shall not extend  
beyond the expiration date of Pat. No.  
5,609,938.

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*Primary Examiner*—Nasser Ahmad  
*Attorney, Agent, or Firm*—Feix & Feix

[57]

## ABSTRACT

An improved display product and method of making a display wherein a perforated panel is provided with layers of paint which are kept on the panel. Thus, a sign painter can have a wide latitude of designs which can be applied to see-through graphics. The resulting product can be opaque to an observer looking from one side of a display product yet the observer is able to see through the product from the other side of the product. A window to be provided with a display product is masked with masking paper and masking tape to cover the exposed parts. A perforated panel is cut to fit the window and attached over the masking paper and the masking tape. The perforated panel is painted with an image that is desired.

18 Claims, 6 Drawing Sheets

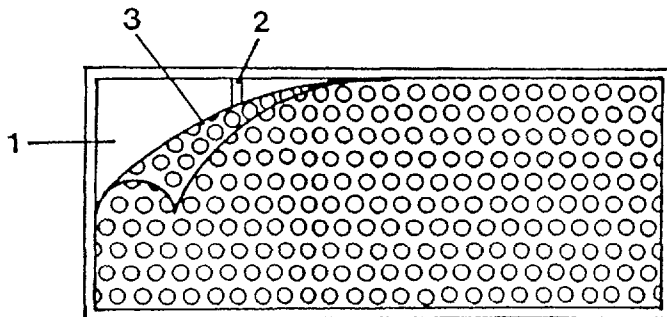
[21] Appl. No.: **203,181**[22] Filed: **Feb. 28, 1994**[51] **Int. Cl.**<sup>6</sup> ..... **B05D 5/00**; G09F 19/02[52] **U.S. Cl.** ..... **428/40.1**; 52/105; 52/171.3;  
359/594; 427/96; 427/259; 427/264; 427/265;  
427/266; 428/41.6; 428/41.7; 428/41.8;  
428/42.1; 428/138; 428/187; 428/191; 428/195;  
428/204[58] **Field of Search** ..... 428/40, 187, 191,  
428/204, 195, 138; 52/105, 171.3; 359/594;  
427/259, 264, 265, 266, 96

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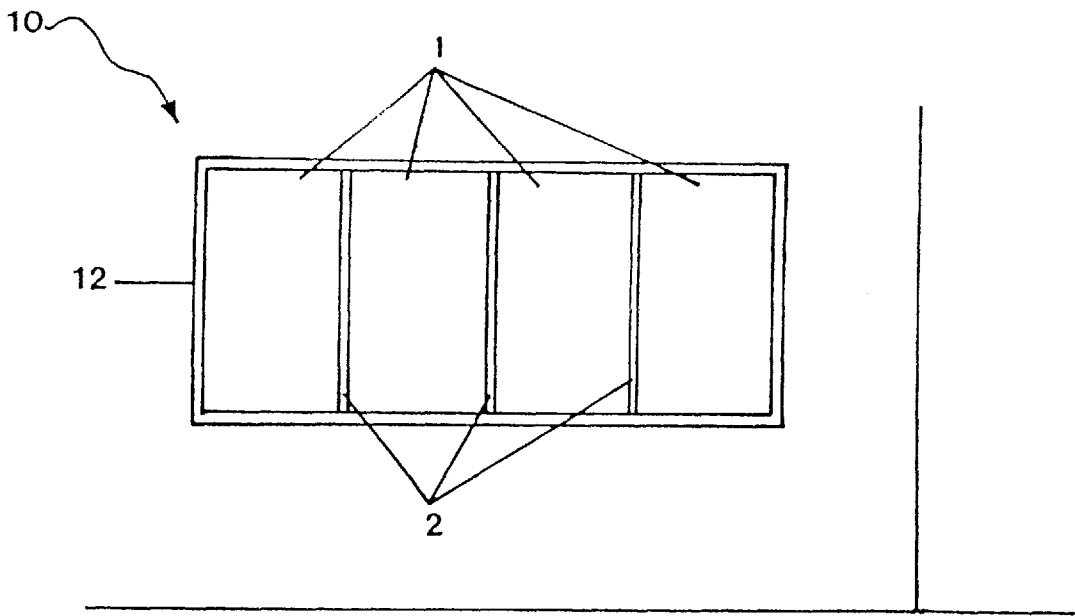


FIG. 1

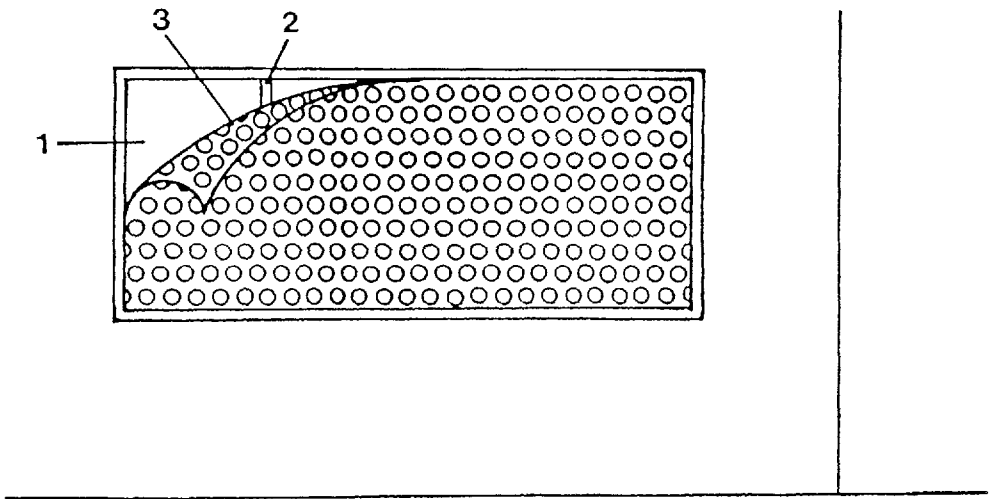


FIG. 2

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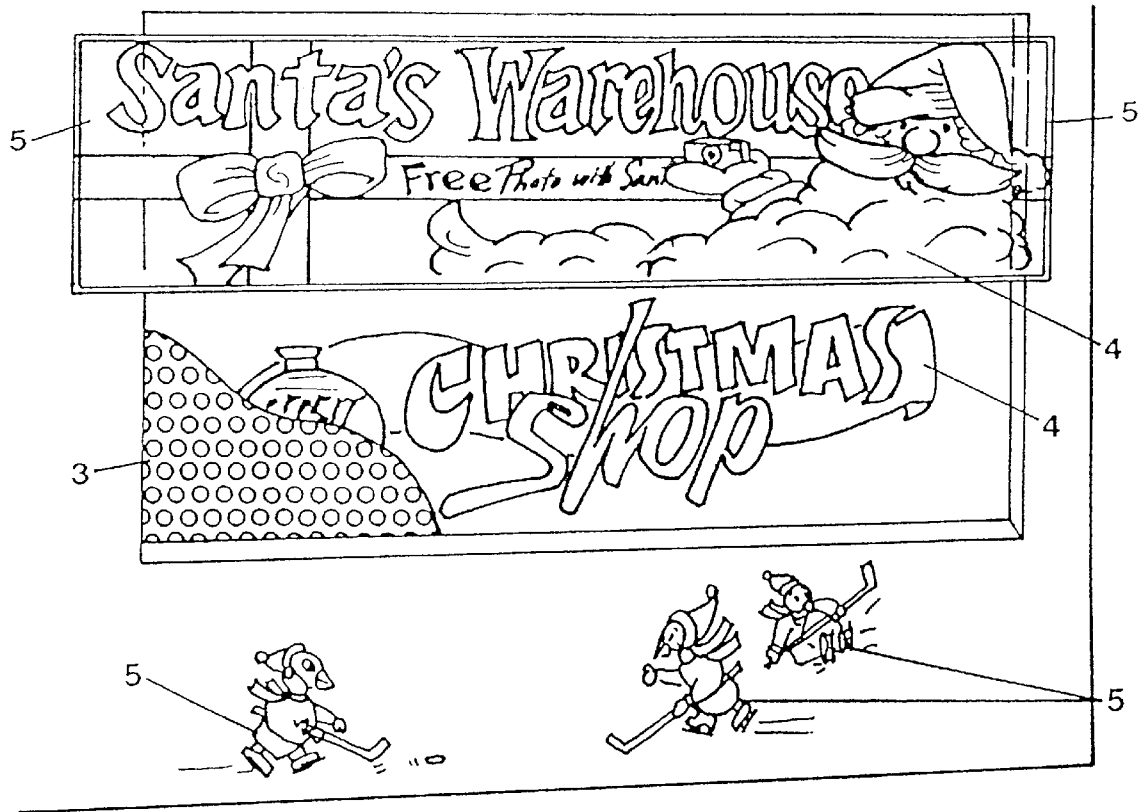


FIG. 3

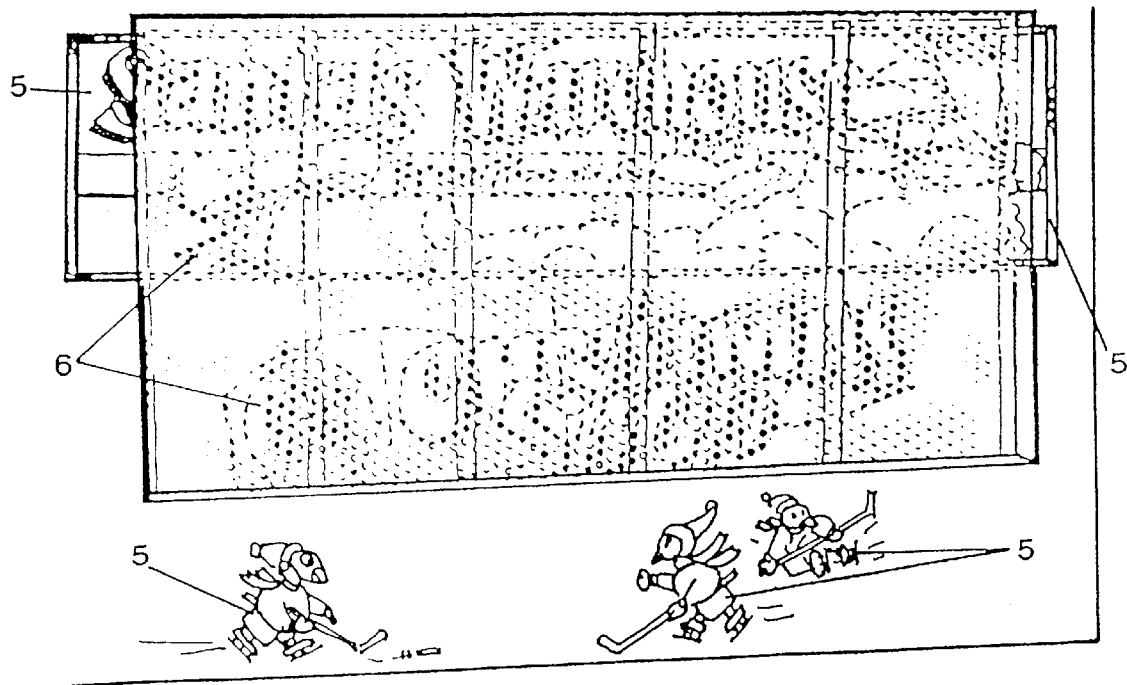


FIG. 4

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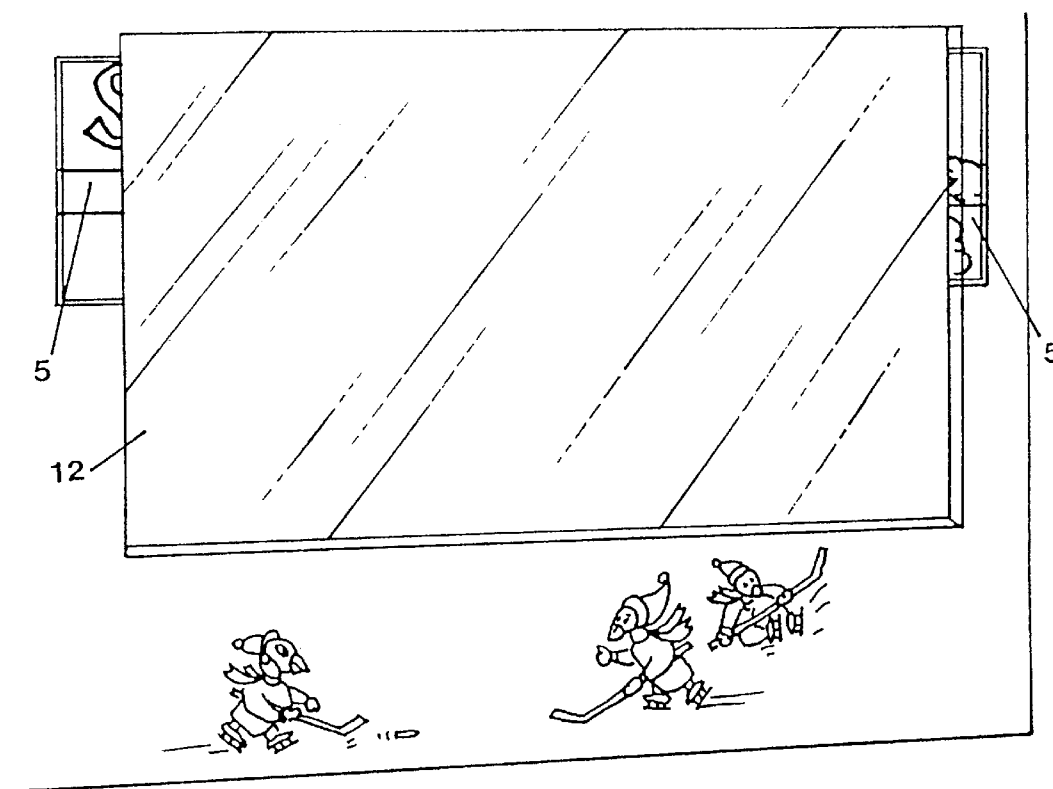


FIG. 5



FIG. 6

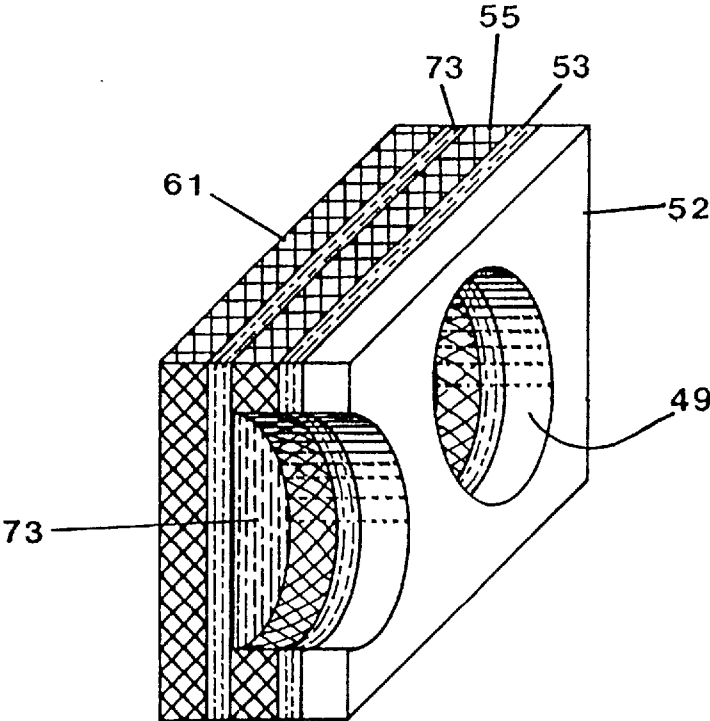


FIG. 7

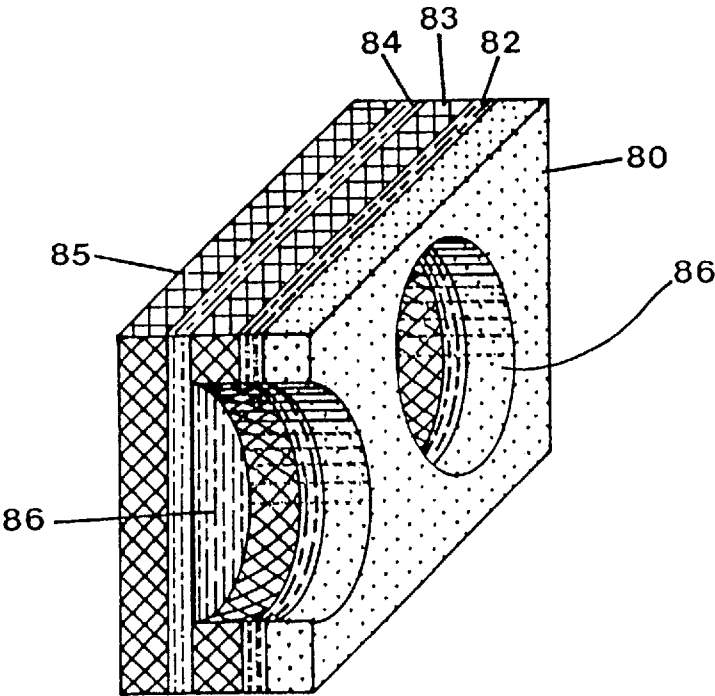


FIG. 8

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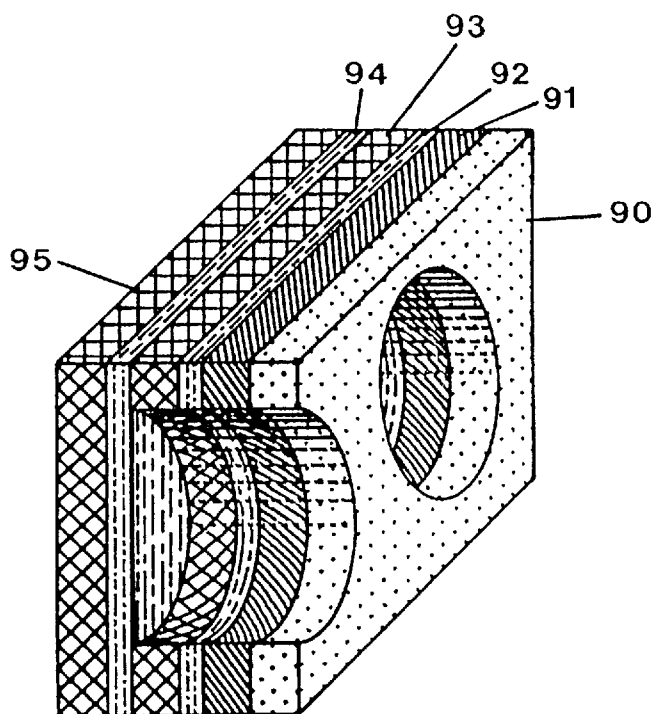


FIG. 9

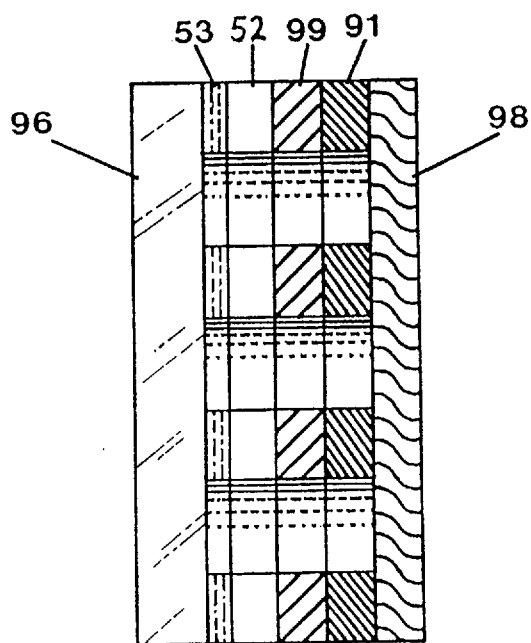


FIG. 10

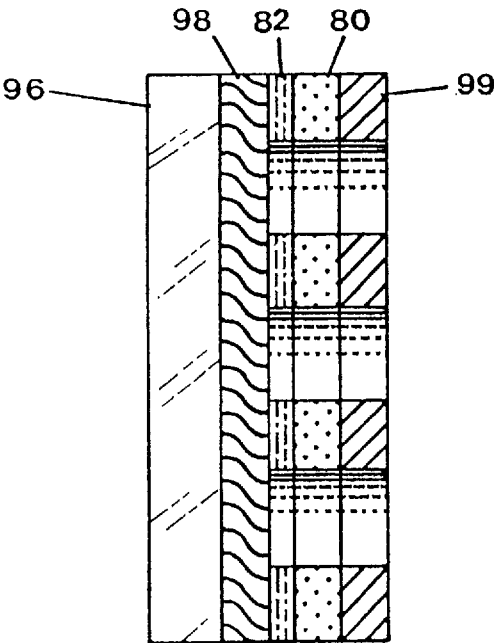


FIG. 11

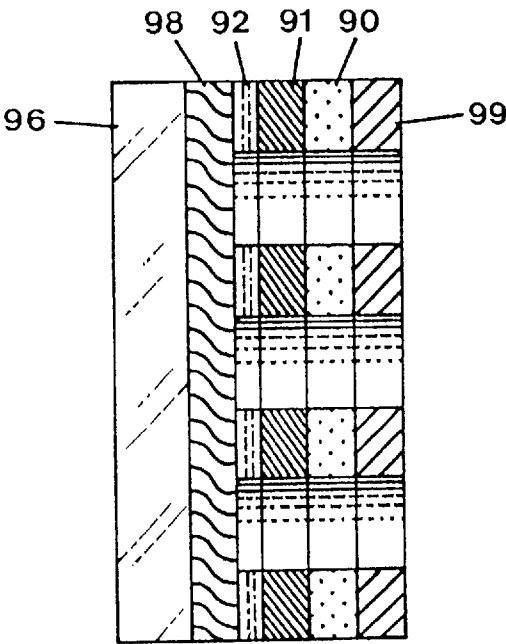


FIG. 12

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## WINDOW PAINTING APPARATUS AND METHOD

This invention relates to techniques for the painting of transparent panels, such as windows, which permits messages, signs, and other such displays to be affixed to and displayed on such panels while permitting the passage in one direction but not in the opposite direction of visible light through light passages.

### BACKGROUND OF THE INVENTION

In the practice of window painting for advertising or promotional purposes, it is desirable to create as large an eye-catching a display as possible. Generally, however, a display across a window will block any light which would otherwise come through the window. Thus, this light cannot add to the interior lighting requirement of the structure or store having the window. Additionally, in such structures as banks where security is of importance, not being able to see out through the windows can present serious security problems. Security can be important to the safety and well-being of the bank customers and employees.

Painted window graphics is one of the largest segments in the sign painting industry. They can be seen practically everywhere—at banks, restaurants, and retail stores. Yet, traditional painted window graphics look untidy from a location inside of the window, as well as blocking natural light into and through the store window and out of the window. Typically, from the reverse side of an image on the graphics, the appearance of the image looks poorly and can be a great distraction, and this is a well-known objection to the use of such images upon window surfaces.

Hill, U.S. Pat. No. 4,673,609, discloses a method of painting one-way graphics onto windows by the use of a mask applied to the window where paint goes through the holes to adhere directly to the glass. There are many problems associated with this method.

1. If the mask does not adhere properly, the paint will bleed under the mask and create unsightly irregular or ragged patterns of dots.
2. Removal of the mask may remove portions of the color or lift entire dots from the surface of the glass.
3. Removal of the graphics from the glass is labor intensive, requiring the use of aggressive window cleaning techniques including scraping the paint from the window, the use of cleaning agents, or the use of high pressure sprays.
4. During the removal of painted graphics from the surface of the glass, the washed off or scraped off paint particles can stain the surrounding areas such as window frames or sills, wall areas, landscaping and walkways.
5. Multiple coats of paint are required to achieve one way graphics; first a black or dark coat is applied and then after the black coat has dried, then at least one coat of the background color is required to cover the black coating.
6. One way graphics painted directly onto glass require a significant investment of time both in the application of several coats of paint and in the labor-intensive removal methods required.

It could be well if the use of such images did not block the light or the view that is the intended function of the window, because the benefit of such images would be great.

The display product and method of this invention seeks to solve these problems.

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## SUMMARY OF THE INVENTION

The present invention is directed to an improved display product and method of making the display wherein a perforated panel is provided with layers of paint which are kept on the perforated panel. Thus, depending upon the type of display which is desired, the sign painter using the teachings of the present invention can have a wide latitude of designs which can be applied to see-through graphics. The resulting product can be substantially opaque to an observer looking from one side of a display product yet the observer is able to see through the product from the other side of the product itself.

For the sign painter who wants quality and durability with the ability to create see-through graphics, the preferred embodiment is a superior display product for hand painted one-way graphics. An image is painted onto a perforated panel, and then the panel is applied to window surfaces. This allows durable and high quality paints to be used for longer term graphics displays, compared to traditional painted window graphics.

The preferred embodiment is for use on masked windows since it has a perforated liner that could allow the paint to go through the liner. For unmasked windows, or for applications where it is desired to do the painting in locations other than the site of the installation, a different version could have an additional liner which would prevent the paint from bleeding through.

In the preferred embodiment of the present invention, a window to be provided with a display product is masked with masking paper and masking tape to cover the exposed parts. A perforated panel is cut to fit the window and attached over the masking paper and the masking tape. The perforated panel is painted with an image that is desired. Once the painting is completed, the panel is taken away from the masking paper, and the masking paper and the masking tape are removed and discarded. The painted panel with the one or more layers of paint thereon is applied to the window which was previously covered by the masking tape and the masking paper. The perforated panel could have an adhesive coating that would have a protective backing liner to protect the adhesive. This liner is peeled off when as the perforated panel is peeled or separated from the backing masking paper and masking tape, thus, leaving the holes of the perforated panel free as well as holes in the painted liner.

Once the perforated panel with paint thereon is applied to the window, the assembly of panel and paint layers is complete and an observer looking in the direction of the panel will see through the panels without seeing the paint layer and the observer looking at the paint layer from a distance will not see the interior of the space or the opposite side of the panel from the window side.

Typically, the perforated panel is applied by an adhesive to the masking paper but it also can be applied by other methods, such as tape, double-stick tape, sprayed adhesive, suction cups and the like. The perforated panel can be backed by a non-perforated backing layer either with or without an adhesive layer therebetween. Such removable backing liner would eliminate the need for masking of the windows in many installations.

The primary object of the present invention is designed to provide an improved painted display product and method of making the product wherein a perforate panel is used to form a display product on a glass surface or window and in which the display product is possible due to the placement of the perforate panel on the window. Thus the observer can view the image from one side of the window surface, but not from

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the other side, all of which gives wider latitude to the formation of designs on window surfaces in an efficient, economical manner.

Other objects of this invention will become apparent as the following specification progresses, reference being had to the accompanying drawings for an illustration of the invention.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view of a window to be provided with the design of the present invention covered by masking paper and tape;

FIG. 2 is a view similar to FIG. 1 but showing a perforated panel applied over masking tape and masking paper on the window;

FIG. 3 is a view of the window with the perforated panel mounted on the masking tape and masking paper applied to the window surface, and a paint layer applied to the perforated panel and to areas around the window;

FIG. 4 is a view similar to FIG. 3 but showing the masking paper and masking tape to which are applied the dots of paint passing through the holes of the perforated panel, the result being observed when the panel and tape layer are peeled off the masking tape and masking paper;

FIG. 5 shows the window after the masking paper and masking tape have been removed, portions of the image not on the window remaining;

FIG. 6 is a view similar to FIG. 4 but showing the painted panel 8 installed on the window surface with the remaining image portions aligned with the surrounding graphics;

FIG. 7 shows a fragmentary perspective view of the assembly of layers capable of holding the design of the present invention;

FIG. 8 is a view similar to FIG. 7 but showing a slightly modified form from that shown in FIG. 7;

FIG. 9 is a view similar to FIGS. 7 and 8 but showing black adhesive backing for the stack of the present invention; and

FIGS. 10, 11 and 12 are vertical sections through the panel assemblies of FIGS. 7, 8 and 9, respectively.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In a preferred embodiment of the invention denoted by the numeral 10 having clear glass panes or window 12 (FIG. 1) is provided with a masking tape 2 around the exposed window hardware and a masking paper sheet 1 is applied to the window on one surface thereof.

A perforated panel 3 is shown in FIG. 2 as applied to and fitted with the window on one side of the transparent or translucent pane or surface thereof. The perforated panel 3 is cut to fit the window. Panel 3 is hung in place with double-stick tape strips, the attachment being in covering relationship to the masking paper 1 and the masking tape 2.

The outer surface of the panel 3 is painted with an image denoted by the numeral 4 (FIG. 3) as desired. In applications where the window will have the graphics to match the image around the window on large continuous graphics, for example, the entire scene can be painted at one time including the masked windows covering the perforated panels. The numeral 5 shows portions of the image that extend onto the surrounding surfaces of the structure that supports the window. Since the same paint is used on the assembly and the rest of the site to be painted, and the painting is all done at

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one time, there will be little noticeable difference between a portion of the image on the panel and the rest of the graphic, yet persons on the inside of the window can still see out through the window to the outside of the building or structure which the window forms a part.

Once the painting layer has completely dried, the panel 3 is separated from and taken off the masking paper and masking tape. Then, after the masking paper and masking tape have been taken off the window surface, they are discarded as they are no longer needed to carry out the teachings of the present invention. FIG. 4 shows a portion of the paint dots 6 on a masking paper and masking tape but this is not the image which is desired. The desired image is painted on the outer surface of the perforated panel 3 (FIG. 6) and this panel has been separated from the masking paper 1 and a masking tape 2.

FIG. 5 shows the windows from which the masking paper 1 and the masking tape 2 have been removed. The end portions of the image not on the window remain on the panel.

After the masking paper and masking tape have been removed from the window, the perforated panel with the layers of paint forming the image 4 on the panel are applied to the window surface as shown in FIG. 6, and the holes in the perforated panel allow the observer to see through the panel from one side of the window but an observer can only see the image in the form of the paint layers when looking at the window from the other side of the window.

The panel could have an adhesive coating that would have a protective backing liner to protect the adhesive until ready for use. The assembly could be done either before or after the perforation of the panel. To install the painted panel in this configuration, the backing liner of the assembly is first removed to expose the adhesive backing; then, the image on the assembly is aligned with the surrounding graphics and the assembly is smoothed out onto the surface of the window, thus attaching the perforated panel and the image to the window surface. Another possibility of the installation would be to affix the perforated panel to the glass window surface in some other method such as by an adhesive or tape, a double-stick tape, spray adhesive, suction cups and the like.

The panel can be backed with a non-perforate backing either with or without the adhesive layer in a protective backing liner which could or would eliminate the need for the masking of the windows in many installations.

FIG. 7 shows a cross-sectional view of an embodiment with a non-perforated backing paper. This configuration uses transparent materials which could be affixed to the glass and is provided for configurations which could be used for applications where the image would be viewed through the glass panel. The panel on which the image is to be painted or printed, broadly denoted by the numeral 52, is transparent and is backed with a transparent adhesive layer 53 which could also be an electrostatically charged surface as in static cling plastic materials.

The adhesive layer 53 is protected by a removable backing liner 55. These three elements, namely panel 52, clear adhesive 53, and backing liner 55 could form an assembly of layers which could be perforated with holes 49 together. The assembly of these three layers would then be bonded or laminated onto a perforated removable backing material or layer 61, by an adhesive 73. The adhesive as shown is applied to the backing and then the assembly 55 and 73 is laminated to the assembly of layers 52, 53 and 55. The adhesive 73 could be applied to the back of the removable

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backing liner 55 to adhere the non-perforated removable backing material 61 to the assemblies 52, 53 and 55. Alternately, layers 52 and 53 can be backed directly to non-perforated removable backing layer 61.

It is only necessary that the panel which is to be painted or printed upon, namely panel 52, be perforated. All other elements except the backing material 73 can be perforated or not as desired.

FIG. 8 shows perspective views of an embodiment wherein the image can be visible over the surface of the glass. The panel 80 on which the image is to be painted or printed is opaque material. Panel 80 is backed with a dark colored adhesive 82. The adhesive layer 82 is protected by a removable backing layer 83. These three elements, namely elements 80, 82 and 83 could form an assembly which permits the elements to be perforated with holes 86 together. The assembly of layers 80, 82 and 83 would then be bonded to or laminated to a backing material 85 by an adhesive 84. The adhesive as shown is applied to the backing liner 85 and then the assembly of layers 84 and 85 is laminated to the assembly layers 80, 82 and 83. The adhesive would be applied to the back of the layer 83 to adhere the backing material layer 85 to the exposed assembly of layers 80, 82 and 83. Layers 80 and 82 could be backed with a non-perforated removable backing layer 85.

It is only necessary that the panel which is to be painted or printed upon, namely panel 80, be perforated. All of the other elements, except the printed material at layer 85 can be perforated or not, as desired. The backing should be solid for most applications.

FIG. 9 shows a view similar to FIGS. 7 and 8 in which the opaque panel 90 has a dark colored layer 91 with an adhesive 92 which could also be an electrostatically charged film as in static cling plastic materials, a transparent adhesive or a dark colored adhesive. The adhesive layer 92 is protected by a removable backing liner 93. These four elements could form an assembly which could be perforated together. The assembly of elements 90, 91, 92 and 93, would then be bonded or laminated to a backing material 95 by an adhesive 94. The adhesive is applied to the backing and then the assembly 94 and 95 is laminated by the assembly of 90, 91 and 92. The adhesive could be applied to the back of the removable liner 93 to adhere the backing material 95 to the assembly 90, 91 and 92. Layers 90, 91 and 92 could be backed with a non-perforated removable backing layer 95.

It is only necessary that panel 90 which is to be painted or printed upon be perforated. All the other elements except the backing material 95 can be perforated or not, as desired. The backing material should be solid for most applications.

In FIGS. 10-12, the image 99 is viewable from the left in FIG. 10 and from the right in FIGS. 11 and 12. FIGS. 10, 11 and 12 show the addition of a semitransparent material 98 such as a partially tinted film or metalized film commonly known as one-way mirror film or window tinting. The addition of this semitransparent material allows the one-way printing effect to compensate for different light levels and would offer a greater degree of "one-way vision", which would have many applications in the field of security or surveillance. FIGS. 10, 11 and 12 also show the panels adhered to a window material such as glass or plastic 96, after the backing materials have been removed and discarded. FIG. 10 also shows the perforated adhesive backed panel 52 of FIG. 7 printed with an image 99 and overlaid with a dark color layer 91.

What is claimed is:

1. A method of painting a window with a one-way vision image, wherein the image is visible when viewed from one

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side of the window and wherein the image appears substantially transparent when viewed from the other side of the window, the method comprising the steps of:

- providing a panel assembly comprising a panel layer having a first panel side for receiving an image and a second panel side for mounting to a window, the panel assembly further including a protective liner removably attached to said second panel side;
  - perforating the panel assembly with a plurality of through-holes;
  - applying a removable solid backing layer to a protective liner side of the perforated panel assembly;
  - temporarily mounting the perforated panel assembly with solid backing layer to a window;
  - painting said first panel side of said panel layer with at least one layer of paint to form an image on non-perforated portions of said panel layer, said solid backing layer preventing excess paint which travels through said plurality of through-holes in said panel assembly from contacting the window;
  - removing said perforated panel assembly along with said solid backing layer from the window; and
  - peeling back said protective liner from said panel layer and adhering said panel layer to the window.
2. The method according to claim 1 wherein said protective liner is removably attached to said second panel side of said panel layer by an adhesive layer.
3. The invention according to claim 1, wherein said panel layer comprises static cling plastic material.
4. The method according to claim 2 wherein: said panel layer comprises transparent material; and said painting step includes applying separate paint layers of light-reflective color and dark color.
5. The method according to claim 3 wherein: said panel layer comprises transparent material; and said painting step includes applying separate paint layers of light-reflective color and dark color.
6. The method according to claim 2 wherein: said adhesive layer is colored black; said panel layer comprises transparent material; and said painting step includes applying a layer of light-reflective color.
7. A method of painting a window with a one-way vision image, wherein the image is visible when viewed from one side of the window and wherein the image appears substantially transparent when viewed from the other side of the window, the method comprising the steps of:
- providing a panel assembly comprising a panel layer having a first panel side for receiving an image and a second panel side for mounting to a window, the panel assembly further including a protective liner that is removably attached to said second panel side;
  - perforating the panel assembly with a plurality of through-holes;
  - masking a window to be painting with a masking sheet; temporarily mounting the perforated panel assembly over the masking sheet;
  - painting said first panel side of said panel layer with at least one layer of paint to form an image on non-perforated portions of said panel layer, said masking sheet for catching excess paint which travels through said plurality of through-holes and for preventing paint from contacting the window;
  - separating said perforated panel assembly from said masking sheet;

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removing said masking sheet from the window; and  
peeling back said protective liner from said panel layer  
and adhering said panel layer to the window.

8. The method according to claim 7 wherein said protec-  
tive liner is removably attached to said second panel side of  
said panel layer by an adhesive layer. 5

9. The invention according to claim 7 wherein said panel  
layer comprises static cling plastic material.

10. The method according to claim 8 wherein:  
said panel layer comprises transparent material; and  
said painting step includes applying separate paint layers  
of light-reflective color and dark color. 10

11. The method according to claim 9 wherein:  
said panel layer comprises transparent material; and  
said painting step includes applying separate paint layers  
of light-reflective color and dark color. 15

12. The method according to claim 8 wherein:  
said adhesive layer is colored black;  
said panel layer comprises transparent material; and  
said painting step includes applying a layer of light-  
reflective color. 20

13. A one-way vision panel assembly bearing an image for  
application to a window, wherein upon application to the  
window the image is visible when viewed from one side of  
the window and the image appears substantially transparent  
when viewed from the other side of the window, the panel  
assembly comprising: 25

an assembly comprising a panel layer having a first panel  
side for receiving an image and a second panel side for  
mounting to a window, said assembly further including  
a protective liner removably attached to said second  
panel side;  
said assembly is perforated with a plurality of through-  
holes; 30 35

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a solid backing layer removably attached to a protective  
liner side of the perforated assembly, wherein:  
said solid backing layer effective to catch excess paint  
which travels through said plurality of through-holes  
as one or more layers of paint are applied to said first  
side of said panel layer; and  
said solid backing layer, along with said protective  
liner, are removable to is permit said second side of  
said panel layer to be adhered to the window.

14. The one-way vision panel assembly according to  
claim 13 wherein said protective liner is removably attached  
to said second panel side of said panel layer by an adhesive  
layer.

15. The one-way vision panel assembly according to  
claim 13 wherein said panel layer comprises static cling  
plastic material. 15

16. The one-way vision panel assembly according to  
claim 14 wherein:  
said panel layer comprises transparent material; and  
said first panel side of said panel layer includes separate  
paint layers of light-reflective color and dark color  
applied thereon. 20

17. The one-way vision panel assembly according to  
claim 15 wherein  
said panel layer comprises transparent material; and  
said fist panel side of said panel layer includes separate  
paint layers of light-reflective color and dark color  
applied thereon. 25

18. The one-way vision panel assembly according to  
claim 14 wherein:  
said adhesive layer is colored black;  
said panel layer comprises transparent material; and  
said first panel side of said panel layer step includes a  
layer of light-reflective color applied thereon. 30

\* \* \* \* \*

## EXHIBIT C

(12) **United States Patent**  
**Nelson**

(10) **Patent No.:** **US 6,258,429 B1**  
(45) **Date of Patent:** **Jul. 10, 2001**

(54) **ONE-WAY SEE-THRU PANEL AND METHOD OF MAKING SAME**

(76) Inventor: **Stephen G. Nelson**, 4828 N. 31st. St., Phoenix, AZ (US) 85016

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/037,315**

(22) Filed: **Mar. 9, 1998**

**Related U.S. Application Data**

(60) Provisional application No. 60/036,678, filed on Mar. 11, 1997.

(51) **Int. Cl.<sup>7</sup>** ..... **B32B 3/10**

(52) **U.S. Cl.** ..... **428/42.1**; 40/442; 428/40.1; 428/41.6; 428/41.7; 428/204; 428/207; 428/137; 428/138

(58) **Field of Search** ..... 428/40.1, 42.1, 428/41.6, 41.7, 204, 207, 137, 138; 40/442

(56) **References Cited**  
**U.S. PATENT DOCUMENTS**  
5,609,938 \* 3/1997 Shields ..... 428/138  
5,756,153 \* 5/1998 Plourde ..... 428/480  
5,830,529 \* 11/1998 Ross ..... 427/152  
5,925,437 \* 7/1999 Nelson ..... 428/137  
\* cited by examiner  
*Primary Examiner*—Nasser Ahmad  
(74) *Attorney, Agent, or Firm*—Gregory J. Nelson

(57) **ABSTRACT**  
A see-through, one-way panel having a white opaque substrate with a dark pigmented adhesive on the rear side. The pigmented adhesive is covered with a release liner. The substrate, adhesive and liner are perforated and thereafter an imperforate barrier is laminated over the release liner. The front surface may be top coated to accept a dye based ink. The front surface is printed with an image by thermal or piezo ink jet printing technology. The resulting panel may then be adhesively applied to a surface.  
**11 Claims, 2 Drawing Sheets**

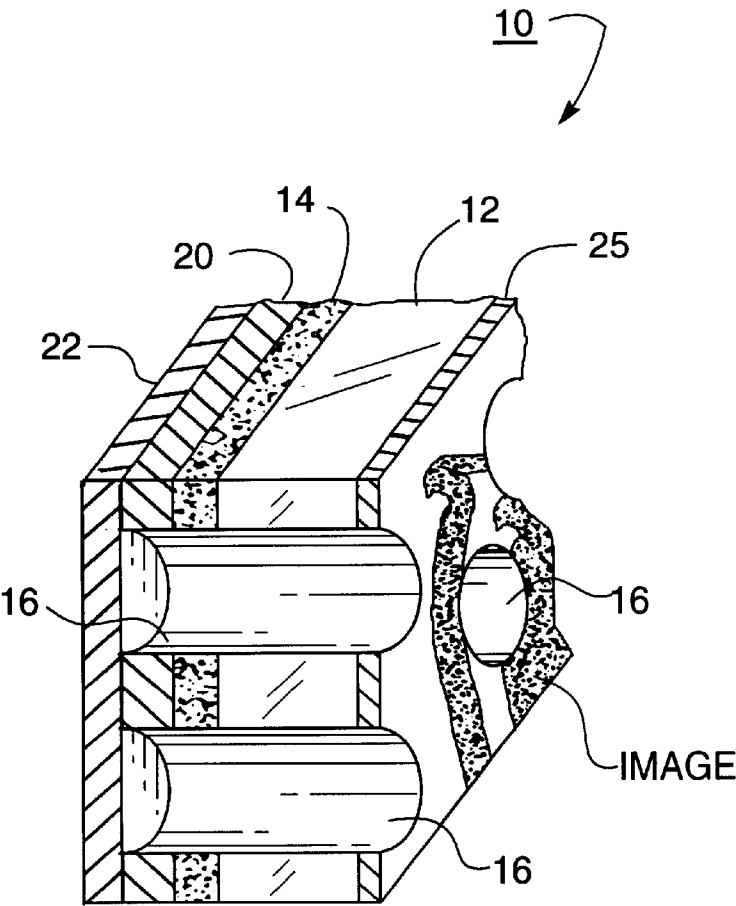


Exhibit C

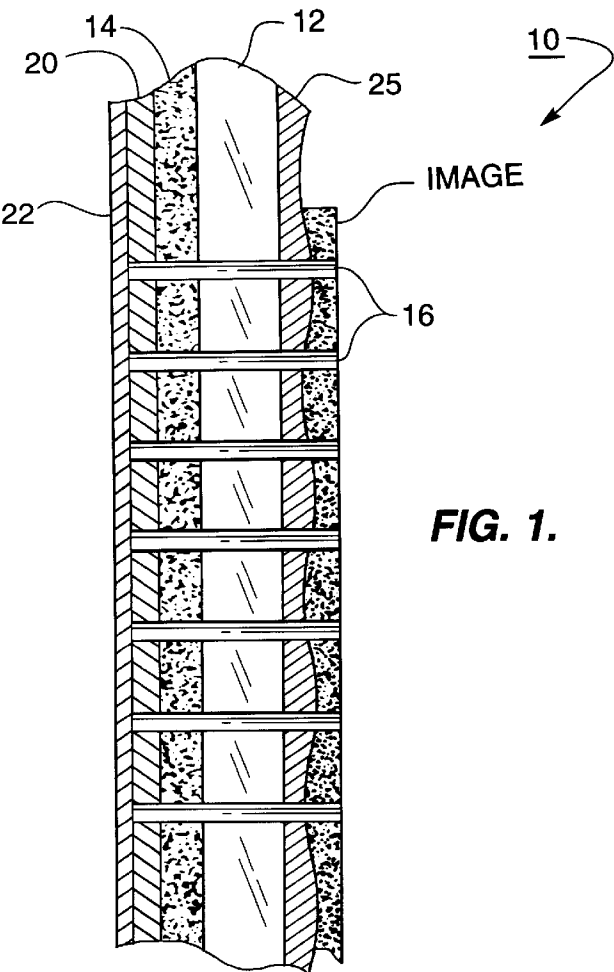


FIG. 1.

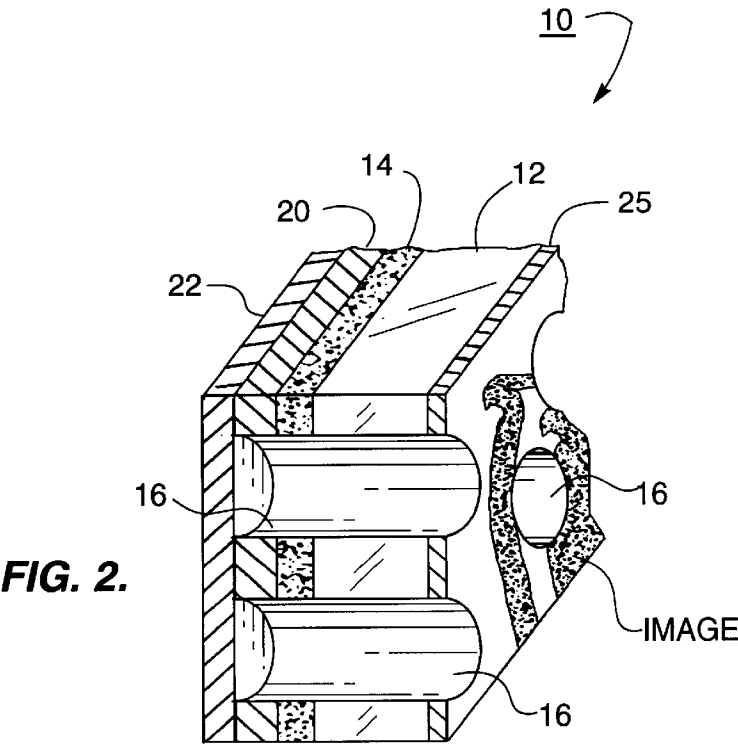
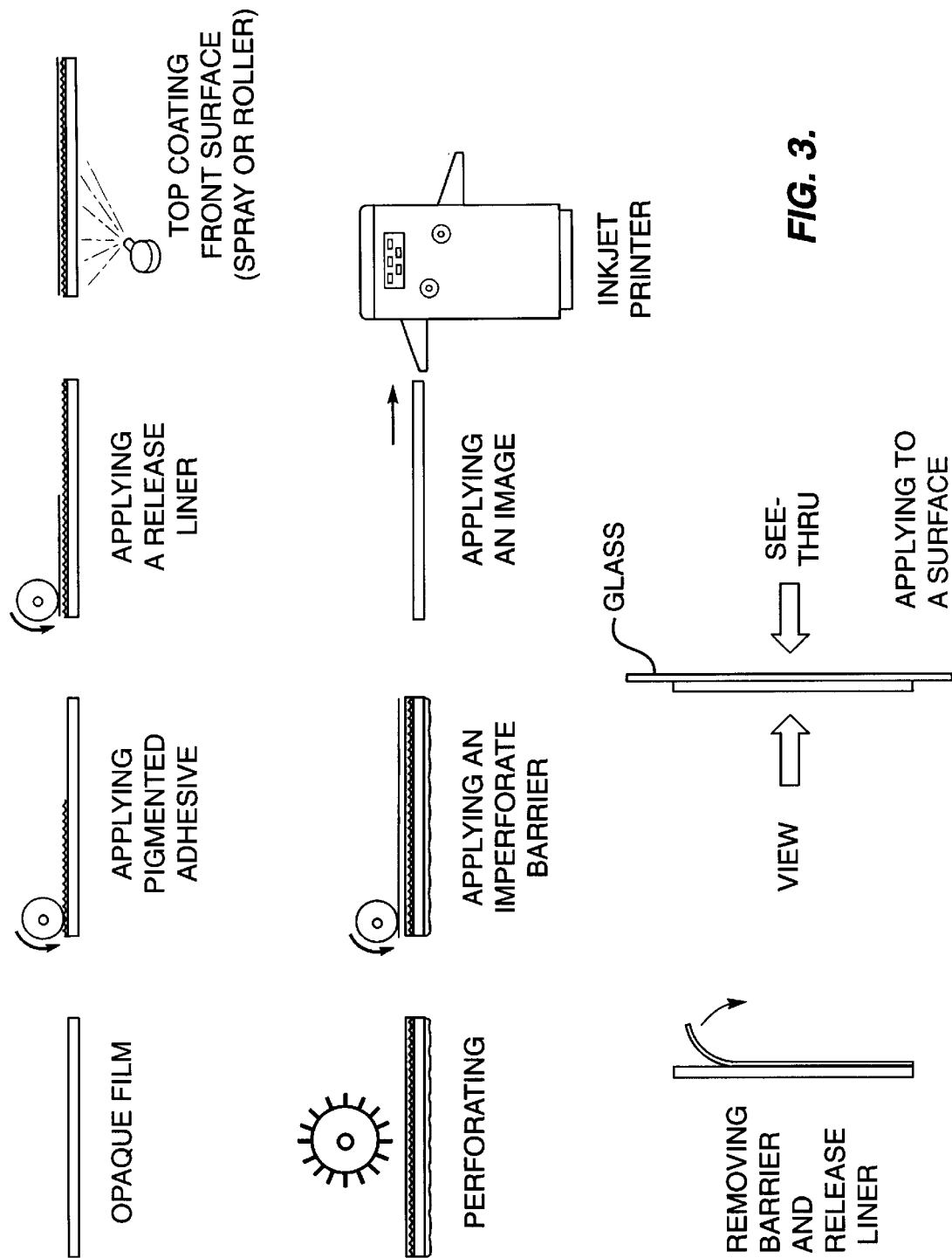


FIG. 2.



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ONE-WAY SEE-THRU PANEL AND METHOD  
OF MAKING SAME

This application is based on Provisional patent applica-  
tion Ser. No. 60/036,678, filed Mar. 11, 1997 entitled  
“Method For Manufacturing One-Way See-Thru Films”.

BACKGROUND OF THE INVENTION

1. Field of the Invention

See-thru or one-way films have become well known and  
are used for various purposes, mainly advertising displays.  
Most see-thru films are fabricated having a substrate which  
is perforated and which is coated on one side with a black  
pigment. The opposite side is white opaque and printed with  
an image and conventional practice is to print the image by  
use of silkscreening or lithography. The perforations permit  
viewing in one direction which is substantially unobstructed.  
The white opaque surface receives the image which is  
viewable from the opposite side. For example, see Pat. Nos.  
4,883,556 and 4,940,622 to Leavitt which teach silkscreen-  
ing a perforated substrate. Similarly, U.S. Pat. No. 5,525,177  
teaches a printing or image transfer method using an elec-  
trostatic process in which a reverse image is transferred to a  
surface of a perforated membrane.

2. Background of the Invention

The problem with using conventional printing methods  
such as screen printing is that screen printing is not cost  
effective for short runs, is time consuming and the resulting  
product while acceptable, does not have a high quality of  
resolution. Also, screen printing images cannot be tiled for  
unique one-of-a-kind graphics. Similarly, deficiencies exist  
with electrostatic processes.

Electrostatic printing is applicable to short-run graphics.  
However, the equipment necessary for electrostatic printing  
is much more expensive than silkscreening, thermal or piezo  
ink jet printing and is more complicated involving the use of  
a laminator to transfer the printed image to an electrostatic-  
ally charged substrate.

The present invention relates to an improved method for  
producing or imaging see-thru panels or films with ink jet  
technology. See-thru films have the advantage that an image  
may be applied and viewed from one side and, because of  
the perforations, substantial light passes through the film  
allowing the viewer relatively unobstructed vision from the  
opposite side. Thus, see-thru films are widely used on such  
advertising applications as the signage applied to the sides of  
vehicles such as buses, allowing the passengers a relatively  
unobstructed view. See-thru films are also used where vis-  
ibility for security purposes is important. Glass panels such  
as windows and cooler cases are other typical applications  
for these types of film.

BRIEF SUMMARY OF THE INVENTION

Briefly, the present invention provides a high resolution,  
see-thru, one-way vision panel manufactured using an  
opaque substrate which may be polyester, vinyl or a poly-  
olefin and which is outdoor durable. Preferably the substrate  
is pigmented with a white opaque pigment. The substrate is  
coated on one side, the rear side, with a black pigmented  
adhesive which is protected by a release liner such as silicon  
coated paper. Once the adhesive and release liner are  
applied, the substrate is perforated to create a distinct hole  
pattern. The perforations can be accomplished by using a  
mechanical or laser perforating process. Typically, the hole  
pattern consists of 1/16" diameter holes which are staggered

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3/32" from one another but other patterns may be applied. The  
opposite or front side of the substrate is chemically treated  
to encapsulate dyes and pigmented inks. Synthetic films,  
such as polyesters and vinyls which are not top-coated, will  
not absorb certain types of ink, particularly dye based and  
pigmented inks. Top coatings such as clays, resins, gels and  
latex combination coatings are best. Another embodiment of  
the invention involves the application of solvent based inks  
to form an image on the substrate, the application of which  
does not require top coating.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a cross-sectional view showing a one-way panel  
manufactured and imaged according to the invention:

FIG. 2 is an enlarged cross-sectional view of the panel  
shown in FIG. 1; and

FIG. 3 is a schematic diagram of the method of the  
invention.

Turning now to the drawings, FIGS. 1 and 2 show a cross  
section of a typical panel 10 according to the invention. The  
panel 10 includes a substrate 12 which is a polymeric film  
such as a polyester or preferably vinyl sheet material having  
a typical thickness of 4 mils. The substrate 12 may be  
transparent or opaque although opaque having a white  
colorization is preferred. In lieu of using an opaque  
substrate, the front surface may be flood coated with a white  
or light reflecting screen printing or the like.

The rear surface is coated with an adhesive layer 14.  
“Rear” as used herein refers to the surface which would  
normally be applied to a surface such as glass store front as  
signage. The image is viewed from the front and when the  
panel 10 is viewed from the rear, see-through vision is  
provided due to passage of light through perforations 16.  
The image on the front is not visible from the rear.

The adhesive layer 14 is pigmented with a black or  
light-absorbing pigment. The adhesive is preferably an  
acrylic adhesive which may be applied by conventional  
methods such as rolling or spraying. The adhesive layer 14  
is then covered with a peelable release liner 20 such as a  
silicone coated paper which is removed to expose the  
adhesive at the time of application. The liner 20 is generally  
roll fed and applied by a pressure roller.

Perforations 16 extend through the release liner and the  
release liner is backed with a barrier film 22 which prevents  
bleed through of inks when the image is applied. Both the  
release liner 20 and barrier 22 are removed at the time the  
panel is installed. The front surface is then top coated with  
a coating 25 which will absorb ink of the type applied by jet  
inks and enhance UV durability, stability and weather resis-  
tance. Dye-based ink jet inks are not generally used for  
outdoor applications because of their tendency to fade in  
sunlight and to be detrimentally effected by water. With the  
present invention, ink jet printing techniques, either piezo or  
thermal, which are fast and less expensive than e-stat, can be  
utilized for applications such as exterior signs and particu-  
larly one-way vision panels.

The top coating may be selected from various materials  
which adhere to the polymeric substrate and which will  
absorb and encapsulate the ink jet dye. Representative of  
such top coats are clays, gels and resins such those manu-  
factured by Precision Coatings, Inc. under the Renais-  
sance™ trademark. American Coating Technology also mar-  
kets a similar coating designated Protecoat Formulation  
#4119.

After top coating, the assembly is perforated using either  
conventional mechanical punching with dies or punches or

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by laser perforating in the desired pattern as described more fully in U.S. Pat. No. 5,550,346.

After perforating, an imperforate barrier **22** is applied to the rear of the assembly. The barrier **22** and release liner **20** will be removed at the time of application. However, the barrier **22** prevents spray through of dyes at the time the image is applied to the front surface. Also, use of the imperforate barrier facilitates handling of the material by use of vacuum tables and equipment thus making handling much more efficient.

FIG. **3** illustrates the process described above in schematic format.

The following are examples of one-way, see-through substrates manufactured according to the present invention:

EXAMPLE 1

A top-coated polyester of the type manufactured by Sumner & Taylor, a member of the SIHL Group, designated Photomatte Waterproof PMW was utilized. The pigmented acrylic based adhesive of the type manufactured by Mac-Tac was gravure-coated on the back of the film and laminated with a suitable release liner, in this case **110#** silicone coated paper.

Thereafter, the substrate with attached release liner and adhesive was perforated using a mechanical perforating die to apply a hole pattern of  $\frac{1}{16}$ " diameter holes staggered on  $\frac{3}{32}$ " centers. After laminating, a nonperforated backing was applied to the back or exposed side of the release paper. The backing was a 1.7 mil. polyester. Printing was accomplished by using a computer-controlled ink jet printer. Several types of large format ink jet printers are available such as the one manufactured by Encad, such as the Encad Novajet Pro Printer are acceptable. Other similar printers are available such as the Hewlett Packard Design Jet 2000, which is a cartridge color ink jet printer, accommodating papers or substrates up to 36" wide and with color resolution up to 600 dpi. These printers are thermal which require heating the ink. Piezo technology printers are relatively new and may also be used. The desired image is applied with the nonperforated vinyl backing preventing "spray through" of the ink because of its absorbency. After the image is applied, the substrate is ready for application. At the point of application, the perforated release liner and the nonperforated backing are removed and the substrate may be applied directly to a surface such as a window.

EXAMPLE 2

A top-coated polyester, again Photomatte Waterproof PMW available from Sumner & Taylor of the SIHL Group was utilized. The substrate was perforated, again using conventional perforating dies to apply a distinct hole pattern as for to example  $\frac{1}{16}$ " diameter holes staggered at  $\frac{3}{32}$ ".

Again, perforating one side of the substrate was coated with an adhesive and a nonperforated release liner was laminated over the adhesive.

The image is then applied again using an ink jet printer such as the Hewlett Packard Design Jet 750C large format printer. The latter example is less expensive to manufacture than that described in Example 1 as it utilizes a single nonperforated liner which is removed at the time of application.

While the principles of the invention have been made clear in the illustrative embodiments set forth above, it will be obvious to those skilled in the art to make various

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modifications to the structure, arrangement, proportion, elements, materials and components used in the practice of the invention. To the extent that these various modifications do not depart from the spirit and scope of the appended claims, they are intended to be encompassed therein.

What is claimed is:

1. A one-way, see through panel for application to a surface comprising:
  - (a) a plastic substrate having opposite first and second surfaces, said first surface being light colored and said second surface being dark colored;
  - (b) said first surface being coated with an ink receptive coating for receiving an image applied over said coating by ink jet printing, said coating encapsulating the ink to prevent bleeding; and
  - (c) said substrate being perforated to allow see through vision from said second surface.
2. The panel of claim 1 wherein said dark colored surface comprises a dark pigmented adhesive.
3. The panel of claim 2 wherein a perforated release liner extends over said adhesive.
4. The panel of claim 1 wherein said plastic substrate is a polyester.
5. The panel of claim 1 wherein said plastic substrate is a polyvinyl.
6. The panel of claim 1 wherein said ink jet print receptive coating is selected from the group consisting of clays, resins, gels and latex coatings.
7. The panel of claim 1 wherein said substrate is mechanically perforated.
8. The panel of claim 1 wherein said substrate is laser perforated.
9. The panel of claim 3 wherein an imperforate barrier extends over said perforated release liner.
10. A one-way see through panel for application to a transparent surface comprising:
  - (a) a flexible plastic substrate having opposite first and second surfaces, said first surface being substantially white and said second surface being substantially black;
  - (b) said first surface being coated with an ink jet print receptive coating;
  - (c) an image on said coating applied by ink jet printing;
  - (d) an adhesive coating on said second surface;
  - (e) a removable release liner extending over said adhesive coating; and
  - (f) said substrate and release liner being perforated wherein said liner may be removed and said substrate applied to a transparent surface whereby said image is viewable from said first surface and when viewed from said second surface said panel provides see-through vision.
11. A one-way, see-through panel for application to a surface comprising:
  - (a) a polyester substrate having opposite first and second surfaces, said first surface being light colored and said second surface being dark colored;
  - (b) said first surface being coated with an ink receptive coating including a clay for receiving an image applied over said coating by ink jet printing; and
  - (c) said substrate being perforated to allow see through vision from said second surface.

**UNITED STATES DISTRICT COURT  
CENTRAL DISTRICT OF CALIFORNIA**

**NOTICE OF ASSIGNMENT TO UNITED STATES MAGISTRATE JUDGE FOR DISCOVERY**

This case has been assigned to District Judge Dean D. Pregerson and the assigned discovery Magistrate Judge is Oswald Parada.

The case number on all documents filed with the Court should read as follows:

**EDCV12- 1372 DDP (OPx)**

Pursuant to General Order 05-07 of the United States District Court for the Central District of California, the Magistrate Judge has been designated to hear discovery related motions.

All discovery related motions should be noticed on the calendar of the Magistrate Judge

=====

**NOTICE TO COUNSEL**

*A copy of this notice must be served with the summons and complaint on all defendants (if a removal action is filed, a copy of this notice must be served on all plaintiffs).*

Subsequent documents must be filed at the following location:

☒ **Western Division**  
312 N. Spring St., Rm. G-8  
Los Angeles, CA 90012

☐ **Southern Division**  
411 West Fourth St., Rm. 1-053  
Santa Ana, CA 92701-4516

☐ **Eastern Division**  
3470 Twelfth St., Rm. 134  
Riverside, CA 92501

Failure to file at the proper location will result in your documents being returned to you.

AO 440 (Rev. 06/12) Summons in a Civil Action

UNITED STATES DISTRICT COURT

for the  
Central District of California

CLEAR FOCUS IMAGING, INC., a California  
Corporation, and Stephen G. Nelson, an Arizona  
resident

*Plaintiff(s)*

v.

FLEXCON COMPANY, INC., a Massachusetts  
Corporation

*Defendant(s)*

EDCV12-1372 DDP(CPX)

Civil Action No.

SUMMONS IN A CIVIL ACTION

To: *(Defendant's name and address)*

FLEXcon Company, Inc.  
Attn: Neil McDonough  
President and CEO  
1 FLEXcon Industrial Park  
Spencer, MA 01562-2642

A lawsuit has been filed against you.

Within 21 days after service of this summons on you (not counting the day you received it) — or 60 days if you are the United States or a United States agency, or an officer or employee of the United States described in Fed. R. Civ. P. 12 (a)(2) or (3) — you must serve on the plaintiff an answer to the attached complaint or a motion under Rule 12 of the Federal Rules of Civil Procedure. The answer or motion must be served on the plaintiff or plaintiff's attorney, whose name and address are:

A. Brooks Gresham  
McGuireWoods LLP  
1800 Century Park East, 8<sup>th</sup> Floor  
Los Angeles, CA 90067

If you fail to respond, judgment by default will be entered against you for the relief demanded in the complaint. You also must file your answer or motion with the court.

AUG 16 2012

CLERK OF COURT

JULIE PRADO



1154

Date: \_\_\_\_\_

\_\_\_\_\_  
*Signature of Clerk or Deputy Clerk*

AO 440 (Rev. 06/12) Summons in a Civil Action (Page 2)

Civil Action No. \_\_\_\_\_

**PROOF OF SERVICE**

*(This section should not be filed with the court unless required by Fed. R. Civ. P. 4 (l))*

This summons for *(name of individual and title, if any)* \_\_\_\_\_  
was received by me on *(date)* \_\_\_\_\_

☐ I personally served the summons on the individual at *(place)* \_\_\_\_\_  
\_\_\_\_\_ on *(date)* \_\_\_\_\_; or

☐ I left the summons at the individual's residence or usual place of abode with *(name)* \_\_\_\_\_  
\_\_\_\_\_, a person of suitable age and discretion who resides there,  
on *(date)* \_\_\_\_\_, and mailed a copy to the individual's last known address; or

☐ I served the summons on *(name of individual)* \_\_\_\_\_, who is  
designated by law to accept service of process on behalf of *(name of organization)* \_\_\_\_\_  
\_\_\_\_\_ on *(date)* \_\_\_\_\_; or

☐ I returned the summons unexecuted because \_\_\_\_\_; or

☐ Other *(specify)*:

My fees are \$ \_\_\_\_\_ for travel and \$ \_\_\_\_\_ for services, for a total of \$ 0.00

I declare under penalty of perjury that this information is true.

Date: \_\_\_\_\_

\_\_\_\_\_  
*Server's signature*

\_\_\_\_\_  
*Printed name and title*

\_\_\_\_\_  
*Server's address*

Additional information regarding attempted service, etc:

**UNITED STATES DISTRICT COURT, CENTRAL DISTRICT OF CALIFORNIA**  
**CIVIL COVER SHEET**

<b>I (a) PLAINTIFFS</b> (Check box if you are representing yourself <input type="checkbox"/> ) Clear Focus Imaging, Inc., and Stephen G. Nelson	<b>DEFENDANTS</b> FLEXcon Company, Inc.
<b>(b) Attorneys</b> (Firm Name, Address and Telephone Number. If you are representing yourself, provide same.) A. Brooks Gresham McGuireWoods LLP 1800 Century Park East, 8 <sup>th</sup> Floor Los Angeles, CA 90067 310.315.8291	Attorneys (If Known)

BY FAX

<b>II. BASIS OF JURISDICTION</b> (Place an X in one box only.)  <input type="checkbox"/> 1 U.S. Government Plaintiff <input checked="" type="checkbox"/> 3 Federal Question (U.S. Government Not a Party)  <input type="checkbox"/> 2 U.S. Government Defendant <input type="checkbox"/> 4 Diversity (Indicate Citizenship of Parties in Item III)	<b>III. CITIZENSHIP OF PRINCIPAL PARTIES</b> - For Diversity Cases Only (Place an X in one box for plaintiff and one for defendant.)  <table style="width:100%;"> <tr> <td style="width:33%;">Citizen of This State</td> <td style="width:33%;">PTF DEF <input type="checkbox"/> 1 <input type="checkbox"/> 1</td> <td style="width:33%;">Incorporated or Principal Place of Business in this State</td> <td style="width:33%;">PTF DEF <input type="checkbox"/> 4 <input type="checkbox"/> 4</td> </tr> <tr> <td>Citizen of Another State</td> <td><input type="checkbox"/> 2 <input type="checkbox"/> 2</td> <td>Incorporated and Principal Place of Business in Another State</td> <td><input type="checkbox"/> 5 <input type="checkbox"/> 5</td> </tr> <tr> <td>Citizen or Subject of a Foreign Country</td> <td><input type="checkbox"/> 3 <input type="checkbox"/> 3</td> <td>Foreign Nation</td> <td><input type="checkbox"/> 6 <input type="checkbox"/> 6</td> </tr> </table>	Citizen of This State	PTF DEF <input type="checkbox"/> 1 <input type="checkbox"/> 1	Incorporated or Principal Place of Business in this State	PTF DEF <input type="checkbox"/> 4 <input type="checkbox"/> 4	Citizen of Another State	<input type="checkbox"/> 2 <input type="checkbox"/> 2	Incorporated and Principal Place of Business in Another State	<input type="checkbox"/> 5 <input type="checkbox"/> 5	Citizen or Subject of a Foreign Country	<input type="checkbox"/> 3 <input type="checkbox"/> 3	Foreign Nation	<input type="checkbox"/> 6 <input type="checkbox"/> 6
Citizen of This State	PTF DEF <input type="checkbox"/> 1 <input type="checkbox"/> 1	Incorporated or Principal Place of Business in this State	PTF DEF <input type="checkbox"/> 4 <input type="checkbox"/> 4										
Citizen of Another State	<input type="checkbox"/> 2 <input type="checkbox"/> 2	Incorporated and Principal Place of Business in Another State	<input type="checkbox"/> 5 <input type="checkbox"/> 5										
Citizen or Subject of a Foreign Country	<input type="checkbox"/> 3 <input type="checkbox"/> 3	Foreign Nation	<input type="checkbox"/> 6 <input type="checkbox"/> 6										
<b>IV. ORIGIN</b> (Place an X in one box only.) <input checked="" type="checkbox"/> 1 Original Proceeding <input type="checkbox"/> 2 Removed from State Court <input type="checkbox"/> 3 Remanded from Appellate Court <input type="checkbox"/> 4 Reinstated or Reopened <input type="checkbox"/> 5 Transferred from another district (specify): <input type="checkbox"/> 6 Multi-District Litigation <input type="checkbox"/> 7 Appeal to District Judge from Magistrate Judge													

**V. REQUESTED IN COMPLAINT: JURY DEMAND:** ☒ Yes ☐ No (Check 'Yes' only if demanded in complaint.)  
**CLASS ACTION under F.R.C.P. 23:** ☐ Yes ☐ No     **MONEY DEMANDED IN COMPLAINT: \$** To be determined

**VI. CAUSE OF ACTION** (Cite the U. S. Civil Statute under which you are filing and write a brief statement of cause. Do not cite jurisdictional statutes unless diversity.)  
 Complaint for Patent Infringement under Section 281 of title 35 of the United States Code

**VII. NATURE OF SUIT** (Place an X in one box only.)

<b>OTHER STATUTES</b> <input type="checkbox"/> 400 State Reapportionment <input type="checkbox"/> 410 Antitrust <input type="checkbox"/> 430 Banks and Banking <input type="checkbox"/> 450 Commerce/ICC Rates/etc. <input type="checkbox"/> 460 Deportation <input type="checkbox"/> 470 Racketeer Influenced and Corrupt Organizations <input type="checkbox"/> 480 Consumer Credit <input type="checkbox"/> 490 Cable/Sat TV <input type="checkbox"/> 810 Selective Service <input type="checkbox"/> 850 Securities/Commodities/Exchange <input type="checkbox"/> 875 Customer Challenge 12 USC 3410 <input type="checkbox"/> 890 Other Statutory Actions <input type="checkbox"/> 891 Agricultural Act <input type="checkbox"/> 892 Economic Stabilization Act <input type="checkbox"/> 893 Environmental Matters <input type="checkbox"/> 894 Energy Allocation Act <input type="checkbox"/> 895 Freedom of Info. Act <input type="checkbox"/> 900 Appeal of Fee Determination Under Equal Access to Justice <input type="checkbox"/> 950 Constitutionality of State Statutes	<b>CONTRACT</b> <input type="checkbox"/> 110 Insurance <input type="checkbox"/> 120 Marine <input type="checkbox"/> 130 Miller Act <input type="checkbox"/> 140 Negotiable Instrument <input type="checkbox"/> 150 Recovery of Overpayment & Enforcement of Judgment <input type="checkbox"/> 151 Medicare Act <input type="checkbox"/> 152 Recovery of Defaulted Student Loan (Excl. Veterans) <input type="checkbox"/> 153 Recovery of Overpayment of Veteran's Benefits <input type="checkbox"/> 160 Stockholders' Suits <input type="checkbox"/> 190 Other Contract <input type="checkbox"/> 195 Contract Product Liability <input type="checkbox"/> 196 Franchise <b>REAL PROPERTY</b> <input type="checkbox"/> 210 Land Condemnation <input type="checkbox"/> 220 Foreclosure <input type="checkbox"/> 230 Rent Lease & Ejectment <input type="checkbox"/> 240 Torts to Land <input type="checkbox"/> 245 Tort Product Liability <input type="checkbox"/> 290 All Other Real Property	<b>TORTS PERSONAL INJURY</b> <input type="checkbox"/> 310 Airplane <input type="checkbox"/> 315 Airplane Product Liability <input type="checkbox"/> 320 Assault, Libel & Slander <input type="checkbox"/> 330 Fed. Employers' Liability <input type="checkbox"/> 340 Marine <input type="checkbox"/> 345 Marine Product Liability <input type="checkbox"/> 350 Motor Vehicle <input type="checkbox"/> 355 Motor Vehicle Product Liability <input type="checkbox"/> 360 Other Personal Injury <input type="checkbox"/> 362 Personal Injury-Med Malpractice <input type="checkbox"/> 365 Personal Injury-Product Liability <input type="checkbox"/> 368 Asbestos Personal Injury Product Liability <b>IMMIGRATION</b> <input type="checkbox"/> 462 Naturalization Application <input type="checkbox"/> 463 Habeas Corpus-Alien Detainee <input type="checkbox"/> 465 Other Immigration	<b>TORTS PERSONAL PROPERTY</b> <input type="checkbox"/> 370 Other Fraud <input type="checkbox"/> 371 Truth in Lending <input type="checkbox"/> 380 Other Personal Property Damage <input type="checkbox"/> 385 Property Damage Product Liability <b>BANKRUPTCY</b> <input type="checkbox"/> 22 Appeal 28 USC 158 <input type="checkbox"/> 423 Withdrawal 28 USC 157 <b>CIVIL RIGHTS</b> <input type="checkbox"/> 441 Voting <input type="checkbox"/> 442 Employment <input type="checkbox"/> 443 Housing/Accommodations <input type="checkbox"/> 444 Welfare <input type="checkbox"/> 445 American with Disabilities - Employment <input type="checkbox"/> 446 American with Disabilities - Other <input type="checkbox"/> 440 Other Civil Rights	<b>PRISONER PETITIONS</b> <input type="checkbox"/> 510 Motions to Vacate Sentence Habeas Corpus <input type="checkbox"/> 530 General <input type="checkbox"/> 535 Death Penalty <input type="checkbox"/> 540 Mandamus/Other <input type="checkbox"/> 550 Civil Rights <input type="checkbox"/> 555 Prison Condition <b>FORFEITURE / PENALTY</b> <input type="checkbox"/> 610 Agriculture <input type="checkbox"/> 620 Other Food & Drug <input type="checkbox"/> 625 Drug Related Seizure of Property 21 USC 881 <input type="checkbox"/> 630 Liquor Laws <input type="checkbox"/> 640 R.R. & Truck <input type="checkbox"/> 650 Airline Regs <input type="checkbox"/> 660 Occupational Safety /Health <input type="checkbox"/> 690 Other	<b>LABOR</b> <input type="checkbox"/> 710 Fair Labor Standards Act <input type="checkbox"/> 720 Labor/Mgmt. Relations <input type="checkbox"/> 730 Labor/Mgmt. Reporting & Disclosure Act <input type="checkbox"/> 740 Railway Labor Act <input type="checkbox"/> 790 Other Labor Litigation <input type="checkbox"/> 791 Empl. Ret. Inc. Security Act <b>PROPERTY RIGHTS</b> <input type="checkbox"/> 820 Copyrights <input checked="" type="checkbox"/> 830 Patent <input type="checkbox"/> 840 Trademark <b>SOCIAL SECURITY</b> <input type="checkbox"/> 61 HIA(1395ff) <input type="checkbox"/> 862 Black Lung (923) <input type="checkbox"/> 863 DIWC/DIWW 405(g) <input type="checkbox"/> 864 SSID Title XVI <input type="checkbox"/> 865 RSI (405(g)) <b>FEDERAL TAX SUITS</b> <input type="checkbox"/> 870 Taxes (U.S. Plaintiff or Defendant) <input type="checkbox"/> 871 IRS-Third Party 26 USC 7609
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CV12-1372

**FOR OFFICE USE ONLY:** Case Number: \_\_\_\_\_  
 AFTER COMPLETING THE FRONT SIDE OF FORM CV-71, COMPLETE THE INFORMATION REQUESTED BELOW.

**VIII(a). IDENTICAL CASES:** Has this action been previously filed in this court and dismissed, remanded or closed? ☒ No ☐ Yes

If yes, list case number(s): \_\_\_\_\_

**VIII(b). RELATED CASES:** Have any cases been previously filed in this court that are related to the present case? ☒ No ☐ Yes

If yes, list case number(s): \_\_\_\_\_

**Civil cases are deemed related if a previously filed case and the present case:**

- (Check all boxes that apply) ☐ A. Arise from the same or closely related transactions, happenings, or events; or  
☐ B. Call for determination of the same or substantially related or similar questions of law and fact; or  
☐ C. For other reasons would entail substantial duplication of labor if heard by different judges; or  
☐ D. Involve the same patent, trademark or copyright, and one of the factors identified above in a, b or c also is present.

**IX. VENUE:** (When completing the following information, use an additional sheet if necessary.)

- (a) List the County in this District; California County outside of this District; State if other than California; or Foreign Country, in which **EACH** named plaintiff resides.  
☐ Check here if the government, its agencies or employees is a named plaintiff. If this box is checked, go to item (b).

County in this District:*	California County outside of this District; State, if other than California; or Foreign Country
	Clear Focus -- Sonoma County Stephen G. Nelson -- Arizona

- (b) List the County in this District; California County outside of this District; State if other than California; or Foreign Country, in which **EACH** named defendant resides.  
☐ Check here if the government, its agencies or employees is a named defendant. If this box is checked, go to item (c).

County in this District:*	California County outside of this District; State, if other than California; or Foreign Country
Defendant resides at 12840 Reservoir Street, Chino, California 91701 in San Bernardino county	Defendant has other facilities throughout the United States and is headquartered in Massachussetts

- (c) List the County in this District; California County outside of this District; State if other than California; or Foreign Country, in which **EACH** claim arose.  
**Note: In land condemnation cases, use the location of the tract of land involved.**

County in this District:*	California County outside of this District; State, if other than California; or Foreign Country
San Bernardino county	Throughout the United States

\* Los Angeles, Orange, San Bernardino, Riverside, Ventura, Santa Barbara, or San Luis Obispo Counties

**Note:** In land condemnation cases, use the location of the tract of land involved

**X. SIGNATURE OF ATTORNEY (OR PRO PER):**

 Date 8/14/12

**Notice to Counsel/Parties:** The CV-71 (JS-44) Civil Cover Sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law. This form, approved by the Judicial Conference of the United States in September 1974, is required pursuant to Local Rule 3 -1 is not filed but is used by the Clerk of the Court for the purpose of statistics, venue and initiating the civil docket sheet. (For more detailed instructions, see separate instructions sheet.)

**Key to Statistical codes relating to Social Security Cases:**

Nature of Suit Code	Abbreviation	Substantive Statement of Cause of Action
861	HIA	All claims for health insurance benefits (Medicare) under Title 18, Part A, of the Social Security Act, as amended. Also, include claims by hospitals, skilled nursing facilities, etc., for certification as providers of services under the program. (42 U.S.C. 1935FF(b))
862	BL	All claims for "Black Lung" benefits under Title 4, Part B, of the Federal Coal Mine Health and Safety Act of 1969. (30 U.S.C. 923)
863	DIWC	All claims filed by insured workers for disability insurance benefits under Title 2 of the Social Security Act, as amended; plus all claims filed for child's insurance benefits based on disability. (42 U.S.C. 405(g))
863	DIWW	All claims filed for widows or widowers insurance benefits based on disability under Title 2 of the Social Security Act, as amended. (42 U.S.C. 405(g))
864	SSID	All claims for supplemental security income payments based upon disability filed under Title 16 of the Social Security Act, as amended.
865	RSI	All claims for retirement (old age) and survivors benefits under Title 2 of the Social Security Act, as amended. (42 U.S.C. (g))