US008464449B2

(12) **United States Patent**
Williams

(10) **Patent No.: US 8,464,449 B2**
(45) **Date of Patent: Jun. 18, 2013**

(54) **DIORAMA AND METHOD OF MAKING THE SAME**

(75) Inventor: **Anthony D. Williams**, San Carlos, CA (US)

(73) Assignee: **Axial-Digital Corp.**, San Carlos, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 513 days.

(21) Appl. No.: **12/539,485**

(22) Filed: **Aug. 11, 2009**

(65) **Prior Publication Data**

US 2011/0039041 A1 Feb. 17, 2011

(51) **Int. Cl.**
G09F 1/00 (2006.01)
A63H 3/52 (2006.01)

(52) **U.S. Cl.**
USPC **40/800**; 40/124.09; 40/427; 40/539

(58) **Field of Classification Search**
USPC 40/800, 539, 124.14, 124.09, 427; 446/82
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,215,962	A *	2/1917	Morrison et al.	446/82
1,523,284	A *	1/1925	Powers	446/73
1,853,615	A	4/1932	Howard	
2,059,964	A *	11/1936	Hempstone	446/76
2,062,735	A *	12/1936	Warren	446/115
2,102,553	A	12/1937	Cohen	
2,154,087	A	4/1939	Fawcett	
2,312,644	A *	3/1943	Horr	40/787
2,314,721	A *	3/1943	Lowenstein	428/13
2,731,748	A *	1/1956	Polay	40/787
3,333,358	A *	8/1967	Green et al.	40/738
3,664,049	A *	5/1972	Smith	40/800
4,146,984	A	4/1979	Lindquist	
4,778,392	A	10/1988	Mitchell	
5,083,389	A *	1/1992	Alperin	40/539
5,265,360	A *	11/1993	Reiss et al.	40/427
5,317,823	A	6/1994	Brunt, II	
5,919,073	A *	7/1999	Shinoda et al.	446/219
6,173,515	B1	1/2001	Walsh	

(Continued)

FOREIGN PATENT DOCUMENTS

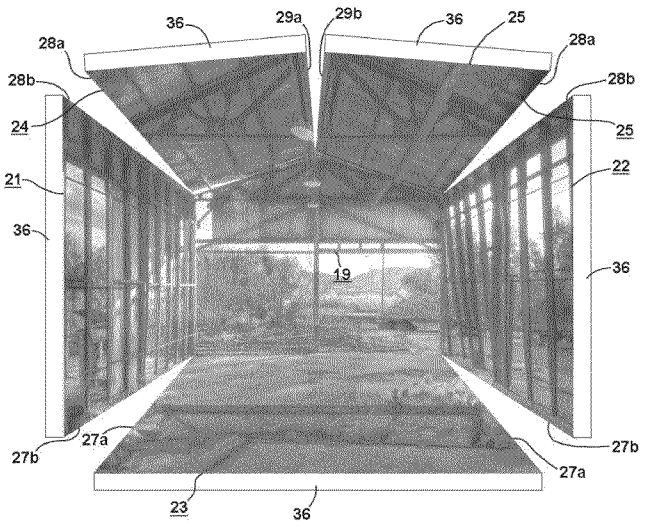
JP 2002254900 A * 9/2002

Primary Examiner — Casandra Davis
(74) *Attorney, Agent, or Firm* — Edward S. Wright

(57) **ABSTRACT**

Diorama made from a two-dimensional image having a background panel in which a background section of the image appears and a plurality of additional panels on which additional sections of the image appear. The additional panels extend forwardly from the background panel, with edges of adjacent ones of the panels coming together and the image flowing continuously between the panels. The two-dimensional image is transformed into a diorama by constructing a three-dimensional model of the diorama in the form of a plurality of panels on which different sections of the image will appear, converting the three-dimensional model to a two-dimensional layout guide with guide lines outlining the panels, superimposing the layout guide on the two-dimensional image, adjusting the shape and size of selected areas of the two-dimensional image to match the guide lines and create the panels, adjusting the areas of the image within the panels so that portions of objects appearing in adjoining panels are aligned with each other, printing the adjusted image, trimming the printed image along facing edges of adjacent ones of the panels, and bringing the trimmed edges together to form a continuous three-dimensional image.

20 Claims, 8 Drawing Sheets



U.S. PATENT DOCUMENTS

6,249,278	B1	6/2001	Segan et al.	
6,606,407	B1	8/2003	Takahashi et al.	
7,258,592	B2 *	8/2007	Colak	446/487
2002/0110652	A1	8/2002	Conk	
2004/0190063	A1	9/2004	Brown	
2005/0099414	A1	5/2005	Kaye et al.	
2006/0046603	A1	3/2006	Colak	
2007/0240345	A1	10/2007	Davis	
2008/0178501	A1	7/2008	Crowell et al.	
2008/0253608	A1	10/2008	Long et al.	

* cited by examiner

Fig. 1

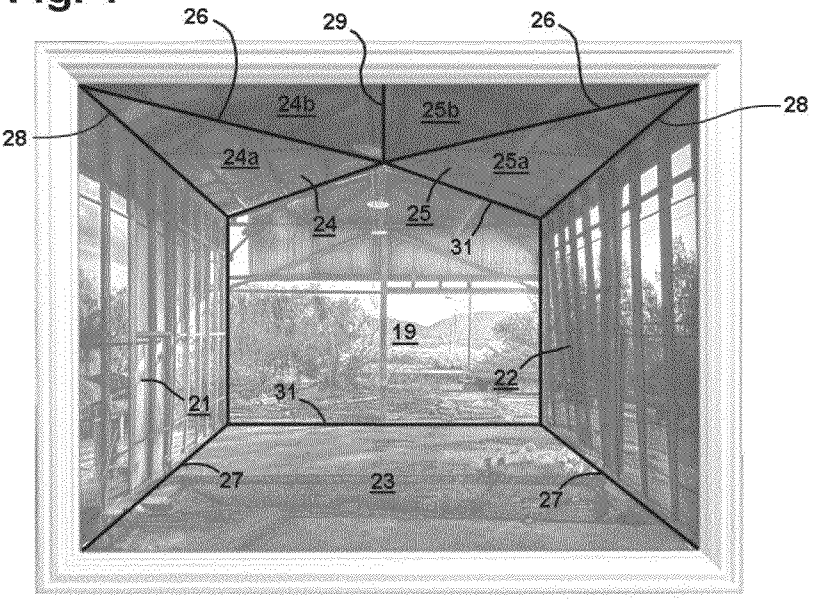


Fig. 2

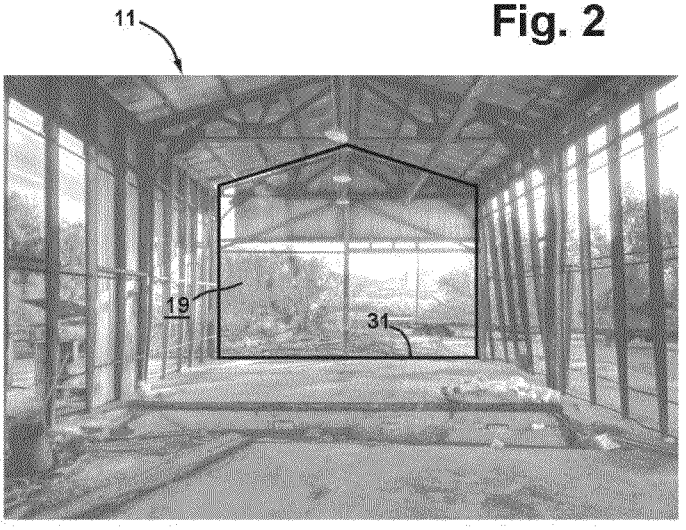
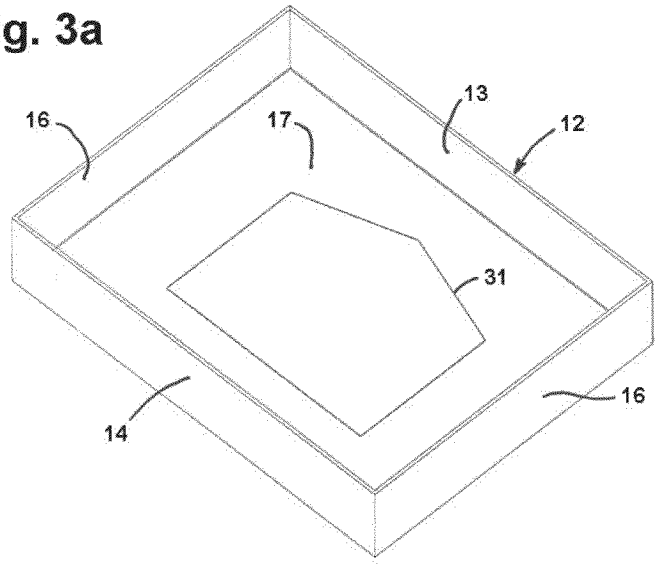


Fig. 3a


16
17
13
12
31
14
16

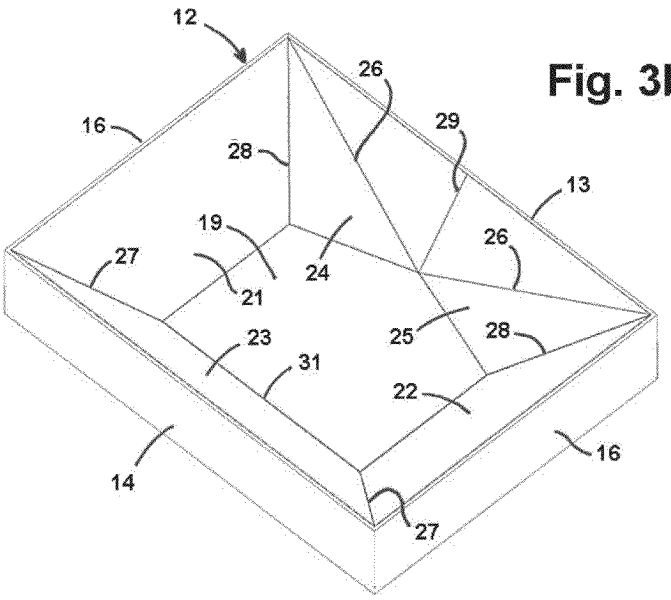

12
26
16
29
28
13
19
26
27
24
21
25
28
23
31
22
14
16
27

Fig. 3b

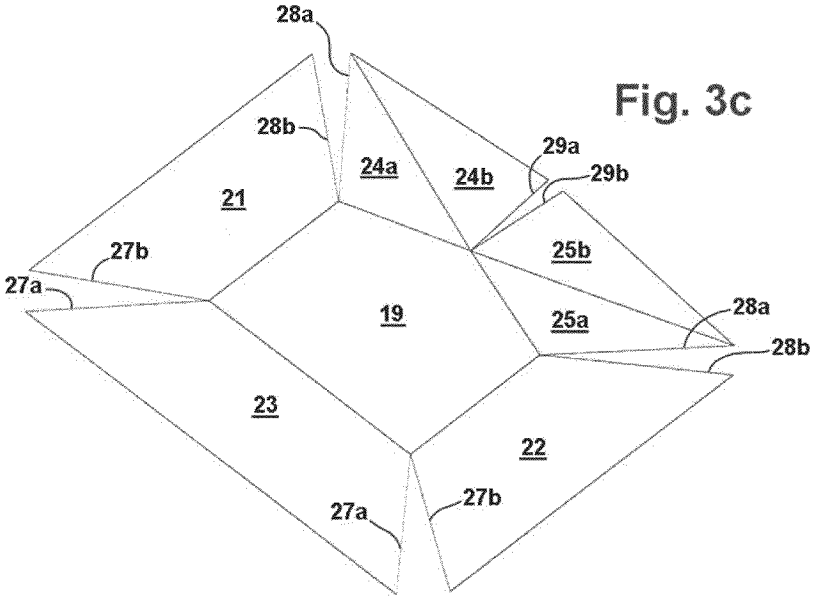

28a
28b
24a
24b
29a
29b
21
25b
27b
27a
19
25a
28a
28b
23
22
27a
27b

Fig. 3c

Fig. 3d

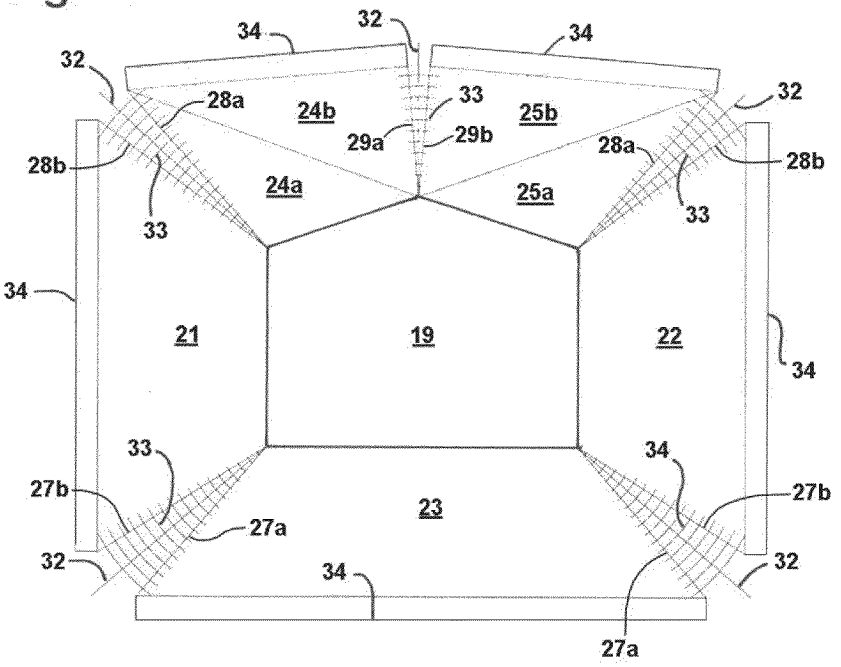

34
32
34
32
28a
24b
33
25b
32
29a
29b
28a
28b
28b
24a
25a
33
33
34
21
19
22
34
33
34
27b
27b
23
27a
32
32
34
27a

Fig. 4a

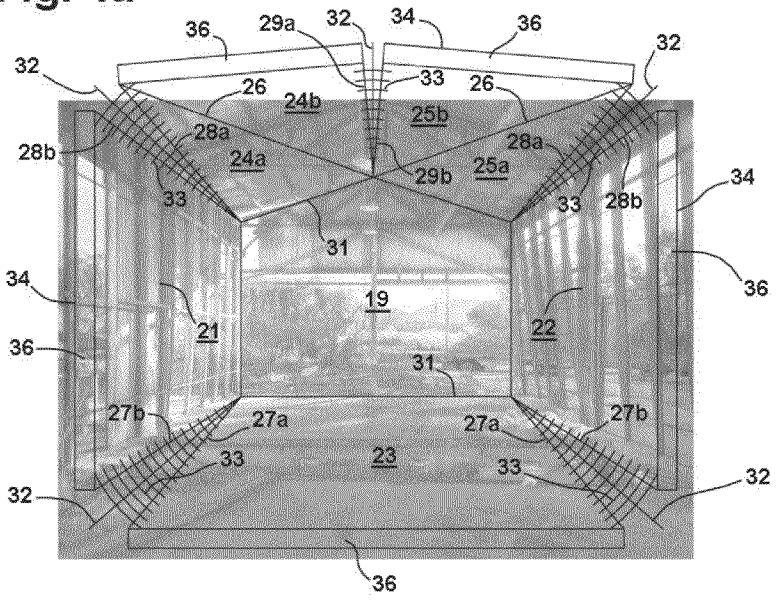

36
29a
32
34
36
32
32
26
33
26
24b
25b
28a
28a
28b
24a
29b
25a
34
33
33
28b
31
36
34
19
21
22
36
31
27b
27a
27a
27b
33
23
33
32
32
36

Fig. 4b

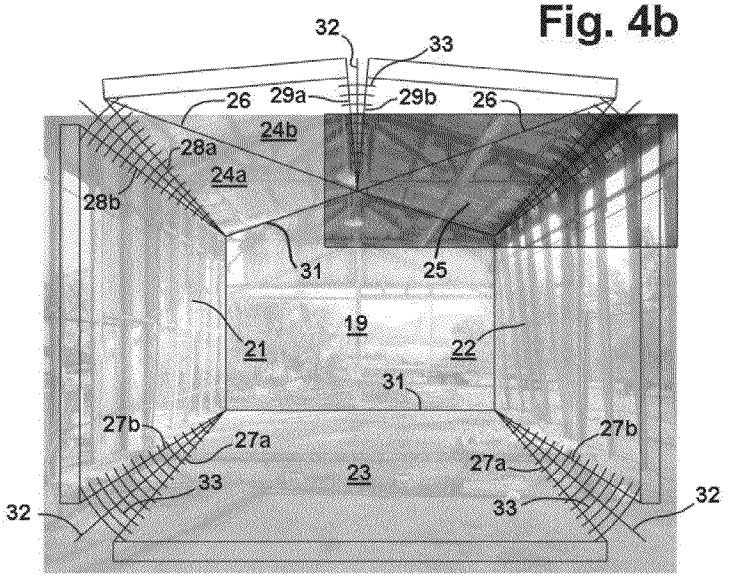

32
33
26
29a
29b
26
24b
28a
24a
28b
31
25
19
21
22
31
27b
27a
27b
27a
33
23
32
33
32

Fig. 4c

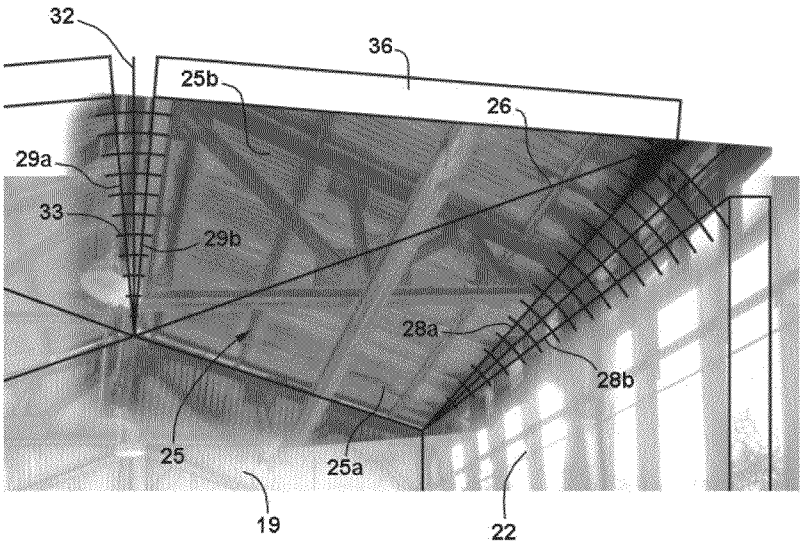

32
36
25b
26
29a
33
29b
28a
28b
25
25a
19
22

Fig. 4d

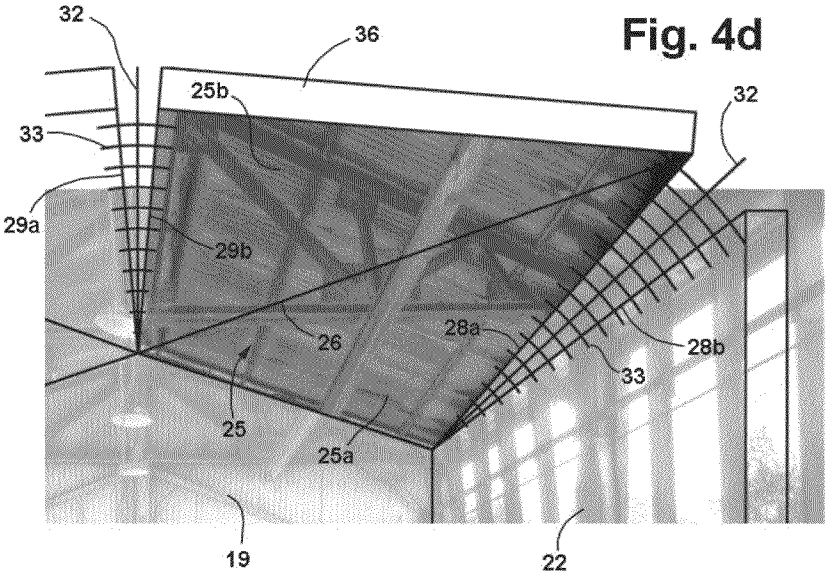

32
36
25b
32
33
29a
29b
26
28a
28b
33
25
25a
19
22

Fig. 5

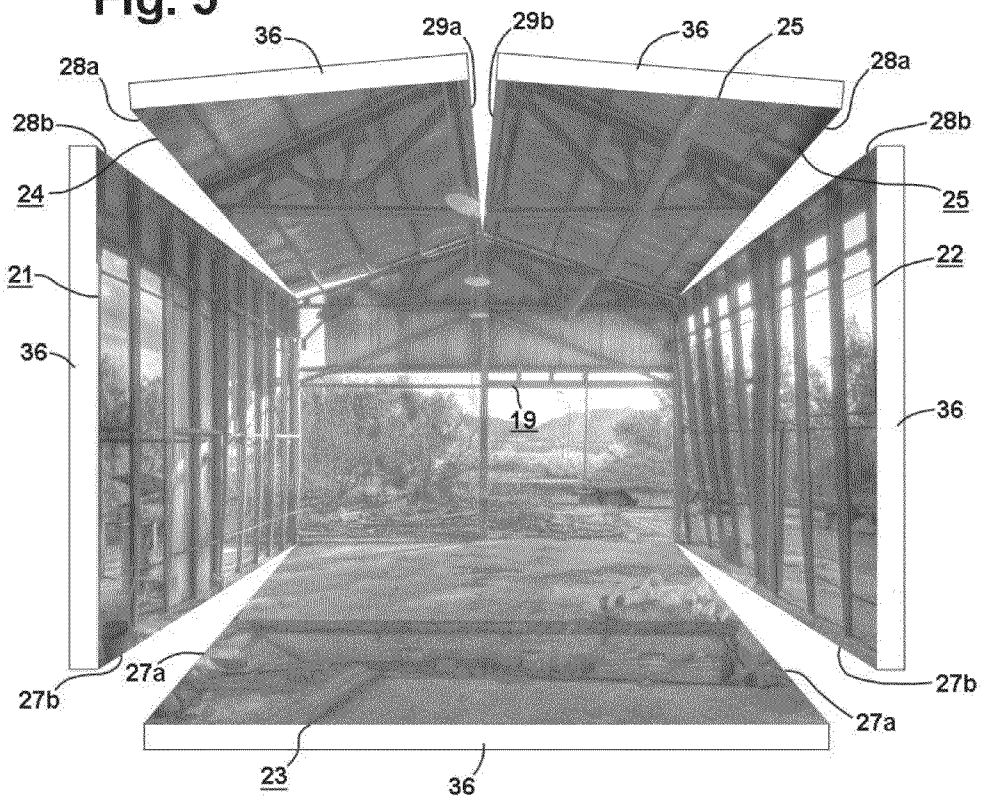
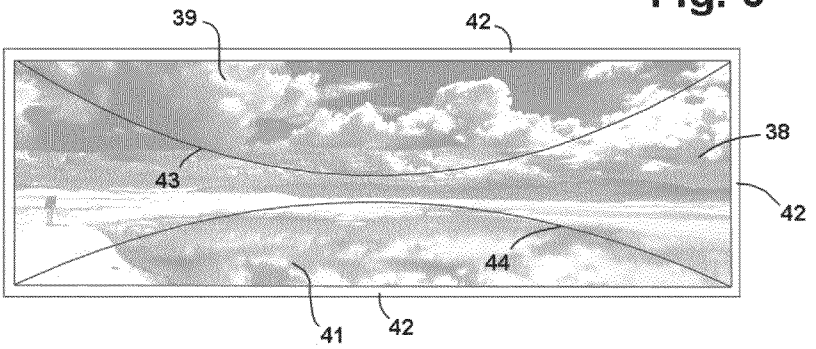

36
29a
29b
36
25
28a
28a
28b
28b
24
25
21
22
36
19
36
27a
27b
27b
27a
23
36

Fig. 6



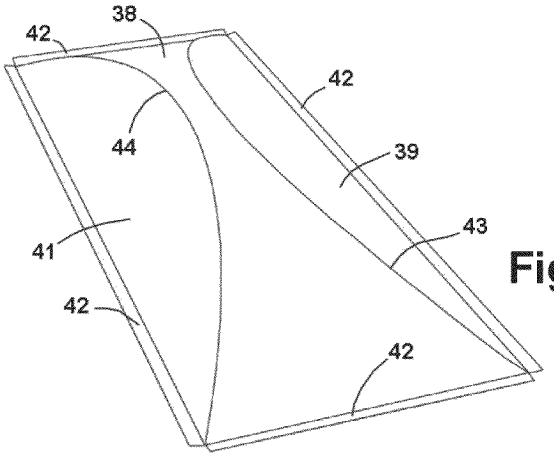


Fig. 7

Fig. 8

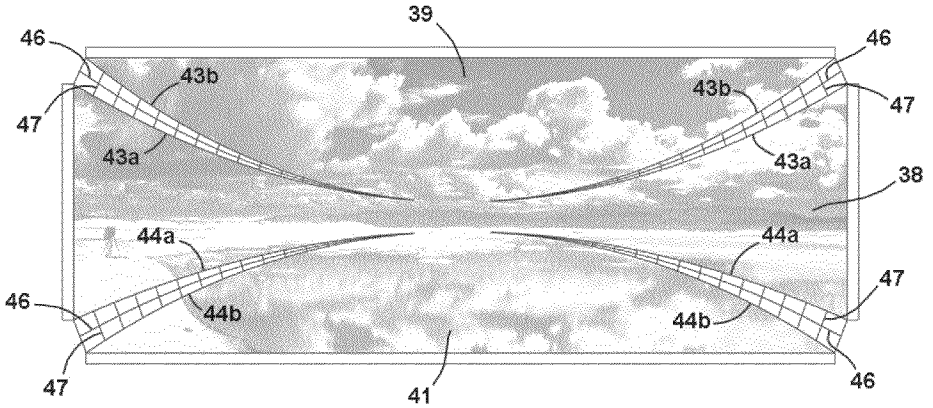
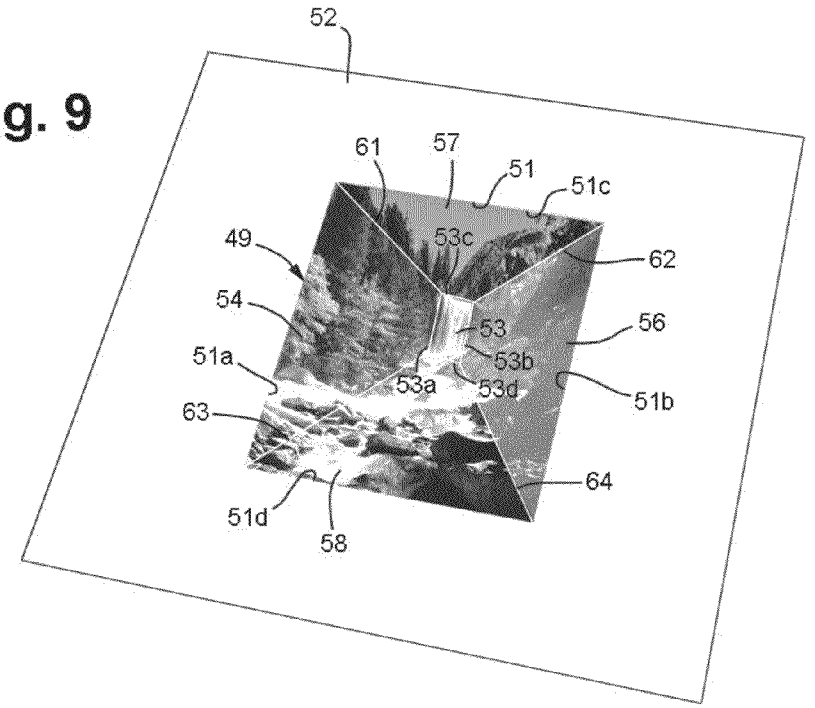


Fig. 9


52
61
57
51
51c
49
53c
62
54
53
56
51a
53b
53a
53d
51b
63
64
51d
58

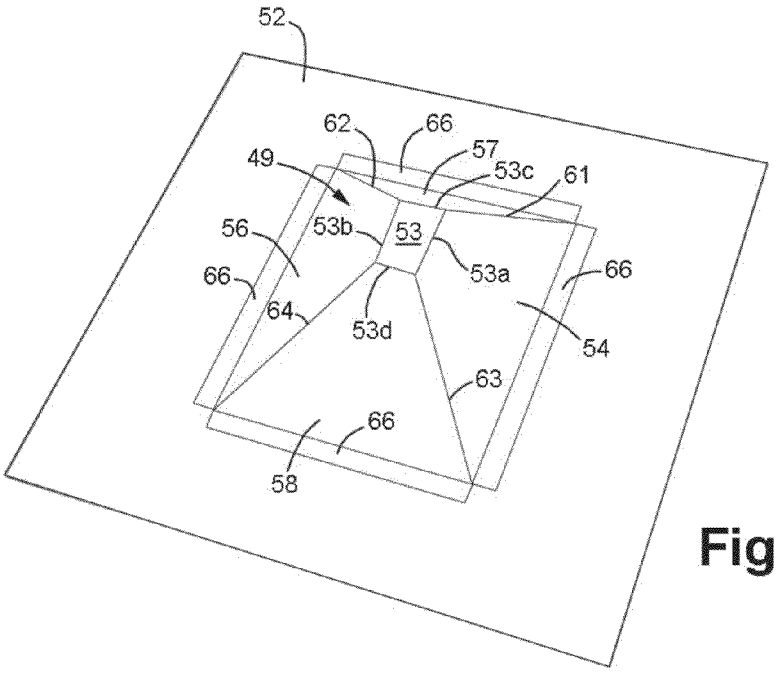

52
62
66
57
49
53c
61
56
53b
53
53a
66
66
64
53d
54
63
66
58

Fig. 10

DIORAMA AND METHOD OF MAKING THE SAME

BACKGROUND OF THE INVENTION

1. Field of Invention

This invention pertains generally to three-dimensional images and, more particularly, to a diorama and method of making the same.

2. Related Art

The earliest dioramas were in the form of large images used in theaters. They were printed and/or painted on thin gauze curtains that allowed the theater operators to change the light intensity in front of or behind the gauze curtains, thus changing the mood of the display.

Modern dioramas are typically in the form of three dimensional models, both full and scaled sizes, utilizing three dimensional models of persons and other objects positioned, sometimes on scaled terrain, in front a background image to produce a three-dimensional effect. Such dioramas are sometimes placed in shadow boxes, but fail to provide a true perspective effect.

OBJECTS AND SUMMARY OF THE INVENTION

It is, in general, an object of the invention to provide a new and improved diorama and method of making the same.

Another object of the invention is to provide a diorama and method of the above character in which a realistic perspective effect is created.

These and other objects are achieved in accordance with the invention by providing diorama made from a two-dimensional image having a background panel in which a background section of the image appears and a plurality of additional panels on which additional sections of the image appear. The additional panels extend forwardly from the background panel, with edges of adjacent ones of the panels coming together and the image flowing continuously between the panels.

The two-dimensional image is transformed into a diorama by constructing a three-dimensional model of the diorama in the form of a plurality of panels on which different sections of the image will appear, converting the three-dimensional model to a two-dimensional layout guide with guide lines outlining the panels, superimposing the layout guide on the two-dimensional image, adjusting the shape and size of selected areas of the two-dimensional image to match the guide lines and create the panels, adjusting the areas of the image within the panels so that portions of objects appearing in adjoining panels are aligned with each other, printing the adjusted image, trimming the printed image along facing edges of adjacent ones of the panels, and bringing the trimmed edges together to form a continuous three-dimensional image.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a front elevational view of one embodiment of a diorama according to the invention.

FIG. **2** a plan view of the original photograph in the embodiment of FIG. **1**.

FIGS. **3***a*-**3***c* are isometric views illustrating some of the steps in a preferred method of constructing a layout guide for use in making the diorama of FIG. **1**.

FIG. **3***d* is a plan view illustrating the remainder of the steps in constructing the layout guide.

FIGS. **4***a*-**4***d* are plan views illustrating the use of the layout guide in making the diorama of FIG. **1**.

FIG. **5** is a plan view of the diorama in the embodiment of FIG. **1** in a flattened state prior to being formed into the three-dimensional configuration illustrated in FIG. **1**.

FIG. **6** is a front elevational view of another embodiment of a diorama according to the invention.

FIG. **7** is a rear perspective view of the embodiment of FIG. **6**.

FIG. **8** is a plan view of a two-dimensional layout of the embodiment of FIG. **6**.

FIG. **9** is a front perspective view of another embodiment of a diorama according to the invention.

FIG. **10** is a rear perspective view of the embodiment of FIG. **9**.

DETAILED DESCRIPTION

The diorama consists of a two-dimensional image **11** which has been adjusted and configured for three-dimensional display in a frame or container **12**. The image can be of any desired subject, and typically is a photographic image, although it can also be a drawing, painting, or other form of image, if desired. In the embodiment illustrated, the frame or container is illustrated as being a five-sided, rectangular shadow box having an upper wall **13**, a lower wall **14**, side walls **16**, **16**, a rear wall **17**, and an open front.

One section or panel of the image is selected as a background section or panel **19** which is positioned in a central location toward the rear of the box. This panel is of lesser width and height than the rear wall of the box, and additional sections or panels of the image extend between the edges of the central panel and the corresponding edges at the front of the box. In the embodiment illustrated, the primary subject is a partially completed garage, and the back wall of the garage has been selected as the background section which appears on the central panel **19** of the diorama. The side walls of the garage are depicted on panels **21**, **22** which extend between the side edges of the central panel and the front edges of the sides of the box, and the floor of the garage is depicted on a panel **23** which extends between the lower edge of the central panel and the front edge of the lower wall of the box, with panels **21**-**23** being generally trapezoidal in shape.

In this particular example, the garage has a gable roof, and the back wall has two upper edges which extend between tops of the side walls and the ridge of the roof. The roof structure is depicted on panels **24**, **25** which extend between the upper edges of the central panel and the front edge of the upper wall of the box. Since the top edges of the central panel are not parallel to the front edges of the box, the roof panels are folded along lines **26**, **26** which extend between the peak of the central panel and the upper front corners of the box, to make the outer edges of the roof panels parallel to the edge of the box.

Panels **21**-**25** extend from the central, or back, panel at angles on the order of 30-45 degrees relative to the rear wall of the box, with adjacent edges of the panels coming together along lines which extend between the corners of the back panel and the front corners or edges of the box. Thus, the side panels and floor panel come together along lines **27**, **27** which extend between lower corners of the back panel and the lower front corners of the box, and side panels and roof panels come together along lines **28**, **28** which extend between upper corners at the sides of the back panel and the upper front corners of the box. The two roof panels come together along a line **29** which extends between the ridge or peak of the central panel and the midpoint of the front edge of the upper wall of the box.

This three-dimensional configuration of the image provides a unique perspective effect that gives the diorama a very realistic appearance, particularly when the image is adjusted in the manner described below to align objects which appear in adjoining panels so that there will not be any discontinuities between the panels.

The first step in making the diorama is selecting the image and converting it to digital form if it is not already in digital form. Then, using a photo manipulation program, features such as colors, contrast, and sharpness are adjusted as desired or required. The area to be the background or central section of the diorama is selected and adjusted for squareness and/or parallelism with the photo manipulation program. The background section, indicated by outline **31** in FIG. **2**, is then measured, the dimensions are recorded, and the adjusted image is stored as a discrete file.

The frame or container **12** is selected or constructed as desired. In the embodiment illustrated, it is in the form of a five-sided box having an open front and a rear wall of greater width and height than the background section of the photograph. In this particular embodiment, the background section has a width of 6.930 inches and a height of 4.469 inches on the sides, and the interior of the box is 12.75 inches wide, 9.75 inches high, and 2.44 inches deep. These dimensions are also recorded.

Next, a guide for the flat layout of the diorama is constructed. This can be done either with a three-dimensional CAD (computer-aided design) program or by hand using orthographic projection techniques. First, a three-dimensional drawing of the shadow box or frame is prepared, as illustrated in FIG. **3***a*, following which the outline **31** of background section of the diorama is drawn in the desired position on the rear wall of the box.

A three-dimensional model of the upper, lower, and side panels of the diorama is then constructed by drawing lines between the edges and corners of the background section and corresponding edges and corners of the frame or container. Thus, as illustrated in FIG. **3***b*, lines **27**, **27** are drawn between lower corners of the back panel and the lower front corners of the box, lines **28**, **28** are drawn between the upper corners at the sides of the back panel and the upper front corners of the box, a line **29** is drawn between the peak of the back panel and the midpoint of the front edge of the upper wall of the box, and fold lines **26**, **26** are drawn between the peak of the back panel and the upper front corners of the box.

A flat, two-dimensional layout guide is then developed from the three-dimensional model of FIG. **3***b*. Initially, as illustrated in FIG. **3***c*, a two-dimensional projection of the model is drawn either manually or with software such as that utilized in the layout of sheet metal. In the two-dimensional representation, the edges of the panels which come together along lines **27-29** in the three-dimensional configuration are separated, as indicated by lines **27***a*, **27***b*; **28***a*, **28***b*; and **29***a*, **29***b*. These lines diverge outwardly from the corners of the back panel at angles corresponding to the angles of panels **21-25** in the finished diorama.

The two-dimensional projection of FIG. **3***c* is converted to an orthographic, or plan, view, as shown in FIG. **3***d*, with corner dividing lines **32** and concentric alignment arcs **33** being added to aid in the alignment of objects which appear in adjoining panels so that there will be no discontinuities in them when the panels of the image are folded up and brought together at their edges to form the diorama. The corner dividing lines emanate from the five corners of background panel **19** and are positioned midway between the lines defining the edges of panels **21-25**. The concentric arcs are centered at the corners of the background panel and are spaced uniformly along the dividing lines, crossing the lines defining the edges of the panels. Guide lines **34** are added to the outer edges of the panels for use in constructing mounting tabs **36** which extend along the outer edges of panels **21-25** and are attached to the frame or box to hold the diorama in place.

The two-dimensional layout guide of FIG. **3***d* is then imported into the photo manipulation program. If the layout guide was generated with a CAD program, it is simply saved as a standard digital image file. If, however, the layout guide was drafted by hand, it is scanned electronically and then stored as a digital image file. In either case, the image of the layout guide is saved as a discrete file.

Using the layout guide as a template or guide, the two-dimensional photograph is converted into a three-dimensional diorama. For that purpose, the photograph and the image of the layout guide are opened in the photo manipulation program, making sure they both have the same bit depth and pixel density. The canvas size of the photograph is checked to make sure it is large enough to allow all of the layout guide to be seen when it is imported into the photograph, and increased if necessary.

As illustrated in FIG. **4***a*, the layout guide is superimposed onto the photograph and masked so that only the layout lines are visible. The positions of the two images are then adjusted so that the background area of the photograph is aligned with the background section of the layout. At this point, not much of the photographic image other then the background area aligns with the layout guide, and the resolution of this incongruity is an important part of the invention.

Using the editing tools of the photo manipulation program, the image is adjusted, one panel at a time, to match the layout guide. As illustrated in FIG. **4***b*, an area slightly larger than the panel to be worked on is selected, and a copy of that area is stored. Although it is possible to start with any of the panels, it is generally best to start with the panel that requires the greatest amount of adjustment, and in this particular example, the selected panel **25** is one of the two panels on which the roof structure is depicted.

The shape and size of the selected panel are adjusted until the area to be seen in the diorama corresponds closely to the panel in the layout guide, as illustrated in FIG. **4***c*. The image can be twisted, stretched, compressed, and/or otherwise adjusted as desired with the photo manipulation program, using the concentric arcs **33** and corner dividing lines **32** as a reference, to align objects that appear in two panels on opposite sides of a dividing line or corner to provide continuity between the two panels.

Since the selected area is larger than what is to be seen on the panel in the diorama, the excess must be removed, as illustrated in FIG. **4***d*. This is best done by masking the excess area with the program's masking tool since the image of the area removed can be unmasked later if needed to correct a discontinuity between portions of an object in adjacent panels. The excess areas can also be removed with the trimming or erasing tools of the program, but when those tools are used, the areas removed will no longer be available in the event they are needed later.

Each of the other panels of the photograph is adjusted and trimmed in a similar manner, as illustrated in FIG. **5**. These steps can then be repeated, as needed or desired, until all of the panels are precisely aligned with the lines on the layout guide. In the event that the re-sizing and distortion needed to fit each panel to the guide results in misalignment of portions of objects that appear in adjoining panels, such misalignment is corrected in a later step.

When the conversion process is complete, the fit of the diorama in the box or frame is checked by printing a full size

proof of the flattened diorama and cutting it to the outline, as illustrated in FIG. **5**. The proof sheet is then folded along the edges of the background panel to bring the adjacent edges of the other panels together along corner lines **25-29** and thereby give the diorama its three-dimensional shape. The abutting edges are secured together along the corner lines, and the folded proof sheet is placed in the shadow box or frame to check the overall size and fit. If necessary, the size and fit of the proof sheet are adjusted until the desired fit is achieved.

Each of the corners of the folded proof sheet is also checked for proper alignment of objects which appear in adjoining panels, and any misalignments are corrected with the editing tools of the image manipulation program, using the corner lines and arcs as a guide. This process is repeated until the alignment of the objects is as desired. In the event that proper alignment of one or more objects cannot be achieved, those objects can be relocated or removed.

Once all of the adjustments have been made, the final image of the flattened diorama is printed on photo paper, using printer settings that provide maximum clarity and impact. The flattened diorama is cut to the outline, as illustrated in FIG. **5**. The diorama is then folded to its three-dimensional shape, and the edge portions of adjacent panels are joined together along the corner lines. The completed diorama is placed in the shadow box or frame, as illustrated in FIG. **1**, and the mounting tabs are attached to the box or frame to hold the diorama in place.

In the embodiment of FIGS. **6-8**, the diorama has a horizontally curved back panel **38**, an upper panel **39** which extends forwardly and upwardly from the back panel, and a lower panel **41** which extends forwardly and downwardly from the rear panel, with the side edges of the back panel, the upper edge of the upper panel, and the lower edge of the lower panel extending along the front edges of the rectangular display frame or box (not shown) in which the diorama is mounted. Mounting tabs **42** extend along the outer edges of the panels for attachment to the display frame or box.

With the curved back panel, the lines **43**, **44** along which the adjacent edges **43***a*, **43***b* and **44***a*, **44***b* of the panels come together are also curved, as are the edges of the panels. As in the embodiment of FIG. **1**, corner dividing lines **46** and concentric alignment arcs **47** are included in the layout guide to aid in the alignment of objects which appear in adjoining panels so that there will be no discontinuities in them when the edges of the panels are brought together to give the diorama its three-dimensional configuration. The corner dividing lines extend along arcuate paths midway between the adjacent edges of the panels.

This embodiment is particularly suitable for panoramas and other wide format images, with the width of the three-dimensional diorama being substantially greater than the height and the width and the height both being substantially greater than the depth. As an example, the diorama in this embodiment might have a width of 35 inches, a height of 11 inches, and a depth of 4 inches, although it can have any dimensions and/or aspect ratio desired.

FIGS. **9** and **10** illustrate an embodiment in which the diorama **49** is mounted behind a rectangular opening **51** in a mat board **52**. The mat board can be mounted in a suitable frame or box (not shown) or otherwise displayed, as desired. The diorama has a rectangular back panel **53**, with side panels **54**, **56**, an upper panel **57**, and a lower panel **58** extending between edges **53***a*-**53***d* of the back panel and edges **51***a*-**51***d* of the opening and coming together along lines **61-64** which extend between the corners of the back panel and the opening. With the back panel and the front edge of the diorama both being rectangular, panels **53-57** are trapezoidal in shape. Mounting tabs **66** extend outwardly from the front edges of the panels and are attached to the rear side of the mat around the opening.

In this embodiment, the back panel is relatively small and is positioned above the horizontal centerline of the diorama and asymmetrically of the opening in the mat board. Thus, lower panel **58** is longer or taller than upper panel **57** and extends from the plane of the back panel at a lesser angle than the upper panel. This gives an increased perception of depth to the portion of the image below the back panel, which in this particular example is the water downstream of a waterfall displayed on the back panel.

The invention has a number of important features and advantages which allow a two-dimensional photograph or other image to be readily converted the a three-dimensional diorama that creates a genuine perspective which greatly augments the illusion of depth.

The invention can be also applied to applications other than the display of stationary images by using video display panels arranged in the manner disclosed herein, with the video signals displayed on the different panels being processed to provide continuity between them.

It is apparent from the foregoing that a new and improved diorama and method of making the same have been provided. While only certain presently preferred embodiments have been described in detail, as will be apparent to those familiar with the art, certain changes and modifications can be made without departing from the scope of the invention as defined by the following claims.

The invention claimed is:

1. A diorama in which the perspective effect of a two-dimensional image is enhanced, comprising a background panel and a plurality of additional panels extending outwardly and forwardly from the background panel with edges of adjacent ones of the additional panels coming together along corner lines and outer edges of the additional panels lying in a common plane spaced in front of the background panel, a focal area of the two-dimensional image displayed on the background panel, and images of contiguous areas of the two-dimensional image which have been adjusted to correspond in size and shape to two-dimensional orthographic projections of the additional panels displayed on the additional panels, with the focal area and the adjusted images forming a three-dimensional image of enhanced perspective effect and depth that flows smoothly and continuously between the additional panels and between the background panel and the additional panels, with portions of objects appearing on adjoining ones of the additional panels being aligned with each other and flowing smoothly across the corner lines between the panels.

2. The diorama of claim **1** wherein the images adjusted to provide increased perspective effect are adjusted so that portions of objects appearing on adjoining panels are aligned with each other and flow smoothly between the panels.

3. The diorama of claim **1** wherein the background panel is generally rectangular, and the additional panels extend from upper, lower, and side edges of the background panel, with the edges of the additional panels coming together along lines that extend diagonally from the corners of the background panel.

4. The diorama of claim **1** wherein the background panel lies in a plane, and the additional panels extend from the background panel at angles on the order of 30-45 degrees relative to the plane of the background panel.

5. The diorama of claim **1** wherein the background panel is curved, and the edges of the panels come together along curved lines.

6. The diorama of claim 1 wherein the diorama is mounted in a frame, and the additional panels extend obliquely between edges of the background panel and edges of the frame.

7. The diorama of claim 6 wherein the frame comprises a five-sided rectangular box having a rear wall, an upper wall, a lower wall, side walls, and an open front, and the background panel is adjacent to and smaller in size than the rear wall with the additional panels diverging outwardly between upper, lower, and side edges of the background panel and front edges of the upper, lower, and side walls of the box.

8. The diorama of claim 1 wherein the diorama is mounted behind an opening in a mat board, with the additional panels extending between edges of the background panel and edges of the opening.

9. An image of increased perspective effect for display as a diorama having a background panel and a plurality of outer panels which extend outwardly and forwardly from the background panel, comprising an image of a focal area of a two-dimensional image having the same size and shape as the background panel and images of outer areas of the two-dimensional image which have been adjusted to correspond in size and shape to two-dimensional orthographic projections of the outer panels, with adjacent ones of the adjusted images having outwardly diverging edges that can be brought together so that the image of the focal area of the two-dimensional image on the background panel and the adjusted images on the outer panels form a continuous three-dimensional image of enhanced perspective effect and depth that flows between the panels with portions of objects appearing on adjoining ones of the outer panels being aligned with each other and flowing smoothly between the panels.

10. The diorama of claim 9 wherein the background panel is generally rectangular, and the outer panels extend from upper, lower, and side edges of the background panel, with the edges of the outer panels coming together along lines that extend diagonally outward from the corners of the background panel.

11. The diorama of claim 9 wherein the background panel lies in a plane, and the outer panels extend from the background panel at angles on the order of 30-45 degrees relative to the plane of the background panel.

12. The diorama of claim 9 wherein the background panel is curved, and the edges of the panels come together along curved lines.

13. The diorama of claim 9 wherein the diorama is mounted in a frame, and the outer panels extend between edges of the background panel and edges of the frame.

14. The diorama of claim 13 wherein the frame comprises a five-sided rectangular box having a rear wall, an upper wall, a lower wall, side walls, and an open front, and the background panel is adjacent to and smaller in size than the rear wall, with the outer panels diverging outwardly between upper, lower, and side edges of the background panel and front edges of the upper, lower, and side walls of the box.

15. The diorama of claim 9 wherein the diorama is mounted behind an opening in a mat board, with the outer panels extending between edges of the background panel and edges of the opening.

16. A diorama made from a two-dimensional image by the steps of: constructing a three-dimensional model of a diorama having a background panel on which a focal area of the image will appear and a plurality of other panels diverging outwardly from the background panel on which other areas of the image will appear, with adjacent edges of the panels coming together along corner lines, converting the three-dimensional model to a two-dimensional layout guide with lines outlining two-dimensional orthographic projections of the panels, selecting a focal area of the image having the same shape and size as the background panel of the diorama, selecting other contiguous areas of the image to appear on the other panels of the diorama, adjusting each of the other selected areas of the two-dimensional image to match the size and shape of a corresponding one of the orthographic projections of the other panels on the layout guide, printing an adjusted image consisting of the focal area and the orthographically adjusted areas of the two-dimensional image arranged in accordance with panels on the layout guide, trimming the printed image along facing diagonal edges of adjacent ones of the panels, and forming the printed image into the three-dimensional configuration of the diorama, with the facing edges coming together along the corner lines and the adjusted image flowing smoothly and continuously between the panels with an enhanced perspective effect and depth.

17. The diorama of claim 16 wherein the diorama is mounted in a frame, with the focal area on a background panel spaced behind the front of the frame and the other panels extending between the edges of the background panel and corresponding edges of the frame.

18. The diorama of claim 16 wherein the background panel is curved, and the edges of the panels come together along curved lines.

19. The diorama of claim 16 wherein the frame comprises a five-sided rectangular box having a rear wall, an upper wall, a lower wall, side walls, and an open front, and the background panel is adjacent to and smaller in size than the rear wall, with the outer panels diverging outwardly between upper, lower, and side edges of the background panel and front edges of the upper, lower, and side walls of the box.

20. The diorama of claim 16 wherein the diorama is mounted behind an opening in a mat board, with the outer panels extending between edges of the background panel and edges of the opening.

* * * * *