

Oct. 25, 1949.

H. H. HUTT

2,485,830

THREE-DIMENSIONAL DISPLAY DEVICE

Filed May 1, 1946

Fig. 1.

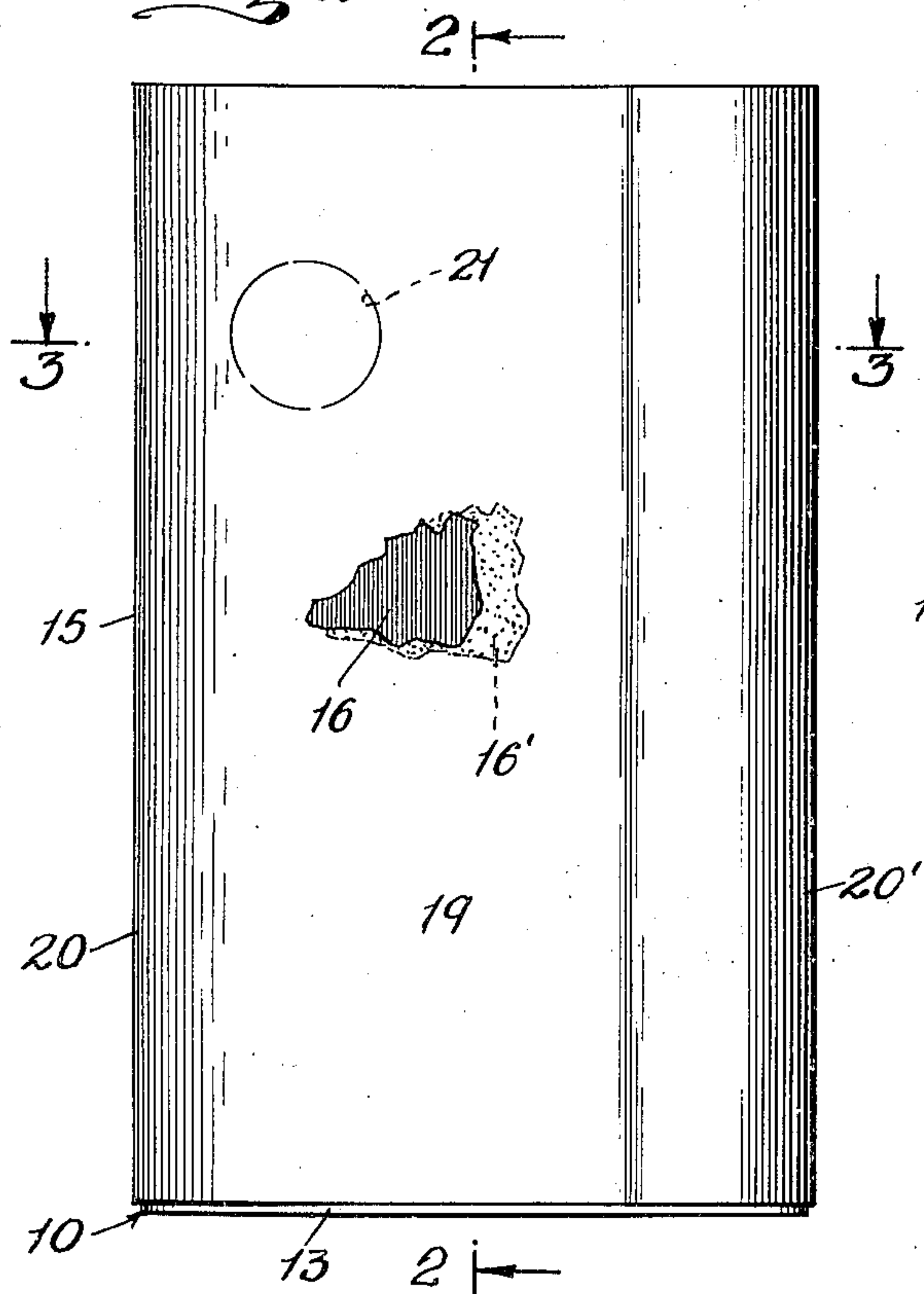


Fig. 2.

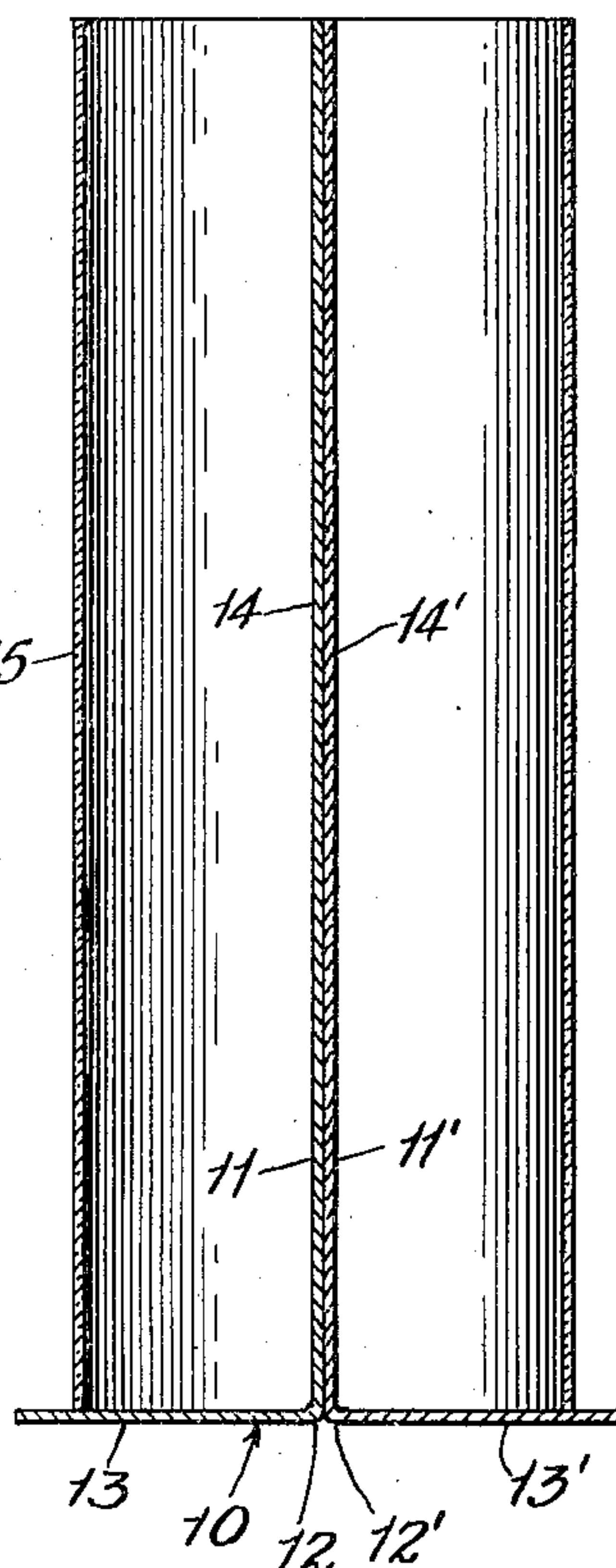


Fig. 3.

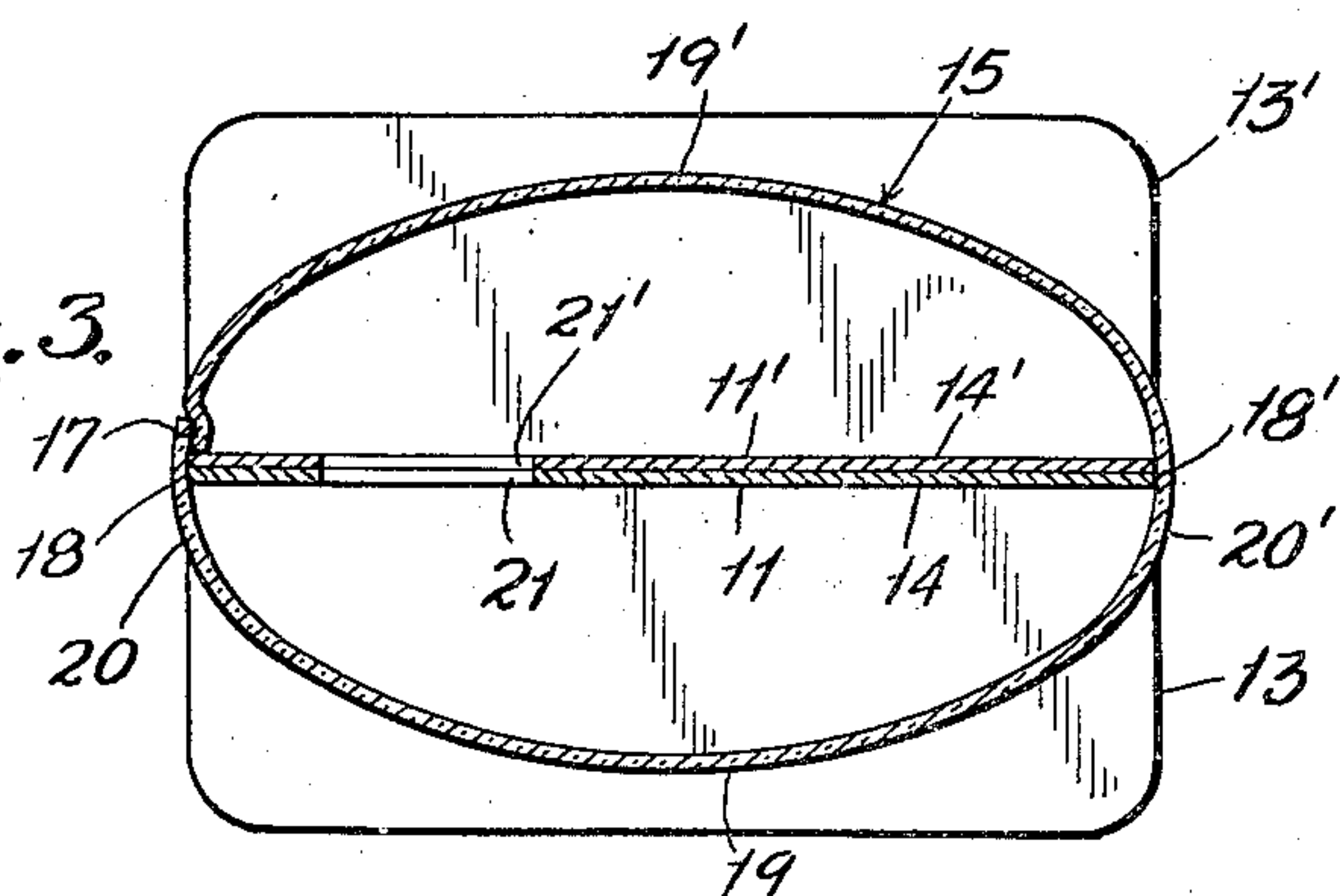


Fig. 4.

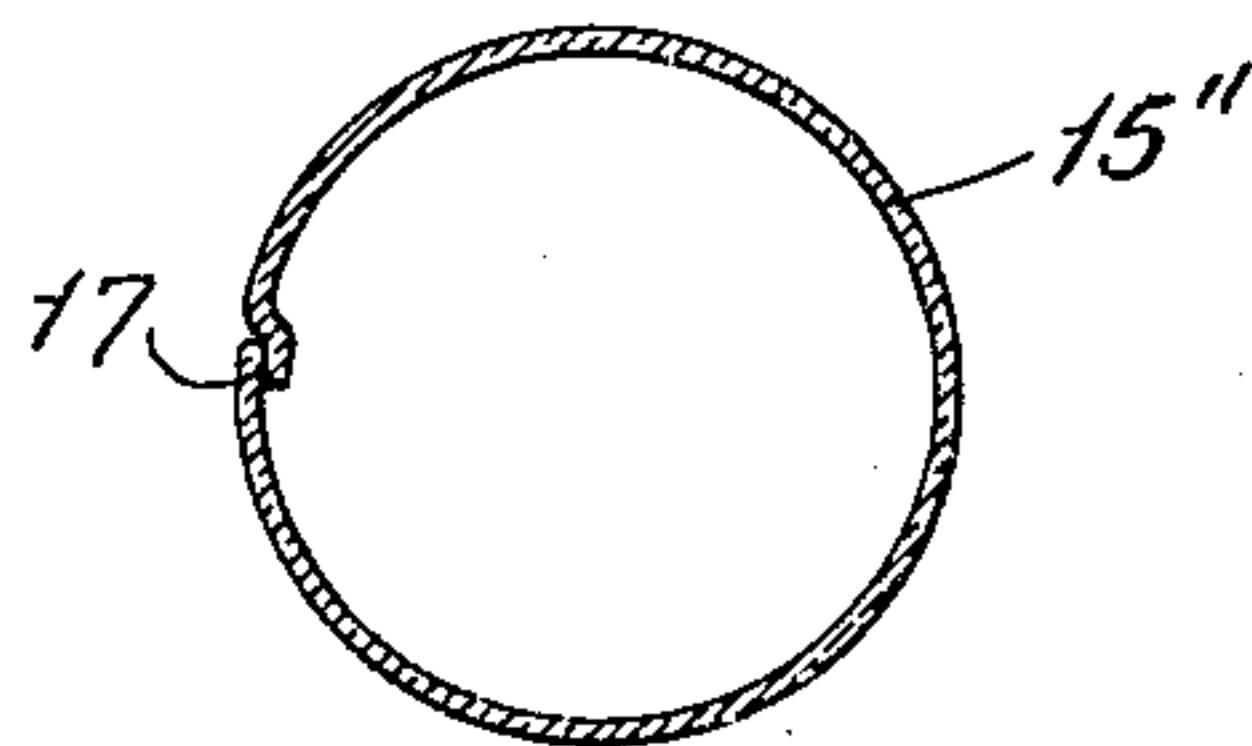
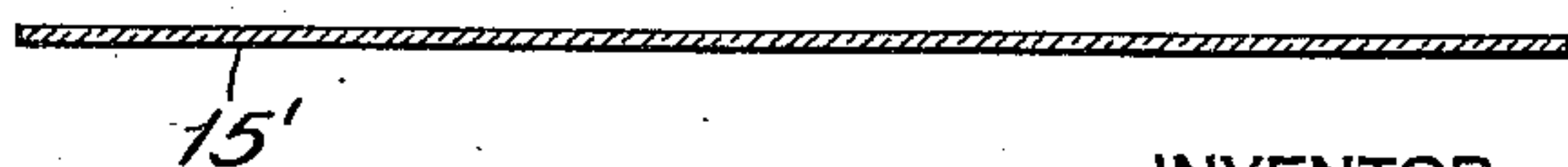


Fig. 5.



INVENTOR
HERMAN H. HUTT
BY
Amos E. Thompson
ATTORNEY

UNITED STATES PATENT OFFICE

2,485,830

THREE-DIMENSIONAL DISPLAY DEVICE

Herman H. Hutt, Brooklyn, N. Y.

Application May 1, 1946, Serial No. 666,329

7 Claims. (Cl. 40—126)

1 This invention relates to devices generally classified as displays. More particularly, the invention deals with a device of this kind having means whereby a three dimension effect is produced, particularly in casting a shadow on a printed or lithographed representation disposed upon a transparent or translucent sheet onto a backing wall in giving the appearance of depth or three dimensions in such printed or lithographed representations. Still more particularly, the invention includes means for supporting articles on, or in connection with the display and for rendering part of the rear wall portion of a transparent or translucent display sheet or sleeve visible at the front of the device. The novel feature of the invention will be best understood from the following description when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed, and in which the separate parts are designated by suitable reference characters in each of the views; and in which:

Fig. 1 is a front view of a display made according to my invention.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a diagrammatic plan view of one part of the display detached and on a reduced scale; and

Fig. 5 is an edge view of a sheet or strip from which the device of Fig. 4 is formed.

Considering Figs. 1 to 3 inclusive, I have shown at 10, the supporting frame of the display device which, in the construction shown, comprises two substantially similar sheets 11—11' of heavy paper, cardboard, plastic or other material, the sheets being folded, as seen at 12—12' to form front and back base or supporting plates 13—13' and perpendicular wall portions 14—14', the latter being secured together in any desired manner to provide a two wall thickness. Outer or exposed surfaces of the walls 14—14' may be lithographed, printed or otherwise characterized to give a suitable background scenic appearance to the resulting display. In some instances, the outer surface of the front wall 14 only will be characterized, particularly when the display is to have a one vision showing, as for example, in a window display. However, in counter displays, both sides of the resulting device may be considered as display sides.

At 15 is shown a tube or sleeve of transparent or translucent material, preferably a suitable plastic which lends itself to printing or lithographing and on predetermined sections or areas

2 of the tube 15 are suitably formed display characters, as indicated by the shaded sections 16 in Fig. 1 of the drawing. The character 16 may be substantially opaque or have a nominal amount of translucency so as to cast a shadow upon the surface 14, as seen by the stipled section 16' in Fig. 1. Casting of this shadow produces the depth or three dimensional effect with respect to the representation 16. It will be apparent that any number of characters or representations may be printed on the tube or sleeve 15 on front and back surfaces thereof, or at the top curved sides.

Turning now to the illustrations in Figs. 4 and 5 of the drawing, it will appear that at 15', in Fig. 5, I have shown a flat sheet from which the tube or sleeve 15 is formed, the tube or sheet is printed, lithographed or otherwise characterized while in its flat state, after which the sheet is formed into a round tube, as shown at 15'' in Fig. 4 of the drawing, the edges being overlapped and secured together, as indicated at 17. The round tube of Fig. 4 is then flexed into the elliptical form, clearly illustrated in Fig. 3, in mounting the same upon the side edges 18—18' of the walls 14—14', the elliptical tube or sleeve being contained substantially in the boundaries of the supporting base plates 13—13' and resting thereon.

The elliptical formation of the tube or sleeve in the manner shown, clearly in Fig. 3, produces front and rear curved surfaces 19—19' of relatively large radius, with curved side surfaces 20—20' of relatively small radius. This construction produces what might be termed a slight outwardly bowed wall portion at front and rear surfaces of the tube or sleeve, thus giving a rounded contour to the characterized sections or markings, as at 16 on these surfaces in addition to the casting of the shadow which produces the desirable three dimensional effect.

It will be understood that articles may be arranged within the tube or sleeve 15 and upon the supporting frame 10, either by arrangement upon the base members 13—13' or by mounting in an apertured portion, as seen at 21—21' in the walls 14—14'. On the other hand, the apertured portion or cutout, as at 21—21' may be utilized to give vision to the rear wall portion 19' of the tube or sleeve 15 from the front of the display. In this event, suitable characterizations will be arranged upon the wall portion 19' to be visible through the opening or cutout 21—21'. For example, the display may have on the wall 14 a scenic representation which may include a house and the opening or cutout 21—21' may represent

3

a door or window of the house and looking there-through would be a representation on the wall 19-19' of something within the house, or in other instances, something out of doors and viewed from within a room of a house.

It will be apparent that the accompanying drawing is illustrative of one simple form of construction for carrying my invention into effect. One of the distinctive features of the invention resides in mounting a transparent or translucent printed or lithographed sheet in a curved relationship with respect to a supporting frame sheet in producing between said sheets a three dimensional effect.

It will be apparent that the frame of the device supports the three dimensional element, for example, the tube or sleeve in a tensioned position, with surfaces thereof preferably curved or rounded, which extends the vision through a greater area. In other words, characterizations on the tube or sleeve are visible from sides as well as the front of the device.

It will be apparent that my improved display device, that is to say, the backing or supporting member taken in conjunction with the transparent or translucent mounting for attachment on the supporting member produces what may be termed an environment. In other words, the characterized subject on the transparent or translucent sheet is placed within the environment of characterizations printed, lithographed or otherwise applied to the surface of the supporting member. In other words, the supporting member may have applied thereto a picture of a home with a garden in the foreground and the transparent or translucent sheet could have one, two or more individuals arranged thereon, appearing to stand in the garden in front of the house represented on the supporting sheet.

I claim:

1. A device for producing three dimensional effects in displays, said device comprising an elongated flat backing sheet and an elongated flexible tubular member having translucent properties, said member being of a length substantially equal to the length of said backing sheet and of a diameter less than the width of said sheet, said member being flexed to elliptical shape in mounting the member on said sheet in engagement with side edge portions only thereof, the member forming on opposed surfaces of the sheet outwardly convexed wall portions spaced with respect to said surfaces, and at least one wall portion of said member having a substantially opaque characterized portion thereon adapted to cast a shadow upon the adjacent surface of the sheet in producing a third dimensional effect of the characterized display.

2. A device for producing three dimensional effects in displays, said device comprising an elongated flat backing sheet and an elongated flexible tubular member having translucent properties, said member being of a length substantially equal to the length of said backing sheet and of a diameter less than the width of said sheet, said member being flexed to elliptical shape in mounting the member on said sheet in engagement with side edge portions only thereof, the member forming on opposed surfaces of the sheet outwardly convexed wall portions spaced with respect to said surfaces, at least one wall portion of said member having a substantially opaque characterized portion thereon adapted to cast a shadow upon the adjacent surface of the

4

sheet in producing a third dimensional effect of the characterized display, said surface of the sheet being characterized, and said sheet being apertured to give vision to part of the other wall portion of said member through said sheet.

3. A device for producing three dimensional effects in displays, said device comprising an elongated flat backing sheet and an elongated flexible tubular member having translucent properties, said member being of a length substantially equal to the length of said backing sheet and of a diameter less than the width of said sheet, said member being flexed to elliptical shape in mounting the member on said sheet in engagement with side edge portions only thereof, the member forming on opposed surfaces of the sheet outwardly convexed wall portions spaced with respect to said surfaces, at least one wall portion of said member having a substantially opaque characterized portion thereon adapted to cast a shadow upon the adjacent surface of the sheet in producing a third dimensional effect of the characterized display, said surface of the sheet being characterized, said sheet being apertured to give vision to part of the other wall portion of said member through said sheet, and said sheet comprising a double wall having laterally extending base portions upon which the lower end of said member is adapted to rest.

4. In display devices, the combination with a characterized elongated tubular member of substantially transparent flexible material, of a supporting frame upon which said member is arranged, said frame comprising an elongated sheet of rigid material of a length substantially equal to the length of said member and of a width greater than the diameter of said tubular member, said tubular member in arrangement upon said frame being flexed into substantially elliptical cross-sectional form, forming outwardly convexed walls on and spaced from opposed surfaces of said sheet, and said member tensionally engaging the edges of the sheet when arranged thereon.

5. In display devices, the combination with a characterized elongated tubular member of substantially transparent flexible material, of a supporting frame upon which said member is arranged, said frame comprising an elongated sheet of rigid material of a length substantially equal to the length of said member and of a width greater than the diameter of said tubular member, said tubular member in arrangement upon said frame being flexed into substantially elliptical cross-sectional form, forming outwardly convexed walls on and spaced from opposed surfaces of said sheet, said member tensionally engaging the edges of the sheet when arranged thereon, and one of the outwardly convexed walls of said member having a substantially opaque section thereon adapted to cast a shadow upon the adjacent surface of said sheet in producing a three dimensional effect in the display device.

6. In display devices, the combination with a characterized elongated tubular member of substantially transparent flexible material, of a supporting frame upon which said member is arranged, said frame comprising an elongated sheet of rigid material of a length substantially equal to the length of said member and of a width greater than the diameter of said tubular member, said tubular member in arrangement upon said frame being flexed into substantially elliptical cross-sectional form, forming out-

5

wardly convexed walls on and spaced from opposed surfaces of said sheet, said member tensionally engaging the edges of the sheet when arranged thereon, one of the outwardly convexed walls of said member having a substantially opaque section thereon adapted to cast a shadow upon the adjacent surface of said sheet in producing a three dimensional effect in the display device, and said frame having means for supporting articles in connection therewith.

7. In display devices, the combination with a characterized elongated tubular member of substantially transparent flexible material, of a supporting frame upon which said member is arranged, said frame comprising an elongated sheet of rigid material of a length substantially equal to the length of said member and of a width greater than the diameter of said tubular member, said tubular member in arrangement upon said frame being flexed into substantially elliptical cross-sectional form, forming outwardly convexed walls on and spaced from opposed surfaces of said sheet, said member tensionally

6

sionally engaging the edges of the sheet when arranged thereon, the sheet of said frame being two ply, and each ply having a laterally extending based portion upon which the lower end of said member is adapted to rest.

HERMAN H. HUTT.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,665,009	Bacon	Apr. 3, 1928
1,908,772	Lowenthal	May 16, 1933
1,969,551	Francis	Aug. 7, 1934
2,158,633	Normandi et al.	May 16, 1939
2,173,939	Hall	Sept. 26, 1939
2,177,136	Hayden et al.	Oct. 24, 1939

FOREIGN PATENTS

Number	Country	Date
451,058	Great Britain	July 29, 1936