Dec. 4, 1956 R. B. BISHOP 2,772,494

DISPLAY DEVICE

Filed Jan. 10, 1951 3 Sheets-Sheet 1

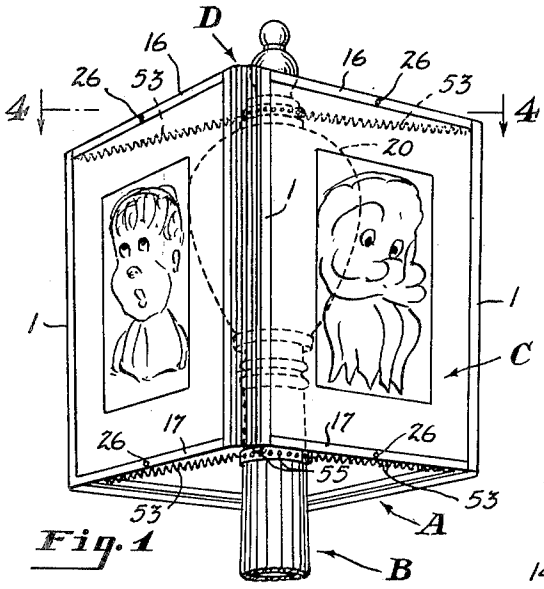


Fig. 1

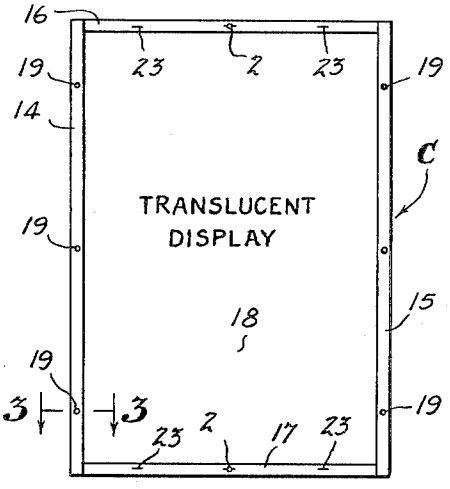


Fig. 2

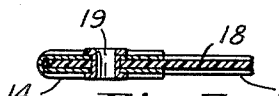


Fig. 3

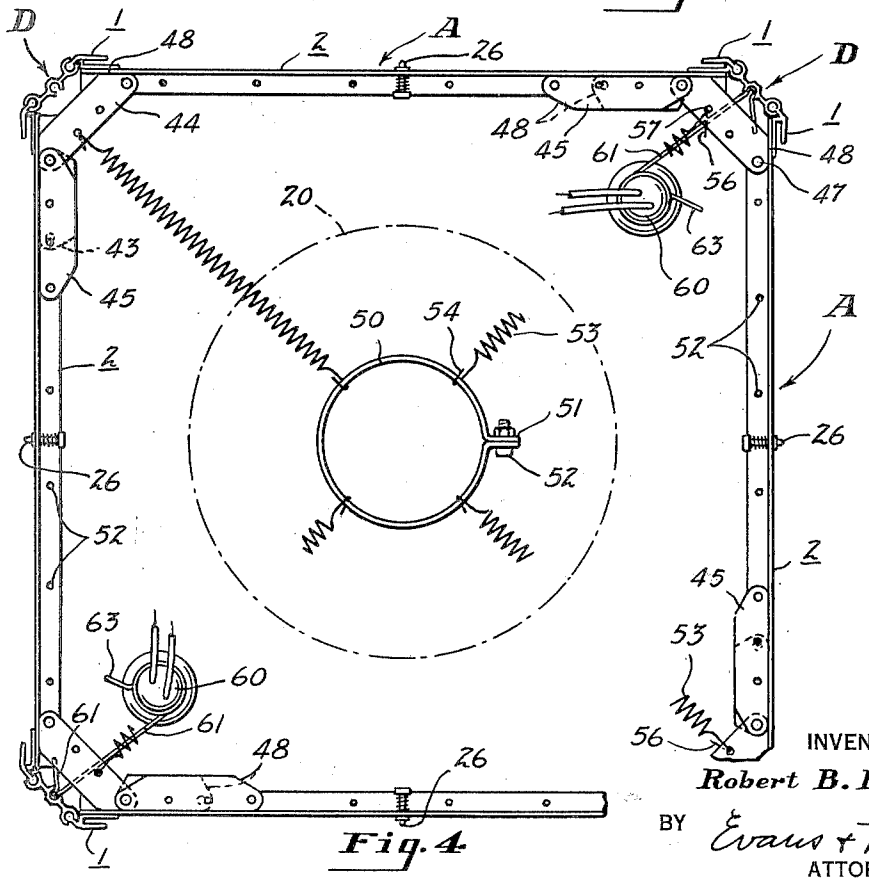


Fig. 4

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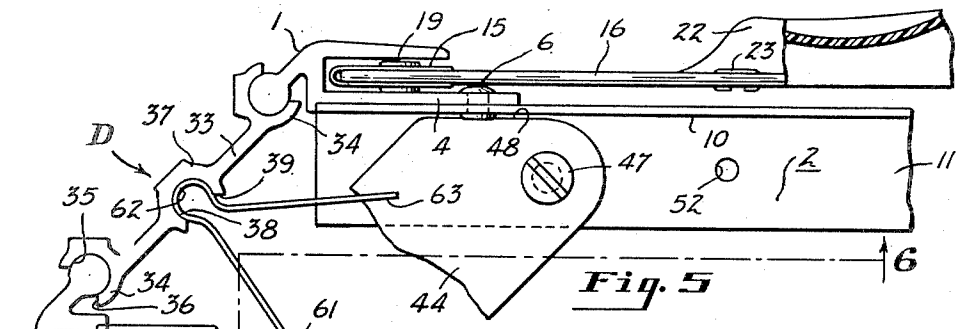


Fig. 5

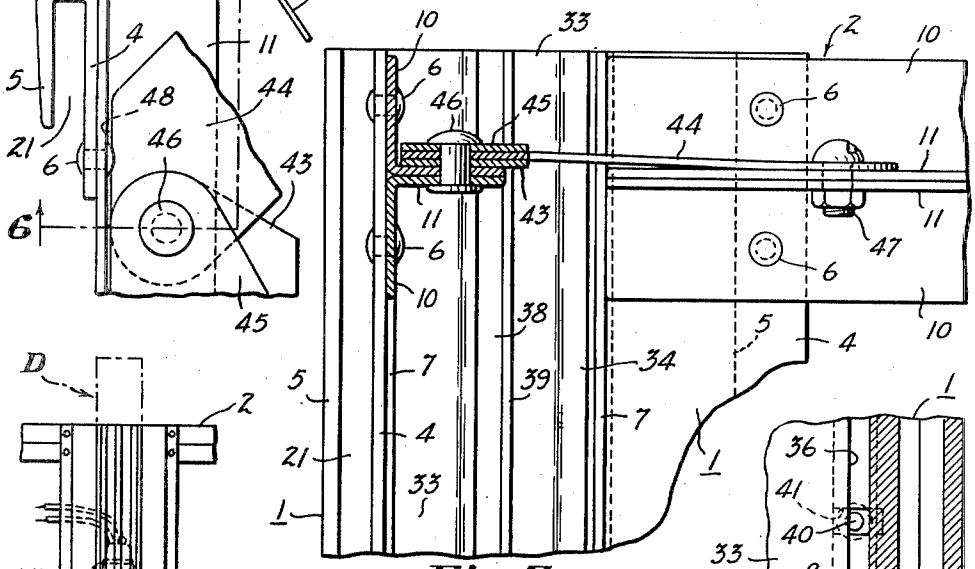


Fig. 6

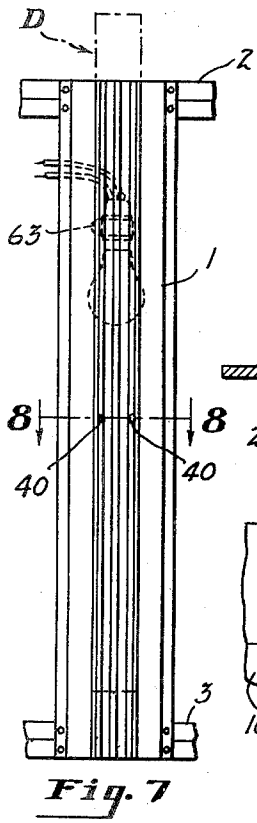


Fig. 7

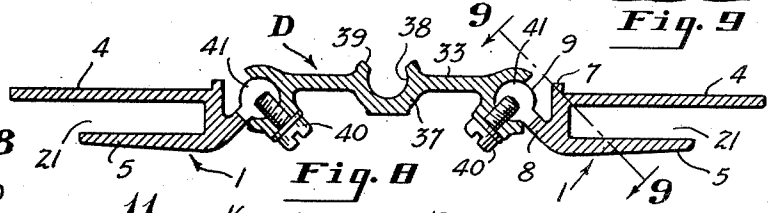


Fig. 8

Fig. 9

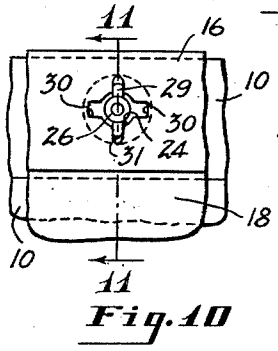


Fig. 10

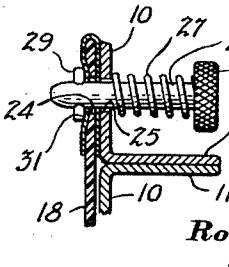


Fig. 11

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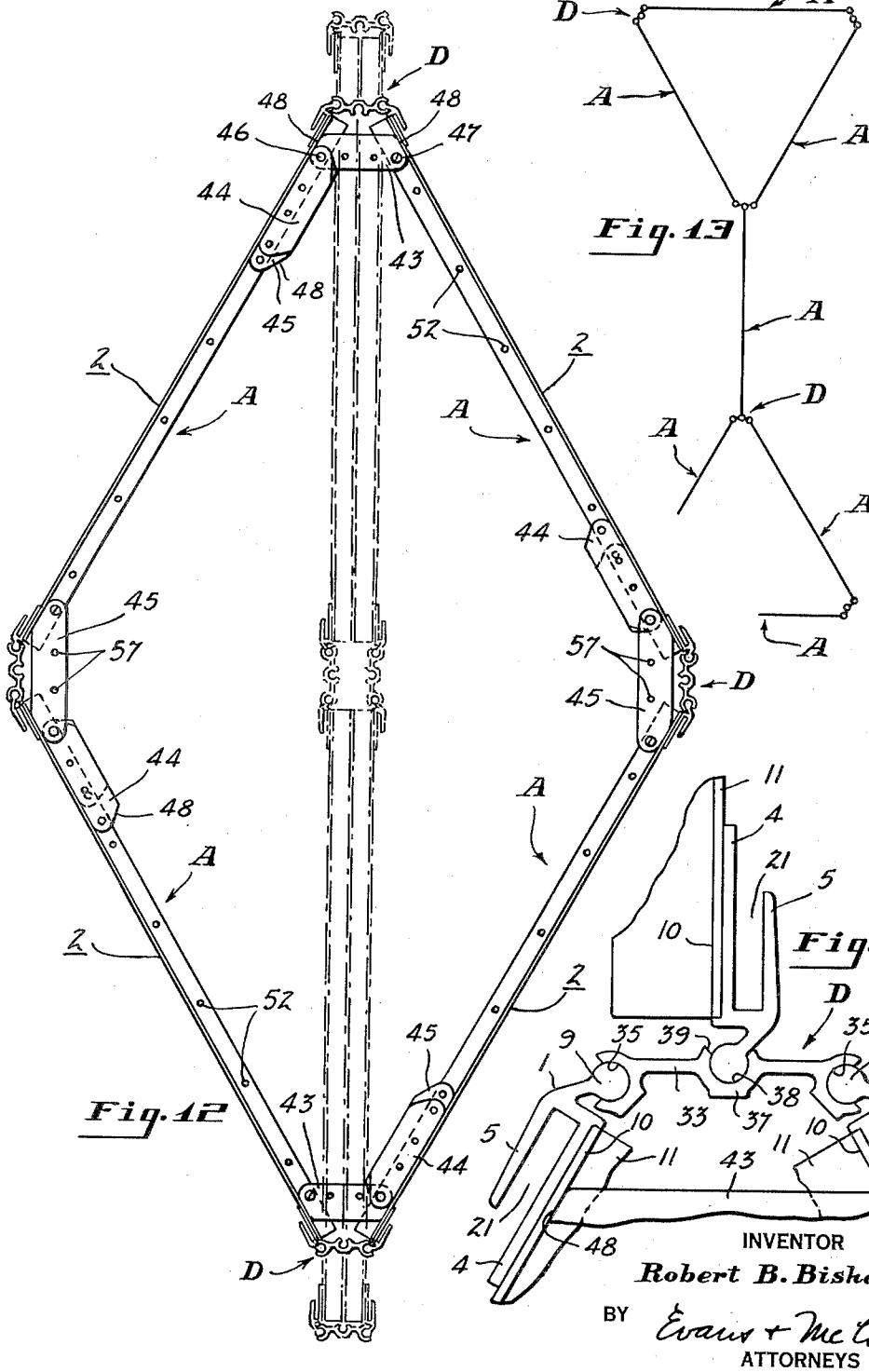


Fig. 12

Fig. 13

Fig. 14

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2,772,494

DISPLAY DEVICE

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Application January 10, 1951, Serial No. 205,358

21 Claims. (Cl. 40—125)

This invention relates to displays and particularly to multiple sided collapsible or knock down displays having removable panels.

One of the principal objects of the invention is to provide an improved articulated display of the type comprising a plurality of hinged panels that can be collapsed for storage and shipment or arranged in a number of polygonal shapes. In a preferred arrangement the invention contemplates a display comprising a plurality of panel receiving frames coupled together for relative movement so that, without disassembly, the adjacent panelled frames can be disposed in different angular relationships.

Another object is to provide a display of panels connected together by continuous substantially light-tight joints which permit effective use of internal illumination in combination with relative swinging of adjacent panels to adjust the display to different shapes.

Another object is to provide a display of the character mentioned in which rectangular frames of rigid construction carry removable and interchangeable translucent panels that are embossed or molded to provide protuberances on one side and cavities on the other, the several frames being connected together along adjacent edges by hinge means so that for storage and transit the embossed panels can be removed and nested and the articulated frames collapsed.

Another object is to provide a multiple panelled display having adjustable suspension means for mounting the display on upright poles, posts, pillars, trees and the like. As a preferential aspect of this phase of the invention, the suspension includes a pole encircling band which may be adjustable in length and a plurality of resilient elements radiating from the band and secured at their outer ends to different panels or members of the display.

Another object is to provide an improved panel receiving frame for use in an articulated display, this phase of the invention being particularly concerned with the provision of a rigid frame for slidingly receiving an embossed panel.

A further object is to provide an improved corner joint for an articulated display in which adjacent frames are connected by a retaining member for relative swinging movement. More specifically, it is sought to provide a corner joint construction for articulated panel displays in which a cylindrical socket on one member receives a complementally formed element on another member, the socket and the element interfitted therewith preferably being continuous substantially throughout the entire lengths of the display frames connected thereby.

Other objects and advantages pertain to certain novel features of construction and combinations and arrangements of parts, including improved corner latch elements and brackets for supporting electric lamp sockets inside the display, all of which will become apparent from the following detailed description of a preferred embodiment of the invention. This description is made

in connection with the accompanying drawings forming a part of the specification.

In the drawings:

Figure 1 is a perspective view, taken from below and partly diagrammatic, showing the display of the present invention mounted on a lamp post;

Fig. 2 is an elevational view of a translucent panel of the flat type illustrating the edge binding construction of the panels employed in the display of the present invention;

Fig. 3 is a sectional detail through one of the frame elements of the display panel, this view being taken substantially along the line 3—3 of Fig. 2 and enlarged with respect to that figure;

Fig. 4 is a top plan view, with parts broken away and removed, of the display illustrated in Fig. 1;

Fig. 5 is a fragmentary top plan view, with parts broken away and removed, showing one of the corner joints of the display, this view being enlarged with respect to Fig. 4;

Fig. 6 is a sectional detail taken substantially along the line indicated at 6—6 of Fig. 5;

Fig. 7 is an elevational detail showing one of the corners of the display including the retaining member intermediate the individual panel receiving frames and to which the latter are hinged;

Fig. 8 is a sectional detail with parts removed taken substantially along the line indicated at 8—8 of Fig. 7 and enlarged with respect to that figure;

Fig. 9 is a sectional detail taken substantially along the line 9—9 of Fig. 8;

Fig. 10 is an elevational detail showing one of the fasteners used to locate and retain the removable panels in the panel receiving frames;

Fig. 11 is a sectional detail taken substantially along the line indicated at 11—11 of Fig. 10;

Fig. 12 is a plan view, partly diagrammatic, showing the articulated display in the form of a parallelogram and also collapsed;

Fig. 13 is a diagrammatic plan view showing several displays embodying the present invention assembled into a composite unit; and

Fig. 14 is an enlarged fragmentary plan view of one of the joints of the composite display unit of Fig. 13 showing the manner in which three panel frames are hinged to a common retaining member.

The display of the present invention, briefly described, comprises a plurality of panel receiving frames A arranged in the form of a polygon, each frame having opposite edges connected, preferably hinged, to the edges of adjacent frames. The displays are received for support about a suitable upright such as a lamp post B and are mounted therein as by adjustable self-centering suspensions. Each of the frames A receives a display panel C, the several panels being of various designs but of the same size to provide for interchangeability. At the corners of the display, the edges of adjacent panel frames are preferably hinged together so that the display can be altered in shape or collapsed for shipment and storage. Although one panel receiving frame may be hinged directly to another, it is preferable to employ a retaining strip or member D in each corner joint.

The panel receiving frames A each comprises a pair of spaced side frame members 1 and top and bottom cross frame members 2 and 3 respectively. The frame side members 1 are of uniform section throughout, preferably being light metal such as aluminum. These frame members may be economically formed by extruding or rolling long strips of the desired cross section, such strips being then cut into short lengths corresponding to the desired frame sizes. One, or inner, flange 4 of the chan-

nel frame member is wider than the other, or outer, flange 5, the extension of the flange 4 beyond the edge of the flange 5 facilitating attachment thereto of the cross members 2 and 3 as by means of rivets 6. Shallow ribs 7 along the edges of the inner flanges 4 of the frame members provide abutments or locating shoulders which are engaged by the ends of the cross members 2 and 3. Along the length of each of the channel frame members 1 is an integral obliquely disposed hinge flange or element 8 which is oppositely directed with respect to the channel forming flanges 4 and 5. This hinge flange is oblique to the planes of the flanges 4 and 5 and has a free edge formed with a longitudinally extending cylindrical element 9 that forms part of one of the hinged joints between adjacent frames.

The cross members 2 and 3 each comprises a pair of angle sectioned metal strips or elements of aluminum arranged in a T. One flange 10 of each element is received flatwise against the wide flanges 4 of the frame side members, while the other flange 11 is disposed in back to back relation with the corresponding flange of the other element of the cross member.

Each of the display panels C is of generally rectanguar shape, having spaced side elements 14 and 15 and top and bottom cross elements 16 and 17. The side and cross elements may be formed of similar channel shaped metal strips received over the edges of sheet material 18 comprising the body of the panel. At spaced intervals along the side and cross elements of the panel C, hollow rivets 19 extend through the flanges of the channel elements and clamp the panel material 18 therebetween. At the corners of the panels, the ends of the side and cross elements overlap one another. The cross elements 16 and 17 are also fastened to the plastic panel sheet by staples 23.

As mentioned above, the several panels C may be of various styles and types. The sheet material 18, of which the panels are formed, is a stiff translucent plastic of high strength which is painted or otherwise ornamented to give the desired decorative effect or to carry any desired legend or message. Some or all of the panels are molded or embossed to stand out from the planes of the frames A and provide three dimensional effect. Mounting of the display about globe 20 of the lamp post B illuminates the display internally so that the individual panels are effective both day and night.

Channels 21 of the side members 1 of each of the panel receiving frames are disposed in confronting relation to one another and serve as guides to receive the side edges of the removable and interchangeable panels C when assembling the latter in the supporting frames A of the display. The panels are slid endwise or vertically into the channels 21. The flanges of the side frame members 1 embrace individually the side elements 14 and 15 of th panels to prevent distortion and bending of the latter. This permits the side elements of the panels to be made of light gauge metal which facilitates assembly of the panels, simplifies handling, storage and transportation and reduces cost. The side and cross elements of the panel C are, in effect, edge bindings which resist tearing and mutilation of the side portions of the panel material 18.

The cross members 2 and 3 of the panel receiving frames A are each disposed wholly on one, preferably the rear or inner, side of a received display panel as indicated in Fig. 5 so that clearance is provided between the side members 1 for any embossments or raised portions such as indicated at 22 which project outwardly beyond the face or plane of the panel as defined by the side and cross elements 14, 15, 16 and 17. The side elements 14 and 15 are substantially wholly received within the channels 21 of the frame side members 1 as indicated in Fig. 5 so as to be concealed from view. Location of the rivets 6 which secure the cross members 2 and 3 of the panel receiving frames to the side members 1 of such frames in those portions of the side member flanges 4 which project beyond the outer or narrow flanges 5 prevents engagement or interference between such rivets and the hollow rivets 19 of the panel elements when the panels are slid into and out of the frames.

To locate and support the panels C in the frames A, the top and bottom margins of the panels are formed with apertures 24 through the metal edge bindings or cross elements 16 and 17. These apertures are aligned in assembly with apertures 25 in the flanges 10 of the frame cross members. Extending through each pair of the aligned apertures is a rod-like fastening element 26, the shank of which receives a helical coil spring 27 compressed between head 28 of the fastener and the rear face of the cross member flange 10. The end of the fastener 26 remote from the head 28 carries a cross pin 29 which is drawn snugly against the outer face of the panel cross element by the action of the spring 27 so as to hold the panel against the outer face of the frame cross member. The circular apertures 25 in the cross member flanges 10 are only slightly larger in diameter than the rod like fasteners 26 so that the pins 29, assembled in the rods 26 after insertion of the latter in the apertures 25, hold the fasteners captive on the frame cross members. The apertures 24 in the panel cross elements include diametrically arranged extensions 30 of sufficient extent to accommodate the retaining pins 29. Thus, the fastener rods 26 can be projected through the apertures 24 of the panels when assembling the latter in the frames by aligning the retaining pins 29 with the aperture extensions 30. After the pins 29 have been thus projected through the panel apertures, the fasteners are rotated ninety degrees to position the retaining pins 29 in detent recesses 31 formed in the outer faces of the panel cross elements. Removal of the fasteners 26 from the panels C so that the latter can be withdrawn or slid vertically from the frames is accomplished by a reversal of the fastener inserting process just described. The panels C, including the cross elements 16 and 17, are sufficiently flexible to permit the cross elements to bow outwardly so as to clear the projecting ends of the fastener rods 26 during the sliding of the panels into and out of the supporting frames.

Articulation of the display is effected by hinged joints at the corners along the edges of adjacent panel frames. These hinged joints preferably extend the full lengths of the panels, or substantially so, and are so constructed as to prevent the escape of light rays from the inside to the outside of the display.

Each of the hinged joints includes one of the retaining members D which is swingably coupled to a plurality of panel receiving frames. The retainers extend across the angle between the planes of the adjacent panels and the panel frames connected thereby. These retaining members, formed as by extruding or rolling aluminum or similar metal, are of substantially uniform section throughout their lengths or vertical heights. Each comprises a generally flat strip body portion 33 and hollow beads 34 along the edges of the body. The hollow beads 34 are formed with internal, substantially cylindrically shaped sockets 35 that receive the cylindrical beads 9 on the side members 1 of the panel receiving frames in the provision of a hinged connection. The beads 9 and the sockets 35 are complementally formed to retain the beads in the sockets, the latter being formed with full length arcuate lateral openings 36 of less than 180° extent to receive the oblique flanges 8 of the frame side members. These flange receiving slots or openings 36 in the hollow beads 34 are oppositely directed.

Intermediate the edge beads 34, the flat body portion 33 of each retainer is formed with an enlargement 37 paralleling the edges and having an internal cylindrical socket 38 corresponding in shape to the edge sockets 35. These intermediate sockets extend the full lengths of the retainers and are adapted slidingly and retentatively to

receive the cylindrical beads 9 of the panel frames. Longitudinally continuous arcuate lateral openings 39 into the sockets accommodate the oblique flanges 8 of the frame side members. The intermediate sockets, as will later appear, are utilized in combining a plurality of the display panels and frames in various alternative arrangements employing a common hinged joint.

Intermediate their ends the hollow beads 34 and the intermediate enlargements 37 are drilled and tapped to receive cap screws 40 which extend in transverse relation into the corresponding cylindrical sockets. The cylindrical beads 9 on the side members 1 of the panel receiving frames are relieved or cut away, as indicated at 41, to accommodate the ends of the cap screws and to provide abutments which engage the cap screws and thereby limit longitudinal sliding movement of the cylindrical beads 9 within the cylindrical sockets.

Vertical sliding of the retainers D on the cylindrical edges or beads 9 of the panel frames quickly assembles and disassembles the display. As shown by the broken lines in Fig. 7, the retainer D can be raised relative to the frames hinged together thereby so as to disconnect the corner joint. Assembly is done by sliding the retainer D in either its normal position of Fig. 5 or its reversed position of Fig. 14 onto the cylindrical elements 9 of the frames to be joined, it being understood that the locating screws 40 of the retainers are removed or backed off during assembly and disassembly of the displays.

Although each of the arcuate openings 36 and 39 is less than 180° in extent, it is preferable that such openings be greater than 90° to permit at least a 90° relative swinging or turning of the panel receiving frames A and the retainers D. Thus the hinged joints provided by the corner retainers permit the panel frames to be moved or swung to a collapsed condition such as indicated, in the case of a four-panel display, by the broken lines of Fig. 12. In this collapsed condition the endmost retainers D are each disposed at approximately 90° angles to the panel frames connected thereby while the intermediate retainers are substantially parallel to to planes of the panel frames connected thereby. Between the limits of movement represented by these relative positions the retainers can be disposed at various angles with respect to the planes of the panel frames connected thereby. For example, a display square in plan form may be set up, as illustrated in Figs. 1, 4 and 5. If desired, the four-sided display may be shaped to diamond or parallelogram plan form as illustrated by the full lines of Fig. 12.

To make a three-panel or a three-sided display one of the panel assemblies and one of the retaining members B are removed from the assembly. The three corners of the display each includes a retainer which connects the edges of the adjacent panels disposed at 60° angles to one another.

As indicated in Fig. 14, one or more of the retainers D can be reversed so that the arcuate opening 39 into its intermediate socket 38 is directed outwardly. This outwardly-directed socket opening permits the hinged attachment to a single retainer of a third panel receiving frame. Using this multiple or triple joint arrangement, a composite display such as indicated diagrammatically in Fig. 13 is feasible. Here a pair of spaced displays, each triangular in plan form, are connected by a single display. This intermediate or connecting display panel is hinged along its side edges to the retainers D of each of the triangular displays. Other variations and combinations are obviously feasible utilizing the present panel receiving frames and the hinge joint retaining members.

Since the cylindrical beads 9 on the panel receiving frames each forms a swinging joint with the cylindrical socket of the retaining member to which it is attached, provision is made for restricting or limiting the relative swinging of the corner joints of the display so as to retain the display in the desired plan form. This feature is particularly useful in multiple-sided displays employing four or more articulated panels. Control of the corners is effected by gusset, fillet or latch elements secured across the angles between the panel frames. The panel frames are standardized for use in a variety of combinations and plan forms, each carrying a plurality or group of the gusset or latch elements of different lengths, indicated at 43, 44 and 45, adjacent one end of each of the top and bottom cross members. Each group of these latch elements is held captive by a common rivet 46 secured through one end of each element of the group and through the horizontal flanges 11 of the angle pieces or strips comprising the frame cross member. In assembling the display for use, one of the latch elements in each group, as, for example, the latch element 44 in the case of the rectangular plan form display of Figs. 1, 4 and 5, is positioned across the angle between the panels. The positioned latch element, secured at one end by the rivet 46 and at the other end by a bolt 47 through aligned apertures in the end of the latch element and the flanges 10 of the cross member of the adjacent panel frame, locks the frames against relative swinging at the corner joint. The latch elements are formed with end edge faces 48 engageable in abutting relation against the vertical flanges 10 of the frame cross members to limit swinging or turning of the latch elements on the rivets 46 and the bolts 47. The end faces 48 on each of the short latch elements 43 are disposed at relatively greater angles to the longitudinal axis of the element than are the corresponding end faces on the larger latch elements 44 and 45. The different end face angles are determined by the different angles prevailing between the latch elements and the frames under various polygonal arrangements of the frames.

When one of the displays is formed to the shape of a parallelogram such as illustrated by the full lines of Fig. 12, it has one pair of acute angles between adjacent panels and another pair of obtuse angles between adjacent panels. To hold or lock the display in the desired parallelogram shape, the relatively short latch elements 43 are disposed across the acute angle corners while the relatively long latch elements 45 are disposed across the obtuse angle corners. In the display arrangement illustrated in Fig. 13 in which groups of three panel frames each are arranged in triangular plan form, the corner joints are locked by means of the short latch or link elements 43. In other arrangements of the displays, various combinations of corner angles are employed with the appropriate length of latch elements.

The polygonal display of the present invention can be supported in any suitable manner, a preferred arrangement, illustrated in Fig. 1, being suspension on a lamp post or a similar upright. The light from the electric lamp within the globe 20 illuminates internally the translucent display panels C. Metal bands 50 embrace vertically spaced portions of the support, one being placed about the cap on the globe, the other being below the globe. These bands each comprises a perforated metal tape of soft iron or the like, conventional plumber's tape being suitable. The ends of the tape are bent to form ears 51 having aligned apertures that receive a tightening bolt 52. The metal bands 50 are each formed along its length with a series of spaced apertures 55. Thus the ears 51 or one of them, can be formed by bending the metal at any desired location along the length of the band to provide a supporting annulus of the desired circumference to fit the particular lamp post or other upright being used as a support.

The ends of a plurality of extensible coil springs 53 are attached individually to spaced points about each of the bands 50. A convenient method of attachment consists in passing hooked portions 54 on the ends of the springs through certain of the apertures 55 in the bands 50. The springs 53 extend from the bands 50

in radial relation and are connected at their outer ends to the cross members or other components of the panel frames A formed with holes **52** to receive hooks on the spring ends. The outer ends of the springs may, for example, have hooks **56** received through apertures **57** in the corner latch elements or gussets. The springs **53** are of such length as normally to be under tension, their elasticity permitting variation in length to adjust to diameter changes in the mounting rings or bands **50** in the accommodation of lamp posts or uprights of various sizes. The suspension is self-centering and adjusts to posts and uprights of different sizes and shapes. While the springs shown extend full length between the display frame and the attaching band, shorter springs may be employed, using extension hooks or wires (not shown) between the spring ends and the band or the frame. The apertures **52** and **57** in the display frames may be used in attaching other and supplemental display devices and materials such as wreaths and streamers to the present display by means of wires, cords, bolts and the like. The holes are also used in suspending the display as by wires or springs from cross wires or brackets as is customary in street and department store decorating systems.

As shown in Fig. 1, the suspension device comprises one set of a band **50** and a plurality of springs **53** arranged at the bottom of the display and another set of a band and springs at the top of the display. This arrangement, while providing for resilient mounting of the display to yield under impact and thereby avoid damage to the display, tends to hold the display in fixed relation to the lamp post or support, eliminating objectionable swinging, twisting and turning.

To provide for internal illumination in the event the display is mounted on an upright other than a lamp post, or in the event supplemental interior illumination is desired, lamp sockets **60** are supported in the angles between adjacent panels by spring metal brackets **61**. These brackets are each formed of a resilient metal strip reversely bent to provide at one end a cylindrical enlargement **62** receivable in the socket **38** of one of the corner members or retainers D. The cylindrical enlargement **62** is formed to an external diameter normally slightly greater than that of the socket **38**, requiring deformation in assembly so that the inherent resiliency of the metal of the strip **61** retains the enlargement **62** in frictional engagement with the walls of the socket **38** thereby resisting longitudinal sliding of the bracket along the retainer D. The reverse bend which provides the cylindrical enlargement **62** on the bracket **61** also provides an extension or lever portion **63** normally disposed at an oblique angle to the body portion **61**. By pinching together the extension lever **63** and the body portion of the bracket, the enlargement loop **62** can be deformed permitting insertion into the retainer socket **38** and longitudinal sliding of the lamp bracket relative to the retainer D in adjusting the lamp socket **60** carried thereby to any desired vertical position in the display. The lamp sockets **60** are conventionally constructed and are individually embraced and held by resilient loop portions **64** formed integrally on the brackets **61**. Conventional wiring connects the sockets to a suitable source of electric current.

In accordance with the patent statutes the principles of the present invention may be utilized in various ways, numerous modifications and alterations being contemplated, substitution of parts and changes in construction being resorted to as desired, it being understood that the embodiment shown in the drawings and described above is given merely for purposes of explanation and illustration without intending to limit the scope of the claims to the specific details disclosed.

What I claim and desire to secure by Letters Patent of the United States is:

1. In combination in an articulated display, a panel frame having elongated side members and an elongated retaining member connected to one of the side members with the longitudinal axis of the retaining member generally paralleling the longitudinal axis of the one side member, the connection between the members extending along substantially the entire length of one side of the frame and comprising an elongated substantially cylindrical socket on one of the connected members and an elongated rib of substantially circular section complemental to and received in the socket on the other of the connected members for relatively longitudinal sliding movement, a recess in the rib, and means carried by said one connected member and receivable in the rib recess to locate and retain the connected members in predetermined relative longitudinal positions.

2. In combination in an articulated display device, a plurality of panel frames each having a pair of spaced substantially parallel elongated side members disposed in a common plane, a plurality of elongated relatively narrow strip members, the panel frames being arranged in a multiple sided closed figure and the side members of adjacent frames being connected together by the elongated relatively narrow strip members, the strip members having parallel side edges connected to the side members of the frames by flexible joints, the device being collapsible to a flat shape in which the panel frames are disposed flatwise substantially against one another and the narrow strip members connect the side members of the frames in pairs in the collapsed condition of the device, said joints each comprising means providing an elongated substantially cylindrical socket and an elongated rib received in such socket and complementally shaped to turn therein, at least one of the panel frames having a display opening, and a display panel mounted for facile removal and replacement across the display opening of said one panel.

3. In combination in an articulated display device, a plurality of panel frames each having a pair of spaced substantially parallel elongated side members disposed in a common plane, a plurality of elongated relatively narrow strip members, the panel frames being arranged in a multiple sided closed figure and the side members of adjacent frames being connected together by the elongated relatively narrow strip members, the strip members having parallel side edges connected to the side members of the frames by flexible joints, at least one of the panel frames having a display opening, a display panel mounted across the display opening of said one panel for facile removal and replacement, the joints each comprising an inner element in the form of a flange formed along one edge with a rib having a substantially cylindrical periphery and a hollow outer element embracing the inner element, the inner flange elements being integral with the frame side members and disposed obliquely to the planes of their respective panel frames, the device being collapsible to a flat shape in which the panel frames are disposed flatwise substantially against one another and the narrow strip members connect the side members of the frames in pairs in the collapsed condition of the device, and said joints each being substantially continuous along substantially the entire length of the frame side members connected thereby.

4. A display comprising panels and a retaining strip joining the panels for relative swinging movement, the strip being narrow relative to the panels and having an interfitting sliding connection with each of the panels for independent relative movement of the panels longitudinally of the strip in assembly, the sliding connections being in spaced parallel relation on the strip, and releasable locating means engaged between each panel and the strip restraining the panels against said relative longitudinal movement.

5. In combination with an articulated display device, a plurality of panel frames each having a pair of spaced substantially parallel elongated side members disposed in a common plane, and elongated retaining members

connecting the edge of the panel frames, each retaining member being relatively narrow and being swingably connected to the side members of the panel frames connected thereby, the longitudinal axes of the retaining member generally paralleling the longitudinal axes of the frame side members connected thereto to form a multiple sided closed figure in which the retaining members are equal in number to the panel frames and alternate therewith, the narrow retaining members being of such width that the panel members lie flatwise against one another in pairs when the display is collapsed the connections between the members extending along substantially the entire lengths of the sides of the frames and comprising elongated substantially cylindrical sockets and elongated ribs received in the sockets and complementally shaped to turn therein at least one of the panel frames having a display opening, and a display panel mounted for facile removal and replacement across the display opening of said one panel.

6. In combination in a display device, a plurality of panel frames and a relatively narrow retaining member joining the frames, said member having parallel sockets of substantially cylindrical section along opposite edges, said sockets having longitudinally extending slot openings oppositely directed, said member also having a longitudinally extending socket intermediate the edge sockets, said intermediate socket having a longitudinally extending slot opening directed laterally from one side of the member, and lock flanges on the panels received in the sockets of the retaining member, the lock flanges having edges complemental in section to the sockets and the flanges having relatively thin portions received in the slot openings of the sockets whereby to permit swinging of the panels relative to the retaining members.

7. In combination in a display device, a plurality of panel frames and a retaining member joining the frames, said member having parallel sockets of substantially cylindrical section along opposite edges, said sockets having longitudinally extending slot openings oppositely directed, said member also having a longitudinally extending socket intermediate the edge sockets, said intermediate socket having a longitudinally extending slot opening directed laterally from one side of the member, lock flanges on the panels received in the sockets of the retaining member, the lock flanges having edges complemental in section to the sockets and the flanges having relatively thin portions received in the slot openings of the sockets whereby to permit swinging of the panels relative to the retaining member, and means carried by the retaining member and engageable with the lock flanges of the panels to restrain longitudinal movement of the lock flanges in the sockets.

8. In combination in a display device, a frame comprising a pair of spaced side member channels and top and bottom cross members extending between and connecting the side members, the side member channels being open toward one another in spaced parallel confronting relation to provide side guideways on the frame, an embossed panel supported by the frame and having spaced parallel side edges received slidingly in the channels and embraced by the side frame members to constrain the panel to edgewise sliding movement relative to the frame, at least one of the cross members being disposed wholly on one side of the received panel to prevent interference between said one cross member and embossments on the panel in sliding such panel edgewise in the side member channels, and means carried by one of the members and engaging the received panel to locate such panel in predetermined position.

9. In combination in a display device, a frame comprising a pair of spaced side member channels and top and bottom cross members extending between and connecting the side members, the side member channels being open toward one another in spaced parallel confronting relation to provide side guideways on the frame, an embossed panel supported by the frame, said panel having spaced parallel relatively thin flat side margins disposed in substantially a common plane and received slidingly in the channels of the side frame members and embraced by the side frame members to constrain the panel to edgewise sliding movement relative to the frame, at least one of the cross members being disposed wholly on one side of the received panel to prevent interference between said one cross member and embossments on the panel in sliding such panel edgewise in the side member channels, and means for holding the panel in predetermined position in the frame.

10. In combination in a display device, a frame comprising a pair of spaced side member channels and top and bottom cross members extending between and connecting the side members, the side member channels being open toward one another, an embossed panel supported by the frame and having side edges received in the channels, at least one of the cross members being disposed wholly on one side of the received panel to prevent interference between said one cross member and embossments on the panel in sliding such panel in the side member channels, and an element and spring biasing means therefor to latch a supported panel in predetermined position in the frame, the latched element being carried by and movable transversely through one of the members and also movable through the panel to engage and hold the panel against the member carrying the latch elements.

11. In combination in an articulated display device, a plurality of panel frames each having a pair of spaced substantially parallel elongated side members disposed in a common plane and cross members extending between and connecting the side members, the panel frames being arranged in a multiple sided closed figure in which adjacent panel frames are angularly disposed, a plurality of panels carried by the panel frames, each panel having spaced generally parallel side edges slidingly received in interfitting relation with side members of the panel frames and thereby held for facile removal and replacement, flexible joints connecting the side members of adjacent panels to permit adjustment of the angles between such adjacent panels, the joints each comprising an inner element and an embracing outer element articulated therewith to provide a light tight seal between such elements, and gussets disposed in the angles between adjacent panel frames and connected to the cross members of the frames to retain the panel frames in fixed angular relationship.

12. In combination in an articulated display device, a plurality of panel frames each having a pair of spaced substantially parallel elongated side members disposed in a common plane and cross members extending between and connecting the side members, the panel frames being arranged in a multiple sided closed figure in which adjacent panel frames are angularly disposed, flexible joints connecting the side members of adjacent panels to permit adjustment of the angles between such adjacent panels, a pin secured to one of the frame cross members, a plurality of gussets swingably mounted on said pin and selectively movable to positions extending across the angle between said one frame and a frame adjacent thereto, and means for securing the gussets to the last mentioned frame to retain the panel frames in fixed angular relationship.

13. In combination in an articulated display device, a plurality of panel frames each having a pair of spaced substantially parallel elongated side members disposed in a common plane and cross members extending between and connecting the side members, the panel frames being arranged in a multiple sided closed figure in which adjacent panel frames are angularly disposed, flexible joints connecting the side members of adjacent panels to permit adjustment of the angles between such adjacent panels, a pin secured to a cross member of one of the frames, a gusset swingable on the pin about an axis par-

alleling the plane of the side members of said one frame, and means for securing the gusset to a frame adjacent said one frame to retain the panel frames in fixed angular relationship, the gusset having a stop portion spaced from the pin and arranged to bear against the cross member to which the pin is secured for limiting the swinging movement of the gusset.

14. In combination in an articulated display device, a plurality of panel frames each having a pair of spaced substantially parallel elongated side members disposed in a common plane and cross members extending between and connecting the side members, the panel frames being arranged in a multiple sided closed figure in which adjacent panel frames are angularly disposed, flexible joints connecting the side members of adjacent panels to permit adjustment of the angles between such adjacent panels, pins secured to the cross members of adjacent frames, and a gusset extending between and connecting said pins, said gusset having stop portions spaced from the pins, the stop portions being arranged to bear against the cross members to which the pins are secured to limit turning of the gusset on the pins relative to such cross members.

15. In combination in an articulated display device, a plurality of panels, a plurality of relatively narrow retaining members connecting the edges of the panels, the retaining members being hinged to the panels connected thereby to permit collapsing of the device to a substantially flat shape for transit and storage in which adjacent panels are disposed substantially flatwise against one another and to permit expanding of the device to a substantially polygonal shape in which adjacent panels are disposed in angular relation to one another, and latch gussets carried by the panels for connection across the angles between adjacent panels to retain the expanded device in said polygonal shape, said retaining members extending substantially the full length of the panels connected thereby and said latch gussets bridging the retaining members and the connections of the latter to the panels.

16. In combination in an articulated display device, a plurality of panels each comprising spaced side members and top and bottom cross members connected between the side members, a plurality of relatively narrow retaining members connecting the panels, the retaining members being hinged to the side members of the panels connected thereby to permit collapsing of the device to a substantially flat shape for transit and storage in which the adjacent panels are disposed substantially flatwise against one another and to permit expanding of the device to a substantially polygonal shape in which the adjacent panels are disposed in angular relation to one another, a plurality of latch gussets swingably mounted on one of the cross members of one of the panels for turning movement about a common axis, said gussets being of different lengths, and means for selectively connecting one of the gussets to one of the cross members of a panel adjoining said one panel whereby the connected latch gusset is disposed across the angle between adjacent panels in bridging relation to the retaining member connecting such panels to retain the expanded device in said polygonal shape.

17. In a display device of the character described, a panel frame retainer comprising an elongated strip of generally uniform section having open sided sockets extending longitudinally along opposite edges and an intermediate socket extending longitudinally of the strip substantially midway between and in parallel relation to the edge sockets, the edge socket openings being oppositely directed, the intermediate socket having a longitudinal opening symmetrical with respect to the edge openings and the interior surfaces of the sockets being cylindrically curved to receive and retain complemental hinge parts of panel frames.

18. In a display device of the character described, a panel frame retainer comprising an elongated strip of generally uniform section having a generally flat relatively thin body formed along opposite edges with enlargements having open sided sockets, and a centrally disposed enlargement extending longitudinally of the body and having formed therein an open sided socket substantially parallel to the edge sockets.

19. In a display device of the character described, a panel frame retainer comprising an elongated strip of generally uniform section having a generally flat relatively thin body formed along opposite edges with enlargements having open sided sockets, and a centrally disposed enlargement extending longitudinally of the body and located substantially in the plane of the body, said central enlargement having formed therein an open sided socket substantially parallel to and equidistant from the edge sockets.

20. In combination in a display device a plurality of flat open panel frames each comprising spaced side members and top and bottom cross members connected between the side members, the side members of each panel frame comprising channels open toward one another and also open at their ends, means hingedly connecting the panel frames together along their side edges, a plurality of panels each supported by one of the panel frames, said panels each comprising spaced elongated side elements disposed in generally parallel relation, a translucent panel member extending between the side elements, the side elements of each panel being slidingly received in the channels of the side members of the respective panel frames for edgewise movement of each panel over a path parallel to the plane of the corresponding panel frame for facile removal and replacement of the panels, means for securing the panel frames in a polygonal figure, means having connection with the panel frames for mounting the polygonal figure on an upright post in surrounding relation to the latter, and the cross members of the panel frames being located inwardly toward the center of the polygonal figure from the planes of the panel paths to clear the open ends of the channels to permit said edgewise sliding movement of the panels in their respective frames whereby the panels are individually removable from and replaceable in the panel frames while the figure is so supported and the open frames permit illumination of the several translucent panels from within the polygonal figure.

21. A display device comprising a plurality of panels having spaced side edges, a plurality of elongated connecting strip members having side edges more closely spaced than the side edges of the panels, each connecting strip and each panel being hingedly joined along its edges to the edges of two panels and two connecting strips, respectively, in the provision of an articulated structure that can be opened to polygonal shape for display purposes or closed to a collapsed shape, the strip members being proportioned so that in the said collapsed shape one panel is disposed substantially flatwise against another and said one and said other panels have adjacent edges hinged to and joined by a common strip member.

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