United States Patent [19]

Drueck, Jr.

[11] **3,842,524**

[45] **Oct. 22, 1974**

[54] **DISPLAY DEVICE**

[75] Inventor: **Fred Drueck, Jr.**, Chicago, Ill.

[73] Assignee: **National Creative Merchandising Corp.**, Mount Prospect, Ill.

[22] Filed: **July 8, 1971**

[21] Appl. No.: **160,678**

[52] **U.S. Cl.** **40/145,** 40/128, 40/125

[51] **Int. Cl.** **G09f 7/18**

[58] **Field of Search** ..... 210/125, 125 H, 125 G, 210/145; 116/173, 174

[56] **References Cited**

UNITED STATES PATENTS

435,696	9/1890	Hoffman	40/125 G X
533,539	2/1895	Kincade	248/155.1
1,846,988	2/1932	Buck	40/125 G
2,518,280	8/1950	Buckner, Jr.	116/173
2,800,164	7/1957	Chambers	245/155.1
3,239,957	3/1966	Snediker	116/174 X

FOREIGN PATENTS OR APPLICATIONS

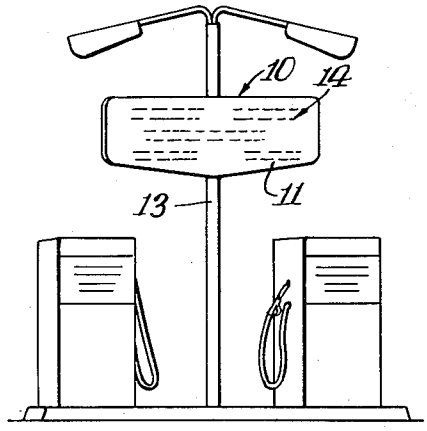
15,020	7/1902	Great Britain	40/125 G

Primary Examiner—Jerome Schnall
Assistant Examiner—Wenceslao J. Contreras
Attorney, Agent, or Firm—Hofgren, Wegner, Allen, Stellman & McCord

[57] **ABSTRACT**

A display device adapted for elevated mounting as on an upright pole. The device is suited for advertising purposes in connection with service stations, supermarkets, used car lots, etc. The device is arranged to be relatively compact in a knocked-down shipping arrangement while opening to a large display configuration, and includes means for effectively positively locking the device in the display arrangement on the mounting pole. The display element comprises a pocket element adapted to be placed onto suitable movable support means of the device for carrying advertising indicia or the like.

14 Claims, 9 Drawing Figures



PATENTED OCT 22 1974

3,842,524

SHEET 1 OF 2

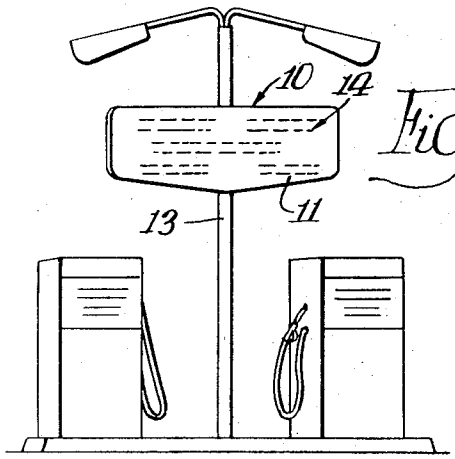


Fig. 1.

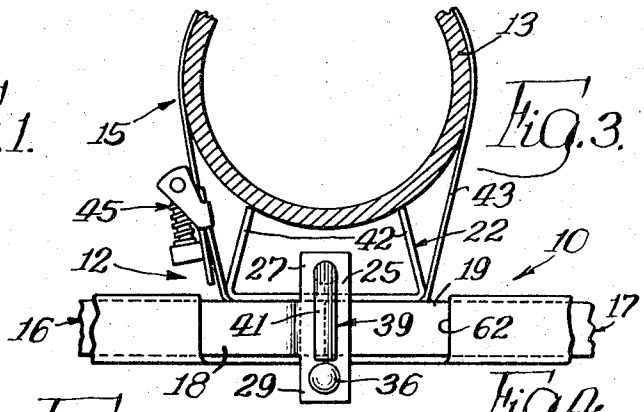
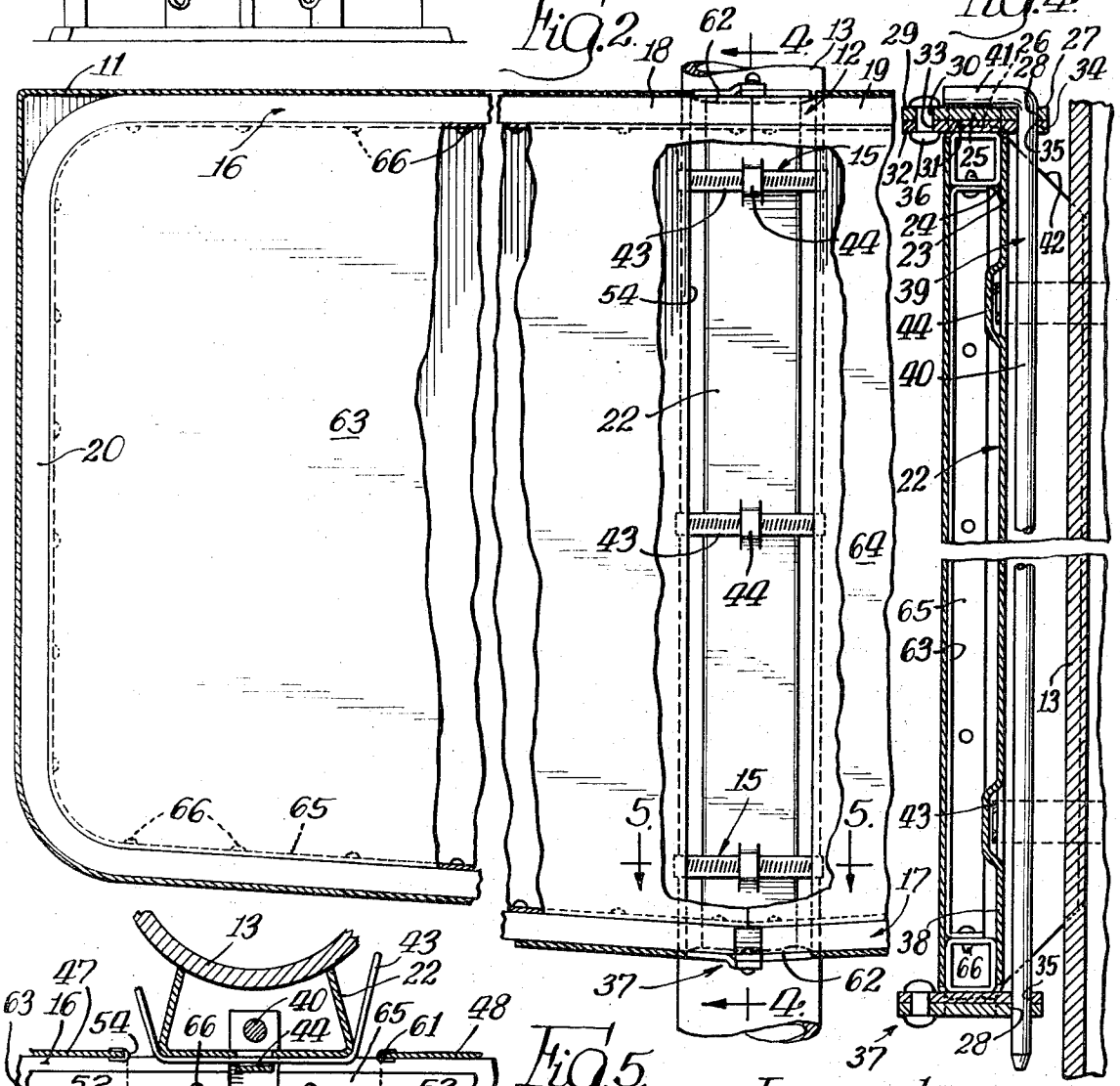


Fig. 3.

Fig. 4.

Fig. 2.



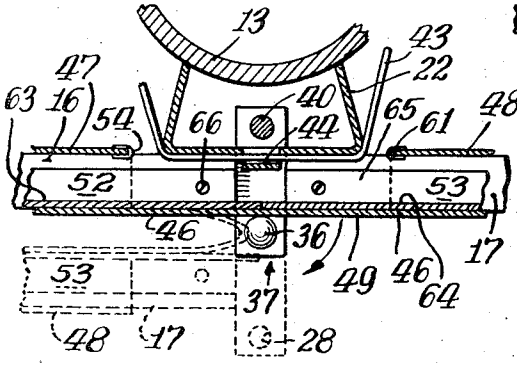


Fig. 5.

Inventor:-
Fred Drueck, Jr.,
By Hofgren, Wegner, Allen,
Stellman & McCord Attys.

Fig. 6.

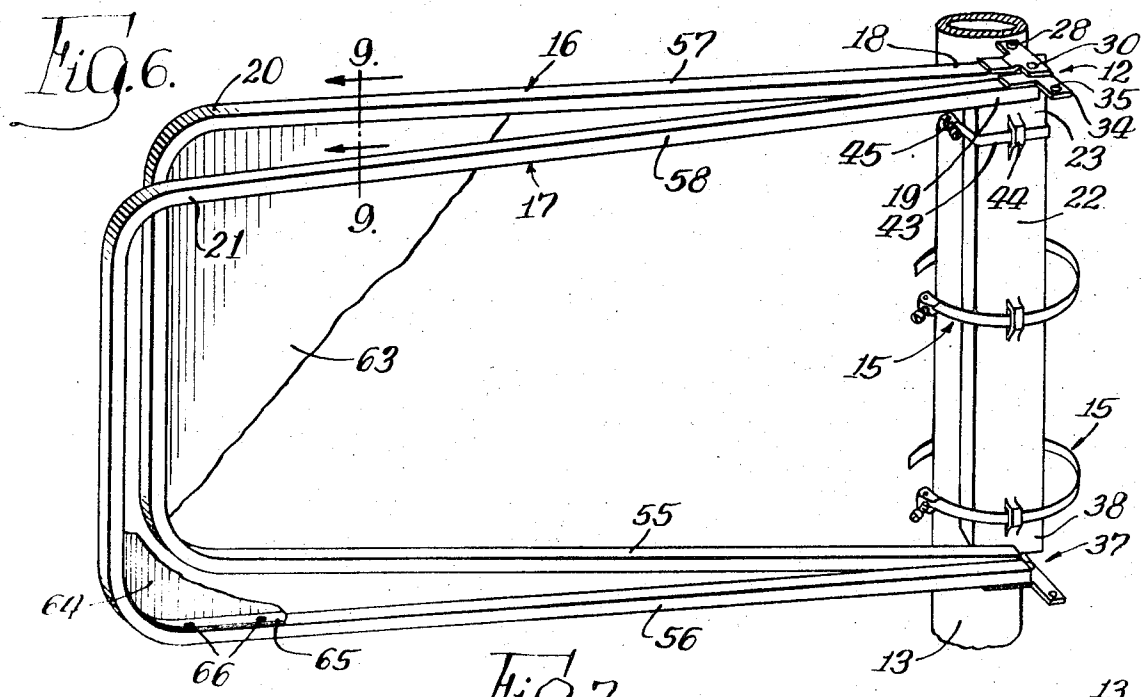


Fig. 7.

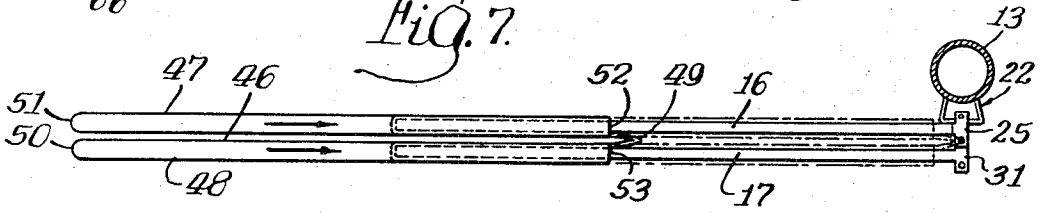


Fig. 9.

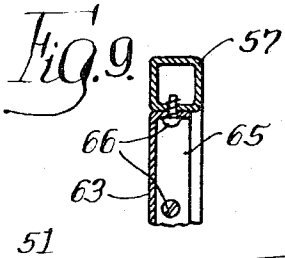


Fig. 8.

DISPLAY DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to display devices, and in particular to relatively large display devices such as for use in outdoor advertising adapted for installation on an upright pole.

2. Description of the Prior Art

Display devices adapted for mounting on upright poles conventionally have been provided in the form of relatively rigid flat sheet elements mounted on suitable supports adapted to be secured to the upright pole. The known display devices of this type have the serious disadvantages of relatively large size in the shipping arrangement and difficulty in installation. Further, the present devices present difficulty in removing and installing new advertising message panels when desired. Existing such devices require the use of individual panels arranged to be inserted from each end of the device and further require that some means be provided to keep them from separating in the center.

SUMMARY OF THE INVENTION

The present invention comprehends an improved display device utilizing a display element adapted to be mounted on movable arm means of the device. The arm means are pivotally carried on a mounting member to swing from a compact assembly position to a spread display position. The display element may comprise an envelope element having suitable pockets for receiving the movable arms and arranged to be positively retained on the arm structure as a result of the moving of the arms to the display position. To this end, the display element defines pocket portions opening toward the mid-portion of the element with the arms being pivotally mounted adjacent the mid-portion of the element. Thus, the element is installed on the arms with the arms arranged in a side-by-side disposition. The arms are then swung to an end-to-end disposition so as to cause the display element to be spread out in the desired substantially flat display arrangement. Means are provided for releasably locking the arms in the end-to-end arrangement.

Means are provided for facilitated installation of the device on the upright pole, or standard. Thus, the device may be installed on the pole with the arms in the side-by-side arrangement permitting the device to be rearranged in the display configuration after it is firmly secured in place on the pole.

The display device of the invention is extremely simple and economical of construction while yet providing the highly desirable features and advantages over the prior art structures as discussed above.

BRIEF DESCRIPTION OF THE DRAWING

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing wherein:

FIG. 1 is a perspective view of a service station pump island having a display device embodying the invention mounted on an upright pole thereof;

FIG. 2 is a fragmentary front elevation of the display device with the front sheet of the display element removed; FIG. 3 is a fragmentary top plan view thereof;

FIG. 4 is a vertical section taken substantially along the line 4—4 of FIG. 2;

FIG. 5 is a fragmentary horizontal section taken substantially along the line 5—5 of FIG. 2;

FIG. 6 is a perspective view of the mounting means of the display device;

FIG. 7 is a top view thereof illustrating the installation of the display element on the arms;

FIG. 8 is a front perspective view of the display device with portions broken away to facilitate illustration of the means for locking the device in the display configuration, and illustrating the arrangement of the device in the assembly configuration in dotted lines; and

FIG. 9 is a fragmentary vertical cross-section taken substantially along the line 9—9 of FIG. 6.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the exemplary embodiment of the invention as disclosed in the drawing, a display device generally designated **10** is shown to comprise a display element **11** carried on a mounting structure generally designated **12** adapted to be secured to an upright support, such as a pole, **13**, which may comprise a gasoline, or service, station pump island lamp pole, as shown in FIG. **1**. The display element **11** is adapted to carry suitable indicia, such as advertising material, **14** on both the front and rear surfaces thereof as desired. The mounting structure **12** includes strap means **15** for removably securing the device **10** to the pole **13**, as best seen in FIG. **3**.

Referring now more specifically to FIG. **6**, mounting structure **12** includes a pair of arms **16** and **17** having inner ends **18** and **19** and outer ends **20** and **21**, respectively. The arms are mounted at inner ends **18** and **19** to a mounting member **22**. At least one of the arms is pivotally mounted to the member **22** and in the illustrated embodiment, end **19** of arm **17** is pivotally mounted thereto with end **18** of arm **16** being fixedly mounted. More specifically, arm end **18** may be fixed to the upper end **23** of the member **22** as by suitable means, such as welding **24**. A T-shaped pivot element **25** is fixedly secured to the arm end **18** by suitable means, such as welding **26**, and includes a rear leg portion **27** having an opening **28** therein and a front leg portion **29** having an opening **30** therein. A similar T-shaped pivot element **31** is fixedly secured to the end **19** of arm **17** and includes a front leg portion **32** having an opening **33** and a rear leg portion **34** having an opening **35** therein. A rivet **36** extends through openings **30** and **33** for pivotally mounting the arm **17** through pivot element **31** and pivot element **25** to the mounting member **22**. Thus, arm **17** is selectively disposable in side-by-side relationship with arm **16**, as shown in FIG. **6**, and in an end-to-end relationship therewith, as shown in FIG. **8**, as a result of the selective swinging of the arm **17** on the pivot **36**. A similar pivot structure generally designated **37** is provided at the lower end **38** of the mounting member **22**, as shown in FIG. **4**, the elements thereof being reversely identical to the elements of pivot means **25–36**. The arms are locked in the spread open, end-to-end arrangement of FIG. **8** by means of a locking rod generally designated **39** having a shank portion **40** extendable through the aligned openings **28** and **35** of both the top and bottom pivot mounting structures, as shown in FIG. **4**. The locking rod pivot mounting structures, as shown in FIG.

4. The locking rod 39 includes an upper handle portion 41 for facilitated manipulation of the locking rod as shown in FIG. 8.

As shown in FIG. 3, mounting member 22 may comprise an elongated member having a U-shaped configuration defined by slightly inturned legs 42 adapted to bear against the cylindrical surface of the pole 13 thereby to stabilize the mounting member 22 thereon. Use of the inturned legs 42 permits the device to be securely mounted on any suitable pole configuration. The legs 42 are urged firmly against the pole and secured thereto by means of the strap elements 15 which may comprise conventional flexible metal straps 43 extended through upset retainer portions 44 (see FIGS. 2 and 6) on mounting member 22 and having the opposite ends thereof secured by suitable strap clamp elements 45.

Display element 11 comprises a bag, or envelope, element defined by a front sheet portion 46 and a pair of rear pocket portions 47 and 48 opening toward and extending substantially to the center, or mid-portion, 49 of the front sheet 46 from the opposite ends 50 and 51 of the front sheet portion 46. As shown in FIGS. 5 and 8, the pocket portions 47 and 48 terminate short of the mounting member 22 while front sheet portion 49 extends forwardly of the mounting member so as to cover the mounting member in the display configuration of the device. Thus, front sheet 46 and rear sheet 47 cooperatively define a pocket 52 adapted to receive arm 16, and front sheet 46 and rear sheet 48 cooperatively defining a pocket 53 adapted to receive arm 17. The arms are inserted through the opening 54 between rear sheet portions 47 and 48 with the display element 11 folded with the two halves of the front sheet portion 46 disposed in facial juxtaposition, as shown in FIG. 7. When the arms 16 and 17 are fully received in the pockets 52 and 53, arm 17 may be swung from side-by-side relationship with arm 16 to end-to-end relationship therewith in a spread out arrangement, as shown in FIG. 8, unfolding the front sheet 46 of the display element and spreading out the display element into the desired display configuration of FIG. 1. The size of the display element is accurately coordinated with the dimensions of the arms 16 and 17 so as to spread out the display element flatly and tautly in the display configuration. The arms may be then locked in the spread out arrangement by insertion of the locking rod 39 through the openings 28 and 35 as discussed above.

To facilitate installation of the display element on the arms 16 and 17, the arms are preferably tapered outwardly and the pockets 52 and 53 are correspondingly tapered outwardly, i.e., away from the sheet mid-portion 49. In the illustrated embodiment, the taper is effected by angling the bottom arm portions 55 and 56 of the arms 16 and 17, respectively, slightly upwardly toward the outer ends 20 and 21 while permitting the upper arm portions 57 and 58 to extend horizontally, i.e., perpendicular to the axis of the pivots 36.

The display element is formed of a suitable strong flexible material, such as paper, and may be formed of a single sheet of paper with the pocket portions 47 and 48 folded downwardly from the top edge and secured along the outer edge and lower edge of the front sheet by a suitable means such as stitching 59. The stitching may be reinforced by use of a transparent strip 60 of suitable material, such as plastic, folded about the sheet edges with the stitching extending through the two folded portions of the strip and the juxtaposed sheet edge portions. The edges 61 of the pocket portions may be reinforced similarly by means of stitching and strap means 60. The top and bottom of mid-portion 49 may define recesses 62 to provide clearance for the pivot members 25 and 31, as shown in FIG. 2.

The mounting structure for the display element may be formed of suitable strong material, such as sheet metal. The arms may be formed of tubular metal, as illustrated in FIGS. 4 and 6, for improved strength and light weight. Thus, the entire display device 10 is strong but relatively light in weight for facilitated installation on the mounting standard 13. By virtue of the folding arrnagement of the arms, the display element 11 may be readily installed thereon while yet being firmly supported in a taut, flat position in the display configuration as a result of the simple swinging of the arms to the spread out disposition and locking thereof in the spread out disposition by the locking member 39. As shown in FIG. 4, the locking member is effectively recessed behind the mounting member forwardly of the pole. If it is desired to remove the display element for any reason, the locking member is merely lifted upwardly by the handle portion 41 to withdraw the shank 40 thereof from the openings 28 and 35 in the pivot elements. The device, therefore, is adapted for facilitated substitution of different display elements while being maintained in mounted disposition on pole 13.

As shown in FIGS. 6 and 9, the invention further comprehends the provision of a pair of flat elements 63 and 64 extending one each across the open space defined by the arms 16 and 17, respectively, which may comprise further display means which will be visible whenever the flexible display elements are not mounted in the device. Illustratively, the elements 63 and 64 may carry long-term indicia, such as the name or emblem of the company, with the display indicia carried by the removable flexible display elements being seasonal or periodic.

Illustratively, the elements 63 and 64 may comprise flat panels formed of a relatively rigid material, such as plastic or metal, and may be secured to the arms 16 and 17 by means of turned peripheral edge flanges 65 which may be secured to the inside of the arm elements by suitable means such as screws 66. Thus, the display elements 63 and 64 comprise means for rigidifying the open framework defined by arms 16 and 17 as well as means for preventing deformation of the flexible element 11 through the flat plane of the arms 16 and 17 as by wind forces acting thereagainst. Thus, the life of the flexible display elements may be increased by effectively minimizing the flexing thereof in use.

By utilizing the inturned flanges for mounting the display elements 63 and 64 effectively within the open arm area, sharp edges of the elements 63 and 64 are effectively recessed so as to prevent tearing of the flexible element 11 when installed on the arms.

The foregoing disclosure of specific embodiments is illustrative of the broad inventive concepts comprehended by the invention.

I claim:

1. A display device adapted for elevated mounting on an upright pole, comprising: a pair of arms each having an inner end and an outer end; a mounting member; means pivotally mounting at least one of said inner arm ends to said mounting member adjacent each other to swing from a juxtaposed position to a spread apart posi-

tion while maintaining the configuration of the individual arms; a flexible display element having a first end retained by said outer end of one arm and a second end retained by the outer end of said second arm and having a length between said first and second ends substantially equal to the spacing between said arm outer ends when said arms are swung to the spread apart position; means for releasably holding said arms in said spread apart position; and securing means adapted to secure said device to an upright pole with said display element spread between said arm ends in said spread apart position thereof, said arms having a substantially horizontal top edge and an upwardly, outwardly inclined lower edge and said display element portions defining correspondingly tapered means slidable onto the tapered arms.

2. A display device adapted for elevated mounting on an upright pole, comprising:

a bag element having closed ends and a mid-portion provided with an opening;

bifurcated means insertable through said opening with a first portion thereof extending toward one of said closed ends and a second portion thereof extending toward the other of said closed ends; and

means for adjusting the relative disposition of said bifurcated means portions from a side-by-side disposition with said bag element folded at said mid-portion thereof to an end-to-end disposition with said bag element spread out in a display arrangement thereon.

3. The display device of claim **2** wherein said bag element is formed of paper.

4. The display device of claim **2** wherein said bifurcated means comprises a pair of open frame members.

5. The display device of claim **2** wherein said adjusting means comprise pivot means mounting said bifurcated means portions for swinging movement about a single vertical axis.

6. The display device of claim **2** wherein said strap means are provided for removably securing said device to an upright pole.

7. A display device adapted for elevated mounting on an upright pole, comprising: a pair of arms each having an inner end; a mounting member; means pivotally mounting at least one of said inner arm ends to said mounting member adjacent each other to swing from a juxtaposed position to a spread apart position while maintaining the configuration of the individual arms; means having a first portion retained on said one arm and a second portion retained on said second arm defining a display when said arms are swung to the spread apart position; means for releasably holding said arms in said spread apart position; and securing means adapted to secure said device to an upright pole with said display means spread open in said spread apart position of said arms, said arms comprising peripheral frame elements defining a central open space, and said display means portions comprising a pair of flat portions extending one each across said open spaces of said respective arms.

8. The display device of claim **7** wherein said flat portions define turned edges and means for securing said turned edges to the inside of said frame elements.

9. A display device adapted for use on an upright pole, comprising: a frame having arms movable between a contracted position and a spread position; and an envelope element formed of flexible sheet material and having a front flat portion and rear pocket portions opening toward and extending substantially to the center of the element from the opposite ends thereof, said pocket portions being substantially flat, and receiving said arms to be held in a display arrangement with said front portion extending substantially flat when said arms are in said spread position, said arms including an outer end, said envelope having a first end retained by said outer end of one arm and a second end retained by the outer end of the other arm and having a length between said first and second ends substantially equal to the spacing between said arm outer ends when said arms are swung to the spread position, said envelope being spread between said arm ends in said spread position thereof.

10. A display device adapted for elevated mounting on an upright pole, comprising: a bag element having closed ends and a mid-portion provided with an opening, bifurcated means defined by a pair of open frame members insertable through said opening with a first portion thereof extending toward one of said closed ends and a second portion thereof extending toward the other of said closed ends; means for adjusting the relative disposition of said bifurcated means portions from a side-by-side disposition with said bag element folded at said mid-portion thereof to an end-to-end disposition with said bag element spread out in a display arrangement thereon; and means extending across said open frame members for preventing deformation of said bag element through said open members.

11. A display device adapted for use on an upright pole, comprising: a frame having arms movable between a contracted position and a spread position; and an envelope element formed of flexible sheet material and having a front flat portion and rear pocket portions opening toward and extending substantially to the center of the element from the opposite ends thereof, said pocket portions being substantially flat, and receiving said arms to be held in a display arrangement with said front portion extending substantially flat when said arms are in said spread position.

12. The display of claim **11** wherein said front portion defines a mid-portion having recessed top and bottom edges intermediate said rear pocket portions.

13. The display device of claim **11** wherein said envelope element is formed of a single sheet of paper.

14. The display device of claim **11** wherein said front sheet portion has rectilinear top and bottom edges converging outwardly from the center of the element.

* * * * *