United States Patent [19]

Attwood

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[45] **Dec. 30, 1975**

[54] **SIGNPOST STRUCTURE**

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[73] Assignee: **Unistrut Corporation**, Wayne, Mich.

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[52] **U.S. Cl.** ..... **40/145 R**; 40/125 H

[51] **Int. Cl.²** **G09F 7/18**

[58] **Field of Search** ..... 40/125 H, 145 R, 125 R, 40/19, 21 R, 124.1, 131 R

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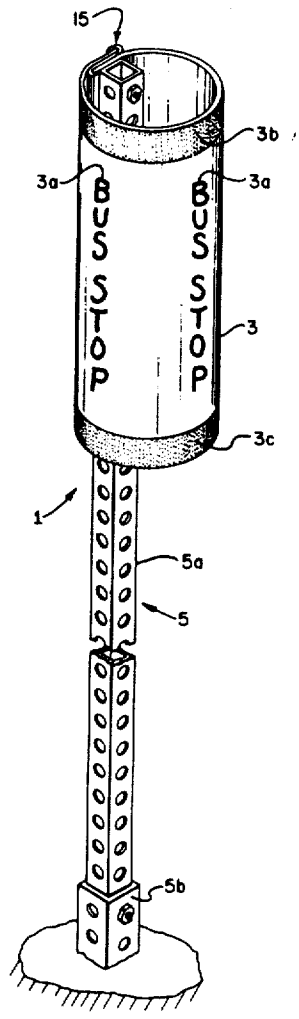
Telespar Advertising Brochure, 8–1964, Centerfold.

Primary Examiner—Louis G. Mancene
Assistant Examiner—John F. Pitrelli
Attorney, Agent, or Firm—Peter Xiarhos; Elmer J. Nealon; Norman J. O'Malley

[57] **ABSTRACT**

A signpost structure including an elongated support post and an information-bearing cylindrical sign attached via an edge stiffening and mounting member to the support post and capable of presenting information to a viewer within a range of 360°. The cylindrical sign is formed by joining the side edges of a rectangular, flat, flexible sign blank formed of a highimpact organic plastic material. The support post is preferably a four-sided tubular member having equi-spaced openings provided longitudinally in each side for permitting the cylindrical sign to be attached to any one of the four sides at any one of several possible points along the length thereof.

12 Claims, 9 Drawing Figures



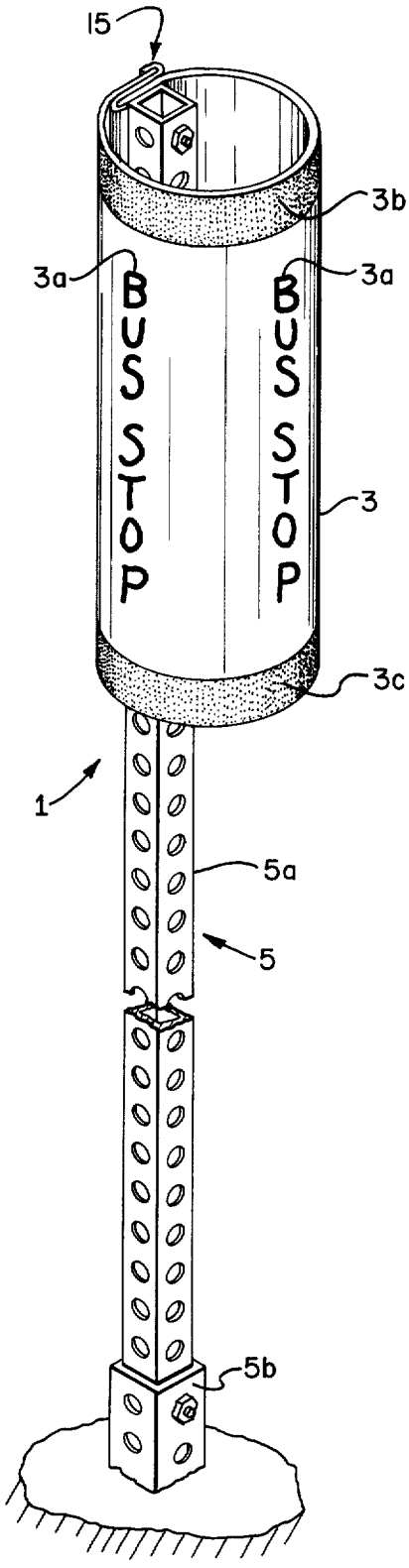


FIG. 1

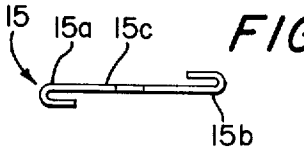


FIG. 3

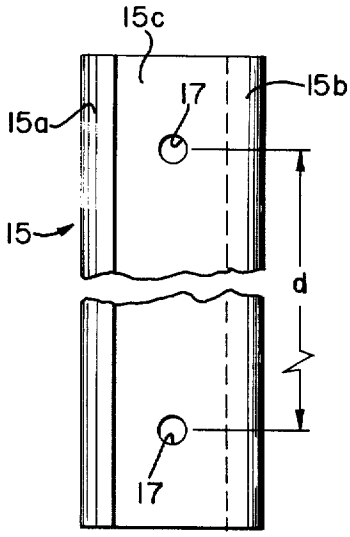


FIG. 4

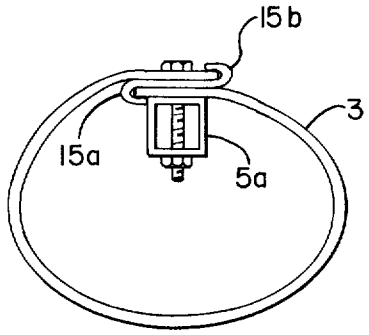


FIG. 5

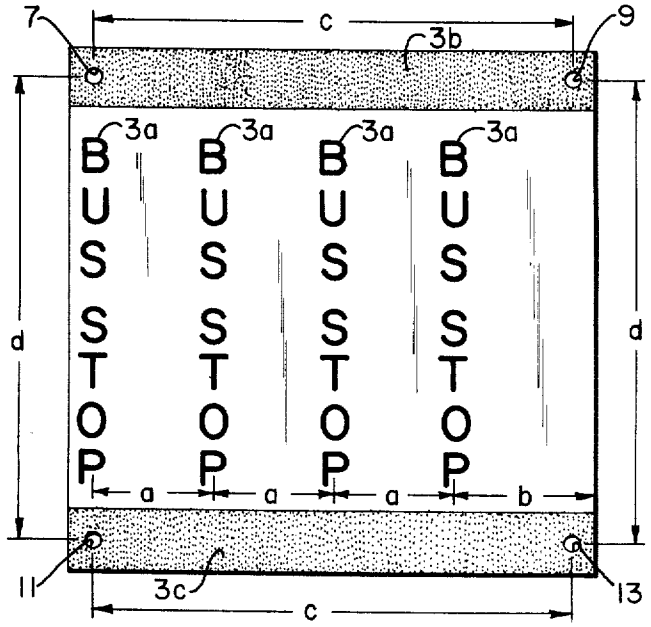


FIG. 2

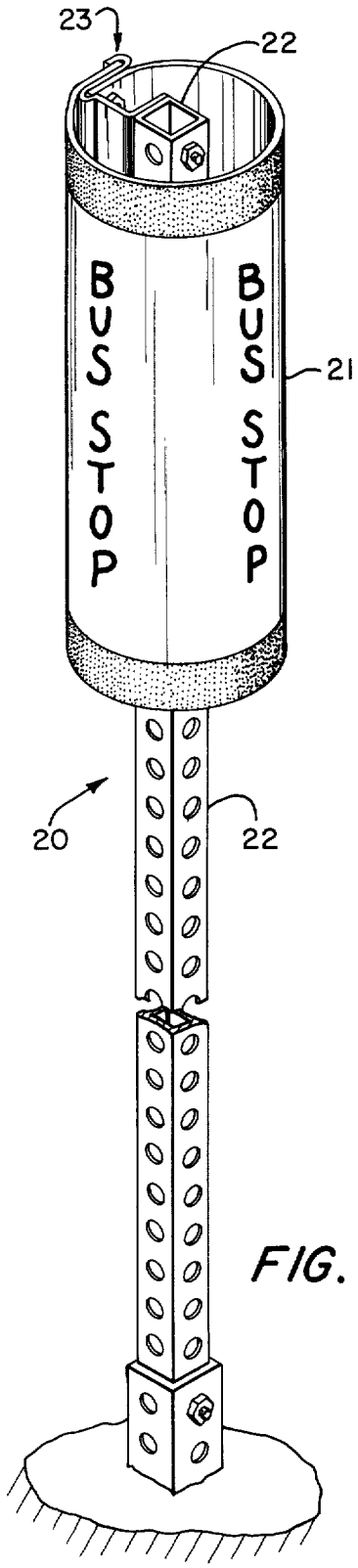


FIG. 6

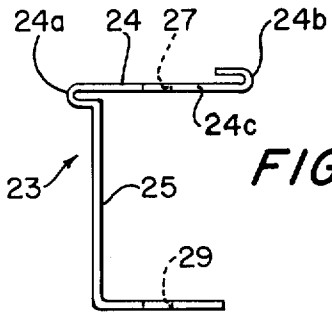


FIG. 7

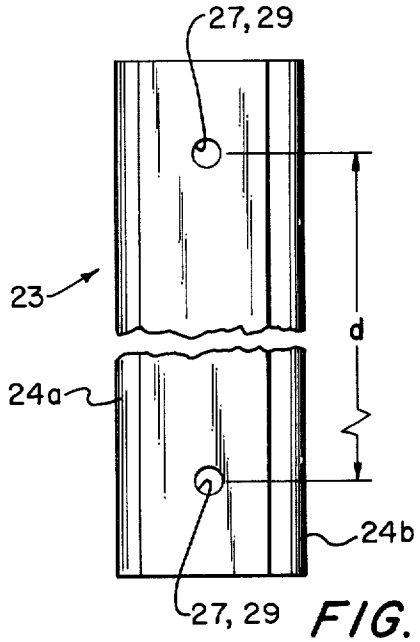


FIG. 8

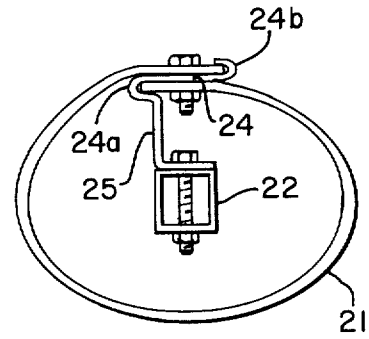


FIG. 9

SIGNPOST STRUCTURE

BACKGROUND OF THE INVENTION

The present invention relates to a signpost structure and, more particularly, to a signpost structure including an information-bearing cylindrical sign capable of 360° visibility and legibility.

A wide variety of signpost structures of different types and construction are well-known to the average person. These signposts generally include signs for communicating a variety of different kinds of information to a viewer such as, for example, traffic information, street names, and information for use in connection with specialized applications such as public transportation (e.g., bus stop information). While existing signpost structures perform a very necessary and valuable function, the signs of these signpost structures are generally flat, and accordingly, communicate the information thereon to a viewer only through a very narrow viewing range, typically considerably less than 180°. Thus, in applications where it might be desirable to provide 360° visibility of sign information, for example, in bus stop or street sign applications, existing signpost structures are unsatisfactory. In addition, existing signpost structures generally do not present a distinctly unique appearance to a viewer.

BRIEF SUMMARY OF THE INVENTION

Briefly, in accordance with the present invention, a signpost structure is provided including an information-bearing cylindrical sign which is capable of 360° visibility and legibility and, in addition, is uniquely different and distinguishable from the flat signs of existing signpost structures. The cylindrical sign of the signpost structure of the invention is hollow and is formed from an initially rectangular, flat, flexible sign blank. The cylindrical sign has an outer surface having a plurality of identical items of information thereon and further has first and second side edges. The signpost structure also includes an edge-placement means which places the first and second side edges of the sign blank adjacent to each other thereby forming the initially flat, rectangular sign blank into the hollow cylindrical sign. The plurality of items of information at the outer surface of the sign blank are arranged so that at least one item of information is always presented to a viewer when the side edges of the sign blank have been placed adjacent to each other by the edge-placement means in forming the cylindrical sign. The signpost structure further includes an elongated support member having a cross-sectional area less than the cross-sectional area of the cylindrical sign, and mounting means mounting the cylindrical sign to the elongated support member.

BRIEF DESCRIPTION OF THE DRAWING

Various objects, features and advantages of a signpost structure in accordance with the present invention will be apparent from the following detailed discussion taken in conjunction with the accompanying drawing in which:

FIG. **1** is a perspective view of a signpost structure in accordance with a first embodiment of the invention;

FIG. **2** is a front view of a flat sign blank employed to produce a cylindrical sign for use in the signpost structure of FIG. **1**;

FIGS. **3** and **4** are top and front views, respectively, of an edge stiffening and mounting member employed in the signpost structure of FIG. **1**;

FIG. **5** is a top view of the signpost structure of FIG. **1**;

FIG. **6** is a perspective of a signpost structure in accordance with a second embodiment of the invention;

FIGS. **7** and **8** are top and front views, respectively, of an edge stiffening and mounting member employed in the signpost structure of FIG. **6**; and

FIG. **9** is a top view of the signpost structure of FIG. **6**.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to FIG. **1**, there is shown in a perspective view a signpost structure **1** in accordance with a first embodiment of the invention. The signpost structure **1** includes a cylindrical sign **3** bearing multiple identical legends **3a** thereon parallel to the axis of the sign **3**, an edge stiffening and mounting member **15** used in conjunction with the cylindrical sign **3**, and a support structure **5** for supporting the cylindrical sign **3** and the associated edge stiffening and mounting member **15**. For purposes of explaining the present invention, it is assumed that the signpost structure **1** is to be used in connection with public transportation. For this reason, the legends "BUS STOP" have been selected for use on the cylindrical sign **3**. However, it will be appreciated that for other applications the cylindrical sign **3** may bear any other suitable legends or symbols, whether pictorial in form or otherwise.

The cylindrical sign **3** as shown in FIG. **1** is formed from a flat, rectangular, flexible sign blank such as shown in FIG. **2**. The sign blank of FIG. **2** is preferably of a lightweight, weather-resistant and impact-resistant organic plastic material, such as, for example, a cellulose acetate butyrate plastic material or a polystyrene plastic material. For its use in public transportation, the sign blank is preferably selected to be of a basic white color and the "BUS STOP" legends **3***a*, typically of a black color, are silk-screened together with an upper border **3***b* and a lower border **3***c*, both typically of a red color, against the white background. The above combination of colors insures that the cylindrical sign **3** will be eye-catching, both to motorists and pedestrians alike.

As indicated in FIG. **2**, the multiple "BUS STOP" legends **3***a* are arranged vertically on the sign blank and such that each of the legends **3***a*, with the exception of the left-most legend **3***a*, is spaced from the preceding legend **3***a* by a distance a, and the right-most legend **3***a* is spaced from the right edge of the sign blank by a second, greater, distance *b*. As will be apparent hereinafter, the dimensions a and b are selected such that when the sign blank is formed into a cylindrical sign, specifically, by slightly overlapping the side edges of the sign blank (the left edge overlapping the right edge), the right-most legend **3***a* in FIG. **2** then likewise becomes spaced from the left-most legend **3a** in FIG. **2** by the aforementioned distance a. As a result, the information content of the cylindrical sign becomes available to a viewer through a range of 360°, that is, a legend **3***a* of the sign is always visible to a viewer facing the sign.

The sign blank of FIG. **2** also has a plurality of openings **7**, **9**, **11** and **13** provided therein for use in forming the sign blank into a cylindrical sign, one opening being provided in each corner region of the sign blank. The

openings 7 and 9 and the openings 11 and 13 are spaced from each other by a distance c and the openings 7 and 11 and the openings 9 and 13 are spaced from each other by a distance d such that when the sign blank is formed into a cylindrical sign the opening 7 is coaxially aligned with the opening 9 and the opening 11 is coaxially aligned with the opening 13.

To form the sign blank of FIG. 2 into a cylindrical sign, the aforementioned edge stiffening and mounting member 15, shown in detail in the top and front views of FIGS. 3 and 4, respectively, is employed. The edge stiffening and mounting member 15 is basically an S-shaped element, typically of sheet metal, and includes a pair of diagonally opposed curved end portions 15a and 15*b* separated by an integral flat portion 15*c*. The curved end portions 15*a* and 15*b* of the edge stiffening and mounting member 15 define spaces for receiving the opposite side edges of the sign blank. Specifically, the curved end portion 15*a* of the edge stiffening and mounting member 15 receives the right edge of the sign blank and the curved end portion 15*b* receives the left edge of the sign blank. The flat portion 15*c* of the edge stiffening and mounting member 15 further has a pair of openings 17 provided therein and spaced apart from each other by the aforementioned distance d so as to be coaxially aligned with the pairs of openings 7, 9 and 11, 13 of the sign blank when the side edges of the sign blank have been inserted into and received in the respective curved end portions 15*a* and 15*b* of the edge stiffening and mounting member 15.

When the side edges of the sign blank have been inserted into and received by the curved end portions 15*a* and 15*b* of the edge stiffening and mounting member 15, as mentioned above, the cylindrical sign so formed may be attached, together with the accompanying edge stiffening and mounting member 15, directly to the aforementioned support structure 5. The support structure 5 is preferably of a type described in detail in U.S. Pat. No. 3,628,296, to Herbert J. Henry, and assigned to the same assignee as the present invention. The support structure 5 comprises, as shown in FIG. 1, an elongated longitudinally perforated tubular sign support post 5*a* and a longitudinally perforated tubular anchor sleeve 5*b* inserted into a base medium (e.g., a sidewalk or the ground) and into which the sign support post 5*a* is telescoped and suitably attached, for example, by a nut-and-bolt arrangement. As is evident from FIG. 1, the tubular sign support post 5*a* (and also the tubular anchor sleeve 5*b*) has a cross-sectional area substantially smaller than the cross-sectional area of the cylindrical sign 3, as taken in a plane normal to the central (longitudinal) axis of the sign 3. The tubular members 5*a* and 5*b* are typically of metal and are commercially available from the Unistrut Corporation, Wayne, Mich., under the trade name "Telespar."

To attach the aforedescribed cylindrical sign and the accompanying edge stiffening and mounting member 15 to the support structure 5, specifically, to the sign support post 5*a*, a pair of threaded bolts are simply passed through the pairs of openings 7, 9 and 11, 13 in the cylindrical sign, through the associated openings 17 in the edge stiffening and mounting member 15, through opposed pairs of openings in opposed sides of the sign support post 5*a*, and then threaded into associated nuts. It will be appreciated that the large number of openings in the sides of the sign support post 5*a* permit the cylindrical sign and the associated edge stiffening and mounting member 15 to be attached thereto at any one of several possible points along the length thereof. A top view of the completed signpost assembly 1 is shown in FIG. 5.

The signpost structure 1 of FIG. 1, as described hereinabove, offers many advantages and features. The cylindrical sign of the signpost structure 1, by virtue of its configuration and use of several colors, is unique and readily distinguishable from conventional flat signs. In addition, it is able to withstand the normal effects of weather, it is not susceptible to rusting and, due to its resiliency and flexibility, is not readily susceptible to being significantly damaged, for example, due to vandalism or as a result of accidental vehicular impact. In addition, the sign has sufficient thickness (e.g. 0.040 in.) and stiffness to maintain its shape without the requirement of additional support beyond that provided by the edge stiffening and mounting member 15 and the sign support post 5*a*. Further, the cylindrical sign is lightweight and may be quickly demounted from its support post and, if desired, used elsewhere. Due to the fact that the sign blank from which the cylindrical sign is formed is flat and flexible, the cylindrical sign is conveniently formed on-site, thereby avoiding the necessity of the blank being formed into a cylindrical sign beforehand and then transported to the site. This feature is significant when large numbers of cylindrical signs are to be prepared and storage space does not readily permit the storage of the required number of cylindrical signs.

Referring now to FIG. 6, there is shown in a perspective view a signpost structure 20 in accordance with an alternative embodiment of the invention. The signpost structure 20 of FIG. 6 is similar to the signpost structure 1 of FIG. 1 and, like the signpost structure 1 of FIG. 1, includes a cylindrical sign 21 and a sign support post 22. The signpost structure 20 of FIG. 6 differs most significantly from the signpost structure 1 of FIG. 1 in that the sign support post 22 is positioned centrally of the cylindrical sign 21 rather than being offset with respect to the central axis of the sign as is the case with the signpost structure 1. The respective positioning of the sign support post 22 and the cylindrical sign 21 is achieved by means of an edge stiffening and mounting member 23 as shown in detail in the top and front views of FIGS. 7 and 8, respectively. As shown in FIGS. 7 and 8, the edge stiffening and mounting member 23 includes an S-shaped section 24 having a pair of diagonally opposed curved end portions 24*a* and 24*b* for receiving the side edges of the cylindrical sign 21 and a flat portion 24*c* integral with the portions 24*a* and 24*b*, and further includes an L-shaped section 25 integral with and extending away from the curved end portion 24*a*. The flat portion 24*c* of the S-shaped section 24 further includes a pair of openings 27, spaced apart from each other by the aforementioned distance *d*, so as to be coaxially aligned with the openings in the cylindrical sign 21, and the horizontal portion of the L-shaped section 25 also includes a pair of openings 29, also spaced apart from each other by the aforementioned distance *d*. The edge stiffening and mounting member 23 is typically of sheet metal. To attach the cylindrical sign 21 and its associated edge stiffening and mounting member 23 to the sign support post 22, threaded bolts are passed through the openings in the cylindrical sign 21 and the coaxially aligned openings 27 in the S-shaped section 24 and then threaded into nuts, thereby to secure the cylindrical sign to the edge stiffening and mounting member 23, and threaded bolts

are passed through the openings **29** in the L-shaped section **23** and associated opposed pairs of openings in opposed sides of the sign support post **22** and then threaded into nuts, thereby to secure the edge stiffening and mounting member **23** to the sign support post **22**. A top view of the completed signpost structure **20** is shown in FIG. **9**.

Although preferred embodiments of the invention have been described hereinabove, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the invention as called for in the appended claims.

What is claimed is:

1. A signpost structure, comprising:

a hollow cylindrical sign formed an initially rectangular, flat, flexible sign blank, said sign blank having first and second side edges and first, second, fourth and forth openings provided therein in first, second, third and fourth corner regions thereof, respectively, the first and second openings being adjacent to the first side edge of the sign blank and the third and fourth openings being adjacent to the second side edge of the sign blank, said sign blank further having an outer surface having a plurality of identical items of information thereon;

edge-placement means placing the first and second side edges of the sign blank adjacent to each other thereby to from the intially flat, rectangular sign blank into the hollow cylindrical sign, said edge-placement means including an S-shaped member having first and second diagonally opposed edge-receiving portions arranged to receive the first and second side edges, respectively, of the sign blank and a flat portion between the first and second edge-receiving portions and having first and second spaced openings therein, the openings in the sign blank and in the flat portion of the S-shaped member being arranged so that the first second openings in the sign blank are coaxially aligned with the first opening in the flat portion of the S-shaped member and the third and fourth openings in the sign blank are coaxially aligned with the second opening in the flat portion of the S-shaped member when the first and second side edges of the sign blank are received by the respective first and second edge-receiving portions of the S-shaped member, the plurality of items of information at the outer surface of the sign blank being arranged so that at least one item of information is always presented to a viewer when the side edges of the sign blank have been placed adjacent to each other in forming the cylindrical sign:

an elongated support member having a cross-sectional area less than the cross-sectional area of the cylindrical sign; and

mounting means including means employing the first and second openings in the sign blank and the first opening in the flat portion of the S-shaped member and means employing the third and fourth openings in the sign blank and the second opening in the flat portion of the S-shaped member for mounting the cylindrical sign and the associated S-shaped member to the elongated support member.

2. A signpost structure in accordance with claim **1** wherein:

the support member is a tubular member having a plurality of openings provided therein along its length.

3. A signpost structure in accordance with claim **1** wherein:

the plurality of items of information of the sign blank are arranged thereon so as to be spaced from each other by a predetermined fixed distance when the first and second edges are placed adjacent to each other by the edge-placement means.

4. A support structure in accordance with claim **1** wherein:

the sign blank from which the hollow cylindrical sign is formed is of an organic plastic material.

5. A signpost structure in accordance with claim **4** wherein:

the cylindrical sign is of a cellulose acetate butyrate plastic material.

6. A signpost structure in accordance with claim **4** wherein:

the cylindrical sign is of a polystyrene plastic material.

7. A signpost structure comprising:

a hollow cylindrical sign formed for an initially rectangular, flat, flexible sign blank, said sign blank having first and second side edges and first, second, third and fourth openings provided therein in first, second, third and fourth corner regions thereof, respectively, the first and second openings being adjacent to the first side edge of the sign blank and the third and fourth openings being adjacent to the second side edge of the sign blank, said side blank further having an outer surface having a plurality of identical items of information thereon;

an elongated support member having a cross-sectional area less than the cross-sectional area of the cylindrical sign;

edge-placement means placing the first and second side edges of the sign blank adjacent to each other thereby to form the initially flat, rectangular sign blank into the hollow cylindrical sign, said edge-placement means including an S-shaped member having first and second diagonally opposed edge-receiving portions arranged to receive the first and second side edges, respectively, of the sign blank and a flat portion between the first and second diagonally opposed edge-receiving portions, said edge-placement means further including a member extending between the second edge-receiving portion of the S-shaped member and the elongated support member for spacing the cylindrical sign and the associated S-shaped member away from the elongated support member so that the cylindrical sign surrounds the elongated support member, said flat portion of the S-shaped member being arranged so that the first and second openings in the sign blank are coaxially aligned with the first opening in the flat portion of the S-shaped member and the third and fourth openings in the sign blank are coaxially aligned with the second opening in the flat portion of the S-shaped member when the first and second side edges of the sign blank are received by the respective first and second edge-receiving portion of the S-shaped member, the plurality of items of information at the outer surface of the sign blank being arranged so that at least one item of information is always presented to a viewer when the side edges of the sign blank have been placed adjacent to each other in forming the cylindrical sign; and

mounting means including means employed the first and second openings in the sign blank and the first opening in the flat portion of the S-shaped member and means employing the third and fourth openings in the sign blank and the second opening in the flat portion of the S-shaped member for securing the cylindrical sign formed from the sign blank to the S-shaped member, and said mounting means further including means employing the openings in the extending member for securing the S-shaped member and the extending member to the elongated support member.

8. A sign structure in accordance with claim **7** wherein:

the sign blank from which the hollow cylindrical sign is formed is of an organic plastic material.

9. A signpost structure in accordance with claim **8** wherein:

the cylindrical sign is of a cellulose butyrate plastic material.

10. A signpost structure in accordance with claim **8** wherein:

the cylindrical sign is of a polystyrene plastic material.

11. A signpost structure in accordance with claim **7** wherein:

the elongated support member is a tubular member having a plurality of openings provided therein along its length.

12. A signpost structure in accordance with claim **7** wherein:

the plurality of items of information of the sign blank are arranged thereon so as to be spaced from each other by a predetermined fixed distance when the first and second edges are placed adjacent to each other by the edge-placement means.

* * * * *