# United States Patent

[11] **3,540,406**


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**Continuation-in-part of application Ser. No. 703,698, Feb. 7, 1968, abandoned**
[45] Patented **Nov. 17, 1970**


[54] **VEHICLE LOCATION MARKER**
**4 Claims, 9 Drawing Figs.**


[52] **U.S. Cl.** ..... **116/28,** 116/132; 248/38; 287/12
[51] **Int. Cl.** ..... **B60q**
[50] **Field of Search** ..... 116/28, 132, 173, 174, 175, 63, 124; 248/38, 40, 44, 127, 206A; 287/12, 14, 21, 86, 101, 23; 343/880, 882, 892



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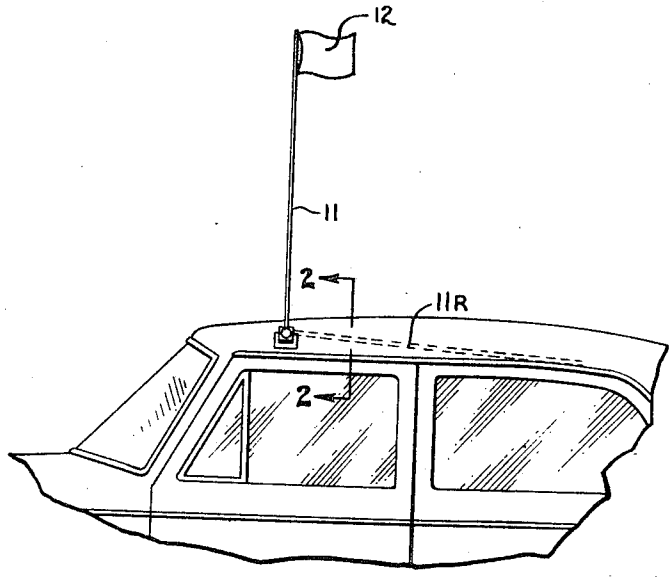
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**ABSTRACT:** A marker device including a base yoke adhesively attached to a vehicle roof, with an intermediate member pivotally mounted thereto on a first axis, and a second intermediate member pivotally mounted thereto on a second axis lying in a plane perpendicular to the first axis, the marker rod being affixed to the second intermediate member and having a flag or other identifying device thereon. The marker rod is universally pivotable from a retracted position flush with the roof top, to an elevated position projecting well above the rooftop. A second embodiment employs a ball and socket joint assembly.

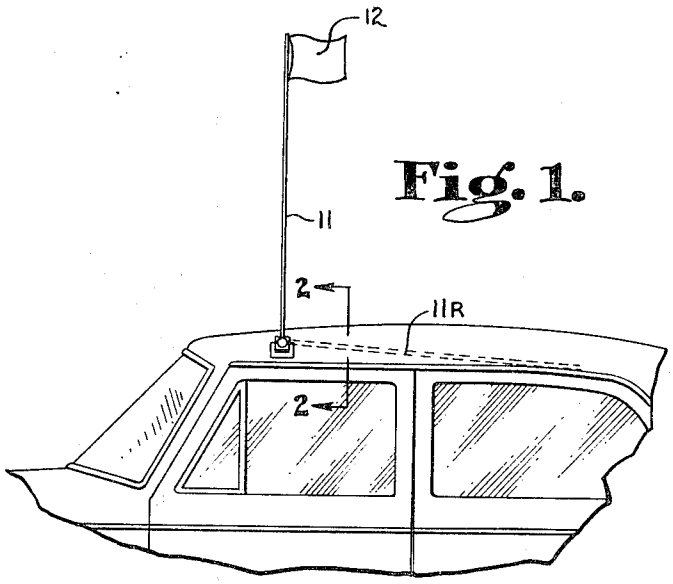



Fig. 1.

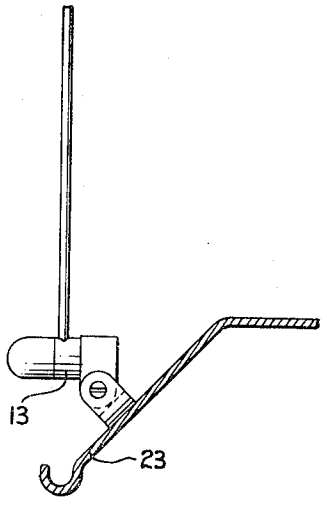



Fig. 2.

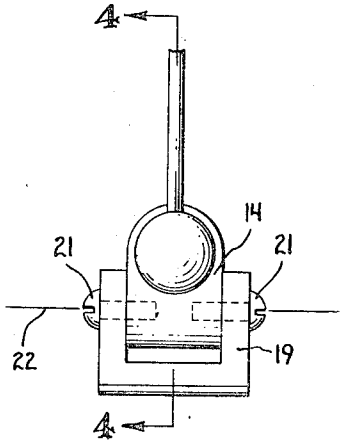



Fig. 3.

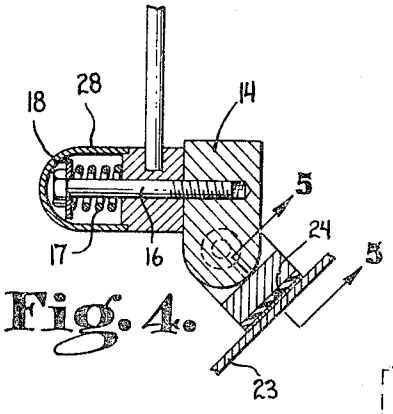



Fig. 4.

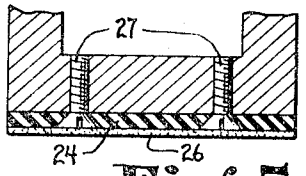



Fig. 5.

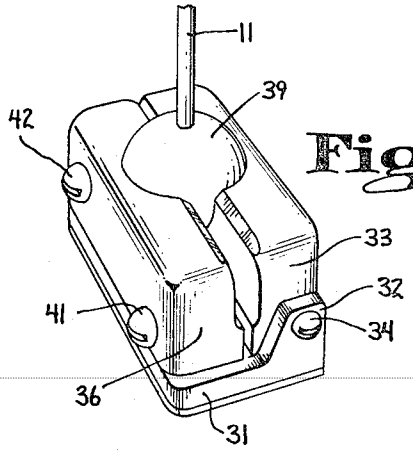



Fig. 6.

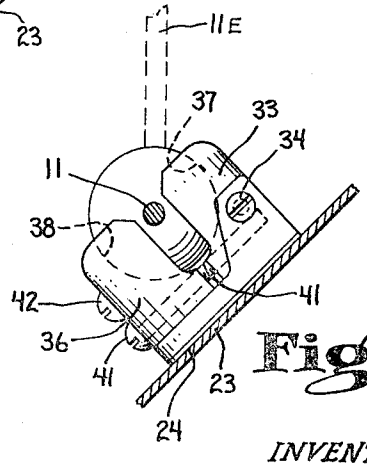



Fig. 7.

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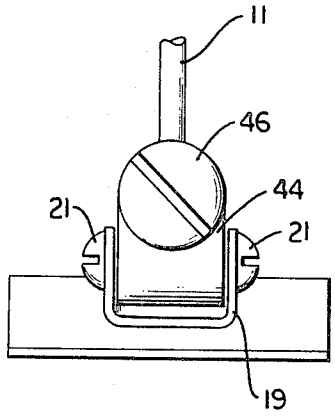



Fig. 8.

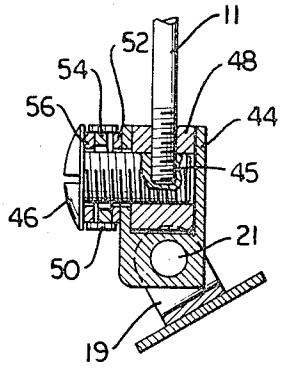



Fig. 9.

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# VEHICLE LOCATION MARKER

## CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part application of U.S. Pat. application Ser. No. 703,698 filed Feb. 7, 1968, now abandoned entitled Vehicle Location Marker having an invention which is common with this application.

## BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to marker devices, and more particularly to one mounted to a vehicle rooftop and movable from an inconspicuous position to an elevated conspicuous position to facilitate location of the vehicle in a crowded parking lot.

2. Description of the Prior Art

Various devices are known in the prior art, including markers of a type used on vehicles in funeral processions. Examples of prior art markers are shown in U.S. Pat. Nos. 2,906,234, 3,127,869, 3,158,132 and 3,280,790.

It is also known to put marker balls, flags, or ribbons on vehicle antennas.

The typical funeral procession markers are not satisfactory because they are typically not retractable, and they are not conspicuous enough for use in locating a vehicle in large crowded parking lots of the shopping center or sporting event stadium variety. Various devices mounted to vehicle antennas can be detrimental from both the standpoints of electrical disturbance and mechanical damage.

## SUMMARY OF THE INVENTION

Described briefly, in a typical embodiment of the present invention, a base is provided with adhesive whereby it is readily securable to a vehicle roof surface. A sturdy elongated rod is universally mounted to the base and pivotable from an upstanding position for marker purposes, to a virtually horizontal and inconspicuous position at all other times.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a side elevation showing one embodiment of the device mounted on vehicle roof, the dotted line indicating the retracted position;

FIG. **2** is an enlarged end view taken at line **2–2** of FIG. **1** and viewed in the direction of the arrows;

FIG. **3** is a further enlarged side elevational view as seen from the left in FIG. **2** and as seen directly in FIG. **1**;

FIG. **4** is a section taken at line **4–4** in FIG. **3** and viewed in the direction of the arrows;

FIG. **5** is a further enlarged section taken at line **5–5** in FIG. **4** and viewed in the direction of the arrows, illustrating the mounting to the rooftop;

FIG. **6** is a perspective view of an alternative embodiment employing a ball and socket assembly;

FIG. **7** is an end elevational view of the embodiment of FIG. **6**, the view being taken in the same direction as that of FIG. **2**;

FIG. **8** is an enlarged side elevational view of still another embodiment taken in the same direction as that of FIG. **3**; and

FIG. **9** is a section taken of the embodiment of FIG. **8** taken in the same direction as that of FIG. **4**.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings in detail, the rod **11** may be provided with a flag or other identifying means **12** at the upper end thereof, the lower end being affixed to a cylindrical member **13**. The member **13** is pivotally mounted to the member **14** for rotation on the elongated axis of the bolt **16**, the tension spring **17** under the washer **18** preventing a loose connection at this location.

The member **14** is pivotally mounted to a yoke **19** by means of the two screws **21** threadedly received in the member **14** and which can be tightened to prevent rotation of the member **14** on the axis **22** of the screws, which axis is perpendicular to a vertical plane containing the horizontal axis of the bolt **16**.



The yoke is secured to the roof **23** of the car by a stiff but pliable rubber sheet **24** having a pressure sensitive adhesive **26** on the lower face thereof. This sheet is secured to the yoke in FIG. **5** by screws **27**. Other adhesive means can be provided for securing the yoke to the rooftop of the vehicle, and nonadhesive mechanical attachments might also be used but adhesives are considered much preferable. A streamlining cap **28** is received over the bolt head and screw as shown in FIGS. **2** and **4**.

The structure of this embodiment of the invention facilitates the retention of the rod **11** in the retracted position shown by the dotted outline **11R** in FIG. **1**, or in the elevated position shown by the solid outline. It is only necessary to provide the proper tension on the spring **17** and the screws **21** for this purpose.

The alternative embodiment shown in FIGS. **6** and **7** includes a base structure with a yoke portion **31** having two upstanding arms **32** at opposite ends thereof (one not appearing in the drawing) to which is fastened a block portion **33** by means of screws **34**. The member **31** has the rubber mounting sheet **24** secured to the lower face thereof and adhesively attached to the roof as with the previous embodiment. However in this embodiment another block portion **36** is provided, portions **33** and **36** having facing ball socket cavities **37** and **38**, respectively therein. These receive a pivot ball **39** to which the marker rod **11** is affixed. The tension on the ball in the cavities can be adjusted by the screws **41** and **42** which are received in apertures in the block **36** and threadedly received in the block **33**. It will be apparent from this description that the rod **11** secured to the ball can be moved to a variety of positions including the elevated position of FIG. **1** and retracted position shown therein. FIG. **7** shows the rod in the elevated position in the dotted outlines and shows that in the retracted position the rod is disposed partially within the space between the two blocks **33** and **36**.

FIGS. **8** and **9** illustrate the preferred embodiment of this invention. Referring to these figures, it can be seen that a first yoke **19** is similar to and mounted in a fashion as described above. Mounted within this first yoke is a second yoke **44** which is attached thereto by means of a pair of opposing screws **21**. The second yoke is adapted to pivot in a first axis around screws **21**. Mounted pivotally within said second yoke is a drum **48** to which is affixed rod **11**.

The drum is secured in the second yoke by means of bolt **46** which passes through one arm of the second yoke and into drum **48**. Bolt **46** is secured in the drum by means of rod **11** which is threaded into aperture **45** which passes through the drum and bolt.

The frictional relationship between the drum and second yoke **44** is controlled by the tension on bolt **46**. This tension is regulated by means of a spacer **50** which is mounted on bolt **46**. Spacer **50** contains a first hardened flat washer **56** adjacent to the head of bolt **46**. A lock washer **54** is adjacent thereto and a second hardened flat washer **52** is adjacent to lock washer **54**. The thickness of flat washers **52** and **56** and lock washer **54** in an expanded position is slightly greater than the thickness of spacer **50**.

When bolt **46** is tightened lock washer **54** is compressed such that flat washer **52** and spacer **50** are in frictional contact with second yoke **44**. Because of this frictional contact the movement of rod **11** from a horizontal to vertical stance is controlled.

It is understood by one skilled in the art that lock washer **54** could easily be replaced by a compression coil spring.

While the invention has been disclosed and described in some detail in the drawings and foregoing description, they are to be considered as illustrative and not restrictive in character, as other modifications may readily suggest themselves to persons skilled in this art and within the broad scope of the invention, reference being made to the appended claims.

I claim:

**1**. A vehicle location marker comprising:

a base securable to a vehicle body;

a rod pivotally mounted to said base for movement from a retracted position generally parallel to a vehicle body surface to an elevated position wherein it projects well above the rooftop level of said vehicle body;

friction means operational between said rod and said base for normally retaining said rod in whichever of said retracted or elevated dispositions it happens to be disposed;

said base includes a first portion secured to said vehicle body and a second portion secured to said first portion, said first and second portions having ball socket cavities therein;

a ball secured to said rod and received in facing cavities of said first and second portion;

said friction means including said ball and cavities and fastener means in said first and second portions, said fastener means being adjustable to reduce the space between said cavities and tighten said ball therein; and

said base includes a yoke attached to said vehicle body, said first portion being received in and secured to said yoke and thereby secured to said vehicle body.

2. A vehicle location marker comprising:

a base securable to a vehicle body;

a rod pivotally mounted to said base for movement from a retracted position generally parallel to a vehicle body surface to an elevated position wherein it projects well above the rooftop level of said vehicle body;



friction means operational between said rod and said base for normally retaining said rod in whichever of said retracted or elevated dispositions it happens to be disposed;

said base being a first yoke;

a second yoke being received between the arms of said first yoke and pivotably mounted thereon on a first axis; and

an intermediate member being pivotably mounted within said second yoke for pivoting on a second axis lying in a plane perpendicular to said first axis, said rod being affixed to said intermediate member.

3. The marker of claim 2 wherein said intermediate member is a drum, wherein said drum is secured in said second yoke by means of a bolt which passes through one arm of said second yoke and into said drum, wherein said bolt is secured to said drum by the passage of said rod through said drum and said bolt.

4. The marker of claim 3 wherein the frictional relationship between said drum and said second yoke is controlled by said bolt wherein positioned between the head of said bolt and said second yoke is a spacer, which contains a first hardened flat washer adjacent to the head of said bolt, a lock washer adjacent thereto and a second hardened flat washer adjacent thereto, the thickness of said first and second hardened flat washers and said lock washer in an expanded position being slightly greater than the thickness of said spacer.