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Invention Title:

A SUPPORT MEMBER

The following statement is a full description of this invention, including the best method of performing it known to me/us:

A B S T R A C T

A support member for supporting a visual display is disclosed. The support member comprises a resilient section that is adapted to bend in response to contact of a moving object with the visual display to allow the visual display to deflect from the path of movement of the object and is adapted to return the visual display to its original position following the contact with the object. The resilient section is formed from a plurality of planar members arranged side by side and bonded together by adhesive. Each planar member comprises at least part of the tread and the underlying carcass of the motor vehicle tyre.

A SUPPORT MEMBER

The present invention relates to a support member for supporting a visual display and to a visual display system which comprises the visual display and the support member.

The claims are confined to a visual display system in the form of a road marker post which comprises the visual display and the support member.

The term "visual display" is understood herein to mean any form of display which conveys information (in written, pictorial, or in any other form) to a person. By way of particular example, in the context of the motorway system, the term "visual display" includes road markers/indicia, such as street name signs and road marker posts with reflectors.

A disadvantage of conventional road marker posts is that impact of motor vehicles against the marker posts invariably causes damage which in many instances makes it necessary to replace the road marker posts. Many other forms of visual displays are susceptible to damage from contact with objects other than motor vehicles.

A general object of the present invention is to provide a support member for supporting a visual display that enables damage caused by contact with objects (such as motor vehicles in the case of road marker posts) to be minimised.

According to the present invention there is provided a support member for supporting a visual display, the support member comprising a resilient section that is adapted to bend in response to contact of a moving object with the visual display to allow the visual display to

deflect from the path of movement of the object and is adapted to return the visual display to its original

position following the contact with the object, the resilient section being formed from a plurality of planar members arranged side by side and bonded together by adhesive, with each planar member comprising at least part of the tread and the underlying carcass of the motor vehicle tyre.

It is preferred that the motor vehicle tyre be a steel belted tyre.

It is preferred that the resilient section consists of only two planar members adhered together. In this connection, the applicant has found that there is an increasing tendency for the resilient section to delaminate as the number of planar members increases.

It is preferred that the support member be adapted to be connected to a fixed support or to the ground.

It is preferred that the support member comprises a securing means for connecting the support member to the fixed support, such as a post, or to the ground.

In one embodiment it is preferred that the securing means be the resilient section.

In another embodiment it is preferred that the securing means be selected from the group which comprises, a drivable spike, a surface-mounting bracket, and a socket-mounting bracket, for embedding in the ground.

It is preferred that the support member comprises a body section for mounting the visible display.

It is preferred that the body section comprise a rubber core and an external sleeve formed from a plastics

material.

Alternatively, it is preferred that the body section be formed from a plastics material.

It is preferred that the plastics material be high density polyethylene (HDPE).

It is preferred that the resilient section interconnect the securing means and the body section.

According to the present invention there is provided a visual display system comprising:

i. a visual display; and

ii. the support member described in the preceding paragraphs.

A visual display system of particular interest to the applicant is a road marker post.

In the circumstances, according to the present invention there is provided a road marker post which comprises a visual display in the form of a reflector or other road indicating indicia, the road marker post comprising:

i. a body section which carries the visual display; and

ii. **a resilient base that is formed as a separate component to the body section and is connected to the body section, the resilient base being adapted to be embedded in the ground with an upper section of the base extending from the ground, the resilient base also being adapted to bend in response to contact of a**

vehicle with the body section to allow the body section to deflect from the path of movement of the vehicle and is adapted to return the body section to its original position following the contact, the base section being formed from a plurality of elongate generally rectangular planar members arranged side by side and bonded together by adhesive, with each planar member comprising at least part of the tread and the underlying carcass of a motor vehicle tyre.

The body section may be formed from any suitable light weight material.

By way of example, the body section may be formed from PVC or HDPE, any other suitable plastics material, or fibre glass.

The body section may be connected to the base by any suitable means.

By way of example, the body section may be connected to the base by means of bolts.

According to the present invention there is provided a road marker post as described in the preceding paragraphs embedded in the ground.

The present invention is described by way of example with reference to the accompanying drawings in which:

Figure 1 is a side elevation of a preferred embodiment of a road marker post which includes a support member in accordance with the present invention embedded in

the ground; and

Figure 2 is a perspective view of the road marker post shown in Figure 1.

With reference to the figures, the road marker post comprises a base 3 and a body 5 connected to the base 3 by means of galvanised bolt and nut assemblies 7. The post further comprises a visual display in the form of a reflector 17 (Figure 2) mounted on the body 5.

The base 3 is formed by laminating together two or more strips of predetermined width and length of the tread and the carcass of a scrap steel belted motor vehicle tyre. The base 3 preferably comprises two strips.

The base 3 is embedded in the ground so that an upper section 9 of the base 3 extends above the ground and, in this position, forms a resilient section (ie hinge) of the post which, in view of the resiliency of the rubber/steel belt in the tyre, enables the body 5 to bend toward the ground in response to the impact of a vehicle against the body 5. The selective bending in response to vehicle contact enables damage to both the vehicle and the post to be minimised. In addition, following vehicle contact, the resiliency of the rubber/steel belt in the tyre, enables the body 5 to return to the upright position shown in the figure.

The body 5 may be formed from any suitable material. By way of example, for high risk applications (ie, low speed tyre impact situations - roadway intersections, tight curves, and parking areas), it is preferred that the body 5 comprise a rubber core and an external sleeve of a suitable plastics material, such as HDPE. Alternatively, for medium risk applications it is preferred that the body 5 be formed only from a suitable

plastics material, such as HDPE.

In the arrangement shown in the figure, the base 3 has the dual function as a resilient hinge and as a means for anchoring the body 5 and visual display to the ground.

In an alternative embodiment (not shown) these functions are separated and the road marker post comprises a resilient section which acts as a resilient hinge and a securing means for anchoring the road marker post to the ground connected to the resilient section. The securing means may comprise a drivable spike, a surface-mounting bracket, a socket - mounting bracket, or any other suitable means.

Many modifications may be made to the preferred embodiment of the present invention described above without departing from the spirit and scope of the present invention.

In this regard, whilst the above description of the present invention in relation to the accompanying drawing is in the context of a road marker post, it can readily be appreciated that the present invention is not so limited and extends generally to support members for visual displays and to visual display systems that include the support members.

Furthermore, whilst the body 5 and the base 3 of the preferred embodiment are connected together by means of bolts, it can readily be appreciated that the present invention is not so restricted and any suitable means may be used to connect together the body 5 and the base 3.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A road marker post having a visual display in the form of a reflector or other road indicating indicia, the road marker post comprising:

i. a body section which carries the visual display; and

ii. a resilient base that is formed as a separate component to the body section and is connected to the body section, the resilient base being adapted to be embedded in the ground with an upper section of the base extending from the ground, the resilient base also being adapted to bend in response to contact of a vehicle with the body section to allow the body section to deflect from the path of movement of the vehicle and being adapted to return the body section to its original position following the contact, the base section being formed from a plurality of elongate generally rectangular planar members arranged side by side and bonded together by adhesive, with each planar member comprising at least part of the tread and the underlying carcass of a motor vehicle tyre.

2. The post defined in claim 1 wherein the body section is formed from a light weight material.

3. The post defined in claim 1 or claim 2 wherein the body section is formed from PVC, HDPE, any other suitable plastics material, or fibre glass.

4. The post defined in any one of the preceding claims wherein the motor vehicle tyre is a steel belted

tyre.

5. The post defined in any one of the preceding claims wherein the resilient base consists of only two planar members adhered together.

6. The post defined in any one of the preceding claims further comprises a means for anchoring the post to the ground.

7. The post defined in claim 6 wherein the anchoring means is selected from the group which comprises, a drivable spike, a surface-mounted bracket, and a socket-mounted bracket.

8. The post defined in claim 6 or claim 7 wherein the resilient base interconnects the anchoring means and the body section.

Dated this 9th day of January 2003
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members arranged side by side and bonded together by adhesive, with each planar member comprising at least part of the tread and the underlying carcass of a motor vehicle tyre.

12. The road marker post defined in claim 11 wherein the body section is formed from a light weight material.

13. The road marker post defined in claim 12 wherein the body section is formed from PVC, HDPE any other suitable plastics material, or fibre glass.

14. A road marker post defined in any one of claims 11 to 13 embedded in the ground.

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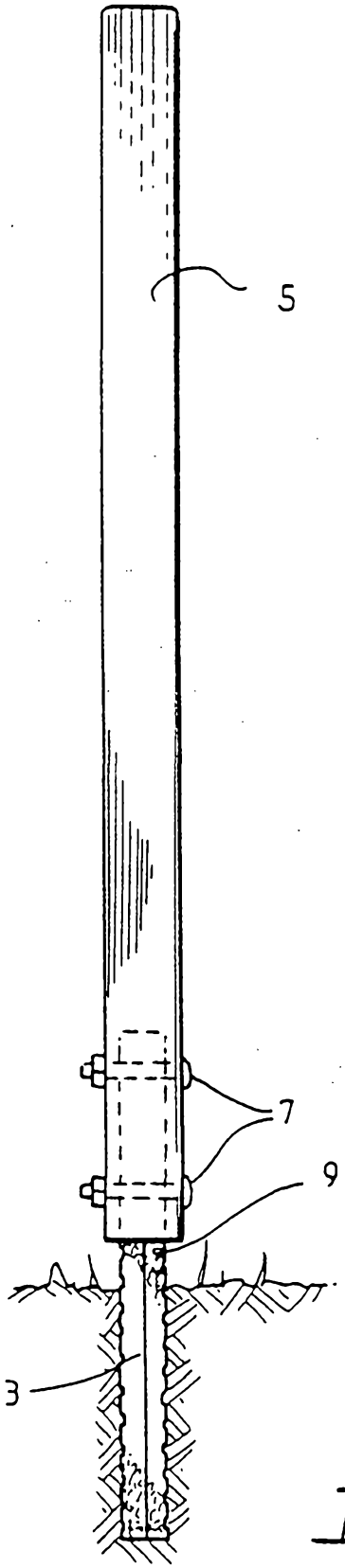

FIG. 1.

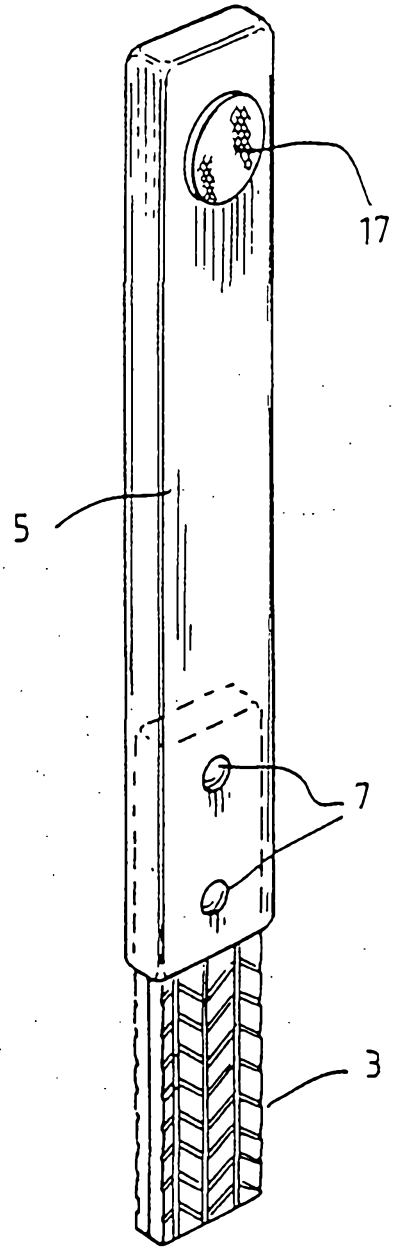

FIG. 2.