

[54] REAR VISION REFLECTION DEVICE FOR A HELMET

[76] Inventors: Robert S. Rayow, 446 W. 55th St., New York, N.Y. 10019; Charles L. Gillette, 2 Grace Ct., Brooklyn, N.Y. 11201

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[58] Field of Search 350/248, 298, 301, 302, 350/304, 307

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Primary Examiner—Ronald L. Wibert
Assistant Examiner—Michael J. Tokar

[57] ABSTRACT

A rear vision reflection device is adapted to be affixed to a protective helmet of the type worn by motorcyclists. It includes a single reflected surface prism mounted on an upright support attached to the visor of the helmet with an adjustable mirror at the other end of the support. The mirror provides a rear view reflected sight line to the prism and the prism is normally positioned above the normal forward line of sight of the wearer.

3 Claims, 4 Drawing Figures

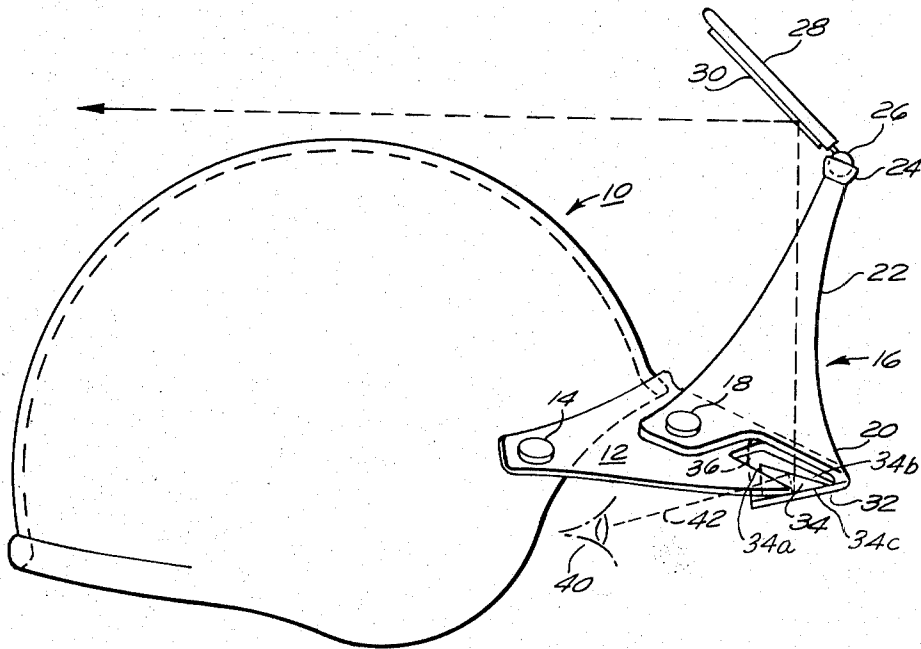


FIG. 1

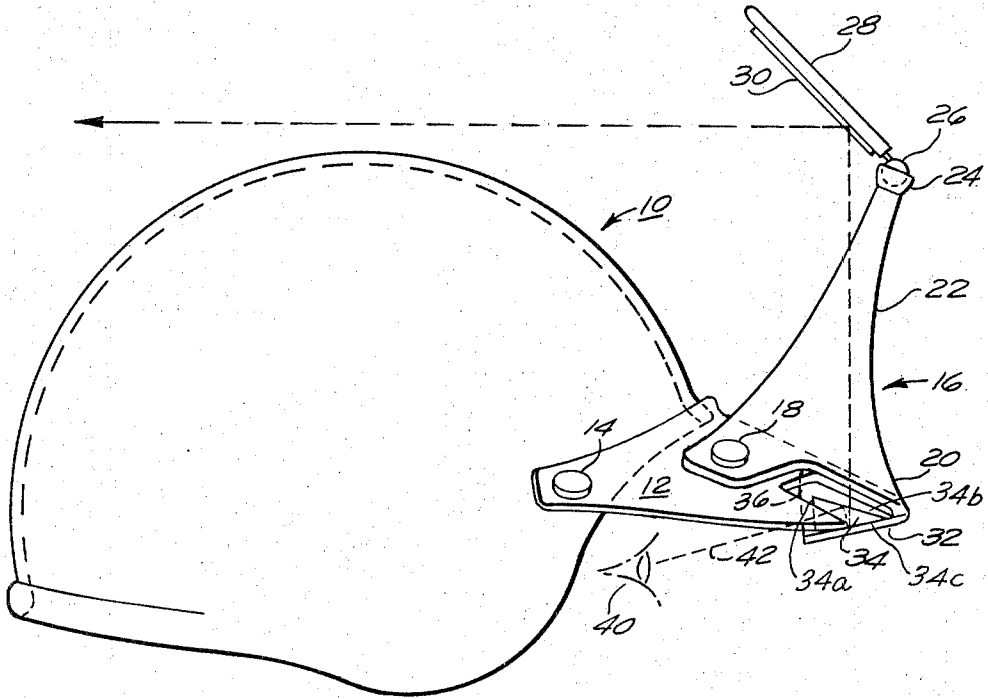


FIG. 3

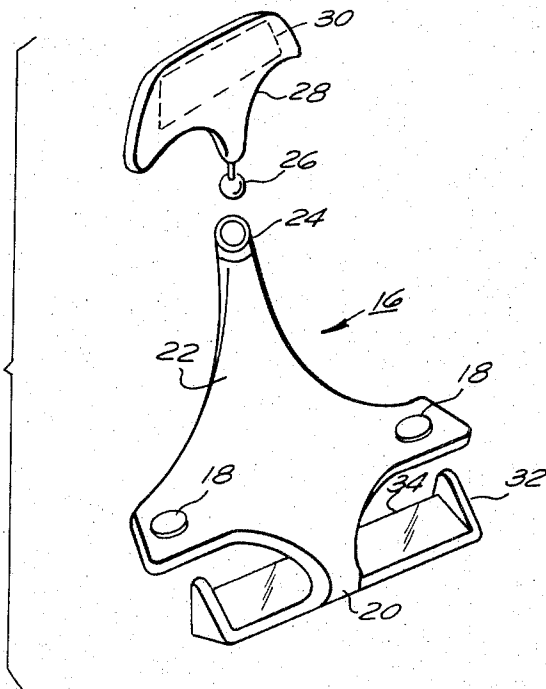


FIG. 2

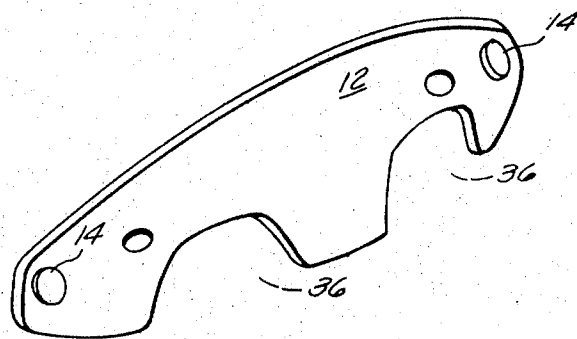
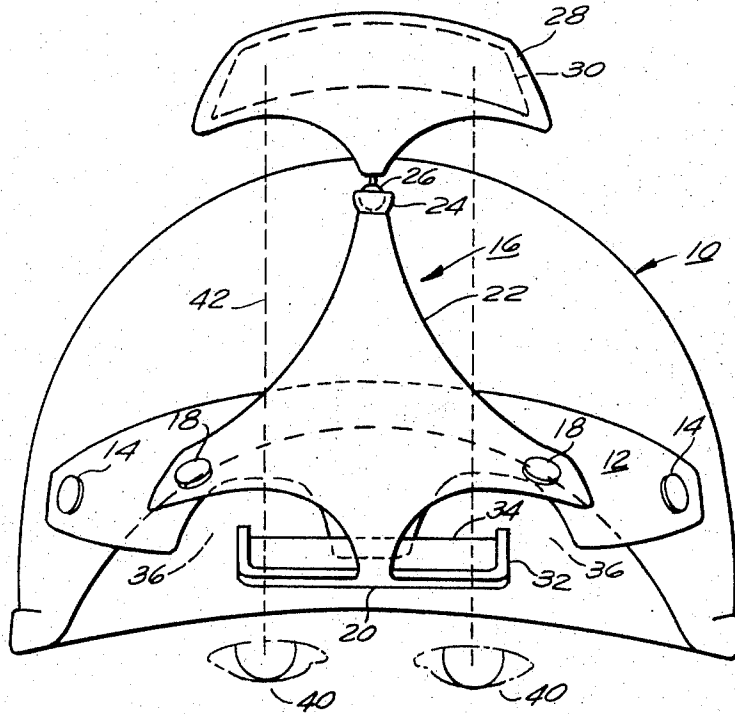


FIG. 4

REAR VISION REFLECTION DEVICE FOR A HELMET

SUMMARY OF THE INVENTION

This invention relates to rear vision reflection devices adapted to be affixed to the protective helmets of motorcyclists. Motorcycling has become increasingly popular as a means of transportation as well as sport. It is also now generally required that motorcyclists wear protective helmets as a safety measure. As a further safety aid it has been proposed to affix to the helmet reflecting mirrors of various types so that the cyclist may have a view of the road or terrain behind him. As far as it is known, such reflective devices have not been entirely satisfactory since they have generally required the use of three or more reflective mirrors and, further, the line of sight is to the side of the helmet wearer and as a result often quite limited.

Accordingly, it is an object of the present invention to provide a rear vision reflective device which may be affixed to any of the presently commercial helmets and be of the type which will provide a full view of the roadway or terrain to the rear of the motorcyclist.

It is a further object of the present invention to provide a device which is economical to manufacture and may be readily and easily replaced if damaged without the necessity of replacing the entire helmet.

It is still a further object of the present invention to provide a device which may be readily and easily adjusted by the wearer to adapt the reflected line of sight to his particular line of vision.

Therefore, in the present invention, a reflection device is provided which includes a single reflected surface prism mounted on a support attached to the helmet visor with an adjustable mirror at the other end of the support. The mirror provides a rear view reflected sight line to the prism and it is normally positioned above the normal forward line of sight of the wearer. In other words the reflective device would not interfere with the normal forward line of sight of the user, and, as a result, it is not a safety hazard.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of the reflection device of the present invention attached to a helmet;

FIG. 2 is a front view of the device of FIG. 1;

FIG. 3 is a semi-exploded perspective view of the reflective device of FIG. 1; and

FIG. 4 is a perspective view of the visor which may be used with the helmet and the reflective device.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings and to FIGS. 1 and 3 in particular, a helmet 10 of the type normally worn by motorcyclists is shown to which is attached a visor 12. Snaps 14 are provided on the visor 12 for securing it to the helmet. The use of a visor with snap attachments permits the visor, which is normally a less expensive component, to be replaced if broken without the necessity of replacing the entire helmet. Affixed to the visor 12 is a reflector mount 16. Snaps 18 are provided on the mount 16 for securing it to the visor 12. It is to be understood that if desired the mount 16 may be permanently affixed to the visor 12 without departing from the scope and spirit of the present invention.

The mount 16 includes a base portion 20 which is affixed to the visor and an upright support 22. The term "upright" as used to describe support 22 is intended to refer to an upwardly directed support and not one which would necessarily be perpendicular to the base or the visor. At the upper end of the support 22 a socket 24 is provided into which a ball 26 may be inserted. The ball 26 is attached to a mirror housing 28 on which is placed a reflecting mirror 30. At the base 20 or lower portion of the support 22 an elongated prism frame 32 is fixed. Into the frame 32 a prism 34 is snapped or positioned by any suitable means. The prism is preferably of the single reflected surface type.

Cut-outs 36 are provided in the visor of the illustrated embodiment. As shown in FIGS. 1 and 2 in particular, the prism is located above the normal forward sight line and eye 40 of the helmet wearer. In order to view the area to his rear, the helmet wearer need only look slightly upward from his normal forward sight line to the forward face of the prism 34. On that forward face of the prism is reflected the image which is seen in the mirror 30.

As will be noted from a view of FIG. 1, the line of sight 42 to the helmet wearer through the mirror and the prism is such that it is not interfered with by the top of the helmet. The actual sight line 42 is through the vertical face 34a of the prism 34 to the upper face 34b. Since the user looks slightly upwardly the image which he sees is in proper orientation. If the user were to look downwardly through face 34a to the reflected or mirror face 34c, the image would be inverted. However, since the line of sight is upward to face 34b, the inverted image of mirror 32 is reinverted to the viewer of face 34b, giving the proper orientation.

The use of prisms rather than a series of reflecting mirrors has safety advantages as well as improved ease of operation. In normal use, the only adjustment which may necessarily be made by a helmet wearer is to adjust the angle of the mirror housing 28 to insure that the proper rear view is reflected through the prism 34.

The present invention eliminates the necessity for a rear view mirror mounted on the handle bars of a motorcycle. Such handle bar mounting of mirrors is not satisfactory since the vibration of the handle bars would distort the reflected image in the mirror. By having the reflecting surface mounted on the wearer's helmet, the amount of vibration and accompanying distortion is substantially reduced if not eliminated.

The present invention provides a full line of rear sight as well as providing a device which may be easily adapted to commercially available helmets at a minimum of expense.

What is claimed:

1. A rear vision reflection device to be affixed to a protective helmet to be placed on a person's head, said device comprising:

- a visor adapted to be secured to the helmet at one side thereof;
- an upright support mounted on the visor;
- at least one single reflected surface prism affixed to said support and positioned above the normal forward line of sight of the helmet wearer;
- a reflection mirror mounted on the upright support at the end thereof opposite the prism and oriented whereby the mirror reflects the image from behind the helmet wearer;

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said reflection mirror being positioned whereby its reflection sight line is above the uppermost extent of the helmet;
at least one opening in said visor adjacent the prism;

the reflection mirror and prism positioned whereby the reflection sight line of the mirror is reflected through the visor opening and through the prism

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where it may be viewed by the helmet wearer.

2. A rear vision reflection device as defined in claim 1 wherein two prisms in side-by-side relationship are provided.

3. A rear vision reflection device as defined in claim 2 and further including an adjustable ball socket for mounting the reflection mirror on the upright support.

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