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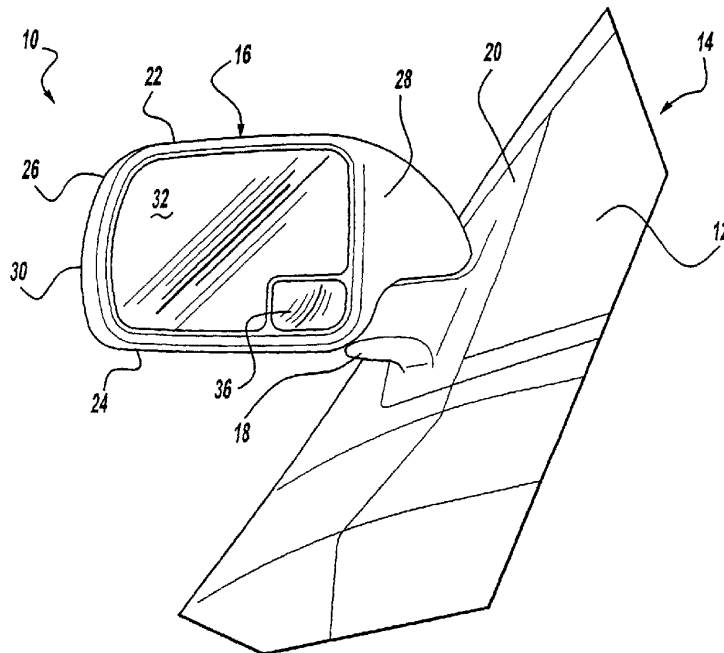
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(54) Title: SIDE VIEW MIRROR WITH INTEGRAL LIGHTING



(57) Abstract: A mirror assembly (10) in which a mirror housing (16) and multi-function backing plate (34) provides various useful functions. The multi-function backing plate supports not only a conventional reflective element (32) but also supports a wide angle reflective element (36). The multi-function backing plate further supports an indicator light assembly (96) so that the mirror assembly can provide an indicator light function.



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SIDE VIEW MIRROR WITH INTEGRAL LIGHTING

The present invention relates generally to improvements in mirror assemblies.

Background and Summary of the Invention

In automotive vehicles, exterior, rear-view mirror assemblies typically enable the driver to conveniently view rearward and sideward portions of the vehicle to check for obstacles or other vehicles. Typically, the mirror assembly includes a housing which attaches to the vehicle and supports a backing assembly which supports the reflective element. The reflective element typically adjusts so that various rearward and sideward portions around the vehicle may be viewed by the driver. The reflective element is typically a flat assembly.

Present assemblies include many useful features such as indicator lights, turn signal lighting, and spotlights. However, existing designs do not fully utilize the overall structure of the mirror assembly in order to most efficiently implement and utilize such features.

Thus, the subject invention is directed to improvements in multi-function mirror assemblies.

The subject invention is also directed to the inclusion of several additional features in exterior, rear-view mirror assemblies.

For a more complete understanding of the invention, its objects and advantages, reference should be made to the following specification and to the accompanying drawings.

Brief Description of the Drawings

5 Fig. 1 is a perspective view of an exterior rear view mirror assembly having an integral spotter or fish-eye mirror arranged in accordance with the principles of the present of the invention;

Fig. 2 is a front view of the mirror assembly of Fig. 1;

10 Fig. 3 is a crosssectional view of the mirror assembly of Figs. 1 and 2 having a spot mirror fixed with respect to the multi-function backing plate;

Fig. 4 is a crosssectional view of the mirror assembly of Figs. 1 and 2 having an adjustable spot mirror;

15 Fig. 5 is a perspective view of the dampener assembly for the adjustable spot mirror of Fig. 4;

Fig. 6 is a front view of a mirror assembly including a multi-function backing plate having an indicator light assembly arranged in accordance with the principles of the present invention;

20 Fig. 7 is a crosssectional view of the mirror assembly taken along the lines 7-7 of Fig. 6;

Fig. 8 is an expanded view of the indicator light assembly of Fig. 7;

Fig. 9 is a front view of a mirror assembly having an indicator light assembly formed on the multi-function backing plate beneath the reflective element arranged in accordance with the principles of the present invention;

5 Fig. 10 is a perspective view of a mirror assembly having a conventional reflective element, a spotter reflective element, and an indicator light assembly beside the conventional reflective element;

Fig. 11 is a front view of a mirror assembly having an indicator light assembly placed on the multi-function backing plate of the mirror
10 assembly beside the reflective element, including a spotter element below the reflective element;

Fig. 12 is a front view of a mirror assembly having an indicator light assembly placed between the reflective element and the spotter element arranged in accordance with the principles of the present invention;

15 Fig. 13 is a horizontal, crosssectional view of a mirror assembly having an adjustable approach light arranged in accordance with the principles of the present invention;

Fig. 14 is a horizontal, crosssectional view of the mirror assembly of Fig. 13 with the approach light in an exposed position;

20 Fig. 15 is a block diagram of a control system for a smart mirror system, particularly for operating the mirror assembly of Figs. 13 and 14;

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