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W. LA HODNY

1,948,222

COMBINED MIRROR AND INSTRUMENT

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Fig. 1.

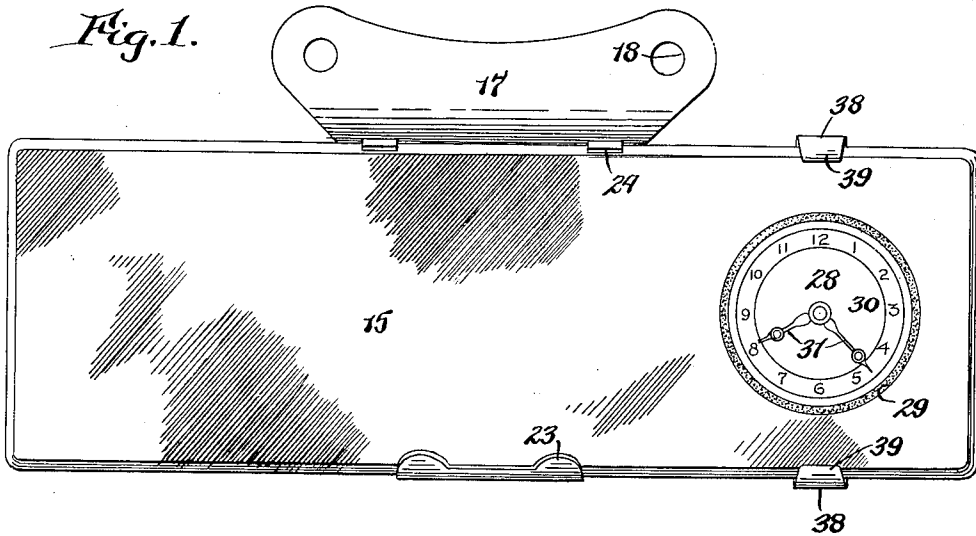


Fig. 2.

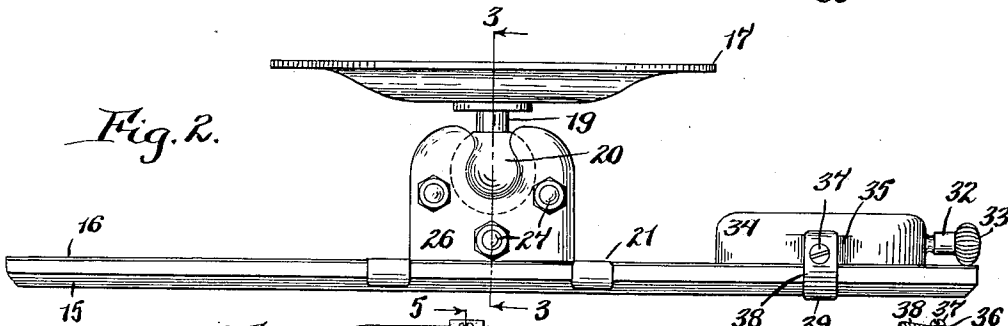


Fig. 4.

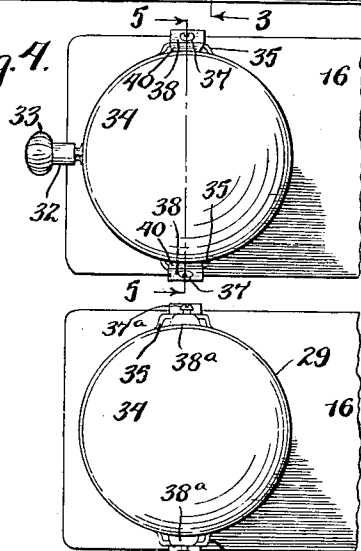


Fig. 3.

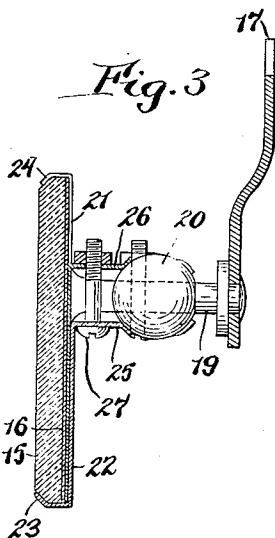


Fig. 5.

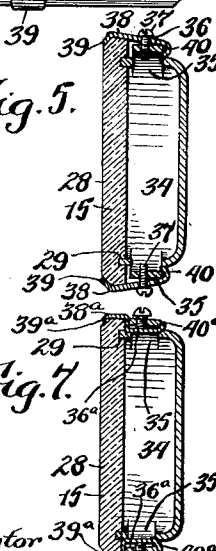


Fig. 6.

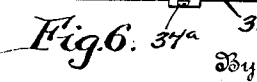
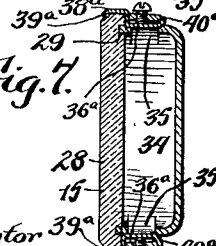


Fig. 7.



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# UNITED STATES PATENT OFFICE

1,948,222

## COMBINED MIRROR AND INSTRUMENT

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a corporation of New York

Application May 1, 1930. Serial No. 448,837

11 Claims. (Cl. 45-97)

This invention relates to a combined mirror and instrument and is shown as embodied in a rear vision mirror having associated therewith a watch or clock, although any instrument can be substituted for the watch or clock, such as a barometer, a compass, a thermometer, a viscosimeter, or any other kind of instrument to which frequent reference is made, particularly in an automobile. The invention is also applicable to wall mirrors, bathroom cabinet mirrors, desk mirror clock combinations or anywhere else where it may be desirable to have a watch, clock or other instrument as well as a mirror.

One of the principal objects of this invention is to provide such a combined mirror and clock or watch in which the watch or clock is supported exclusively by the mirror and has no direct connection with the bracket or other support for the mirror.

Another object of this invention is to provide a single mirror having a watch or clock associated therewith, the watch or clock being directly visible through a transparency or transparent opening provided in the mirror by removing or by eliminating the reflective coating of a portion of the mirror so that the mirror plate itself forms a crystal for the watch or clock. The provision of such an opening in a mirror to form a crystal for a watch or clock is more particularly shown and described in my co-pending application, Ser. No. 408,095, filed November 18, 1929. By this means the combined mirror and watch or clock are in their most compact form, the assembly is attractive in appearance, the face of the watch or clock is clearly visible and the rear vision mirror possesses its complete strength so that it is not likely to break or crack as would be the case if an opening of the size required were provided in the glass plate. By forming the mirror so as to also form the crystal for the watch or clock the danger of dust and dirt filtering through to the movement is reduced. The invention is, however, also applicable to a mirror in which an opening is actually cut through the mirror plate to receive the watch or clock case.

Another object is to form a simple and inexpensive means for securing a watch or clock case to the mirror, which means embody a pair of clips and a tightening bolt, which tightening bolt simultaneously secures the watch or clock case to the mirror and also draws it tightly against the rear side of the same so that the watch or clock case is reliably held in position in rear of the crystal in said mirror.

Another purpose is to provide such a mounting which is simple and inexpensive and which can be quickly applied to both the watch or clock case and to the mirror thereby expediting the operation of assembling the same.

A still further purpose is to provide such a mounting which is neat and attractive in appearance, particularly when viewed from the rear side and in which the necessary clamping bolts or other means are arranged in positions where they are not directly visible to one entering the automobile or to the occupants thereof.

A still further aim is to provide such a mounting which is suitable for use with various types and sizes of mirrors so that any movement can be employed.

Other purposes are to provide a combined rear vision mirror and instrument which is inexpensive to form and assemble, which is neat and attractive in appearance, which, particularly when viewed from the rear side of the same, presents no unsightly mechanical devices and in which the instrument is readily accessible for resetting, rewinding or the like.

In the accompanying drawing:

Fig. 1 is a front elevation of a combined rear vision mirror and watch or clock embodying one form of my invention.

Fig. 2 is a top plan view thereof.

Fig. 3 is a vertical section taken on line 3-3, Fig. 2.

Fig. 4 is a fragmentary rear elevation of the right hand end of the rear vision mirror showing a watch or clock case mounted in accordance with the form of the invention shown in Figs. 1-3.

Fig. 5 is a vertical section taken on line 5-5, Fig. 4.

Fig. 6 is a view similar to Fig. 4 showing a modified form of the invention.

Fig. 7 is a view similar to Fig. 5 showing the form of the invention shown in Fig. 6.

Similar reference numerals refer to like parts in each of the several views.

In its general organization this invention comprises a mirror which is formed to provide a crystal, a clock case fitted over said crystal in rear of said mirror and formed to provide a pair of ears, a pair of clips arranged in cooperative relation with said ears and having portions extending over the adjacent bevelled edges of the mirror, and a pair of screws screwing into said ears and operating to draw the clip toward the watch case and to contract these clips and thereby cause these clips to embrace the mirror

and also draw the watch case into firm engagement with the rear side of the mirror so that the watch case is reliably held in position.

The rear vision mirror can be of any suitable construction and is shown as comprising a plate 15 of elongated rectangular form, which plate is bevelled at its margin and is provided on its rear side with a reflective coating 16. Any other transparent material can be used in place of the glass and the reflective coating can be of the usual silver or it can be of a material which absorbs a part of the light reflected into the same, such light absorbing reflective coatings providing what is commonly known as a non-glare rear vision mirror.

This mirror can be mounted in any well known and approved manner, this mounting forming no part of the present invention. As shown, the mirror is supported by a bracket 17 having holes 18 by means of which the bracket is secured to the usual head bar (not shown) of an automobile windshield. This bracket is formed to provide a depending arm from the lower end of which a stem 19 projects forwardly. This stem is formed to provide a ball 20. The mirror is shown as held by an upper plate 21 and a lower plate 22, these plates overlapping and the lower plate being formed to provide fingers 23 which engage the lower bevelled edge of the mirror while the upper plate 21 is formed to provide similar fingers 24 which engage the upper bevelled edge of the mirror. The lower plate 22 is formed to provide a rearwardly projecting arm 25 which fits around the lower part of the ball 20, and the upper plate 21 is formed to provide a similar rearwardly projecting arm 26 which fits around the upper part of the ball 20. These arms are drawn together by a plurality of bolts 27 so that at the same time the two plates 21 and 22 are drawn together to clamp the mirror plate therebetween, the arms 25, 26 are compressed upon the ball 20 so that a firm frictional ball and socket joint is provided for supporting the mirror plate 15 from the bracket 17. In the two forms of the invention shown, the mirror plate 15 is first coated over its entire surface with the film of reflective material 16. If the watch or clock to be used has a circular face a circular transparency, transparent opening, or crystal 28 is then provided in the right hand end of the mirror by removing the circular disk of the reflective coating on the back of the mirror plate. This can be done by scraping off the reflective coating, grinding a concave recess in the rear side of the mirror, or by coating the crystal part of the rear vision mirror, before the mirror is silvered, with a suitable material to which the coating will not adhere. Around the crystal a circular groove 29 is ground into the rear side of the mirror.

The watch or clock movement including the dial 30, hands 31, stem 32 and crown 33 is arranged in a watch or clock case 34, the rim of which is set into the groove 29 so that the dial and hands 30, 31 of its contained movement are visible through the crystal 28.

In the form of the invention shown in Figs. 1-5 the watch or clock case 34 is formed at opposite sides of its rim to provide a pair of ears 35, which are punched outwardly from the rim and form an anchorage for the attaching clips. Each of these ears is provided with a threaded hole 36 which receives a screw 37. The head of each of the screws 37 bears against the central part of an attaching clip 38 through which

the screw 36 passes. Each of the attaching clips 38 includes an inclined front end 39 which bears against the adjacent bevelled front edge or margin of the mirror and the rear part 40 of each of these clips is reversely formed to extend around the rear side of the corresponding ear 35 and entering the aperture formed between this ear and the watch or clock case. The watch case is somewhat smaller in diameter than the total length of the mirror so that the body of each of the clips 38 slopes rearwardly toward the center of the watch or clock case. By so arranging the clips 39 that they converge rearwardly, it is apparent that upon tightening the balls 36 the front ends 39 of the clips 38 are drawn into firm engagement with the adjacent opposite edges of the mirror and by reason of the space between the clips 38 and the adjacent ears 35, the clips form a yielding or spring support which prevents the screws 36 from unturning and becoming loose under the vibration of the automobile. At the same time, it is apparent, that upon tightening the screws 37, the clips 38 are sprung inward and exert a yielding forward pressure on the watch or clock case, which pressure yieldingly holds the rim of the watch or clock case in its groove 29.

In the form of the invention shown in Figs. 6 and 7 the body part of each of the clips 38<sup>a</sup> is arranged under the corresponding ear 35 and its rear part is bent outwardly, as indicated at 40<sup>a</sup> so as to be arranged above the rear edge of the ear 35. The front end 39<sup>a</sup> of each of the clips is formed to engage the adjacent bevelled edge of the mirror as with the construction shown in Figs. 1-5. The screw 37<sup>a</sup> engages a threaded opening 36<sup>a</sup> in the ear 35 and the end of this screw bears against the body of the clip 38<sup>a</sup> so as to force the clip 38<sup>a</sup> downwardly when the screw 37<sup>a</sup> is screwed inwardly. It is apparent that with this construction upon screwing the screws 37<sup>a</sup> inwardly they flex the body of the clip 38<sup>a</sup> and yieldingly draw the front ends 39<sup>a</sup> into firm engagement with the opposite edges of the mirror plate. At the same time the flexing of the body of the clips 38<sup>a</sup> draws the upturned end 40<sup>a</sup> of each clip into engagement with the rear edge of the ear 35 so that the instrument case is drawn forwardly into firm engagement with the mirror plate.

It is therefore apparent that the present invention provides a very simple form of clip for securing an instrument case to a rear vision mirror or the like, which clip operates simultaneously to secure the instrument case firmly to the edges of the mirror and at the same time draw the instrument case forwardly into firm engagement with the rear side of the mirror so that a tight yielding joint is maintained at all times between the rim of the instrument case and the rear side of the mirror plate. A combined rear vision mirror and instrument made in accordance with the present invention is also simple and inexpensive to construct and assemble and consists of few parts, the same is neat and attractive in appearance when viewed from either the front or rear side of the mirror and by reason of the yielding character of the connection between the watch or clock case and the mirror, will stand up under the severe vibration to which it is subjected and will not become loose or permit a movement to fall from the mirror.

I claim as my invention:

1. Means for mounting an instrument case behind a transparent panel, comprising an in-

- strument case arranged in rear of said panel and having its rim engaging the rear side of said panel, means for connecting opposite sides of said case to opposite margins of said panel at least one of which last named means includes a clip having a hook-shaped end adapted to engage one margin of said panel and having an opposite hook shaped end adapted to engage said instrument case, and screw means interposed between said clip and the adjacent part of said case and adapted to flex said clip inwardly to draw said clip into firm engagement with the panel and also to draw its rear end into firm engagement with said case whereby said case is yieldingly supported from said panel and the rim of said case is yieldingly drawn into firm engagement with the rear side of said panel, and whereby an instrument arranged in said instrument case is visible through said panel.
2. Means for mounting an instrument case behind a transparent panel, comprising an instrument case arranged in rear of said panel and having its rim engaging the rear side of said panel, means for connecting opposite sides of said case to opposite margins of said panel at least one of which last named means includes a clip having a hook shaped end adapted to engage one margin of said panel and having an opposite hook shaped end adapted to engage said instrument case, and a screw arranged in a threaded hole provided in the corresponding side of said case and arranged to bear inwardly against said clip thereby to flex the body of said clip inwardly and force the corresponding end of said clip against said panel and to shorten said clip to draw said case into firm engagement with said panel and secure said case in position, whereby an instrument arranged in said instrument case is visible through said panel.
3. Means for mounting an instrument case behind a transparent panel, comprising an instrument case arranged in rear of said panel and having its rim engaging the rear of said panel, the width of said case being less than the width of the panel in the same direction, means for connecting opposite sides of said case to opposite margins of said panel at least one of which last named means includes a clip having a hook shaped end adapted to engage one margin of said panel and having an opposite hook shaped end adapted to engage said instrument case, and screw means interposed between said clip and the corresponding part of the instrument case and arranged to flex said clip inwardly to force said clip into clamping engagement with said panel and to shorten said clip thereby to draw said instrument case into firm engagement with the rear side of said panel, whereby an instrument arranged in said instrument case is visible through said panel.
4. Means for mounting an instrument case behind a transparent panel, comprising an instrument case arranged in rear of said panel and having its rim engaging the rear of said panel, means for connecting opposite sides of said case to opposite margins of said panel, at least one of which last named means includes a shoulder provided at the margin of said instrument case and a clip having one end formed to hook over the margin of said panel and its other end formed to hook around the rear of said shoulder, and screw means interposed between said clip and the corresponding shoulder and arranged to flex said clip inwardly to force said clip into clamping engagement with said panel and to shorten said clip thereby to draw said instrument case into firm engagement with the rear side of said panel, whereby an instrument arranged in said instrument case is visible through said panel.
5. Means for mounting an instrument case behind a transparent panel, comprising an instrument case arranged in rear of said panel and having its rim engaging the rear of said panel, a pair of ears punched outwardly from opposite sides of the rim of said instrument case each of said ears being connected at its ends at different places along the periphery of said rim, a pair of C-shaped clips each having one end formed to hook over said panel and its other end formed to hook around the rear side of the corresponding ear, and a screw passing through an opening in each clip and engaging a threaded hole in the corresponding ear the head of said screw being adapted to bear against and flex each clip inwardly to force each clip into clamping engagement with said panel and to shorten said clip thereby to draw said instrument case into firm engagement with the rear side of said panel, whereby an instrument arranged in said instrument case is visible through said panel.
6. Means for mounting an instrument case behind a transparent panel having a continuous groove provided in its rear side, comprising an instrument case arranged in rear of said panel and having its rim arranged in said groove, means for connecting opposite sides of said case to opposite margins of said panel, at least one of which last named means includes a clip having a hook shaped end adapted to engage one margin of said panel and having an opposite hook shaped end adapted to engage said instrument case, and screw means interposed between said clip and the corresponding part of said case and adapted to flex said clip inwardly thereby to clamp one end against the margin of said panel and to shorten said clip and draw said instrument case into firm engagement with its groove, whereby an instrument arranged in said instrument case is visible through said panel.
7. Means for mounting an instrument case behind a transparent panel having a continuous groove in its rear side, comprising an instrument case arranged in rear of said panel and having its rim arranged in said groove, a pair of ears punched outwardly from the rim of said instrument case, each of said ears being connected at its ends at different places along the periphery of said rim, a pair of spring clips each having one end formed to hook over the margin of said panel and the other end formed to hook around the rear side of the corresponding ear, and a screw having threaded engagement with each of said ears and arranged to bear against the corresponding clip thereby to flex each clip into clamping engagement with said panel and to shorten each clip thereby to draw and firmly seat the rim of said instrument case in said groove, whereby an instrument arranged in said instrument case is visible through said panel.
8. The combination of a glass member, a clock secured thereto, said glass member having a transparent opening therein, said clock being centered in said opening, said glass member acting as the crystal for said clock, a plurality of clamps cooperating with the edge of said

5	glass member and projecting into said clock and a plurality of adjustable devices cooperating with said clamps and adapted to draw said clock casing into substantial hermetic sealing with said glass member.	
10	9. The combination of a support, a clock secured thereto, said support having a transparent opening therein, said clock being centered in said opening, said support acting as the crystal for said clock, a plurality of clamps cooperating with the edge of said support and projecting into said clock and a plurality of adjustable devices cooperating with said clamps and adapted to draw said clock casing into substantial hermetic sealing with said support, said opening being substantially concave and having a lens effect.	80
15	10. A securing device for securing an instrument case in moisture and dust proof contact	
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WILLIAM LA HODNY.