UNITED STATES PATENT OFFICE

2,538,489

INSTRUMENT PANEL FOR ACCOMMODATING CHANGEABLE ARRAYS OF INSTRUMENTS


Application April 17, 1946, Serial No. 662,789
In Great Britain March 15, 1945

5 Claims. (Cl. 180—99)

1. This invention relates to instrument panels of the kind employing a mask through which the instruments may be viewed but which hides the supporting means, and particularly to panels for use on vehicles such as motor road vehicles or rail vehicles, motor-cycles, aircraft and boats. The term "instrument" is intended to include such accessories as speedometers, clocks, ther- mometers, oil gauges, air meters, radio sets and controls, car heaters and controls, cigarette lighters, switches, choke controls, and the like. For different models of vehicle, it is very often necessary for a manufacturer to provide for different arrays of accessories, certain arrays hav- ing more and others less accessories. The object of the present invention is to enable the same mask to be employed for different arrays without spoiling the general appearance of the layout.

According to this invention, an instrument panel comprises an instrument support, a main mask in front of the support having at least one opening therein large enough to surround a number of alternative positions for certain accessories and a sub-mask arranged to cover those parts of the opening not occupied by an accessory, or accessories, for the selected layout, and thereby obscuring portions of the support which might otherwise be visible.

In the case of an instrument panel for a motorcar, it may be that the positions of certain accessories will be the same in different arrays, while the other accessories may differ in number and grouping for different arrays. Thus, according to this invention, the main mask is provided with a number of apertures for those accessories the positions of which are the same in different arrays, and with an additional opening large enough to surround the largest grouping of other accessories which may be required for a particular array. Thus, in the case where only a single additional accessory is required the greater part of the opening will be covered by the sub-mask, whereas, if the greatest number of additional instruments is employed, the sub-mask will require to cover only a small portion of the opening.

The aforesaid sub-mask may comprise the means for securing to the support those accessories which are subject to change in different arrays. For this purpose, the sub-mask may be larger than the opening in the main mask with which it is associated, and the means for securing the accessories to it and for securing it to the support may be located in that part of the sub-mask which is obscured by the main mask.

Alternatively, the accessory, or accessories, may be secured directly to said support, while the sub-mask may either be carried by or formed integral with a part of an accessory, or accessories, in which case the main mask is arranged to obscure the means for mounting the accessory or accessories, on the support. In yet a further alternative arrangement, the sub-mask may be secured to the support, or main mask, independently of the accessory or accessories, and is arranged to obscure the mountings for the accessories.

The following is a description of two alternative embodiments of the invention, reference being made to the accompanying drawings, in which:

Figure 1 is a front elevation of the assemblage having a portion of the main mask broken away; Figure 2 is a section on the line 2—2 of Figure 1, showing one embodiment of the invention; Figure 3 is a similar view to Figure 2 showing another embodiment of the invention, and Figure 4 is a front elevation of a part of a support showing an alternative method of supporting the sub-mask and instruments independently of one another.

The instrument support comprises a number of horizontal members secured to and spaced apart by end cross members, each of which horizontal members is provided with a number of tapped holes by means of which a number of instruments is secured to the support. A main mask is arranged to extend over the support and is provided with a number of openings through which the instrument may be viewed, but which obscure the members of the support.

It may be that the particular grouping of instruments is required to be maintained in different car models, but which different models require a different layout of the switch-gear. For example, in Figure 1 only a single switch is provided, whereas in other models a number of switches may be required to be provided side-by-side. The main mask, therefore, is provided with a sufficiently large aperture opposite the switch-gear as to enable the maximum number of switches to be provided in any instrument having the same layout of instruments as referred to above. The aperture is masked by a sub-mask so that the mounting of the switch-gear, or any other part of the support,
cannot be seen through the aperture. As shown in Figure 2, the sub-mask 21 is secured to the horizontal members 10 by set-screws 28 and a flange 22 on the switch-gear is secured to the sub-mask by set-screws 23. It will be noted that the set-screws 23, being part of the mounting means of the switch-gear, are concealed from view by the margin of overlap of the sub-mask and the main mask. Thus, by providing the different switch-gears with an appropriate sub-mask the main mask may be the same, irrespective of what switch-gear is employed.

In the arrangement shown in Figure 3, the sub-mask 21 is shown to be formed integrally with the switch-gear and to be attached directly to the horizontal members 10 by set-screws 24.

In the arrangement shown in Figure 4, the ‘switch unit’ 7 is provided with an integral flange 25 which is secured by set-screws 26 to the horizontal members 10 independently of the sub-mask 21 which is secured to said horizontal members by other set-screws 27 which pass through caps in the periphery of the flange 25. Alternatively, the sub-mask 21 could be secured directly to the underside of the main mask.

Although the invention is primarily for enabling a different number of smaller accessories to be employed in different layouts, it will be appreciated that a sub-mask could be employed for larger accessories.

The term “instrument” as used in the claims is intended to cover all conventional or desirable instruments and accessories for mounting upon the instrument panel of a vehicle.

I claim:

1. An instrument panel installation for changeable arrays of instruments comprising, in combination, a rearwardly disposed instrument supporting frame, a main mask disposed in front of said supporting frame and having at least one opening therein large enough to surround a plurality of positions for certain instruments, a sub-mask of an area only slightly greater than said opening in the main mask, means for securing the instruments to said sub-mask, means for securing the sub-mask to the supporting frame in a position at the back of the main mask, and means for securing said sub-mask to said supporting frame, so as to cover all parts of the openings in the main mask not occupied by one or more instruments for a selected layout, whereby portions of the supporting frame which might otherwise be visible may be obscured.

2. An instrument panel installation for changeable arrays of instruments comprising, in combination, a rearwardly disposed instrument supporting frame, a main mask disposed in front of said supporting frame and having at least one opening therein large enough to surround the plurality of alternative positions for certain instruments, a sub-mask arranged only slightly to overlap the part of the main mask surrounding the opening, means for securing the instruments to the sub-mask with the securing means located in said slightly overlapping portion of the mask, means for securing the sub-mask to the supporting frame in a position at the back of the main mask to cover all parts of the opening in the main mask not occupied by one or more instruments for a selected layout-out, whereby portions of the supporting frame which might otherwise be visible may be obscured.

3. An instrument panel installation for changeable arrays of instruments comprising, in combination, a rearwardly disposed instrument supporting frame, a main mask disposed in front of said supporting frame and having at least one opening therein large enough to surround a plurality of alternative positions for certain instruments, means for supporting the instruments from the instrument frame, a sub-mask of an area slightly greater than the opening in the main mask, means for supporting said sub-mask at the back of the main mask independently of the supporting means for said instruments and in a position to cover all parts of the opening in the main mask not occupied by one or more instruments for a selected layout-out and to obscure the instrument frame and the supporting means of said instruments.

4. An instrument panel installation for changeable arrays of instruments comprising, in combination, a rearwardly disposed instrument supporting frame, a main mask disposed in front of said supporting frame and having at least one opening therein large enough to surround a plurality of alternative positions for certain instruments, a sub-mask of an area only slightly greater than said opening in the main mask and formed integrally with an instrument, and means for securing said sub-mask to said supporting frame, so as to cover all parts of the openings in the main mask not occupied by one or more instruments for a selected layout-out, whereby portions of the supporting frame which would otherwise be visible may be obscured.

5. An instrument panel installation according to claim 4 wherein the means for securing the sub-mask to the supporting frame are so located as to be obscured by the main mask.

SYDNEY ALBERT WALTON.

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The following references are of record in the file of this patent:

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