

PATENT SPECIFICATION

(11) 1 338 629

DRAWINGS ATTACHED



- (21) Application No. 58266/71 (22) Filed 15 Dec. 1971
(31) Convention Application No. 128 083 (32) Filed 21 Dec. 1970 in
(33) Japan (JA)
(44) Complete Specification published 28 Nov. 1973
(51) International Classification G04B 39/00//19/18
(52) Index at acceptance
G3T A2B

(54) WATCH GLASS

(71) We, KABUSHIKI KAISHA SUWA SEIKOSHA, a Japanese company of 3-4, 4-chome, Ginza, Chuo-ku, Tokyo, Japan, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns a watch glass.

- 10 According to the present invention, there is provided a watch glass one surface of which is provided over a part or parts only thereof with an anti-reflection coating.

- 15 The said one surface is preferably the outer surface.

- Thus a centrally located region of said one surface may be provided with the anti-reflection coating, the said one surface having non-coated regions disposed on opposite sides of the centrally located region.

- 20 The other surface of the watch glass may also be provided over a part or parts only thereof with an anti-reflection coating. Alternatively the other surface of the watch glass may be provided with an anti-reflection coating over the whole thereof.

The said one surface is preferably flat substantially throughout its extent.

- 30 The anti-reflection coating may be a magnesium fluoride coating.

The invention also comprises a watch provided with a watch glass as set forth above.

- The invention is illustrated, merely by way of example, in the accompanying drawing, in which:—

Figure 1 is a cross-sectional view of a known watch glass, and

- 40 Figures 2 and 3 are respectively a cross-sectional view and a plan view of a watch glass according to the present invention.

- In Figure 1 there is shown a known watch glass 10 whose outer surface 11 has a centrally located flat portion 12 and facets 13 which are disposed on opposite sides of the centrally located portion 12 and which ex-

tend at an angle to the latter. The watch glass 10, which therefore needs to be cut to provide the facets 13, provides a decorative effect by reason of the fact that the portion 12 and the facets 13 reflect the external light in different ways.

However, if the glass 10 is made of a special inorganic glass or of a sapphire glass, its manufacture may take several hours, material may be lost in the process of producing the cut facets 13, and the cost therefore is very high. Moreover, edge lines 14 are formed at the junctions of the facets 13 with the portion 12, so that light coming from the hands or the dial of the watch is refracted by the edge lines 14 with the result that is is not easy to read the time.

In the case, however, of the watch glass according to the present invention which is shown in Figures 2 and 3, a watch glass 15 is provided whose outer surface 16 is flat substantially throughout its extent. The surface 16 is provided at a centrally located region 20 thereof with an anti-reflection coating, the surface 16 having non-coated regions 21, 22 which are disposed on opposite sides of the centrally located coated region 20. The anti-reflection coating may be constituted by a vacuum vapour deposited layer of magnesium fluoride (MgF_2).

Accordingly, in the case of the watch glass 15, the non-coated regions 21, 22 reflect the external light, whereas the region 20 thereof does not reflect the external light. Consequently the general effect of the construction shown in Figures 2 and 3 is substantially the same as that of Figure 1 without the expense of having to produce the facets 13.

As will be appreciated the decorative effect is enhanced further if the inner surface 23 of the watch glass 15 is provided with an anti-reflection coating of the same size as and aligned with the region 20, the remaining parts of the internal surface 23 being un-

[Price 25p]

Price 33p

coated.

Another possibility is for the internal surface 23 to be coated over the whole thereof with an anti-reflection coating.

- 5 Although the drawing shows the coating on the region 20 as consisting of a single band of material it is possible to provide the surface 16 (and also if desired the surface 23) with anti-reflection coatings at a number of different parts of these surfaces. Moreover, these anti-reflection coatings need not have shapes corresponding to that of the region 20.

- 15 It will readily be appreciated that the present invention, while producing an equivalent effect to the prior art, does so very much more economically and does not involve edge lines 14 which make the dial and hands difficult to read.

- 20 The anti-reflection coating on the region 20 may be produced by using a mask which covers the parts of the surface 16 which are not to be coated.

- 25 The glass may be provided, at its surface adjacent the dial, either with an anti-reflection coating shaped to constitute one or more time indices, or with an anti-reflection coating having non-coated regions which are so shaped. If this is done the difference in reflectivity between the coated and non-coated regions enables the or each time index to be visible at the outer surface of the glass.

- 30 WHAT WE CLAIM IS:—

- 35 1. A watch glass one surface of which is provided over a part or parts only thereof

with an anti-reflection coating.

2. A watch glass as claimed in claim 1 in which the said one surface is the outer surface.

3. A watch glass as claimed in claim 1 or 2 in which a centrally located region of said one surface is provided with the anti-reflection coating, the said one surface having non-coated regions disposed on opposite sides of the centrally located region.

4. A watch glass as claimed in any preceding claim in which the other surface of the watch glass is also provided over a part or parts only thereof with an anti-reflection coating.

5. A watch glass as claimed in any of claims 1 to 3 in which the other surface of the watch glass is provided with an anti-reflection coating over the whole thereof.

6. A watch glass as claimed in any preceding claim in which the said one surface is flat substantially throughout its extent.

7. A watch glass as claimed in any preceding claim in which the anti-reflection coating is a magnesium fluoride coating.

8. A watch glass substantially as hereinbefore described with reference to and as shown in Figures 2 and 3 of the accompanying drawing.

9. A watch provided with a watch glass as claimed in any preceding claim.

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