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3,525,210

CASE FOR WATCH

Filed Sept. 10, 1968

FIG. 1
PRIOR ART

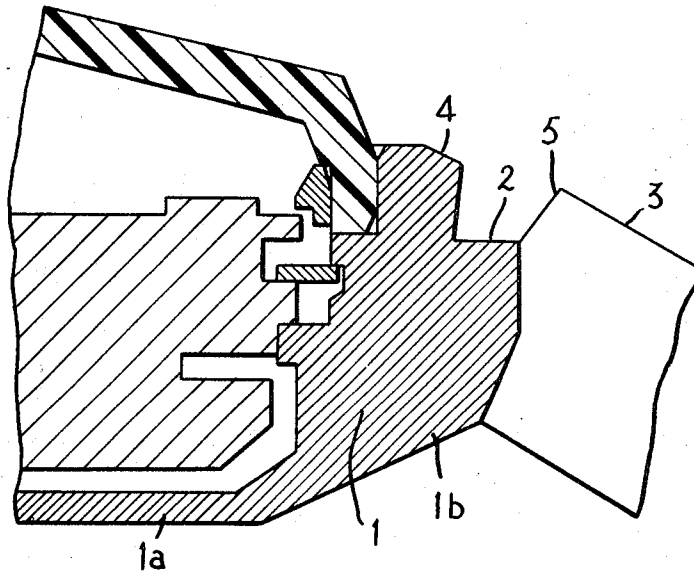
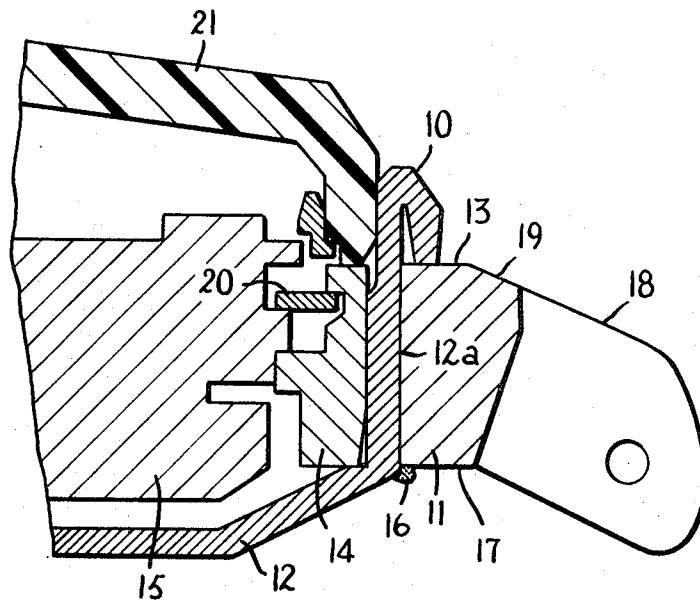


FIG. 2



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CASE FOR WATCH

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U.S. Cl. 58—88

7 Claims

ABSTRACT OF THE DISCLOSURE

A watchcase has a back cover with a cylindrical side wall and an external annular casing in which the back cover fits. The back cover and the casing may be made separately from thin stock to reduce waste and each may also be finished separately without damaging the other.

The present invention relates to a waterproof watchcase having an external case body provided on the outer periphery of a back cover which serves as an inner case body and a casing ring on the inner periphery of the back cover.

Watchcases having the case body and the back cover made in one piece are well known. Generally, in watchcase manufacturing, various cases are produced in small quantities as variety in design is required due to the ornamental nature of the case. The cases are individually finished by suitable polishing operations. When polishing one part of the case, the polishing tool will frequently contact and damage another part. To avoid this, the case body is sometimes made thick, but this is difficult to produce in mass production because of the thick stock material required and the cost will be higher because of the amount of machining required.

It is therefore an object of this invention to make a watchcase in two sections.

It is another object to make a watchcase which can be easily polished.

It is another object to make a watchcase suitable for mass low cost production.

In brief, the objects are achieved by having the watchcase made from two sections: an annular external casing and a back cover which has a cylindrical side wall. The cover may be fitted into the external casing either by press fitting or by using a caulking material or other fixing means. Making the case in two sections allows each to be separately machined and polished without damaging the other. Other objects, features and advantages will be seen from the accompanying description taken in conjunction with the accompanying drawings in which:

FIG. 1 is a side cross sectional view of a watchcase in accordance with the prior art;

FIG. 2 is likewise a side cross sectional view of a watchcase according to the invention.

In FIG. 1 there is shown a conventional watchcase comprising a body 1 having a relatively thin back portion 1a and a thick peripheral side portion 1b with a front face 2. Lugs 3 are provided at diametrically opposite sides of the case 1 for attachment of a wrist band or strap. The lugs 3 each have lug ends 5 adjacent the front face 2. And integral annular cylindrical projection 4 projects beyond the front face 2 and is used to mount a crystal in the case.

The projection 4 interferes with any attempt to run a stripe across the face of the watch because of its height. The projection 4 will similarly interfere with a finishing tool used in any attempt to polish the top surface of the lugs 3. Lugs 3 can be made higher and thicker than normal to prevent such interference with polishing their front faces. Unfortunately, this spoils the appearance of

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the watch and also the case 1 must then be made from thick stock. All this will make mass production more difficult as more machining will be required, and tool life will be shortened, thus increasing the expense of the case.

Referring now to FIG. 2 for the present invention in more detail, a thin back cover 12 with a thin cylindrical side wall 12a can be pressed out of relatively thin sheet material. The upper end of the side wall 12a is bent outwardly to form a cylindrical projection stop 10. Press fitted within the casing 12 is a casing ring 14 to secure a movement 15 within the case 12 by a lock ring 20. However, such known means as adhesives or screwing the ring inside of the back cover may be used to secure the casing ring 14 in the case 12. The case 12 is in turn pressed into an annular external case body 11 until the stop 10 abuts the top surface or shoulder 13 of the external case body 11 thus preventing further movement. The bottom surface 17 of the external case 11 can be secured to case 12 by caulking the intersection joint 16 where they meet. However, it may also be secured by a press fit or adhesive. A set of lugs 18 are provided on diametrically opposite sides of the external case body 11 for attachment of a wristband or strap. A crystal 21 fits inside the upper portion of the side wall 12a of the case body 12 and abuts the upper end of the casing ring 14.

It will be appreciated that because the back cover 12 is made separately from the external case body 11, surface finishing of the top surface 19 of external case body 11 and that of the lug 18 can be done before body 11 and cover 12 are fitted together. Thus, the projecting stop 10 does not block the finishing tool as in the prior art. In addition, the height of the lug 18 can be made quite low and very thin so it is possible to produce a thin watchcase. After any finishing operations, the case 12 and cover 11 are fitted together.

Another advantage of the present embodiment is that the casing ring 14 is separate from the back cover 12. Thus, back cover 12 can be made from a stock material of the uniform thickness. Each part can be shaped or machined as desired and then put together. As the back cover 12 can be simply pressed out of sheet material, machining time is greatly reduced. If the back cover 12 and casing ring 14 are made integrally they obviously must be made of the same material, which in the prior art is stainless steel. An advantage of the present embodiment is that the back cover 12 can be made of stainless steel for durability, while the casing ring 14 is not limited to such material, which is difficult to work, but a metal with a high machinability such as brass or an inexpensive plastic shaped by injection molding can be used.

Therefore, it is easy producing each part in mass production because working time is reduced and production costs are lowered. The uniform thickness of the back cover 12 and its being separate from the casing ring 14 will also contribute to reducing the cost as the demands on the machine tools and on the polishing tools are reduced.

What I claim and desire to secure by Letters Patent is:

1. A watchcase comprising: an annular external casing; a back cover having a cylindrical side wall of substantially the same outer diameter as the inner diameter of the annular casing and thereby providing an upwardly open cavity, said cover fitted downwardly into said external casing and stop means on the outermost periphery of said back cover for limiting downward movement of said cover within said casing.

2. A watchcase as in claim 1 wherein said stop means comprises an outwardly bent over portion of said cylindrical side wall.

3. A watchcase as in claim 1 wherein said back cover is stamped sheet material.

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4. A watchcase as set forth in claim 1 further comprising a crystal, the upper portion of said cylindrical side wall providing a bezel for holding said crystal.

5. A watchcase comprising: an annular external casing; a back cover having a cylindrical side wall of substantially the same outer diameter as the inner diameter of the annular casing, said cover fitted into said said external casing; and a casing ring fitted within said side wall, whereby said casing and cover are separately manufactured from thin stock with reduced waste and finished separately without damaging each other and said cover is then fitted into said outer casing.

6. A watchcase as in claim 5 wherein said casing ring comprises brass.

7. A watchcase as in claim 5 wherein said casing ring comprises plastic.

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