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TIMEPIECE CASE WITH MOVEMENT-SECURING SHOCK-ABSORBING MEANS

Filed May 24, 1968

2 Sheets-Sheet 1

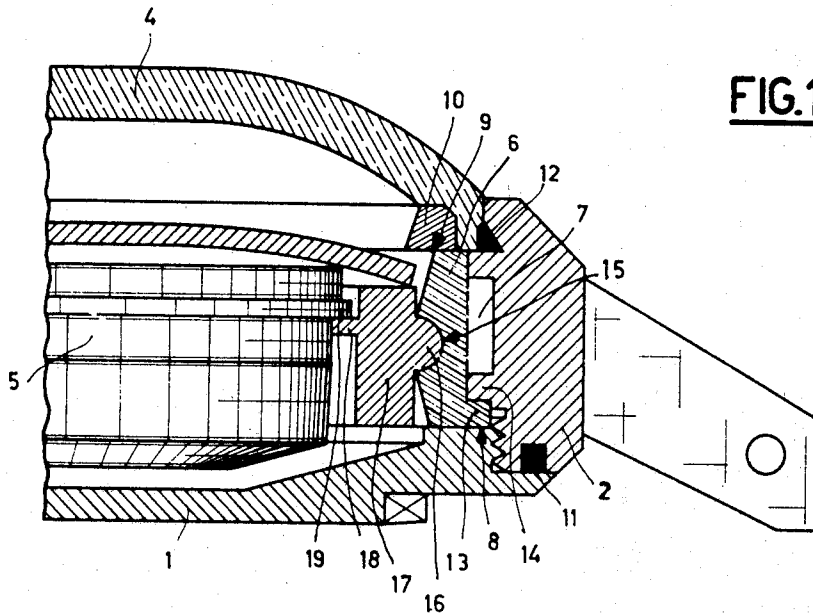


FIG. 1

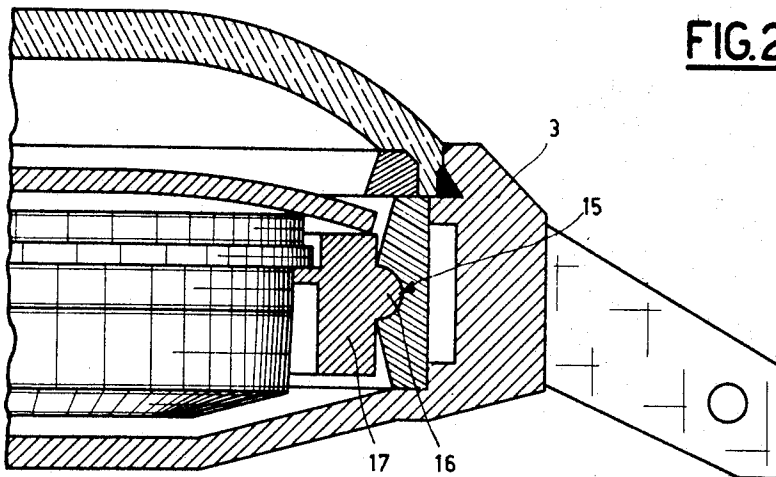


FIG. 2

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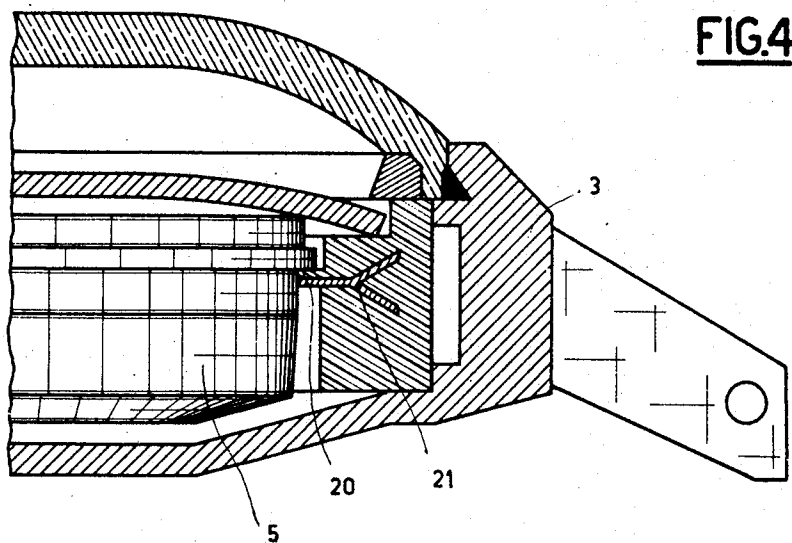
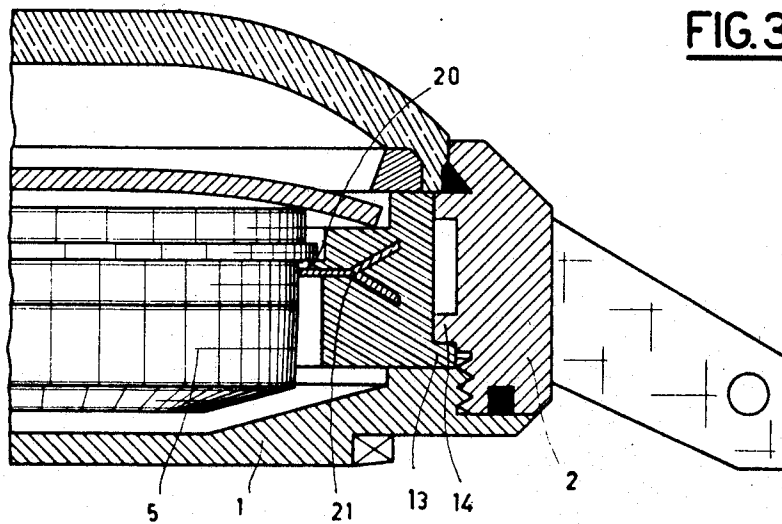
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9 Claims

ABSTRACT OF THE DISCLOSURE

A timepiece casing having a shock-absorbing ring of elastic material for securing a timepiece movement in the casing and for the fluid tightly sealing certain elements of the casing. An inner lateral surface of the casing has an annular groove and the elastic ring has an external surface bearing against the inner surface of the case so as to be able to deform itself within the annular groove.

This invention is concerned with a timepiece case, for example for a watch, which has a shock-absorbing ring of elastic material for securing the movement in the case.

There have already been made watch cases in which the movement is mounted on an annular support having a shoulder housed in a fluid-tight packing which serves simultaneously to ensure the fluid-tightness of the casing and of the watch crystal. To increase the elasticity of the annular packing, the latter is profiled along its inner periphery.

In order to obtain a shock-absorbing assembly, it is nevertheless necessary to provide an annular packing which is thick enough so that the elastic material constituting the same compresses itself in such a way as to absorb impacts. A case which is much larger than the movement is rendered necessary for such an assembly.

The present invention precisely aims at avoiding this drawback and has for its object a timepiece case having a shock-absorbing ring of elastic material for securing the movement in the case and for giving fluid tightness to certain elements of the casing.

It is characterized by the fact that the inner lateral surface of said casing is provided with an annular groove and that said ring has an external surface bearing against said inner surface in order to be able to deform itself within this groove.

The accompanying drawing represents by way of example two modifications of the present invention.

FIGURES 1 and 2 are cross sections of parts of the timepiece case, with recessed bottom and single shell, respectively, for a first modification.

FIGURES 3 and 4 are cross sections of parts of timepiece cases according to a second modification.

The timepiece case according to the invention consists of a bottom 1 and of a middle 2 (FIGURES 1 and 3), or of a bottom-middle 3 (FIGURES 3 and 4), and a crystal 4 a movement 5 is mounted on a substantially rectangular cross-sectional elastic ring 6. The middle 2 and the bottom-middle 3, respectively, have an annular groove 7.

The height of the elastic ring 6 is selected in such a manner as to enable it to absorb axial impacts, while during radial impacts, the middle part of ring 6 can deform itself in groove 7. This makes it possible to reduce the thickness of the elastic joint and consequently, to reduce the diameter of the casing.

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The upper and lower surfaces of the resilient ring 6 are compressed between an edge 8 of the bottom and the lower part 9 of the crystal and of its securing ring 10. This ensures a fluid tight fit in addition to that resulting from fluid tight packings 11 and 12. With cases with recessed bottoms, (FIGURES 1 and 3) ring 6 has a lower outer edge 13 which engages between edge 14 of the middle and shoulder 8 of the bottom.

In the first modification shown in FIGURES 1 and 2, elastic ring 6 has a groove 15 cooperating with a shoulder 16 of the fitting frame 17. The latter comprises a shoulder 18 on which is secured a shoulder 19 of movement 5.

In the second modification of FIGURES 3 and 4, a shoulder 20 of elastic ring 6 is directly mounted on movement 5. The shoulder 20 is reinforced by at least one annular support 21, profiled in a Y, which is partially embedded in the resilient ring 6.

What is claimed is:

1. A timepiece casing comprising: an annularly grooved inner surface having side walls; and resilient mounting means spanning and extending beyond said side walls of said annularly grooved inner surface and deformable therein when said casing is subjected to axial or radial impact.

2. A timepiece casing according to claim 1; including a crystal mounted on said casing; and wherein said resilient mounting means is compressed between said crystal and said casing to fluid-tightly seal said casing.

3. A timepiece casing according to claim 1; including a fitting frame having a supporting flange for supporting a movement and having an outwardly extending projection; and wherein said resilient mounting means has an accommodating recess receiving said outwardly extending projection.

4. A timepiece casing according to claim 1; wherein said resilient mounting means has a substantially rectangular cross-section having two major and two minor dimensioned sides; and wherein said resilient mounting means has one of its major dimensioned sides spanning said annularly grooved inner surface to facilitate its deforming into said annularly grooved inner surface.

5. A timepiece casing according to claim 1, wherein said resilient mounting means has a supporting flange for supporting a movement; and means partially embedded in said resilient mounting means for reinforcing said supporting flange.

6. A timepiece casing comprising: an annularly grooved inner surface; a crystal mounted on said casing; and resilient mounting means disposed adjacent said annularly grooved inner surface for fluid-tightly sealing said crystal and said casing and deformable into said annularly grooved inner surface when said casing is subjected to axial or radial impacts.

7. A timepiece casing according to claim 6; including a fitting frame having a supporting flange for supporting a movement and having an outwardly extending projection; and wherein said resilient mounting means has an accommodating recess receiving said outwardly extending projection.

8. A timepiece casing according to claim 6; wherein said resilient mounting means has a substantially rectangular cross-section having two major and two minor dimensioned sides; and wherein said resilient mounting means has one of its major dimensioned sides spanning said annularly grooved inner surface to facilitate its deforming into said annularly grooved inner surface.

9. A timepiece casing according to claim 6; wherein said resilient mounting means has a supporting flange for supporting a movement; and means partially em-

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bedded in said resilient mounting means for reinforcing
said supporting flange.

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U.S. Cl. X.R.

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