

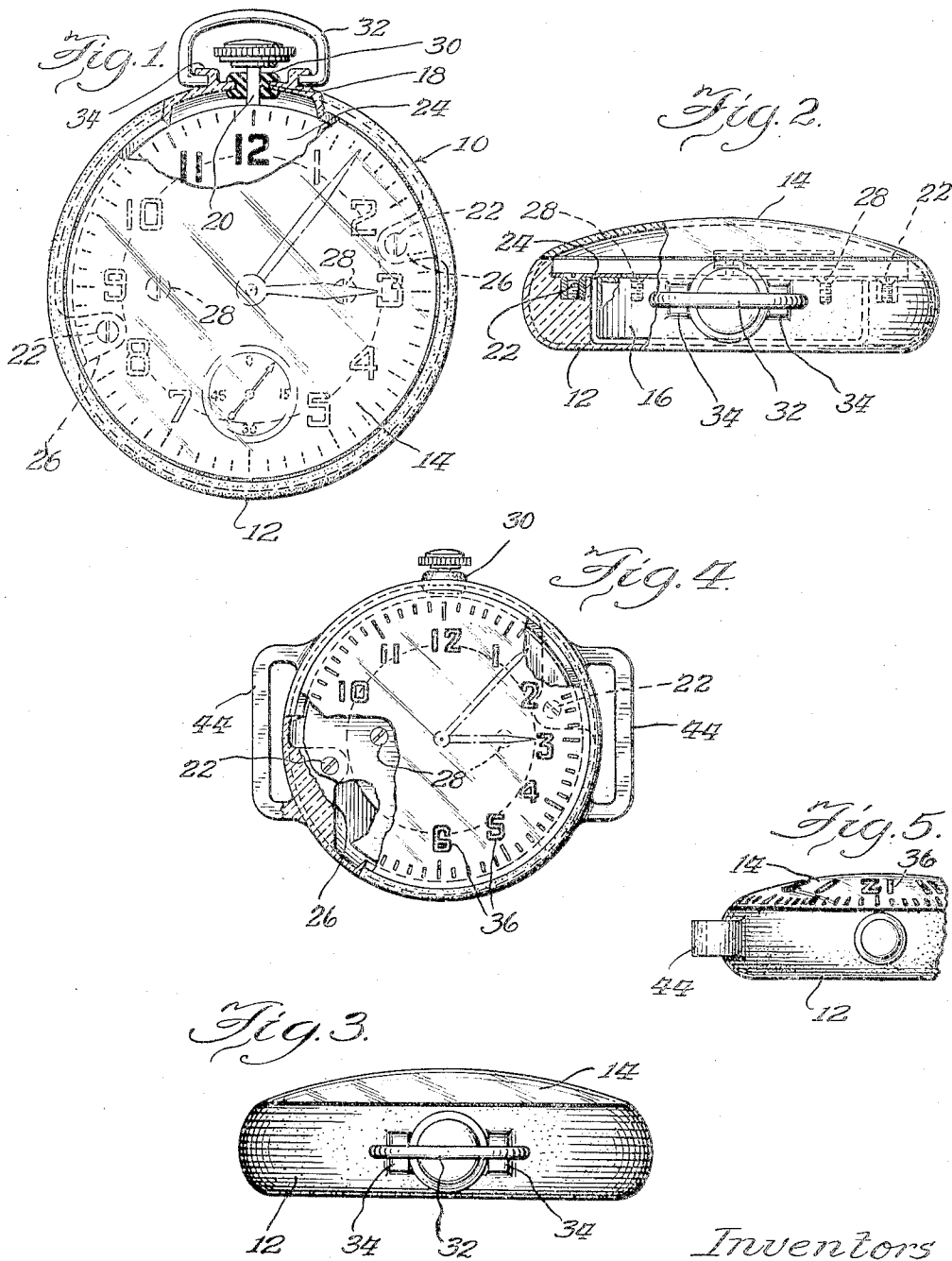
Oct. 28, 1941.

O. M. HAAPANEN ET AL.

2,260,835

WATCHCASE

Filed Sept. 7, 1939



34 32 34

Inventors
Onni M. Hoapanen
Toivo J. Kangas.
By Williams, Bradbury,
Mc Caleb & Hinkle. Attys

UNITED STATES PATENT OFFICE

2,260,835

WATCHCASE

Onni M. Haapanen and Toivo J. Kangas,
Conneaut, Ohio

Application September 7, 1939, Serial No. 293,746

5 Claims. (Cl. 58—88)

This invention relates to improvements in watch cases, and more specifically to a water-proof as well as dust-proof watch case which may be used to house the movement of a pocket or wrist watch.

One of the objects of the present invention is to provide a watch case constructed of plastic material, such as Celluloid or the like, and which is both waterproof and dust-proof.

Another object of the invention is to provide a watch case having base and cover portions which are constructed of plastic semi-resilient material, such as Celluloid or the like, and in which the cover portion and base portion are sealed together in waterproof fashion by a suitable sealing medium.

Another object of the invention is to provide a sealing plug or disc which is adapted to seal an opening in the base portion through which the stem of the watch movement projects, thereby to prevent water and dust particles from entering the case.

A more specific object of the invention is to provide a watch case in which the movement may be readily secured so as to prevent undesired movement of the movement within the case.

Other objects and advantages of the invention will appear more fully from the following description, during the course of which reference is made to the accompanying drawing, in which:

Fig. 1 is a front elevational view of a pocket watch embodying the invention with a part broken away to show the sealing plug used to seal the opening through which the stem projects;

Fig. 2 is a top plan view of a watch case embodying the invention partly broken away to show the manner in which the movement is mounted in and secured to the case;

Fig. 3 shows a top plan view of the watch case illustrated in the preceding figures;

Fig. 4 is a front elevational view of a wrist watch embodying the invention; and

Fig. 5 is a partial top plan view of the watch illustrated in Fig. 4 showing the cover portion of the watch case with embossed indicia.

Referring to the drawing, particularly Figs. 1 to 3, it may be seen that the watch case is indicated as a whole by reference character 10. This case comprises a base portion 12 and a cover portion 14, both of which are made, according to one of the primary features of the present invention, of some waterproof plastic material, such as Celluloid or other semi-resilient material. The case may be made more at-

tractive by suitably coloring the Celluloid or other material from which it is made.

The watch movement, which may be of any suitable construction, and which is indicated by reference character 16, is securely attached in a novel manner to be described presently to the base portion 12 of the case. The base portion is substantially cup-shaped, the more readily to receive the movement, and it is provided with a circular aperture 18 through which the stem 20 extends when the latter is secured to the base portion.

The movement 16 is securely mounted in the base portion 12 by a pair of screws 22 extending through apertures in the dial 24 into tapped holes in the inwardly extending bosses 26 formed as integral parts of the base portion simultaneously with the formation of the latter. The movement and base portion are so dimensioned that when the former is secured in place, the bottom thereof rests upon the bottom of the base portion, thereby to make the assembly more rigid and better to prevent relative movement between the two. The dial 24 may be made of the same material as the case and may be secured to the movement in any suitable manner, a simple and effective manner comprising the use of a plurality of screws 28 passing through the dial and threaded into tapped holes provided in the movement.

The watch case is made both dust-proof and waterproof by sealing or joining the base and cover portions 12 and 14 by a suitable material, such as acetone, and by a resilient sealing plug or disc 30 surrounding the stem 20 and closing the aperture 18. The plug is preferably made of rubber and with an opening having an internal diameter less than that of the stem so as to insure a watertight fit. The outer surface of the plug is provided with an annular groove dimensioned closely to fit about the aperture-defining portion of the watch case. In the assembly of the watch the plug is first forced into the aperture and the watch stem then forced through the plug.

The watch is provided with the usual split ring 32 which, according to the present invention, is movably supported upon a pair of shoulders 34 having somewhat conically bored openings to receive the conical ends of the ring. This construction provides an integral base portion that can be economically formed in one operation.

The dial may be provided with suitable indicia and the movement may operate the usual

hour, minute, and second hands, as illustrated in Fig. 1.

The present invention is applicable also to wrist watches, as shown by Fig. 4 wherein parts like those shown in the preceding modification are illustrated by like reference characters. In this embodiment strap-securing arms 44 are formed integrally with the base portion simultaneously with the formation of the latter.

If desired, the indicia may be engraved, embossed, or otherwise formed directly upon the cover portion 14 of the watch case. Embossed indicia 36 are shown in Figs. 4 and 5.

The watch of the present invention may be made and assembled in a very economical manner. The two portions of the watch case may be molded, cast, or otherwise formed, as integral units. The movement may be easily secured to one unit, and the two parts may then be secured together in a dust-proof and waterproof manner. A watch constructed according to the present invention is rugged and serviceable and may be made and sold very inexpensively.

We claim:

1. A case of plastic material for a watch movement of the type having a winding stem comprising a cover and base portion, said base portion being adapted to receive said movement and being provided with an aperture adapted to receive said stem, and means for sealing said aperture, said means comprising a resilient plug having a centrally located opening through which the stem of the movement is adapted to project and having an annular groove on its exterior surface fitting over the aperture-defining portion of the base portion.

2. A waterproof and dust-proof case of plastic material for a watch movement of the type having a winding stem comprising a cover and base portion, a binder for securing said cover to said base portion in watertight fashion, said base portion being provided with an aperture adapted to receive said stem, and means for sealing said aperture, said means comprising a resilient plug having a centrally located open-

ing through which said stem is adapted to project and having an annular groove on its exterior surface fitting over the aperture-defining portion of the base portion.

3. A waterproof and dust-proof case of plastic material comprising a cover and base portion, a watch movement of the type having a stem mounted in said base portion, a dial secured to said movement, means for securing said dial to said base portion, said base portion being provided with an aperture adapted to receive said stem, means for sealing said aperture, said means comprising a resilient plug having a centrally located opening through which the stem is adapted to project and having an annular groove on its exterior surface fitting over the aperture-defining portion of the base portion, and means for sealing said cover to said base portion.

4. A waterproof and dust-proof watch case of plastic material comprising a cover and a base portion, a watch movement of the type having a winding stem mounted in said base portion, an indicia-bearing dial secured to said watch movement and said base portion for supporting said movement in said base portion, said base portion being provided with an aperture adapted to receive said stem, means for sealing said aperture, said means comprising a semi-resilient rubber plug having a centrally located opening through which the stem of the movement is adapted to project and having an annular groove on its exterior surface to receive the aperture-defining portion of said base portion, and means comprising acetone for securing said cover to said base.

5. A watch case comprising a base portion, a watch movement mounted in said base portion, an apertured dial secured to said movement, said base portion having a plurality of tapped inturned flanges along the peripheral edge thereof corresponding to the apertures in said dial, and means co-operating with the tapped flanges and apertures for securing said dial to said base portion.

ONNI M. HAAPANEN.
TOIVO J. KANGAS.