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(54) BATTERY DISCHARGE GUARD FOR ELECTRIC WATCH

(71) We, TIMEX CORPORATION, a Corporation organized under the laws of the State of Delaware, United States of America, of Waterbury, Connecticut 06720, United States of America, 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 relates to a battery discharge guard for the external actuator of an electric watch.

Electric watches which employ an internal energy cell or battery as a power source generally have an external actuator, such as a knob, button or crown, which is depressed to activate the watch, such as by connecting the battery through an internal switch to the watch circuit, or releasing a balance wheel locked in open circuit position, when it is desired to operate the watch. Such actuators may perform other functions such as setting the hands.

Guards are known in the art comprising metal clips which slip transversely over the stem of the external button or crown and hold it in an extended position during shipping or storage. This prevents accidental starting of the watch and consequent discharge of the battery. The clip is removed by the purchaser and generally discarded.

Because of the great variety of shapes and sizes of the external crowns, buttons or knobs, various types and shapes of clips have been needed in the past to fit the different designs. Additional expense is required to manufacture and stock the different types of clips.

Accordingly, it is an object of the present invention to provide an improved battery discharge guard for an electric watch which is capable of fitting most of the common types of external actuators.

Another object of the invention is to provide an improved battery discharge guard which is more economical to manufacture and easier to remove than previous types.

According to the invention there is provided a battery discharge guard for an electric watch of the type having a depressible

external actuator for activating the watch, said actuator having a stem and an enlarged crown, said guard comprising a first pendant-enclosing as hereinafter defined portion of stretchable material of thickness for holding the stem in an extended non-operative position, and a second portion connected to the pendant-enclosing portion to serve as a tab for stretching it and pulling it over the crown of the actuator.

One form of the invention comprises a battery discharge guard for a depressible external actuator having a stem within a pendant of the watch and an enlarged crown. The guard comprises a pendant-enclosing portion of stretchable material for holding the actuator in an extended position, and a connecting tab portion for pulling the pendant-enclosing portion over the crown.

The above and other features and advantages of the invention will be more clearly understood by reference to the following description, taken in connection with the accompanying drawings, in which:—

Figure 1 is a perspective view of a preferred embodiment of battery discharge guard according to the invention;

Figure 2 is a plan view, partly in section, showing the guard in place on the actuator stem of a typical electric watch;

Figure 3 is a perspective view illustrating the removal of the guard, and

Figure 4 is a perspective view of a modified embodiment of battery guard.

Referring now to Figure 1 of the drawings, the battery discharge guard 1 illustrated comprises a first pendant-enclosing portion 2 and a connected second portion 3 in the form of a finger tab. The pendant-enclosing portion is generally in the shape of a washer with an internal hole 4 of diameter sufficient to enclose the pendant and stem of a watch actuator but substantially less than the crown diameter. The portion 2 is of a thickness sufficient to hold the actuator in its extended non-operative position.

The pendant-enclosing portion 2 is made of a thermoplastic, rubber or other stretchable material, such as polyvinyl chloride. In the preferred embodiment of Figures 1 to 3, the entire member 1 is moulded in one piece of substantially uniform thickness so that

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the second or tab portion 3 is integral with the pendant-enclosing portion.

Figure 2 illustrates the battery discharge guard in position on an electric watch 5 having an external actuator 6. The watch 5 and actuator 6 are of any conventional type. The actuator is, for example, depressible to connect the watch battery to the internal circuitry through an internal switch (not shown) or to release a balance wheel locked in open circuit position. Actuator 6 has a stem 7 slidable within a fixed pendant 15 and an enlarged connected crown or knob 8. As seen in Figure 2, the pendant-enclosing portion 2 just fits over the pendant 15 where it can be put during assembly of the watch when the actuator is inserted, or subsequent to assembly by stretching over the crown.

Reference to Figure 3 illustrates the method of removal. The purchaser simply grasps the tab 3 and pulls to deform or stretch the pendant-enclosing portion 2 so that it may be removed by twisting up over the crown 8. The guard may then be discarded and the actuator depressed to start the watch running.

When manufactured in one piece, as illustrated in Figure 1, the improved guard is economical to manufacture and fits many different types and sizes of external actuators. It may also carry legible characters giving an advertising message or trademark by appropriate indicia as shown at 9.

Referring to Figure 4, another embodiment of the invention comprises a stretchable washer 10 serving as the pendant-enclosing portion equivalent to portion 2, and a tag 11 connected to member 10 by a cord or wire 12 and serving as the second portion of the guard. This embodiment operates in a manner similar to the embodiment of Figures 1 to 3.

In some types of watches not having an extended pendant, the portion 2 may simply fit over the stem. In the appended claims, "pendant-enclosing" is intended to mean stem-enclosing in watches of this type.

There have been described two forms of an improved battery discharge guard which is easier to remove and which accommodates a greater variety of watch designs than pre-

vious guards. It is particularly economical to manufacture and easy to install. Naturally, other modifications within the scope of the appended claims will occur to those skilled in the art.

WHAT WE CLAIM IS:—

1. A battery discharge guard for an electric watch of the type having a depressible external actuator for activating the watch, said actuator having a stem and an enlarged crown, said guard comprising a first pendant-enclosing as herein defined portion of stretchable material of thickness for holding the stem in an extended non-operative position, and a second portion connected to the pendant-enclosing portion to serve as a tab for stretching it and pulling it over the crown of the actuator.

2. A battery discharge guard according to Claim 1, wherein said first and second portions are formed as an integral member of stretchable material.

3. A battery discharge guard according to Claim 1 or Claim 2, wherein said first portion comprises a washer-like element with an internal hole of a diameter substantially less than that of said actuator crown.

4. A battery discharge guard according to Claim 1, wherein said first portion comprises a washer-like element and said second portion comprises an integral connected tab member, all of substantially uniform thickness.

5. A battery discharge guard according to Claim 4, wherein said tab member is flat and carries legible characters.

6. A battery discharge guard for an electric watch, substantially as hereinbefore described with reference to Figures 1 to 3 or Figure 4 of the accompanying drawings.

7. An electric watch of the type having a depressible external actuator for closing an internal circuit by connecting the battery, in combination with a battery discharge guard as claimed in any one of the preceding claims.

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