Sept. 18, 1962 C. DOM 3,054,559

WATCHCASE-TYPE COUNTER

Filed March 23, 1959

Fig. 1

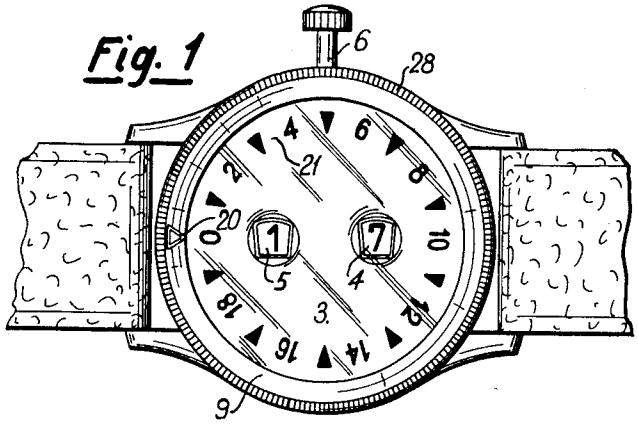


Fig. 2

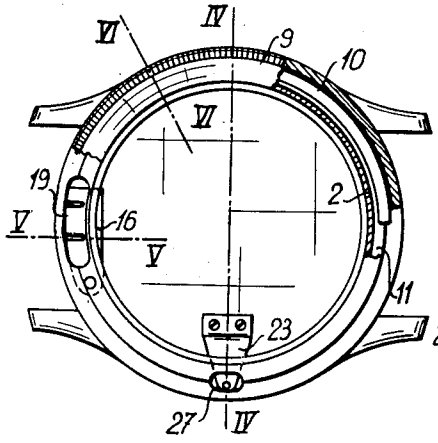


Fig. 3

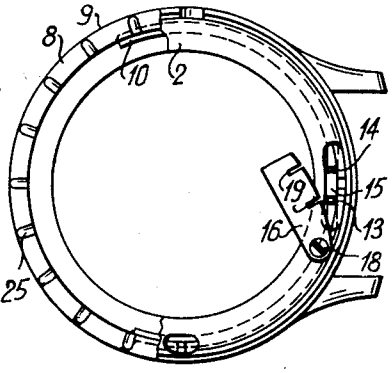
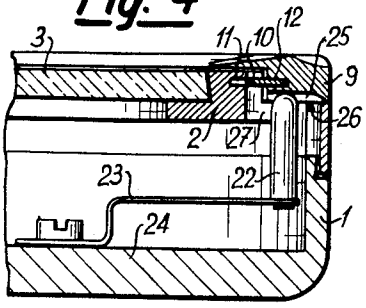


Fig. 4



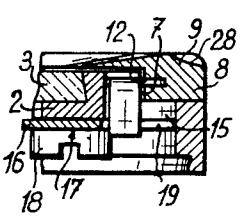


Fig. 5

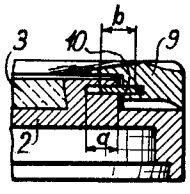


Fig. 6

INVENTOR

CHARLES DOM

By Irwin S. Thompson

ATTY.

United States Patent Office 3,054,559 Patented Sept. 18, 1962

3,054,559

WATCHCASE-TYPE COUNTER

Charles Dom, 10 Rue de la Muse, Geneva, Switzerland

Filed Mar. 23, 1959, Ser. No. 801,058
Claims priority, application Switzerland May 29, 1958
3 Claims. (Cl. 235—121)

The present invention has for its object a case of the watch-case type, comprising a glass-rim and which is characterized by the fact that it is provided with a ring angularly movable with respect to said glass-rim and which is held axially with respect to said glass-rim by a coupling device.

The accompanying drawing illustrates, schematically and by way of example, a case of the wrist-watch case type containing a counter like the one described in the U.S. patent application Serial No. 739,873 filed June 4, 1958, now Patent No. 3,000,559.

FIG. 1 is a plan view of the counter.

FIG. 2 is a plan view with broken away portions of the case.

FIG. 3 is a bottom view of the glass-rim.

FIG. 4 is a partial cross-section and at a greater scale along the line IV—IV of FIG. 2.

FIG. 5 is a partial cross-section along the line V—V of FIG. 2.

FIG. 6 is a partial cross-section along the line VI—VI of FIG. 2.

According to the accompanying drawing, the case shown is a case of the wrist-watch case type containing a golf counter like the one described in the above-mentioned U.S. patent application. Said case **1** is provided with a glass-rim **2** machined in a single piece with a bottom **3** provided with two apertures **4** and **5** allowing to appear in each a figure carried by a counting member. The units counting member containing the figures which appear successively in the aperture **4** is actuated step by step by a push-button **6** while a tens transferring device actuates step by step the counting member of which the figures appear in the aperture **5**. Said counter allows one to count up to 99. The object of the invention is to permit one either to count up to 1999, or for a golf player, for example, to mark the order number of a hole of the game.

To this effect, the glass-rim **2** is provided with a circular external recess **7**, into which is engaged a circular foot **8** of a ring **9**, which is angularly movable with respect to the glass-rim, but axially held in position with respect to said glass-rim, by a coupling device. Said coupling device is constituted by an elastic ring **10** disposed within a recess formed by two corresponding circular grooves **11** and **12** cut in the glass-rim **2** and in the foot **8** of the ring **9**. Said elastic ring is split and both its extremities are bent at right angles, so as to form actuating fingers **13** and **14** which traverse an aperture **15** made in the glass-rim.

A bolt **16** disposed on the internal face **17** of the glass-rim and constituted by a lever provided with two notches **19** is articulated by one of its extremities by means of a shouldered screw **18**. Said two notches are intended for engagement on the actuating fingers **13** and **14**, in order to keep them apart one from another and then to secure for the elastic ring **10** such a diameter as to be always located partially in the groove **11** and partially in the groove **12**. Said elastic ring constitutes then with the grooves **11** and **12** a coupling device holding the circular ring **9** in axial position on the glass-rim, but permitting the angular displacements of said ring with respect to the glass-rim. The circular ring **9** carries a mark **20** adapted to travel opposite a scale **21** carried by the bottom **3** of the glass-rim. In the illustrated example, said scale carries, regularly spaced along a circle, the numbers from 0 to 19 enabling the golf player to mark the order number of the hole which he is trying to reach, by a simple angular displacement of the circular ring.

The case is further provided with a locking device defining each of the angular positions of the circular ring **9** for which its mark **20** is placed opposite a figure of the scale **21** carried by the bottom **3**. Said locking device is constituted, on the one hand, by a finger **22** carried by an elastic support **23** secured on the bottom **24** of the case, and, on the other hand, by notches **25** impressed in the front face **26** of the foot **8** of the circular ring **9**. The finger **22** passes through an aperture **27** provided in said glass-rim.

In order to set in place the circular ring **9** onto the glass-rim **2**, the circular groove **11** provided in the said glass-rim presents a depth *a* larger than the width *b* of the elastic ring **10**. Furthermore, the distance between the actuating fingers **13** and **14** is such that when the bolt **16** is in disengaged position (FIG. 3) and the operator actuates said fingers, by menas of tongs, till they come into contact one with another, the elastic ring **9** is entirely engaged in the groove **11**, so that the circular ring may then be set in place or taken away at will.

A knurling **28**, provided on the circular ring **9**, assures a good grasp and allows easy actuation thereof. It is clear that, as shown in the drawing, the end of the finger **22** is rounded, as well as the edges of the notches **25**, so as to allow the disengagement of the two parts of said locking device as soon as the torque exerted on the circular ring **9** exceeds the force applied to finger **22** by spring **23**.

An embodiment of the invention has been described here by way of example and with reference to the accompanying drawing, but it is clear that multiple modifications can be foreseen without departing from the scope of the claimed subject matter. Thus, for example, the glass-rim **2** could comprise no bottom **3**, but could be provided with a glass like a watch-case glass-rim; the scale **21** may then be carried by a dial secured in the case in the usual manner. Said dial may be provided with two apertures **4** and **5** when the case contains a counter, but it may also comprise a watch face and the scale **21** may then comprise, for example, the numbers from 1 to 12, so as to enable the user to mark the order number of the month, or the numbers from 1 to 31 to enable the user of the watch to mark the day of the month.

In another modification, the scale **21** could be engraved on a tapered surface of the glass-rim. When said scale is provided with twenty marks, as shown in the drawing, the counter allows to count up to 1999, which permits one to perform, for example, the counting of vehicles, etc.

I claim:

1. In a casing, of the circular watchcase type, comprising a case, a glass rim mounted on said case, and a ring angularly displaceable with respect to said glass rim, in which said ring is held in axial position with respect to said glass rim by means of a coupling device comprising a circular groove provided partly in said glass rim and partly in said ring, an annular split ring located in said circular groove and presenting at each extremity a finger bent at 90° with respect to said split ring, a bolt hinged on the rear face of said glass rim, and two splits made in said bolt to engage said two fingers, whereby the diameter of said annular split ring is positively fixed when said fingers are engaged with said bolt.

2. In a casing, of the circular watchcase type, comprising a case, a glass rim mounted on said case, a ring angularly displaceable with respect to said glass rim, and a coupling device holding said ring in axial position with respect to said glass rim, in which said coupling device comprises an annular groove provided partly in said glass

rim and partly in said ring, and an elastic annular split ring housed in said annular groove and in which further, on the one hand, locking means are provided for acting on both ends of said annular split ring to fix positively the diameter of said annular split ring at such a diameter that this annular split ring is located partly in said glass rim and partly in said ring, and, on the other hand, gripping members are provided on said annular split ring in order to allow the bringing together of the ends of said annular split ring against its own elasticity, whereby said ring is then free to be displaced axially with respect to said glass rim.

3. A casing as claimed in claim 2, comprising further a step-by-step locking device constituted by regularly spaced-apart notches made in the rear face of said ring, a scale on said glass rim comprising indicia, a spring-loaded finger engaging said notches to fix preselected angular positions of said ring with respect to said glass rim, said spring-loaded finger and said spaced-apart notches being so disposed that said spring-loaded finger easily

moves from one spaced-apart notch to another upon manipulation of said ring for securing said ring firmly in each position whereby a mark carried by said ring is made to coincide with the indicia of said scale on said glass rim.

References Cited in the file of this patent

UNITED STATES PATENTS

315,322	Nelson	Apr. 7, 1885
1,160,110	Mays	Nov. 9, 1915

FOREIGN PATENTS

28,101	Switzerland	Apr. 20, 1903
188,931	Switzerland	Mar. 1, 1937
218,929	Switzerland	Apr. 16, 1942
254,582	Switzerland	Dec. 16, 1948
281,492	Switzerland	June 16, 1952
308,601	Switzerland	Oct. 1, 1955
325,171	Switzerland	Dec. 14, 1957