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1,483,768

R. BICKERTON

SILENT ALARM WRIST WATCH

Filed June 15. 1922

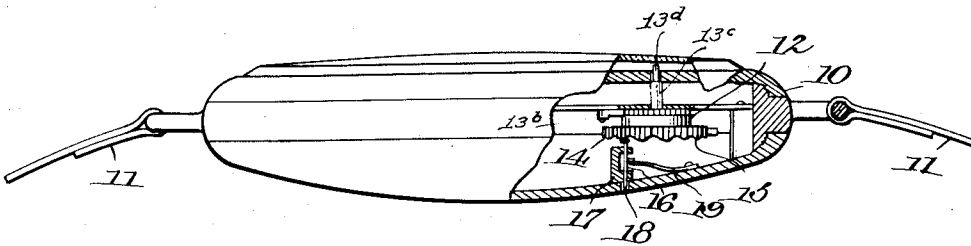
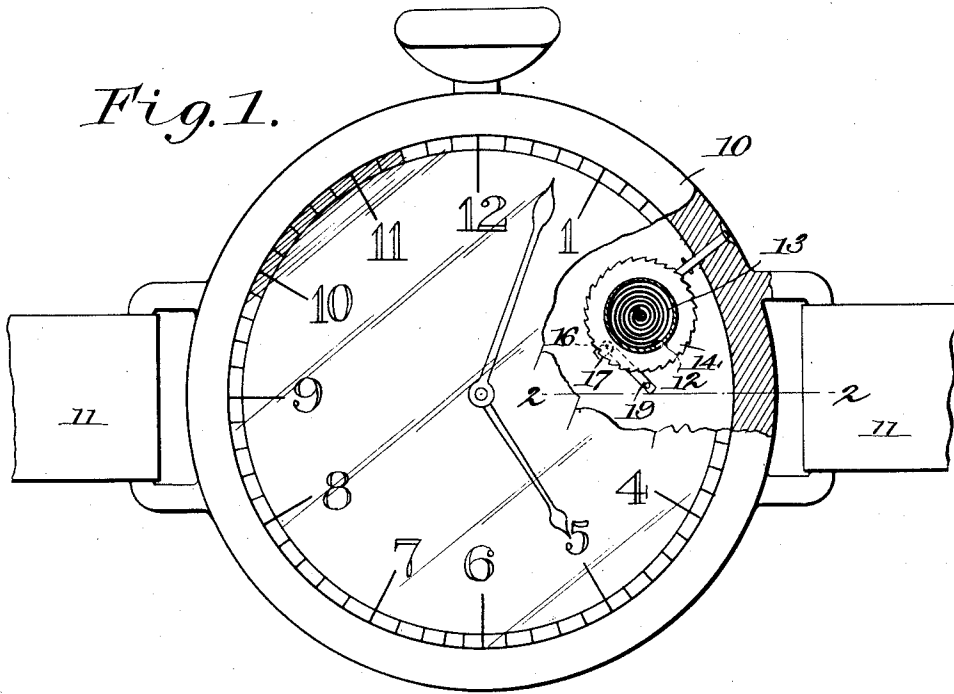


Fig. 2.

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INVENTOR

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WITNESS:

Fred. W. Ely.

UNITED STATES PATENT OFFICE.

RALPH BICKERTON, OF BROOKLYN, NEW YORK.

SILENT-ALARM WRIST WATCH.

Application filed June 15, 1922. Serial No. 568,592.

To all whom it may concern:

Be it known that I, RALPH BICKERTON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Silent-Alarm Wrist Watches, of which the following is a specification.

This invention relates to silent alarm wrist watches, and the principal object is to provide a wrist watch with means whereby the wearer may be awakened or notified when a desired time has arrived without the use of a bell or other audible alarm.

Another object is to produce a device of this nature which shall be simple of construction, cheap to manufacture, and highly efficient for the purpose for which it is designed.

With these and other objects in view, the invention resides in certain novel construction and combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:—

Figure 1 is a horizontal sectional view of a watch case showing my device installed therein.

Figure 2 is a part section taken on line 2—2.

Like characters of reference refer to like parts in all views.

Referring to the drawing in detail, 10 represents the case of the watch which is provided with the usual wrist strap 11 and which may be of any suitable well-known construction. The watch may be provided with any suitable form of movement, and as these devices are well-known in the art no movement is shown. Any suitable mechanism may be provided for releasing the spring of the alarm mechanism hereinafter described, there being any number of these devices in the prior art and they will no doubt suggest themselves to the mechanic skilled in the art.

The invention proper consists in mounting in any suitable manner a spring drum

12 to which is secured a spring 13 adapted to be wound by any suitable mechanism. In order to prevent retrograde movement of the drum I provide a ratchet 13^a for co-action with the dog 13^b, the ratchet 13^a being secured to a spindle 13^c. The spindle 13^c extends through the face of the watch and is provided with a squared portion 13^d for receiving a suitable key whereby the spring is adapted to be rewound. Secured to the spring drum 12 is a cam wheel 14 provided with a plurality of cams 15 on its outer surface, the cams 15 are adapted to reciprocate a needle or plunger 16 mounted in a bushing or sheath 17 secured to the case 10 of the watch. The case is provided with an aperture 18 to permit the passage of the needle or plunger 16 through the case, and a spring 19 secured to the inner surface of the watch case operates to constantly press the plunger 16 toward the cams 15. When at rest, the plunger is entirely within the case so as not to scratch the wrist.

The operation of the device is as follows:—The watch is strapped to the wrist in the usual manner which brings the aperture 18 into contact with the wrist of the wearer. The spring 13 is tensioned and the device is set for the time at which a person wishes to be awakened or for having his attention drawn to the fact that such time has arrived. When the time arrives and the spring is released the drum 12 will rotate carrying with it the cam disk 14, and the cams 15 will successively engage the plunger 17 and reciprocate it so as to cause a slight pricking of the wearer's wrist. Any suitable mechanism may be provided for turning the device off when the sleeper awakes.

While I have described what I deem to be the most desirable embodiment of my invention, it is obvious that many of the details may be varied without in any way departing from the spirit of my invention, and I therefore do not limit myself to the exact details of construction herein set forth nor to anything less than the whole of my invention limited only by the appended claim.

What is claimed as new is:—

A wrist watch alarm comprising a watch

casing, a spring actuated drum mounted for rotation in said casing, a plurality of undulations formed on said drum, a plunger mounted in said casing and arranged parallel to the vertical axis of said drum, and a spring co-operating with said plunger for normally holding the same in retracted position and into engagement with said undulations, whereby rotation of said drum will cause said plunger to be gradually extended from said casing. 10

In testimony whereof I have affixed my signature.

RALPH BICKERTON.