Feb. 6, 1940. H. THIEBAUD 2,189,334

WATCH MOVEMENT

Filed June 30, 1937

Fig. 1

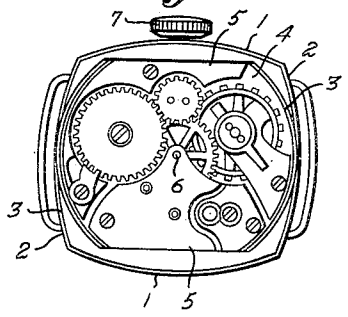


Fig. 2

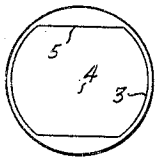


Fig. 3

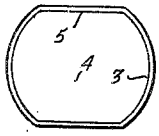


Fig. 4

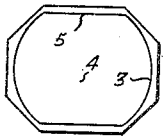


Fig. 5

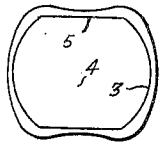


Fig. 6

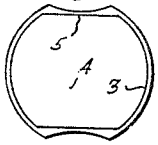


Fig. 7

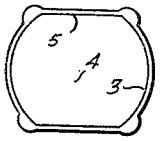


Fig. 8

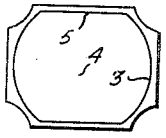


Fig. 9

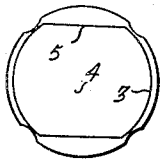


Fig. 10

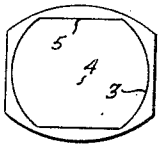


Fig. 11

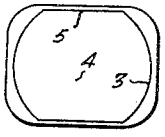


Fig. 12

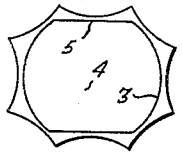
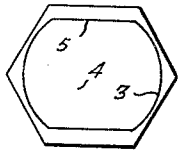


Fig. 13



INVENTOR
HENRI THIEBAUD

BY Goudmin & Goudmin

ATTORNEYS

Patented Feb. 6, 1940 2,189,334

UNITED STATES PATENT OFFICE

2,189,334

WATCH MOVEMENT

Henri Thiebaud, Bienne (Schweiz), Switzerland, assignor to The Gruen Watch Company, Cincinnati, Ohio, a corporation of Ohio

Application June 30, 1937, Serial No. 151,071

3 Claims. (Cl. 58—59)

My invention relates to watches, and in particular, to a frame for supporting the moving parts of a watch movement within its case.

My invention has for its particular object the forming of a watch movement into such a pattern or form so as to readily fit this movement into a number of cases of widely different shapes, without requiring the mechanical adjustment or trimming of either the movement or the case, while the configuration of the watch movement is such that the available space within the casing is utilized to the greatest possible extent.

My invention has for its object to make use of the available interior space of the watchcase as completely as possible, when inserting the movable parts of the watch movement therein, even though widely different watchcase shapes are involved. By the use of the movement having a frame of the character of my invention, it can be utilized in both round cases and cases of other shapes, whereas a round movement would have to be confined to a round case only in the achievement of like economy of waste space.

It is a well known principle of watch making that it is desirable to have the movement utilize, to the greatest possible extent, the available space within the case, as it is thereby possible to use parts which are stronger because larger. Otherwise stated, assuming an equal quality of workmanship, the larger the movement, the better it will withstand the shocks and jars to which a watch, particularly a wrist watch, is inevitably exposed. For this reason, when a comparatively small case is being utilized, it is desirable to have the movement fit just as snugly within the case as the confines of the space will permit.

The preferred shape of the frame of my invention viewed in top plan is one in which the ends of the frame are rounded and the sides are straight, and parallel to one another. The ends are described about the same center point, which point is the axis of the hands, and the flat sides are on chords which subtend the arc of the circle describing the ends. The two opposite rounded sides, which are in a central position with the axis of the hands, fit between cooperating sides of the case.

This simplifies the construction and lowers the cost not only of manufacturing but also in carrying stock, since, due to the well-fitting rounded ends, a satisfactory fit of the movement in the case is assured. At the same time the sides of the movement or frame, between the two rounded ends, are disposed in suitable parallel straight lines so that the movement can be inserted into a round case or a case approaching the rectangular shape. In using cases of oval, rhombic, polygonal shapes and the like, the straight sides between the rounded ends can fit in cases of those shapes.

The shapes of the cases of wrist watches vary greatly, according to individual taste and changes in fashion, which makes it necessary for the retailer to carry in stock a large number of wrist watches of the most diversified models. Up to the time of my invention, it was assumed that the movement or the frame supporting the movement for these various shaped watches must be made more or less to correspond to the shape of the case. My present invention shows the fallacy of this belief, as movements constructed in accordance therewith, although substantially alike in configuration, will fit practically all types of cases. Resultantly, it is possible for the manufacturer to maintain a large stock of movements which are equally well adapted to fit almost any shape of case that he may desire to utilize.

It will be understood, in referring to the parts of this invention, that I use "movement" in a generic sense, including the frame supporting the moving parts of the movement.

In the drawing:

Figure 1 is a rear elevation of a case with the movement in position.

Figure 2 is a diagram showing this movement in a circular case.

Figure 3 is a diagram of the movement where the case has rounded ends and straight sides.

Figure 4 is a diagram of the movement in a case having parallel sides and angular ends.

Figure 5 is a diagram of the movement in a case having ends of different curvature but approaching the curved rounded ends of the movement, and with concave sides.

Figure 6 is a diagram of the movement with a case having concentric curved ends and concave sides.

Figure 7 is a diagram of the movement having a case with closely fitting sides and rounded corners.

Figure 8 is a similar view, with the case having straight sides, straight ends and concave corners.

Figure 9 is a similar view, with the case having concentric curved ends, curved sides and concave corners.

Figure 10 is a similar view of a watch movement having a case with straight ends and curved sides.

Figure 11 is a similar view of the movement in

a case having straight ends and sides, with rounded corners.

Figure 12 is a similar view of the movement in a case having eight concave sides, forming a fluted exterior.

Figure 13 is a diagram of the case having hexagonal sides.

Referring to the drawing in detail, and in particular to Figure 1, the case consists of rounded sides 1 and rounded ends 2, which closely approach and engage the rounded ends 3 of the movement 4. The numeral 7 refers to the winding crown. The movement is provided with flat sides 5. The ends of the case are described on the same arc about the center 6, which is also the axis of the hands of the movement. The flat sides 5 are on chords subtending the arc described about the center 6. These two sides are opposite and parallel. The distance between the ends of the curved ends may be greater than the length of the flat sides, as shown in the drawing, although this is not an essential requirement. It will be observed that by making the case, no matter what its shape, at some point engage with the movement, and preferably with at least two sides of the case of the same general configuration as at least two sides of the movement, there is the maximum utilization of space and the proper positioning of the movement in the case.

An examination of Figures 2 to 13, inclusive, shows that with a wide variety of shapes of cases, the space within the case is used in the most advantageous manner, despite the most diversified shapes. It will be realized that a comparable result might be secured by having the ends of the movement straight, or substantially straight, and the sides of the movement rounded. This would be a mere reversal of the principle of this invention.

It will be understood that I desire to comprehend within my invention such modifications as come within the scope of the claims and the invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A watch movement, particularly for wrist watches, said movement being of general oblong shape and having two concentric arcuate ends on opposite sides of a circle described about the axis of the hands of the movement, said arcuate ends being adapted to fit between two congruent bearing faces of the case within which the movement is housed.

2. A watch movement of generally oblate configuration having two opposite sides rounded and described about a center, which is the axis of the hands of the movement, and the other two sides straight, parallel and perpendicular to a line drawn between the axis of the hands and the stem of the watch, said movement being constructed and arranged to fit within and to be supported by any one of a series of watch cases, each and every one of said series being characterized by a cavity having wall portions complementary to and fitting relatively close to the sides or ends of the movement, or both, the cases otherwise being unrelated in internal configuration.

3. The combination of a case and a movement enclosed in the cavity of the case, the movement being characterized by rounded ends described about a center which is the axis of the hands of the movement, and side edges intermediate the rounded ends, said side edges being straight and parallel to one another, and the case being one of a series each, and every one of which is characterized by a cavity having wall portions complementary to the sides or ends of the movement, or both, the cases otherwise being unrelated in internal configuration.

HENRI THIEBAUD.