Oct. 4, 1949. D. H. HAMEL 2,483,765

WATCH REPAIRING METHOD

Filed Aug. 6, 1946

FIG. 1

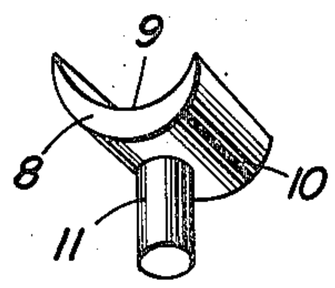


FIG. 2

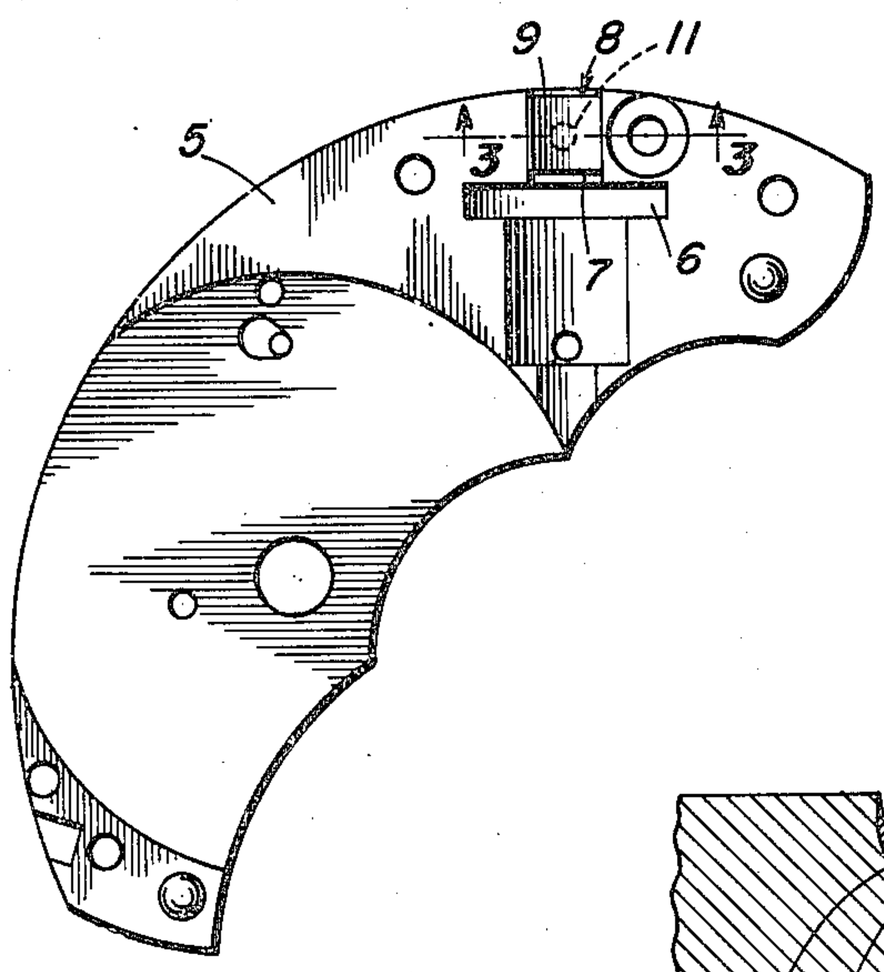
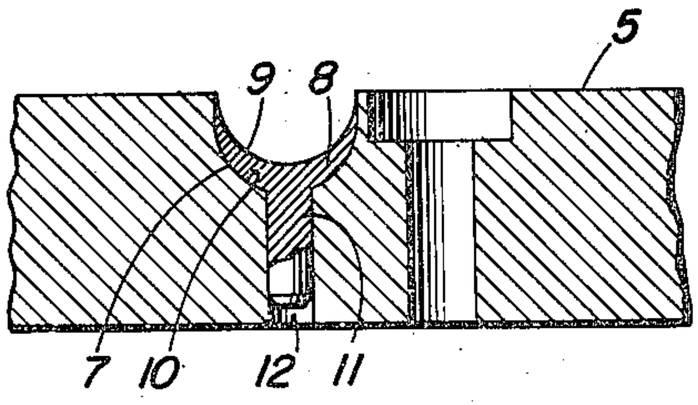


FIG. 3



Inventor

DONAT H. HAMEL

By Clarence O'Brien and Harvey B. Jackson

Attorneys

Patented Oct. 4, 1949 2,483,765

UNITED STATES PATENT OFFICE

2,483,765

WATCH REPAIRING METHOD

Donat H. Hamel, Huntington Park, Calif.

Application August 6, 1946, Serial No. 688,722

1 Claim. (Cl. 29—149.5)

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This invention relates to watch repairing, and particularly to a method of repairing the bridge plate of a watch using a Swiss type setting mechanism, when the winding stem recess thereof becomes enlarged by wear.

Due to the lack of proper lubrication, exposure to the elements, and rearward pressure on the winding stems when winding, the winding stem bearing recesses in the bridge plates of Swiss type stem set watches are ultimately enlarged by wear so that the winding mechanisms become faulty. When this condition arises, it is the usual practice to counterbore the mating recesses of the bridge and lower plates and then replace the original stem by an oversize stem. Besides being a difficult and time-consuming procedure, this requires stocking of oversize stems of different sizes.

The primary object of the present invention, therefore, is to provide a method whereby the bridge plate may be repaired easily and quickly, so that the original winding stem may be kept in use and undue lateral play of the stem and pinion relative to the bridge plate will be effectively overcome.

The exact nature of the present invention, as well as more specific objects and features thereof, will become apparent from the following description when considered in connection with the accompanying drawings, in which:

Figure 1 is a perspective view of a repair shim element forming part of the present invention;

Figure 2 is an inner face view of the bridge plate of a watch repaired by use of a shim element of the form shown in Figure 1, in accordance with the present invention;

Figure 3 is an enlarged fragmentary section taken on line 3—3 of Figure 2.

Referring in detail to the drawing, 5 indicates a conventional bridge plate which is formed on its inner face with the usual recess 6 to receive the pinion which drives a gear of the winding mechanism, and a bearing recess 7 to accommodate the winding stem. The recesses 6 and 7 mate with similar recesses in the lower plate, not shown. This type of construction is well known in the art.

Due to the previously mentioned conditions, the winding stem bearing recess 7 of the bridge plate 5 is ultimately enlarged by wear, so that the winding mechanism of the watch becomes faulty. An eccentric bearing surface results, and the winding stem and pinion are allowed lateral movement so that the pinion moves away from the coacting gear.

In order to overcome the above condition, I make use of a shim element comprising a substantially crescent shaped shim proper 8 having an arcuate concave face 9 whose radius corresponds to that of the winding stem, and an arcuate convex face 10 eccentric to the concave face 9 and conforming to the surface of the worn recess 7. A cylindrical stem 11 is rigid with and projects centrally from the convex face 10 of the shim proper and is adapted to have a drive fit in a transverse cylindrical opening 12 drilled entirely through the bridge plate 5 centrally of the bearing recess 7. In practice, the socket or opening 12 is drilled in the bridge plate, and the stem 11 of the shim element is driven therein until the convex face 10 of the shim proper 8 is brought into snug contact with the bearing surface 7 as shown in Figure 3. The shim element is thus securely held in place so that the concave surface 9 of the shim proper provides a new bearing surface for the winding stem so that lateral play of the stem and pinion is prevented or overcome. Should renewal of the shim become necessary, it may be removed by inserting a tool in the opening 12 from the outer side of plate 5, and then tapping said tool to drive the stem 11 from said opening.

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By repairing the bridge plate in the manner described and by use of the shim element disclosed, the work can be accomplished easily, expeditiously and economically, and stocking of winding stems of different larger sizes and counterboring the mating recesses of the bridge and pillar plates of the watch is rendered unnecessary. In practice, the relatively small shim proper 8 may be formed of a relatively high quality of wear resisting metal at comparatively low cost, so that the repaired watch will give satisfactory service over an extended period of time.

From the foregoing description, it is believed that the nature and advantages of the present invention will be readily understood and appreciated by those skilled in the art.

What I claim is:

The herein described method of repairing the bridge plate of a watch whose semi-cylindrical winding stem bearing recess has become enlarged by wear, which method consists in providing a crescent-shaped shim proper having an arcuate concave face whose radius corresponds to that of the winding stem and an arcuate convex face eccentric to the concave face and conforming to the surface of the worn bearing recess, providing a rigid cylindrical stem on the shim proper so that it projects centrally from the convex face of the shim proper, drilling a transverse opening entirely through the bridge plate centrally of the

bearing recess and of a size to receive said stem with a drive fit, and tapping the shim element so as to drive its stem into said transverse opening until the convex face of the shim proper seats upon the worn bearing surface of the bridge plate recess.

DONAT H. HAMEL.

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