July 31, 1934. W. L. SMITH 1,968,718

WATCH MOVEMENT FRAME FASTENING MEANS

Filed June 22, 1933

Fig. 1.

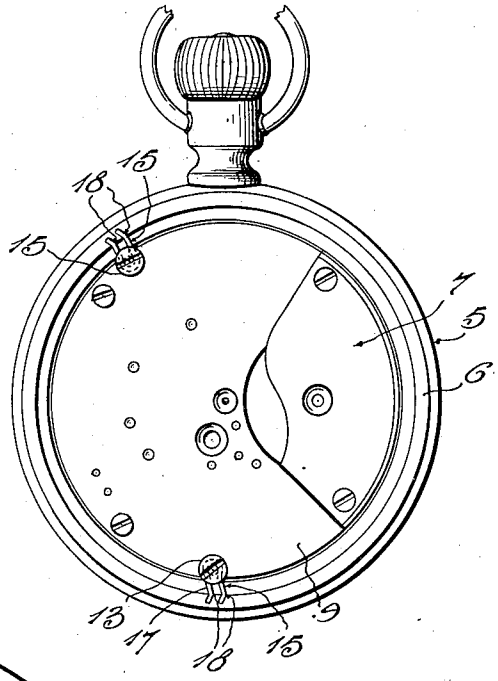


Fig. 2.

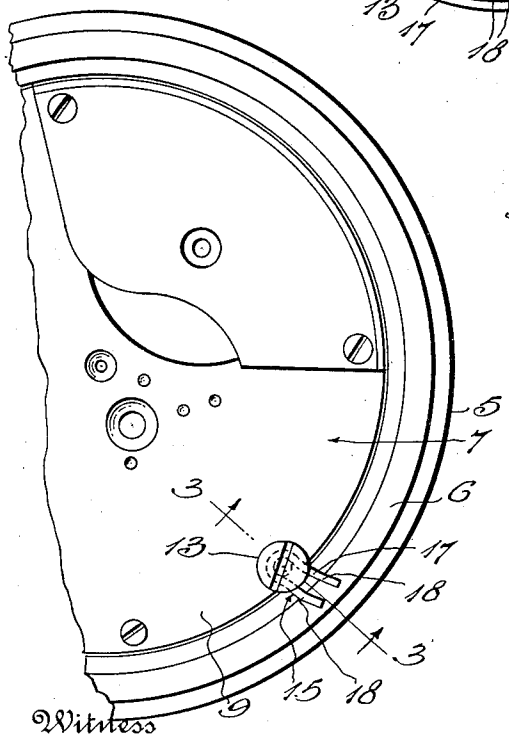


Fig. 3.

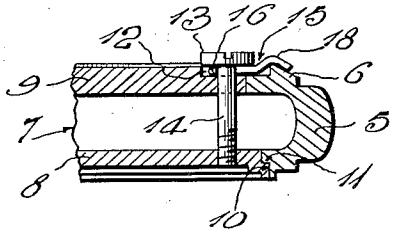
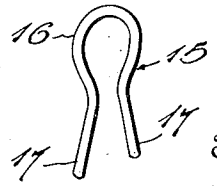


Fig. 4.



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WATCH MOVEMENT FRAME FASTENING MEANS

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Application June 22, 1933, Serial No. 677,122

2 Claims. (Cl. 58—88)

The invention aims primarily to improve upon the conventional means used for fastening watch movement frames within the case rims. It is customary to merely thread case screws into the movement frame and to have their heads overlap the rear side of the case rim, for holding a shoulder of the frame against a co-acting shoulder of the rim, but the screws soon become loosened and hence ineffectively hold the movement frame and the case rim in assembled relation. It is the principal aim of my invention however, to provide an improved construction in which each case screw is effectively held in a novel way so that it cannot accidentally loosen. In carrying out this end, a unique washer is provided which yieldably grips the screw and is itself held against turning by contact with the usual rib on the back of the case rim.

A further aim is to provide a washer which may readily be forced astride the screw without the necessity of entirely removing the latter.

A still further aim is to provide a washer of substantially U-shape and having its arms of such nature that they may readily be given angular bends for engagement with the above-named rib.

A still further aim is to provide a novel washer which while primarily intended for the above-described purpose, is not necessarily restricted thereto.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawing.

Fig. 1 is a rear elevation of a portion of a watch having its movement frame secured in the case rim in accordance with the present invention.

Fig. 2 is an enlarged fragmentary view similar to a portion of Fig. 1.

Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Fig. 4 is a perspective view of one of the washers.

The conventional case rim of a watch, is denoted at 5, the rear side of said rim being provided with the usual transversely angular rib 6 for engagement with a rear cover of the watch case. The conventional movement frame 7 is received within the rim 5 and abuts the inner edge of the latter, said frame embodying a front plate 8 and a back plate 9, the former being shouldered at 10 to abut the usual shoulder 11 of the rim 5. The rear face of the back plate 9 is formed with the usual countersinks 12 which usually receive the flat heads 13 of the case screws 14, which screws have the usual threaded engagement with the movement frame 7. Each of these screws is effectively held against loosening by a novel washer 15. All of these washers are of the same construction and hence a description of one will suffice. A length of more or less resilient wire is preferably used in constructing this washer, said wire being bent substantially upon itself at its center into approximately U-shaped form, so that it may readily be positioned astride the screw 14 without necessarily removing the latter entirely. The bight portion 16 of the washer 15 is intended to yieldably grip the screw 14, and the arms 17 of said washer are of a length to project beyond the screw head 13 and to engage the rib 6 so as to hold the washer against turning. As this washer cannot turn and it yieldably grips the screw 14, it will be seen that the latter is held against loosening. The bight portion 16 is clamped by the screw head 13 in the countersink 12 and the inner portions of the arms 17 are similarly clamped by said screw head against the rear side of the case rim 5. Preferably, the bight portion 16 is greater than 180° in length so that it will snap into position when forced astride the screw 14, and it is also preferable that the arms 17 be disposed in outwardly diverging relation as seen more clearly in Fig. 4, to facilitate positioning of the washer upon the screw. As manufactured, the washer is preferably provided with straight arms as seen in Fig. 4 but when applying said washer, these arms are preferably given an angular bend 18 to snugly engage the transversely angular rib 6, as illustrated more particularly in Fig. 3.

It will be seen from the above that I have in a very simple and inexpensive way, materially improved over the conventional way of anchoring a watch movement frame within the case rim. It will also be clear that I have devised a novel type of washer and that while the preferred application of said washer has been shown, it is not necessarily restricted to this particular field. Moreover, while it is preferable that the washer yieldably grip the screw, the device might be used to advantage even if such yieldable gripping did not take place. For instance, if the part of the case rim 5 ordinarily engaged by the screw head 13 should be so badly worn away that the screw could not effectively hold the movement frame in place, one of the washers would overcome the difficulty whether it yieldably embraced the screw 14 or not. I have found however that the best results are obtainable when the washer yieldably grips the screw for it then has a greater tendency to hold the latter against loosening. If

the screw is tightened sufficiently however, even without having the washer yieldably grip the screw, there is not as much liability of the latter loosening, as in the conventional structure.

I claim:—

1. In a watch embodying a case rim having a rib on its rear side, a movement frame having a rear plate abutting the inner edge of said rim, and a case screw passing through said rear plate; a substantially U-shaped washer straddling and frictionally gripping said screw and clamped by the head thereof against said plate and rim, the arms of said washer projecting beyond said head and engaging said rib in a manner to hold said washer against rotation about the screw axis.

2. In a watch embodying a case rim having a transversely angular rib on its rear side, a movement frame having a rear plate abutting the inner edge of said rim, and a case screw passing through said rear plate; a substantially U-shaped washer straddling said screw and clamped by the head thereof against said plate and rim, the arms of said washer projecting beyond said head transversely of said rib and having angular bends engaging said rib.

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