Feb. 4, 1930. E. J. WITTMAN 1,745,565

WATCHCASE BAR ASSEMBLY

Filed Nov. 7, 1927

Fig. 1.

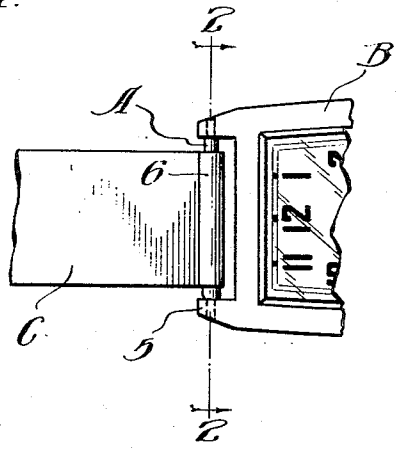


Fig. 2.

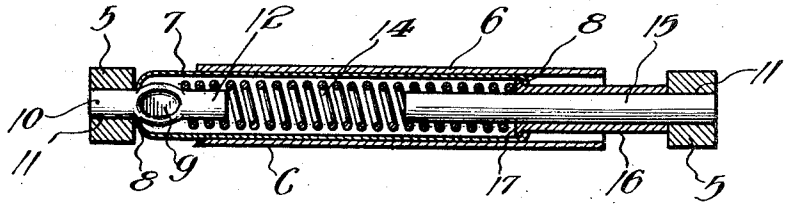


Fig. 3.

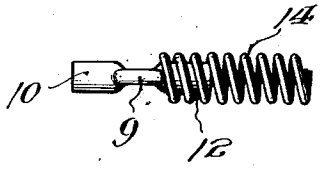
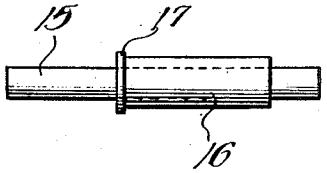


Fig. 4.



Inventor:
Edward J. Wittman.
By Wenning & Wenning
Attys.

Patented Feb. 4, 1930 1,745,565

UNITED STATES PATENT OFFICE

EDWARD J. WITTMAN, OF ELGIN, ILLINOIS, ASSIGNOR TO ILLINOIS WATCH CASE COMPANY, OF ELGIN, ILLINOIS, A CORPORATION OF ILLINOIS

WATCHCASE-BAR ASSEMBLY

Application filed November 7, 1927. Serial No. 231,480.

This invention which relates generally to a watch case is concerned more particularly with certain improvements in the bar which is extended between supporting lugs on opposite sides of the case for the attachment thereto of a bracelet by which the watch may be worn upon the wrist.

It is a primary object of this invention to devise for the purpose mentioned a bar assembly having yielding trunnions for mounting or demounting relative to the lugs in which the bar is supported; a bar in which the component parts are readily and quickly assembled without requiring soldering or other laborious operations; and a bar which will have the strength and appearance requisite to serve in the capacity noted. An exemplification of my invention is accordingly set forth in the accompanying drawing in the manner following:

Figure 1 is a view in elevation showing a bracelet bar supported in place between a pair of lugs extended outwardly from one end of a watch case;

Fig. 2 is an enlarged longitudinal section through the bar assembly taken on line 2—2 of Fig. 1;

Fig. 3 is a detail in elevation showing one trunnion-pin, together with the proximate spring end which is secured thereto; and

Fig. 4 is a detail in elevation showing a second trunnion-pin formed of two parts.

As already indicated, the present invention relates to a bar assembly A which is supported between a pair of lugs 5 which are extended from one end of a wrist watch B. Around the bar is looped as at 6 a bracelet C of any suitable character, the bar forming the medium of attachment between the bracelet and the watch.

Referring now to Fig. 2, the bar assembly includes a sleeve 7 having its opposite end 8 inwardly crimped to confine in place certain sliding elements which will be termed trunnion-pins. At the left end of the structure shown in Fig. 2 I have shown such a pin, of one piece, flattened in its center region at 9 so as to be laterally enlarged in the form of a head in opposite directions. In this manner two end portions are provided, one, designated as 10, constituting a trunnion which may be journaled within a suitable opening 11 which is formed through one of the lugs 5. The flattened head portion 9 lies inwardly of the crimped sleeve end 8 so as to be confined thereby against outward movement. The inner pin end 12 is adapted to be frictionally fitted within one end of a coiled spring 14 which extends through the sleeve 7.

The one-piece trunnion pin just described, and its connection with the spring, may be duplicated, if desired, at the opposite end of the sleeve 7. An alternative two-part construction may optionally be used, as suggested at the right end of the structure which is illustrated in Fig. 2. In this construction I utilize a pin 15 upon which is frictionally fitted a bushing 16 having its inner end upset in the form of an outwardly extended flange 17. This flange lies just inwardly of the crimp 8 at the proximate sleeve end so as to be confined thereby. The pin 15 extends beyond both ends of the bushing so as to present one end within the lug opening 11 and the other between the coils of the spring 14 for a frictional connection therewith.

In producing the present bar assembly, the trunnion-pins are first formed to the shape indicated by the action of dies. They are next fitted by frictional connection to the springs in such manner as to remain joined thereto during handling. In the two-part trunnion construction shown at the right end of Fig. 2, the bushing 16 is fitted frictionally upon the pin 15 in a similar manner after first having its end 17 upset as already noted. The trunnion-pins are next placed within the sleeve 7, the ends of which are subjected to a crimping operation. The entire bar assembly is now completed, the parts interiorly of the sleeve being confined in place against separation. After being passed through a loop in the strap C, the bar may be inserted in place between a pair of lugs 5, and during this operation one or both trunnions are pushed in against the tension of the spring until the bar is aligned with the holes 11. Thereafter this spring forces the trunnions outwardly so as to assure a permanent securement of the bar in place.

It is of major importance to this invention that I am enabled to produce the present bar assembly in a manner which conduces to substantial saving of labor and expense. This is due in part to the avoidance of soldering operations, and to the preliminary connections between the spring and trunnion-pins, permitting these two parts to be handled as a unit. It is to be observed that the two ends of the one-piece trunnion-pin are exactly alike, permitting it to be reversed in relation to the spring. Because of this fact, this pin, which is of very small size, may be picked up and inserted, either end, in the spring for connection therewith. When so held, the spring is supported against lateral deflection, and this is important, as otherwise the trunnion-pin might swing around, or tilt in its mounting, with a possible ensuing separation of the bar from the watch case. The two forms of trunnion-pins illustrated are alike, in that each is provided intermediately of its ends with a lateral projection constituting a stop which co-operates with the proximate inturned sleeve end; and each presents toward the other an end with which the coiled spring may be frictionally connected, the spring furnishing also a lateral support for the inner ends of the trunnion pins.

I claim:

1. A watch case bar assembly in which is comprised a pair of aligned trunnion-pins each having means extended laterally therefrom to provide a stop, a spring extended between the two pins and frictionally secured to one end of each, one of said trunnion-pins having opposite ends of similar size whereby the spring may selectively join with either end thereof, the stop on said trunnion-pin being located intermediately of its ends, and a sleeve surrounding the spring and partially enclosing each trunnion-pin, the sleeve ends being inturned for engagement with the stops of the trunnion-pins and cooperating therewith to limit movement of the trunnion-pins outwardly from the sleeve, similar opposite ends of said trunnion pin being reversible in position within the sleeve whereby to present either end exteriorly of the sleeve.

2. A watch case bar assembly in which is comprised a pair of aligned spaced trunnion pins, a compression spring detachably interconnecting the trunnion pins as a single unit, one of the trunnion pins being so formed that the same may be connected to said spring at either of its ends, a sleeve surrounding a portion of each trunnion pin and providing a mounting therefor, and cooperating means on the sleeve and each trunnion pin for confining the latter against displacement from the sleeve.

3. A watch case bar assembly in which is comprised a pair of aligned trunnion-pins in spaced relation, a bushing affixed to one pin intermediately of its ends, the inner bushing end being offset to provide an outturned flange, a coiled spring frictionally fitted to the proximate end of each trunnion-pin, and a sleeve surrounding the spring and partially surrounding each trunnion-pin and providing a mounting therefor, the sleeve end adjacent the bushing being inturned to engage with the flange thereof whereby to prevent said bushing and the associated trunnion pin from ejection from the sleeve, substantially as described.

4. A watch case bar assembly in which is comprised a sleeve furnishing at one end a mounting for a trunnion pin, a trunnion pin at the other sleeve end, a bushing affixed to the trunnion pin intermediately of its ends, the inner bushing end being upset to provide an outturned flange, a coiled spring frictionally fitted to the proximate end of the trunnion pin and exerting an outward pressure thereupon, the sleeve end adjacent the bushing being inturned to engage with the flange thereof whereby to prevent the bushing and associated trunnion pin from ejection from the sleeve, substantially as described.

EDWARD J. WITTMAN.