June 19, 1951 A. J. PUJOL 2,557,200

ADJUSTABLE EARRING

Filed March 29, 1949

Fig 1

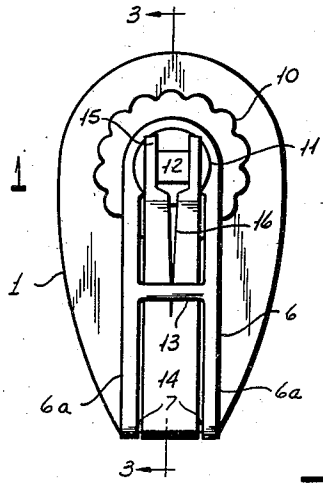


Fig 2

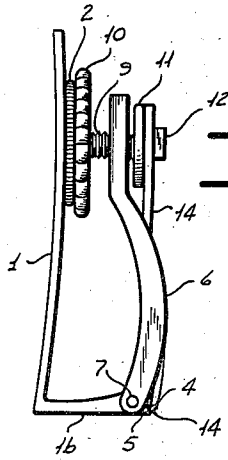


Fig 4

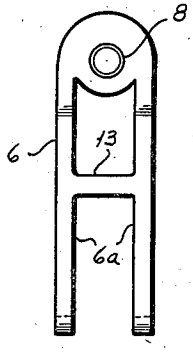
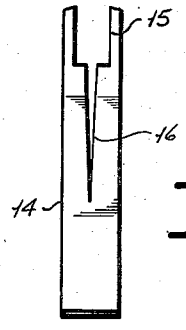


Fig 6



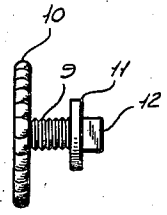


Fig 3

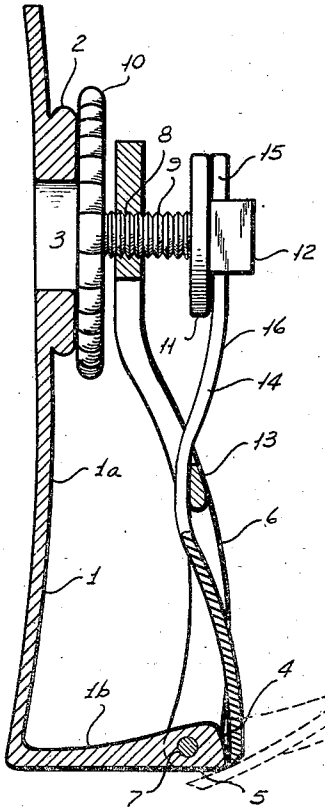
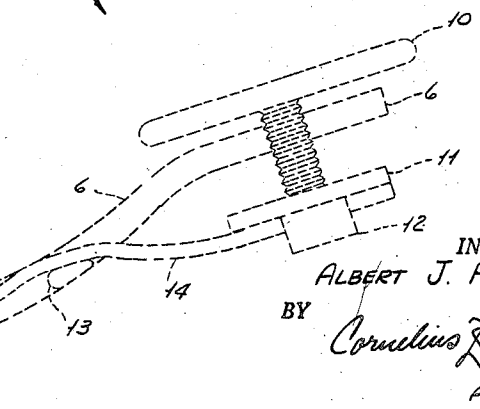


Fig 5



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ADJUSTABLE EARRING

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6 Claims. (Cl. 63—14)

1

This invention is an earring embodying a rigid frame adapted to overlie the outer surface of the lobe of the ear and to which is pivoted a clamping arm adapted to engage the back of the lobe. A spring is utilized to bias the frame and clamping arm, so that they will grip the lobe of the ear between them and this spring is mounted on the clamping arm and acts against cam surfaces on the frame.

The object of the present invention is to make it possible to regulate the tension of this spring in a novel and efficient manner. By so regulating the tension of the spring, the pressure exerted by the earring upon the ear may be made sufficient to hold the earring in place, but comfortable to the wearer.

In my application, Serial No. 20,242, filed April 10, 1948, now abandoned, I disclosed one form of means for tensioning the spring, wherein a cam surface is engaged with the free end of the spring and is rotatable to vary the tension of the latter. The present invention embodies another form of tensioning means utilizing a screw threaded shank for the same purpose.

In accordance with this invention, the free end of the clamping arm is provided with a threaded hole and through this threaded hole extends a threaded shank. To the inner end of this threaded shank is rigidly affixed an ear engaging knob. To the outer end of the shank is secured a fixed collar on the outer surface of which is a polygonal lug. The spring is engaged intermediate its ends with the clamping arm, with one end of the spring coacting with the cam surfaces of the frame and its other end bifurcated to straddle the polygonal lug and engage with the outer surface of the fixed collar. The bifurcated end of the spring closely fits the polygonal lug and thus normally holds the threaded shank against inadvertent rotation. Said spring is, however, longitudinally slit for a distance from its free end so as to transversely yield when the knob is turned to adjust the threaded shank axially through the clamping arm for the purpose of regulating the tension of the spring to meet the particular requirements of the individual wearer.

The earring of the present invention is strong and rugged and extremely simple in construction. The adjustments referred to may be easily accomplished by the wearer while the earring is in place on the ear and with ease and comfort.

Features of the invention, other than those adverted to, will be apparent from the hereinafter detailed description and claims, when read in conjunction with the accompanying drawing.

The accompanying drawing illustrates one practical embodiment of the invention, but the construction therein shown is to be understood as illustrative, only, and not as defining the limits of the invention.

Figure 1 is a front elevation of an earring embodying the present invention.

2

Figure 2 is a side elevation of the earring of Figure 1.

Figure 3 is a central vertical section on the line 3—3 of Figure 1 showing the clamping arm of the earring in the two positions which it is adapted to take with respect to the frame.

Figure 4 is a face view of the clamping arm detached from the remainder of the structure.

Figure 5 is a similar view of the spring.

Figure 6 is a side elevation of the rotatable knob, its threaded shank, fixed collar and polygonal lug.

Referring to the drawings 1 designates the frame of the earring which, in practice, may be of substantially L-shape, comprising an upstanding plate 1*a* having at its bottom a rearwardly extending flange 1*b*. The plate 1*a* is provided with a boss 2 adapted for engagement with the anterior surface of the ear lobe and perforated at 3 to provide a better grip with such ear lobe. One or more jewels or other ornamentation are ordinarily mounted on the outer surface of this plate.

At the outer end of the flange 1*b* is a camming surface 4 and directly below this camming surface and on the bottom of this flange is formed another camming surface 5. These two camming surfaces are arranged in angular relation to one another and are preferably individually substantially flat. The clamping arm 6 is of bowed, skeletonized form and is bifurcated so that the lower ends of its legs 6*a* straddle the outer end of the flange 1*b*. At this point the legs are provided with hinge sections and a hinge pin 7 passes through these sections and through the flange 1*b* to mount the arm 6 for pivotal movement on the frame.

The upper end of the clamping arm 6 is provided with a threaded hole 8 and through this hole extends a threaded shank 9. On the forward end of this shank a knob 10 is rigidly attached and to the shank on the opposite side of the arm 6 is secured a fixed collar 11 forming an outwardly facing shoulder. The outer surface of this collar carries a polygonal lug 12. The shoulder and lug are both carried by and form part of the shank. This lug is shown in the drawings as of square cross section, although it may be of other cross section without departing from this invention. It is preferable, however, that it be polygonal to perform the locking function presently to be described.

Extending across the clamping arm 6 about midway of its height and bridging the space between the legs 6*a*, is a spring retainer 13. A leaf spring 14 extends longitudinally between the legs 6*a* and about midway of its length engages the retainer 13, as shown best in Figure 3. When the spring is thus positioned, its lower end will normally overlie and engage with the camming surface 4 on the flange 1*b* of the frame, while its upper end will coact with the fixed collar 11 and lug 12 of the threaded shank. To

permit of this latter cooperation, the upper end portion of the spring is bifurcated or cut away to form an opening 15 with parallel opposite sides, as shown best in Figures 1 and 5. The polygonal lug 12 is received within this opening 15 with a relatively close fit as appears from Figure 1, but from the base of this opening a slit 16 extends longitudinally of the spring for a distance so that the opposite side walls of the opening 15 may be sprung apart by the lug 12 as the latter is rotated to adjust the threaded shank axially through the opening 8 of the clamping arm.

With this arrangement, the adjustment of pressure on the lobe of the ear may be accomplished by rotating the knob 10 to vary the tension of the spring 14 and the interlocking relation between the polygonal lug and the opening 15 of the spring will cause the knob to be locked in any desired position of adjustment.

The spring is relatively long and is so biased that it will press firmly against the fixed collar at 11 in all positions of adjustment of the latter and thus will serve to press the knob 10 firmly but resiliently against the posterior surface of the lobe of the ear to clamp the lobe between said knob and the boss 2 of the frame. The adjustment may be made without removing the earring from the ear, by merely grasping the scalloped edge of the knob between the thumb and fore finger and rotating it until the desired adjustment is obtained. In this manner a very nice adjustment may be easily and expeditiously made to hold the earring securely and comfortably in position.

When it is desired to remove the earring from the ear, the clamping arm 6 may be swung on its pivot pin 7 from the full line clamping position of Figure 3 through the dotted line position of this figure. During this operation, manually effected, the lower end or toe of the spring 14 will be forced to ride over the line of intersection between the cam surfaces 4 and 5 until the toe facially engages with the cam surface 5. To apply the earring to the ear, the boss 2 is merely brought into engagement with the anterior surface of the ear lobe and the clamping arm is then moved from the dotted line position of Figure 3 to the full line position thereof, by pressure exerted by the finger of the user against the rear surface of said arm. During these operations, the spring 14 works freely between the legs 6*a* of the arm without binding. This spring is made sufficiently long so that it may be made heavy enough to withstand long usage without undue fatigue. It does not require sharp bends at any point and operates under ideal conditions for a leaf spring.

The foregoing detailed description sets forth the preferred embodiment of this invention, but the invention is to be understood as fully commensurate with the appended claims.

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

1. An earring comprising: a frame having an ear engaging portion and provided with a camming surface, a clamping arm one end of which is pivoted to the frame in juxtaposition with said camming surface, an ear engaging knob having a threaded shank passing through a tapped hole in the other end of the clamping arm and provided with an outwardly facing shoulder, and a leaf spring engaging intermediate its ends with an intermediate portion of the clamping arm with one end of the spring bearing against the camming surface and the other end of the spring bearing against the shoulder to urge the knob and the ear engaging portion of the frame toward one another.

2. An earring comprising: an ear engaging frame provided with a camming surface, a clamping arm one end of which is pivoted to the frame in juxtaposition with said camming surface, an ear engaging knob having a threaded shank passing through a tapped hole in the other end of the clamping arm and provided with an outwardly facing shoulder and an adjoining polygonal portion, and a leaf spring engaging intermediate its ends with an intermediate portion of the clamping arm with one end of the spring bearing against the camming surface and the other end of the spring bearing against the shoulder of the shank and bifurcated to straddle the polygonal portion of the latter.

3. An earring according to claim 2, wherein the spring is slit longitudinally from the base of its bifurcation to render it transversely resilient and thus permit forcible rotation of the threaded shank to regulate the tension of the spring.

4. An earring comprising: an ear engaging frame provided with a camming surface, a clamping arm one end of which is pivoted to the frame in juxtaposition with the camming surface and the other end of which has a tapped hole, a threaded shank adjustably passing through said tapped hole and provided at the frame side of the arm with a knob and at the other side of the arm with a collar having a polygonal lug at its outer face, and a leaf spring an intermediate portion of the length of which engages with the arm with one free end of the spring bearing against the camming surface of the frame and the other free end of the spring bearing against the outer face of the collar and bifurcated to straddle said lug.

5. An earring according to claim 4 wherein the spring is slit longitudinally from the base of its bifurcation to render it transversely resilient and thus permit forcible rotation of the shank to regulate the tension of the spring.

6. An earring comprising: an ear engaging frame having a camming surface, a clamping arm one end of which is pivoted to the frame in juxtaposition with the camming surface and the other end of which arm carries an ear engaging knob, and a leaf spring of substantially the same length as the clamping arm and having opposite free ends one of which engages with the camming surface and the other of which bears against the free end portion of the arm to bias it in the direction of the frame, said spring engaging about midway of its length with a retainer carried by the clamping arm about midway of the length of the latter and otherwise free from contact with said arm.

ALBERT J. PUJOL.

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