March 1, 1966 W. DOERING 3,237,426

SELF-ADJUSTING GUARD FOR FINGER RINGS

Filed April 17, 1963

FIG. 1

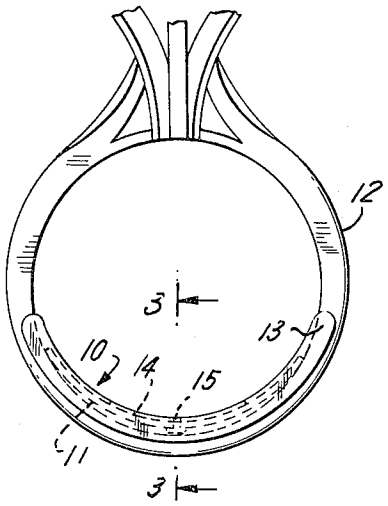


FIG. 4

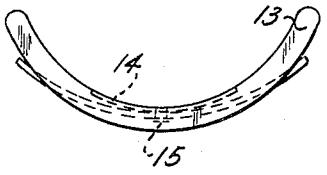


FIG. 5

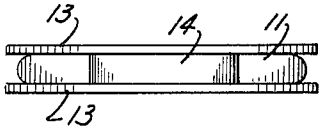


FIG. 2

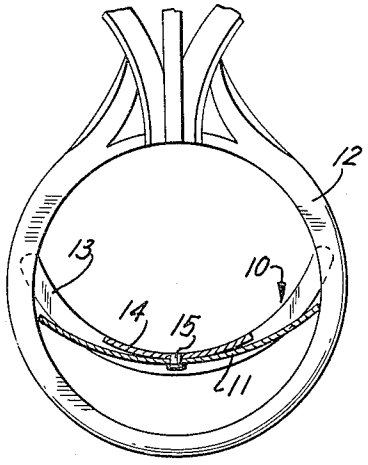


FIG. 6

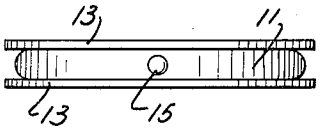


FIG. 7

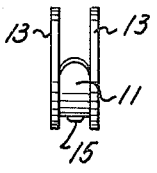
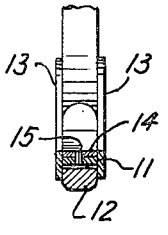


FIG. 3



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SELF-ADJUSTING GUARD FOR FINGER RINGS

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3 Claims. (Cl. 63—15.6)

This invention relates to guards for finger rings.

Guards of the type to which this invention relates have been used for many years to effectively adjust the size of a ring to the portion of the finger on which it is worn. As is well known, a finger ring must be made large enough to pass over the knuckle of the wearer and for that reason the ring is often too large for the portion of the finger directly above the knuckle. Consequently, as the ring is worn it tends to rotate on the finger with the result that the gem or other ornament at the top of the ring does not remain in its proper position. Therefore, ring guards of various kinds, usually including or consisting entirely of a spring have been employed which permit the ring to be passed over the knuckle and then effectively decrease the inside dimensions of the ring so that it fits tightly on the finger portion above the knuckle. An important disadvantage of most ring guards in use today is that they require the use of pliers or other tools in mounting them on rings.

It is a principal object of this invention to provide a ring guard of the character described which requires no tools of any kind to mount it on a ring.

It is an important object of the invention to provide such a guard in which the spring is to a large extent concealed thus improving the appearance of the ring as a whole.

It is another object of the invention to provide such a guard which is thoroughly practical from the points of view of both manufacture and use.

Other objects and advantages of the invention will be apparent from the following description in which reference is made to the accompanying drawings:

In the drawings:

FIG. 1 is a side elevational view of a ring provided with a guard according to this invention, the guard being shown in its lowermost position;

FIG. 2 is a view similar to FIG. 1 showing the guard in a raised position;

FIG. 3 is a vertical cross-sectional view on line 3—3 of FIG. 1;

FIG. 4 is a side elevational view of the illustrative guard by itself;

FIG. 5 is a top plan view of the guard;

FIG. 6 is a bottom plan view of the guard; and

FIG. 7 is an end elevational view of the guard.

The ring guard chosen to illustrate the present invention includes generally a rigid frame **10** and a leaf spring **11**. The frame **10** is preferably formed of the same metal as, or a metal compatible with, the metal of the ring **12** with which it is to be used; however, any suitable rigid material may be used. The frame comprises a pair of arcuate ribs **13** spaced-apart and rigidly connected by a cross-member **14**. The curvature of the ribs **13** substantially corresponds to the curvature of the ring **12**, and the arcuate length of each rib is about equal to or a little less than one-half the perimeter of the ring. This particular size and contour of the ribs is chosen, as will become clear from the description below, to permit the frame **10** to move vertically with respect to the ring **12** without becoming disengaged from the ring and yet without having its ends project outside the contour of the ring.

The cross-member **14** is provided with the same curvature as that of the ribs **13**, but the cross-member is

shorter than the ribs and is relatively thin with respect to the width of the ribs. The width of the cross-member is equal to or greater than the width of the ring to permit the ribs **13** to be arranged adjacent to the opposite sides of the ring. The concave or top face of the cross-member is made flush with the concave edges of the ribs giving the ecntral portion of the frame **10** an inverted U-shaped cross-sectional contour, as shown in FIG. 3. If desired, the ribs **13** and cross-member **14** may be formed integrally.

The leaf spring **11**, which may be formed of any suitable material, is located between the ribs **13** and secured at its midpoint to the convex or bottom face of the cross-member, as by a rivet **15**. Preferably, the spring normally tends to assume a condition in which it is arched in the same direction as the ribs **13** but along a curve having a larger radius than the ribs, as shown in FIG. 4. The length of the spring, when straight, is greater than the inside diameter of the ring **12** but less than one-half the perimeter of the ring. The length of the spring **11** is important since if it is made shorter than mentioned above, the guard will not be moved as far toward the center of the ring as shown in FIG. 2, thus limiting its usefulness. On the other hand, if the spring is made longer it will not urge the guard toward the center of the ring. The leaf spring is made slightly narrower than the cross-member **14**, i.e., narrower than the spacing between the ribs **13**, to permit its extremities to have free movement in the direction perpendicular to the plane of the spring. The spring is made relatively thin with respect to the width of the ribs **13** so that in use it will be almost completely concealed by the ribs.

To mount the ring guard on the ring **12**, one end of the frame **10** is positioned so that the corresponding ends of the ribs **13** straddle the ring at some point along its circumference. The guard is then pressed toward that point on the ring circumference, thereby flexing the spring **11**, until the opposite end of the frame clears the inner surface. The frame is then swung into the plane of the ring and released, whereby the spring moves the guard a short distance in a direction away from the abovementioned point on the ring circumference so that the opposite end of the frame straddles a point on the ring circumference opposite to the first-mentioned point. It will now be appreciated why the spring **11** preferably has a normally curved contour rather than a straight condition. If the spring were straight it would project much further beyond the edges of the frame **10** than it does and would hamper mounting of the guard on a ring. In other words, the fact that the spring is normally curved facilitates mounting the ring guard on a ring.

When off the finger of the wearer, the ring and guard will appear as in FIG. 2. As the ring is slipped on to the finger, the guard moves toward the position of FIG. 1, which shows the position of the guard as the ring passes over the knuckle. In this position, the spring is flexed to a curvature of smaller radius than that of its normal curvature. After passing the knuckle, the tendency of the spring to assume a straighter condition causes the guard to move toward the center of the ring until it encounters the finger. The spring **11** constantly urges the guard against the finger and thereby holds the ring in place on the finger.

The invention has been shown and described in preferred form only, and by way of example, and many variations may be made in the invention which will still be comprised within its spirit. It is understood, therefore, that the invention is not limited to any specific form or embodiment except insofar as such limitations are included in the appended claims.

What I claim is:

1. A ring guard including a rigid frame comprising

two parallel spaced-apart ribs curved along the path of a circle, a cross-member rigidly connecting said ribs, said cross-member terminating short of the ends of said ribs so as to permit the ribs at each end of said frame to straddle a ring, and a leaf spring secured to said cross-member on the side thereof facing away from the center of curvature of said ribs having a length when straight exceeding the inside diameter of said circle and the ring but less than one-half the inside circumference of said circle and the ring, the ends of said spring being adapted to bear against the inner face of the ring in order to maintain said spring in flexed condition whereby it will constantly tend to straighten out and thereby urge said frame toward the center of the ring.

2. A finger-ring guard comprising a rigid element curved along the path of a circle, said element being bifurcated at both ends to permit said ends to straddle a ring, and a leaf spring anchored at about its center to the face of said element opposite the center of curvature of said element for yieldably urging said element toward the center of the ring, said spring in its unstressed condition being arched in the same direction as said element but along a curve having a larger radius, and said spring

having a length when straight exceeding the inside diameter of said circle but less than one-half the inside circumference of said circle.

3. A finger-ring guard as defined in claim 2, said element having a U-shaped cross-section in its central region whereby the arms of the U overlie the side surfaces of the ring and thereby conceal the presence of said spring.

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