Jan. 2, 1968 J. SCHECHTER ET AL 3,360,959

FINGER RING INCLUDING RING GUARD WITH UNDULATED BEARING SURFACE

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Fig. 1.

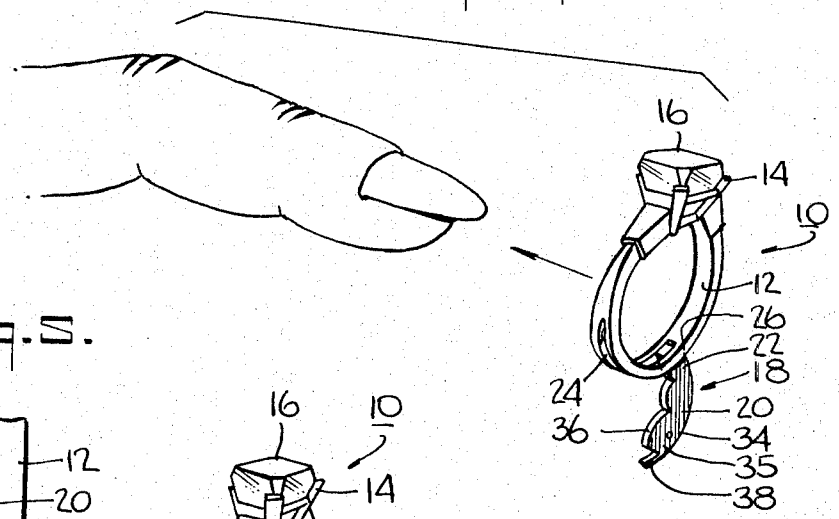
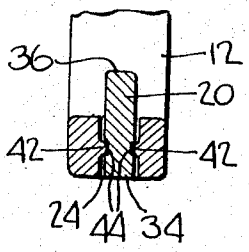


Fig. 5.



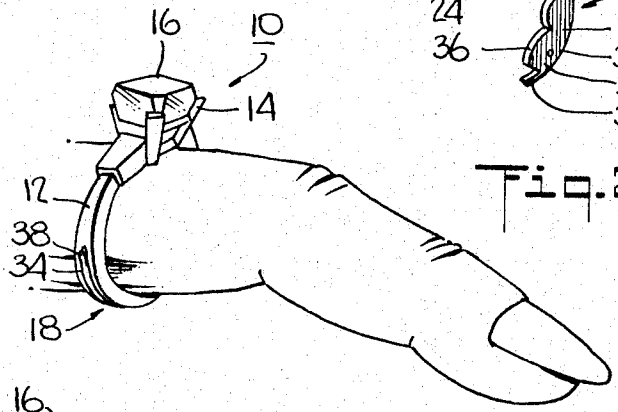


Fig. 2.

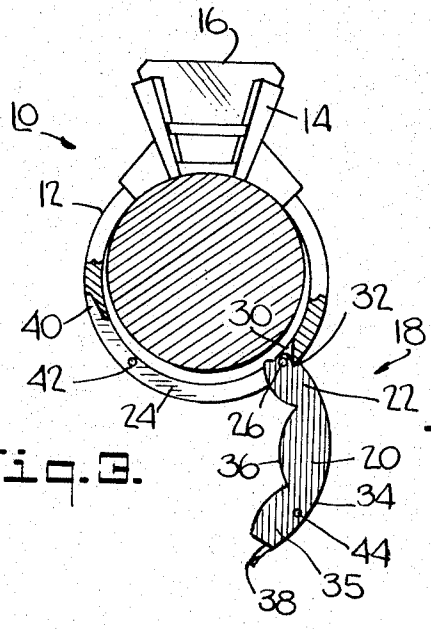


Fig. 3.

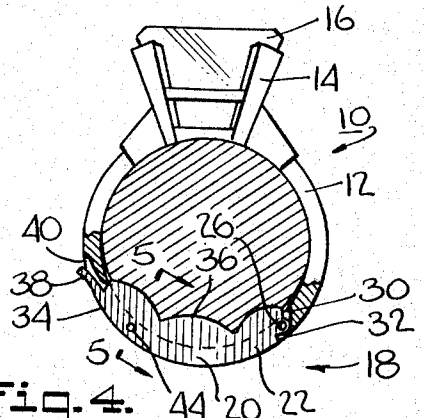


Fig. 4.

INVENTORS
JACK SCHECHTER
BY JACK L. SHAW

Kinschsvein, Kinschsvein & O'Hinge
ATTORNEYS

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FINGER RING INCLUDING RING GUARD WITH UNDULATED BEARING SURFACE

Jack Schechter, North Caldwell, N.J., and Jack L. Shaw, New York, N.Y., assignors to Palais Jewelers, Inc., New York, N.Y., a corporation of New York

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3 Claims. (Cl. 63—15.6)

This invention relates to a finger ring including a ring guard with an undulated bearing surface.

It is the primary object of this invention to provide an ornamental finger ring including a permanently built-in ring guard, wherein the ring guard has an undulated surface which, when the ring is being worn, bears against the skin on the undersurface of the wearer's finger so as to prevent the ring from slipping off, twisting or rotating.

It is well known in the jewelry art to provide ring guards for finger rings, the ring guard being arranged to permit enlargement of the finger ring opening so that the ring may be slipped over the wearer's knuckle, and further being arranged to subsequently permit constriction of the finger ring opening so that the ring cannot fall off the wearer's hand.

The aforementioned ring guards have been provided to overcome a problem caused by the structure of the human hand. The difficulty is that the knuckle of a finger is larger than the bony structure of the phalanx (shank) of the finger bones between the knuckles. The interior circumference of the band of the ring must be large enough to slip over the knuckles and the skin thereon, which means that the opening is too large for the phalanx of the bone, plus the skin covering the bone, closest to the palm. It is noted that this problem is particularly aggravating for people who have arthritis with the consequent enlarged knuckles and for people who use their fingers a great deal in their occupation as, for instance, typists and musicians.

Although, as has been mentioned, the problem of contricting the ring band after it has been slipped over the knuckle has been solved, it has yet been the tendency of such ornamental rings to rotate when worn. This is primarily due to the presence of a heavy setting or precious gem or any other type of decorative ornamentation, which makes the ring "top heavy" so that the ring is unbalanced, and consequently the heavy decorative portion tends to twist or turn the ring. This condition is aggravating when the wearer's hands are oily or wet (and perhaps soapy), reducing the friction between the band and the finger to let the ring rotate more readily.

It is of course undesirable to allow the ring to slip because of the annoying feeling caused when the enlarged decorative portion of the ring touches the adjacent fingers, and because the decorative portion is hidden from view.

Although prior art ring guards sometimes increased the friction between the ring band and the finger, this increase was necessarily kept at a minimum because an undue constriction in size would pinch the finger and even restrict the flow of blood in the finger. Consequently, these finger guards did little to inhibit rotation of a ring once it was placed on the finger.

It is an object of this invention to provide an ornamental finger ring of the character described, wherein the ring guard constricts the ring band after the ring is passed over the knuckle of the finger, and simultaneously by its construction prevents the ring band from rotating on the finger, even in instances when the ring carries a heavy setting and gem.

It is another object of the invention to provide an ornamental finger ring of the character described wherein the ring guard inhibits rotating or twisting of the ring on the finger without noticeable pinching of the finger.

It is another object of the invention to provide an ornamental finger ring of the character described, which is economical in manufacture, constitutes only one movable part, and which can be incorporated into ornamental finger rings at a low cost.

It is another object of the invention to provide an ornamental finger ring of the character described, wherein the addition of the ring guard does not detract from the overall sales-inducing appearance of the ring.

It is another object of the invention to provide an ornamental finger ring of the character described, wherein the ring guard is not observable when the ring is being worn.

It is another object of the invention to provide an ornamental finger ring of the character described, wherein the ring guard is permanently engaged to the ring so that it cannot become detached therefrom and so cannot become misplaced or lost.

It is another object of the invention to provide an ornamental finger ring of the character described, wherein the ring guard can be incorporated into almost any type of otherwise conventional finger ring without any sacrifice in appearance, strength, cost or quality.

Other objects of the invention in part will be obvious and in part will be pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangements of parts which will be exemplified in the finger ring hereinafter described and of which the scope of application will be indicated in the appended claims.

In the accompanying drawings in which is shown one embodiment of this invention,

FIG. 1 is a perspective view of an ornamental finger ring including its ring guard with its undulated bearing surface, the ring guard being in its open position immediately prior to placement onto the finger of a wearer;

FIG. 2 is a view similar to FIG. 1 but illustrating the ring guard in its closed position with the ring being worn on the finger;

FIGS. 3 and 4 are enlarged partially sectional side elevational views of the ornamental finger ring and illustrating the ring guard with its undulated bearing surface in, respectively, open and closed positions; and

FIG. 5 is an enlarged fragmentary sectional view taken substantially along the line 5—5 of FIG. 4.

In general, and in accordance with the teaching of this invention, an ornamental finger ring is provided which is conventional except for the addition of a new and improved ring guard. The ring comprises a circular 360°-sweep band and a setting for a precious gem or other suitable ornament. The term "setting" is meant to include mountings for all types of decorative ornamentation, including for example mountings for one or more jewels, a filigree, a symbol, initials, a carved setting, a cameo, etc.

The ring guard incorporated into the ornamental finger ring comprises a generally arcuate upwardly concave sector which is swingably mounted in a circumferential slot in the ring band. The slot is diametrically opposed to the ring setting. The sector has an undulated surface which, when the ring is worn, bears against the soft flesh on the under surface of the wearer's finger.

When in an open position, the ring guard sector does not protrude into the finger opening defined by the ring band, and in this condition the band is of sufficient internal diameter so that it can be slipped over the wearer's knuckles.

When the ring is located so that its band encircles the smaller diameter of the phalanx of the finger (between

the knuckle and the palm), the sector is swung into the slot so that the undulated surface of the sector obtrudes into the finger opening and bears against the fleshy undersurface of the wearer's finger. A typical reduction in size effected by the ring guard is about 1 to 2½ ring sizes.

The skin of the finger is forced to generally follow the shape of the undulated surface against which it bears, the soft flesh flowing away from the peaks on the undulated surface and into the valleys separating the peaks. The resistance of the skin and flesh to further flow after they have been pressed into the described undulated configuration inhibits any twisting or rotating of the ring due to its heavy setting. Yet, since only an undulated configuration is imparted to the undersurface of the finger and no undue squeezing or pinching is performed, the wearer feels only that he has on a properly fitting ring.

Referring now in detail to the drawings, the reference numeral **10** denotes an ornamental finger ring including a ring guard having an undulated bearing surface.

The ring **10** includes a generally circular band **12** comprising a 360° continuous sweep which defines an opening through which the finger of the wearer is inserted. The term "generally circular" includes bands which define a circle of constant diameter as well as bands defining rectanguloid as well as other non-descript shapes, which yet provide a finger opening. The band **12** and the other portions of the ring **10** are formed from a rigid, self-form-maintaining material, preferably metals, e.g. gold, silver or platinum alloys.

The ring **10** further includes a setting **14** for a gem **16**. The setting can, of course, be fashioned in any desired form which is in current vogue. The setting can be molded in one piece with the band, or can be separately formed and then attached to the band as by autogenous welding.

The ornamental finger ring incorporates a ring guard, generally designated by reference number **18**, which includes an element, i.e. a sector **20**, which in part defines a portion of the ring opening.

The sector **20** is pivoted at one end **22** for swinging movement on the band **12** in and out of a through slot **24** formed in the band. More specifically, the slot **24** is located on the band at a position diametrically opposed to the setting **14**. The slot is of constant width and passes from the exposed exterior surface of the band in a radial direction to the interior surface of the band (the interior surface being in contact with the wearer's finger when the ring is worn). The slot extends from approximately ⅓ to less than ½ of the circumference of the band. The slot is centered from side-to-side on the band (see FIG. 5), and sufficient band material is retained on each side thereof to retain the strength of the band.

The sector **20** generally has an upwardly concave arcuate configuration, and has a thickness only slightly less than the thickness of the slot **24**. (See FIG. 5.) It occupies substantially the full length of the slot when swung into its closed position. (See FIG. 4.)

The sector **20** is mounted for reciprocal movement about an axis parallel to the central axis of the ring opening but spaced therefrom. To this end, the sector is journaled on a small-diameter pin **26** which is held fast in coaxial through bores in opposed walls of the slot at one end thereof. The pin passes through an aperture in the sector at its pivoted end **22**. The associated end of the slot is shaped as at **30** in a manner such that it will not interfere with movement of the sector. The sector has a shoulder **32** which abuts the end **30** of the slot to limit outward swinging movement of the sector. (See FIG. 3.)

The sector **20** has an exterior border **34** (that is, that border most distant from the finger opening) which is of the same curvature as the outside, exposed circumferential surface of the band **12**. When the sector is in its closed position, the exterior border of the sector and the exposed circumferential surface of the band are in transverse registry, i.e. are substantially coincident. (See FIG. 4.)

The essential feature of the ring guard of the present invention resides in the provision of an undulated interior border **36** on the sector **20**, which border when the sector is in its closed position obtrudes into the finger opening defined by the ring band and, when the ring is worn, bears against the fleshy undersurface of the wearer's finger. Preferably, the undulated border comprises a series of adjacent circular segments, each segment being of the same diameter, and each segment, when the sector is in its closed position, protruding radially equally into the finger opening. Other compound curved or non-linear borders are also suitable, e.g. a rounded saw tooth or scalloped configuration. In fact, any shape presenting at least one and preferably a few protrusions to the undersurface of the finger, having externally convex crests separated by valleys of any form not presenting sharp points to the wearer's skin is suitable.

The end **35** of the sector **20** opposed to its pivoted end **22** carries a protruding fingernail nib **38**. The nib **38** projects tangentially from the end **35** of the sector. A shallow recess **40** is provided in the associated end of the slot and the nib slopes slightly away from the exterior surface of the band so that when the sector is in its closed position, there is yet sufficient space to permit the insertion of the wearer's fingernail so that the nib can then be pressed downwardly radially-outwardly away from the band to open the sector.

Means is provided to detachably retain the sector in its closed position. For this purpose, two coaxial tits **42** project each from a different wall of the slot and the sector has two coaxial indents **44** which, when the sector is in its closed position, receive the tits so as to keep the sector in place. (See FIG. 5.) The walls of the slot are sufficiently resilient so that the tits can be forced out of the indents and the sector opened by ordinary finger pressure.

When the sector is in its open position swung out of the slot with its undulated interior border distant from the finger opening, the finger opening is defined only by the ring band and the ring can readily fit over the knuckles, and the skin thereon, of the finger of the wearer. (See FIG. 1.) When the ring is in its proper location encircling the phalanx of the finger between the middle knuckle and the knuckle adjacent the palm, the sector is closed with the tit and indent arrangement retaining the sector in place. In this closed position, the undulated interior border of the sector projects into the finger opening and bears against the fleshly undersurface of the finger. The skin and flesh thereupon are forced to flow away from the leading crests of said border and into the valleys separating the crests. The skin and flesh thus are also formed into an undulated configuration substantially complementary to the undulated interior border of the sector. The construction of the sector causes a reduction of from 1–2½ finger sizes in the opening of the ring.

The flesh and undersurface of the skin, shaped into the undulated configuration above mentioned, resist further flow and so inhibit the ring from rotating, twisting or slipping. The sector is easily opened by fingernail pressure on the nib **38**, again enlarging the opening and permitting the ring to be withdrawn off the finger.

It thus will be seen there has been provided a finger ring which achieves the several objects of the present invention and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment set forth, it is to be understood that all matter herein described or shown in the ac-

companying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described the invention, there is claimed as new and useful and it is desired to secure by Letters Patent:

1. An ornamental finger ring including a band defining a permanently closed generally circular finger opening, a setting mounted on the band, a sector including rotation-inhibiting means defining an undulated interior border, and means pivoting one end of said sector on the band for swinging movement of the sector about an axis passing through the band and parallel to and spaced from the central axis of the opening between a closed position in which the interior border of the sector is disposed radially inward of the interior surface of the band so that the undulated border obtrudes into the finger opening whereby said undulated border presses against the fleshy undersurface of a finger when the ring is on the finger of a wearer, the flesh of the finger then flowing into the valleys of said surface and by its resistance to further circumferential flow inhibiting rotation of the ring on the finger, and an open position wherein the undulated border is radially outward of the interior surface of the band, said band including a circumferential through slot diametrically opposed to the setting member, the sector being mounted at one end of the slot for movement into and away from said slot, and means to hold the sector in its closed position.

2. An ornamental finger ring as set forth in claim 1 wherein the undulated border comprises a series of radially inwardly protruding rounded segments.

3. An ornamental finger ring as set forth in claim 1 wherein the undulated border comprises a series of radially inwardly protruding adjacent rounded segments.

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F. BARRY SHAY, *Primary Examiner.*