Nov. 28, 1933. E. MOLDENHAUER 1,936,604

WEDDING RING

Filed Oct. 19, 1932

FIG. I.

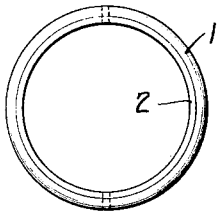


FIG. II.

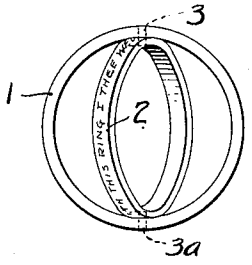


FIG. III.

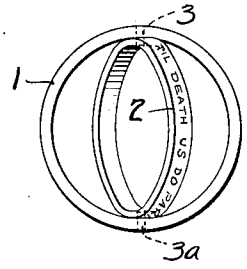


FIG. IV.

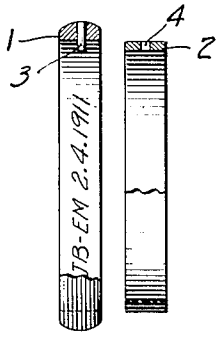


FIG. V.

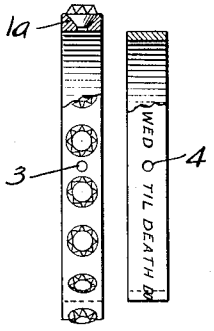


FIG. VI.

FIG. VII.

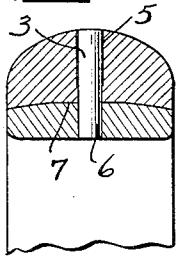


FIG. VII a.

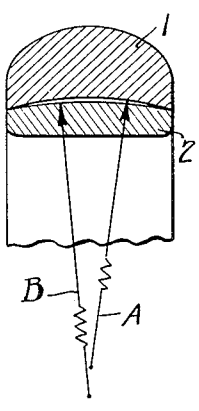


FIG. VII b.

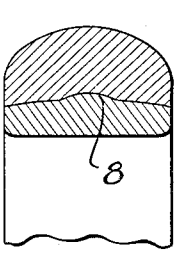


FIG. VII c.

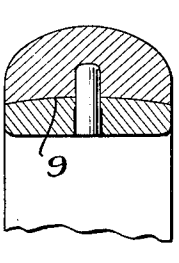
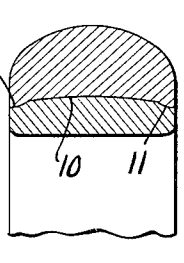


FIG. VII d.



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WEDDING RING

Eric Moldenhauer, New York, N. Y.

Application October 19, 1932. Serial No. 638,446

1 Claim. (Cl. 63—16)

This invention relates to wedding rings and has for its object a novel construction serving various useful purposes. In particular, I provide a wedding ring which consists of two parts that are normally nested when in use, giving the effect of a single ring that is in appearance a single rigid unit when on the finger, but pivoted at diametrical points so that the inner ring may intentionally by voluntary force be turned on the pivots with respect to the outer ring. This provides a structure permitting the dedication, such as the names and date of the wedded parties to be engraved on the inner surface of the outer ring where it will be protected by the inner ring against any wear of ages. In particular, however, I provide a surface, namely, the outer surface of the inner ring, as a place for the engraving of the wedding vow—With this ring I thee wed—'Til death us do part—, and in so engraving the wedding vow it is on the surface which is concealed by the outer ring, and therefore is invisible in normal use and remains invisible at all times subject to the desires of the wearer; and furthermore having the juxtaposed surfaces of the outer and inner parts of particular formation to assure the unit appearance, rigidity and permanent protection. It will be appreciated that as wedding rings are of a specific class, they usually involve constant wearing and often permanent wearing, and therefore to meet such particular requirements it has been a difficult problem to devise the exact construction that will permanently hold the parts of the ring in exact alignment, subject only to voluntary displacement, and to provide for the practically invisible joints on the sides and at the same time a permanently protective joint, that will meet all the requirements of durability of the ring as a unit, though subjected constantly to the strenuous use like an ordinary wedding ring permanently kept on the finger. To meet the practical requirements, I provide structure for different sizes of rings, as, for example, very narrow rings or wider rings, as wedding rings are subject to fashion as to widths, particularly in the case of plain rings. All of the detailed requirements will be evident from the accompanying drawing, as hereinafter described.

The construction permits of mounting jewels in the outer ring, and in such cases the inner ring constitutes a supporting bezel which not alone protects the jeweled outer ring but also strengthens the ring as a whole, and besides this permits the swinging of the inner ring when it is desired to clean the jewels from underneath their setting.

With these and other objects that may appear from the more detailed description, it will be noted that while carrying the marriage vow in a secreted or invisible manner, the ring normally constitutes a unit and a perfectly plain ring in outward appearance. In other words, a normal wedding ring as so universally accepted, and at the same time it also is a two-in-one wedding ring, although in normal appearance identical with a single piece, plain wedding ring.

The construction of my ring is such that when death parts the contracting parties, the ring may be easily parted without injuring either ring, and the surviving party retaining one of the parts. The construction provides for a simple and secure mounting of the two rings, and by the proper fit they will normally hold together until intentional pressure readily separates and swings the inner ring with respect to the outer ring, but the fit of the abutting surfaces of the two rings is made so that they will normally lock against any accidental separation, and therefore the ring may be taken off and put on the finger as a solid unit, and may be shown without revealing the sentiment, that is either the vow or the dedication. It thus constitutes an invisible record except for the knowledge of the contracting parties.

While the construction of my ring may vary in some respects, one embodiment of my invention is shown in the accompanying drawing, in which:

Fig. I is a side elevation of the unit ring ready for normal use.

Fig. II shows the inner or vow ring swiveled partly out of register with the outer ring with one-half of the wedding vow engraved on its outer surface.

Fig. III shows the inner ring in perspective swiveled with respect to the outer ring, showing the other part of the vow engraved on its surface.

Fig. IV is an elevation of the two rings, part in section, showing a plain outer ring with the pivot which supports the inner ring at one side.

Fig. V is an elevation of the two rings, separated, with an outer ring constructed to support jewels.

Fig. VI is the developed surface of the ring as it contains the vow, showing that the pivot is so located that the pivot points separate the two phrases of the vow.

Fig. VII is a cross section on a much enlarged scale, of the two parts of the ring as nested, showing one form of the interengaging surfaces;

Fig. VII^a is a similar enlarged view with a different formation of the engaging surfaces; Fig. VII^b is a similar view showing another form of the interengaging surfaces; Fig. VII^c is a similar

view showing another form of the interengaging surfaces; Fig. VII[d] is a similar view showing another form of the interengaging surfaces.

Fig. I shows a side view of the ring with the outer part 1 and the inner part 2 nested and locked in position. In Figs. II and III the inner ring 2 has been displaced by pivoting it on the pivots 3 and 3[a], showing in Fig. II half of the outer surface of the inner ring 2 with the desired marriage vow.

Fig. IV shows in section the ring 1 with the pivot 3 which has been inserted in the ring and projects inwardly a short distance so as to engage the hole 4 in the ring 2, as shown in section. The rest of the two rings, here shown separated and a view on edge, are shown partially broken away, and on the inside of ring 1, the surface which in normal use is covered by the inner ring 2, is shown with the marriage record in the usual way engraved thereon. In this way the engraving on the inside of the outer ring is always protected by the inner ring from wear, and is thereby preserved indefinitely.

In Fig. V the outer ring 1[a] is shown at one edge in cross-section having a diamond or other gem set into it, held by the girdle of the gem with the table protruding, and the base of the gem engaging the recess in the ring 1[a]. When jewels are so set, or set in any way in the outer ring the pivot 3 is located between the jewels as shown, and the inner ring when mounted on its pivots and turned into engagement for the normal use of the consolidated ring, serves in place of the supporting gallery in ordinary rings to strengthen the outer jeweled band, but it also makes possible cleaning of the underside of the jewels by the simple operation of turning the inner ring on its pivots so that the underside of the jewels' mountings becomes immediately accessible.

In Fig. VI there is shown the developed surface, that is spread out for illustration purposes solely, with the marriage vow in its two phrases engraved, with the holes 4—4[a] shown simply to indicate they would be between the two phrases, so that the pivoting connections of the two ring parts, where there is always a slight overlapping of surfaces even when swung out of registration, will not interfere with the visibility of the text of the marriage vow.

Rings containing my invention may, of course, be quite narrow or of different breadths, depending upon fashion or personal desire, and as my aim includes the secure holding of both parts of the ring in registration, I construct the narrow rings with the juxtaposed surfaces of the two parts flat, that is they are substantially truly cylindrical, and the swing on the pivots causing a minute difference in radius of engagement when pivoting the inner ring, prevents the accidental slipping of the outer ring,—but with a slight pressure of the fingers this slight jamming causes the very slight expansion or contraction of metal at the engaging surface edges, so that without difficulty voluntary turning of the ring is accomplished. When closing the two parts together the same slight spring of the metal assures the two parts snapping together so that they then become a rigid, practically solid unit.

In the case of broader rings, I may provide various ways of assuring the positive interlocking of the outside and inside rings, and in Figs. VII to VII[d] are shown several ways that this may be accomplished. In Fig. VII[a] the outer ring has its inner surface very slightly concave, exaggerated in the drawing for purposes of illustration, but its relation to the outer surface of the inner ring 2, which is very slightly convex, is indicated by the arrowed line A denoting the radius of the outer ring surface as compared with the arrowed line B, which is a slightly greater radius of curvature for the outer surface of the inner ring,—both of these radial distances being indicated part in dotted line, and do not in the illustration indicate the exact length, because the curvature and the relative curvature of both surfaces will depend upon the width of the ring and the size. Such curvature permits the two parts of the ring to nest precisely, with the joint of the two parts tight on either side, because the relative sizes of the rings are such that they must be sprung into engagement due to that slight deformation of shape, or of the metal, which does not injure the strength of the parts but upon slight voluntary pressure permits them to be snapped together, and thereafter assures permanent pressure between the two parts closing the edges of the joint with maximum pressure, whereas the interior of the joint has relative dimensions which relieve the pressure in the middle, although, in fact, the few ten thousandths of an inch variation involved may mean an actual contact throughout the joint,—simply assuring by my construction a greater relative pressure at the edges. In this respect I assure practically an invisible joint due to the tight contacts on the edges, as well as the interlocking of the two rings except when voluntarily desiring to separate them. Variation of the surfaces is so slight that where the rings engage at the pivots there would be a slight relative displacement, but the inner end of the pivot is made loose in the hole in the inner ring, and therefore the slight slip, to assure a ready swing of the parts, is provided, and all of the movements involved, in this respect, only a few ten thousandths of an inch to assure all the required locking and fit and the ready voluntary displacement,—all serving the purposes of my invention.

As shown in Fig. VII, on the relatively much enlarged scale of section of the ring, one of the pivots 3 is shown, and at 5 the solder which locks that pivot firmly in its hole in the outer ring, whereas the inner end 6 is free to turn in the hole in the inner ring. In some forms I may solder the pivots to the inner ring, thereby assuring strength to the thinner band, and have the outer end of each pivot enter and turn freely in a hole extending only part way from the inner surface of the outer band, and not through it, thus preserving greater strength for the outer band. In Fig. VII the respective juxtaposed surfaces of the two parts being slightly curved throughout, I make the surface at 7 a cylindrical surface with a minute taper to each edge of the ring. In this form the narrow median band acts the same as a narrow ring, while at either side the slight curve assures the necessary clearance for nesting. In Fig. VII[b] I show a broad ring in which the surfaces have a very slight rise 8, a median band slightly greater than the adjacent surface of the inner ring, so that this median band of the inner ring provides for the locking. In Fig. VII[c] I show the joint 9 of the juxtaposed surfaces in a form in which the curvature is very minute and substantially uniform, so that there is an assured contact from side-to-side of the ring which involves further assurances of maintaining registration when the ring parts are close together, due to a little more surface contact, while still assuring the tightness of the joint and

the ready voluntary unlocking and locking due to pressure of the fingers, but preventing any involuntary separation of the rings. In this form the transverse curvature of the juxtaposed surfaces of the outer and inner band may conform to a radius greater than the distance between the axis of the pivots and the juxtaposed surfaces, so that there would be slightly less resistance to turning on the pivots when bringing the two parts of the ring in nesting position or when releasing them, that is in comparison with the form shown in Fig. VII[a], in which the radii of transverse curvature of the juxtaposed band surfaces is slightly less than the distance from the axis of the ring to the contacting surfaces of the two bands. In Fig. VII[d] I provide the interengaging surfaces either flat or slightly curved at 10 with a very slight rim variation at 11—11, so that the catching or locking effect is accomplished at the edges to close the seam or joint tight and assure accurate positioning, while the inner portion of the juxtaposed surfaces may be made of a slight clearance such as a few ten thousandths or a few thousandths of an inch.

As this article of manufacture can be made readily with precision tools, I can assure with extreme accuracy the relative dimensions of parts, whether the material used is gold, platinum or other metals. Likewise, in all the metals used there is a very slight spring of the metal which with the pressure of fingers in the operation of pivoting the rings is effective with readiness due to the pressure obtainable on the parts, and a simultaneous pressure on opposite sides of the ring assures this snapping of the inner ring into position without causing any undue pressure upon the pivots, so that the pivots may be extremely small, and thereby in no way interfere with the required strength of the rings where the holes are drilled for insertion of the pivots. When snapped together for normal use the interlocking or interengaging surfaces provide for the solidity of the ring as a unit, without any strain on the pivots, but when articulating the inner ring for purposes of observation, which usually would be on rare occasions, the pivots guarantee the holding of the inner ring with its marriage vow positively connected to the outer ring,—throughout life. When the final separation or parting takes place, the inner ring can be turned transverse to the outer ring and a very slight pressure will spring the metal sufficiently to release it from one pivot, so that it can be permanently separated from the outer ring, and thereafter the inward protruding ends of the pivots are filed off and the outer ring remains for the surviving member to the contract as a single ring for future use.

As illustrated, it will be noted that my preferred form has the outer ring band substantially thicker than the inner ring band, and in general the relative radial dimensions are about two-thirds and one-third, but variations of this may be made for any purposes of accommodating the decoration on the outer ring, or for other reasons. While I provide the wedding record engraving preferably on the inner surface of the outer ring where it will be permanently preserved against wear, and I aim in particular to engrave and make voluntarily visible, but at other times well preserved, the essential two sentences of the marriage vow, the outer surface of the inner ring may be used as desired for engraving or secret notation of the wedded couple, or may be left blank for later embellishment. In fact, in the formation of the interengaging bands forming the ring I may simply provide for the assured locking of the lateral edges or the surface near both edges, and may in cases recess the median portion of one of the surfaces, preferably the thicker outer band, with a sufficient recess for the secret preservation of some minute record or item that the contracting parties may wish to preserve in connection with their marriage vow. The inner band has its inner surface rounded at either side as is usual with rings, and in every respect the consolidated ring formation as to section and size may be varied at will and made to conform to desire. While the two-part ring serves the particular purpose of two contracting parties in sealing their marriage vow, occasion may occur for other reasons in adding a third band to the ring in which the intermediate ring is held solidly between the outer and inner bands, while still retaining the structure as hereinafter claimed essential for practical use of the coordination of the two-part ring which is the main subject-matter of my invention.

Rings made in accordance with my invention may be either plain or made of the outer part encrusted with gems, or the outer surface may be fashioned with engraved decoration, or treated in any manner as desired in the realm of decoration to meet the taste of users or the fashions.

While variations may be made in material, structure, and of course in sizes without departing from the spirit of my invention, what I claim and desire to secure by Letters Patent is:

A wedding ring consisting of two separately made parts of relatively different diameter and both having the same width of band each band having a uniform symmetrical formation throughout, pivotal connections positioned diametrically opposite each other between the two bands to hold them permanently together and permit their relative articulation, whereby the outer surface of the inner ring band becomes visible with any engraving thereon readable, and when the two parts are nested the juxtaposed surfaces of the two bands remain invisible with lateral junction of the two bands on each side tight and substantially invisible.

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