

Description

[0001] The present patent application relates to a ring with interchangeable stone. The purpose of the present invention - which has no antecedents to the best of our knowledge - is to provide a ring with high versatility compared to traditional jewels.

[0002] The ring comprises a metal bearing structure (or setting) normally provided with a ring element in which the finger is inserted, under a flat top used to support the stone.

[0003] The characteristic feature of the ring is the possibility of removing the stone set on the top and replacing it with a different stone with analogue structure. With this simple operation, as long as two or more stones are available, the user can change the ornament of the ring - and therefore its esthetical look - as desired. As it is known, the characteristic look of a ring is mainly related to the precious stone set in the ring itself.

[0004] The solution for the realisation of a similar ring makes use of the intrinsic elasticity of the ring element in order to spread apart the top, which features a median cut interrupting its structural continuity.

[0005] This creates two different halves on the top, which act as two jaws of a very small vice and delimit a housing capable of containing a precious stone or a similar manufacture made of noble metals.

[0006] Thanks to the rigidity of the ring element, the two parts of the top according to the present invention remain in mutual contact spontaneously and permanently. For this reason, the stone mounted between the two halves (or jaws) of the top fits in place with no risk of being accidentally removed and, most of all, with no need for additional independent fixing means.

[0007] The ring also makes use of a special lever, which is manually operated in order to spread apart the two halves (or jaws) of the top thanks to the elasticity of the ring element. This allows to release the stone from the grip of the two jaws and replace it with a stone with identical structure, but of different nature and/or colour. The same lever can be used again to bring close the two halves (or jaws) of the top to tighten the new stone.

[0008] For major clarity the description of the present invention continues with reference to the enclosed drawing, which is intended for purposes of illustration and not in a limiting sense, whereby:

- Fig. 1 is an axonometric view of the ring according to the present invention;
- Fig. 2 is an axonometric view of the same ring without stone in the position that allows to replace the stone.

[0009] With reference to the above figures, the ring (1) normally comprises a ring element (2) and a top (3), which centrally features a rectangular housing (4) with the stone (P).

[0010] More precisely, the rectangular housing (4) is

transversally delimited by two special box-shaped edges (4a and 4b), converging downwards and located on the opposite sides at the top of the ring element (2). In operational position, the box-shaped edges (4a and 4b) embrace the transversal sides of the stone (P) and hold the stone in place inside the housing (4).

[0011] The housing (4) is longitudinally delimited by two strips (4c) which horizontally protrude from the internal lateral borders of the transversal box-shaped edges (4a).

[0012] The lower section of the two longitudinal strips (4c) have a concave profile that perfectly matches the border (2a) of the ring element (2), which delimits the hole on each side of the ring.

[0013] With reference to Fig. 1, the free ends of the two longitudinal strips (4c) touch the internal lateral borders of the opposite transversal box-shaped edge (4b) when the ring (1) is ready to tighten the stone (P).

[0014] As mentioned earlier, the top of the ring (1) comprises an opposite pair of jaws, which can be spread apart to tighten or, alternatively, release the stone contained in the housing (4).

[0015] As shown in Fig. 2, each jaw is composed of one transversal box-shaped edge (4a or 4b) and the corresponding pair of horizontal wings (5a or 5b), which are located edgewise and protrude from its internal side.

[0016] The two horizontal wings (5a) protruding from the first box-shaped edge (4a) are jointly fixed against the internal side of the strips (4c), which longitudinally delimit the central housing (4) of the ring (1) according to the present invention. The two horizontal wings (5b) protruding from the second box-shaped edge (4b) are perfectly aligned with the two wings (5a) protruding from the opposite transversal edge (4a), but are independent from the strips (4c).

[0017] Thanks to their perfect alignment, the opposite pairs of wings (5a e 5b) touch when the ring (1) is in the position shown in Fig. 1, that is ready to tighten the stone (P).

[0018] Corresponding arches (6) with downward cavity are soldered on the internal side of the first pair of wings (5a). The length of the arches (6) is higher than the length of the wings (5a) so that their free ends can be located inside the second pair of wings (5b) near the point in which the wings are soldered against the internal side of the transversal edge (4b).

[0019] The free ends of each arch (6) feature a "U-shaped" slot (6a) facing downwards. As Fig. 2 shows, the two arches (6) are joined by means of a crosspiece (6b) exactly mounted at the free ends.

[0020] A pin (7) with horizontal axis is axially mounted at the base of the transversal box-shaped edge (4b) in order to pivot an oscillating lever (8) comprising two arched arms (8a) whose free ends are joined by means of a small cross-piece (8b).

[0021] In the pivoting point of the transversal pin (7), the two longitudinal arms (8a) of the lever (8) feature cams (8c) protruding upwards, each cam being capable

of exactly engaging inside the "U-shaped" slot (6a) at the free ends of the two arches (6).

[0022] In particular, the cams (8c) of the lever (8) engage within their corresponding slots (6a) when the ring (1) is in the normal operation condition shown in Fig. 1, that is ready to tighten the stone (P). 5

[0023] With reference to Fig. 2, the lever (8) can be turned downwards by means of the lateral tab (8d). The movement of the lever (8) determines the counter-rotation of the two cams (8c) that energetically push the internal borders of the slots (6a) of the arches (6). 10

[0024] The interference between the cams (8c) and the internal border of the slots (6a) results in the forced backward movement of the two arches (6) and, consequently, of the pair of wings (5a) against which the arches (6) are soldered. 15

[0025] The backward movement also affects the two longitudinal strips (4c) that are joined to the wings (5a), so that the free ends of the strips move away from the internal lateral borders of the transversal box-shaped edge (5b), as shown in Fig. 2. 20

[0026] This also determines the movement of the first pair of wings (5a) away from the second pair of wings (5b) and the two transversal box-shaped edges (4a and 4b). Obviously, the spreading apart of the two parts of the top of the ring (1) is made possible by the intrinsic elasticity of the ring element (2). 25

[0027] Simultaneously, the transversal sides of the stone (P) are no longer embraced by the two transversal box-shaped edges (5a and 5b) and therefore the stone (P) can be easily removed from its housing (4). 30

[0028] Once this operation has been completed, the lever (8) is turned upwards so that the cams (8c) stop interfering against the internal border of the slots (6a) of the wings (6) and engage again inside them, thanks to the elastic return of the ring element (2). 35

[0029] The interruption of the interference causes the forward movement of the arches (6) and consequently of the wings (5a) to which the arches are soldered. The wings (5a) now touch the opposite wings (5b), while the two transversal box-shaped edges (4a and 4b) move closer, embracing the transversal sides of the stone (P) contained inside the housing (4), thus holding it in place. 40

[0030] As shown in Fig. 1, the lever (8) can be turned upwards until the two arms (8a) touch the concavities of the arches (6) and the lateral tab (8d) perfectly engages within a small seat (9) located under one of the lateral borders of the transversal box-shaped edge (4a). 45

[0031] This description shows the high efficacy of the ring according to the present invention, also in terms of preventing the accidental release of the precious stone (P) while wearing the ring. It is obvious that the presence of the finger inside the ring element (2) absolutely prevents the downward rotation of the lever (8) and therefore the spreading apart of the top of the ring. 50 55

Claims

1. A ring with interchangeable stone, characterised in that it comprises, above the traditional ring element (2), a special top (3) centrally provided with a rectangular housing (4) containing the stone (P), which is transversally delimited by two box-shaped edges (4a and 4b) converging downwards and realised from opposite sides on the top of the ring element (2); it being provided that two strips (4c) with horizontal axis are fixed on the internal lateral borders of the first transversal edge (4a), longitudinally delimiting the housing (4) from opposite sides and internally supporting horizontal wings (5a) placed edgewise and approximately as long as half of the housing (4), which in turn internally support long arches (6) with downward concavity, whose free ends are connected by means of a cross-piece (6b) and located near the opposite transversal edge (4b), featuring "U-shaped" slots (6a); it being also provided that the second transversal box-shaped edge (4b) horizontally supports, on the internal side, two wings (5b) located edgewise and perfectly aligned with the two wings (5a) that horizontally protrude from the first box-shaped edge (4a), having the same length, while a pin (7) with horizontal axis is axially mounted at the base of the second box-shaped edge (4b) in order to pivot a lever (8) formed by a parallel pair of arched arms (8a), whose free ends are joined by means of a cross-piece (8b) and feature, in the pivoting point with respect to the pin (7), cams (8c) capable of exactly engaging, from below upwards, inside the slots (6a) of the arches (6); it being finally provided that the curving of the arms (8a) of the lever (8) allows them to exactly engage against the concavity of the arches (6) and that the lower border of the longitudinal strips (4c) features a concave profile which allows them to exactly engage with the border of the hole of the ring (1).
2. A ring with interchangeable stone, according to claim 1, characterised in that the lever (8) laterally features a tab (8d) capable of exactly engaging inside a small seat (9) located under one of the lateral borders of the first transversal box-shaped edge (4a).

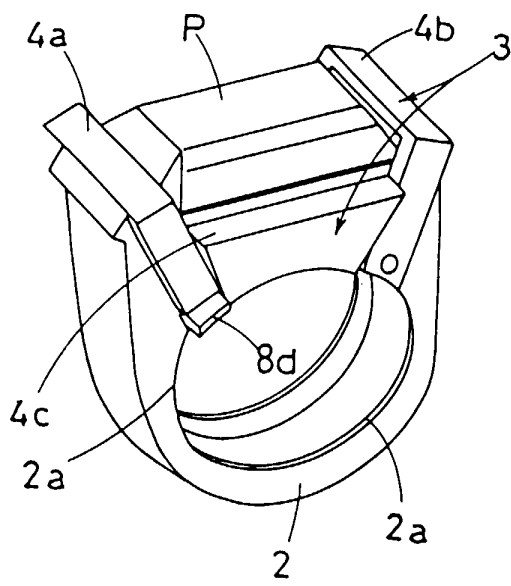


FIG. 1

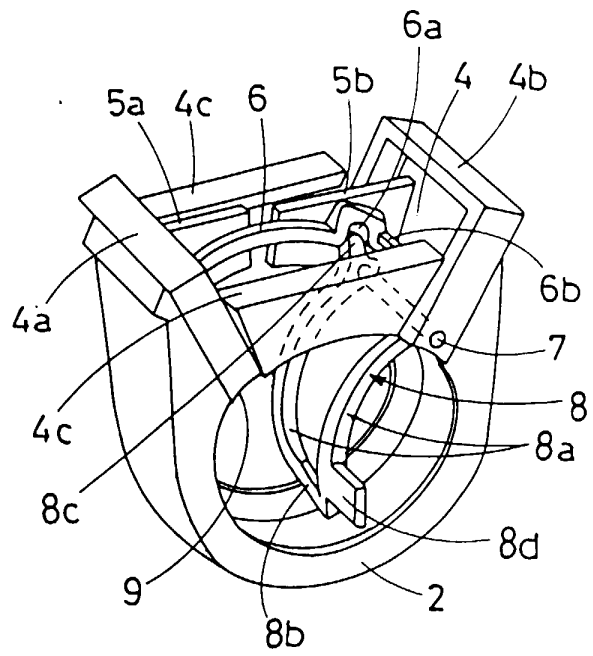


FIG. 2