



(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 158(3) EPC

(43) Date of publication:
10.01.2007 Bulletin 2007/02

(51) Int Cl.:
A44C 17/02 (2006.01)

(21) Application number: **04785924.4**

(86) International application number:
PCT/RU2004/000229

(22) Date of filing: **16.06.2004**

(87) International publication number:
WO 2005/099507 (27.10.2005 Gazette 2005/43)

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

(72) Inventor: **Tarasov, Nikolay Petrovich**
Moscow 109652 (RU)

(30) Priority: **15.04.2004 RU 2004111545**

(74) Representative: **Einsel, Martin**
Patentanwälte,
Einsel & Kollegen,
Jasperalle 1a
38102 Braunschweig (DE)

(71) Applicant: **Tarasov, Nikolay Petrovich**
Moscow 109652 (RU)

(54) **JEWELLERY PROVIDED WITH A REMOVABLE FANCY ELEMENT**

(57) The invention relates to the jewellery and fancy industry, in particular to the structural design of a jewellery piece such as a ring, brooch, bracelet, etc. provided with a removable fancy element, in the preferred embodiment, at least with two interchangeable fancy elements. The inventive jewellery piece is provided with a shaped through hole in the base thereof for passing therethrough

a stem corresponding to the hole shape and comprising a loop of the fancy element pivotally connected thereto. A fixing unit is provided with a blocking element. Said invention makes it possible to substantially extend the assortment of such products and to improve the operating properties, including the fastening security of the removable fancy element.

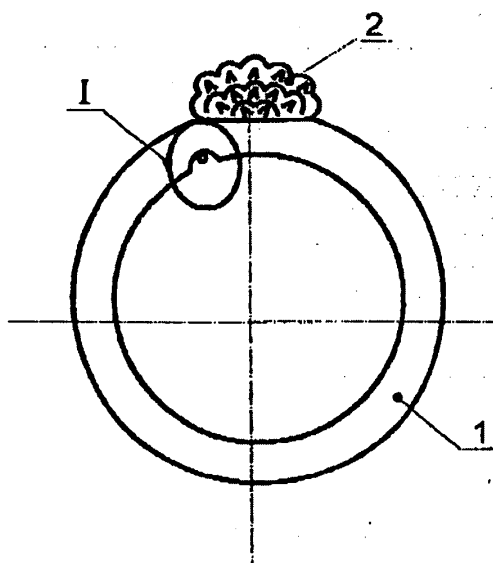


Fig. 1

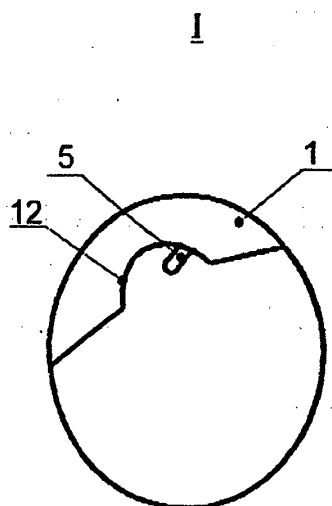


Fig. 2

Description

FIELD OF THE INVENTION

[0001] This invention relates to jewelry or fancy goods, particularly to the design of a piece of jewelry or bijouterie, such as a ring, brooch, bracelet, and so on, which has a detachable ornament.

PRIOR ART

[0002] Prior art inventions include, in particular, "A Setting for a Jewelry Stone of the Cabochon Style Workmanship," which is described in patent RU 2,202,264, class A44C 17/02, April 20, 2003, and "A Jewelry Piece with a Replaceable Ornament," described in patent RU 2,185,766, class A44C 17/04, July 27, 2002. The second of these inventions was chosen as the closest prior art of this invention.

[0003] The closest prior art invention is a ring having at least one detachable ornament fastened to the ring by a pin engaging an L-shaped slot formed in the ring. The drawbacks of the closest prior art invention include low reliability of the detachable ornament fastening on the ring and inconvenience in use, because the ring is designed in such a way that the detachable ornament overhangs part of the ring and may injure the wearer's fingers.

ESSENCE OF THE INVENTION

[0004] The useful effect of this invention consists in improved practical properties and convenience of the detachable ornament piece, in particular, easier replacement of the ornament and more reliable fastening of the ornament to the piece.

The above-mentioned useful effect of this invention is achieved by the following combination of features.

[0005] The jewelry piece comprising at least one replaceable ornament includes a base adapted to be connected to at least one ornament. The base of the piece has at least one through opening, and each ornament has a pin pivotally connected to a hinge. The pin and the hinge can be inserted into the through opening in the base and the pin and/or hinge can swivel about the pin axis for the hinge to be latched to the base.

[0006] The detachable ornament may have several embodiments. For example, in a preferred embodiment the head and pin of the ornament are rigidly coupled together, and the hinge is pivotally mounted on the pin. In another embodiment, the pin is loosely connected to the head of the ornament and swivels together with the hinge pivoted thereto relative to the fixed head. In yet another embodiment, the head and pin are rigidly joined together, and the hinge is pivoted to the pin to be able to swivel about the axis thereof.

[0007] In accordance with the above-mentioned embodiments, the pin and/or hinge of each ornament can

turn to an angle of 90° to allow a more reliable fastening, even though the turning angle may be different. After the ornament or a part thereof has turned, the hinge is latched to the base.

[0008] The hinge of the ornament has a larger width than the pin.

The through opening in the base has preferably a shaped configuration, and the shape of the central part of the opening conforms to the cross-sectional shape of the ornament pin, the length of the opening being equal to the width of the hinge of the ornament. The through opening may have a rectangular shape as well.

A slot is provided in the inner wall of the base near the through opening to receive the latched hinge flush.

[0009] In one embodiment of the device to hold the ornament securely in the slot, a locking projection is provided at one side of the through opening in the base to be joined to the hinge with an interference fit.

[0010] In another embodiment of the device to hold the ornament securely in the slot, a locking recess is provided at one side of the through opening, and the hinge has a projection to be received in said recess.

[0011] In both embodiments of the device, a dent is provided in the inner wall of the base near the locking projection or recess to facilitate capture of the hinge.

[0012] The jewelry piece has at least two interchangeable ornaments.

The base of the jewelry piece is any of the following items: a ring, an earring, a pendant, brooch, bracelet, chain, cufflink, necktie clip, or piercing stud.

The base and the ornament may be designed as complementary parts of a chain or bracelet catch.

[0013] The chain or bracelet may consist of segments, and the base and ornament in this embodiment may be provided on the opposite ends of the segments and be designed as complementary parts of means provided to sequentially connect the segments.

DESCRIPTION OF THE DRAWINGS

[0014] The invention is illustrated in the accompanying drawings, wherein

Fig. 1 shows a general view of a jewelry piece such as a ring;

Fig. 2 shows an enlarged view of the fragment I of the piece shown in Fig. 1;

Fig. 3 shows a jewelry piece without the ornament;

Fig. 4 is a view D of Fig. 3;

Fig. 5 is a cutaway view along the line A-A of Fig. 4;

Fig. 6 shows a first embodiment of the detachable ornament;

Fig. 7 is a view B of Fig. 6;

Fig. 8 is a view of a second embodiment of the detachable ornament; and

Fig. 9 is a view C of Fig. 8.

PREFERRED EMBODIMENT OF THE INVENTION

[0015] The jewelry piece, such as a ring, shown in **Fig. 1** comprises a base 1 and an ornament 2 detachably mounted on base 1. The detachable mounting means comprises a through opening 3 (**Fig. 3**) formed in the ring-shaped base 1, a pin 4, and a hinge 5 of ornament 2 pivotally joined thereto (**Fig. 6**).

Through opening 3 is symmetrical relative to the axes X and Y (**Fig. 4**) and has a shaped configuration. The central part 6 of opening 3 has a larger width than the peripheral parts and matches pin 4 of ornament 2 in shape and size, in particular, the cross-section thereof, and the peripheral parts 7 of opening 3 are narrower than the central part. The total length l of opening 3 is equal to the width l' of pin 4 of the ornament (**Figs. 4 and 6**).

Hinge 5 has a larger width than the width or diameter of pin 4 in the preferred cylindrical embodiment thereof.

A slot 8 is provided in the inner wall of the base under opening 3 to receive an unlatched hinge 5 in the working (latched) position thereof. In one embodiment of the invention, the hinge is latched by a projection 9 formed in slot 8 at one side of through opening 3 (**Fig. 3**).

In another embodiment of the invention, the lower part of a hinge 10 (**Fig. 9**) is provided with a projection 11 to be received in a locking recess (not shown) formed in slot 8, at one side of through opening 3.

The hinge may have any suitable shape; for example, it may be pear-shaped (**Fig. 6**) or rectangular (**Fig. 8**). It may have a curved configuration (**Fig. 7**) to achieve a more accurate matching with the inner configuration of the base of the piece.

[0016] The ends of hinges 5 and 10 are inserted into opposite openings provided in the lower end of pin 4 or in a tubular member joined pivotally or permanently to the free end of said pin. To facilitate manipulation of the device, such as replacing the ornament, the inner wall of the base has a recess 12 (**Figs. 2 and 5**) near the locking projection or recess and, hence, the free end of hinge 5. A single jewelry piece may, its size permitting, carry several removable, interchangeable ornaments 2.

[0017] The design of the device is not confined to the shape or kind of jewelry piece in the form of a ring shown in the drawings. It may also be made in the form of such pieces as earrings, pendant, brooch, bracelet, chain, cufflinks, necktie clip, piercing stud, and many more.

The device operates as follows:

To replace ornament 2 on base 1, the end of hinge 5 is pressed by a finger of the hand or any suitable means to disengage it from projection 9, whereupon ornament 2 as a whole, or pin 4 thereof with hinge 5, or hinge 5 only,

is turned clockwise or counterclockwise to an angle of 90° so as to align the plane of the hinge with the plane of opening 3, and ornament 2 is removed from the opening. A new ornament is inserted into the base in a reverse order, and ornament 2 is safely latched in base 1 by clicking movable hinge 5 and projection 9 with a light interference fit to make certain that the device does not open unintentionally.

The slot provided in the inner wall of the base to receive the fastening elements of the device flush obviates discomfort to the wearer, particularly when the piece (like a ring or piercing stud) is in contact with the body.

COMMERCIAL APPLICABILITY

[0018] The claimed design predominantly for a jewelry piece allows interchangeable ornaments to be fastened safely on the piece and, by virtue of this fact, prevents unintentional disengagement, and damage or loss thereof as a result, and permits a majority of existing jewelry pieces to be modified (changed) quickly and simply at a commercial manufacturing facility or at a small jeweler's shop. Besides, the range of jewelry and bijouterie pieces is expanded considerably.

Claims

1. A jewelry piece having at least one interchangeable ornament, comprising a base attachable to at least one ornament, wherein the base is provided with at least one through opening, and each ornament has a pin pivotally joined to a hinge, the pin and the hinge being adapted to engage the through opening of the base and turn each separately or jointly about the axis of the pin, and the hinge being then latched to the base.
2. A jewelry piece of claim 1, wherein the pin and/or hinge of each ornament can turn to an angle of 90° .
3. A jewelry piece of claim 1, wherein the hinge is wider than the pin.
4. A jewelry piece of claim 3, wherein the through opening of the base has a shaped configuration, the shape of the central part of the opening matching the cross-sectional shape of the pin of the ornament and the length of the opening being equal to the width of the hinge of the ornament.
5. A jewelry piece of claim 1, wherein the inner wall of the base is provided near the through opening with a slot to receive a locked hinge flush.
6. A jewelry piece of claim 5, wherein the slot is provided at one side of the through opening with a locking projection to be engaged by the hinge with an inter-

ference fit.

7. A jewelry piece of claim 5, wherein the slot has a locking recess at one side of the through opening and the hinge is provided with a projection to be received in said recess. 5
8. A jewelry piece of claim 6 or 7, wherein the inner wall of the base is provided with a dent near the locking projection or recess for easy capture of the hinge. 10
9. A jewelry piece of claim 1, wherein said jewelry piece has at least two interchangeable ornaments.
10. A jewelry piece of claim 1, wherein said base is a ring, an earring, a pendant, brooch, bracelet, chain, cufflink, necktie clip or piercing stud. 15
11. A jewelry piece of claim 10, wherein said base and said ornament constitute complementary parts of a latch for a chain or bracelet. 20
12. A jewelry piece of claim 10 or 11, wherein said chain or bracelet are comprised of segments, and said base and ornament are provided at the opposite ends of the segments and constitute complementary parts of means serving to sequentially join said segments. 25

30

35

40

45

50

55

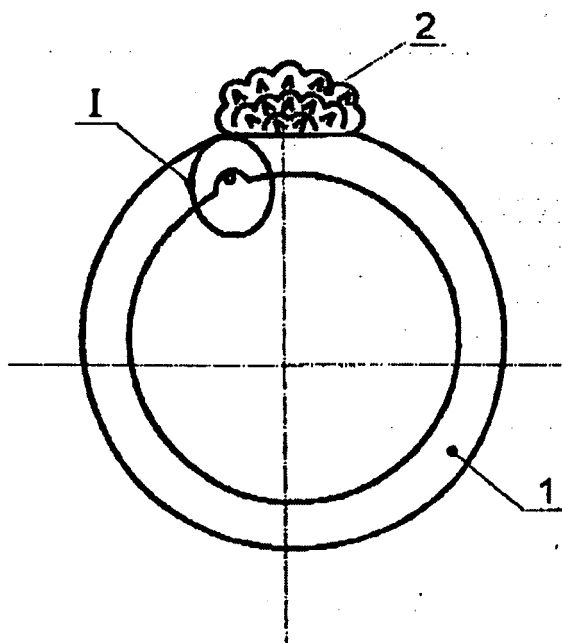


Fig. 1

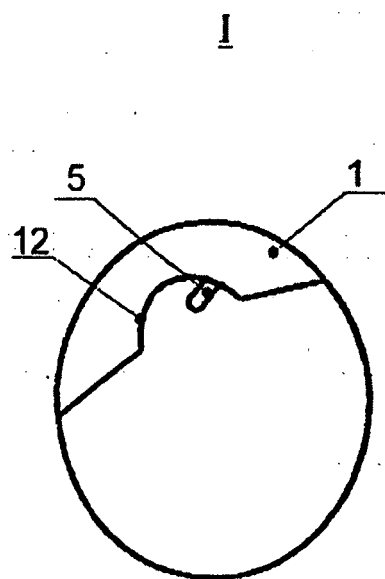


Fig. 2

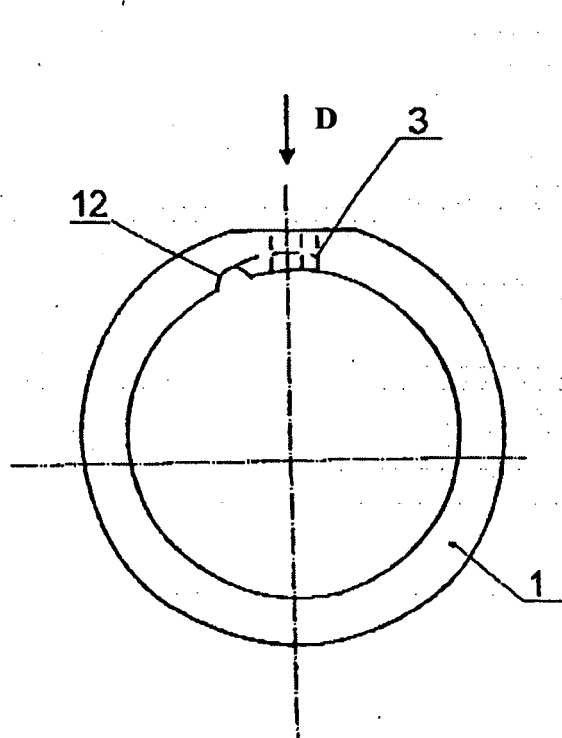


Fig. 3

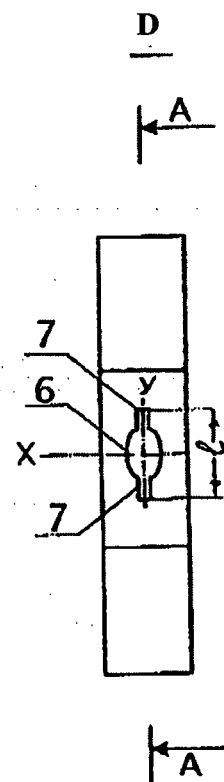


Fig. 4

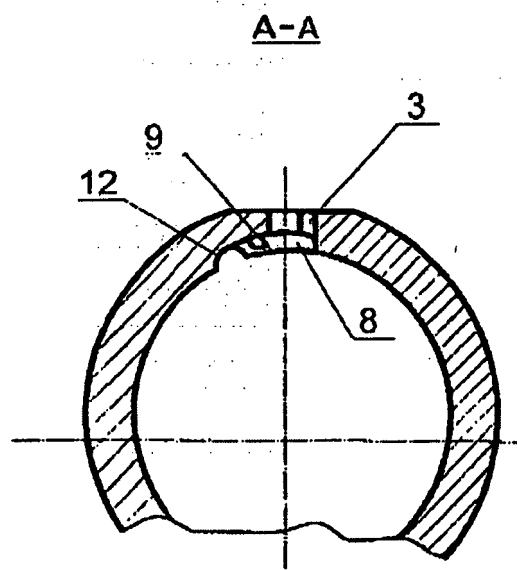


Fig. 5

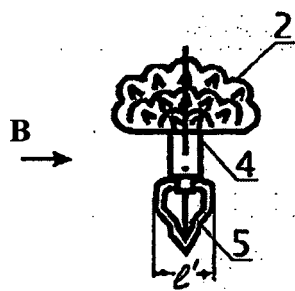


Fig. 6



Fig. 7

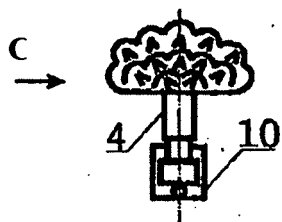


Fig. 8

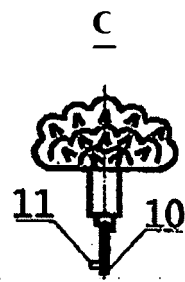


Fig. 9

INTERNATIONAL SEARCH REPORT

International application No.

PCT/RU 2004/000229

| | | |
|---|--|--|
| A. CLASSIFICATION OF SUBJECT MATTER | | A44C 17/02 |
| According to International Patent Classification (IPC) or to both national classification and IPC | | |
| B. FIELDS SEARCHED | | |
| Minimum documentation searched (classification system followed by classification symbols) | | |
| A44C 1/00, 7/00, 9/00, 11/00, 13/00, 15/00, 17/00-17/04, 25/00, 27/00 | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched | | |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | FR 2814043 A1 (LUMET MICHEL PAUL JACQUES) 22. 03. 2002, page 1, lines 4-6, the abstract, the drawings | 1-12 |
| A | RU 2185766 C2 (LE KLIP KONSEPT LLS) 27.07.2002, the abstract, the drawings | 1-12 |
| A | US 5456095 A (DAVID TAWIL et al.) 10. 10. 1995, the abstract, the drawings | 1-12 |
| A | WO 1996/033633 A1 (HURON, DIDIER et al.) 31. 10. 1996, the abstract, figure 1 | 1-12 |
| A | FR 2774268 A1 (LUMET MICHEL PAUL JACQUES) 06. 08. 1999, the abstract, the drawings | 1-12 |
| <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex. | | |
| * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family | | |
| Date of the actual completion of the international search 29 November 2004 (29. 11. 2004) | | Date of mailing of the international search report 09 December 2004 (09. 12. 2004) |
| Name and mailing address of the ISA/ Facsimile No. | | Authorized officer Telephone No. |

Form PCT/ISA/210 (second sheet) (July 1992)

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- RU 2202264 [0002]
- RU 2185766 [0002]