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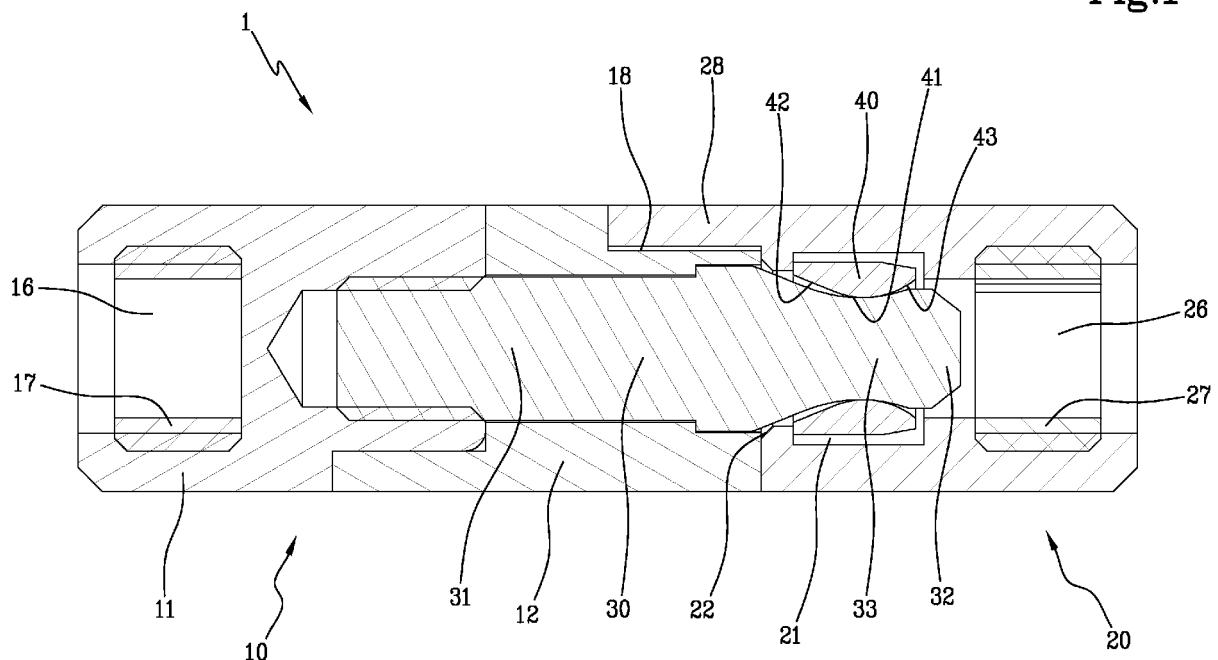
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(54) **REVERSIBLE JOINT FOR COSTUME JEWELLERY ELEMENTS, JEWELLERY ELEMENTS AND THE LIKE**

(57) The present invention relates to a reversible joint for fastening costume jewellery elements, comprising a reversible interlocking mechanism, in particular by means of the insertion of a pin, included in a first section

of the joint and insertable inside a bearing arranged inside an engagement seat included in a second section of the joint.

Fig.1



Description

[0001] The present invention relates to a reversible joint for fastening costume jewellery elements, jewellery elements and the like, where the joint is adapted to connect, respectively, to a first end portion and a second end portion of a costume jewellery element or jewellery element or the like by means of a reversible interlocking mechanism.

[0002] In the field of costume jewellery, jewellery and the like, the known art is full of reference products for a variety of solutions concerning the joints connecting the ends of elements such as necklaces, bracelets, anklets and the like. Such joints have the purpose of mutually fixing the two ends so as to arrange such elements around the wrist, neck or ankles of the end users.

[0003] Among the traditional fastening systems of the above-mentioned elements, fasteners are chosen such as to ensure a predetermined strength and a low risk of accidental opening. Among the various types of fasteners, clasps and snap hook closures are among the most preferred. However, such fasteners, in the case of small costume jewellery items, lead to difficulties for the end users in the operation of connecting or disconnecting the two ends of the costume jewellery element. In particular, the small size makes it difficult to manipulate the fastening joints, often causing end users frustration when putting on or taking off a given costume jewellery element.

[0004] In the case of necklaces, for example, a user could need the help of a mirror or the assistance of a second person to be able to correctly manipulate the fastening of the costume jewellery element. In the case of bracelets, a user would instead need the assistance of a second person as it is necessary to use both hands to manipulate the fastening. Such disadvantages can also be found in other types of traditional fastenings beyond those mentioned above.

[0005] Recently, a number of solutions have emerged in the known art which propose joints for costume jewellery elements and jewellery elements characterised in that the items can be closed/opened with moderate ease. In particular, European patent EP3267831 proposes costume jewellery elements characterised by the sequence of a set of interconnected modules, mutually assembled by a snap-fit connection system. A snap-fit connection is understood as a male-female type joint, where the male portion generally comprises an extending or protruding member which is received in a special female seat, and such a male portion is held in the engaged position by means of forces counteracting the release by exploiting friction and/or elastic mechanical interference from the female portion.

[0006] Always according to patent EP3267831, each module is characterised by the presence of a pin, having a rounded head mounted on a neck, where the cross-sectional diameter of the head is greater than the cross-sectional diameter of the neck. The pin is connected to

the surface of the module and can be axially engaged to an engagement seat inside the body of a second module, capable of receiving the pin. The engagement of the pin inside the seat is maintained stable because the engagement seat has an inlet segment with a respective inlet hole, the diameters of which are smaller with respect to the cross-sectional diameter of the head but have geometries such as to make them flexibly radially expandable during the insertion of the head.

[0007] Once the head passes beyond the inlet segment and is received inside the engagement seat, the hole of the inlet segment returns to the starting value around the neck of the pin. The elastic force exerted on the inlet segment is calibrated so as to prevent the rounded head of the pin from unintentionally exiting from the engagement seat.

[0008] Each module comprises a pin and an engagement seat, respectively, where the engagement seat is arranged diametrically opposite the pin to the module body. Such an arrangement allows a concatenation of modules to obtain closed chains of different sizes, which can be worn as bracelets, necklaces, anklets, etc.

[0009] The main advantage of such a solution would be in the ease with which an end user can engage two modules, a manual compression between two modules being sufficient, in particular so that the pin of a first module engages inside the engagement seat of a second module. Similarly, a traction of sufficient intensity is sufficient for two modules to disconnect. Potentially, a user has the possibility of opening and closing the chain at any connecting point between the modules, having a costume jewellery element which is easy to put on, easy to take off and easy to modify due to the interchangeability of the modules forming the chain.

[0010] For example, a connector configured to connect two ends of a necklace is known from JP 2009 000216: such a connector comprises a female element fixed to one end of the necklace and a male element fixed to the other end of the necklace. An annular spacer can be interposed between the male element and the female element for decorative purposes or for adjusting the gap, and moreover a convex portion is formed on one side of the male element. An engagement groove is formed in the centre of the convex portion.

[0011] Also known from US 1 829 857 is a chain connector comprising a pair of connecting elements, each of which has a hollow body: a first connecting element comprises a male connecting element with an enlarged head and a convex segment extending axially from a concave wall, while a second connecting element comprises a cavity intended to receive the head and a spring assembly arranged at the inlet of the cavity, shaped specularly concave to the concave wall, in which such a spring assembly is configured to close around the convex segment.

[0012] Disadvantageously, the known solutions presented above have several negative aspects.

[0013] In particular, a first disadvantage results from

the fact that the materials chosen to establish said modules must have predetermined mechanical features, in order for the structural integrity of the module chain to be maintained.

[0014] In particular, in order to ensure the structural integrity of the module chain, the modules must be sufficiently strongly coupled to avoid accidental openings along the chain. Such a risk is conditioned by the presence of a multiplicity of connections between the modules, significantly increasing the probability of accidental opening. For such a reason, the solution favours a high ratio of the size of the rounded head diameter with respect to the diameter of the hole of the housing seat, so as to reinforce the seal of the various couplings and prevent the accidental opening thereof. However, such a choice can make the operation of inserting the head in the housing rather difficult, requiring a high manual force for insertion and resulting in an unpleasant effect for the end user.

[0015] Additionally, the solution appears to be formed such that if the pin breaks, the entire module must be replaced. For such a reason, the present solution has the module body preferably made of metallic materials, so as to increase the mechanical strength and minimise the risk of breakage. Other materials, such as hard plastic, can also be used but have less mechanical strength. Hard but fragile materials, such as ceramics or other minerals, are instead totally unsuitable.

[0016] It is therefore a technical task of the present invention to provide a reversible joint for a costume jewellery element or jewellery element or the like which is/are capable of overcoming the drawbacks in the known art of both the traditional and alternative systems, such as the system cited in patent EP0326783.

[0017] An object of the present invention is therefore to provide a reversible joint for a costume jewellery element, jewellery element or the like, adapted to connect by means of an interlocking mechanism respectively a first and a second end of a body of a costume jewellery element such as to ensure an easy opening and closing by the end user, in particular in the case of small costume jewellery elements.

[0018] A further object of the present invention is to provide a reversible joint for a costume jewellery element, jewellery element or the like characterised by the compatibility with bodies of costume jewellery, jewellery or the like having shapes and structures traditionally used in the field of costume jewellery, jewellery or the like.

[0019] A further object of the present invention is to provide a reversible joint for a costume jewellery element, jewellery element or the like characterised by the modular constitution of the joint itself, in which the various components can be easily and reversibly connected to each other, facilitating both the assembly and repair of the joint, as well as the possibility of using different types of functionally suitable materials for each modular element of the joint.

[0020] The object of the present invention further in-

cludes a simple and effective method for assembling a reversible joint for a costume jewellery element, both with regard to assembly and with regard to the replacement of the respective components of such a joint.

5 **[0021]** The specified technical task and the specified objects are substantially achieved by a reversible joint for a costume jewellery element, jewellery element or the like comprising the technical features set forth in one or more of the appended claims.

10 **[0022]** In particular, a reversible joint is described for fastening costume jewellery elements, jewellery elements or the like, in which the joint is adapted to respectively connect a first and a second end portion of a costume jewellery element or jewellery element or the like by means of a reversible interlocking mechanism, in particular, by means of the insertion of a pin, included in a first section of the joint, inside a bearing, arranged inside an engagement seat included in a second section of the joint.

20 **[0023]** Further features and advantages of the present invention will become clearer from the indicative, and therefore non-limiting, description of a preferred but non-exclusive form of a reversible joint for costume jewellery elements, jewellery elements or the like.

25 **[0024]** Such description will be set forth herein below with reference to the accompanying drawings, provided for merely indicative and therefore non-limiting purposes, wherein:

- 30 - figure 1 shows a view of a longitudinal section of the joint according to the present invention,
- figure 2 shows an overall axonometric view of the first section of the joint;
- figure 3 shows an overall axonometric view of the second section of the joint;
- 35 - figure 4 shows an axonometric view of an interlocking bearing used in the second section of the joint;
- figure 5 shows a top view of the interlocking bearing depicted in figure 4;
- 40 - figure 6 shows a view of a longitudinal section of the interlocking bearing depicted in figure 4 along the cutting plane "VI" depicted in figure 5;

45 **[0025]** With reference to the appended drawings, a reversible joint for costume jewellery elements or jewellery elements in accordance with the present invention, hereinafter referred to simply as "costume jewellery element", has been designated 1.

50 **[0026]** The joint 1 is adapted to respectively connect a first end portion and a second end portion of a costume jewellery element (not depicted as not the subject matter of the present invention).

55 **[0027]** The joint 1 comprises a first section 10 and a second section 20 which are reversibly connectable by means of an interlocking mechanism, i.e., each having respectively at least one male-female mutual coupling member, in which the female member reversibly receives and retains the male member therein by friction and/or

elastic mechanical interference.

[0028] The appended drawings illustrate a preferred embodiment in which each among the first section 10 and the second section 20 have only one mutual coupling member, respectively; however, different embodiments can provide for several such mutual coupling members thereof.

[0029] In the present embodiment illustrated in the appended drawings, the joint 1 has a substantially cylindrical body, but in alternative embodiments it can also provide different geometries.

[0030] The first section 10 has at a longitudinal end a male coupling member in the form of a connecting pin 30. The connecting pin 30 comprises a main body 31, a rounded and/or longitudinally concave head 32 and a convex segment 33.

[0031] In particular, the convex segment 33 interposes itself as a connection between the rounded head 32 and the main body 31.

[0032] Overall, the coupling pin extends according to an elongated geometry, preferably axial-symmetric.

[0033] The rounded head 32 has a rounded concave geometry, sized so as to have a cross-sectional diameter which is always larger with respect to the minimum cross-sectional diameter of the convex segment 33. As the head 32 is arranged adjacent to the convex segment 33, the overall geometry of the transverse shape results in an initial bulge having an inflection and naturally opening into a narrowing, coinciding with the convex segment 33 itself, later widening again to merge into the main body 31 of the pin 30.

[0034] In the present preferred but not exclusive embodiment, the pin 30 is arranged axially inside said first section 10. In particular, the main body 31 is entirely received inside the first section 10, while the convex segment 33 and the rounded head 32 are instead arranged entirely externally.

[0035] The first section 10 can consist of a single body or a plurality of components.

[0036] According to the embodiment illustrated in the present drawings, the first section 10 consists of a first subsection 11 and a second subsection 12.

[0037] The two subsections 11 and 12 are arranged adjoining and receiving the main body 31 of the pin 30. In particular, the main body 31 has a fastening 34, preferably threaded or interlocking at a corresponding connecting zone 13 of the first subsection 11, allowing a firm connection of the pin to the first section 10. Such a fastening 34 is situated at the end of the main body 31 which is distal with respect to the convex segment 33 and the head 32. The second subsection 12 is wrapped around the main body 31. The second subsection 12 longitudinally contacts the first subsection 11 at one end and allows the exit of the head 32 and the convex segment 33 at the opposite end.

[0038] With reference to figure 1, according to the present non-exclusive embodiment, the pin 30 has a stepped segment 35 on the portion of the main body 31

proximal to the convex segment 33. The stepped segment 35 extends projecting transversely with respect to the remaining portion of the main body 31. The stepped segment 35 engages, compatibly in shape, with a corresponding annular section 14 inside the second subsection 12, keeping the second subsection 12 in position and adhering against the first subsection 11.

[0039] The second section 20 has a substantially cylindrical body having a female member comprising an engagement seat 21 receiving said pin 30 of the first section 10.

[0040] The engagement seat 21 is arranged inside the second section 20. In particular, the second section 20 comprises an opening 22 at a first longitudinal end which puts the engagement seat 21 in communication with the outside.

[0041] In the embodiment illustrated in the present drawings, the engagement seat 21 and the corresponding opening hole 22 are arranged axially with respect to said second section 20 such that they are capable of axially receiving the pin 30 and permitting an axial connection between said first section 10 and the second section 20 of the joint 1.

[0042] The housing seat 21 comprises an elastic bearing 40 therein, which is reversibly inserted. Preferably, the shape of the bearing 40 is cylindrical or annular or tubular around an axis "A".

[0043] The geometry of the engagement seat 21 substantially follows that of the bearing 40, wrapping entirely therearound except for the hole 22, retaining it therein and preventing it from accidentally exiting.

[0044] The bearing 40 has an inner cavity 41, preferably extending around the axis "A", and in which said pin 30 can be reversibly inserted axially.

[0045] The cavity 41 is preferably pass-through with respect to the bearing 40, comprising an inlet portion 42 and an outlet portion 43. The inlet portion 42 is aligned with the opening 22 of the engagement seat 21. The pin 30 is capable of being reversibly inserted internally along the axis "A" and along the entire length of the inner cavity 41 of the bearing 40, preferably emerging beyond the outlet portion 43. The inserted pin 30 is held in position by elastic mechanical interference with the cavity 41 of the bearing 40. In particular, at least the outlet portion 43 of the cavity 41 is capable of elastically deforming, allowing the bearing 40 to wrap around the head 32 and the intermediate segment 33 of the pin 30.

[0046] The diameter of the outlet portion 43 is smaller than the diameter of the inlet portion 42.

[0047] The retention in position of the pin 30 in the engagement seat 21 is ensured on the one hand by the choice of a specific range of values both of the dimensional ratio between the cross-sectional diameter of the head 32 and the cross-sectional diameter of the inner cavity 41 of the bearing 40 and of the dimensional ratio between the cross-sectional diameter of the convex segment 33, and in particular the minimum cross section of the convex segment 33, and the diameter of the inner

cavity 41 of the bearing 40.

[0048] In particular, the dimensional ratio of the cross-sectional diameter of the head 32 to the cross-sectional diameter of a minimum section of the inner cavity 41 of the bearing 40 is comprised between 1.25 and 1.5 with a tolerance of 5%. Instead, the dimensional ratio between the cross-sectional diameter of the minimum section of the convex segment 33 and the cross-sectional diameter of the minimum section of the inner cavity 41 is comprised between 0.95 and 1.25 with a tolerance of 5%.

[0049] Such ratios define limiting ranges derived from the consideration of the possible extensions of the overall geometric shape of the head 30 and convex segment 33 in relation to the dimensions of the inner cavity 41, advantageously allowing for a good compromise between the necessary insertion/disconnection force and the stability of the joint 1 in the event of accidental openings.

[0050] The inner cavity 41 can be irregularly shaped, but preferably, it has a tapered shape. Tapered is intended as a geometric extension where the inner cavity 41 is progressively reduced in section. Such a reduction can be linear, curvilinear, broken or other.

[0051] Consequently, the inner cavity 41 has the inlet portion 42 characterised by a larger diameter with respect to the diameter of the outlet portion 43.

[0052] Since the diameter of the outlet portion 43 is smaller than the inlet portion 42, the insertion of the head 32 causes an elastic deformation of the inner cavity 41, in particular of at least said outlet portion 43, at least during the crossing of the outlet portion 43 by the head 32.

[0053] The engagement between the bearing 40 and the pin 30 results from the equilibrium position achieved by the arrangement of the head 32 and the convex segment 33 inside the inner cavity 41. In particular, the engagement position is kept stable due to the geometry of the convex segment 33 where the bearing 41 wraps around, mechanically interfering with the head 32 and preventing the head 32 from freeing itself.

[0054] The convex segment 33 can have a more or less marked longitudinal convexity, such that it accentuates the overall longitudinal concavity of the head 32. Additionally, the tapered shape and the outlet portion 33 with a smaller diameter with respect to the diameter of the inlet portion 32 allow an easier insertion of the pin 30 inside the bearing 40 with respect to the disengagement, advantageously differentiating the force required for insertion and disengagement.

[0055] The bearing 40 has a crooked slit 44, extending between the inlet portion 42 and the outlet portion 43 of the inner cavity 41, which facilitates the elastic deformation of the bearing 40 and the wrapping of the bearing 40 around the head 32 and the intermediate segment 33. In particular, such a slit 44 preferably results in a continuous interruption along the bearing 40, allowing the bearing 40 to progressively adapt and deform, when the pin 30 is sliding inside the cavity 41, and facilitating the wrapping of the bearing around the head 32 and the intermediate segment 33.

[0056] A further important factor of the present invention is the set of chosen materials forming the various components of the joint, in particular the head 32 and the bearing 40.

[0057] In particular, for the head 32, materials chosen from metal and rigid plastic were preferred, i.e., materials characterised by stiffness and high mechanical strength under static and fatigue conditions.

[0058] Stiffness refers to materials characterised by resistance to an external stress, and in particular the ability of a solid specimen to resist an external bending or torsion stress.

[0059] Static mechanical strength refers to the ability of a specimen to resist static mechanical stress.

[0060] Mechanical fatigue strength is defined as the maximum stress which can be withstood by a specimen for a defined number of cycles without breaking the specimen.

[0061] In other words, the pin 30 is formed so that it has a certain ability to withstand stress without breaking both in the engaged position and during insertion and disengagement inside the bearing 40.

[0062] For the bearing 40, samples made of materials chosen from resins and plastics were preferred, with a particular preference for acetyl or POM C resins, i.e., materials characterised by stiffness, resilience and high mechanical fatigue strength.

[0063] Resilience refers to the elastic resistance of a specimen to mechanical stress, or more precisely, the ability to absorb energy and release it elastically while maintaining the geometry thereof.

[0064] In other words, the bearing 40 is formed so that it is elastic enough to adapt to the shapes and dimensions of the head 32 and convex segment 33, but at the same time rigid enough to create enough mechanical interference to prevent the accidental exit of the pin 30.

[0065] Additionally, the bearing 40 must have a predetermined ability to withstand numerous engagement cycles with the aforementioned pin 30. Advantageously, the combination of the above-mentioned features allows to achieve a resistance to opening which is sufficient to prevent accidental opening but at the same time does not require a great deal of manual effort on the part of end users to perform both insertion and disengagement.

[0066] The joint 1 is modularly constructed so that each component can be easily and reversibly assembled and possibly replaced.

[0067] The pin 30 is reversibly fixed or fixable to the first section 10 of the joint 1. Such a feature allows a pin of a different material with respect to the material chosen for the joint 1 to be used.

[0068] Advantageously, a pin 30 consisting of a first material which is more resistant to mechanical stress can be coupled with the first section 10 of the joint 1, made of a second material which is different with respect to the material used for the pin 30.

[0069] In particular, in the event of breakage due to excessive mechanical stress, the pin 30 can be replaced

without having to replace the entire first section 10 of the joint 1.

[0070] Similarly, the bearing 40 is also reversibly fixed or fixable to the second section 20 of the joint 1. Consequently, the bearing 40 can be made of a different material with respect to the second section 20 of the joint 1 and suitably replaceable if necessary without necessarily having to replace the entire section 20 of the joint 1.

[0071] The first section 10 and the second section 20 of the joint 1 can be provided consisting of materials with low mechanical performance but more aesthetically pleasing. It can be provided to exploit not only metals and hard plastics but also less mechanically resistant materials such as ceramics, minerals or the like. The first section 10 and the second section 20 must only be able to hold the pin 30 and the bearing 40 firmly in place, respectively.

[0072] The first section 10 and the second section 20 of the reversible joint 1 have a first seat 16 and a second seat 26, respectively, adapted to receive and hold the respective end portions of the costume jewellery element. The first seat 16 is arranged at the end of the first section 10 which is distal with respect to the end comprising the head 32. The second seat 26 is arranged on the end which is distal with respect to the end comprising the opening 22 for the engagement seat 21.

[0073] In particular, the first seat 16 and the second seat 26 correspondingly have a first retaining portion 17 and a second retaining portion 27 intended to engage with the costume jewellery element in various manners, such as, but not limited to, by means of threaded coupling or mechanical interference fit. The costume jewellery element to which the joint 1 connects can advantageously feature shapes, structures and designs traditionally used in the field such as chain bodies, rope bodies, wire bodies, leather bodies and others.

[0074] The reversible joint 1 can have at least one additional hooking mechanism, placed either on the first section 10 or on the second section 20 or on both, with the purpose of further reinforcing the fastening of the joint to prevent accidental opening.

[0075] Preferably, such an additional hooking mechanism comprises an additional hooking element 28 in the form of a tab made in a single piece and arranged longitudinally as an extension to one between the first section 10 and the second section 20. Such an additional hooking element 28 can be coupled to a hooking seat 18 arranged on the corresponding opposite section.

[0076] In the embodiment illustrated in the present illustrations, it has been chosen to depict such an additional hooking element 28 arranged on the second end 20. The hooking seat 18 is instead arranged on the first end 10. In particular, such a hooking seat 18 is arranged on the surface of the section which is opposite and counter-shaped to the geometry of the additional hooking element 28. When coupling the first section 2 with the second section 3 of the joint 1, the additional hooking element 28 is inserted, preferably transversely, in the coupling

seat 18.

[0077] The additional hooking element 28 and the hooking seat 18 exert mutual retention by mechanical interference of the corresponding contact surfaces and/or by means of the choice of using specific geometries which hinder decoupling.

[0078] The hooking element 28 and the hooking seat 18 can comprise a further retaining mechanism not illustrated in the present drawings.

[0079] Given a first contact surface 19 and a second contact surface 29, which correspondingly belong to the hooking seat 18 and the additional hooking element 28, the first contact surface 19 has a plurality of reliefs while the second contact surface 29 in turn has a plurality of grooves compatible with the aforementioned reliefs. During the coupling of the first section 10 with the second section 20 of the joint 1, the reliefs are engaged or reversibly engaged with the grooves supporting the retention and maintenance of the coupling position between the hooking seat 18 and the additional hooking element 28, and thus between the first section 10 and second section 20.

[0080] An assembly method in accordance with the present invention concerning a reversible joint 1 for a costume jewellery element or the like is further presented.

[0081] Such a method comprises, the arrangement of a costume jewellery element and the arrangement of a joint 1, having a first section 10 and a second section 20, comprising a pin 30 and an elastic bearing 40 respectively, and made in accordance with the present description.

[0082] Said pin 30 is fixed to the first section 10 of the joint 1. The elastic bearing 40 is fixed inside the appropriate housing seat 21 of the second end 20 of the joint 1. The first section 10 is fixed to a first end portion of the body of the costume jewellery element. The second section 20 is fixed to a second end portion of the body of the costume jewellery element. The joint 1 is then closed by means of the insertion of the pin 30 in the appropriate housing seat 21, and in particular inside the cavity 41 of the elastic bearing 40.

Claims

1. Reversible joint (1) for fastening costume jewellery elements, jewellery elements or the like comprising:

- a first section (10), connected or connectable to a first end portion of a costume jewellery element, said first section (10) comprising a connecting pin (30) having a main body (31), a rounded and/or longitudinally concave head (32) and a convex segment (33) defined between said head (32) and said main body (31), said head (32) having a cross-sectional diameter larger than a minimum cross-sectional diam-

eter of said convex segment (33); and
 - a second section (20), connected or connect-
 able to a second end portion of a costume jew-
 ellery element, said second section (20) com-
 prising an engagement seat (21) adapted to
 house said connecting pin (30) and comprising
 an elastic bearing 40 having an inner pass-
 through cavity (41);
 wherein said first section (10) and said second
 section (20) may be reversibly connected by in-
 troducing said pin (30) into said bearing (40),
 said pin (30) being held in position within said
 bearing (40) by mechanical interference;

characterised in that:

- said cross-sectional diameter of said head
 (32) and a cross-sectional diameter of a
 minimum section of said pass-through cav-
 ity (41) have a dimensional ratio ranging
 from 1.25 to 1.5 with a tolerance of 5%;
- said cross-sectional diameter of a mini-
 mum section of said convex segment (33)
 and the cross-sectional diameter of a mini-
 mum section of said inner pass-through
 cavity (41) have a dimension ratio ranging
 from 0.9 to 1.25 with a tolerance of 5%; and
- said inner pass-through cavity (41) has an
 inlet portion (42) and an outlet portion (43),
 wherein a diameter of said outlet portion
 (43) is smaller than a diameter of said inlet
 portion (42), and wherein while introducing
 said head (30) within said bearing (40), at
 least said outlet portion (43) is elastically
 deformable.

2. Joint according to claim 1, wherein said bearing (40)
 has a crooked slit (44) extending between said inlet
 portion (42) and said outlet portion (43) of said cavity
 (41).

3. Joint according to one or more of the preceding
 claims, wherein said pin (30) is made of metal or
 plastic material.

4. Joint according to one or more of the preceding
 claims, wherein said bearing (40) is made from
 acetal resin or "POM C".

5. Joint according to one or more of the preceding
 claims, wherein said pin (30) is reversibly fixed or
 fixable to said first section (10) of said joint (1).

6. Joint according to one or more of the preceding
 claims, wherein said bearing (10) is reversibly fixed
 or fixable to said second section (20) of said joint (1).

7. Joint according to one or more of the preceding
 claims, wherein said first section (2) and said second

section (3) of said joint (1) respectively have a first
 seat (16), opposite said pin (30), and a second seat
 (26), opposite said engagement seat (21), adapted
 to receive and retain respective end portions of said
 costume jewellery element.

8. Joint according to one or more of the preceding
 claims, wherein said second section (20) has an ad-
 ditional hooking element (26) and wherein said first
 section (2) has a hooking seat (16), preferably coun-
 ter-shaped to said hooking element (16), adapted to
 receive said hooking element (26).

9. Method for assembling costume jewellery elements
 or the like, comprising the following steps:

- arranging a costume jewellery element;
- arranging a reversible joint (1) according to one
 or more of the preceding claims from 1 to 8;
- attaching said first section (10) to a first end
 portion of said costume jewellery element;
- attaching said second section (20) to a second
 end portion of said costume jewellery element;
 and
- introducing said pin (30) by snap-fit into said
 housing seat (21) and inside said elastic bearing
 (40).

Fig.1

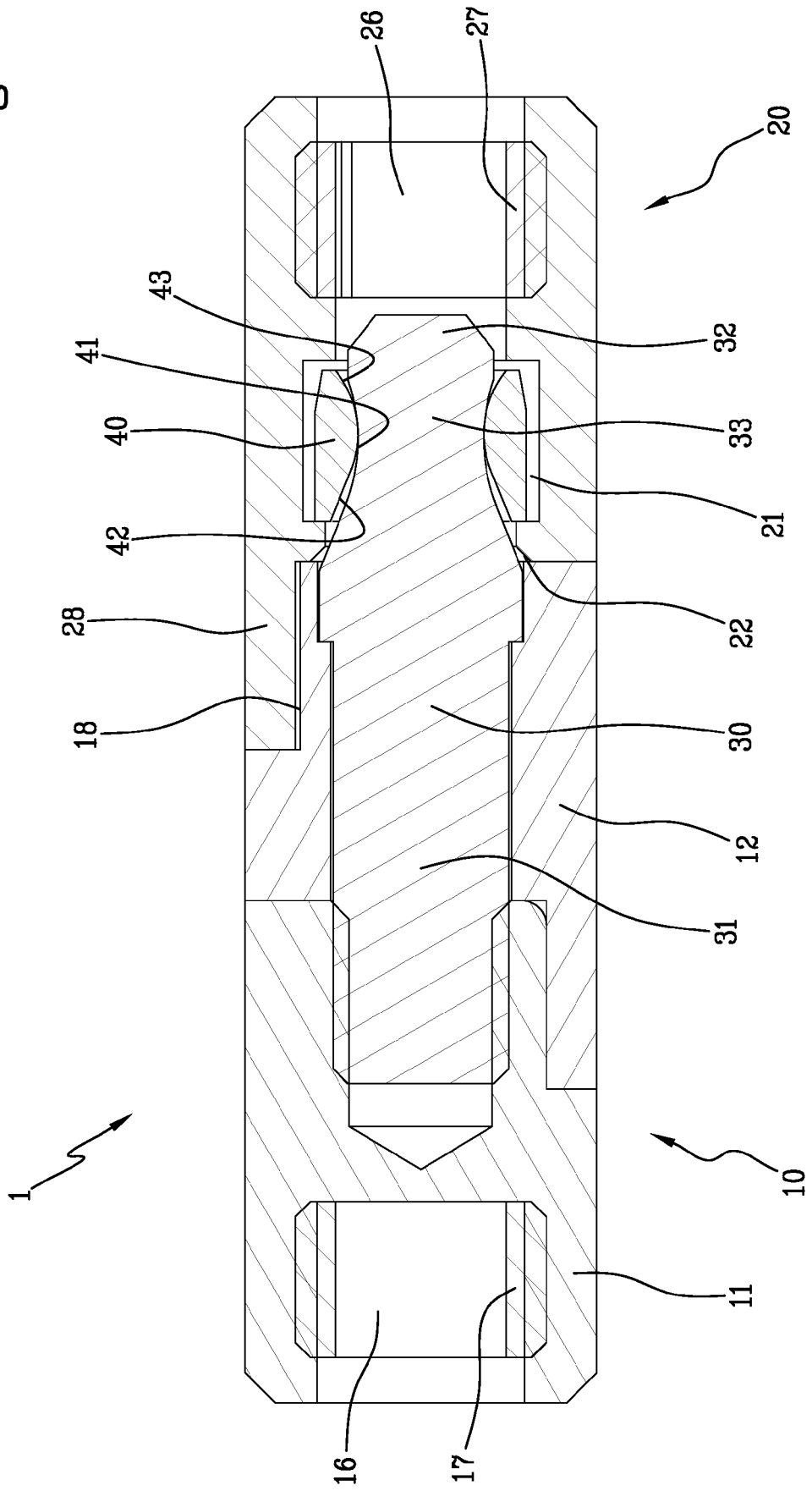


Fig.2

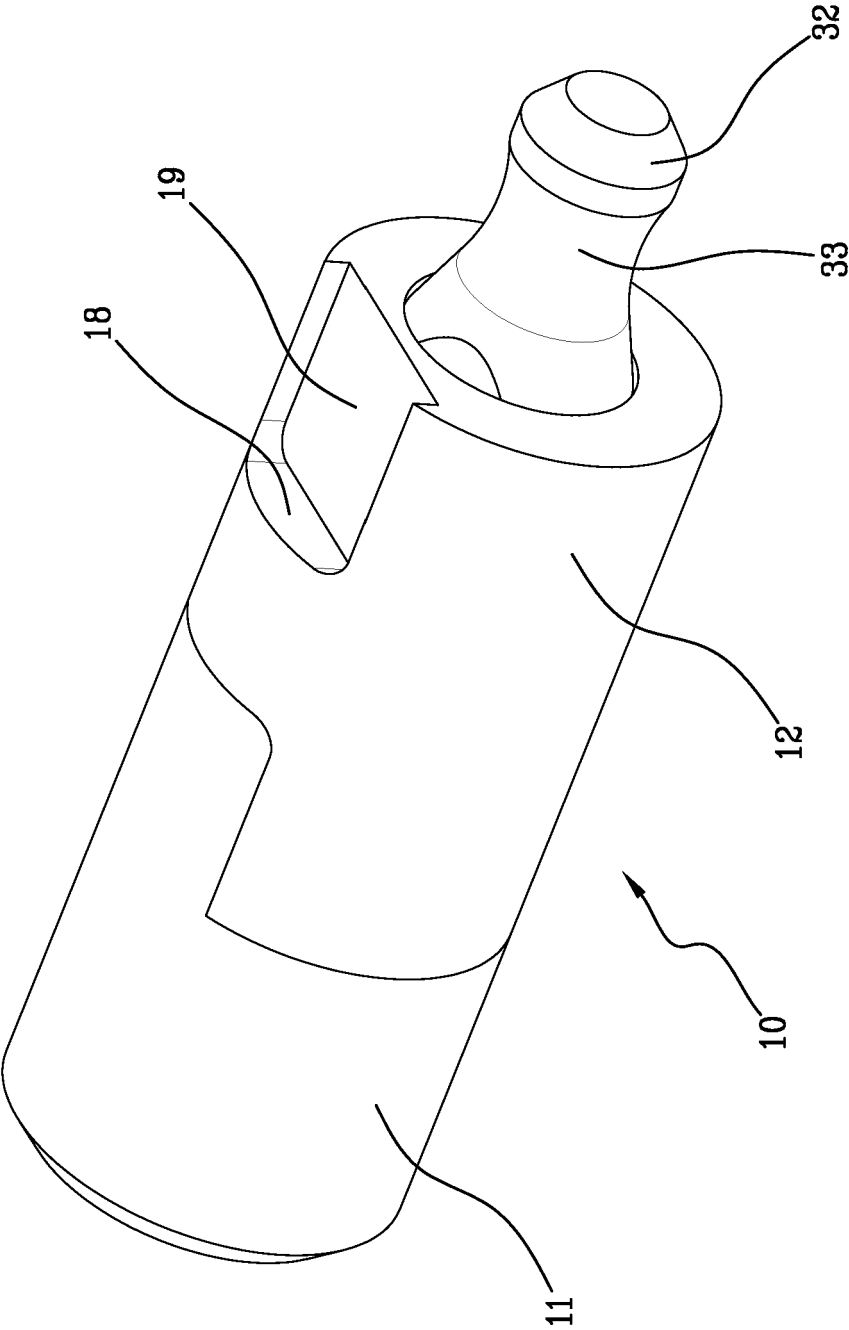


Fig.3

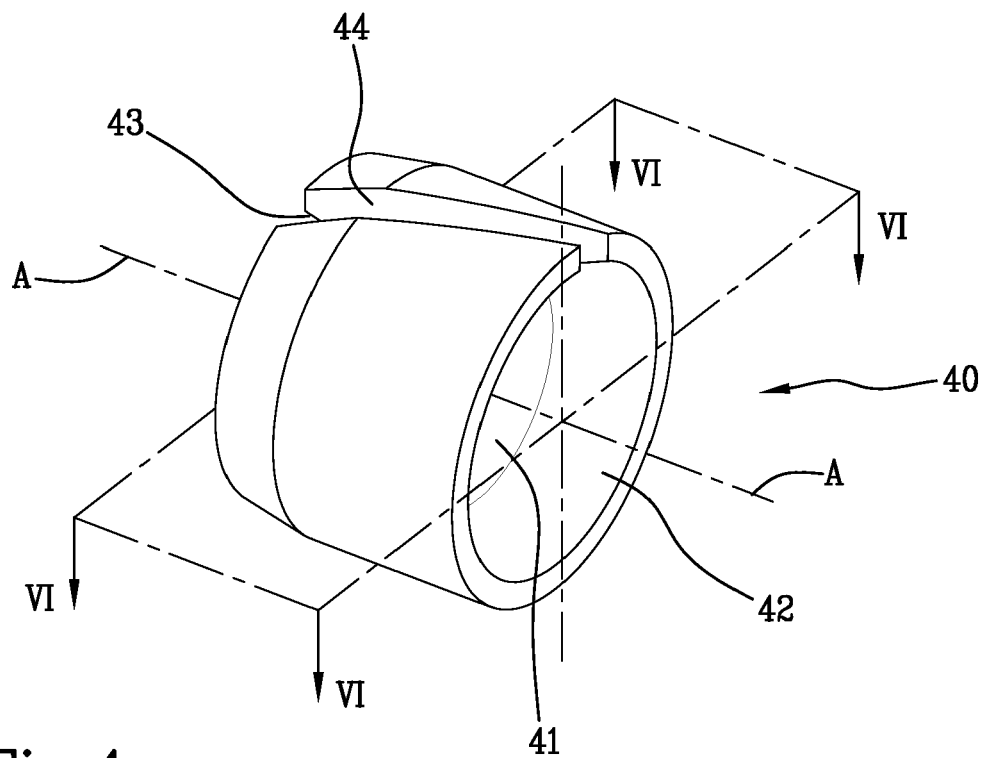
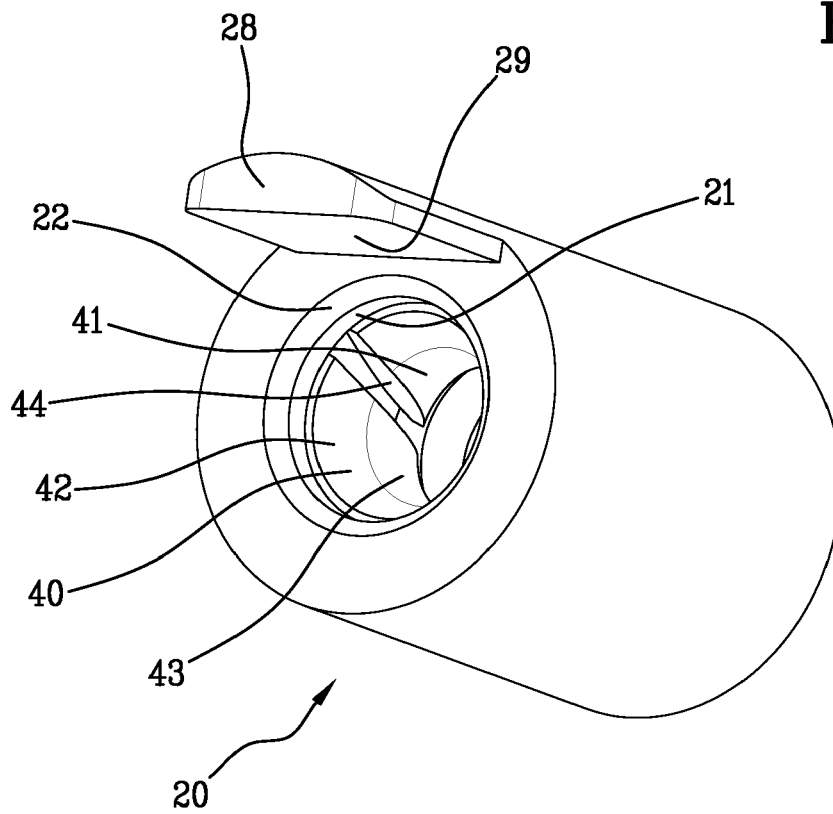


Fig.4

Fig.5

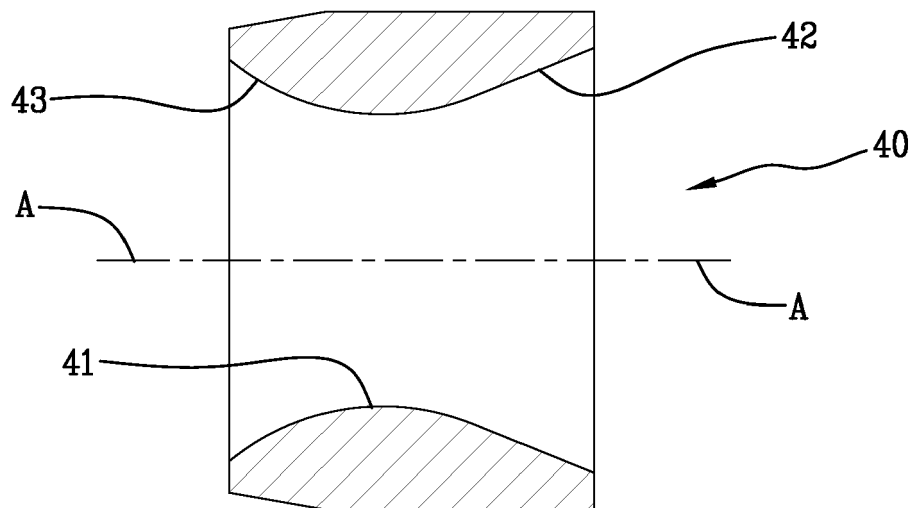
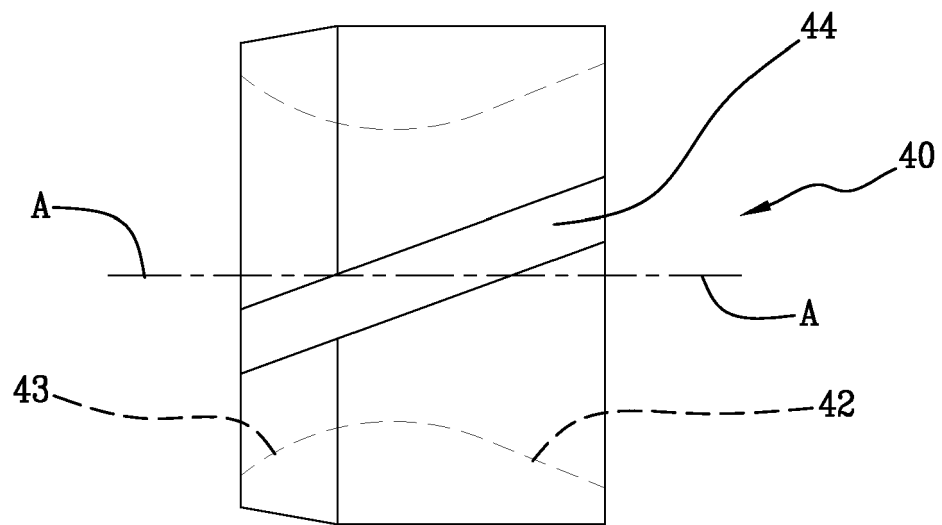


Fig.6



EUROPEAN SEARCH REPORT

Application Number

EP 24 15 4334

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	JP 2009 000216 A (NISHIMURA KINZOKU KK) 8 January 2009 (2009-01-08) * paragraph [0001]; figures 1-4 * -----	1-9	INV. A44C5/20
A	US 1 829 857 A (SIGMUND FISCHER) 3 November 1931 (1931-11-03) * figure 2 * -----	1-9	
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The present search report has been drawn up for all claims			

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EPO FORM 1503 03.82 (P04C01)

Place of search

The Hague

Date of completion of the search

27 February 2024

Examiner

Krüger, Sophia

CATEGORY OF CITED DOCUMENTS

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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27-02-2024

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REFERENCES CITED IN THE DESCRIPTION

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