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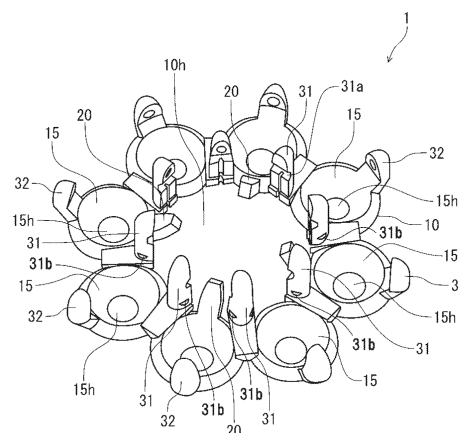
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(54) **JEWEL SUPPORT BASE AND ORNAMENT**

(57) According to an aspect of the present invention, there is provided a jewel support base that supports a jewel, the jewel support base including: an annular portion provided around a hole portion at a center of the annular portion; a plurality of support pieces that protrude from a rim of the annular portion to a center of the hole portion, the rim being on a side where the hole portion is

present, and that are arranged at an interval along the rim; and a plurality of first holding claws that extend upward from the annular portion, and that are arranged around the hole portion, the plurality of support pieces supporting a lower side of the jewel that is arranged in the hole portion, the plurality of first holding claws holding an outer periphery of the jewel.

[FIG. 1]



Description

Technical Field

[0001] The present invention relates to a jewel support base that supports a jewel such as a diamond, and to an ornament including this jewel support base in which the jewel is arranged.

Background Art

[0002] The jewel support base that supports the jewel such as the diamond, a ruby, or a sapphire needs to have a structure that securely fixes the jewel, that has an excellent design feature, and that does not impair brilliance of the jewel. Patent Literature 1 discloses a jewel holding frame that holds a jewel, the jewel holding frame having a reflective bottom with a mirror-finished inner surface.

[0003] Patent Literature 2 discloses a jewel mounting structure in which a jewel is easily and precisely fixed to a metal frame for emphasizing brilliance and a size of the jewel, and in which this decorative frame is accurately and securely fixed to a correct position on a jewel mounting base for an accessory.

[0004] Patent Literature 3 discloses an ornament including a plurality of decorative beads, and a plurality of claw portions that lock the plurality of these decorative beads, the ornament having a configuration in which at least one decorative bead of the plurality of decorative beads is locked by adjacent ones of the plurality of decorative beads.

Citation List

Patent Literature

[0005]

[PTL 1] Japanese Patent Application Laid-open No. 8-299036

[PTL 2] Japanese Patent Application Laid-open No. 2010-119699

[PTL 3] Japanese Patent Application Laid-open No. 2008-136747

Summary of Invention

Technical Problem

[0006] In the jewel support base, as support parts for the jewel are formed to be thinner, presence of the jewel can be more emphasized. With this, a large amount of light can be delivered to the jewel to enhance brilliance of the jewel. However, forming the support parts to be thinner results in a decrease in support stability for the jewel or their strength.

[0007] It is an object of the present invention to provide a jewel support base having a structure that securely supports and fixes a jewel, that has an excellent design feature, and that does not impair brilliance of the jewel.

Solution to Problem

[0008] According an aspect of the present invention, there is provided a jewel support base that supports a jewel, the jewel support base including:

an annular portion having a hole portion at a center of the annular portion;
a plurality of support pieces

that protrude from a rim of the annular portion to a center of the hole portion, the rim being on a side where the hole portion is present, and that are arranged at an interval along the rim; and

a plurality of first holding claws

that extend upward from the annular portion, and that are arranged around the hole portion,

the plurality of support pieces supporting a lower side of the jewel that is arranged in the hole portion, the plurality of first holding claws holding an outer periphery of the jewel.

[0009] With such a configuration, when the jewel is arranged in the hole portion of the annular portion, the jewel is supported from below by the plurality of support pieces that extend from the rim of the hole portion. In other words, the lower side of the jewel is supported by the plurality of support pieces, and hence the jewel need not be supported with use of an entirety of the rim of the annular portion. With this, the hole portion can be enlarged, which enables light to be sufficiently delivered not only from above the jewel but also from below and sideways. In addition, since the outer periphery of the jewel is held by the plurality of first holding claws, the jewel is securely fixed.

[0010] In the above-described jewel support base, the plurality of support pieces are each preferred to be provided to extend obliquely upward. With this, the jewel arranged in the hole portion of the annular portion is supported in a manner of floating in the hole portion.

[0011] In the above-described jewel support base, the plurality of first holding claws are preferred to be arranged at an equal interval around the hole portion. With this, the jewel can be held in a good balance with use of the plurality of first holding claws.

[0012] In the above-described jewel support base, corresponding ones of the plurality of first holding claws are preferred to be arranged on both sides of each of the plurality of support pieces as the annular portion is viewed

from above. With this, the jewel can be supported at three points from above and below with use of one of the plurality of support pieces and two of the plurality of first holding claws, the two being arranged on both the sides relative to this one of the plurality of support pieces.

[0013] In the above-described jewel support base, the plurality of first holding claws are each preferred to include a groove portion into which an outer peripheral part of the jewel is fitted. With this, the outer peripheral part of the jewel is fitted into the groove portion of each of the plurality of first holding claws, and the jewel can be securely fixed.

[0014] In the above-described jewel support base, the annular portion may include a recessed portion in which a small jewel is arranged. With this, the jewel that is arranged in the hole portion of the annular portion can be decorated with use of the small jewel that is arranged in the recessed portion.

[0015] The above-described jewel support base may further include

a second holding claw that is provided on a side of the recessed portion, the side of the recessed portion being opposite to the side where the hole portion is present as the annular portion is viewed from above, and

an outer periphery of the small jewel that is arranged in the recessed portion may be held between a corresponding one of the plurality of first holding claws and the second holding claw. With this, the jewel and the small jewel can be efficiently fixed with use of the same corresponding one of the plurality of first holding claws that hold the jewel also as a claw that holds the small jewel.

[0016] In the above-described jewel support base,

the recessed portion of the annular portion may include a plurality of recessed portions, the annular portion may include the second holding claw, and the second holding claw of the annular portion may include a plurality of second holding claws. With this, the small jewel may include a plurality of small jewels that are arranged around the jewel.

[0017] In the above-described jewel support base, a hole is preferred to be provided at a center part of the recessed portion as the annular portion is viewed from above. With this, light can be sufficiently delivered from below to the small jewel arranged in the recessed portion.

[0018] According to another aspect of the present invention, there is provided an ornament including:

the above-described jewel support base; and the jewel that is arranged in the above-described jewel support base. With such a configuration, the ornament in which the jewel can be securely fixed,

and in which light can be sufficiently delivered not only from above the jewel but also from below and sideways is provided.

5 Advantageous Effects of Invention

[0019] According to the present invention, the jewel support base having the structure that securely supports and fixes a jewel, that has an excellent design feature, and that does not impair brilliance of the jewel can be provided.

Brief Description of Drawings

15 [0020]

[FIG. 1] FIG. 1 is an exemplary perspective view of a configuration of a jewel support base according to an embodiment of the present invention as viewed from above.

[FIG. 2] FIG. 2 is an exemplary perspective view of the configuration of the jewel support base according to the embodiment as viewed from below.

[FIG. 3] (a) and (b) of FIG. 3 are respectively an exemplary plan view and an exemplary side view of the configuration of the jewel support base according to the embodiment.

[FIG. 4] FIG. 4 is an exemplary perspective view illustrating a state in which jewels are arranged in the jewel support base according to the embodiment.

[FIG. 5] (a) and (b) of FIG. 5 are exemplary views illustrating a method of manufacturing an ornament.

[FIG. 6] (a) and (b) of FIG. 6 are other exemplary views illustrating the method of manufacturing the ornament.

[FIG. 7] FIG. 7 is a plan view of the ornament.

[FIG. 8] FIG. 8 is a perspective view of the ornament as viewed from below.

[FIG. 9] FIG. 9 is an exemplary perspective view of a jewel support base according to Comparative Example.

Description of Embodiments

[0021] Below, an embodiment of the present invention is described with reference to the drawings. Note that, in the following description, the same members are denoted by the same reference symbols to omit redundant description thereof.

(Configuration of Jewel Support Base)

[0022] FIG. 1 is an exemplary perspective view of a configuration of a jewel support base according to this embodiment as viewed from above.

[0023] FIG. 2 is an exemplary perspective view of the configuration of the jewel support base according to this embodiment as viewed from below.

(a) and (b) of FIG. 3 are respectively an exemplary plan view and an exemplary side view of the configuration of the jewel support base according to this embodiment.

[0024] FIG. 4 is an exemplary perspective view illustrating a state in which jewels are arranged in the jewel support base according to this embodiment.

[0025] Note that, in this embodiment, for the sake of convenience of description, a side where the jewels are arranged is referred to as an "upper side." In addition, the jewels encompass simulated jewels.

[0026] A jewel support base 1 according to this embodiment includes an annular portion 10 having a hole portion 10h at a center of the annular portion 10, a plurality of support pieces 20 that protrude from a rim of the annular portion 10 to a center of the hole portion 10h, the rim being on a side where the hole portion 10h is present, and a plurality of first holding claws 31 that extend upward from the annular portion 10.

[0027] The annular portion 10 is a part to serve as a bezel that supports a jewel S1 with the jewel S1 arranged in the hole portion 10h. Recessed portions 15 may be provided in the annular portion 10. In this embodiment, the plurality of recessed portions 15 are provided at an equal interval along a circumferential direction of the annular portion 10 as viewed from above. Small jewels S2 are arranged in the recessed portions 15, which are capable of decorating a periphery of the jewel S1 that is arranged in the hole portion 10h at the center.

[0028] When the jewel S1 is arranged in the hole portion 10h of the annular portion 10, a lower side of the jewel S1 is supported by the plurality of support pieces 20 that protrude from the rim of the annular portion 10, the rim being on the side where the hole portion 10h is present. The jewel support base 1 supports the lower side of the jewel S1 with use of the plurality of support pieces 20, and hence it is unnecessary to support the jewel S1 with use of an entirety of the rim of the annular portion 10, the rim being on the side where the hole portion 10h is present. With this, an area of members that support the lower side of the jewel S1 can be reduced, and accordingly an area of the hole portion 10h can be increased. When the hole portion 10h can be enlarged, light can be sufficiently delivered from below the jewel S1 to the jewel S1. In addition, the light is delivered also from between the support pieces 20 adjacent to each other, and hence the light can be sufficiently delivered also to lateral sides of the jewel S1.

[0029] In this embodiment, the support pieces 20 that are provided to the annular portion 10 include four support pieces 20. These four support pieces 20 are arranged at an interval of 90° as viewed from above. With this, the lower side of the jewel S1 is supported by the support pieces 20 at four points. Although the area of the hole portion 10h can be increased as the number of the support pieces 20 becomes smaller, support strength decreases. Meanwhile, although the support strength be-

comes higher as the number of the support pieces 20 becomes larger, the area of the hole portion 10h decreases. Therefore, the number of the support pieces 20 is preferred to be approximately three or more and eight or less.

[0030] The plurality of support pieces 20 are each preferred to be provided to extend obliquely upward from the rim of the annular portion 10, the rim being on the side where the hole portion 10h is present. With this, when the lower side of the jewel S1 is supported with use of the plurality of support pieces 20, the jewel S1 is supported in a manner of floating in the hole portion 10h.

[0031] The plurality of first holding claws 31 that are provided to the annular portion 10 hold an outer periphery of the jewel S1 arranged in the hole portion 10h. In the jewel support base 1, the lower side of the jewel S1 arranged in the hole portion 10h is supported with use of the plurality of support pieces 20, and the outer periphery of the jewel S1 is held with use of the plurality of first holding claws 31. With this, the jewel S1 can be securely fixed.

[0032] The plurality of first holding claws 31 are preferred to be arranged at an equal interval around the hole portion 10h. With this, the jewel S1 can be held in a good balance with use of the plurality of first holding claws 31. In this embodiment, corresponding ones of the first holding claws 31 are arranged on both sides of each of the four support pieces 20. Specifically, two of the first holding claws 31 are arranged respectively on both the sides of each of the four support pieces 20, and hence a total of eight first-holding claws 31 is provided. These eight first-holding claws 31 are arranged at an equal interval (interval of 45 degrees) as viewed from above. With this, the jewel S1 can be securely fixed, and a sense of balanced design can be provided.

[0033] The first holding claws 31 each include a groove portion 31a into which an outer peripheral part of the jewel S1 arranged in the hole portion 10h is fitted. For example, when the jewel S1 is a brilliant-cut diamond, the groove portion 31a is formed in conformity with a girdle part. With this, the groove portion 31a of each of the first holding claws 31 is fitted to the girdle part, and the outer periphery of the jewel S1 can be securely held and fixed.

[0034] When the recessed portions 15 are provided in the annular portion 10, second holding claws 32 are provided on a side of the recessed portions 15, the side being opposite to the side where the hole portion 10h is present as the annular portion 10 is viewed from above. The second holding claws 32 are provided upright on an outer peripheral side of the annular portion 10, and perform a function to hold the small jewels S2 between the second holding claws 32 and the first holding claws 31 that are provided upright on an inner peripheral side of the annular portion 10.

[0035] In this embodiment, the recessed portions 15 that are provided in the annular portion 10 include eight recessed portions 15 at an equal interval, and the second holding claws 32 are provided respectively to the re-

cessed portions 15. As the annular portion 10 is viewed from above, the eight second-holding claws 32 are located at positions that are shifted by a half pitch in the circumferential direction from the eight first-holding claws 31. With this, the small jewels S2 can each be held at three points with use of two of the first holding claws 31 and one of the second holding claws 32 with the small jewels S2 arranged in the recessed portions 15.

[0036] As illustrated, for example, in FIG. 1 and (b) of FIG. 3, the first holding claws 31 each include groove portions 31b into which outer peripheral parts of the small jewels S2 arranged in the recessed portions 15 are fitted. The outer peripheral parts of the small jewels S2 arranged in the recessed portions 15 are fitted into the groove portions 31b of the two of the first holding claws 31 provided to face the recessed portions 15. For example, when the small jewel S2 is the brilliant-cut diamond, the groove portions 31b are formed in conformity with the girdle part. The first holding claws 31 are used not only as holders for the jewel S1 but also as holders for the small jewels S2. Thus, the jewel S1 and the small jewels S2 can be efficiently fixed with use of the same first-holding claws 31.

[0037] In addition, a hole 15h is provided at a center part of each of the recessed portions 15. With this, light can be sufficiently delivered from below to the small jewels S2 arranged in the recessed portions 15.

[0038] An ornament 100 is constituted by arranging the jewel S1 and the small jewels S2 in the jewel support base 1 according to this embodiment (refer to FIG. 4). In the ornament 100 using the jewel support base 1, the lower side of the jewel S1 is supported by the plurality of support pieces 20, and hence light can be sufficiently delivered from below the jewel S1 and sideways to the jewel S1. Further, the ornament 100 in which the jewel S1 can be securely fixed with use of the support pieces 20 and the first holding claws 31, in which the small jewels S2 can be securely fixed with use of the first holding claws 31 and the second holding claws 32, and in which the light can be sufficiently delivered not only from above the jewel S1 and the small jewels S2 but also from below and sideways is provided.

(Method of Manufacturing Ornament)

[0039] FIG. 5 and FIG. 6 are exemplary views illustrating a method of manufacturing the ornament.

[0040] First, as illustrated in (a) of FIG. 5, the jewel support base 1 according to this embodiment is prepared. Then, as illustrated in (b) of FIG. 5, the jewel S1 is arranged in the hole portion 10h provided at the center of the annular portion 10 of the jewel support base 1. At this time, distal parts of the first holding claws 31 have not yet been bent. By pressing the jewel S1 from above into an inner side relative to the plurality of first holding claws 31, the outer peripheral part of the jewel S1 is fitted into the groove portions 31a of the first holding claws 31. Further, the small jewels S2 are arranged respectively in the

plurality of recessed portions 15 of the annular portion 10.

[0041] Then, as illustrated in (a) and (b) of FIG. 6, the distal parts of the first holding claws 31 are bent toward the jewel S1 so that the jewel S1 is held. With this, the lower side of the jewel S1 is supported by the support pieces 20, and the upper side of the jewel S1 is held by the first holding claws 31. Further, distal parts of the second holding claws 32 are bent toward the small jewels S2 so that the small jewels S2 are held. With this, the small jewels S2 are pressed against the first holding claws 31, and fixed by the second holding claws 32. When the jewel S1 and the small jewels S2 are fixed to the jewel support base 1, the ornament 100 is completed.

[0042] FIG. 7 is a plan view of the ornament.

[0043] FIG. 8 is a perspective view of the ornament as viewed from below.

[0044] The ornament 100 using the jewel support base 1 according to this embodiment has a design in which the jewel S1 is arranged at the center, and in which the eight small jewels S2 are arranged therearound. As viewed from above, the jewel S1 and the small jewels S2 are fixed in a good balance by the eight first-holding claws 31 and the eight second-holding claws 32.

[0045] Meanwhile, as the ornament 100 is viewed from below, the jewel S1 arranged in the hole portion 10h is supported by the four support pieces 20. Thus, light is delivered to the jewel S1 not only via the center of the hole portion 10h but also through between the support pieces 20. The light is delivered to the small jewels S2 through the holes 15h of the recessed portions 15. In this way, the light is not unnecessarily blocked by the support member for the jewel S1 and the small jewels S2, and the light is sufficiently delivered not only from above the jewel S1 and the small jewels S2 but also from below and sideways. With this, brilliance of the jewel S1 and the small jewels S2 is exhibited.

(Comparative Example)

[0046] FIG. 9 is an exemplary perspective view of a jewel support base according to Comparative Example.

[0047] This jewel support base 1B according to Comparative Example includes an annular portion 10B having the hole portion 10h at a center of the annular portion 10B, a plurality of first holding claws 31B that extend upward from the annular portion 10B, and that are arranged around the hole portion 10h, a plurality of recessed portions 15B that are provided in the annular portion 10B, and second holding claws 32B that are provided on a side of the recessed portions 15B as the annular portion 10B is viewed from above, the side being opposite to the side where the hole portion 10h is present. The jewel support base 1B is configured to support the lower side of the jewel S1 with use of an entirety of a rim of the annular portion 10 under the state in which the jewel S1 is arranged in the hole portion 10h, the rim being on the side where the hole portion 10h is present. In other words, unlike the jewel support base 1 according to the embod-

iment of the present invention, the jewel support base 1B does not include the support pieces 20.

[0048] In the jewel support base 1B according to Comparative Example, since the jewel S1 is supported with use of the entirety of the rim of the annular portion 10B, the rim being on the side where the hole portion 10h is present, the area of the hole portion 10h is smaller than that in the jewel support base 1 according to the embodiment of the present invention. As a result, in the jewel support base 1B according to Comparative Example, an amount of light to be collected from below and sideways to the jewel S1 is smaller than that in the jewel support base 1 according to the embodiment of the present invention.

[0049] In addition, since the configuration in which the jewel S1 is supported with use of the entirety of the rim of the annular portion 10B is employed, the rim being on the side where the hole portion 10h is present, an amount of a material of the annular portion 10B is larger than that of the annular portion 10. Thus, the jewel support base 1 according to the embodiment of the present invention is lighter in weight than the jewel support base 1B according to Comparative Example. As an example, the jewel support base 1B according to Comparative Example has a weight of 0.4 g when made of silver, and the jewel support base 1 according to the embodiment of the present invention has a weight of 0.17 g when made of silver as well. Depending on design, the jewel support base 1 according to the embodiment of the present invention can be approximately 30% to 60% lighter in weight than the jewel support base 1B according to Comparative Example.

[0050] As described hereinabove, the jewel support base 1 to be provided according to the embodiment of the present invention is capable of having a structure that securely supports and fixes the jewel S1, that is excellent in design, and that does not deteriorate the brilliance of the jewel S1.

[0051] Note that, the present invention are not limited to the examples described above in the embodiment of the present invention or to its application examples. For example, although the jewel support base 1 exemplified in the embodiment of the present invention enables the plurality of small jewels S2 to be arranged around the jewel S1, the jewel support base 1 may enable one small jewel S2 to be arranged, or the jewel support base 1 may enable the jewel S1 to be arranged alone.

[0052] In addition, components to be added as appropriate by persons skilled in the art to the above-described embodiments or to its application examples, components to be removed as appropriate by the persons from the above-described embodiments or from its application examples, design modification to be made as appropriate by the persons to the components, or combinations of features of the embodiments to be made as appropriate by the persons are also encompassed within the scope of the present invention as long as the gist of the present invention is included.

[0053] The present application claims the benefit of priority from Japanese Patent Application No. 2021-32175 filed on March 1, 2021, the entire contents of Japanese Patent Application No. 2021-32175 are incorporated herein by reference.

Reference Signs List

[0054]

1, 1B jewel support base
10, 10B annular portion
10h hole portion
15, 15B recessed portion
15h hole
20 support piece
31, 31B first holding claw
31a, 31b groove portion
32, 32B second holding claw
100 ornament
S1 jewel
S2 small jewel

Claims

1. A jewel support base that supports a jewel, the jewel support base comprising:

an annular portion having a hole portion at a center of the annular portion;
a plurality of support pieces

that protrude from a rim of the annular portion to a center of the hole portion, the rim being on a side where the hole portion is present, and
that are arranged at an interval along the rim; and

a plurality of first holding claws

that extend upward from the annular portion, and
that are arranged around the hole portion,

the plurality of support pieces supporting a lower side of the jewel that is arranged in the hole portion,
the plurality of first holding claws holding an outer periphery of the jewel.

2. The jewel support base according to Claim 1, wherein the plurality of support pieces are each provided to extend obliquely upward.

3. The jewel support base according to Claim 1 or 2, wherein the plurality of first holding claws are ar-

ranged at an equal interval around the hole portion.

4. The jewel support base according to any one of Claims 1 to 3,
wherein corresponding ones of the plurality of first holding claws are arranged on both sides of each of the plurality of support pieces as the annular portion is viewed from above. 5

5. The jewel support base according to any one of Claims 1 to 4,
wherein the plurality of first holding claws each include a groove portion into which an outer peripheral part of the jewel is fitted. 10
15

6. The jewel support base according to any one of Claims 1 to 5,
wherein the annular portion includes a recessed portion in which a small jewel is arranged. 20

7. The jewel support base according to Claim 6, further comprising

a second holding claw that is provided on a side of the recessed portion, the side of the recessed portion being opposite to the side where the hole portion is present as the annular portion is viewed from above, 25
wherein an outer periphery of the small jewel that is arranged in the recessed portion is held between a corresponding one of the plurality of first holding claws and the second holding claw. 30

8. The jewel support base according to Claim 7, 35

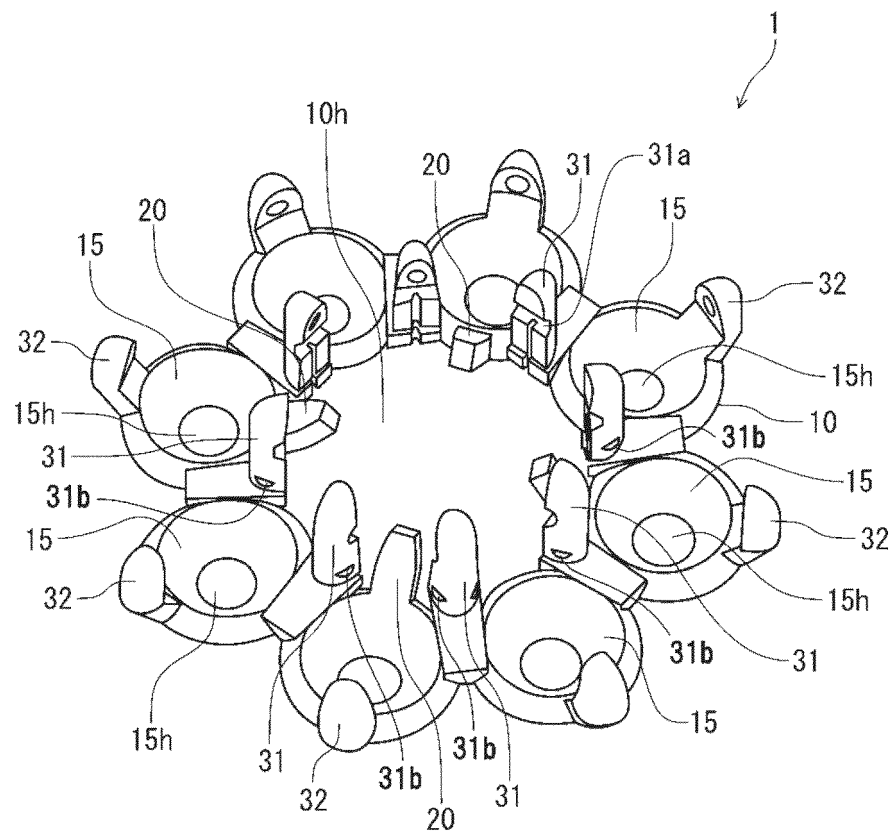
wherein the recessed portion of the annular portion includes a plurality of recessed portions, wherein the annular portion includes the second holding claw, and
wherein the second holding claw of the annular portion includes a plurality of second holding claws. 40

9. The jewel support base according to any one of Claims 6 to 8, 45
wherein a hole is provided at a center part of the recessed portion as the annular portion is viewed from above.

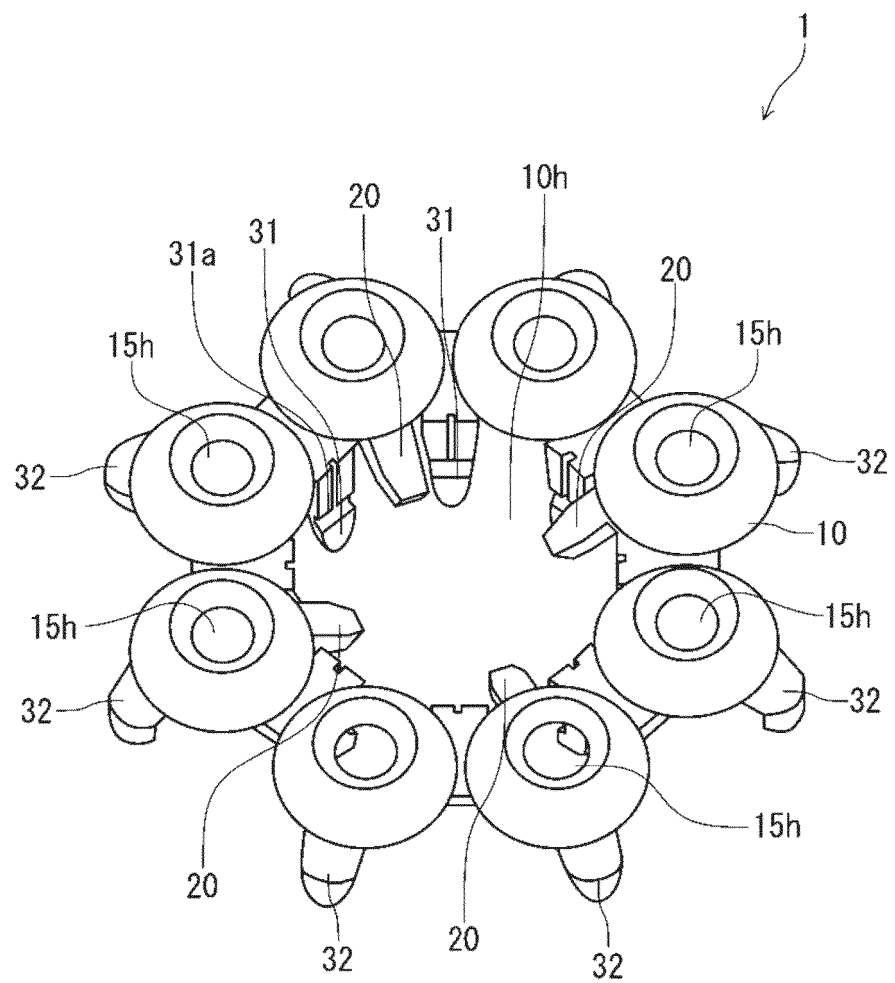
10. An ornament, comprising: 50

the jewel support base according to any one of Claims 1 to 9; and
the jewel that is arranged in the jewel support base. 55

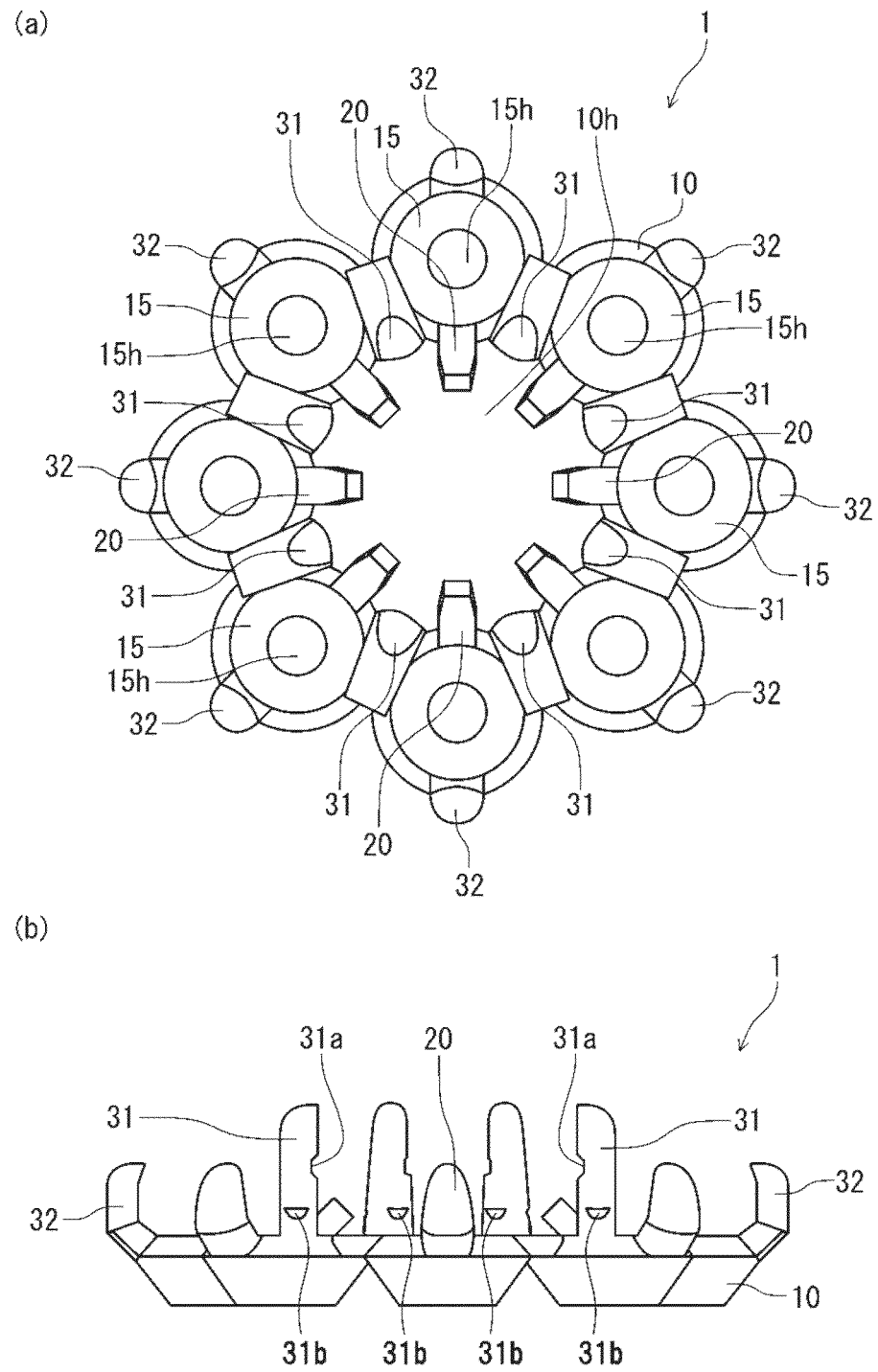
[FIG. 1]



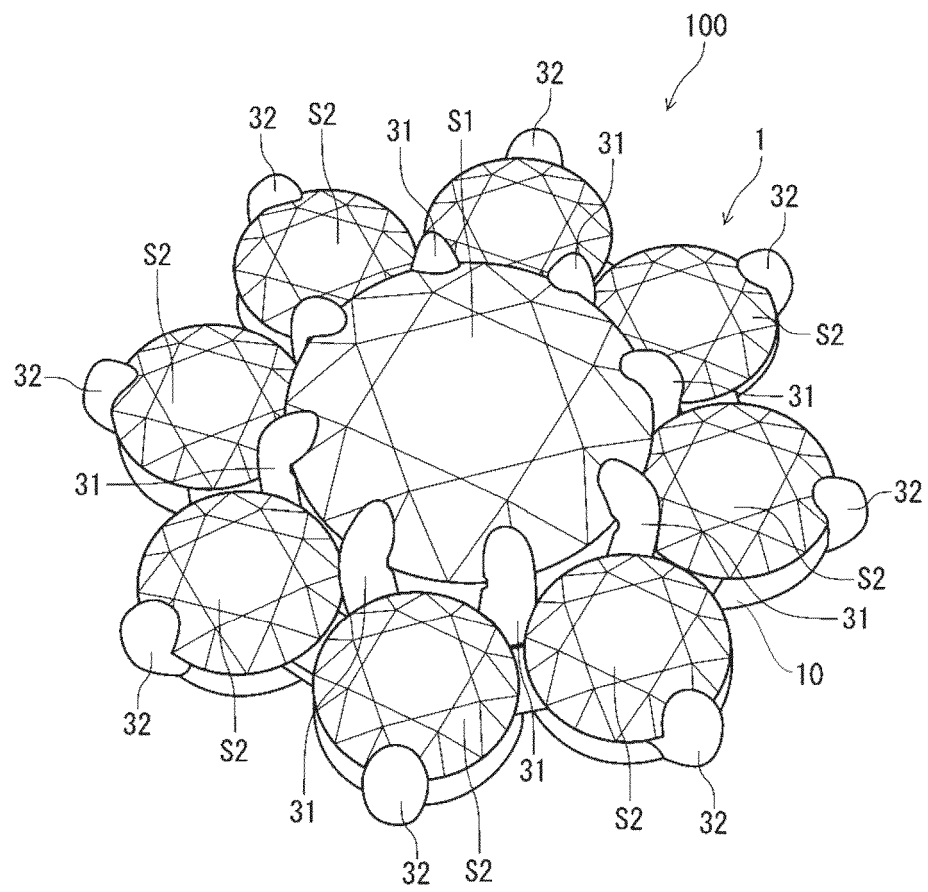
[FIG. 2]



[FIG. 3]

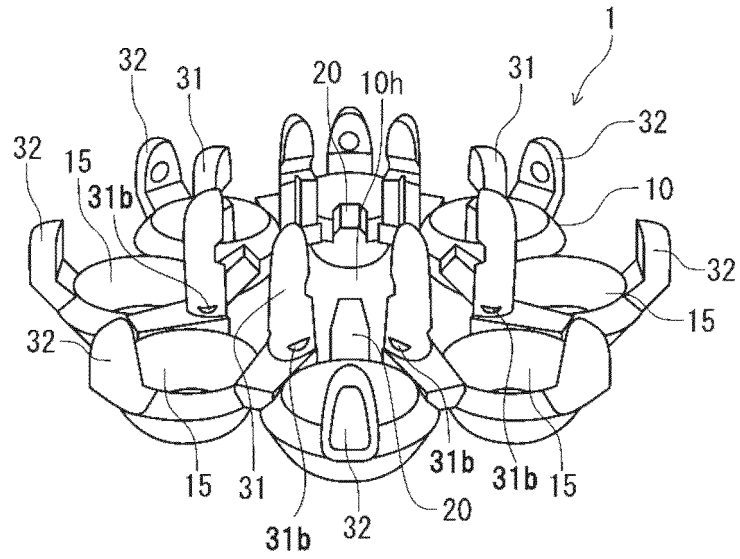


[FIG. 4]

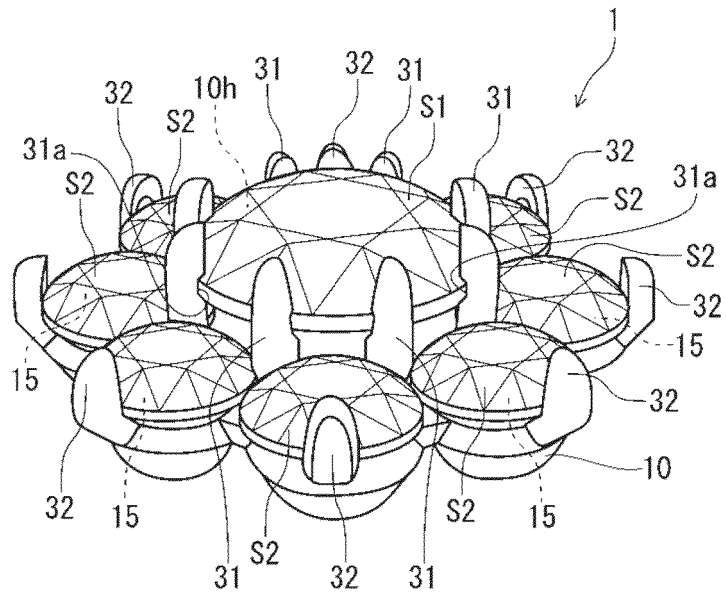


[FIG. 5]

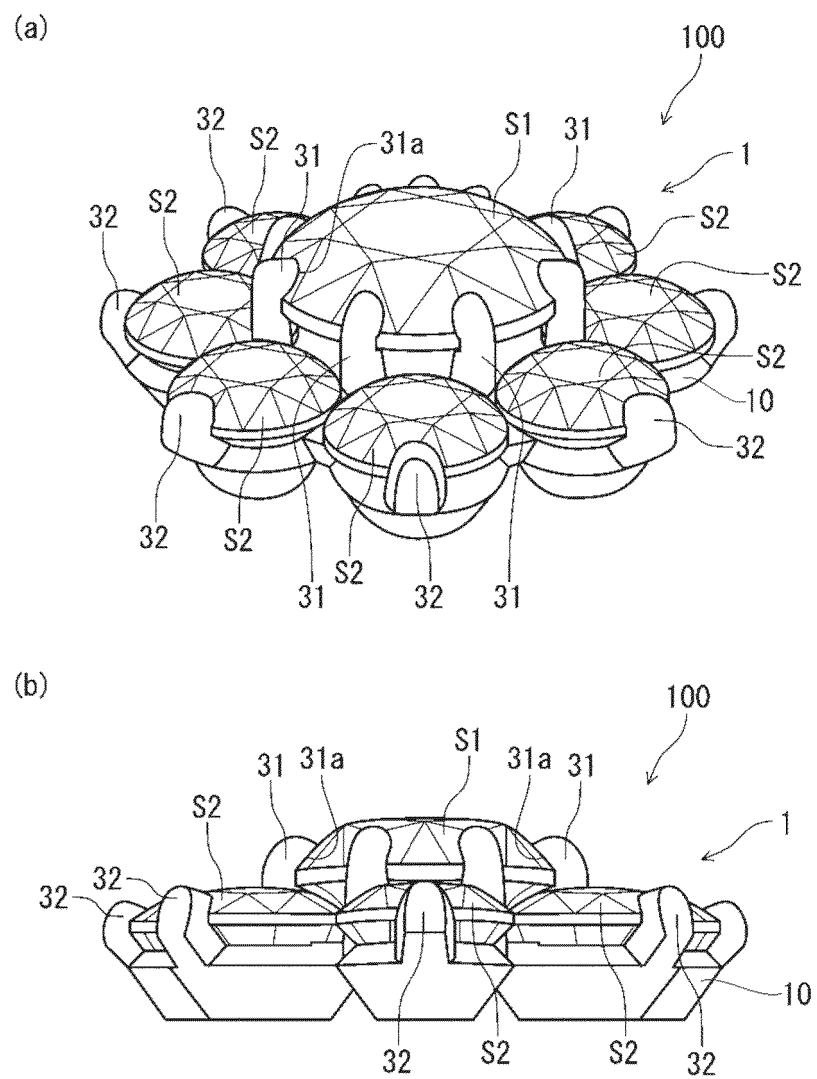
(a)



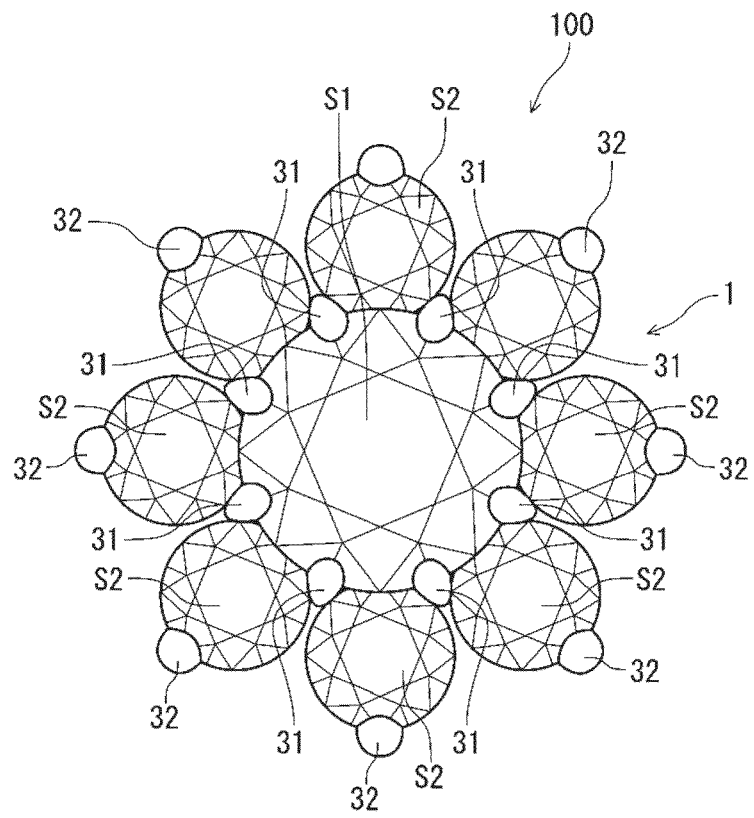
(b)



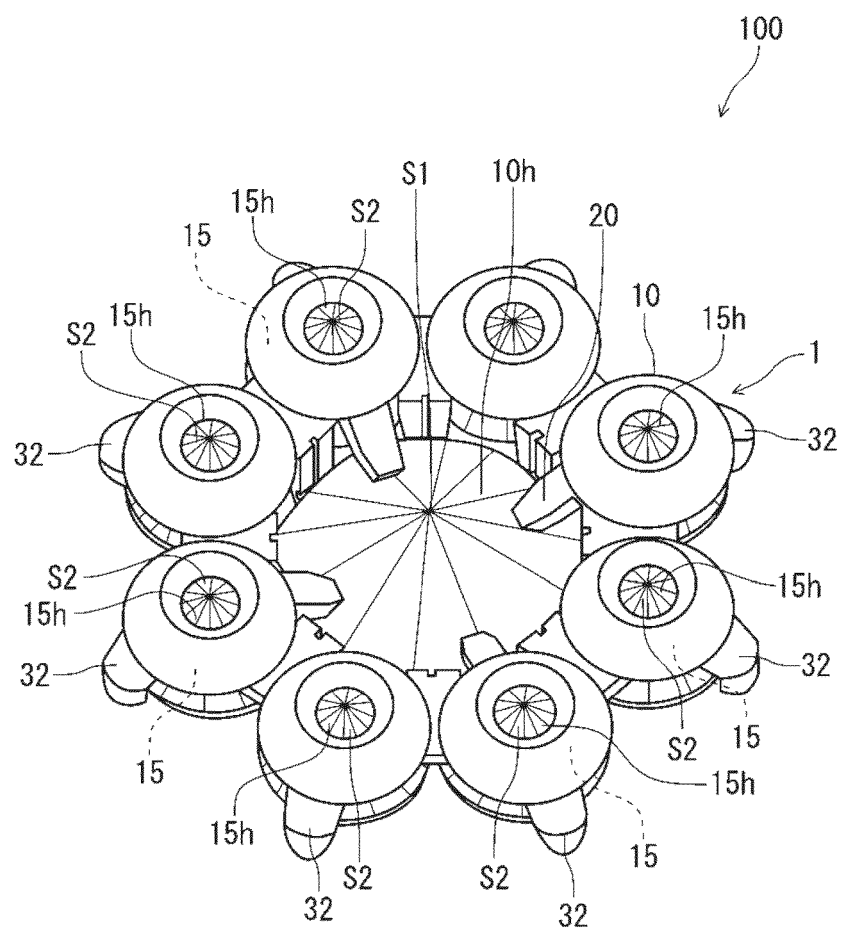
[FIG. 6]



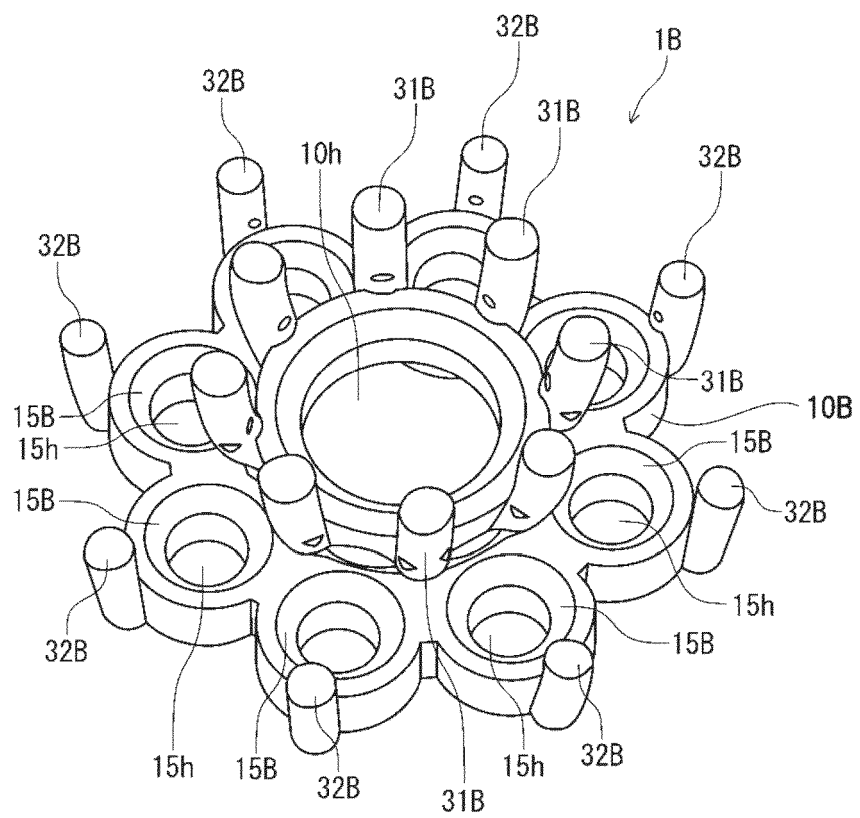
[FIG. 7]



[FIG. 8]



[FIG. 9]



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2021/029527

A. CLASSIFICATION OF SUBJECT MATTER

A44C 17/02(2006.01)i

FI: A44C17/02

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)

A44C17/00, A44C27/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan 1922-1996

Published unexamined utility model applications of Japan 1971-2021

Registered utility model specifications of Japan 1996-2021

Published registered utility model applications of Japan 1994-2021

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	CN 211065301 U (SHENZHEN BAIFULONG JEWELRY CO., LTD.) 24 July 2020 (2020-07-24) paragraphs [0018]-[0025], fig. 1-2	1-10
A	CN 206836434 U (YANG, Yun) 05 January 2018 (2018-01-05) paragraphs [0024]-[0026], fig. 1-3	1-10
A	KR 20-0328407 Y1 (SON, Gwang-Su) 29 September 2003 (2003-09-29) description, p. 2, lines 26-36, fig. 1-2	1-10
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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INTERNATIONAL SEARCH REPORT

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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