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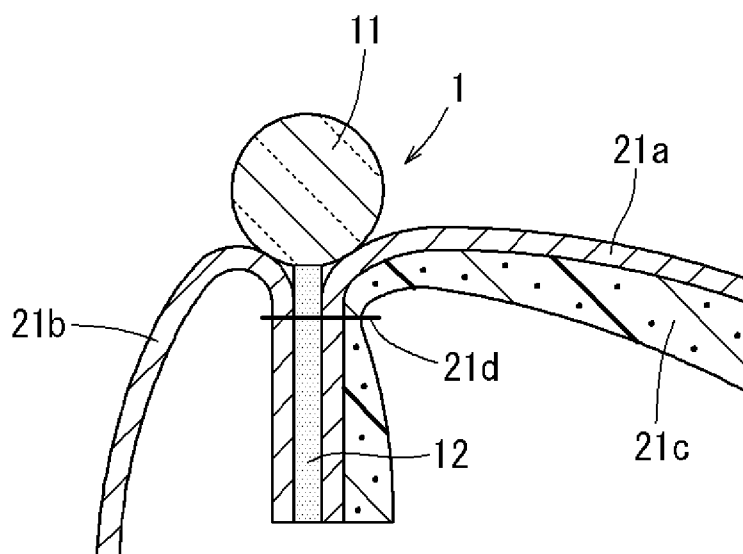
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(54) **Title:** BEADINGS



(57) **Abstract:** Embodiments of the present invention may include beading (1) for decorating a target member. The beading (1) has a linear member (11), a leg portion (12) and a colored portion (13). The linear member (11) has a main portion formed of a light-transmitting material. The linear member (11) has a first end and a second end opposite the first end on an outer periphery thereof. The leg portion (12) extends from the first end of the linear member (11). The leg portion (12) has a sewn portion that is sewn onto the target member by sewing thread (21d). The colored portion (13) is provided in the linear member (11) or the leg portion (12). The colored portion (13) has a smaller quantity of transmitting light than that of the main portion. The colored portion (13) is situated and configured to suppress the visibility of the sewing thread (21d) when the linear member (11) is seen from above the second end.

Description

Title of Invention: BEADINGS

Technical Field

- [0001] Embodiments of the present invention relate to beading. Beading is a linear member, is mounted to a target member in order to decorate the target member. Beading is used on an automotive seat or the like.

Background Art

- [0002] Beading is provided, for example, at the outer edges of a seat cushion of an automotive seat and the outer edges of a seatback of the automotive seat. Beading refers to a linear decoration member, which adds appearance to the seat. Japanese Laid-Open Utility Model Publication No. 5-49272 discloses a seat having beading consisting of an optical fiber covered with transparent resin.
- [0003] Beading is sewn onto a seat skin with thread. When beading is formed of a material having high light transmittance, the thread is visible from the outside through the beading. This may deteriorate the outward appearance of the seat. Beading has a linear member and a plate-like leg portion. The leg portion is provided integrally with the linear member. The leg portion is sewn onto a main member such as a seat skin by sewing thread. The linear member is formed of material having high light transmittance. The linear member has at least a part of a circular cross-section. Thus the linear member functions as a lens. As a result, the sewing thread is visible through the linear member.
- [0004] Therefore, there is a need in the art for beading in which the sewing thread is not easily seen from the outside, even when the beading is formed of a material having high light transmittance.

Summary of Invention

- [0005] According to an aspect of the invention, certain embodiments of the present invention include beading for decorating a target member. Beading has a linear member, a leg portion and a colored portion. The linear member has a main portion formed of a light-transmitting material. The linear member has a first end and a second end opposite the first end on an outer periphery thereof. The leg portion extends from the first end of the linear member. The leg portion has a sewn portion that is sewn onto the target member by sewing thread. The colored portion is provided in the linear member or the leg portion. The colored portion has a smaller quantity of transmitting light than that of the main portion. The colored portion is situated and configured to suppress the visibility of the sewing thread when the linear member is seen from above the second end.

- [0006] The leg portion is superimposed on the target member, and is sewn onto the target member by the sewing thread. As a result, the beading is attached to the target member. The main portion of the linear member enhances the decoration property of the beading since the main portion is formed of a light transmitting material. When the linear member is seen from above the second end, the colored portion suppresses the visibility of the sewing thread. This helps to achieve an improvement in terms of the outward appearance of the beading.
- [0007] According to another aspect, the colored portion may be provided on at least the first end of the linear member. According to another aspect, the colored portion may be provided at least between the first end and the sewn portion of the leg portion.
- [0008] According to another aspect, the linear member and the leg portion may be formed of a material including the light-transmitting material. The colored portion may be formed of a material obtained by coloring the light-transmitting material. According to another aspect, the colored portion may be a film.
- [0009] The linear member and the leg portion may be integrally molded through two-color molding. Thus, the beading can be molded than that having a configuration where the linear member and the leg portion are formed of different materials.
- [0010] According to another aspect, the linear member or the leg portion is provided with a decoration member. The decoration member is situated so as to be visible in a region where the colored portion is visible when the linear member is seen from above the second end. Thus, when the linear member is seen from above the second end, the decoration member appears to be raised with respect to the colored portion. This helps to enhance the design property of the beading.
- [0011] According to another aspect, the decoration member may be provided at the center of the linear member and extend in the longitudinal direction of the linear member. According to another aspect, the decoration member may be provided in the linear member. The decoration member may be situated nearer the second end in relation to the colored portion.
- [0012] According to another aspect, the colored portion may be provided in the entirety of the linear member. According to another aspect, the colored portion may have a first portion provided in the leg portion and a second portion protruding from the first portion into the linear member. According to another aspect, the colored portion may have a convex shape starting from the leg portion. According to another aspect, the colored portion may be provided in the linear member and be concave to the leg portion.
- [0013] According to another aspect, the colored portion may have a first color portion situated at a distal end thereof and a second color portion having different color from that of the first color portion. According to another aspect, the colored portion may

have a first color portion situated on a first side surface thereof and a second color portion situated on a second side surface. The second side surface is preferably opposite the first side surface. The second color portion has a different color from that of the first color portion.

Brief Description of Drawings

- [0014] [fig.1]FIG. 1 is a perspective view of an automobile seat having beading;
[fig.2]FIG. 2 is a cross-sectional view taken along line II-II in FIG. 1;
[fig.3]FIG. 3 is a cross-sectional view of the beading with visibility views of the beading;
[fig.4]FIG. 4 is a cross-sectional view of another beading with visibility views of the beading;
[fig.5]FIG. 5 is a cross-sectional view of another beading with visibility views of the beading;
[fig.6]FIG. 6 is a cross-sectional view of another beading with visibility views of the beading;
[fig.7]FIG. 7 is a cross-sectional view of another beading with visibility views of the beading;
[fig.8]FIG. 8 is a cross-sectional view of another beading with visibility views of the beading;
[fig.9]FIG. 9 is a cross-sectional view of another beading with visibility views of the beading;
[fig.10]FIG. 10 is a cross-sectional view of another beading with visibility views of the beading;
[fig.11]FIG. 11 is a cross-sectional view of another beading with visibility views of the beading;
[fig.12]FIG. 12 is a cross-sectional view of another beading with visibility views of the beading;
[fig.13]FIG. 13 is a cross-sectional view of another beading with visibility views of the beading;
[fig.14]FIG. 14 is a cross-sectional view of another beading with visibility views of the beading;
[fig.15]FIG. 15 is a cross-sectional view of another beading;
[fig.16]FIG. 16 is a cross-sectional view of another beading;
[fig.17]FIG. 17 is a cross-sectional view of another beading;
[fig.18]FIG. 18 is a cross-sectional view of beading for illustrating paths of light transmittance;
[fig.19]FIG. 19 is a cross-sectional view of beading having decoration materials for il-

lustrating visibilities of the decoration materials;

[fig.20]FIG. 20 is a perspective view of a bag having beading;

[fig.21]FIG. 21 is a perspective view of a shoe having beading;

[fig.22]FIG. 22 is a perspective view of clothing having beading;

Description of Embodiments

- [0015] Each of the additional features and teachings disclosed above and below may be utilized separately or in conjunction with other features and teachings to provide improved beadings. Representative examples of the present invention, which utilize many of these additional features and teachings both separately and in conjunction with one another, will now be described in detail with reference to the attached drawings. This detailed description is merely intended to teach a person of ordinary skill in the art further details for practicing preferred aspects of the present teachings and is not intended to limit the scope of the invention. Only the claims define the scope of the claimed invention. Therefore, combinations of features and steps disclosed in the following detailed description may not be necessary to practice the invention in the broadest sense, and are instead taught merely to particularly describe representative examples of the invention. Moreover, various features of the representative examples and the dependent claims may be combined in ways that are not specifically enumerated in order to provide additional useful configurations of the present teachings.
- [0016] FIGS. 1 and 2 show an embodiment in which an automotive seat is provided with beading 1. The seat has a seatback 21 and a seat cushion 22. Each of the seatback 21 and the seat cushion 22 has a main plate portion and side portions. Boundary portions between the main plate portions and the side portions are situated at the outer edges of the seat back 21 and of the seat cushion 22. The beading 1 is provided at the boundary portions.
- [0017] The beading 1 integrally has a linear member 11 and a leg portion 12. The linear member 11 has a predetermined thickness and a substantially circular cross-section. The linear member 11 has a larger diameter than the leg portion 12. The leg portion 12 is of a plate-like configuration, and is provided integrally at a portion of the outer peripheral edge of the beading 1. The linear member 11 and the leg portion 12 have substantially the same length in the longitudinal direction.
- [0018] As shown in FIG. 2, the seat has a seat cover 21a covering the main plate portion, and a seat cover 21b covering the side portion. The leg portion 12 of the beading 1 is installed between ends of the seat covers 21a and 21b. The end of the leg portion 12 and the ends of the seat covers 21a and 21b are sewn together by sewing thread 21d.
- [0019] The linear member 11 protrudes from the boundary between the seat covers 21a and

21b. As a result, the beading 1 gives the seat decoration. FIG. 2 shows the beading 1 of the seatback 21. The beading 1 of the seat cushion 22 is of the same structure as the beading 1 of the seatback 21. A cover pad 21c is provided on the back surface of the seat cover 21a.

- [0020] The linear member 11 is formed of a light-transmitting material. The linear member 11 has a main portion formed solely of the light-transmitting material. The light-transmitting material of the beading enhances the decoration. The leg portion 12 is formed of a colored material obtained by coloring the light-transmitting material. The colored material is of a non-light-transmitting material or a material of lower light transmittance than the linear member 11. The leg portion 12 and the linear member 11 are formed integrally through two-color molding. The color of the leg portion 12 suppresses the visibility of the sewing thread from the outside of the linear member 11. If no color is added to the leg portion 12, the thread 21d is visible from the outside of the linear member 11.
- [0021] FIG. 18 illustrates how light is transmitted through the beading 1 from the outside of the beading 1. The beading 1 is formed of a resin material having a predetermined refractive index. For example, urethane has a refractive index of 1.5. When light travels in a direction tangent to the outer peripheral surface of the linear member 11, the light is incident in the linear member 11 from the outer peripheral surface at a refraction angle that is approximately 41.8 degrees. The thickness of the leg portion 12 is set to be anywhere from 10 to 50%, for example 10% of the maximum outer diameter of the linear member 11.
- [0022] When the linear member 11 is seen from the side opposite the leg portion 12, a portion 9 corresponding to the sewing thread is visible within a first range. The first range is a range near 24.8 degrees which passes the center of the sectional circle. The leg portion 12 is sewn onto the seat covers 21a and 21b by the sewing thread 21d (see FIG. 2). The portion 9 corresponds to the position where the sewing thread 21d passes the leg portion 12.
- [0023] Within a second range, the portion 9 corresponding to the sewing thread is directly or indirectly visible. The second range is a range extending around the first range. The second range is situated between two tangents of the linear member 11. The angle made by the two tangents is approximately 50.8 degrees. Within the second range, light is refracted within the linear member 11, so that the portion 9 corresponding to the sewing thread is visible. The portion 9 corresponding to the sewing thread cannot be seen from the outside of the second range. Within the first range, the portion 9 and a predetermined region in the leg portion can be directly seen. The portion 9 corresponding to the sewing thread is situated at the predetermined region. The predetermined region extends from the portion 9 toward the distal end of the leg portion 12

to a middle position. The middle position is spaced away from the portion 9 by a distance of 2.4 times the thickness of the leg portion 12.

[0024] FIG. 3 shows the way the beading is seen from direction A and direction B. Direction A is a direction in which the linear member 11 is seen from the side opposite the leg portion 12. Direction B is a direction making an angle of approximately 90 degrees with direction A. When seen from direction A, the colored portion 13 of the leg portion 12 is directly or indirectly visible within the first range and the second range. The colored portion 13 of the leg portion 12 is seen at the center of the linear member 11. The sewing thread 21d is provided on the leg portion 12 so as to pass through the leg portion 12. Thus, due to the colored portion 13 of the leg portion 12, the sewing thread 21d is not visible from direction A. The sewing thread 21d is not visible from direction B, either.

[0025] In the embodiment of FIG. 3, the sewing thread 21d passes the colored portion 13 of the leg portion 12. Thus, it is possible to suppress the visibility of the sewing thread 21d from the outside of the linear member 11. As a result, it is possible for the colored portion 13 to suppress deterioration in the outward appearance of the beading 1.

[0026] The leg portion 12 is colored. As a result, no light is transmitted through the leg portion 12. Alternatively, it is more difficult for light to be transmitted through the leg portion 12 than through the linear member 11. The linear member 11 and the leg portion 12 may be formed of the same material. As compared to the situation where they are formed of different materials, the linear member 11 and the leg portion 12 can be formed more easily.

[0027] When the linear member 11 is seen from direction A of FIG. 3, the colored portion 13 is visible at the center of the linear member 11. The direction A is from the side opposite the leg portion 12. The linear member 11 has a first end on which the leg portion 12 is provided and a second end opposite to the first end. The direction A is from the side above the second end. The linear member 11 is transparent, and extends in a strip-like fashion. The strip of the colored portion 13 is visible at the center of the linear member extending in a strip-like fashion. As a result, three strips are visible. As a result, the colored portion 13 can enhance the design property of the linear member 11.

[0028] The automotive seat may have a beading 1a shown in FIG. 4 instead of the beading 1 shown in FIG. 3. The beading 1a includes a linear member 11a, a leg portion 12a and a colored portion 15. As shown in FIG. 3, the colored portion 13 is provided solely in the leg portion 12. The colored portion 13 is provided in the entire leg portion 12. On the other hand, the colored portion 15 of FIG. 4 has a first portion 15a provided in the leg portion 12a and a second portion 15b provided in a part of the linear member 11a.

[0029] The second portion 15b of the colored portion 15 is formed in a region of the linear

member 11a near the leg portion 12a. The second portion 15b occupies the region that covers from one tenth to half of the sectional area of the linear member 11a. The linear member 11a includes the second portion 15b of the colored portion 15, and a main portion constituting the rest thereof. When forming the beading 1a through two-color molding, the pressure supply to the mold for the colored material is set high. This makes it possible for the colored portion 15 to be larger than the colored portion 13 of FIG. 3.

[0030] When the linear member 11a of FIG. 4 is seen from direction A, the colored portion 15 is visible throughout the linear member 11a. When it is seen from direction B, the colored portion 15 is visible so as to occupy approximately one tenth to one third or half of the linear member 11a. The colored portion 15 is also formed in a part of the linear member 11a. Thus, even if there is variation in the position of the sewing thread 21d, it is possible to suitably suppress the visibility of the sewing thread 21d from the outside of the linear member 11a.

[0031] Even if there is variation in the boundary position between the stained portion having the colored portion 15 and the transparent portion having no colored portion 15, it is possible to suitably suppress the visibility of the thread 21d from the outside of the linear member 11a. The boundary between the stained portion and the transparent portion is larger than that of the beading 1 of FIG. 3. Thus, the stained portion and the transparent portion may be firmly bonded to each other. This helps to suppress separation between the stained portion and the transparent portion. It is desirable to impart embossing with small protrusions and recesses to be bonding surfaces of the stained portion and the transparent portion. This helps to further enhance the bonding strength between the stained portion and the transparent portion.

[0032] The automotive seat may have a beading 1b shown in FIG. 5 instead of the beading 1 shown in FIG. 3. The beading 1b includes a linear member 11b, a leg portion 12b and a colored portion 16. The colored portion 16 has a first portion 16a provided in the leg portion 12b, and a protrusion 16b protruding from the leg portion 12b into the linear member 11b. The linear member 11b includes the protrusion 16b of the colored portion 16 and a main portion constituting the rest thereof.

[0033] When the linear member 11b of FIG. 5 is seen from direction A, the colored portion 16 is visible throughout the linear member 11b. When it is seen from direction B, the protrusion 16b of the colored portion 16 protruding into the linear member 11b is visible. The colored portion 16 is formed in the linear member 11b. Thus, the beading 1b of FIG. 5 can provide the same effect as that of the beading 1a of FIG. 4.

[0034] The automotive seat may have a beading 1c shown in FIG. 6 instead of the beading 1 shown in FIG. 3. The beading 1c includes a linear member 11c, a leg portion 12c, a colored portion 13 and a decoration material 14. The decoration material 14 consists

of, for example, thread. The decoration material 14 is inserted at the center of the sectional circle of the linear member 11c. The decoration material 14 may consist of sliver thread, lame thread, coarse yarn, monofilament, braided material or the like. When molding the beading 1c, the decoration material 14 is set in the mold as an insert material. The decoration material 14 is set in the mold so as to extend along the longitudinal direction of the linear member 11c.

- [0035] As shown in FIG. 6, when the linear member 11c is seen from direction A, the colored portion 13 of the leg portion 12c is visible at the center of the linear member 11c. The decoration material 14 is visible on the inner side of the colored portion 13. When seen from direction A, the colored portion 13 and the decoration material 14 overlap each other at the center of the linear member 11. As a result, the decoration material 14 appears to be raised because the colored portion 13 is situated below the decoration material 14. When seen from direction B, the decoration material 14 is visible at the center of the linear member 11c.
- [0036] In the beading 1c of FIG. 6, the sewing thread 21d is not seen from the outside of the linear member 11c due to the colored portion 13 provided in the leg portion 12c. When seen from the outside of the linear member 11c, the decoration material 14 appears to be raised over the colored portion 13. As a result, the beading 1 provides a highly decorative effect.
- [0037] The way the decoration material 14 is seen from the outside of the linear member 11q will be described with reference to FIG. 19. The way the decoration material 14 looks differs according to its position in the linear member 11q. The nearer to the viewing position, the smaller the decoration material 14b looks. The farther from the viewing position, the larger the decoration material 14a looks. This is due to the fact that the linear member 11q functions as a lens.
- [0038] In FIG. 6, the decoration material 14 appears to be raised on the inner side of the colored portion 13. The overlapping position and overlapping ratio of the decoration material 14 with respect to the colored portion 13 are adjusted according to its position in the linear member 11c. The nearer to the colored portion 13 the decoration material 14 is, the thinner the decoration material 14 looks. The farther from the colored portion 13 the decoration material 14 is, the thicker the decoration material 14 looks. It is also possible to hide the colored portion 13 using the decoration material 14.
- [0039] The automotive seat may have a beading 1d shown in FIG. 7 instead of the beading 1 shown in FIG. 3. The beading 1d includes a linear member 11d, a leg portion 12d, a colored portion 15 and a decoration material 14. The decoration material 14 of FIG. 7 is formed in the same manner as the decoration material 14 of FIG. 6. As shown in FIG. 7, when the linear member 11d is seen from direction A, the colored portion 15 is visible throughout the linear member 11d as in the case of FIG. 4. The decoration

material 14 appears to be raised at the center of the linear member 11d. From direction B, the colored portion 15 is visible in the portion of the linear member 11d near the leg portion 12d. The decoration material 14 is visible at the center of the linear member 11d.

[0040] The automotive seat may have a beading 1e shown in FIG. 8 instead of the beading 1 shown in FIG. 3. The beading 1e includes a linear member 11e, a leg portion 12e, a colored portion 16 and a decoration material 14. The decoration material 14 of FIG. 8 is formed in the same manner as the decoration material 14 of FIG. 6. As shown in FIG. 8, when the linear member 11e is seen from direction A, the colored portion 16 is visible throughout the linear member 11e as in the case of FIG. 5. The decoration material 14 appears to be raised at the center of the linear member 11e. From direction B, the colored portion 16 is visible in the portion of the linear member 11e near the leg portion 12e. The decoration material 14 is visible at the center of the linear member 11e.

[0041] The automotive seat may have a beading 1f shown in FIG. 9 instead of the beading 1 shown in FIG. 3. The beading 1f includes a linear member 11f, a leg portion 12f and a colored portion 6. The colored portion 6 has a plurality of colors. The colored portion 6 has a first portion 6a provided in the leg portion 12f, and a protrusion 6b protruding from the leg portion 12f into the linear member 11f.

[0042] The colored portion 6 of FIG. 9 has a first color portion 6c and a second color portion 6d. The second color portion 6d is situated at the distal end of the protrusion 6b. The second color portion 6d is, for example, red in color. The first color portion 6c is situated at the first portion 6a and the proximal portion of the protrusion 6b. The first color portion 6c has a different color from the second color portion 6d, for example, blue in color. The first color portion 6c and the second color portion 6d are formed through the same material containing different coloring materials. The linear member 11f and the leg portion 12f are formed integrally through two-color molding.

[0043] As shown in FIG. 9, when the linear member 11f is seen from direction A, the blue color of first color portion 6c is visible throughout the linear member 11f without the center. The red color of the second color portion 6d is visible at the center of the linear member 11f. From direction B, the blue color of the first color portion 6c is visible at the portion of the linear member 11f near the leg portion 12f. The red color of the second color portion 6d is visible next to the first color portion 6c.

[0044] In FIG. 9, the colored portion 6 has a plurality of portions of different colors. Thus, the beading 1f provides a novel design. By varying the color combination of the first color portion 6c and the second color portion 6d, it is possible to provide various designs of different tastes.

[0045] The automotive seat may have a beading 1g shown in FIG. 10 instead of the beading

1 shown in FIG. 3. The beading 1g includes a linear member 11g, a leg portion 12g and a colored portion 7. The colored portion 7 has a first portion 6a provided in the leg portion 12f, and a protrusion 6b protruding from the leg portion 12f into the linear member 11f. The colored portion 7 has a first portion provided in the leg portion 12g, and a protrusion protruding from the leg portion 12g into the linear member 11g.

[0046] As shown in FIG. 10, the colored portion 7 has a plurality of colors, e.g., two colors. The colored portion 7 has a first color portion 7a and a second color portion 7b. The first color portion 7a is situated on a first side surface of the leg portion 12g. The first color portion 7a is, for example, blue in color. The second color portion 7b is situated on a second side surface of the leg portion 12g. The second color portion 7b is, for example, red in color. The first color portion 7a and the second color portion 7b are formed through the same material containing coloring materials of different colors. The linear member 11g and the leg portion 12g are formed integrally through two-color molding.

[0047] As shown in FIG. 10, when the linear member 11g is seen from direction A, half the linear member 11g corresponding to the first surface of the leg portion 12g is of blue color due to the color of the first color portion 7a. Half the linear member 11g corresponding to the second surface of the leg portion 12g is of red color due to the color of the second color portion 7b.

[0048] The automotive seat may have a beading 1h shown in FIG. 11 instead of the beading 1 shown in FIG. 3. The beading 1h includes a linear member 11h, a leg portion 12h and a colored portion 8. The colored portion 8 has a plurality of colors, e.g., two colors. The colored portion 8 has a first portion 8a provided in the leg portion 12h and a second portion 8b provided in a part of the linear member 11h. The colored portion 8 has a first color portion 8c and a second color portion 8d.

[0049] The first color portion 8c in FIG. 11 is, for example, blue in color. The second color portion 8d is, for example, red in color. The second color portion 8d is provided at a part of a second portion 8b of the colored portion 8, e.g., on the side opposite the leg portion 12h. The width of the second color portion 8d is equivalent to that of the leg portion 12h. The first color portion 8c and the second color portion 8d are formed through the same material containing different coloring materials. The linear member 11h and the leg portion 12h are integrally formed through two-color molding.

[0050] As shown in FIG. 11, when the linear member 11h is seen from direction A, the red color of the second color portion 8d is visible at the center of the linear member 11h. From direction B, the blue color of the first color portion 8c is visible at a portion near the leg portion 12h of the linear member 11h. The red color of the second color portion 8d is slightly visible next to the blue color.

[0051] The automotive seat may have a beading 1i shown in FIG. 12 instead of the beading

1 shown in FIG. 3. The beading 1i includes a linear member 11i, a leg portion 12i and a colored portion 17. The colored portion 17 extends longer within the linear portion 11i than the colored portion 16 of FIG. 5. The colored portion 17 has a first portion 17a provided in the leg portion 12i and a second portion 17b provided in the linear member 11i. The second portion 17b extends linearly from the distal end of the first portion 17a. The second portion 17b has the same length as the diameter of the linear member 11i, and extends through the linear member 11i.

[0052] The first portion 17a and the second portion 17b of the colored portion 17 are formed simultaneously. A light-transmitting material is provided on both sides of the second portion 17b so as to form the main portion of the linear member 11i. The linear member 11i and the leg portion 12i are formed integrally through two-color molding. The main portion of the linear member 11i and the colored portion 17 are formed of the same material, and the colored portion 17 contains a coloring material.

[0053] As shown in FIG. 12, when the linear member 11i is seen from direction A, the colored portion 17 is directly visible at the center of the linear member 11. Due to the refraction from the light-transmitting member 11i, the colored portion 17 is visible on both sides of the colored portion 17. From direction B, the colored portion 17 is visible through the light-transmitting material of the linear member 11i. The way the beading 1i looks is different from the way the beading 1b of FIG. 5 looks.

[0054] The automotive seat may have a beading 1j shown in FIG. 13 instead of the beading 1 shown in FIG. 3. The beading 1j includes a linear member 11j, a leg portion 12j and a colored portion 18. Within the linear member 11j, the colored portion 18 is larger than the colored portion 16 of FIG. 5. The colored portion 18 has a first portion 18a provided in the leg portion 12j and a second portion 18b provided in the linear member 11j. The second portion 18b protrudes into the linear member 11j from the distal end of the first portion 18a. The second portion 18b is of a configuration similar to that of the linear member 11j.

[0055] The first portion 18a and the second portion 18b of the colored portion 18 are formed simultaneously. A light-transmitting material is provided around the second portion 18b so as to form the main portion of the linear member 11j. The linear member 11j and the leg portion 12j are formed integrally through two-color molding. The main portion of the linear member 11j and the colored portion 18 are formed of the same material, and the colored portion 18 contains a coloring material.

[0056] As shown in FIG. 13, when the linear member 11j is seen from direction A, the colored portion 18 is visible throughout the linear member 11j. When seen from direction B, the second portion 18b of the colored portion 18 is visible. In the beading 1j of FIG. 13, the colored portion 18 is visible in a larger range when seen from direction B than in the beading 1b of FIG. 5.

- [0057] The automotive seat may have a beading 1k shown in FIG. 14 instead of the beading 1 shown in FIG. 3. The beading 1k includes a linear member 11k, a leg portion 12k and a colored portion 19. The colored portion 19 is provided solely in the outer region of the leg portion 12k. The leg portion 12k has a main portion containing no coloring material in the inner region. The main portion is covered with the colored portion 19. The linear member 11k and the leg portion 12k are formed simultaneously of a light-transmitting material. The main portion and the colored portion 19 of the leg portion 12k are formed integrally through two-color molding. The colored portion 19 contains a coloring material.
- [0058] As shown in FIG. 14, when the linear member 11k is seen from direction A, the colored portion 19 is visible throughout the linear member 11k. When seen from direction B, the colored portion 19 is not visible. When the linear member 11k is seen from direction A, the colored portion 19 is visible throughout the linear member 11k. As referring to FIG. 18, the colored portion 19 on the outer side of the leg portion 12k is visible through the interior of the leg portion 12k due to the reflection of light. In the beading 1k of FIG. 14, the colored portion 19 is visible in a wider range when seen from direction A than in the beading 1 of FIG. 3.
- [0059] The automotive seat may have a beading 1m, 1n or 1p as shown in FIGS. 15 to 17 instead of the beading 1 shown in FIG. 3. Each of the beading 1m, 1n or 1p includes a linear member 11m, 11n, 11p, a leg portion 12m, 12n, 12p and a colored portion 22, 23, 24. The colored portion 22 of FIG. 15 is provided solely on a top region of the leg portion 12m. The top region includes a portion where the sewing thread 21d passes through. The colored portion 22 occupies substantially half the region of the leg portion 12m nearer to the linear member 11m. The leg portion 12m including the colored portion 22 and the linear member 11m are formed integrally through two-color molding. The linear member 11m is molded while the decoration material 14 is inserted as an insert material.
- [0060] In the beading 1m of FIG. 15, the sewing thread 21d is not visible from the outside of the linear member 11m due to the colored portion 22 because of the same reason as the beading 1c of FIG. 6. When seen from the outside of the linear member 11m, the decoration material 14 appears to be raised over the colored portion 22. The colored portion 22 is smaller than the colored portion 13 of FIG. 6. This helps to economize on the coloring material.
- [0061] The beading 1n of FIG. 16 has a colored portion 23. The colored portion 23 is not provided in the leg portion 12n where the sewing thread 21d is passed through. The colored portion 23 is provided solely in a region of the linear member 11n near the leg portion 12n. The colored portion 15 of FIG. 4 may have a convex shape starting from the leg portion 12a. In contrast, the colored portion 23 is concave. The leg portion 12n

and the linear member 11n including the colored portion 23 are formed integrally through two-color molding. The linear member 11n has the colored portion 23 and the main portion other than the colored portion 23.

[0062] In the beading 1n of FIG. 16, the sewing thread 21d is not visible from the outside of the linear member 11n due to the colored portion 23. This is similar to the beading 1a of FIG. 4. The colored portion 23 is smaller than the colored portion 15 of FIG. 4. This helps to economize on the coloring material.

[0063] The beading 1p of FIG. 17 has a colored portion 24. The colored portion 24 has a colored film. The colored portion 24 is provided at the boundary between the leg portion 12p and the linear member 11p. The boundary between the leg portion 12p and the linear member 11p undergoes a non-light-transmitting process using the colored portion 24. The linear member 11p and the leg portion 12p are integrated with each other through bonding or fusion-bonding, with the colored portion 24 therebetween.

[0064] In the beading 1p of FIG. 17, the sewing thread 21d is not visible from the outside of the linear member 11p due to the colored portion 24. As in the beading 1 of FIG. 3, in the beading 1p of FIG. 17, when seen from direction A, the strip of the colored portion 24 is visible at the center of the linear member 11p. The colored portion 24 can enhance the design property of the linear member 11p.

[0065] As shown in FIGS. 1 and 2, the beading 1 is applicable to an automotive seat (target member). Alternatively, as shown in FIGS. 20 to 22, the beading 1 is also applicable to a bag 30, a shoe 40, clothing 50, etc. The beading 1 shown in FIGS. 20 to 22 may be changed into other beadings shown in FIGS. 4 to 17.

[0066] The bag 30 shown in FIG. 20 has a main body portion 32 and grips 31. The beadings 1 are provided at the outer edges of the side surfaces of the main body portion 32. The beadings are provided over the entire periphery of the outer edges of the side surfaces of the main body portion 32.

[0067] The shoe 40 shown in FIG. 21 has an insertion inlet 41 through which a foot is to be inserted. The beading 1 is provided at the edge portion of the insertion inlet 41.

[0068] The clothing 50 shown in FIG. 22 is a jacket, which has shoulder portions 51 and a breast pocket 52. The beadings 1 are respectively provided at the top portions of the shoulder portions 51 and at the insertion inlet edge of the breast pocket 52.

[0069] While the embodiments of invention have been described with reference to specific configurations, it will be apparent to those skilled in the art that many alternatives, modifications and variations may be made without departing from the scope of the present invention. Accordingly, embodiments of the present invention are intended to embrace all such alternatives, modifications and variations that may fall within the spirit and scope of the appended claims. For example, embodiments of the present invention should not be limited to the representative configurations, but may be

modified, for example, as described below.

- [0070] As shown in FIG. 3, the leg portion 12 of the beading 1 is of a plate-like configuration having a smooth surface. Alternatively, the leg portion 12 may be of a plate-like configuration having a plurality of protrusions and recesses on the surfaces thereof. As described above, the decoration material 14 may be thread. Alternatively, the decoration material may be formed of a colored portion obtained through coloring, or a film material, etc.
- [0071] As described above, the beading may be applicable to an automotive seat, a bag, a shoe or clothing. Alternatively, the beading may be applied, for example, to an automotive door trim or the like.
- [0072] As described above, the decoration material 14 may be provided in the linear member. Alternatively or additionally, the decoration material 14 may be provided in the leg portion.

Claims

- [Claim 1] A beading for decorating a target member comprising:
a linear member having a main portion formed of a light-transmitting material, the linear member having a first end and a second end opposite the first end on an outer periphery thereof,
a leg portion extending from the first end of the linear member, the leg portion having a sewn portion that is sewn onto the target member by sewing thread, and
a colored portion provided in the linear member or the leg portion, the colored portion having a smaller quantity of transmitting light than that of the main portion, the colored portion being situated and configured to suppress the visibility of the sewing thread when the linear member is seen from above the second end.
- [Claim 2] The beading of claim 1, wherein the colored portion is provided on at least the first end of the linear member.
- [Claim 3] The beading of claim 1, wherein the colored portion is provided at least between the first end of the linear member and the sewn portion of the leg portion.
- [Claim 4] The beading of claim 1, wherein the colored portion is provided at an outer region of the leg portion.
- [Claim 5] The beading of claim 1, wherein the linear member and the leg portion are formed of a material having the same light-transmitting material.
- [Claim 6] The beading of claim 5, wherein the colored portion is formed of a material obtained by coloring the light-transmitting material.
- [Claim 7] The beading of claim 1, wherein the colored portion is a film.
- [Claim 8] The beading of claim 1, wherein the linear member and the leg portion are integrally molded through two-color molding.
- [Claim 9] The beading of claim 1, wherein the linear member or the leg portion is provided with a decoration member, and
wherein the decoration member is situated so as to be visible in a region where the colored portion is visible when the linear member is seen from above the second end.
- [Claim 10] The beading of claim 9, wherein the decoration member is provided at a center of the linear member, and extends in the longitudinal direction of the linear member.
- [Claim 11] The beading of claim 9, wherein the decoration member is provided in the linear member, and the decoration member is situated nearer to the

second end in relation to the colored portion.

[Claim 12] The beading of claim 1, wherein the colored portion is provided in the entirety of the linear member.

[Claim 13] The beading of claim 1, wherein the colored portion comprises a first portion provided in the leg portion and a second portion that protrudes from the first portion into the linear member.

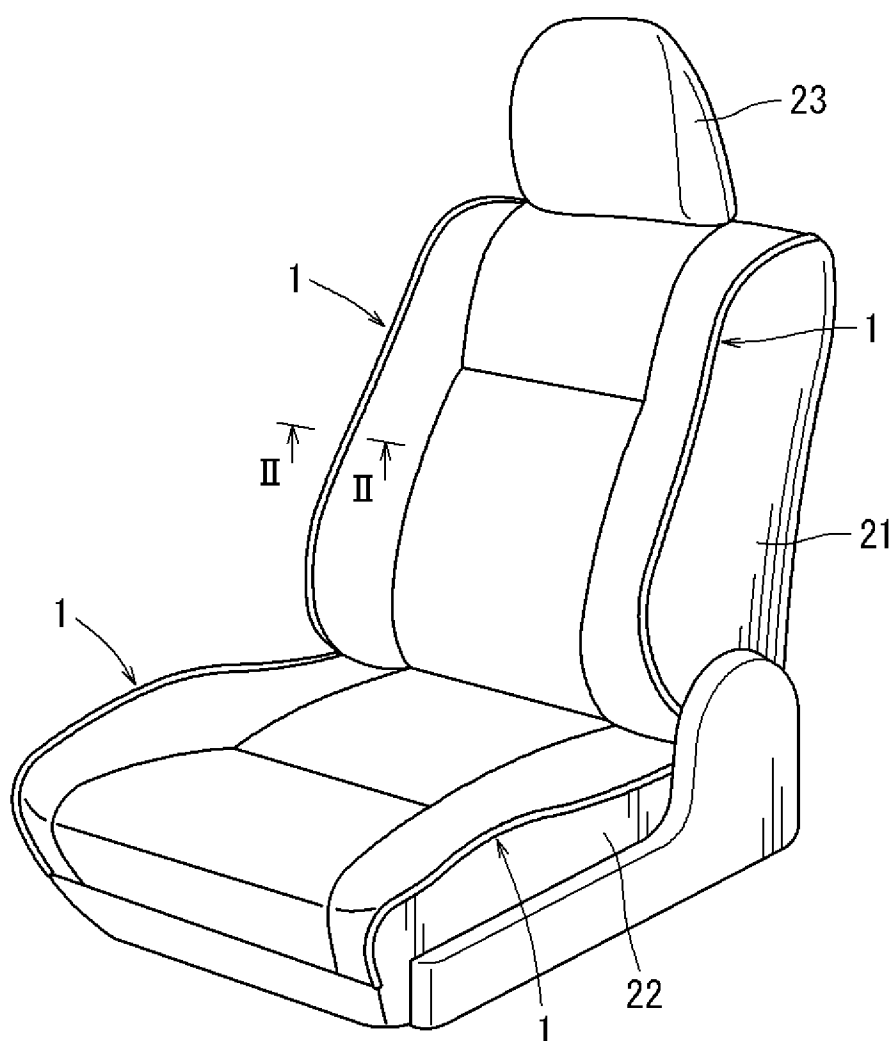
[Claim 14] The beading of claim 1, wherein the colored portion has a convex shape starting from the leg portion.

[Claim 15] The beading of claim 1, wherein the colored portion is provided in the linear member and is concave to the leg portion.

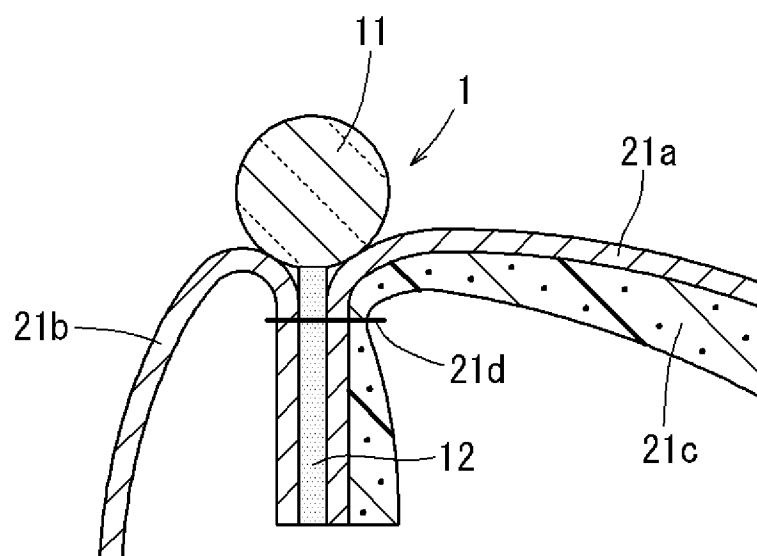
[Claim 16] The beading of claim 1, wherein the colored portion comprises a first color portion situated at a distal end thereof and a second color portion having a different color from that of the first color portion.

[Claim 17] The beading of claim 1, wherein the colored portion comprises a first color portion situated on a first side surface thereof and a second color portion situated on a second side surface opposite the first side surface, and wherein the second color portion has a different color from that of the first color portion.

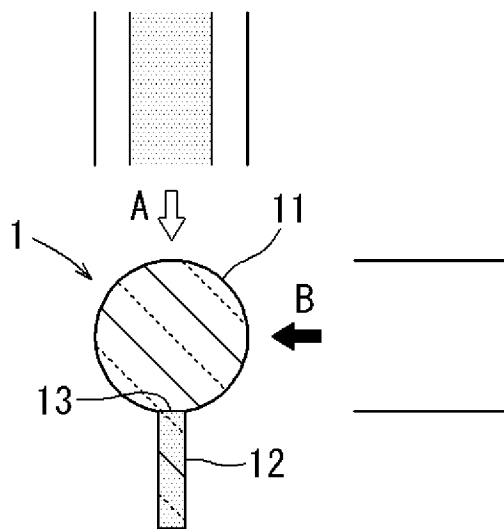
[Fig. 1]



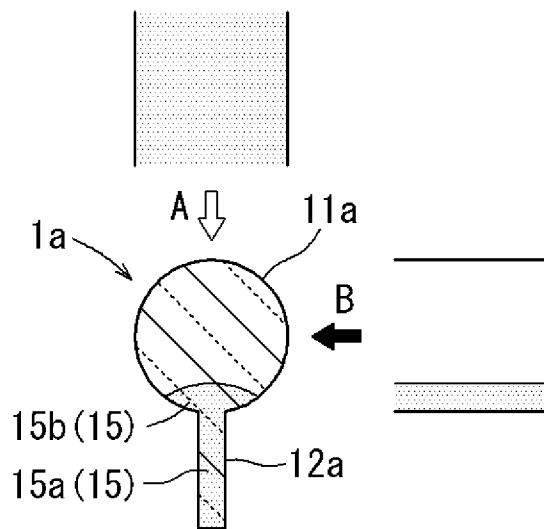
[Fig. 2]



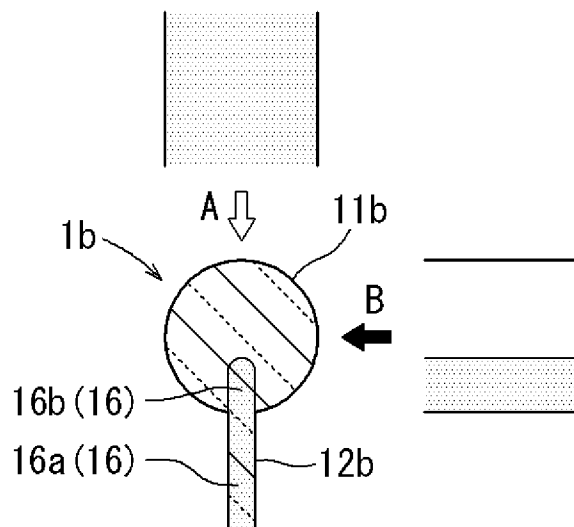
[Fig. 3]



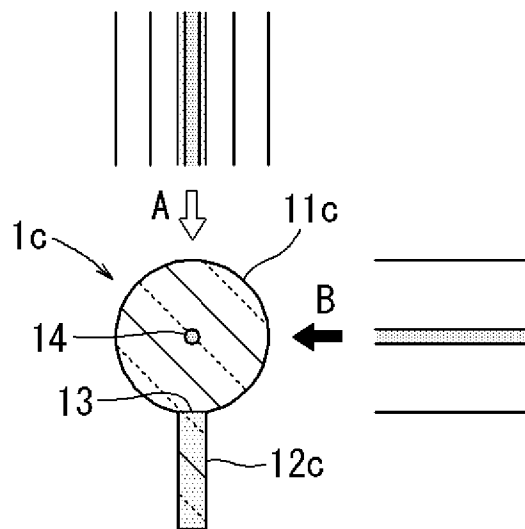
[Fig. 4]



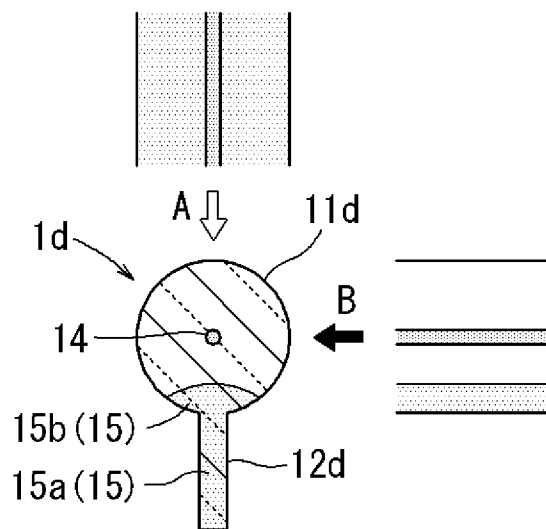
[Fig. 5]



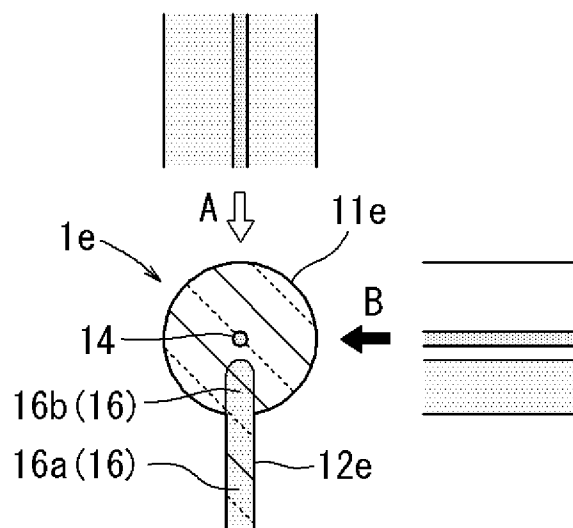
[Fig. 6]



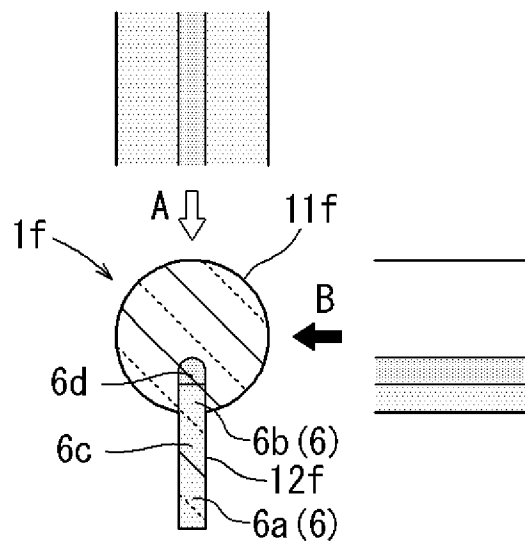
[Fig. 7]



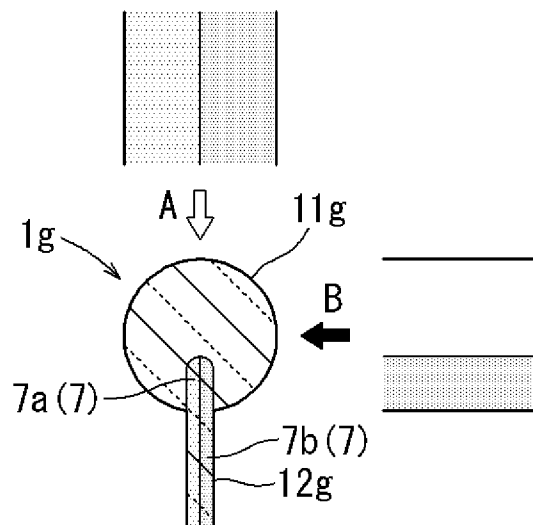
[Fig. 8]



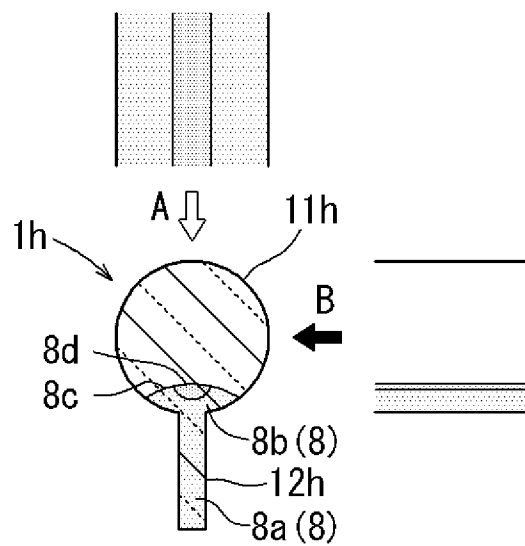
[Fig. 9]



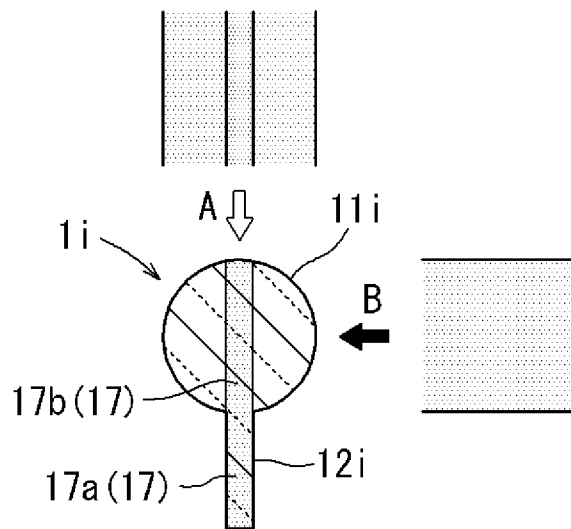
[Fig. 10]



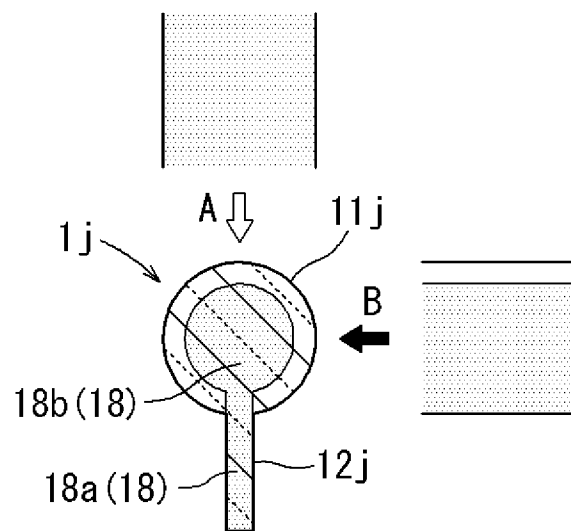
[Fig. 11]



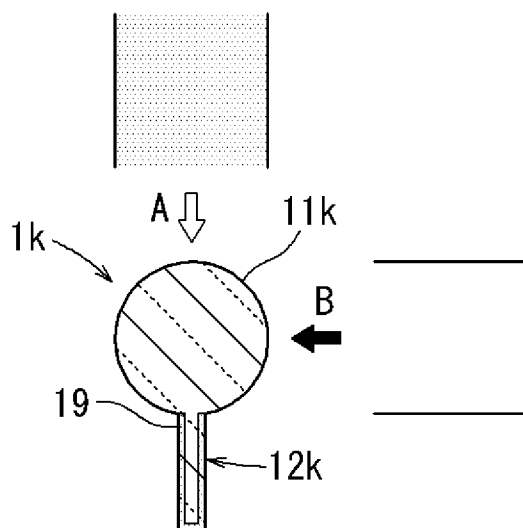
[Fig. 12]



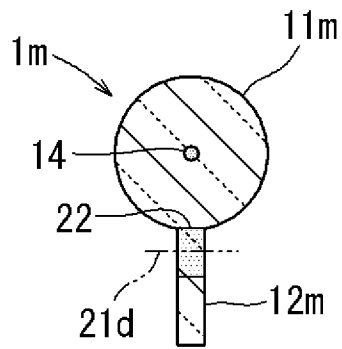
[Fig. 13]



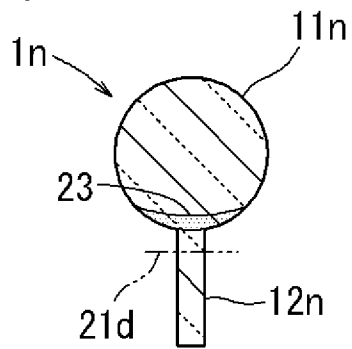
[Fig. 14]



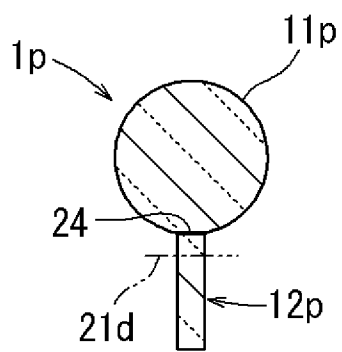
[Fig. 15]



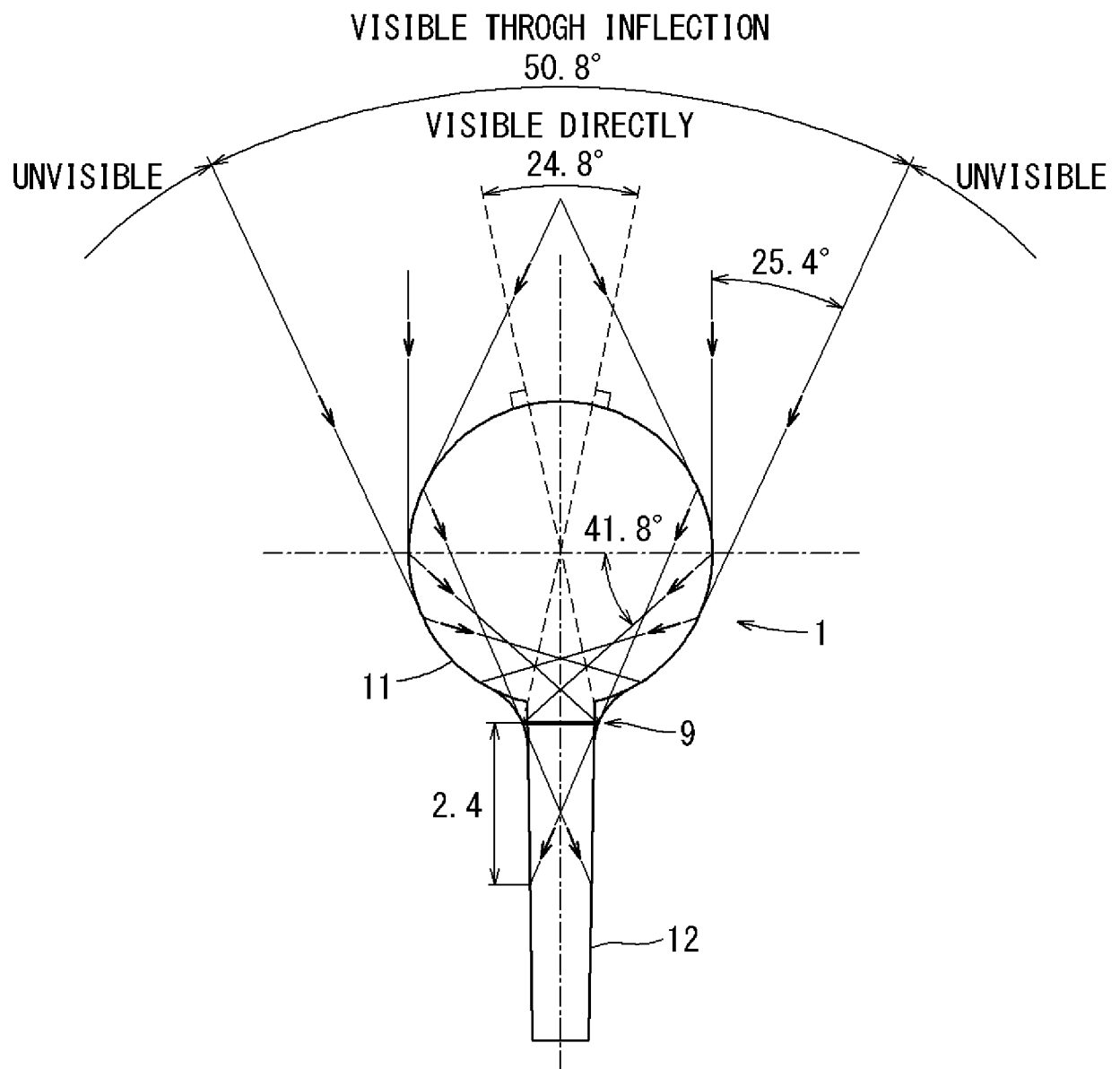
[Fig. 16]



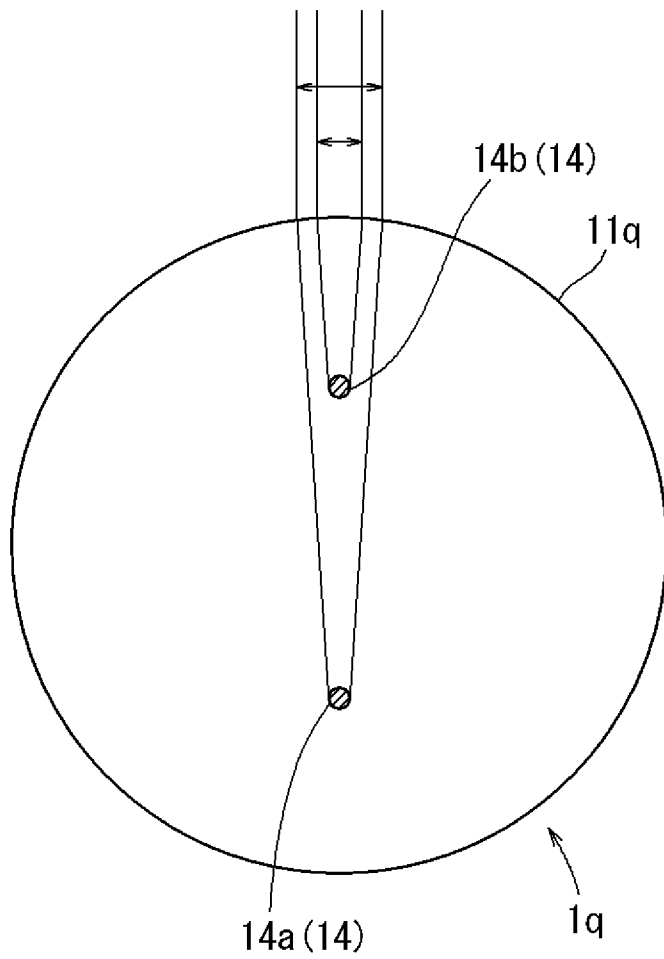
[Fig. 17]



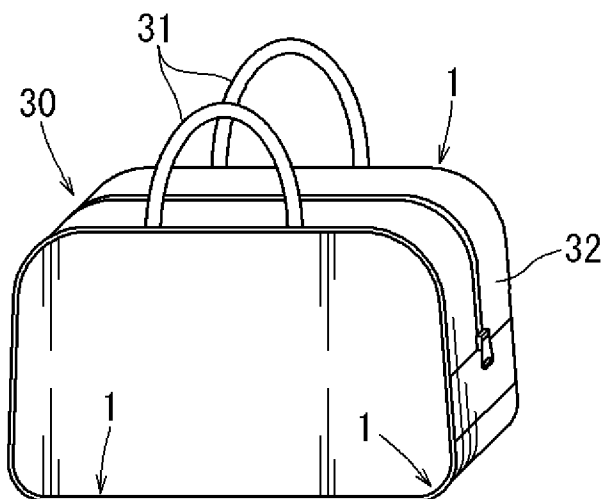
[Fig. 18]



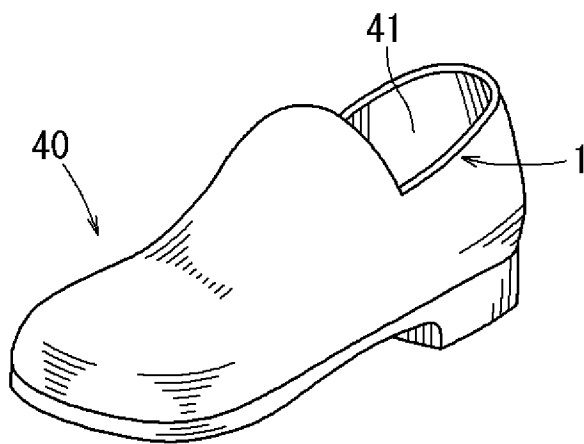
[Fig. 19]



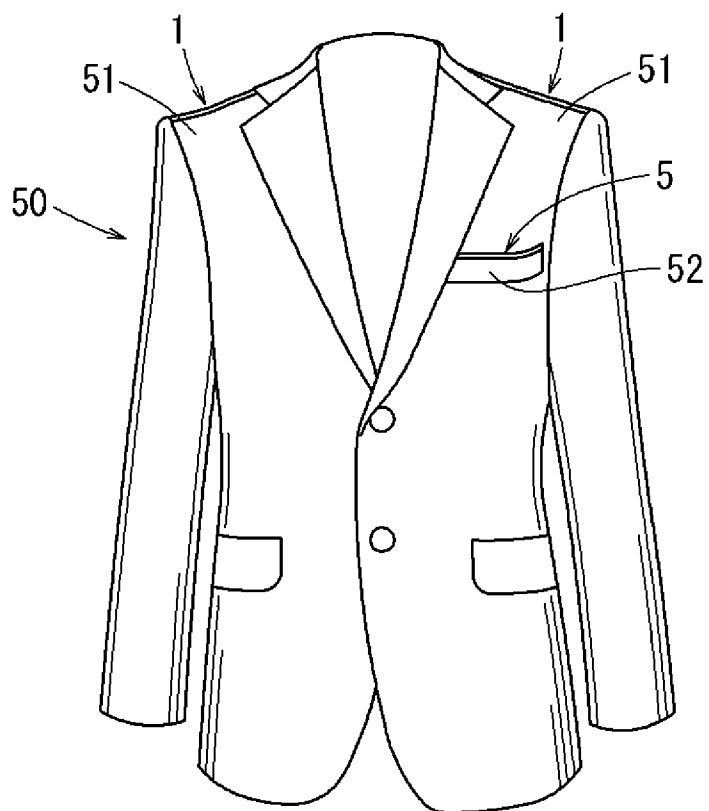
[Fig. 20]



[Fig. 21]



[Fig. 22]



INTERNATIONAL SEARCH REPORT

International application No
PCT/JP2014/004178

A. CLASSIFICATION OF SUBJECT MATTER
INV. B68G7/10 B60Q3/02
ADD.

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)
B68G B60Q A47C

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 20 2005 003613 U1 (SWART) 19 May 2005 (2005-05-19) claims; figures -----	1-9, 12-14, 16,17
A	WO 2009/058723 A2 (LEAR CORP) 7 May 2009 (2009-05-07) paragraphs [0031] - [0034], [0041], [0096]; figures -----	1-17
A	FR 2 888 574 A1 (ROQUE) 19 January 2007 (2007-01-19) claims; figures -----	1-17



Further documents are listed in the continuation of Box C.



See patent family annex.

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"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

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Date of the actual completion of the international search

17 October 2014

Date of mailing of the international search report

23/10/2014

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/JP2014/004178

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 202005003613 U1	19-05-2005	NONE	

WO 2009058723 A2	07-05-2009	CN 101910718 A	08-12-2010
		DE 112008002935 T5	09-09-2010
		KR 20100102104 A	20-09-2010
		US 2010296302 A1	25-11-2010
		WO 2009058723 A2	07-05-2009

FR 2888574 A1	19-01-2007	NONE	
