

[Document Name] Description

[Title] Reel Seat

[Technical Field]

[0001]

The present invention relates to a reel seat that is attached to various fishing rods on which a reel is mounted and used to mount and fix the reel, and particularly, to a reel seat that generates a clicking sound when a movable hood is moved.

[Background Art]

[0002]

Conventionally, it is known to fix a cylindrical reel seat to the outer surface of the blank of a fishing rod that uses a reel. The reel seat of this type generally includes a fixed hood provided at one end, in relation to the axial direction, of the reel foot placing portion and a movable hood provided at the other end in the axial direction. The movable hood is engaged with a nut member in a manner that it is unable to rotate, and when the nut member is rotated, the movable hood moves closer to or away from the fixed hood.

[0003]

There are known reel seats of the above-described structure, which include a click mechanism that generates a cracking sound when the nut member is rotated. For example, Patent Literature 1 discloses a click mechanism including a support member with a plate spring attached thereto, disposed between the nut member and the reel seat, and Patent Literature 2 discloses a click mechanism including a support member with a coil spring and a ball member attached thereto, disposed between the nut member and the reel seat. Both configurations include a recess and protrusion, formed on the inner surface of the nut member in the circumferential

direction, for the plate spring and the ball member to engage elastically, so that a clicking sound is generated when the nut member is rotated.

[Prior Art Document]

[Patent Literature]

[0004]

[Patent Literature 1] Japanese Unexamined Patent Application Publication No. 2000-342123

[Patent Literature 2] Japanese Unexamined Patent Application Publication No. 2001-145439

[Summary]

[Technical Problem]

[0005]

In the conventional click mechanism, the support member for attaching an elastic member is disposed between the nut member and the reel seat, and thus the movable hood has a large outer diameter, spoiling the appearance and its functionality. Here, to reduce the outer diameter of the movable hood, the outer diameter of the screw must be reduced, but this limits the range of use. In addition, the structure that energizes the ball member with a coil spring requires a large number of parts, causing the cost to be increased and making the structure unstable and prone to failure.

[0006]

The present invention was made focusing on the above problem, and an object thereof is to provide a reel seat incorporating a click mechanism that generates a clicking sound with a simple structure, without increasing the outer diameter of the movable hood and the nut member.

[Solution to Problem]

[0007]

In order to achieve the above object, a reel seat of the present invention comprises a seat body including: a reel foot placing portion for placing a reel foot of a fishing reel, and a cylindrical portion with an open hole into which the rear end of a rod is fitted and fixed; wherein the seat body includes: a movable hood that moves in the axial direction and fixes the reel foot placed on the reel foot placing portion, a nut member that is fitted to the movable hood so as to move the movable hood in the axial direction while keeping the movable hood from rotating, and a click mechanism that is provided at the fitting area of the movable hood and the nut member; and the click mechanism includes: a recess and protrusion that is formed on an inner surface of the nut member and generates a clicking sound; and an arc-shaped recess, formed in an outer surface of the movable hood, for installing a plate spring having an apex that engages with the recess and protrusion.

[0008]

The click mechanism of the reel seat described above is provided at the fitting area of the movable hood and the nut member, and includes a plate spring having an apex that engages with the recess and protrusion formed on the inner surface of the nut member. The plate spring is installed in the arc-shaped recess formed in the outer surface of the movable hood at the fitting area, and thus, there is no need to separately provide a support member as needed in the conventional art, and since the clicking sound is generated by the elasticity of the plate spring installed in the recess, the structure is simple, without having to increase the outer diameter of the movable hood and the nut member.

[0009]

The reel seat of the above configuration may be fixed to the outer surface of a rod (blank) of fishing rods of various types.

[Advantageous Effects]

[0010]

The present invention allows to achieve a reel seat incorporating a click mechanism that generates a clicking sound with a simple structure without increasing the outer diameter of the movable hood and the nut member, and a fishing rod on which the reel seat is mounted.

[Brief Description of Drawings]

[0011]

[Fig. 1] Fig. 1 is a partial section view in the axial direction of an embodiment of a reel seat of the present invention.

[Fig. 2] Fig. 2 is an exploded view of the reel seat of Fig. 1, with Fig. 2(a) being a top view and Fig. 2(b) being a bottom view.

[Fig. 3] Fig. 3 illustrates a nut member of the reel seat, with Fig. 3(a) being a section view in the axial direction and Fig. 3(b) being a section view along line A-A of Fig. 3(a).

[Fig. 4] Fig. 4 illustrates a movable hood of the reel seat, with Fig. 4(a) being a section view in the axial direction, Fig. 4(b) being a plan view and Fig. 4(c) being a front view in the axial direction.

[Fig. 5] Fig. 5 illustrates the configuration of a plate spring installed in the movable hood, with Fig. 5(a) being a front view and Fig. 5(b) being a side view.

[Fig. 6] Fig. 6 illustrates the nut member fitted to the movable hood (the structure of a click mechanism), with Fig. 6(a) illustrating the apex of the plate spring engaged with the recess when the nut member is rotated and Fig. 6(b) illustrating the apex of the plate spring engaged with the protrusion.

[Fig. 7] Fig. 7 illustrates a modification example of the click mechanism, with Fig. 7(a) illustrating the apex of the plate spring

positioned at the recess when the nut member is rotated and Fig. 7(b) illustrating the apex of the plate spring engaged with the protrusion.

[Description of Embodiments]

[0012]

Now, embodiments of a reel seat of the present invention will be described in detail with reference to the accompanying drawings.

[0013]

Figs. 1 to 6 illustrate an embodiment of a reel seat of the present invention.

In the following descriptions, the front-rear direction (axial direction) and the top-bottom direction mean the directions illustrated in Fig. 1, and the right-left direction (lateral direction) means the direction perpendicular to the paper surface of Fig. 1. The reel seat of this embodiment has a structure suitable for a fishing rod to which a spinning reel is attached (shaped grip structure), and the reel is mounted at the bottom side. Although the fishing rod to be fixed to the reel seat is not illustrated, the rear end of the rod (blank) is fitted into the reel seat in the axial direction through an open hole of the reel seat, and fixed by adhesion and the like. There is no restriction on the structure of the fishing rod, and may be a telescopic type, put-in type or one-piece type, for example.

[0014]

A seat body 1A of a reel seat 1 of this embodiment is integrally formed of a transparent material such as nylon, polycarbonate, acrylic resin, and urethane to improve the design, and thus the inside of the seat body 1A is visible. It maybe colorless and transparent, or colored, with no limitation on its transmittance as long as its inside is visible. It may also be

colored partially in different colors or may have partially different transmittance. Or, it may also be formed of a nontransparent material.

[0015]

The general shape of the seat body 1A is cylindrical, and the cylindrical portion 1B includes an open hole 1C that penetrates through in the front-rear direction. The base end of the rod (blank) of a fishing rod is inserted into the open hole 1C, and the outer surface of the rod is fixed by adhesion and the like. Here, the base end of the rod may be directly fixed to the inner surface of the open hole 1C, or may be fixed by means of a tubular spacer interposed therebetween.

[0016]

The seat body 1A is integrated with a cylindrical grip 50 for the fisher to grip and hold. The grip 50 of this embodiment is attached to the rear side of the seat body 1A, and its body 50A may be formed of a soft material such as natural cork, urethane, EVA, thermoplastic elastomer, and rubber, to provide a better feeling, grip and appearance when gripped and reduce the weight, or may be formed by covering a hard member with such a material.

The grip 50 is integrated with the seat body 1A by means of a cover member described below, and when the two members are integrated, an open hole 50B that penetrates through the body 50A in the front-rear direction is coaxial with the open hole 1C of the seat body 1A, allowing to insert and fix the base end of the rod. Here, the base end of the rod to be inserted may be directly fixed to the inner surface of the open hole 50B, or may be fixed by means of a tubular spacer interposed therebetween.

[0017]

The seat body 1A includes a reel foot placing portion 3 for

placing the reel foot of the spinning reel, and a fixed hood 5 that is provided at the rear of the reel foot placing portion 3 and receives the rear end of the reel foot. The seat body 1A further includes: a movable hood 60 that is provided at the front, in relation to the axial direction, opposite to the fixed hood 5; a nut member 70 that is fitted to the movable hood 60 so that the movable hood 60 moves in the axial direction while being stopped from rotating; and a click mechanism 80 provided at the fitting area of the movable hood 60 and the nut member 70. In other words, the movable hood 60 is provided at the front of the seat body 1A (at the front of the reel foot placing portion 3), and moves forward and backward in the axial direction, opposite to the fixed hood 5.

[0018]

The nut member 7 is screwed to a male thread 7 formed at the front end of the cylindrical portion 1B, and when this nut member 7 is rotated, the movable hood 60 moves in the axial direction without rotating, and squeezes and fixes the front end of the foot of the spinning reel placed on the reel foot placing portion 3. For this purpose, the movable hood 60 includes a hood portion 61 that moves in the axial direction and receives the front end of the reel foot.

The fitting structure of the movable hood 60 and the nut member 70, and the configuration of the click mechanism 80 will be described below.

[0019]

The seat body 1A includes an end face (connecting end face) 8 on the grip side, and an end face (connecting end face) 52 of the grip 50 is provided to face the end face 8 with a cover member 30 interposed therebetween, thereby integrating the two members.

Here, the reel seat 1 and the grip 50 of this embodiment are configured as an irregularly-shaped grip, a part of which in the axial direction overlaps with the seat body 1A of the reel seat, improving the appearance. Specifically, the seat body 1A is formed in such a manner that the cylindrical portion 1B is exposed and protrudes rearward, and along the exposed protrusion (hereinafter, referred to as "exposed protrusion 1B'"), the connecting end face 8 sloped upward from the lower side is formed.

[0020]

The connecting end face 8 is configured as a step protruding outward along the outer surface of the exposed protrusion 1B', and includes: a protruding step 8a that protrudes substantially in a semi-circular shape in the axial direction at the bottom end of the exposed protrusion 1B'; side sloped steps 8b formed on both sides of the protruding step 8a to gradually rise toward the front; and an upper protruding step 8c formed at the top end of the exposed protrusion 1B' continuously from the side sloped steps 8b. The connecting end face 8 including the protruding step 8a, side sloped steps 8b and upper protruding step 8c is configured as a contact surface exposed rearward. The cover member 30 makes close contact with this contact surface. The fixed hood 5 is integrated from the bottom face of the protruding step 8a through the bottom side of the side sloped steps 8b.

[0021]

The connecting end face 52 that is the connecting side of the body 50A of the grip 50 is cut to slope downward from the top in the connecting area on the seat body side, and the cut face includes a lower end face 52a, side sloped end faces 52b and an upper end face 52c that face the protruding step 8a, the side sloped steps 8b and the upper protruding step 8c of the seat body

1A. These faces face each other with the cover member 30 interposed therebetween when the exposed protrusion 1B' of the seat body 1A is fitted into the front side of the open hole 50B of the grip 50.

[0022]

When the exposed protrusion 1B' of the seat body 1A is fitted into the front side of the open hole 50B of the grip 50, the cover member 30 is interposed between the two members. This cover member 30 has a ring-shaped frame structure that extends in the axial direction and the top-bottom direction with its front side bent and raised, and is formed of a nontransparent material.

When the cover member 30 is interposed between the seat body 1A and the grip 50, the surfaces of the seat body 1A, the cover member 30 and the grip 50 are substantially flush, making it easy for the fisher to grip. The cover member 30 may be integrally formed of resin, metal or wood, for example, and its surface may be colored, patterned or plated with metal such as gold, silver, copper, and aluminum to glitter. In this manner, the design is enhanced with the thin line of the cover member 30 exposed at the boundary between the seat body 1A and the cover member 30.

[0023]

One face (seat-facing face) 30A of the cover member 30 is bent to make contact with the connecting end face 8 (protruding step 8a, side sloped steps 8b and upper protruding step 8c) of the seat body 1A, and the other face (grip-facing face) 30B is bent to make contact with the connecting end face 52 (lower end face 52a, side inclined end faces 52b and upper end face 52c) of the grip body 50A.

[0024]

Before the seat body and grip are mounted on the rod, the cover member 30 formed in the above-described manner is interposed

between the connecting end face 8 of the seat body 1A and the grip 50 (connecting end face 52) and integrates the two members, and with the seat body 1A and the grip 50 integrated, the rod is inserted into the open holes 1C and 50B and fixed there using an adhesive and the like. Here, when the cover member 30 and the grip 50 are glued together using an adhesive, the adhesive is not visible through the transparent seat body 1A because of the non-transparent cover member 30, and there is no need to form a film on the seat body 1A to hide the adhesive as is needed in the conventional art. That is, since there is no need to perform a film-forming process such as applying concealing paint to the connecting end face 8 of the seat body 1A or plating it, the cost and work of processing are reduced. In addition, since no such film is formed, the appearance is not spoiled as the transparent area is not reduced, and there is no need for post-processing such as correcting or processing the unevenness of the film if any.

[0025]

Also, since the connecting end face 8 of the seat body 1A and the connecting end face 52 of the grip 50 are sloped, their surface areas contacting the cover member 30 are large, resulting in increase in the fixing force and improvement in the design as the visible surface area of the cover member 30 is large.

[0026]

In the configuration described above, the cover member 30 is fixed to the seat body 1A beforehand, and then the grip 50 is glued to the cover member 30 of that state, so that the assembly work is easy.

[0027]

Also, in this configuration, it is preferable to form a recess-protrusion engagement portions on the connecting end face (seat-

facing face) 30A of the cover member 30 and the connecting end face 8 of the seat body 1A so that the two members are immovably fitted to each other. This recess-protrusion engagement portions only need to be formed in an area where those two members make contact, and in this embodiment, include a recess 12 formed on the center surface of the protruding step 8a of the connecting end face 8 of the seat body 1A, and a protrusion 32 that is formed on the connecting end face (seat-facing face) 30A of the cover member 30 and fitted to the recess 12 (the recess and the protrusion may be swapped).

[0028]

These recess-protrusion engagement portions 12, 32 fit and fix the cover member 30 to the seat body 1 so that they are immovable in the axial direction and the rotational direction, and gluing the grip 50 to the cover member 30 in this state makes the assembly work easy.

[0029]

It is preferable to form the recess-protrusion engagement portions along the axial direction.

With the recess-protrusion engagement portions of the two members extended in the axial direction, when the cover member 30 is insert to the seat body 1A in the axial direction so that it is fitted to the outer surface of the exposed protrusion 1B', the two members are accordingly integrated, and in the integrated state, the cover member 30 is fixed in a state that it does not move in the rotational direction, and thus the two members are fixed in a stable manner. Here, it is preferable to form the recess-protrusion engagement portions with an inclined or regulating face that facilitates their relative movement when assembled in the axial direction and prevents loosening in the axial direction. In this

manner, the cover member 30 and the seat body 1A are easy to assemble and do not move in the circumferential direction or the axial direction after assembled.

[0030]

Next, the fitting structure of the movable hood 60 and the nut member 70 and the configuration of the click mechanism 80 will be explained.

[0031]

The movable hood 60 and the nut member 70 are fitted at the front end of the movable hood 60 and the rear end of the nut member 70, and the nut member 70 is fitted to the outside of the movable hood 60 in relation to the radial direction. As Fig. 3(a) illustrates, the rear end of the nut member 70 is expanded in the radial direction, and the front end of the movable hood 60 illustrated in Fig. 4 is fitted to the inner surface thereof.

[0032]

The inner surface of the nut member 70 includes a female thread 71, which is screwed with the male thread 7 formed at the front end of the cylindrical portion 1B. Thus, when the nut member 70 is rotated, it moves in the axial direction. In addition, an engagement structure is provided in the fitting area of the movable hood 60 and the nut member 70, and it moves the movable hood 60 integrally with the movement of the nut member 70 in the axial direction. This engagement structure is configured by the engagement between a flange 72 that protrudes inward in the radial direction at the rear edge of the nut member 70 and a circumferential groove 62 formed at the rear of a cylindrical protrusion 63 at the tip end of the movable hood 60.

[0033]

Specifically, with the flange 72 of the nut member 70 fitted

into the circumferential groove 62 of the movable hood 60, the movable hood 60 moves in the axial direction integrally with the nut member when the nut member 70 is rotated and moves forward or backward in the axial direction (front-back direction). Here, rotation of the movable hood 60 is stopped by a rotation stopper structure so that it does not rotate together with the rotation of the nut member 70. This rotation stopper structure may include, for example, a protrusion 65 that extends in the axial direction on the inner surface of the movable hood 60, and an elongated groove 1E that extends in the axial direction in the seat body 1A for the protrusion 65 to enter. According to this configuration, when the movable hood 60 is subject to rotation with the nut member 70, the engagement between the projection 65 and the elongated groove 1E restricts rotation of the movable hood 60 while allowing the movable hood 60 to move in the axial direction.

This rotation stopper structure with a protrusion and an elongated groove may be formed at more than one position (in this embodiment, at two positions at 180° intervals), or may be formed with a protrusion formed on the seat body 1A and an elongated groove formed in the movable hood 60.

[0034]

The click mechanism 80 is provided at the fitting area of the movable hood 60 and the nut member 70, and in this embodiment, provided in front of the engagement structure (flange 72) that moves the movable hood 60 integrally with the movement of the nut member 70 in the axial direction, at the fitting area at the cylindrical protrusion 63 at the tip end of the movable hood 60. Specifically, the click mechanism 80 includes a protrusion and recess 82 that is formed on the inner surface of the nut member 70 in the circumferential direction and generates a clicking sound, a

plate spring 90 that is formed on the outer surface of the movable hood 60 and includes an apex 90a that engages with the protrusion and recess 82, and an arc-shaped recess 84 to install the plate spring 90.

[0035]

The recess 84 is formed in a surface of the cylindrical protrusion 63, and as illustrated in Figs. 4(a) and 4(b), is adjacent to the hood portion 61 of the movable hood 63 in the axial direction so that it generates a sound near the hood portion 61. As Fig. 5 illustrates, the plate spring 90 has an upside-down V-shape with the apex 90a and two end faces 90b and preferably is symmetrical in the right-left direction, configured to be ready to install (place) in the recess 84 as it is. In other words, the plate spring 90 is not wound around the cylindrical protrusion 63, and both sides of the apex 90a are placed in the recess 84. Thus, the range that the recess 84 is formed (the angle θ of the range of formation in the circumferential direction viewed from the axial direction; see Fig. 4(c)) only needs to be smaller than 180° around the axial center X. Practically, it only needs to be large enough to generate a clicking sound effectively by means of the elasticity of the plate spring, and in consideration of simplification of the structure, reduction in the weight, ease of assembly, etc., the range only needs to be between 50° and 12° , and further, between 60° and 90° . The plate spring 90 may be formed of a metal material including aluminum and stainless steel (SUS) or a resin material, and its shape may be changed as necessary.

[0036]

The depth D of the recess 84 is preferably about 0.5 mm to 1.5 mm so as not to reduce the strength, in order to substantially match the depth with the thickness of the cylindrical protrusion 63

of the movable hood of an existing reel seat with no click mechanism installed. The thickness T of the plate spring 90 installed in the recess of the depth D is preferably 0.15 mm to 0.5 mm.

[0037]

When the nut member 70 is rotated, the clicking sound of the click mechanism 80 is generated by the engagement between the rotating recess and protrusion 82 and the apex 90a of the plate spring 90. The number of the recess and protrusions 82 to be formed (the number of the pair of the protrusion 82a and the recess 82b formed in the circumferential direction) is not limited, and in this embodiment, it is 30 or more in consideration of the ease of rotating the nut member 70 and the state of the generated clicking sound. As for the relationship between the apex 90a and the recess and protrusion 82, as Fig. 6(a) illustrates, the apex 90a is formed so as to enter the recess 82b between the adjacent protrusions 82a, and thus, when the nut member 70 is rotated, the protrusion 82a presses down the apex 90a as illustrated in Fig. 6(b), causing the plate spring 90 to be deformed about 0.2 mm, and a clicking sound is generated when the elasticity makes the apex 90a enter the recess 82b.

[0038]

In the above-described configuration of the click mechanism 80, it is preferable to form the plate spring 90 and the arc-shaped recess 84 in such a manner that as Fig. 6 illustrates, a gap is formed between the end faces 90b of the plate spring 90 and the inner walls 84a of the recess when the plate spring 90 is installed in the arc-shaped recess 84.

[0039]

The formation of the gap facilitates easy installation of the

plate spring 90 and deformation of the plate spring when its apex 90a is pressed by the protrusion 82 when the nut member 70 is rotated, and further, no large resistance is exerted on the rotation of the nut member 70.

In forming this gap, it is preferable that the end face 90b (either one or both end faces) makes contact with the inner wall 84a of the recess 84 when the nut member 70 is rotated and the plate spring 90 is pressed down by the elastic engagement between the protrusion 82a of the recess and protrusion 82 and the apex 90a. The end face 90b of the plate spring 90 making contact with the inner wall 84a of the recess 84 stabilizes the behavior of the plate spring 90, thereby generating a stable clicking sound.

[0040]

Fig. 7 illustrates a modification example of the click mechanism 80, with Fig. 7(a) illustrating the apex of the plate spring positioned at the recess when the nut member is rotated, and Fig. 7(b) illustrating the apex of the plate spring engaged with the protrusion.

[0041]

This modification example includes a sloped face 84b formed on the inner wall of the arc-shaped recess 84 to prevent the plate spring 90 installed in the recess 84 from slipping outward in the radial direction. The sloped face 84b is formed in such a manner that it falls into the recess as it extends outward in the radial direction, and keeps the plate spring 90 installed in the recess 84 from slipping outward in the radial direction.

Thus, since the plate spring 90 does not change its position in the radial direction, its apex 90a is pressed by the protrusion 82a in a stable manner, generating a stable clicking sound. Also, as in the configuration illustrated in Fig. 6, it is preferable to

form a gap between the end face 90b of the plate spring 90 and the inner wall of the recess 84 in this configuration as well.

[0042]

The engagement between the apex 90a of the plate spring 90 and the protrusion and recess 82 (protrusion 82a, recess 82b) is not limited in any way as long as a clicking sound is generated when the nut member 70 is rotated, as described above, and it is preferable to form the apex 90a of the plate spring 90 so that the radius of curvature is large in relation to the surface of the recess and protrusion (i.e., the apex 90a does not enter the recess 82b, and the adjacent protrusion 82a presses down the apex 90a). This configuration reduces the resistance caused when the nut member 70 is rotated and improves the rotational operability.

[0043]

According to the click mechanism 80 of the reel seat described above, its configuration is simple only including the arc-shaped recess 84 formed in the outer surface (the cylindrical protrusion 63 at the tip end) of the movable hood 60 and the plate spring 90 installed therein, and thus, there is no need to separately provide a support member for the spring member as is needed in the conventional art. In addition, the structure is simple as the clicking sound is generated by the elasticity (elasticity in the top-bottom direction) of the plate spring 90 installed in the recess 84, and the outer diameter of the movable hood and nut member is not increased.

[0044]

Although an embodiment of the present invention is described above, the present invention is not limited thereto and may be modified in various ways.

[0045]

The click mechanism 80 described above is adjacent to the hood portion 61 of the movable hood 60 in the axial direction, but its position is not limited. In addition, the click mechanism 80 has a simple structure with the recess 84 simply formed at the fitting area of the movable hood 60, and thus, when more than one of the click mechanisms 80 are formed at multiple positions along the circumferential direction, that does not increase the outer diameter of the movable hood and the nut member. The material used for the seat body 1A is not limited, and its surface shape may be modified in various ways by, e.g., forming a protrusion and recesses, thinned area or opening. To a surface of the nut member 70 described above, a grip or the like may be attached. Also, the movable hood 60 may be provided at the rear or on both sides of the seat body 1A. Furthermore, although the reel seat of this embodiment is structured to mount a spinning reel, it may be of the type to mount a double bearing reel, in which a trigger may be formed on the opposite side of the reel foot placing portion.

[Explanation of Reference Numerals]

[0046]

1 Reel seat

1A Seat body

1B Cylindrical portion

1C Open hole

3 Reel foot placing portion

5 Fixed hood

60 Movable hood

70 Nut member

80 Click mechanism

82 Recess and protrusion

84 Recess

90 Plate spring

[Document Name] Claims

[Claim 1]

A reel seat comprising
a seat body including: a reel foot placing portion for placing a reel foot of a fishing reel, and a cylindrical portion with an open hole into which the rear end of a rod is fitted and fixed; wherein

the seat body includes: a movable hood that moves in the axial direction and fixes the reel foot placed on the reel foot placing portion, a nut member that is fitted to the movable hood so as to move the movable hood in the axial direction while keeping the movable hood from rotating, and a click mechanism that is provided at the fitting area of the movable hood and the nut member; and

the click mechanism includes: a recess and protrusion that is formed on an inner surface of the nut member and generates a clicking sound; and an arc-shaped recess, formed in an outer surface of the movable hood, for installing a plate spring having an apex that engages with the recess and protrusion.

[Claim 2]

The reel seat of claim 1, wherein the plate spring and the arc-shaped recess are formed in such a manner that a gap is formed between an end face of the plate spring and an inner wall of the recess when the plate spring is installed in the arc-shaped recess; and

when the nut member is rotated, the plate spring is pressed by the elastic engagement between the recess and protrusion and the apex, and its end face makes contact with the inner wall of the recess.

[Claim 3]

The reel seat of claim 1 or 2, wherein the recess includes a

sloped face formed on the inner wall of the recess so that the plate spring installed in the recess is kept from slipping outward in the radial direction.

[Claim 4]

The reel seat of any one of claims 1 to 3, wherein the apex of the plate spring has a large radius of curvature in relation to the surface of the recess and protrusion of the nut member.

[Claim 5]

The reel seat of any one of claims 1 to 4, wherein the thickness T of the plate spring is 0.15 mm to 0.5 mm, the range θ in which the recess is formed in the circumferential direction is 50° to 120° , and the depth D of the recess is 0.5 mm to 1.5 mm.

[Claim 6]

A fishing rod to which the reel seat of any one of claims 1 to 5 is firmly attached.