

DESCRIPTION**FISHING ROD AND REEL SEAT FOR A FISHING ROD**

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TECHNICAL FIELD

The present invention relates to a fishing rod and a reel seat for a fishing rod. In particular, the present invention relates to a position adjustable reel seat, and a fishing rod including such a reel seat.

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BACKGROUND ART

A conventional fishing rod including a reel seat for attaching a reel to the fishing rod has been disclosed in Patent Document 1 for example. This reel seat fixes horizontally extending parts of the reel leg portion with a pair of hoods that tighten those parts against the fishing rod. Conventionally, however, reel seats are not position adjustable with respect to the fishing rods.

Position adjustable reel seats have the following advantages. It is possible to adjust the reel to the best position for the fish to be caught. Moreover, it is possible, when the reel is attached, to adjust the balance of the entire fishing rod to one's personal preferences, in accordance with the weight of the reel. Fishing rods including conventional reel seats do not have these advantages, since such reel seats are not position adjustable.

Patent Document 1: JP H05-038244A

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DISCLOSURE OF INVENTION

It is an object of the present invention to provide a position adjustable

reel seat and a fishing rod with such a reel seat.

In accordance with a first aspect of the present invention, a fishing rod includes a rod portion that extends in longitudinal direction, and a reel seat arranged on an outer circumference of the rod portion. The reel seat
5 includes a reel seat main member, a first threaded portion formed on an outer circumferential surface of a first region of the reel seat main member, a first hood having a first reel leg fixing portion and a first operating portion, and a second hood having a second reel leg fixing portion. The first operating portion includes a second threaded portion that is in threaded engagement
10 with the first threaded portion.

The reel seat main member further includes an elastic portion that is arranged at least at one of the regions of the first reel leg fixing portion and the second reel leg fixing portion, and that can transmit to the rod portion a force, which at least one of the first reel leg fixing portion and the second reel
15 leg fixing portion applies to a reel leg portion, when that reel leg portion is attached. Thus, the reel seat can be slid on the outer circumference of the rod portion, until the force is transmitted.

Consequently, a reel seat that can slide on the outer circumference of the rod portion is provided, and the reel seat main member is provided with
20 an elastic portion. When attaching a reel leg portion, the force to fix the reel leg portion is transmitted through the elastic portion to the rod portion, by operating the first operating portion. As a result, it is possible to fix the reel seat on the rod portion by a frictional force between the elastic portion and the rod portion.

25 Consequently, the invention makes it possible to provide a fishing rod with a position adjustable reel seat with a simple configuration.

In accordance with a second aspect of the invention, in addition to the

first aspect, the elastic portion is formed by a gap in the reel seat main member. When the elastic portion is formed by a gap in the reel seat main member, the reel seat main member can be provided in one piece with the elastic portion, and their strength can be maintained. The elastic portion
5 also can be formed easily.

In accordance with a third aspect of the invention, in addition to the second aspect, the gap has a U-shape in plan view. When the gap has a U-shape in plan view, it becomes possible to make the elastic portion easily.

In accordance with a fourth aspect of the invention, in addition to the
10 second aspect, the gap has a U-shape with angular corners in plan view. Also when the gap has a U-shape with angular corners, it becomes possible to make the elastic portion easily.

In accordance with a fifth aspect of the invention, in addition to the first aspect, the first operating portion can rotate with respect to the first reel
15 leg fixing portion. The outer circumferential surface of a second region on the reel seat main member is provided with a third threaded portion. The second hood includes a second operating portion that can rotate relative to the second reel leg fixing portion. The second operating portion includes a fourth threaded portion that is in threaded engagement with the third
20 threaded portion. The elastic portion comprises a first elastic portion formed in the region of the first reel leg fixing portion, and a second elastic portion formed in the region of the second reel leg fixing portion.

If the first operating portion and the first reel leg fixing portion can rotate relative to each other, for example, the first reel leg fixing portion does
25 not need to be rotated while abutting against the reel leg portion, when the reel leg portion is fixed with the reel leg fixing portion by operating the first operating portion. Therefore, it becomes easy to fix the reel legs. By

forming a second elastic portion in addition to the first elastic portion, the reel seat main member can be fixed more tightly to the rod portion.

In accordance with a sixth aspect of the invention, in addition to the fifth aspect, the first elastic portion is formed by a U-shaped gap formed on
5 the reel seat main member and having leg portions, and opening in a first direction along the longitudinal direction, and the second elastic portion is formed by a U-shaped gap having leg portions, which opens in a second direction arranged opposite the first direction.

The U-shaped gaps make it easy to form the first and second elastic
10 portions.

In accordance with a seventh aspect of the invention, in addition to the fifth aspect, the first elastic portion is formed by a U-shaped gap with angular corners formed on the reel seat main member, the U-shaped gap being provided with leg portions and opening in a first direction along the
15 longitudinal direction, and the second elastic portion is formed by a U-shaped gap with angular corners, which is provided with leg portions, and which opens in a second direction opposite the first direction.

The U-shaped gaps with angular corners also make it easy to form the first and second elastic portions.

20 In accordance with an eighth aspect of the invention, in addition to one of the sixth or seventh aspect, a distance (D1) between tip ends in the first direction of the leg portions of the gap forming the first elastic portion and tip ends in the second direction of the leg portions of the gap forming the second elastic portion is not greater than 40% and not less than 5% of a distance (D2)
25 between the tip end in the second direction of the first elastic portion and the tip end in the first direction of the second elastic portion.

When making D1 small with respect to D2, the elastic portions

become longer and more flexible. However, when making D1 too small with respect to D2, the strength of the elastic portions becomes too low. These two factors, flexibility and strength, are well balanced when D1 is not greater than 40%, and not less than 5% of D2.

- 5 In accordance with a ninth aspect of the invention, in addition to one of the sixth or seventh aspect, a distance between tip ends in the first direction of the leg portions of the gap forming the first elastic portion and tip ends in the second direction of the leg portions of the gap forming the second elastic portion is not greater than 30%, and not less than 10% of a distance
10 between an end portion in the second direction of the first elastic portion and an end portion in the first direction of the second elastic portion.

Due to the above reasons, the flexibility and the strength are even better balanced when D1 is not greater than 30%, and not less than 10% of D2.

- 15 In accordance with a tenth aspect of the invention, in addition to the first aspect, the elastic portion is formed by a gap that extends substantially in the circumferential direction.

When the gap is formed extending in the circumferential direction, it is very easy to form the elastic portion.

- 20 In accordance with an eleventh aspect of the invention, in addition to the first aspect, a region of the reel seat main member that is opposite the region where the elastic portion is formed is provided with a groove extending in the longitudinal direction of the reel seat, and at least one of the first reel leg fixing portion and the second reel leg fixing portion are provided with a
25 protrusion that engages with the groove.

When the protrusion engages with the groove, a circumferential position of the leg fixing portion with respect to the reel seat main member

and, thus, the elastic member is determined automatically. Consequently, the surface of the leg fixing portion abutting the reel is always advantageously located in the region of the elastic portion.

In accordance with a twelfth aspect of the invention, in addition to the
5 first aspect, one of the first reel leg fixing portion and the second reel leg fixing portion is provided with a trigger. When the trigger is formed on the reel leg fixing portion, the number of parts can be reduced compared to the case where the trigger is made as a separate part. By forming the trigger in one piece with the reel leg fixing portion, the strength of the trigger can be
10 improved.

In accordance with a thirteenth aspect of the invention, in addition to the first aspect, a surface of the rod portion is provided with a cork layer.

With this configuration, the bottom surface of the elastic portion contacts the cork layer. Therefore, when the elastic portion applies a force to
15 the cork layer, the cork layer is indented due to its elasticity, and the reel seat is fixed more firmly on the fishing rod.

In accordance with a fourteenth aspect of the invention, in addition to the first aspect, an outer surface of the first operating portion is provided with a friction surface for manual operation.

20 Providing a friction surface on the operating portion enables easy manual operation.

In accordance with a fifteenth aspect of the invention, in addition to the first aspect, the reel seat main member is made of plastic.

When the reel seat main member is made of plastic, it becomes easy
25 to make the reel seat main member and the elastic portion.

In accordance with a sixteenth aspect of the invention, in addition to the first aspect, at least a part of the reel seat is made of aluminum alloy.

When at least a part of the reel seat is made of aluminum alloy, it becomes possible to attain a light and strong component.

In accordance with a seventeenth aspect of the invention, in addition to the first aspect, at least a part of the reel seat is made of titanium.

5 Also when at least a part of the reel seat is made of titanium, it becomes possible to attain a light and strong component.

In accordance with an eighteenth aspect of the invention, a reel seat for a fishing rod includes a reel seat main member, a first threaded portion formed on an outer circumferential surface of a first region of the reel seat
10 main member, a first hood having a first reel leg fixing portion and a first operating portion, and a second hood having a second reel leg fixing portion. The first operating portion includes a second threaded portion that is in threaded engagement with the first threaded portion.

The reel seat main member further includes an elastic portion that is
15 arranged at least at one of the regions of the first reel leg fixing portion and the second reel leg fixing portion, and that can be displaced elastically by a force applied to the reel leg portion by at least one of the first reel leg fixing portion and the second reel leg fixing portion when the reel leg portion is attached.

20 Consequently, the reel seat main member, which can be slid on the outer circumference of the fishing rod when attached on the fishing rod, is provided with an elastic portion. When the reel leg portion is attached, the elastic portion is displaced, and a force to fix the reel leg portion is transmitted to the fishing rod, by operating the first operating portion. As a
25 result, it is possible to fix the reel seat on the rod portion by a frictional force between the elastic portion and the fishing rod.

Consequently, it becomes possible to provide a reel seat that is

position adjustable on a fishing rod with a simple configuration.

In accordance with a nineteenth aspect of the invention, in addition to the eighteenth aspect, the elastic portion is formed by making a gap in the reel seat main member. When the elastic portion is formed by making a gap, the elastic portion can be formed in one piece with the reel seat main member, and their strength can be maintained. Furthermore, it becomes easy to form the elastic portion.

In accordance with a twentieth aspect of the invention, in addition to the nineteenth aspect, the gap has a U-shape in plan view. When the gap has a U-shape in plan view, it becomes easy to make the elastic portion.

In accordance with a twenty-first aspect of the invention, in addition to the eighteenth aspect, the first operating portion can rotate relative to the first reel leg fixing portion.

A third threaded portion is formed on an outer circumferential surface of a second region of the reel seat main member. The second hood is provided with a second operating portion that can rotate relative to the second reel leg fixing portion. The second operating portion is provided with a fourth threaded portion that is in threaded engagement with the third threaded portion. The elastic portion includes a first elastic portion formed on the region of the first reel leg fixing portion, and a second elastic portion formed on the region of the second reel leg fixing portion.

Since the first operating portion and the first reel leg fixing portion can rotate relative to each other, for example, the first reel leg fixing portion does not need to be rotated while abutting against the reel leg portion, when the reel leg portion is fixed with the reel leg fixing portion by operating the first operating portion. Therefore, it becomes easy to fix the reel legs. By forming a second elastic portion in addition to the first elastic portion, the reel

seat main member can be fixed more tightly to the rod portion.

PREFERRED EMBODIMENT FOR CARRYING OUT THE INVENTION

Hereinafter, a plurality of embodiments of a position adjustable reel
 5 seat in accordance with the invention are described with reference to the
 appended drawings. Aspects in different embodiments can be combined
 with any aspects in other embodiments, as long as there is no contradiction
 between them, and such combinations are included in the scope of the present
 invention.

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Embodiment 1

FIG. 1 shows a fishing rod including a reel seat 1 for mounting a reel
 A, in accordance with Embodiment 1 of the present invention.

This fishing rod includes a rear grip portion G1, a reel seat 1, a front
 15 grip portion G2, and a rod main member 2 extending in a frontward direction
 from the front grip portion. In this specification, "front side" means a tip end
 side of the fishing rod, and "rear side" means a butt end side with the rear
 grip G1 for an angler to grip. Front and rear sides of each part of the fishing
 rod are defined accordingly.

20 The reel seat 1 in accordance with the invention can be slid back and
 forth (in the longitudinal direction indicated by the arrow in FIG. 1), within a
 range where the radius of the fishing rod hardly changes. In this
 specification, "rod portion R" means the portion of the fishing rod over which
 the reel seat 1 can be slid. In this embodiment, the rod portion R is formed
 25 continuously in one piece between the front and rear ends thereof.

Next, the reel seat 1 is described. In FIG. 2, the frontward direction
 is to the left.

As shown in FIG. 2, the reel seat 1 is mainly provided with a first hood 10, a second hood 20, and a reel seat main member 1A, which is generally cylindrically shaped. The reel seat main member 1A is preferably made of plastic. It is preferable that the first hood 10 and the second hood 20 are made of metal such as aluminum alloy or titanium. However, it is also possible that the reel seat main member 1A is made of metal, such as aluminum alloy or titanium, or that the first hood 10 and the second hood 20 are made of plastic.

The reel seat main member 1A has a first threaded portion T1 at its rear end, and a third threaded portion T3 at its front end.

In the region between its front and rear ends, the reel seat main member 1A has a first elastic portion E1 and a second elastic portion E2 that can be displaced elastically. As shown most clearly in FIG. 3, the first elastic portion E1 is formed by a U-shaped gap with a pair of leg portions 3 that open to the front. Tip ends of the leg portions 3 are indicated with reference number 4. Similarly, the second elastic portion E2 is formed by a U-shaped gap with a pair of leg portions 5 that open to the rear. Tip ends of the leg portions 5 are indicated with reference number 6. As shown in FIG. 2 and FIG. 6, a flat contact portion 1b is formed in a region spanning from the first elastic portion E1 to the second elastic portion E2 of the reel seat main member 1A. This contact portion 1b contacts a concave surface provided at a bottom surface of a reel leg portion L.

As shown in FIG. 3, D1 is the distance between the tip ends 4 of the leg portion 3 of the first elastic portion E1, and the tip ends 6 of the leg portion 5 of the second elastic portion E2. D2 is the distance between a rear end portion 7 of the first elastic portion E1 and a front end portion 8 of the second elastic portion E2. Making D1 small with respect to D2 would make

the first elastic portion E1 and the second elastic portion E2 become more flexible. However, if D1 is made too small, the risk of damaging the first elastic portion E1 or the second elastic portion E2 increases. Therefore, it is not preferable to make D1 too small. Therefore, it is preferable that D1 is not less than 5%, and not greater than 40% of D2 (that is, $D1 / D2$ is not less than 0.05, and not greater than 0.40), and it is even more preferable that D1 is not less than 10%, and not greater than 30% of D2 (that is, $D1 / D2$ is not less than 0.1, and not greater than 0.30).

As shown in FIG. 2, the first hood 10 is provided with a first reel leg fixing portion 11 and a first operating portion 16. As shown in FIG. 4 and FIG. 5, the front portion of the first reel leg fixing portion 11 stretches more in an outward radial direction than its rear portion, and includes a first abutting surface 12 inside, which is an inclined surface contacting an upper surface of a portion L1, which is a portion extending to the rear side of the reel leg portion L.

The outer surface of the first operating portion 16 is provided with a friction surface with a multitude of longitudinal grooves enabling easy manual operation. The inner surface of the first operating portion 16 has a second threaded portion T2 that is in threaded engagement with the first threaded portion T1. Therefore, by rotating the first operating portion 16 clockwise, it is possible to move the first hood 10 frontward with respect to the reel seat main member 1A.

As shown in FIG. 5, the rear end of the first reel leg fixing portion 11 is provided with a large diameter portion 14 and a medium sized diameter portion 15 whose radius is smaller than that of the large diameter portion 14. The front end of the first operating portion 16 has a tip end portion whose shape corresponds with the large diameter portion 14 and the medium sized

diameter portion 15. This configuration connects the first reel leg fixing portion 11 to the first operating portion 16 so that they can rotate relative to each other. As shown in FIG. 7, the inner surface of the first reel leg fixing portion 11 is provided with a protrusion 11a protruding in an inward radial direction. This protrusion 11a engages with a groove 1a extending in the longitudinal direction, provided on the outer surface of the reel seat main member 1A, as shown in FIG. 6. Thus, the first reel leg fixing portion 11 can move, without rotating, in the longitudinal direction with respect to the reel seat main member 1A. The first reel leg fixing portion 11 has a cylindrical inner surface 13. This inner surface has a diameter that is substantially the same as, or slightly larger than an outer diameter of the rod portion 10.

As shown in FIG. 2 and FIG. 4, the first reel leg fixing portion 11 is integrally provided with a trigger 30.

As shown in FIG. 2, the second hood 20 includes a second reel leg fixing portion 21 and a second operating portion 26. As shown in FIG. 4, the rear portion of the second reel leg fixing portion 21 stretches more in an outward radial direction than its front portion, and includes a second abutting surface 22 inside, which is an inclined surface abutting an upper surface of a portion L2 extending to the front side of the reel leg portion L.

The outer surface of the second operating portion 26 is provided with a friction surface with a multitude of longitudinal grooves. The inner surface of the second operating portion 26 has a fourth threaded portion T4 that is in threaded engagement with the third threaded portion T3 formed on the reel seat main member 1A. Therefore, by rotating the second operating portion 26, it is possible to move the second hood 20 rearward with respect to the reel seat main member 1A.

With the similar configuration as that enabling relative rotation of

the first reel leg fixing portion 11 and the first operating portion 16, the second reel leg fixing portion 21 and the second operating portion 26 can rotate relative to each other. The inner surface of the second reel leg fixing portion 21 is provided with a protrusion (not shown) protruding in an inward radial direction. This protrusion engages with the groove 1a extending in the longitudinal direction, provided on the outer surface of the reel seat main member 1A, as shown in FIG. 6. Thus, the second reel leg fixing portion 21 can move, without rotating, in the longitudinal direction with respect to the rod seat main member 1A. The second reel leg fixing portion 21 has a cylindrical inner surface 23. This inner surface has a diameter that is substantially the same as, or slightly larger than the outer diameter of the rod portion 10.

The procedure to fix the reel on the reel seat 1 is described.

First, the reel seat 1 is moved to the desired point in the longitudinal direction on the rod portion R. Next, as shown in FIG. 4, the portion L2 extending to the front side of the reel leg portion L is moved under the inner surface of the second reel leg fixing portion 21, abutting it against the second abutting surface 22. Next, by rotating the first operating portion 16, the first hood 10 is moved forward. Consequently, the first abutting surface 12 of the first hood 10 abuts the upper surface of the portion L1 extending to the rear side of the reel leg portion L. Then, by further rotating the first operating portion 16, the first abutting surface 12 applies a force, indicated as F1 in FIG. 5, on the portion L1 extending to the rear side of the reel leg portion L. This force is transmitted to the first elastic portion E1 as F2, through the reel part L1. Due to the elasticity of the first elastic portion E1, this force F2 is applied to the rod portion R as F3. This force F3 generates or increases a frictional force between the inner surface of the first elastic

portion E1 and the rod portion R, so that the reel seat 1 is fixed on the rod portion R.

As described above, when the portion L2 extending to the front side of the reel leg portion L abuts against the second abutting surface 22 of the second reel leg fixing portion 21, by further rotating the first operating portion 16, and moving the first hood 10 forward, the second abutting surface 22 applies a force having a downward component on the upper surface of the portion L2 extending to the front side of the reel leg portion L. Therefore, the similar forces as F1 to F3 are generated between the second abutting surface 22 and the upper surface of the portion L2 extending to the front side of the reel leg portion L, between the portion L2 extending to the front side of the reel leg portion L and the second elastic portion E2, and between the second elastic portion E2 and the rod portion R, generating or increasing a frictional force between the second elastic portion E2 and the rod portion R. Thus, the reel seat 1 is fixed more firmly on the rod portion R.

As shown in FIG. 5, the rod portion R is provided with a core portion R2 made of prepreg, and a cork layer R1 formed radially outward thereof. Thus, when the cork layer R1 contacts the reel seat 1, the frictional force between the reel seat 1 and the reel increases, making it possible to fix the reel more firmly on the fishing rod.

If the reel main member 1A is made of plastic, it is possible to form the gap in one piece by injection molding. If the reel main member 1A is made of plastic or metal, it is possible to cut the gap portion after completing the cylindrical reel main member 1A.

Embodiment 2

Next, Embodiment 2 of the invention is described with reference to

FIG. 8. This embodiment and the following embodiments use the same reference numbers for the same parts in Embodiment 1, and explanations of like parts are not repeated.

In Embodiment 2, the first elastic portion E1 is provided with two gaps 3a and 3b extending in the longitudinal direction. Tip ends 4a and 4b of the gaps extend to the same region as the tip ends 4 of the gap forming the first elastic portion E1. Similarly, also the second elastic portion E2 is provided with two gaps 5a and 5b extending in the longitudinal direction. Tip ends 6a and 6b of these gaps extend to the same region as the tip ends 6 of the gap forming the second elastic portion E2. These additional gaps make the first elastic portion E1 and the second elastic portion E2 more flexible.

It is also possible to provide the additional gaps only in either of the first elastic portion E1 or the second elastic portion E2. Moreover, instead of the additional gaps, it is also possible to provide a groove that extends in the longitudinal direction, and that does not go all the way through in the radial direction. Other parts are the same as in Embodiment 1.

Embodiment 3

Next, Embodiment 3 of the invention, which has only one of the first elastic portion E1 and the second elastic portion E2, is described.

As shown in FIG. 9, the reel seat main member 1A is provided only with the first elastic portion E1, but not with the second elastic portion E2. Moreover, the second hood 20 is fixed on the reel seat main member 1A by a conventional method, such as press fitting, adhesion bond, bolts, welding, or shrink fitting. Other parts are the same as described in Embodiment 1.

Even when the elastic portion is made only of the first elastic portion E1 like this, it is possible to generate an adequate frictional force between the

first elastic portion E1 of the reel seat 1 and the rod portion R, fixing the reel on the reel seat 1. As described in Embodiment 1, the reel is fixed by operating an operating portion 16, moving the first hood 10 forward.

It is of course also possible to make the second hood 20 position
 5 adjustable on the reel seat main member 1A, as described in Embodiment 1.

It is also possible that the reel seat main member 1A has only the second elastic portion E2. In this case, for example, the reel seat main member 1A is not provided with the first elastic portion E1 shown in FIG. 2. Other parts are the same as described in Embodiment 1.

10 Even when the elastic portion is made only of the second elastic portion E2 like this, as described in Embodiment 1, by rotating the first operating portion 16 to move the first hood 10 forward, while abutting the second abutting surface 22 of the second reel leg fixing portion 21, the second abutting surface 22 applies a force having a downward component on the
 15 upper surface of the portion L2 extending to the front side of the reel leg portion L. Therefore, the similar forces as F1 to F3 indicated in FIG. 5 are generated between the second abutting surface 22 and the upper surface of the portion L2 extending to the front side of the reel leg portion L, between the portion L2 extending to the front side of the reel leg portion L and the
 20 second elastic portion E2, and between the bottom surface of the second elastic portion E2 and the rod portion R, generating or increasing a frictional force between the second elastic portion E2 and the rod portion R. Thus, the reel seat 1 is adequately fixed on the rod portion R.

25 *Embodiment 4*

In Embodiment 4, the first elastic portion E1 and the second elastic portion E2 have shapes that are different from those in Embodiment 1.

As shown in FIG. 10 (A) and FIG. 10 (B), the first elastic portion E1 and the second elastic portion E2 bracket shape, that is, U-shapes with angular corners. That is, the gap forming the first elastic portion E1 has a pair of leg portions 3c that are arranged substantially in parallel. Similarly,
 5 a gap forming the second elastic portion E2 has a pair of leg portions 5c that are arranged substantially in parallel.

Also in this embodiment (and in the other embodiments), it is preferable that the distance (D1) between tip ends 4c of the leg portion 3c of the first elastic portion E1 and tip ends 6c of the leg portion 5c of the second
 10 elastic portion E2, and the distance (D2) between a rear end portion 7c of the first elastic portion E1 and a front end portion 8c of the second elastic portion E2 meet the following condition. That is, it is preferable that D1 is not less than 5%, and not greater than 40% of D2 (that is, $D1 / D2$ is not less than 0.05, and not greater than 0.40), and it is more preferable that D1 is not less than
 15 10%, and not greater than 30% of D2 (that is, $D1 / D2$ is not less than 0.1, and not greater than 0.30).

Other Embodiments

1. As shown in FIG. 11, it is possible to extend the first threaded portion
 20 T1 into the region of the first elastic portion E1. It is also possible to extend the third threaded portion T3 into the region of the second elastic portion E2.

2. As shown in FIG. 12 (A) and FIG. 12 (B), it is possible that the elastic portions are made of a pair of gaps 3d and 5d that extend substantially in a circumferential direction of the reel seat main member 1A. Gaps with such
 25 a shape are easier to make.

3. As shown in FIG. 13 (A) and FIG. 13 (B), it is also possible that the first elastic portion E1 and the second elastic portion E2 are made of gaps 3e

and 5e that extend in straight lines when viewed from the side. In this case, those gaps form substantially a V-shape in plan view. Gaps with such a shape are easier to make.

4. The reel to be mounted can be either a double bearing reel or a spinning reel. Therefore, the elastic portions can be arranged under the reel.

5. As shown in FIG. 14, it is also possible that the first reel leg fixing portion 11 does not have the trigger.

6. The reel portion R can be also provided with a foam rubber layer, instead of the cork layer R1. The rod portion also can be made of a conventional rod material, such as prepreg.

7. As shown in FIG. 15, at least a part of an inner surface of the elastic portion can be provided with, for example, a rubber layer 35. The layer increases the friction between the elastic portion and the rod portion R, making it possible to fix the reel more firmly. The material of this layer 35 is not limited to rubber, and other materials like cork can be used as long as they increase the friction with the surface of the rod portion.

8. As shown in FIG. 16, it is possible to place a protrusion 36 on the tip end portion of the elastic portion, or on the surface of another part arranged opposite the rod portion R. This protrusion and the elastic portion may be made in one piece, or the protrusion may be attached to the elastic portion. This protrusion can fix the reel more firmly, especially when an external surface of the rod portion is provided with a cork layer or a foam rubber layer that is relatively flexible.

9. The elastic portions and the reel seat main member do not necessarily have to be made in one piece. It is also possible to fix the elastic portions on the reel seat main member by a conventional attachment method, such as screws, an adhesive, or welding, after producing the elastic portion separately

from the reel seat main member.

INDUSTRIAL APPLICABILITY

A position adjustable reel seat on a fishing rod according to the
5 present invention is useful for fixing a reel.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a perspective view of a fishing rod with a position adjustable
reel seat according to Embodiment 1 of the present invention.

10 FIG. 2 is an exploded perspective view of a reel seat according to
Embodiment 1 of the present invention.

FIG. 3 is a plan view of a reel seat main member according to
Embodiment 1 of the present invention.

15 FIG. 4 is a sectional view of a reel seat according to Embodiment 1 of
the present invention.

FIG. 5 is a sectional view of the main part of a reel seat according to
Embodiment 1 of the present invention.

FIG. 6 is a sectional view of a reel seat main member according to
Embodiment 1 of the present invention.

20 FIG. 7 is a sectional view of a reel leg fixing portion according to
Embodiment 1 of the present invention.

FIG. 8 is a plan view of a reel seat main member according to
Embodiment 2 of the present invention.

25 FIG. 9 is a perspective view of a reel seat according to Embodiment 3
of the present invention.

FIG. 10 is a perspective view of a reel seat according to Embodiment 4
of the present invention.

FIG. 11 is a sectional view of a reel seat main member according to another embodiment.

FIG. 12 is a sectional view of a reel seat main member according to another embodiment.

5 FIG. 13 is a sectional view of a reel seat main member according to another embodiment.

FIG. 14 is a perspective view of a reel leg fixing portion according to another embodiment.

10 FIG. 15 is a sectional view of an elastic portion according to another embodiment.

FIG. 16 is a sectional view of an elastic portion according to another embodiment.

LIST OF PARTS

	R	rod portion
5	1	reel seat
	10	first hood
	20	second hood
	T1	first threaded portion
	T2	second threaded portion
10	T3	third threaded portion
	T4	fourth threaded portion
	11	first reel leg fixing portion
	22	second reel leg fixing portion
	E1	first elastic portion
15	E2	second elastic portion

CLAIMS

1. A fishing rod, comprising:
 - 5 a rod portion that extends in a longitudinal direction; and
 - a reel seat arranged on an outer circumference of the rod portion;
 - wherein the reel seat includes a reel seat main member, a first threaded portion formed on an outer circumferential surface of a first region of the reel seat main member, a first hood having a first reel leg fixing portion
 - 10 and a first operating portion, and a second hood having a second reel leg fixing portion;
 - wherein the first operating portion includes a second threaded portion that is in threaded engagement with the first threaded portion;
 - wherein the reel seat main member is further provided with an elastic
 - 15 portion that is arranged at least at one of regions of the first reel leg fixing portion and the second reel leg fixing portion, and that can transmit to the rod portion a force that at least one of the first reel leg fixing portion and the second reel leg fixing portion applies to a rod leg portion when that reel leg portion is attached, such that the reel seat can slide on the outer
 - 20 circumference of the rod portion until the force is transmitted.
2. The fishing rod according to claim 1,
 - wherein the elastic portion is formed by making a gap in the reel seat main member.
- 25 3. The fishing rod according to claim 2,
 - wherein the gap forms a U-shape in plan view.

4. The fishing rod according to claim 2,
wherein the gap forms a U-shape with angular corners in plan view.
- 5 5. The fishing rod according to claim 1,
wherein the first operating portion is rotatable with respect to the
first reel leg fixing portion,
wherein the outer circumferential surface of a second region on the
reel seat main member is provided with a third threaded portion,
10 wherein the second hood includes a second operating portion that can
rotate relative to the second reel leg fixing portion,
wherein the second operating portion includes a fourth threaded
portion that can be in threaded engagement with the third threaded portion,
and
15 wherein the elastic portion comprises a first elastic portion formed in
the region of the first reel leg fixing portion, and a second elastic portion
formed in the region of the second reel leg fixing portion.
- 20 6. The fishing rod according to claim 5,
wherein the first elastic portion is formed by a U-shaped gap formed
in the reel seat main member, the U-shaped gap being provided with leg
portions and opening in a first direction along the longitudinal direction, and
wherein the second elastic portion is formed by a U-shaped gap, which
is provided with leg portions, and which opens in a second direction opposite
25 the first direction.
7. The fishing rod according to claim 5,

wherein the first elastic portion is formed by a U-shaped gap with angular corners formed in the reel seat main member, the U-shaped gap being provided with leg portions and opening in a first direction along the longitudinal direction, and

- 5 wherein the second elastic portion is formed by a U-shaped gap with angular corners, which is provided with leg portions, and which opens in a second direction opposite the first direction.

8. The fishing rod according to claim 6 or claim 7,

- 10 wherein a distance between tip ends in the first direction of the leg portions of the gap forming the first elastic portion and tip ends in the second direction of the leg portions of the gap forming the second elastic portion is not greater than 40% and not less than 5% of a distance between the tip end in the second direction of the first elastic portion and the tip end in the first
15 direction of the second elastic portion.

9. The fishing rod according to claim 6 or claim 7,

- wherein a distance between tip ends in the first direction of the leg portions of the gap forming the first elastic portion and tip ends in the second
20 direction of the leg portions of the gap forming the second elastic portion is not greater than 30% and not less than 10% of a distance between the end portion in the second direction of the first elastic portion and the end portion in the first direction of the second elastic portion.

25 10. The fishing rod according to claim 1,

 wherein the elastic portion is formed by a gap that extends substantially in the circumferential direction.

11. The fishing rod according to claim 1,
wherein a region of the reel seat main member, that is opposite the
region where the elastic portion is formed, is provided with a groove
5 extending in the longitudinal direction of the reel seat, and
wherein at least one of the first reel leg fixing portion and the second
reel leg fixing portion is provided with a protrusion that engages the groove.
12. The fishing rod according to claim 1,
10 wherein one of the first reel leg fixing portion and the second reel leg
fixing portion is provided with a trigger.
13. The fishing rod according to claim 1,
wherein a surface of the rod portion is provided with a cork layer.
15
14. The fishing rod according to claim 1,
wherein an outer surface of the first operating portion is provided
with a friction surface for manual operation.
- 20 15. The fishing rod according to claim 1,
wherein the reel seat main member is made of plastic.
16. The fishing rod according to claim 1,
wherein at least a part of the reel seat 1 is made of aluminum alloy.
25
17. The fishing rod according to claim 1,
wherein at least a part of the reel seat 1 is made of titanium.

18. A reel seat for a fishing rod, comprising:
 - a reel seat main member;
 - a first threaded portion formed on an outer circumferential surface of
 - 5 a first region of the reel seat main member;
 - a first hood having a first reel leg fixing portion and a first operating portion; and
 - a second hood having a second reel leg fixing portion;
 - wherein the first operating portion includes a second threaded portion
 - 10 that is in threaded engagement with the first threaded portion; and
 - wherein the reel seat main member is further provided with an elastic portion that is arranged at least at one of regions of the first reel leg fixing portion and the second reel leg fixing portion, and that can be displaced elastically by a force applied to the reel leg portion by at least one of the first
 - 15 reel leg fixing portion and the second reel leg fixing portion when the reel leg portion is attached.
19. The reel seat for a fishing rod according to claim 18,
 - wherein the elastic portion is formed by making a gap in the reel seat
 - 20 main member.
20. The reel seat for a fishing rod according to claim 19,
 - wherein the gap forms a U-shape in plan view.
- 25 21. The reel seat for a fishing rod according to claim 18,
 - wherein the first operating portion can rotate relative to the first reel leg fixing portion,

wherein a third threaded portion is formed on an outer circumferential surface of a second region of the reel seat main member,

wherein the second hood is provided with a second operating portion that can rotate relative to the second reel leg fixing portion,

5 wherein the second operating portion is provided with a fourth threaded portion that can be in threaded engagement with the third threaded portion, and

wherein the elastic portion is provided with a first elastic portion formed in the region of the first reel leg fixing portion, and a second elastic
10 portion formed in the region of the second reel leg fixing portion.