

[Document Name] Description

[Title] Spinning Reel for Fishing

[Technical Field]

[0001]

The present invention relates to a spinning reel for fishing.

[Background]

[0002]

Generally, a spinning reel for fishing includes a rotor that rotates in an integrated manner in response to the reel-in operation of a handle and a spool that moves forward and backward along with the reel-in operation of the handle. The rotor has a bail support member that is rotatably supported on a pair of support arms. On the bail support member, a bail for picking up a fishing line is mounted.

[0003]

A conventional spinning reel for fishing includes a flipping mechanism that returns the bail support member (bail) from a casting position to a reel-in position (e.g., Patent Literature 1). The flipping mechanism has a guide, an end of which is connected to the bail support member, and a returning contact member that makes contact with the guide in response to the rotation of the rotor in the reel-in direction and returns the bail support member from the casting position to the reel-in position. In the spinning reel for fishing with such a flipping mechanism, when the handle is rotated while the bail support member (bail) is in the casting position, the returning contact member contacts the guide along with the rotation of the rotor, and the contact force returns the bail support member from the casting position to the reel-in position.

[Prior Art]

[Patent Literatures]

[0004]

[Patent Literature 1] Japanese Unexamined Patent
Application Publication No. 2016-202133

[Summary]

[Technical Problems]

[0005]

For the conventional spinning reel for fishing, it has been desired to efficiently transmit the contact force of the returning contact member, produced by pivoting, to the guide in order to further improve the operational feel in the return carried out by rotating the handle.

[0006]

The present invention was created to solve these problems, and an object thereof is to provide a spinning reel for fishing that efficiently transmits the contact force of the returning contact member to the guide and improves the operational feel in the return carried out by rotating the handle.

[Solution to Problems]

[0007]

In order to solve the above-mentioned problem, a spinning reel for fishing of the present invention includes: a reel body; a rotor provided on the reel body; an arm portion provided on the rotor; a bail support member that is mounted on the arm portion and rotatable between a reel-in position and a casting position; and a flipping mechanism that returns the bail support member from the casting position to the reel-in position. The flipping mechanism includes: a guide that has an end connected to the bail support member and is pivotably mounted on the arm portion; and a returning contact member that is rotatably provided on the arm portion by means of a rotating shaft and returns the bail support member from the casting position to the reel-in position by making contact with the guide in response to the rotation of the rotor in the reel-in direction. The returning contact member includes: a bearing portion through which the rotating shaft is

inserted; an extended portion that extends radially outward from the bearing portion with the rotating shaft as the center; and a protruded portion that protrudes in the axial direction of the rotating shaft from the extended portion toward the guide. The extended portion includes a first contact portion that makes contact with the guide at an early stage of the rotation of the returning contact member; and the protruded portion includes a second contact portion that makes contact with the guide at a late stage of the rotation of the returning contact member. The guide includes a first guide surface that the first contact portion makes contact with and a second guide surface that the second contact portion makes contact with; and the relationship between a distance L1 from the pivoting center of the guide to the first guide surface and a distance L2 from the pivoting center of the guide to the second guide surface satisfies $L1 > L2$.

[0008]

In this spinning reel for fishing, the returning contact member includes the two contact portions: the first contact portion that makes contact with the guide at an early stage of the rotation of the returning contact member, and the second contact portion that makes contact with the guide at a late stage of the rotation of the returning contact member. Here, in the returning contact member, the first contact portion is formed at the extended portion that extends radially outward from the bearing portion into which the rotating shaft is inserted, and thus, the contact force of the returning contact member is transmitted to the first guide surface of the guide at a radial extension of the bearing portion. Thus, when the first contact portion makes contact with the first guide surface, the bearing portion does not twist with respect to the rotating shaft, and the returning contact member rotates smoothly. As a result, the contact force of the returning contact member is efficiently transmitted to the

guide, providing improved operational feel in the return carried out by rotating the handle.

[0009]

Also, since the relationship between the distance L1 from the pivoting center of the guide to the first guide surface and the distance L2 from the pivoting center of the guide to the second guide surface satisfies $L1 > L2$, the contact force of the returning contact member is efficiently transmitted to the guide at an early stage of the rotation of the returning contact member, which requires a larger contact force than at a late stage. Thus, the operational feel in the return carried out by rotating the handle is improved. The second contact portion makes contact with the second guide surface at a late stage of the rotation of the returning contact member, and thus, the guide does not have to be unnecessarily long, thereby allowing for a compact structure. Since a late stage of the rotation of the returning contact member requires less contact force than at an early stage of the rotation, the contact force of the returning contact member is efficiently transmitted to the guide without the bearing portion being twisted with respect to the rotating shaft, even in a structure in which the second contact portion makes contact with the second guide surface.

[0010]

Preferably, a contact surface of the first contact portion and the first guide surface make contact substantially in parallel if viewed from a radial direction of the rotating shaft.

[0011]

According to this configuration, the contact force is efficiently transmitted from the first contact portion to the first guide surface. Thus, the operational feel in the return carried out by rotating the handle is further improved.

[Advantage Effects of Invention]

[0012]

According to the spinning reel for fishing of the present invention, the contact force of the returning contact member is efficiently transmitted to the guide, and the operational feel in the return carried out by rotating the handle is improved.

[Brief Description of Drawings]

[0013]

[Fig. 1] Fig. 1 is a schematic side view of a spinning reel for fishing according to an embodiment of the present invention.

[Fig. 2] Fig. 2 is an arm portion and a bail support portion, in a reel-in position, of the spinning reel for fishing of an embodiment of the present invention, with (a) being a side view of the internal structure of the arm portion and (b) illustrating the contact state between a returning contact member and a guide member.

[Fig. 3] Fig. 3 is the arm portion and the bail support portion, in a casting position, of the spinning reel for fishing of an embodiment of the present invention, with (a) being a side view of the internal structure of the arm portion and (b) illustrating the contact state between the returning contact member and the guide member.

[Fig. 4] Fig. 4 is the contact state between the returning contact member and the guide member of the spinning reel for fishing of an embodiment of the present invention, with (a) being an enlarged side view of the contact state in the reel-in position and (b) being an enlarged side view of the contact state in the casting position.

[Fig. 5A] Fig. 5A is an enlarged perspective view of the returning contact member of the spinning reel for fishing of an embodiment of the present invention.

[Fig. 5B] Fig. 5B is an enlarged perspective view, in a different angle, of the returning contact member of the

spinning reel for fishing of an embodiment of the present invention.

[Fig. 6] Fig. 6 is the arm portion and the bail support portion near a dead point, which is an intermediate position between the casting position and the reel-in position, of the spinning reel for fishing of an embodiment of the present invention, with (a) being a side view of the internal structure of the arm portion and (b) illustrating the contact state between the returning contact member and the guide member.

[Fig. 7] Fig. 7 shows the arm portion and the bail support portion at a late stage of the rotation of the returning contact member of the spinning reel for fishing of an embodiment of the present invention, with (a) being a side view of the internal structure of the arm portion and (b) illustrating the contact state between the returning contact member and the guide member.

[Description of Embodiments]

[0014]

Now, a spool for a spinning reel for fishing according to an embodiment of the present invention will be described with reference to the drawings as appropriate. In the descriptions of the embodiment, the words "top", "bottom", "front", and "back" are used in terms of the directions shown in Fig. 1, and "right" and "left" are used in terms of the directions shown in Fig. 2.

[0015]

As shown in Fig. 1, a spinning reel for fishing primarily includes: a reel body 1 formed with a foot 1A to be mounted on a fishing rod that is not shown in the figure; a rotor 2 that rotates toward the front of the reel body 1; and a spool 10 that moves in the front-rear direction in synchronization with the rotating movement of the rotor 2.

[0016]

A handle shaft 3 is rotatably supported on the reel body 1 by means of a bearing that is not shown in the figure, and a handle 4 that is operated for reeling-in is mounted on a protruding end of the handle shaft 3. On the handle shaft 3, a shaft cylinder is fixed in such a manner that its loosening is prevented. On the shaft cylinder, a drive gear 6 with inner teeth to drive the rotor 2 for reeling-in is integrally formed. This drive gear 6 meshes with a pinion gear 7a of a drive shaft cylinder 7, which extends in a direction perpendicular to the handle shaft 3 and has an inner cavity extending in the axial direction. [0017]

The drive shaft cylinder 7 is rotatably supported on the reel body 1 by means of a bearing, and a spool shaft 8 that extends in a direction perpendicular to the handle shaft 3 is inserted into the cavity of the drive shaft cylinder 7 in such a manner that it moves in the axial direction, with the spool 10 to be mounted on a tip end side of the spool shaft 8. [0018]

A rear end of the spool shaft 8 includes a known oscillating mechanism 9 for moving the spool shaft 8 forward and backward. [0019]

The drive shaft cylinder 7 extends toward the spool 10, and the rotor 2 is mounted on the front end of the drive shaft cylinder 7. The drive shaft cylinder 7 is restricted from rotating in the reverse direction (rotation in the direction of casting the fishing line) by a one-way clutch that is not shown in the figure. [0020]

The rotor 2 includes a cylindrical portion positioned in a skirt portion 10a of the spool 10, and a pair of arm portions 20A, 20B. At the front ends of the arm portions 20A, 20B, bail support members 30A, 30B are rotatably supported between a reel-in position and a casting

position, and a bail 31 to pick up the fishing line in the casted state is provided between the bail support members 30A, 30B. One base end of the bail 31 is mounted on a line roller 32 integrally provided on the bail support members 30A, and the other base end is mounted on the bail support member 30B. As shown in Fig. 2, a flipping mechanism 50 is provided in the arm 20A. Details of the flipping mechanism 50 will be described below.

[0021]

As shown in Fig. 1, the spool 10 has a cylindrical shape with a fishing-line winding body 10c, which is provided between the skirt portion 10a and a front flange 10, for winding the fishing line that is not shown in the figure.

[0022]

In the spinning reel for fishing R1, when the handle 4 is operated for reeling-in, the rotor 2 is rotated by means of the drive gear 6 and the pinion gear 7a, and the spool 10 is moved forward and backward by means of the pinion gear 7a and the oscillating mechanism 9. As a result, the fishing line that is not shown in the figure is evenly wound on the fishing-line winding body 10c of the spool 10 by means of the line roller 2g.

[0023]

Now, details of the arm portion 20A and the flipping mechanism 50 provided in the arm portion 20A will be described. As shown in Fig. 1, the arm portion 20A includes an arm body 21 and a cover member 22 that covers the arm body 21. The arm body 21 is substantially L-shaped in a side view and extends forward from the rear end of the rotor 2, along the skirt portion 10a of the spool 10. Between the arm body 21 and the cover member 22, a space S to house members of the flipping mechanism 50 is formed.

[0024]

The flipping mechanism 50 is to flip the bail support member 30A in order to return the bail 31 to the reel-in

position when the rotor 2 is rotated as a result of reeling-in the handle 4 (see Fig. 1) with the bail 31 (see Fig. 1) raised to the casting position. The flipping mechanism 50 includes a guide 51 and a returning contact member 61. The guide 51 has a shaft 52 and a guide member 53.

[0025]

The shaft 52 is a member that slidably supports the guide member 53 and has a front end connected to the bail support member 30A by means of a connecting shaft 35. A coil spring 52a is mounted on the shaft 52, to the guide member 53, in a pressed state to have a biasing force. The guide member 53 is pivotably mounted on an arm body 21 by means of a shaft portion 53a. The guide member 53 includes an insertion hole formed in a longitudinal direction, and the shaft 52 is inserted into the insertion hole.

[0026]

The shaft 52, the coil spring 52a and the guide member 53 enable the bail 31 (bail support members 30A, 30B) to be biased either to the reel-in position or the casting position and held there. Now, the guide member 53 and the returning contact member 61 of the flipping mechanism 50 will be described in detail.

[0027]

The guide member 53 includes a base portion 53b of a substantially rectangular shape, the shaft portion 53a formed in the base portion 53b, and a guide contact portion 53c that integrally extends rearward from a tip end of the base portion 53b. The guide contact portion 53c is a portion that the returning contact member 61 makes contact with. As shown in Fig. 2(a), the guide contact portion 53c is inclined to the right side (the side on which the returning contact member 61 is disposed) of the center line O1 of the base portion 53b that extends through the center of the shaft portion 53a, to be close to the returning contact member 61 disposed on the right side. As shown in

Figs. 4(a) and 4(b), on the right side surface of the guide contact portion 53c, a first guide surface 54a and a second guide surface 54b are formed and serve as a contact surface that the returning contact member 61 makes contact with. In other words, the guide contact portion 53c includes two contact surfaces that are provided at different positions in terms of the front-rear direction.

[0028]

The first guide surface 54a is a flat contact surface formed on the tip end side of the right side surface of the guide contact portion 53c. As shown in Fig. 4(b), in the casting position, the first guide surface 54a is provided substantially parallel to the central axis O2 of a rotating shaft 60 of the returning contact member 61, though the rotating shaft 60 will be described later. The first guide surface 54a is tapered to some extent towards the tip end with the surface width being smaller towards the tip end. The first guide surface 54a serves as a contact-receiving surface for a first contact portion 63a of the returning contact member 61, though the first contact portion 63a will be described later. The second guide surface 54b is a flat contact surface that is continuous with the rear end of the first guide surface 54a and parallel to the center line O1 of the base portion 53b. The first guide surface 54a is somewhat inclined to the right side, in terms of the second guide surface 54b (center line O1), to be further close to the returning contact member 61 on the right side.

[0029]

Here, as shown in Figs. 4(a) and 4(b), the relationship between the distance L1 from the center of the shaft portion 53a to the center portion, in terms of the front-rear direction, of the first guide surface 54a and the distance L2 from the center of the shaft portion 53a to the center portion, in terms of the front-rear direction, of the second guide surface 54b is set to be $L1 < L2$.

[0030]

Now, the returning contact member 61 will be described. As shown in Fig. 2(b), the returning contact member 61 is rotatably supported by the rotating shaft 60 at the rear end of the arm body 21 and rotates about the rotating shaft 60 in the right-left direction. The returning contact member 61 makes contact with the guide contact portion 53c of the guide member 53 along with the rotation of the rotor 2 in the reel-in direction that is carried out by the rotation of the handle 4, and transmits the contact force to the guide member 53. The returning contact member 61 includes the first contact portion 63a and a second contact portion 65a, which make contact with the guide contact portion 53c.

[0031]

As shown in Figs. 4(a), 4(b), 5A, and 5B, the returning contact member 61 includes an annular bearing portion 62 into which the rotating shaft 60 is inserted, an extended portion 63 extended radially outward from the bearing portion 62 with the rotating shaft 60 as the center, and a protruded portion 65 protruded from the extended portion 63 in the axial direction of the rotating shaft 60 toward the guide member 53. The returning contact member 61 also includes a roller support portion 64 that extends substantially opposite to the extended portion 63. A roller 64a is rotatably supported on the roller support portion 64.

[0032]

As shown in Figs. 5A and 5B, the bearing portion 62 includes a hole 62a through which the rotating shaft 60 is inserted. The bearing portion 62 has an annular shape surrounding the hole 62a and includes an arc-shaped reinforcing wall 62b projecting toward the front side in the axial direction.

[0033]

As shown in Figs. 2(a), 2(b) and 4(a), the extended portion 63 in the reel-in position is placed substantially

on the left side of the central axis O2 of the rotating shaft 60. Also, as shown in Figs. 3(a), 3(b) and 4(b), the extended portion 63 in the casting position is disposed on the right side of the central axis O2 of the rotating shaft 60. As shown in Fig. 5A, the first contact portion 63a is formed on a side surface of the extended portion 63. The first contact portion 63a is disposed radially outward from the bearing portion 62 and formed of a rounded surface that continues from an outer circumferential surface of the bearing portion 62. Thus, while the returning contact member 61 is being rotated, the first contact portion 63a follows the rotation and suitably makes contact with the first guide surface 54a. In addition, the first contact portion 63a includes a contact surface disposed substantially in parallel to the central axis O2 of the rotating shaft 60 if viewed from the radial direction of the rotating shaft 60. Thus, as shown in Fig. 4(b), the first contact portion 63a in the casting position makes contact with the first guide surface 54a of the guide contact portion 53c substantially in parallel. This first contact portion 63a is configured to make contact with the first guide surface 54a of the guide contact portion 53c at an early stage of the rotation when the returning contact member 61 is rotated from the casting position to the reel-in position.

[0034]

As shown in Figs. 5A and 5B, the second contact portion 65a is formed on a side surface of the protruded portion 65. As shown in Fig. 5B, the second contact portion 65a is disposed in front of the first contact portion 63a in terms of the axial direction and formed of an inclined surface, which is a diagonally cut corner of the front end of the protruded portion 65. At an upper end of the second contact portion 65a, a rounded surface 65a1 is continuously formed. As shown in Fig. 4(a), the second contact portion

65a in the reel-in position makes contact with the guide contact portion 53c.

[0035]

As shown in Fig. 2(a), a spring member 66 disposed around the rotating shaft 60 keeps biasing the returning contact member 61 at all times toward the direction in which the extended portion 63 and the protruded portion 65 make contact with the guide contact portion 53c.

[0036]

As shown in Fig. 3(b), the roller 64a of the returning contact member 61 in the casting position protrudes toward the inner side, in terms of the radial direction, of the rotor 2 and slidably makes contact with an outer circumference 26 of the front portion of the reel body 1. The outer circumference 26 includes a returning member 25 at a position where it interferes with the roller 64a. The returning member 25 is configured to interfere with the roller 64a when the rotor 2 is rotated in the reel-in direction in response to the rotation of the handle 4, and to apply a rotary force to the returning contact member 61 to return the bail support members 30A, 30B to the reel-in position.

[0037]

Now, the action of manually raising the bail support members 30A, 30B from the reel-in position to the casting position will be described. When the bail support members 30A, 30B are raised manually from the reel-in position shown in Figs. 2(a) and 2(b) to the casting position shown in Figs. 3(a) and 3(b), along with the rotation of the bail support members 30A, 30B, the guide member 53 pivots counterclockwise around the shaft portion 53a, and the guide contact portion 53c pushes the returning contact member 61.

[0038]

In this case, at an early stage of the manual raising operation, the second guide surface 54b of the guide

contact portion 53c presses the second contact portion 65a of the returning contact member 61, and at a late stage of the raising operation, the first guide surface 54a of the guide contact portion 53c press the first contact portion 63a of the returning contact member 61. Through these pressing actions, the returning contact member 61 is rotated about the rotating shaft 60, and the roller 64a of the returning contact member 61 slidably makes contact with the outer circumference 26 of the front portion of the reel body 1.

[0039]

Now, the action of the flipping mechanism 50 will be described. When the handle 4 is rotated while the bail support members 30A, 30B are in the casting position, the roller 64a of the returning contact member 61 moves on the outer circumference 26 of the front portion of the reel body 1 and, as shown in Fig. 6(b), moves over onto a cam surface 25a of the returning member 25.

[0040]

As a result of this moving over of the roller 64a, the returning contact member 61 is rotated clockwise around the rotating shaft 60 and, along with this rotation, as shown in Fig. 6(a), the first guide surface 54a of the guide member 53 is pressed by the first contact portion 63a. As a result, the guide member 53 is pivoted clockwise around the shaft portion 53a. By this pivoting movement, a force to rotate the bail support member 30A is transmitted by means of the shaft 52, and the bail support member 30A begins to be rotated toward the reel-in position.

[0041]

At an early stage of this pivoting movement of the guide member 53, the first guide surface 54a of the guide member 53 is continuously pressed by the first contact portion 63a, and the contact force of the first contact portion 63a is suitably transmitted to the first guide surface 54a of the guide member 53.

[0042]

Then, while the roller 64a of the returning contact member 61 is moving up the cam surface 25a of the returning member 25, to a top surface 25b, the returning contact member 61 is further rotated counterclockwise around the rotating shaft 60, and along with this rotation, the portion that pushes the guide member 53 is changed from the first contact portion 63a to the second contact portion 65a.

[0043]

In other words, at a late stage of the pivoting movement of the guide member 53, as shown in Fig. 7(b), the portion that pushes the guide member 53 is changed from the first contact portion 63a to the second contact portion 65a near a point (dead point) that allocates the biasing force of the coil spring 52a of the guide 51, and after the change, the contact force of the second contact portion 65a is suitably transmitted to the second guide surface 54b of the guide member 53. Also, the biasing force of the spring member 66 of the returning contact member 61 is also suitably used as the contact force of the second contact portion 65a.

[0044]

The bail support member 30A is suitably returned to the reel-in position, receiving the contact force of the first contact portion 63a and the second contact portion 65a.

[0045]

According to the present embodiment described above, the returning contact member 61 includes the two contact portions: the first contact portion 63a that makes contact with the first guide surface 54a of the guide member 53 at an early stage of the rotation of the returning contact member 61, and the second contact portion 65a that makes contact with the second guide surface 54b of the guide member 53 at a late stage of the rotation of the returning

contact member 61. Here, in the returning contact member 61, the first contact portion 63a is formed at the extended portion 63 that extends radially outward from the bearing portion 62 into which the rotating shaft 60 is inserted, and thus, the contact force of the returning contact member 61 is transmitted to the first guide surface 54a of the guide member 53 at a radial extension of the bearing portion 62. Thus, when the first contact portion 63a makes contact with the first guide surface 54a, the bearing portion 62 does not twist with respect to the rotating shaft 60, and the returning contact member 61 rotates smoothly. As a result, the contact force of the returning contact member 61 is efficiently transmitted to the guide member 53, providing improved operational feel in the return carried out by rotating the handle 4.

[0046]

In addition, since the relationship between the distance L1 from the pivoting center of the guide member 53 (center of the shaft portion 53a) to the first guide surface 54a and the distance L2 from the pivoting center of the guide member 53 (center of the shaft portion 53a) to the second guide surface 54b satisfies $L1 > L2$, the contact force of the returning contact member 61 is efficiently transmitted to the guide at an early stage of the rotation of the returning contact member 61, which requires a larger contact force than at a late stage of the rotation. Thus, the operational feel in the return carried out by rotating the handle 4 is improved. Also, the second contact portion 65a makes contact with the second guide surface 54b at a late stage of the rotation of the returning contact member 61, and thus, the guide member 53 does not have to be unnecessarily long, allowing for a compact structure. Since the contact force required at a late stage of the rotation of the returning contact member 61 is less than at an early stage of the rotation, the contact force of the returning contact member 61 is efficiently transmitted to the guide

member 53 without the bearing portion 62 being twisted with respect to the rotating shaft 60 even in a configuration in which the second contact portion 65a makes contact with the second guide surface 54b.

[0047]

Furthermore, since the contact surface of the first contact portion 63a and the first guide surface 54a are substantially parallel when viewed from the radial direction of the rotating shaft 60, the contact force is efficiently transmitted from the first contact portion 63a to the first guide surface 54a. Thus, the operational feel in the return carried out by rotating the handle 4 is further improved.

[0048]

Although an embodiment of the present invention is described above, the present invention is not limited to the embodiment and may be modified as appropriate to the extent that does not depart from the intended purposes thereof. For example, the extended portion 63 of the returning contact member 61 only has to include the first contact portion 63a that extends radially outward from the bearing portion 62 and may be shaped in various manners. Also, the protruded portion 65 of the returning contact member 61 only has to include the second contact portion 65a that protrudes in the axial direction of the rotating shaft 60 from the extended portion 63 toward the guide 51 and may be shaped in various manners.

[0049]

Also, the guide member 53 only has to include the first guide surface 54a that the first contact portion 63a makes contact with and the second guide surface 54b that the second contact portion 65a makes contact with, having the relationship $L1 > L2$, and the guide member 53 may be shaped in various manners. The reference point for the distance $L1$ does not have to be the center portion of the first guide surface 54a, and the reference point for the

distance L2 does not have to be the center portion of the first guide surface 54b. The reference point for the distance L1 and the distance L2 may be set at an appropriate position on the first guide surface 54a and the second guide surface 54b.

[0050]

In the descriptions of the above embodiment, the portion that pushes the guide member 53 is changed from the first contact portion 63a to the second contact portion 65a somewhere over the dead point of the return, but the present invention is not limited to this, and the change may be made before or after the dead point of the return.

[Description of Reference Numerals]

[0051]

1 reel body

2 rotor

20a, 20b arm portion

30a, 30b bail support member

50 flipping mechanism

51 guide

54 first guide surface

54b second guide surface

60 rotating shaft

61 returning contact member

62 bearing

63 extended portion

63a first contact portion

65 protruded portion

65a second contact portion

L1 distance (between pivoting center of guide to first guide surface)

L2 distance (between pivoting center of guide to second guide surface)

[Name of Document] Claims

[Claim 1]

A spinning reel for fishing, comprising:

a reel body;

a rotor provided on the reel body;

an arm portion provided on the rotor;

a bail support member that is mounted on the arm portion and rotatable between a reel-in position and a casting position; and

a flipping mechanism that returns the bail support member from the casting position to the reel-in position; wherein

the flipping mechanism includes:

a guide that has an end connected to the bail support member and is pivotably mounted on the arm portion; and

a returning contact member that is rotatably provided on the arm portion by means of a rotating shaft and returns the bail support member from the casting position to the reel-in position by making contact with the guide in response to the rotation of the rotor in the reel-in direction;

the returning contact member includes:

a bearing portion through which the rotating shaft is inserted;

an extended portion that extends radially outward from the bearing portion with the rotating shaft as the center; and

a protruded portion that protrudes in the axial direction of the rotating shaft from the extended portion toward the guide;

the extended portion includes a first contact portion that makes contact with the guide at an early stage of the rotation of the returning contact member;

the protruded portion includes a second contact portion that makes contact with the guide at a late stage of the rotation of the returning contact member;

the guide includes a first guide surface that the first contact portion makes contact with and a second guide surface that the second contact portion makes contact with; and

the relationship between a distance $L1$ from the pivoting center of the guide to the first guide surface and a distance $L2$ from the pivoting center of the guide to the second guide surface satisfies $L1 > L2$.

[Claim 2]

The spinning reel for fishing according to claim 1, wherein a contact surfaces of the first contact portion and the first guide surface make contact substantially in parallel with each other if viewed from a radial direction of the rotating shaft.