Trial decision

Invalidation No. 2016-800001

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The case of trial regarding the invalidation of Japanese Patent No. 3292366, entitled "SPINNING REEL FOR FISHING" between the parties above has resulted in the following trial decision.

Conclusion

The demand for trial of the case was groundless.

The costs in connection with the trial shall be borne by the demandant.

Reason

No. 1 History of the procedures

September 9, 1996: Previous application underlying priority claim (Japanese Patent Application No. H8-237986)
March 31, 1997: Application of the case (Japanese Patent Application No. H9-80933)
March 29, 2002: Registration (Japanese Patent No. 3292366)
December 28, 2015: Request for trial of the case
March 22, 2016: Submission of written reply from the demandee
May 2, 2016: Notification of matters to be examined (drafting date)
June 16, 2016: Submission of oral proceeding statement brief from the demandant (received on June 17, 2016)
June 30, 2016: Submission of oral proceeding statement brief from the demandee
July 14, 2016: Oral proceeding
July 19, 2016: Submission of written statement from the demandant (received on July 20, 2016)
August 9, 2015: Submission of written statement from the demandee

August 30, 2015: Submission of written statement from the demandant
(received on August 31, 2015)

No. 2 The patent invention

It is recognized that the inventions relating to Claims 1 to 4 of the patent (hereinafter referred to as "Invention 1" to "Invention 4," respectively, and referred to collectively as "the Invention") are as follows, as specified by the matters described in Claims 1 to 4 of the scope of claims of the Patent description.

[Claim 1]

A spinning reel for fishing having an oscillation mechanism configured by forming a protrusion on the circumference of a side face of an idle gear rotating in a state interlocked with the rotation of a handle, the protrusion being engaged with an oscillation groove of an oscillation slider attached to the rear end of a spool shaft having a spool at the tip end, to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool,

the oscillation groove being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft, and straight parts extending from both ends of the inclined part in the vertical direction nearly perpendicular to the spool shaft.

[Claim 2]

The spinning reel for fishing described in Claim 1 configured so that the protrusion shifts from the inclined part to the straight parts of the oscillation groove at a switching point of reciprocating motion in the longitudinal direction of the spool.

[Claim 3]

The spinning reel for fishing described in Claims 1 or 2 configured so that a groove width of the inclined part of the oscillation groove is smaller than the groove width of the straight parts.

[Claim 4]

The spinning reel for fishing described in Claims 1 or 2 configured to form the protrusion of the idle gear engaged with the oscillation groove in an oval shape so that the longitudinal direction thereof is a direction perpendicular to the inclined part when engaged with the inclined part.

No. 3 Allegations of the parties

1 The demandant's allegation

The demandant requested the trial decision that the patent for the inventions described in Claims 1 to 4 of the scope of claims of the patent shall be invalidated and the costs in connection with the trial shall be borne by the demandee, submitted Evidence A No. 1 to Evidence A No. 13-5 as means of proof, and alleged the following reasons for invalidation.

<Outline of allegation>

Reasons for invalidation 1 (lack of novelty)

Inventions 1 and 2 are the inventions described in Evidence A No. 1-1, and thus, the inventions fall under Article 29-1(3) of the Patent Act, and the demandee should not be granted a patent. The Patent falls under Article 123-1(2) of the Patent Act and should be invalidated.

Reasons for invalidation 2 (lack of novelty)

Inventions 1 and 2 are the inventions described in Evidence A No. 2-1, and thus, the inventions fall under Article 29-1(3) of the Patent Act, and the demandee should not be granted a patent. The Patent falls under Article 123-1(2) of the Patent Act and should be invalidated.

Reasons for invalidation 3 (lack of inventive step)

Inventions 1 and 2 could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 1-1, and matters described in Evidence A No. 2-1, Evidence A No. 3, and Evidence A No. 5, and the demandee should not be granted a patent for the invention in accordance with the provisions of Article 29-2 of the Patent Act. The Patent falls under Article 123-1(2) of the Patent Act and should be invalidated.

Reasons for invalidation 4 (lack of inventive step)

Inventions 1 and 2 could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 4, and matters described in Evidence A No. 1-1, Evidence A No. 2-1, and Evidence A No. 3, and the demandee should not be granted a patent for the invention in accordance with the provisions of Article 29-2 of the Patent Act. The Patent falls under Article 123-1(2) of the Patent Act and should be

invalidated.

Reasons for invalidation 5 (lack of inventive step)

Inventions 1 and 2 could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 3, and matters described in Evidence A No. 1-1, Evidence A No. 2-1, and Evidence A No. 4, and the demandee should not be granted a patent for the invention in accordance with the provisions of Article 29-2 of the Patent Act. The Patent falls under Article 123-1(2) of the Patent Act and should be invalidated.

Reasons for invalidation 6 (lack of inventive step)

Inventions 1 and 2 could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 2-1, and matters described in Evidence A No. 1-1, Evidence A No. 3, and Evidence A No. 4, and the demandee should not be granted a patent for the invention in accordance with the provisions of Article 29-2 of the Patent Act. The Patent falls under Article 123-1(2) of the Patent Act and should be invalidated.

Reasons for invalidation 7 (violation of requirements for support)

Inventions 1 to 4 are not described in the detailed description of the invention, and do not comply with the requirements stipulated in Article 36-6(1) of the Patent Act. Thus, the Patent falls under Article 123-1(4) of the Patent Act and should be invalidated.

Reasons for invalidation 8 (violation of enabling requirement)

The detailed description of the invention of the patent is not clear and sufficient to enable a person ordinarily skilled in the art to carry out Inventions 1 to 4, and the requirements stipulated in Article 36-4(1) of the Patent Act are not satisfied. Thus, the Patent falls under Article 123-1(4) of the Patent Act and should be invalidated.

Reasons for invalidation 9 (violation of requirements for clarity)

Inventions 1 to 4 are not clear, and do not comply with the requirements stipulated in Article 36-6(2) of the Patent Act. Thus, the Patent falls under Article 123-1(4) of the Patent Act and should be invalidated.

<Specific reasons>

(1) Regarding the Reasons for invalidation 1

A Invention described in Evidence A No. 1-1

"The spinning reel for surf-casting including a slider-crank mechanism having
a1 a gear (10) rotating in a state interlocked with the rotation of a handle (5) and a pin (18) formed on the circumference of a side face thereof,
a2 and a lever (15) rocking around an end fulcrum (16) having a non-linear slot (19) formed thereon and connected to a rear end of a spool shaft with a spool formed at a tip via a sliding pad (17) freely sliding on the lever longitudinally,
a3 the pin (18) formed on the gear (10) being engaged with the non-linear slot (19) of the lever (15) so as to be moved in the slot, to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool,
b the non-linear slot being composed of an inclined connection part (inclined plane) arranged in the intermediate part thereof and inclined in the longitudinal direction of the spool shaft, and straight longitudinal extension parts extending from both ends of the inclined connection part (inclined plane)"
(Oral proceeding statement brief p. 18 l. 4-l. 17)

B Comparison between Invention 1 and invention described in Evidence A No. 1-1
(A) Invention 1 is specified as the "oscillation slider attached to the rear end of a spool shaft" in Constituent component 1, while the invention described in Evidence A No. 1-1 is configured so that the lever (15) rocking around the end fulcrum (16) is connected to the rear end of the spool shaft via the sliding pad (17) freely sliding on the lever longitudinally. They are supposedly different in the above point (Different feature 1).
(Oral proceeding statement brief p. 20 the last line to p. 21 l. 5)

(B) Invention 1 is configured so that the "straight parts" constituting the oscillation groove are limited to the "straight parts extending from both ends of the inclined part in the vertical direction nearly perpendicular to the spool shaft," while the invention described in Evidence A No. 1-1 contains no clear description of positional relationship of the longitudinal extension part with respect to a spool shaft direction. They are supposedly different in the above point (Different feature 2).
(Oral proceedings statement brief p. 21 l. 6-l. 10)

C Regarding Different feature 1
(A) The term "attached" described in Claim 1 of the patent has the same meaning as "equipped." The matters specifying the invention, "oscillation slider attached to the rear

end of a spool shaft," includes an oscillation slider equipped at the rear end of the spool shaft in various states, slidable or turnable state, as well as an oscillation slider fixed to the rear end of the spool shaft, and also includes an oscillation slider having another member, such as a pad for sliding or turning the slider, as well as an oscillation slider directly equipped on the spool shaft. Thus, Different feature 1 is not a substantial different feature.
(Oral proceedings statement brief p. 21 l. 12 to the last line)

(B) In light of the terminology in the scope of claims of patent publications, the term "attached" is used in a broader definition than "fixed," in a field including a fishing reel, and the following are only a few examples.
"a spool shaft with which the sliding body is attached" Japanese Patent No. 5330971 (Evidence A No. 13-1)
"a spool attached rotatably" Japanese Patent No. 4913307 (Evidence A No. 13-2)
"a rotor attached" Japanese Patent No. 4090046 (Evidence A No. 13-3)
"a sliding body attached" Japanese Patent No. 3955809 (Evidence A No. 13-4)
"attached slidably" Japanese Patent No. 3921128 (Evidence A No. 13-5)
(Written statement as of July 19, 2016 p. 3 l. 10-l. 17)

D Regarding Different feature 2
(A) In the lever (15) disclosed in Evidence A No. 1, the two longitudinal extension parts (21 and 22) are perpendicular to the spool shaft in the intermediate position of the rocking motion of the lever (15). In view of the entire rocking motion, the members are basically located at the intermediate position, and when they rock in the vertical direction, the lever (15) can be considered to be located within a predetermined angular range based on a perpendicular state with respect to the spool shaft. Thus, the non-linear slot "composed of the inclined connection part (inclined plane) arranged in the intermediate part thereof and inclined in the longitudinal direction of the spool shaft, and straight longitudinal extension parts extending from both ends of the inclined connection part (inclined plane) in vertical direction perpendicular or nearly perpendicular to the spool shaft" is described in Evidence A No. 1-1. Therefore, Different feature 2 is not a substantial different feature.

The demandee interprets "nearly perpendicular to the spool shaft" as that "the two straight parts are arranged in parallel, not on the same straight line." In light of the interpretation, the angular range prescribed by "nearly perpendicular" is assumed to be a very wide range. The longitudinal extension parts (21 and 22) of the rocking lever

located at an upper end and a lower end of the vertical motion are also to be "substantially perpendicular" to the spool shaft, naturally.
(Oral proceedings statement brief p. 22 l. 2 to the last line)

(B) The terms "nearly perpendicular" and "inclined" can each be understood as a term indicating an angle of a predetermined range, and can be interpreted to include a state where the angle changes within a predetermined range.
(Written statement as of July 19, 2016 p. 3 the 4th line from the bottom to the 2nd line from the bottom)

(2) Regarding the Reasons for invalidation 2
A Invention described in Evidence A No. 2-1

"The invention relating to a spinning reel for fishing, which is a fishing reel having a mechanism configured by arranging a cam stud (13) on one side face of a gear (11) that rotates along with rotation of a handcrank (8) eccentrically around a rotation axis (12), and inserting the cam stud (13) into a guide slot (14) of a guide member (15) attached at a rear end of a spindle (2) having a spool (1) at its tip so as to slide in the slot, to displace the guide member (15) with the cam stud (13), and to convert the rotation of the handcrank (8) to to-and-fro reciprocating motion of the spool (1),

the guide slot (14) being formed in an elongated S shape whose longitudinal direction has a certain angle (non-zero angle) with respect to a stroke direction (axial direction of the spindle), and whose central portion (indicated by 25 and 29 in FIG. 6) is inclined with respect to the longitudinal direction (direction perpendicular to the axial direction (26) of the spindle) of the S shape, and being configured so that reciprocating motion of the spool is reversed at positions (indicated by B and D in FIG. 6) shifted from the central portion to other portions," and "the invention having rectilinear sidewalls (14', 14") forming the guide slot (14)."
(Oral proceedings statement brief p. 32 l. 12-p. 33 l. 7)

B Comparison between Invention 1 and invention described in Evidence A No. 2-1

Invention 1 has the following constituent components, "the oscillation groove being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft," while the invention described in Evidence A No. 2-1 discloses that the sidewalls (14', 14")

forming the elongated S-shaped guide slot (14) are formed in a rectilinear shape, but does not specify how the sidewalls are formed in a rectilinear shape. They are supposedly different in the above point.
(Oral proceeding statement brief p. 33 the 2nd line from the bottom to p. 34 l. 5)

C Regarding the different feature

Evidence A No. 2-1 describes the guide slot shown in FIG. 3 as a "rectilinear guide slot" (the 4th column l. 35-l. 37, translation p. 7 the last paragraph l. 1 and l. 2). The description "the sidewalls 14', 14" may be either rectilinear" follows, with a conjunction "or," "arcuate..., averting abrupt transitions such as edges or corners." It can be considered that, when the sidewalls 14', 14" are formed in a rectilinear shape, abrupt transitions such as edges or corners are assumed. Since it is disclosed that the reciprocating motion of the spool is reversed at positions (indicated by B and D in FIG. 6) shifted from the axially inclined central portion of the spindle to other portions, it can be recognized that the whole of the side walls 14' and 14" are formed in a rectilinear shape, that the central portion inclined in the axial direction of the spindle and portion located at both ends is formed by different rectilinear sidewalls, and that the position shifted from the central portion to the other portions has a crank shape where the reciprocating motion of the spool is reversed (equivalent to B and D in FIG. 6). The guide slot (14) having the crank shape is also a matter essentially described in Evidence A No. 2-1.

When the S-shaped guide slot (14) in FIG. 6 is formed in a crank shape as described above, an extension direction of an area indicated by 28 and 31 in FIG. 6 is not perpendicular to the axial direction (26) of the spindle. However, the demandee interprets that the "straight parts ... nearly perpendicular to the spool shaft" described in Claim 1 of the patent means that "the two straight parts are arranged in parallel, not on the same straight line." In light of the interpretation, the term "nearly perpendicular" defines an angle of a wide range including 90 degrees. The inclined angle with respect to the axial direction (26) of the spindle representing the whole of the ends extending from both ends of the cranked central portion disclosed in Evidence A No. 2-1 is supposed to be closer to 90 degrees than α. In light of the above, the inclined angle with respect to the stroke direction (26) of the spool representing the whole of the ends is included in "nearly perpendicular" in the Invention 1.

Thus, the above different feature is not a substantial different feature.
(Oral proceedings statement brief p. 34 l. 6-p. 35 l. 8)

(3) Regarding the Reasons for invalidation 3

A Well-known prior arts

For example, as described in U.S. Patent No. 5350131 Description (Evidence A No. 2-1) and Japanese Unexamined Patent Application Publication No. H8-154543 (Evidence A No. 3), the mechanism in which the slider having a non-linear slot is fixed to a spool shaft and moves forward and backward together was a well-known prior art at the time of the priority date of the patent, and has been employed generally in a fishing reel.

(Written request for trial p. 30 the 2nd line from the bottom to p. 31 l.3)

B Application of the well-known prior arts to the invention described in Evidence A No. 1-1

(A) Motive for application

a As described in Evidence A No. 2-1 and Evidence A No. 5, the same oscillation slider of the oscillation groove is used in both an oscillation mechanism having pivoting motion and a mechanism in which the slider is fixed to the spool shaft and moves forward and backward together.

Therefore, a person skilled in the art could easily conceive the idea that the mechanism having pivoting motion described in Evidence A No. 1-1 is replaced with the mechanism in which the slider is fixed to the spool shaft and moves forward and backward together described in Evidence A No. 2-1 and Evidence A No. 3.

(Written request for trial p.31 l. 4-l. 12)

b In the oscillation mechanism for converting the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool, the structure for fixing the slider to the spool shaft was most common at the time of the priority date of the patent, and there was a strong motivation for employing such structure (Evidence A No. 10 "1 Prior art document that discloses a mechanism in which the slider is fixed to the spool shaft and moves forward and backward together").

Regardless of whether the oscillation groove is formed in I-shape, S-shape, C-shape, or others, there existed the prior arts on both an oscillation mechanism having pivoting motion and a mechanism in which the slider is fixed to the spool shaft and moves forward and backward together (Evidence A No. 10 "2 Combination of prior art documents having the same shape of the oscillation groove and different mechanisms in slider motion" (A)-(D)).

Thus, a person skilled in the art could easily conceive the idea that the

mechanism having pivoting motion described in Evidence A No. 1-1 is replaced with the mechanism in which the slider is fixed to the spool shaft and moves forward and backward together described in many prior art documents.
(Oral proceedings statement brief p. 39 l. 16-p. 40 l. 4)

(B) Configuration employed in application

In fixing the slider to the spool shaft, it is natural that a state of an intermediate point of vertical motion in a direction of an arrow indicated by "H" in Evidence A No. 1-1, Fig. 3 is considered to be a basic state of the rocking lever, and that the slider is fixed to the spool shaft with the longitudinal extension parts perpendicular to H direction.
(Written request for trial p. 31 l. 13-l. 16)

C Demandee's allegation on arguments against the above B (A) a

Evidence A No. 5 only describes that "a pin groove is formed in S shape" (paragraph 0013), but does not describe specifically that it is asymmetric. Drawings of publication of unexamined patent applications are considered to give an outline generally, and it is appropriate to understand that the idea of forming the pin groove in S shape is disclosed in Evidence A No. 5. Even if the shapes of them (the guide slot 14 described in Evidence A No. 2 publication and the pin groove 86 of a first pivot arm 80 described in Evidence A No. 5 publication) are different, it cannot be an obstructing factor of the above replacement. It is an absolute fact that the replacement has been conducted. Even if it has been recognized that the shape of the slot is corrected due to the difference of the mechanisms, a person skilled in the art corrects the shape and replaces the mechanisms only. Therefore, it does not lead to the conclusion that there is no replacement. Even if there is an influence on the motion regulated by a specific slot shape due to the difference of the mechanisms, there is no difference in a basic motion regulated by the slot shape, and a person skilled in the art could conceive of replacement of the mechanisms easily.
(Oral proceedings statement brief p. 40 the 5th line from the bottom to p. 41 l. 7)

(4) Regarding the Reasons for invalidation 4

A Invention described in Evidence A No. 4

"The spinning reel having an oscillation mechanism configured by arranging a drive pin 11 on one side face of a drive gear 9 that rotates along with the rotation of a handle 1 so as to protrude with a tip engaging part 11B set in a larger-diameter position than a gear

bottom diameter of the drive gear 9, and engaging the drive pin 11 with an engagement long groove 10A of a driven body 10 attached to a rear end of a spool shaft 6 having a spool 5 at its tip, to convert the rotation of the handle 1 to reciprocating motion in a longitudinal direction of the spool 5, the engagement long groove 10A being extended straight in a direction perpendicular to the spool shaft 6."
(Oral proceedings statement brief p. 48 l. 2-l. 9)

B Comparison between Invention 1 and the invention described in Evidence A No. 4

Invention 1 describes "the oscillation groove being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft," while the invention described in Evidence A No. 4 describes "the engagement long groove 10A being extended straight in a direction perpendicular to the spool shaft 6." They are different in the above point.
(Oral proceedings statement brief p. 49 l. 7-l.12)

C Regarding the different feature

(A) Regarding the "engagement long groove" in the invention described in Evidence A No. 4, in light of the description in Evidence A No. 3, there is a need to enlarge an interlocking gear for securing spool to-and-fro stroke, and in light of the description in Evidence A No. 2-1, "tangle" may occur due to the increase in the amount of line to be taken up at an end area of a take-up part.
(Oral proceedings statement brief p. 56 l. 13 to the last line)

(B) As described in the prior art documents presented for each of the mechanisms in Evidence A No. 10 "2 Combination of prior art documents having the same shape of the oscillation groove and different mechanisms in slider motion" (A)-(D), the same oscillation slider of the oscillation groove is used in both an oscillation mechanism having pivoting motion and a mechanism in which the slider is fixed to the spool shaft and they move forward and backward together.
(Oral proceedings statement brief p. 57 l. 15-l. 19)

(C) On the basis of the above (B), in order to solve the problems in the above (A), it can be easily conceived that the "engagement long groove" in the invention described in Evidence A No. 4 is replaced with the non-linear slot of the spinning reel for surf-casting disclosed in Evidence A No. 1-1 or the cranked guide slot indicated in Evidence

A No. 2-1.
(Oral proceedings statement brief p. 57 the 6th line from the bottom to p. 58 l. 4)

(5) Regarding the Reasons for invalidation 5
A Invention described in Evidence A No. 3
"A spinning reel for fishing 1 having a spool to-and-fro motion mechanism configured by arranging an eccentric projection 25a on one side face of an interlocking gear 25 that rotates along with rotation of a handle 7 in a periphery thereof, and engaging the projection 25a with an engagement long groove 33a of a slider 33 attached to a rear part of a spool shaft 17 having a spool 5 at its tip, to convert the rotation of the handle 7 to reciprocating motion in a longitudinal direction of the spool 5, the engagement long groove 33a being inclined at a predetermined angle with respect to the spool shaft 17"
(Oral proceedings statement brief p. 61 l. 7-l. 13)

B Comparison between Invention 1 and invention described in Evidence A No. 3
Invention 1 describes that "the oscillation groove being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft," while the invention described in Evidence A No. 3 describes that "the engagement long groove 33a being inclined at a predetermined angle with respect to the spool shaft 17." They are different in the above point.
(Oral proceedings statement brief p. 62 l. 4-l. 9)

C Regarding the different feature
(A) Regarding the "engagement long groove" in the invention described in Evidence A No. 3, in light of the description in Evidence A No. 2, "tangle" may occur due to the increase in the amount of line to be taken up at an end area of a take-up part.
(Oral proceedings statement brief p. 62 the 2nd line from the bottom to p. 63 l. 5)

(B) As described in the prior art documents presented for each of the mechanisms in Evidence A No. 10 "2 Combination of prior art documents having the same shape of the oscillation groove and different mechanisms in slider motion" (A)-(D), the same oscillation slider of the oscillation groove is used in both an oscillation mechanism having pivoting motion and a mechanism in which the slider is fixed to the spool shaft and they move forward and backward together.

(Oral proceedings statement brief p. 63 the 5th line from the bottom to the last line)

(C) On the basis of the above (B), in order to solve the problems in the above (A), it can be easily conceived that the "engagement long groove" in the invention described in Evidence A No. 3 is replaced with the non-linear slot of the spinning reel for surf-casting disclosed in Evidence A No. 1-1 or the cranked guide slot indicated in Evidence A No. 2-1.
(Oral proceedings statement brief p. 64 l. 1-l. 11)

(6) Regarding the Reasons for invalidation 6

Even if Invention 1 and the invention described in Evidence A No. 2-1 are different in the different features described in the above (2) or the different features presented by the collegial body as a temporary opinion, in light of the basic state (state of the intermediation position of the vertical motion) of the non-linear slot of the spinning reel for surf-casting disclosed in Evidence A No. 1-1, the "engagement long groove" of the spinning reel described in Evidence A No. 4, the arrangement of the "engagement long groove" of the spinning reel for fishing described in Evidence A No. 3, and technical significance thereof, (in the invention described in Evidence A No. 2-1), a person skilled in the art can easily conceive the idea that the central portion of the slot is inclined in a stroke direction of the spool and that end portions extending from the both ends thereof are arranged to be extended in a vertical direction perpendicular to the spool shaft.
(Oral proceedings statement brief p. 43 l. 14, p. 44 l. 2-l. 9)

(7) Regarding the Reason for invalidations 7

A Regarding Inventions 1 to 4

According to the descriptions in Claims 1 to 4, the oscillation groove of the spinning reel for fishing of Inventions 1 to 4 does not particularly specify the shape (for example, straight or curved in an arch shape) of the inclined part, a connection form (for example, forming a corner, immediately shifting from one to the other or curved, or gradually shifting from one to the other) between the inclined part and the straight parts, and a ratio between the inclined part and the straight parts. According to the descriptions in Claims 1, 3, and 4, it can be interpreted that the oscillation groove of the spinning reel for fishing of Inventions 1, 3 and 4 does not especially limit the correspondence between the switching point of the to-and-fro motion of the spool and the shifting point from the inclined part to the straight parts or vice versa.

(Written request for trial p. 52 l. 6-l. 14)

B Problems of the Invention

(A) The problems to be solved by the Invention is to provide a spinning reel for fishing configured to solve winding problem of a reel described in Japanese Unexamined Patent Application Publication No. H8-154543 (Evidence A No. 3) and U. S. Patent No. 5350131 (Evidence A No. 2-1) that a winding surface bulges at both ends and sags in the center, while increasing the amount of line to be taken up without enlarging the reel as described in Japanese Unexamined Patent Application Publication No. H8-154543. Especially, the spinning reel configured to allow the oscillation slider to move at a constant speed by forming the oscillation groove in a substantially S shape, described in U. S. Patent No. 5350131 (Evidence A No. 2-1), improves the winding state to some extent, while the amount of displacement of the oscillation slider with respect to the rotation at a predetermined angle of an idle gear is less, in switching the reciprocating motion of the spool, than that in other sections, and a larger amount of line is taken up near both ends of the winding surface. The speed of the oscillation slider is maximized at a position corresponding to the winding surface central part. The spinning reel is considered to solve the problem that the amount of line to be taken up in the central part of the winding surface is reduced.

(Written request for trial p. 52 the 6th line from the bottom to p. 53 l. 6)

(B) The demandee states that the problem to be solved by the Invention 1 is to solve only the problem that the speed of the oscillation slider is maximized in a position corresponding to the winding surface central position and the amount of line to be taken up in the central part of the winding surface is reduced. However, it is obvious that the above problem has already been solved by the invention described in Evidence A No. 2-1, on the basis of the description in FIG. 8 of the specification and data (Evidence A No. 7 1-3) verified by the demandant, and the problem cannot be recognized as problems of the Invention. The problem of the Invention considered as an improvement of the invention described in Evidence A No. 2-1 is recognized to further improve the invention described in Evidence A No. 2-1, in light of the Patent description, to achieve abrupt switching and discontinuous changes, and to switch to-and-fro reciprocating motion of the spool more quickly.

(Oral proceedings statement brief p. 67 l. 14-l. 19, p. 69 l. 11-l. 15)

(C) Evidence A No. 7-1 demonstrates objectively that the S-shaped slot specified in

shape produces a working effect that "the highest-speed point of the reciprocating motion does not coincide with the central part of the winding surface."
(Written statement as of August 30, 2016 p. 8 l. 5-l. 8)

(D) According to FIG. 20 of the Patent, a section between b' and c' is larger than a section between c' and d', and it can be considered that the speed is greater in the section between b' and c'. Thus, the description in paragraph 0010, "the speed of the oscillation slider is maximized at a point N' and a point P"' is not consistent with FIG. 20. According to FIG. 20 of the Patent, it can be recognized that the S-shape slot disclosed in Evidence A No. 2-1 produces an effect that "the highest-speed point of the reciprocating motion does not coincide with the central part pf the winding surface."
(Written statement as of August 30, 2016 p. 8 the 6th line from the bottom to the last line)

C Correspondence between the Invention and means of solving the problem of the Invention
(A) As a working effect of the Invention, the description, "the spool moves quickly, to prevent a large amount of line from being taken up at both ends" is included. This working effect relates to a reel configured to "switch to-and-fro reciprocating motion of the spool when the protrusion shifts from the inclined part of the oscillation groove to the straight parts" described in Claim 2.
(Written request for trial p. 57 l. 2-l. 7)

(B) According to the description of the Patent description, if the inclined part is curved and the projection gradually shifts to the straight parts at both ends, the reciprocating motion of the spool is not quickly switched and motion after the switching is not quick. The problem that a large amount of line is taken up at both ends cannot be solved. The oscillation groove having a curved inclined part formed at an intermediate part and configured to gradually shift between the inclined part and parts connected thereto at both ends while connecting them in a curved shape does not provide means of solving the problem described above.
(Written request for trial p. 58 the last line to p. 59 l. 5)

(C) The problem to be solved by the Invention described above cannot be solved by conditions such as a distance in a spool shaft direction between the two straight parts formed at both ends, a ratio between the straight parts and the inclined part, or an

inclination angle of the inclined part. However, such conditions are not defined in Inventions 1 to 4.
(Written request for trial p. 59 l. 6-l. 9)

(8) Regarding the Reasons for invalidation 8

As is obvious from the above (7), Inventions 1 to 4 provide a reel which produces a working effect that the amount of line to be taken up on the winding surface is uniform as a whole by quickly switching reversal of stroke and achieving quick motion after the switching. However, Inventions 1 to 4 cannot produce the specific working effect as a whole, and contain embodiments lacking utility. Thus, Inventions 1 to 4 are not clearly and sufficiently described enough to enable a person ordinarily skilled in the art to carry out, in the detailed description of the invention of the description, and do not comply with the requirements stipulated in Article 36-4(1) of the Patent Act.
(Written request for trial p. 61 the 5th line from the bottom to p. 62 l. 3)

(9) Regarding the Reasons for invalidation 9

A Invention 1 describes the matters specifying the invention of the "straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft." However, the scope of the matters specifying the invention "nearly perpendicular to the spool shaft" is uncertain even if the detailed description of the invention of the patent and technical common sense are taken into consideration.

Therefore, the term "nearly perpendicular" does not allow unambiguous comprehension of the technical significance and scope thereof alone. Taking into consideration the description in the detailed description of the invention of the patent, [0014] includes the same description as Invention 1, and [0022] includes only the description about the oscillation groove 45 shown in FIG. 2, "two straight parts 53, 55 formed straight in vertical direction nearly perpendicular to the spool shaft 15 from both ends of the inclined part 51." As for the matters specifying the invention, "nearly perpendicular to the spool shaft," there is no description about the definition or technical significance thereof. The significance and scope of the term "nearly perpendicular" change depending on the contents of technology of the inventions, and there is no technical common sense that the term "nearly perpendicular" in the technical field of a fishing reel to which the Invention belongs indicates a certain significance and scope. Even if the detailed description of the invention and technical common sense are taken into consideration, the technical significance, "nearly perpendicular to the spool shaft,"

cannot be understood, and the scope thereof cannot be specified. Thus, Invention 1 is unclear. Inventions 2 to 4 depend from Invention 1, and include the matters specifying the invention, "nearly perpendicular to the spool shaft." Inventions 2 to 4 are unclear as well due to the same reasons.
(Written request for trial p. 62 l. 6 to the last line)

B The demandant alleges that the significance of the terms "straight parts" and "nearly perpendicular" is understood in the scope of the working effect, while considering the working effect, "the highest-speed point of the reciprocating motion does not coincide with the central part of the winding surface," as a working effect specific to the Invention.

However, as proven in Evidence A No. 7-1, an S-shaped slot can produce the same working effect. In light of general knowledge, an angle (for example, 80 or 70 degrees) which does not fall within the range of "about 90 degrees" can also produce the safe working effect.

Thus, the working effect alleged by the demandee cannot define the scope of the "straight parts" and "nearly perpendicular."
(Written statement as of August 30, 2016 p. 11 the 10th line from the bottom to the last line)

[Means of proof]
Evidence A No. 1: Italian Patent No. 694177 Description
Evidence A No. 1-2: Translation of Evidence A No. 1
Evidence A No. 2-1: U. S. Patent No. 5350131 Description
Evidence A No. 2-2: Translation of Evidence A No. 2
Evidence A No. 3: Japanese Unexamined Patent Application Publication No. H8-154543
Evidence A No. 4: CD-ROM of Japanese Utility Model Application No. H3-71902 (Japanese Unexamined Utility Model Application Publication No. H5-21663)
Evidence A No. 5: Japanese Unexamined Patent Application Publication No. H7-255335
Evidence A No. 6: Copy of "Daijirin Japanese Dictionary" of Sanseido, the Internet
http://www.weblio.jp/content/%E5%8F%96%E3%82%8A%E4%BB%98%E3%81%91%E3%82%8B
Evidence A No. 7-1: Graph formed by plotting a rotation angle along the

ordinate and oscillation variation along the abscissa by 5 degrees, in the same way as depicted in FIG. 12 of the patent publication by using a slot shown in FIG. 6 in Evidence A NO. 2-1

Evidence A No. 7-2: Graph formed by plotting a rotation angle along the ordinate and oscillation variation along the abscissa by 5 degrees, in the same way as depicted in FIG. 12 of the patent publication by using a slot shown in FIG. 6 in Evidence A No. 2-1 having both ends which are straight parts perpendicular to the spool shaft

Evidence A No. 7-3: Graph formed by plotting a rotation angle along the ordinate and oscillation variation along the abscissa by 5 degrees, in the same way as depicted in FIG. 12 of the patent publication by using an I-shape slot

Evidence A No. 8-1: Copy of written reply of a patent holder in review of the parties on corresponding U. S. Patent

Evidence A No. 8-2: Translation of Evidence A No. 8-1

Evidence A No. 9: Drawings created based on operation descriptions of the oscillation mechanism described in Evidence A No. 1-1

Evidence A No. 10: List of prior art documents on reels having the oscillation mechanism with various types of oscillation grooves or cams

Evidence A No. 11-1-1: U. S. Patent Application Publication NO. 2724563

Evidence A No. 11-1-2: Partial translation of Evidence A No. 11-1-1

Evidence A No. 11-2: Japanese Utility Model Publication No. S28-1466

Evidence A No. 11-3: Japanese Utility Model Publication No. S29-11171

Evidence A No. 11-4: Japanese Utility Model Publication No. S29-11179

Evidence A No. 11-5: Japanese Utility Model Publication No. S29-16456

Evidence A No. 11-6: Japanese Utility Model Publication No. S29-16474

Evidence A No. 11-7: Japanese Utility Model Publication No. S33-7280

Evidence A No. 11-8: Japanese Utility Model Publication No. S33-15063

Evidence A No. 11-9: Japanese Utility Model Publication No. S33-15065

Evidence A No. 11-10: Japanese Utility Model Publication No. S34-17877

Evidence A No. 11-11: German Patent No. 1073794

Evidence A No. 11-12: Japanese Utility Model Publication No. S37-15478

Evidence A No. 11-13: Japanese Utility Model Publication No. S37-15473

Evidence A No. 11-14: Japanese Utility Model Publication No. S41-18704

Evidence A No. 11-15: Microfilm of Japanese Utility Model Application No. S48-30595 (Japanese Unexamined Utility Model Application Publication No. S49-128794)

Evidence A No. 11-16: Microfilm of Japanese Utility Model Application No. S50-161160 (Japanese Unexamined Utility Model Application Publication No. S52-163592)
Evidence A No. 11-17: Japanese Utility Model Publication No. S55-25258
Evidence A No. 11-18: Japanese Unexamined Patent Application Publication No. S52-127887
Evidence A No. 11-19: Japanese Unexamined Patent Application Publication No. S52-136791
Evidence A No. 11-20: Japanese Patent Publication No. S59-18013

Evidence A No. 11-21: Japanese Unexamined Patent Application Publication No. S53-48895
Evidence A No. 11-22: Microfilm of Japanese Utility Model Application No. S53-120109 (Japanese Unexamined Utility Model Application Publication No. S55-37327)
Evidence A No. 11-23: Microfilm of Japanese Utility Model Application No. S55-74538 (Japanese Unexamined Utility Model Application Publication No. S56-175068)
Evidence A No. 11-24: Japanese Unexamined Patent Application Publication No. S57-29234
Evidence A No. 11-25: Japanese Unexamined Patent Application Publication No. S59-42828
Evidence A No. 11-26: Japanese Unexamined Patent Application Publication No. S59-42829
Evidence A No. 11-27: Japanese Patent Publication No. H2-5380
Evidence A No. 11-28: Japanese Patent Publication No. H2-60295
Evidence A No. 11-29: Microfilm of Japanese Utility Model Application No. S57-186482 (Japanese Unexamined Utility Model Application Publication No. S59-90371)
Evidence A No. 11-30: Microfilm of Japanese Utility Model Application No. S57-202467 (Japanese Unexamined Utility Model Application Publication No. S59-105871)
Evidence A No. 11-31: Japanese Unexamined Patent Application Publication No. S59-196025
Evidence A No. 11-32: Japanese Patent Publication No. H3-68653
Evidence A No. 11-33: Japanese Unexamined Patent Application

Publication No. S60-256328
Evidence A No. 11-34: Japanese Utility Model Publication No. H4-684
Evidence A No. 11-35: Microfilm of Japanese Utility Model Application No. S59-81205 (Japanese Unexamined Utility Model Application Publication No. S60-191178)
Evidence A No. 11-36: Microfilm of Japanese Utility Model Application No. S59-81206 (Japanese Unexamined Utility Model Application Publication No. S60-191179)
Evidence A No. 11-37: Microfilm of Japanese Utility Model Application No. S59-82732 (Japanese Unexamined Utility Model Application Publication No. S60-194977)
Evidence A No. 11-38: Microfilm of Japanese Utility Model Application No. S59-97730 (Japanese Unexamined Utility Model Application Publication No. S61-12372)
Evidence A No. 11-39: Microfilm of Japanese Utility Model Application No. S63-116556 (Japanese Unexamined Utility Model Application Publication No. H2-36973)
Evidence A No. 11-40: CD-ROM of Japanese Utility Model Application No. H3-106015 (Japanese Unexamined Utility Model Application Publication No. H5-53472)
Evidence A No. 11-41: Japanese Unexamined Patent Application Publication No. H4-271740
Evidence A No. 11-42: CD-ROM of Japanese Utility Model Application No. H3-71902 (Japanese Unexamined Utility Model Application Publication No. H5-21663)
Evidence A No. 11-43: Registered Utility Model Publication No. 2570781
Evidence A No. 11-44: Registered Utility Model Publication No. 3012426
Evidence A No. 12-1: Japanese Unexamined Patent Application Publication No. S59-196026
Evidence A No. 12-2: Japanese Patent Publication No. 3111360
Evidence A No. 12-3: U. S. Patent Application Publication No. 5143318
Evidence A No. 12-4: Japanese Unexamined Patent Application Publication No. H5-336865
Evidence A No. 12-5: Japanese Patent Publication No. S56-46377
Evidence A No. 13-1: Japanese Patent Publication No. 5330971
Evidence A No. 13-2: Japanese Patent Publication No. 4913307

Evidence A No. 13-3: Japanese Patent Publication No. 4090046
Evidence A No. 13-4: Japanese Patent Publication No. 3955809
Evidence A No. 13-5: Japanese Patent Publication No. 3921128

2 Demandee's allegation

The demandee demanded the trial decision, "The request for trial of the case is groundless. The costs in connection with the trial shall be borne by the demandant," and made the following arguments against the reasons for invalidation alleged by the demandant.

<Outline of the allegation>
(Regarding the reasons for invalidation)

None of the arguments of the Demandant is groundless and the patent of the case has no reasons for invalidation.

<Concrete allegation>
(1) Regarding the Reasons for invalidation 1
A Invention 1 and A-1 invention are different in the following points.
[Different feature 1]
The oscillation slider of Invention 1 is fixed to at a rear end of the spool shaft with a spool formed at a tip, whereas the lever (15) of the A-1 invention is connected to the spool shaft (23) via a pad-like sliding block sliding freely on the lever (15) longitudinally, and rocks around the end fulcrum (16).
[Different feature 2 (A-1 invention)]
The oscillation groove of Invention 1 is formed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in the vertical direction nearly perpendicular to the spool shaft. The slot (19) of the A-1 invention is formed by connecting two longitudinal extension parts (21) and (22) with the inclined part (20); however, the two longitudinal extension parts (21) and (22) are not extended nearly perpendicular to the spool shaft (23).
(Written reply p. 6 the 10th line from the bottom to p. 7 l.6)

B Regarding the meaning in the dictionary (A-6) submitted by the demandant, the term

"fix" means "install a machine or equipment, equip" and presents "install an air conditioner" as an example, and it can be interpreted to mean "to fix" generally.

As constituent components of the Invention, it is described that "the oscillation groove of the oscillation slider" is "formed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft." Since it is specified that the angle of the straight parts of the "oscillation groove of the oscillation slider" "fixed" to the spool shaft with respect to the spool shaft is fixed, it is obvious that the oscillation slider is fixed without changing the angle with respect to the spool shaft.
(Oral proceedings statement brief p. 2 the 6th line from the bottom to p. 3 l. 6)

(2) Regarding the Reasons for invalidation 2
A The Invention 1 and A-2 invention are different in the following points.
[Different feature 1 (A-2 invention)]
The oscillation groove of the Invention 1 is formed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft. The guide slot 14 of A-2 invention is formed in an elongated S shape, and an angle formed between tangents TA and TC of the guide slot 14 with respect to the segments 20, 21 ((1) a guide slot 14 portion to the segment 20, an area 28, and a first reversal position 27 and (2) a guide slot 14 portion to a second reversal position 30, an area 31, and the segment 21) and an imaginary line orthogonal to the spindle 2 is 45 degrees (or in a range of 40-45 degrees).
(Written reply p. 13 the 6th line from the bottom to p. 14 l. 5)

B A-2 describes only that the sidewalls 14' and 14" may be rectilinear, and does not describe that the entirety thereof is formed in a rectilinear shape. There is no disclosure or indication about how and which part of the sidewalls 14' and 14" are made rectilinear.

In A-2, in order to exert the effect that "the stroke caused upon rotating the gear 11 by the cam stud 13 over the particular sidewall 14' or 14", and by the guide part 15 on the spindle 2, is less per unit time in the segments 20, 21 than in the segments 22. 22", the angle α of the tangents TA and TC to the segments 20, 21 in the travel direction 3-3 in the side positions A and C is required to be smaller than the angle β formed by the tangents TB and TD of the sidewalls 14', 14" in the segments 22, 22' (reversal positions B and D), and the angles α and β preferably are 40-50 degrees (45 degrees in

the embodiment shown) and 70-75 degrees (72.5 degrees in the illustrated embodiment), respectively.

Even if the "crank-shaped" guide slot alleged by the demandant is indicated in A-2, the "rectilinear" sidewalls 14', 14" arranged at both ends of the "crank shape" have an angle of 40-50 degrees with respect to the travel direction 3-3 (spool shaft), and they obviously cannot be "the straight parts extending in vertical direction nearly perpendicular to the spool shaft."

(3) Regarding the Reasons for invalidation 3

A In the A-1 invention, when the lever (15) is attached to the spool shaft (23) and is configured not to rock around the end fulcrum (16), the working effect of the A-1 invention is not produced. Thus, a person skilled in the art has no motive to employ the configuration relating to the different features 1 and 2 to the A-1 invention, and the argument of the demandant relating to the lack of inventive step that cites the A-1 invention mainly is groundless.
(Written reply p. 15 the 6th line from the bottom to the 2nd line from the bottom)

B The demandant alleges, as described in A-2 and A-5, that it can be easily conceived to replace the mechanism using pivoting motion in A-1 invention with the mechanism described in A-2 and A-3 in which the slider is fixed to a spool shaft and moves forward and backward together, since the same oscillation slider of the oscillation groove is used in both an oscillation mechanism having pivoting motion and a mechanism in which the slider is fixed to the spool shaft and moves forward and backward together.

However, the shape of the guide slot 14 described in A-2 or the shape of the pin groove 86 of the first pivot arm 80 described in A-5 is different from the slot (19) of the A-1 invention. There is no description that the shape of the guide slot 14 described in A-2 and the shape of the pin groove 86 of the first pivot arm 80 described in A-5 are the same. The shapes are asymmetric in the right figure of FIG. 4 in A-5, and are different from the shape of the guide slot 14 described in A-2 obviously. It cannot be conceived to replace the mechanism of A-5 having pivoting motion with the mechanism described in A-2 in which the slider is fixed to the spool shaft and moves forward and backward together. Thus, it is obvious that a person skilled in the art cannot conceive the idea that the mechanism of the A-1 invention having pivoting motion is replaced with the mechanism in which the slider is fixed to the spool shaft and they move forward and backward together, by means of the descriptions in the A-2 and A-5 publications.
(Written reply p. 15 the last line to p. 16 l. 17)

C In the fishing reel having an oscillation mechanism having an oscillation groove with a specific shape, even if a slider fixed to a spool shaft is disclosed, it cannot be a motive to conceive the idea that a slider having an oscillation groove with a shape different from the above is fixed to the spool shaft. Especially, as described above, in the A-1 invention, nearly uniform alternate linear motion is generated by rocking motion of the lever (15) as well as slot shape. A person skilled in the art cannot conceive the idea that the lever (15) is fixed to the spool shaft.
(Oral proceedings statement brief P. 16 the 9th line from the bottom to the 3rd line from the bottom)

D The shape of the oscillation groove or whether the slider with the oscillation groove is rocked or not depends on the speed and the way of displacing the spool shaft with the shape and configuration. It is obvious that the slider cannot be replaced from a rocking one to a fixed one against the shape or configuration.
(Oral proceedings statement brief p. 17 l. 6-l. 9)

(4) Regarding the Reasons for invalidation 4

If a replacement is made that the lever (15) of the A-1 invention is fixed to the spool shaft (23) so as not to rock around the end fulcrum (16), the working effect of A-1 invention cannot be produced. Thus, a person skilled in the art has no motive to employ only the shape of the slot (19) described in A-1 instead of the engagement long hole 10A of the A-4 invention, and the allegation of the demandant relating to the lack of inventive step that cites the A-4 invention mainly is groundless.
(Written reply p. 17 the 3rd line from the bottom to p. 18 l.3)

(5) Regarding the Reasons for invalidation 5

If the lever (15) of the A-1 invention is fixed to the spool shaft (23) so as not to rock around the end fulcrum (16), the working effect of the A-1 invention cannot be produced. A person skilled in the art has no motive to employ only the shape of the slot (19) described in A-1 instead of the engagement long groove 33a of the A-3 invention, and the allegation of the demandant relating to the lack of inventive step that cites the A-3 invention mainly is groundless.
(Written reply p. 20 l. 3-l. 8)

(6) Regarding the Reasons for invalidation 6

A When the gear (10) rotating along with the rotation of the handle (5) rotates, in the oscillation mechanism described in A-1, the lever (15)rocks around the end fulcrum (16), as shown in FIG. 3. The rocking of the lever (15) produces a working effect that makes initial forward and backward motion slowly, to be transmitted in an axial direction to the gear (8) and the sliding spool shaft (23) in a bottom support socket (24) so as to achieve uniform alternate motion. Even if the A-2 invention employs the oscillation mechanism described in A-1 in order to allow for uniform to-and-fro motion of the spool shaft, the configuration in which the lever (15) rocks around the end fulcrum (16) will exist. The shape of the slot (19) of the lever (15) alone cannot be employed in the A-2 invention.

Thus, a person skilled in the art has no motive to employ the configuration relating to the different feature in the A-2 invention, and the allegation of the demandant relating to the lack of inventive step that cites the A-2 invention mainly is groundless. (Written reply p. 21 l. 7-l. 18)

B In the A-2 invention, in order to exert the effect that "the stroke caused upon rotating the gear 11 by the cam stud 13 over the particular sidewall 14' or 14", and by the guide part 15 on the spindle 2, is less per unit time in the segments 20, 21 than in the segments 22. 22', the angle α of the tangents TA and TC to the segments 20, 21 in the travel direction 3-3 in the side positions A and C is required to be smaller than the angle β formed by the tangents TB and TD of the sidewalls 14', 14" in the segments 22, 22' (reversal positions B and D), and the angles α and β preferably are 40-50 degrees (45 degrees in the embodiment shown) and 70-75 degrees (72.5 degrees in the illustrated embodiment), respectively.

Therefore, it should be noted that there is no motive to employ the lever (15) having the slot (19) described in A-1, configured so that the angle β is smaller than the angle α, in the A-2 invention.
(Oral proceedings statement brief p. 18 the 2nd line from the bottom to p. 19 the 5th line from the bottom)

(7) Regarding the Reasons for invalidation 7
A Regarding the relationship between the Invention 1 and the problem
(A) In Invention 1, the oscillation groove is formed mainly of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft. Thus, since the two straight parts formed at both ends

of the oscillation groove are parallel to each other, the amount of displacement of the protrusion moving in the straight parts is shifted vertically, and the highest-speed point of the reciprocating motion in the straight parts do not coincide with the central part of the winding surface, and as a result, thereby solving the problem that the amount of line to be taken up in the central part of the winding surface is reduced because the speed of the oscillation slider is maximized at the central part of the winding surface.

The two straight parts formed in parallel at both ends of the oscillation groove produce the working effect that the highest-speed point of the reciprocating motion in the straight parts does not coincide with the central part of the winding surface. There is no relationship between the working effect and the shape of the inclined part and the shape of the connection part between the inclined part and the straight parts.

As described above, in the Invention, when the protrusion shifts from the straight part to the inclined part in the oscillation groove, since the inclined part is a groove to connect to the straight parts, the amount of displacement of the protrusion is larger in the inclined part than in the oscillation groove of a switching point. Although it is not as good as the invention relating to the scope of claims of the Patent and Claim 2, thereby solving the problem that a larger amount of line is to be taken up near the both ends of the winding surface because the amount of displacement of the oscillation slider with respect to the rotation of the idle gear at a predetermined angle is still smaller than in other sections at the time of switching the reciprocating motion of the spool.

Thus, the inclined part for connecting the two straight parts arranged in parallel at both ends of the oscillation groove produces the working effect that the amount of displacement of the protrusion is larger in the inclined part than in the oscillation groove of a switching point between the straight parts and the inclined parts. There is no relationship between the working effect and the shape of the inclined part and the shape of the connection part between the inclined part and the straight parts.
(Written reply p. 30 l. 4-p. 31 l. 11)

(B) Even if a distance between the straight parts is reduced to reduce the inclined part, the working effect of the Invention 1 can be produced. It is obvious that the means of solving the problem of Invention 1 is reflected in Invention 1.
(Written reply p. 33 l. 3-5)

(C) A-2 describes that the stroke of the spool accelerates to A and C located in the central part of the winding surface, and then decelerates. Therefore, the highest-speed point in the spool reciprocating motion of the A-2 invention is to be coincident with the

central part of the winding surface, resulting in reducing the amount of line to be taken up.
(Oral proceedings statement brief p. 7 l. 7-l. 10)

(D) The demandant prepared a graph (A7-1) formed by plotting a rotation angle along the ordinate and oscillation variation along the abscissa by 5 degrees, in the same way as depicted in FIG. 12 of the patent publication by using a slot shown in FIG. 6 of A-2, and alleges that the intermediate point (central part in the winding surface) is not aligned with the highest-speed point. However, the drawings shown in the publication are generally not correct in some cases, and it is confirmed by the statement of the demandant that FIG. 3 of A-1 publication is not correct. Thus, the demandant's allegation is groundless that the central part of the winding surface does not correspond to the highest-speed point in the A-2 invention, on the basis of FIG. 6 of A-2 publication that is not verified as a correct drawing.
(Oral proceedings statement brief p. 7 the 5th line from the bottom to p. 8 l. 5)

(8) Regarding the Reasons for invalidation 8

The demandant alleges that the Inventions violate the enabling requirements on the same grounds as the allegation that the Inventions violate the requirement for support. However, the Inventions satisfy the enabling requirements, and the demandant's allegation is groundless.
(Written reply p. 35 l. 4-l. 6)

(9) Regarding the Reasons for invalidation 9

A In Invention 1, the oscillation groove is formed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft. Thus, since the two straight parts formed at both ends of the oscillation groove are parallel to each other without being on the same straight line, the amount of displacement of the protrusion moving in the straight parts is shifted vertically, and the highest-speed point of the reciprocating motion in the straight parts do not coincide with the central part of the winding surface, thereby solving the problem that the amount of line to be taken up in the central part of the winding surface is reduced because the speed of the oscillation slider is maximized at the central part of the winding surface. The working effect is produced not by a configuration which is precisely perpendicular to the spool shaft, but by the two straight parts arranged in

parallel, not on the same straight line.

In light of the working effect of Invention 1 and the mechanism there of, a range substantially the same as the case where the straight parts are precisely perpendicular to the spool shaft and producing the same working effect can be interpreted rationally as "nearly perpendicular to the spool shaft."
(Written reply p. 35 l. 13 to the last line)

B A spinning reel for fishing is not configured to produce a component with a precise perpendicular (90 degrees) angle. Generally, a tolerance is set, for example. Even if a reference value is 90 degrees, the product which falls within a substantially perpendicular (90 degrees) range without impairing performance can be accepted. The range of the tolerance is designed as necessary by a person skilled in the art on the basis of a relationship with the target performance.

Thus, a person skilled in the art can interpret "nearly perpendicular" to be substantially perpendicular, and can set an angle in consideration of the technical standard and the mechanism that exerts the working effect of the Invention 1. There is no ambiguity.
(Oral proceedings statement brief p. 3 the last line to p. 4 l. 8)

C Regarding the above A, the demandee does not ignore the words in the constituent components, and interprets "nearly perpendicular" to be substantially perpendicular, and sets as necessary an angle in consideration of the technical standard and the mechanism that exerts the working effect of the Invention 1. The t term "nearly perpendicular" is clear.
(Oral proceedings statement brief p. 4 l. 9-l. 15)

[Means of proof] None

No. 4 Judgment by the body
1 Descriptions in Evidences A
(1) Evidence A No. 1-1

Evidence A No. 1-1 submitted by the demandant as evidence relating to the reasons for invalidation, which is a publication distributed before the priority date of the application, describes the following matters. (Underlines are added by the trial decision. The translation is based on Evidence A No. 1-2 prepared by the demandant. There is no dispute between the parties on the translation. The same applies hereafter.)

A

Sono noti i cosiddetti m linelli per il ricupero del filo nella pesca a lancio, ma tutti genericamente sono di costruzione piuttosto complicata poichè necessitano di una numerosa serie di ingranaggi per effettuare con regolarità l'avvolgimento del filo sulla bobina di ricupero.

La presente invenzione ha per oggetto un mqlinello per la pesca a lancio, di semplificata costruzione, dove il movimento di andata e di ritorno della bobina, necessario per guidare il filo nella fase di "ricupero" avviene mediante un dispositivo a glifo, la cui leva oscillante è collegata alla ruota del glifo, mediante un perno scorrevole entro una cava praticata nella leva stessa in forma non lineare ma con andamento tale da consentire al noto albero portabobina, un movimento rettilineo alternato pressochè uniforme, cioè con armonico, essendo detto albero portabobina, collegato alla leva oscillante mediante l'interposizione di un cursore longitudinalmente scorrevole sulla leva stessa;

In una preferita forma di realizzazione, la ruota del glifo oscillante è azionata dalla manovella stessa del mulinello, per mezzo di una serie di ingranaggi demoltiplicatori, mentre il cursore di cui sopra, assume la forma di una pasticca formata con vite trasversale al suddetto albero porta - bobina.

L'allegata tavola di disegni mostra in via di esempio costruttivo, un mulinello per la pesca a lancio ottenuto in base all'invenzione.

In detta tavola:

la fig. 1 mostra un mulinello visto di lato, parzialmente aperto nelle sole parti che interessano;

la fig. 2 è lo stesso mulinello visto di fronte dalla parte esterna;

la fig. 3 è un particolare della figura 1, riguardante il movimento compensato del glifo oscillante;

la fig. 4 è la sezione 4º-4º della fig. 1.

Con riferimento alle sopra elencate figure, il mulinello rappresentato comprende come d'uso, genericamente un appropriato contenitore 1 dei vari organi più avanti descritti, un coperchio 2 di detto contenitore, fissabile perimetricamente con viti 3, un braccio 4 di attacco del mulinello alla canna da pesca, una manovella 5 di azionamento, sostenuta da detto coperchio 2, una base circolare 6 di appoggio degli organi esterni del mulinello stesso, un albero cavo 7 di sostegno della nota scatola guidafilo non rappresentata) solidale con l'ingranaggio conico 8 che riceve il moto dell'ingranaggio 9 di forma circolare, messo in rotazione dalla anzidetta manovella 5 in modo qualsiasi appropriato,

(p. 1 left column l. 1 to right column the last line)

(Translation)

"A spinning reel for taking up a line is well known. All of such spinning reels generally need many gears for taking up the line reliably and uniformly, and are made in a complicated method.

This invention aims to simplify a spinning reel. To-and-fro motion of a spool required for guiding the line in "take-up" stage is generated by a slider crank mechanism. In the mechanism, a rocking lever is connected to a gear of the slider crank mechanism by using a sliding pin located in a slot in the lever. The slot is a non-linear slot, and the

spool shaft is connected to the rocking ever via a longitudinal slider moving along the lever. The slot allows the spool shaft to operate in a nearly uniform, or harmonic, alternate linear motion.

Preferably, a rocking slider crank mechanism is operated by a reel handle via a series of deceleration gears. The slider is in the shape of pad held by a cross slot screw.

Attached drawings illustrate one example of a spinning reel based on the Invention.

FIGURE 1 is a side view of a reel that discloses a part for showing only a target portion.

FIGURE. 2 is a front view of the reel seen from the outside.

FIGURE. 3 is a detailed drawing of FIG. 1 and illustrates compensating motion of the rocking slider crank mechanism.

FIGURE. 4 is a cross sectional view of 4^{O}-4^{O} in FIG. 1.

In light of the above drawings, the illustrated reel includes, as is conventionally done, a general housing (1) for housing various components described below, a cover (2) of the housing which can be attached along an edge with a screw (3), a leg part (4) for attaching the reel to a fishing rod, an operation handle (5) supported by the cover (2), a circular base (6) for supporting an outside part of the reel, and a hollow rod (7) for supporting a lane guide box (not shown). The hollow rod (7) is integrated with a conical gear (8) which is rotated by a circular gear (9) when operated by the handle (5) in an appropriate way.

B

Il dispositivo a globo oscillante di cui all'invenzione, necessario per spostare assialmente ed alternativamente verso l'alto e verso il basso la bobina portafilo durante il ricupero del filo, si compone di una ruota dentata 10 girevole attorno al perno 11 e ricevente il moto della manovella 5 per mezzo degli ingranaggi 12, 13 e 14, di una leva 15 oscillante attorno al fulcro di estremità 16 e di un corsoio a pastiçca 17 scorrevole su detta leva longitudinalmente a giuoco libero.

La ruota 10 del glifo, è impegnata con la leva oscillante 15, per mezzo del perno 18 sporgente da detta ruota di quanto basta, il quale è libero di scorrere nella cava 19 che trovasi praticata nella leva stessa in forma non lineare, ma raccordata con piano inclinato 20 tra due estensioni longitudinali 21 e 22 opportunamente collocate su piani diversi. Per merito di questa particolare conformazione della cava 19, la leva 15 su azione del perno 18, è costretta ad oscillare attorno al proprio fulcro 16, con andamento non armonico ma pressochè uniforme sia verso l'alto che verso il basso, in quanto il perno 18 di cui sopra, percorrendo l'anzidetto tratto raccordato 20, si trasporta da una estensione all'altra e viceversa, ogni qualvolta oltrepassa le zone A e B rispettivamente inferiore e superiore della sua totale corsa circolare C segnata nella fig. 3 con linea a tratti e punti.

Supponendo che la ruota 10 su azione della manovella 5, si muova in direzione antioraria G a partire dalla posizione come a fig. 3, il perno 18 della ruota 10, agirà verso l'alto nell'interno della estensione inferiore 22 della cava 19, trasportando la leva 15 corrispondentemente verso l'alto in direzione H e facendola ruotare attorno al proprio fulcro 16 fino a quando detto perno, non ha raggiunto la zona B superiore del suo percorso circolare C. Oltrepassando detta zona B, il perno 18 medesimo, percorrendo il raccordo 20 a piano inclinato, si trasporta nella estensione superiore 21 della cava 19, coll'effetto di ritardare la corsa iniziale di ritorno della leva. Anche la corsa iniziale di andata della leva 15, sarà ritardata non appena il perno 18, percorrendo questa volta la zona inferiore A, sarà costretto a transitare nuovamente per detto raccordo 20.

L'oscillazione della leva 15 con tali movimenti iniziali rallentati di andata o di ritorno, verrà trasmessa all'albero 23 portabobina scorrevole assialmente nell'interno dell'ingranaggio 8 e della bussola di sostegno inferiore 24, così da uniformarne il moto alternato come allo scopo del trovato, essendo detto albero 23, collegato alla leva 15 mediante l'interposizione dell'anzidetto corsoio a pastiçca 17 opportunamente fissato con vite 15 all'albero stesso.

RIVENDICAZIONI

1. Mulinello per la pesca a lancio, caratterizzato dal fatto che il movimento alternato e rettilineo verso lo alto e verso il basso della bobina portafilo, necessario per distribuire uniformemente il filo su tale bobina ad opera della usuale scatola guidafilo, è ottenuto mediante un dispositivo a glifo oscillante, il quale è costituito da una ruota dentata direttamente od indirettamente azionata dalla manovella esterna di manovra del mulinello, nonchè da una leva fulcrata ad una estremità e collegata a detta ruota, mediante un perno sporgente dalla ruota medesima, atto a scorrere nell'interno di una cava non lineare, ma praticata con andamento tale da consentire al noto albero portabobina, un movimento rettilineo alterno pressochè uniforme, cioè non armonico, essendo detto albero portabobina, collegato alla leva oscillante, mediante l'interposizione di un cursore scorrevole longitudinalmente sulla leva stessa.

2. Mulinello, come alla rivendicazione 1, caratterizzato dal fatto che la cava della leva oscillante comporta un piano inclinato raccordante due espansioni della cava, estese tra di loro parallelamente su due piani diversi e longitudinalmente rispetto alla leva stessa.

3. Mulinello, come alle rivendicazioni 1 e 2, caratterizzato dal fatto che il cursore scorrevole longitudinalmente sulla leva oscillante del dispositivo a glifo, assume la forma di una pastiçca, la quale trovasi fermata all'albero portabobina, per mezzo di almeno una vite trasversale.

(p. 2 left column l. 1 to right column the last line)

(Translation)
"A rocking circular orbital mechanism of the Invention required for moving vertically and alternately a spool of a line in an axial direction while taking up the line is formed of a rotatable gear (10) that rotates around a pin (11) and receives motion of a handle (5) via gears (12), (13), and (14), a lever (15) rocking around an end fulcrum (16), and a sliding pad (17) sliding freely on the lever in a longitudinal direction.

The gear (10) of the slider crank mechanism is engaged with the rocking lever (15) with a pin (18). The pin protrudes by a proper length from the gear, and moves freely in a non-linear slot (19) located in the lever and formed by connecting two longitudinal extension parts (21) and (22) arranged on intentionally different planes with an inclined part (20). With the specific shape of the slot (19), when driven by the pin (18), the lever (15) rocks around the fulcrum (16) in a non-harmonic nearly uniform vertical motion. This is because the pin (18) moving along the connection part (20) moves from one end to the other end or vice versa, every time the pin goes across each of zone A and zone B, or each of a lower point and an upper point of full circular motion (C) indicated by a dashed-dotted line in FIG. 3.

As shown in FIG. 3, if it is assumed that the gear (10) moves counterclockwise when driven by the handle (5), the pin (18) of the gear (10) moves upward in the lower end (22) of the slot (19), and the lever (15) moves upward in (H) direction accordingly. Until the pin reaches the upper zone (B) of a circular path (C), the lever (15) rotates around the fulcrum (16). After passing through the zone (B), the pin (18) moving along the inclined connection part (20) enters the upper end part (21) of the slot (19) having an effect of delaying return initial motion of the lever. Even if the lever (15) moves slowly initially, the pin (18) is moved again along the connection part (20) immediately after moving along the lower zone (A).

The rocking motion of the lever (15) that delays the initial forward and backward motion is transmitted axially to a sliding spool shaft (23) in the gear (8) and a lower support socket (24) so as to render uniform the motion as intended by the Invention. This is because the spool shaft (23) is connected to the lever (15) by the pad-like sliding block (17) attached to the shaft with a screw (15). (Note by trial decision: Underlined "with a screw (15)" is recognized to be a clerical error (in the original text) of "with a screw (25)".)

Scope of claims

1. A spinning reel for surf-casting configured to obtain linear alternate vertical motion of a spool required for winding a line uniformly on a spool by use of an ordinary line guide box by means of a rocking slider crank mechanism,

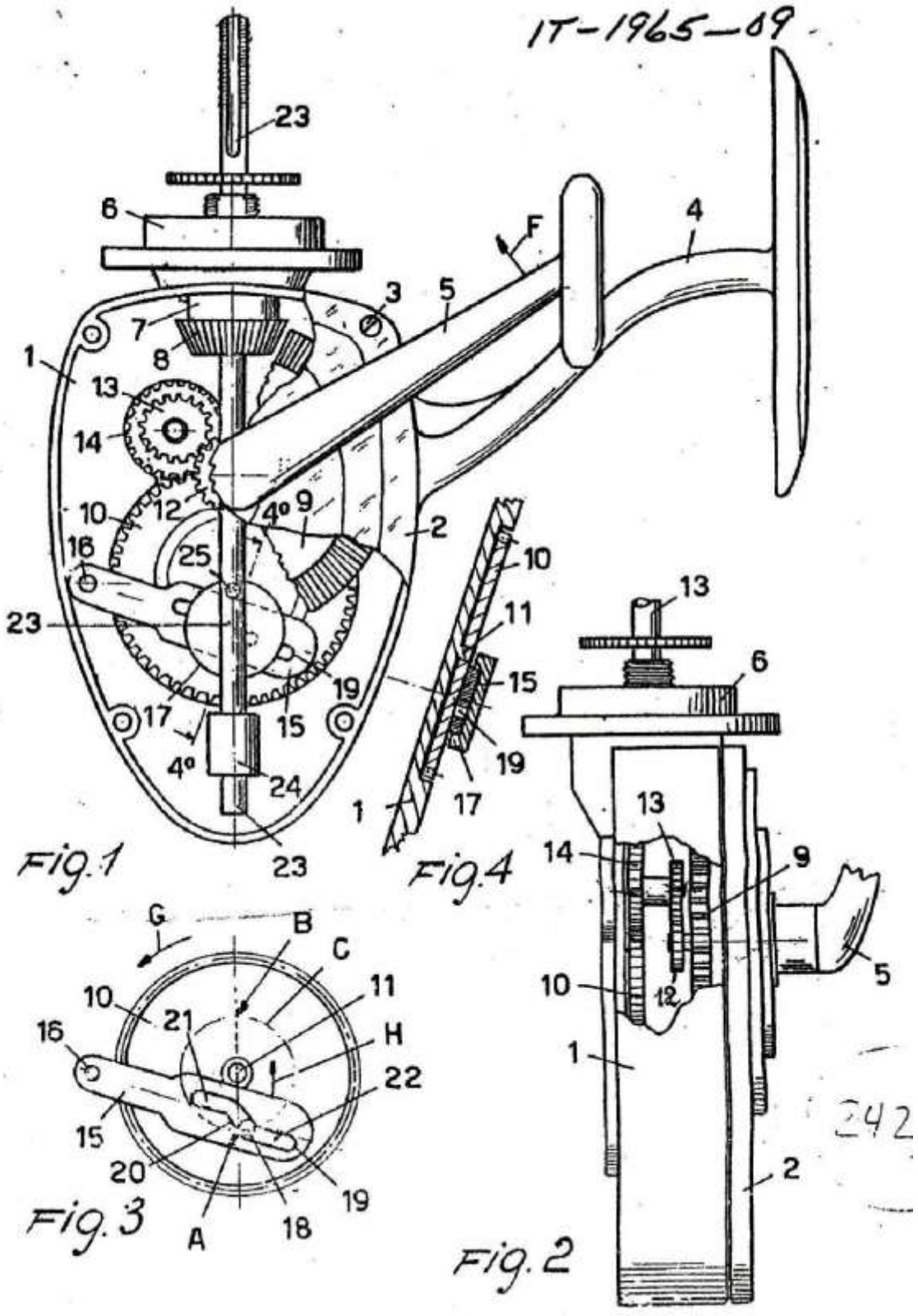
the mechanism being formed of a gear to be directly or indirectly operated by an external handle of a reel and a lever having one end with a fulcrum, the lever being connected to the gear with a pin protruding from the gear and sliding in a non-linear slot,

the mechanism being configured so that the spool shaft is connected to the rocking lever with an arm sliding longitudinally along the lever, to allow the spool shaft to move nearly linearly and alternately, or non-harmonically.

2. The reel described in Claim 1, configured so that the slot of the rocking lever requires an inclined plane for connecting two extension parts of the slot extending in parallel on two different planes in a longitudinal direction of the lever.

3. The reel described in Claim 1 or 2, configured so that the arm sliding longitudinally on the rocking lever of the slider crank mechanism is formed in the shape of a pad attached to the spool shaft with at least one lateral screw."

C The following drawings are described as FIGS. 1-4.



D According to FIG. 3, it can be seen that the non-linear slot (19) is formed of the inclined part (20) arranged in an intermediate part, and two rectilinear longitudinal

extension parts (21), (22) extending in parallel from both ends of the inclined part (20).

E According to FIGS. 3-4, it can be seen that
(A) the pin (18) is formed in a periphery of one side face of the gear (10) and that
(B) the pin (18) is engaged with the non-linear slot (19) of the rocking lever (15).

F According to A to E, it can be recognized that Evidence A No. 1-1 describes the following invention (hereinafter referred to as the "A-1 invention").

"a spinning reel for surf-casting configured so that a pin (18) is formed in a periphery of one side face of a rotatable gear (10) of a rocking slider crank mechanism that receives motion of a handle (5), the pin (18) being engaged with a non-linear slot (19) of a rocking lever (15) rocking around a fulcrum (16) when driven by the pin (18),
a spool shaft (23) is connected to the rocking lever (15) via a pad-like sliding block (17) attached to a spool shaft (23) with a screw,
the non-linear slot (19) is formed of an inclined part (20) arranged in an intermediate part and two rectilinear longitudinal extension parts (21), (22) extending in parallel from both ends of the inclined part (20), the pin (18) freely moving in the non-linear slot (19) and obtaining linear alternate vertical motion of the spool required for winding a line on the spool uniformly by means of the rocking slider crank mechanism."

(2) Evidence A No. 2-1

Evidence A No. 2-1 submitted by the demandant as evidence relating to the reasons for invalidation, which is a publication distributed before the priority date of the application, describes the following matters. (The translation is based on Evidence A No. 2-2 prepared by the demandant.)

A "A straight guide slot was offered in previously known designs for the above type of fishing reel. While such a design has been found practical for narrow spools, if the width of the spool must be made larger to permit more fishing line to be wound onto the same diameter of spool core, outwardly projecting bulges may form at the two end zones of the line winding because of changes in spool speed caused as the spool approaches the reversing positions of the spool travel path. The width must be further enlarged if the spool core diameter is to be made larger without thereby enlarging the spool diameter; i.e., the diameter of the outer line winding, because otherwise the line capacity would be decreased. The bulge formation takes place as the travel or stroke

speed drops down to zero at the cam stud reversing positions; i.e., at the end positions of the reciprocating spool stroke, because the amount of line wound per unit time by the winding flange of the fishing line onto the spool will not decrease but remain constant, regardless of which position the spool assumes in the travel direction. When the fishing line plus bait is cast, the bulge causes the problem of "clinging"; i.e., the line cast from the spool drags along adjacent line turns. This leads to the so-called wig formation as the excess line dragged along by clinging hangs loose and tangles. In turn, this leads to delicate casting, subject to interference." (column 1 l. 18-l. 44)

B "SUMMARY OF THE INVENTION It is therefore an objective of the present invention to make possible the widening of a reciprocating spool for a fishing reel in a simple manner while precluding or minimizing formation of bulges during winding of the fishing line to such an extent that no "wig formation" shall take place when casting. This objective is achieved by providing a spindle cam-drive guide slot which assumes the shape of an elongated S, the cam stud being located approximately centrally in the S when at the reversing positions of the spool, and in one of the end zones of the S when at the side positions. The longitudinal direction of the S subtends an angle, preferably a right angle, with respect to the direction of the spool stroke. As a result, when the spool passes from one reversing position to the next side position and from the side position to the next reversing position, etc., continuously changing stroke speeds are communicated by the motion of the cam stud to the guide part. As a result a number of advantages are secured. The shape of the guide slot as an S and the angle of the guide slot, preferably an approximately right angle with respect to the longitudinal travel direction, prevent axial play from arising and hence prevent self-locking of the motion of the cam stud in the zone of the side positions." (column 2 l. 35-l. 61)

C "DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS FIGURE. 1 shows a fishing reel according to a preferred embodiment of the invention, with several conventional pans omitted for illustrative purposes. A spool 1 is moved by a spindle 2 in a to-and-fro direction of travel 3--3 by means of the cam drive which is described in detail below. At the same time, a fishing line or cord winding 4 is wound on the spool 1, by means of a reel winding flange. The winding flange is not shown in the drawings because it is conventional and well-known. The width of the cord winding 4 is denoted by b. If this width b exceeds a certain value, then projecting bulges 5 may be formed in the designs of the known cam drives at the sides of the cord winding 4, as discussed above. When casting the cord in the direction of an arrow 6, the described wig

formation may ensue on account of dragging along the adjacent turns of the fishing cord. The attempt therefore is made either to entirely avoid these bulges 5; that is, in the ideal case to make a cylindrical winding as shown by a surface 7 of the winding 4, or at least to so reduce the magnitude of the bulges 5 to reduce the danger of wig formation. The spool-core diameter is denoted by 7'." (column 3 l. 55-column 4 l. 10)

D "FIGURES. 1 and 2 show that when the handcrank 8 is rotated, a shaft 9 will drive a pinion 10 meshing with a larger gear 11 of the cam drive. Thereby the rotation of the handcrank 8 is reduced by the gears 10/11; i.e., the gear 11 rotates correspondingly more slowly than the handcrank 8. A cam stud 13 is affixed to the gear 11 eccentrically to its axis of rotation 12, the cam stud 13 entering a guide slot 14 of a guide part 15. The guide part 15 is affixed to the spindle 2 by an attachment 16 at least to such an extent that it is able to displace this spindle in the travel direction 3--3 on account of the cam motion discussed below. For this purpose, two locking rings 17 rigidly joined to the spindle 2 or the like, which rest on both sides against the attachment 16 of the guide part 15, may be used. Where called for, this design allows rotation of the spindle 2 about its own longitudinal center line. Such a design of the spindle as a rotatable shaft is required in the case where a spool brake is present on the spool side away from the fishing-reel housing. Otherwise, the spindle 2 and the spool 1 can be joined not only for being driven in the travel direction 3--3, but also for being driven rotationally jointly about their longitudinal center line. This longitudinal center line coincides with the winding axis of the spool 1." (column 4 l. 11-l. 49)

E "In contrast, FIGS. 6 through 8 illustrate the preferred embodiment of the invention wherein, just as in FIGS. 3-5, the stoke direction 3--3 is shown, which, on account of the drawing, is rendered horizontally. However, for the sake of clarity, the gear 11 and the guide part 15 with attachment 16 are omitted from this Figure. Cam-stud positions A, B, C, D shown in FIGS. 6-8 correspond to those shown in FIGS. 3-5, and denote the positions assumed by the cam stud 13 and the gear 11 rigidly joined to it at each 90 degree division of a complete revolution of gear 11. Positions B and D are the travel reversing positions and positions A and C are the two side positions. Each time the cam stud travels from one position to the next, it crosses 90 degrees. Because the gear 11 rotates about its shaft 12, which is rigidly joined to the housing of the fishing reel (FIGS. 1, 2), and therefore cannot be displaced relative to the fishing-reel housing 19, and because the cam stud 13 moves in the guide slot 14 of the guide part 15, a complete 360 degree revolution of the gear 11 results, by means of the shaft or spindle 2, in a

complete to-and-fro motion of the spool. At position B, the spindle 2 together with the spool 1 assumes the first reversing position, wherein the spool 1 is displaced as far as possible from the fishing-reel housing (upward in FIG. 1). Following a 90 degree rotation of gear 11 in the direction of the arrow 18, the first side position A is reached and the spool assumes a middle position. Following another rotation of gear 11 by about 90 degrees, the second reversing position is reached, at which point the spool is nearest the fishing-reel housing. After another rotation of about 90 degrees, the second side and middle position C has been reached, and after further rotation of the gear 11 by about 90 degrees, the position B of the first reversing position is reached." (column 4 l. 50-column 5 l. 15)

F "FIGURE 6 shows in detail a design of the guide slot 14. The positions assumed by the cam stud 13 at the locations A, B, C and D inside the guide slot 14 are correspondingly marked. Point B is not directly located on the center line whose direction coincides with the stroke direction 3--3 and which is transverse to the longitudinal direction of the slot. Rather, point B is offset from this center line by about 20 degrees in the direction of the arrow 18. As a result, the cam stud on segment 25 of the sidewall 14' of this guide slot imparts a corresponding speed to the guide part in the direction of the arrow 26 (also see this direction of displacement in FIG. 1), in order to increase the travel speed in this zone. The reversing position has been reached at point B. As the gear 11 rotates further, the cam stud no longer presses against the sidewall 14' but against the opposite sidewall 14" of the guide slot, starting at about the position 27, in order to then pass through the zone 28 to arrive at point A; i.e., the first side position. As the gear keeps on rotating, the cam stud moves along the sidewall 14" and back through the zone 28 and further through the zone 29 until reaching position D; i.e., the second reversing position. It is clear that in the last segment of the zone 29, before reaching the reversing position D, the travel speed is again increased. At position D or shortly thereafter a transition takes place (just as the transition from B past the position 27), in that the cam-stud once more rests against the sidewall 14', approximately at position 30, from where the stroke proceeds through the segment 31 to C; i.e., the second side position. From there the stroke goes back through the segment 31, the further segment 32, and then the segment 25 of the sidewall 14' to position B." (column 5 l. 16-l. 48)

G "The curved guidance discussed above and shown in FIG. 6 is such that when passing from position B to position A, there takes place some acceleration (also see the

plot of FIG. 8), so that in the further transition from position A to position D the stroke decelerates somewhat, and again during the return from position D to position C this stroke accelerates, and lastly decelerates somewhat again from position C to position B. This is shown by the plot of FIG. 8, where the stroke as a function of the particular angular position of the gear does not result in coincident curves from B to D and back, but instead curves which are somewhat apart. To further make plain the kinematics of this design, two abscissas are shown; namely, an upper abscissa with the strokes related to the particular angular positions from B through A to D and a lower abscissa for the displacement from D through C to B. By providing the desired motion, the preferred design prevents formation of bulges 5, or permits formation of bulges which are so little that they can be neglected. Acceleration of travel near the reversing points B and D is achieved on the one hand, and on the other hand, a lesser stroke speed is achieved in the zones near A and C." (column 5 l. 49-column 6 l. 3)

H "Yet another effect is achieved by the invention. Whereas the stroke path h of the state of the art is double the spacing between the cam stud 13 and the center point 12 of the gear 11, in the preferred embodiment the stroke path is increased by 2h'. This follows from the fact that when the cam stud is moved toward the point B at the sidewall 14', this sidewall is additionally displaced by h' in the direction of travel. FIGURE. 6 shows the associated displacement of the cam stud 13 when it is being rotated about the center of the gear 11. In the upper one of the two positions shown by dashed lines, the cam stud clearly has pressed the guide part by a distance h' in the travel direction 3--3; namely, to the left. This displacement by h' will take place when the cam stud 13 is sliding, for instance, in the zone 29 along the other sidewall 14" of the guide slot 14 toward point D. In that case the guide part is displaced by h' in the travel direction 3--3 to the right. Accordingly the total travel path is h+2h'. This effect of the invention moreover can be achieved both when rotating the gear 11 in the direction of arrow 18 and in the opposite direction." (column 6 l. 4-l. 25)

I "It should be borne in mind that the curved shape of the guide slot 14 must be selected in such manner that it is not always identical with the circular motion of the cam stud around the axis 12 of the gear 11, because otherwise no travel would be possible. FIGURE. 6 shows furthermore that the tangents TA and TC to the segments 20, 21 of the guide slot 14 receiving the cam stud 13 in the side positions A and C subtend an angle α with the travel direction 3--3, which is less than the angle β subtended by the tangents TB and TD of the sidewalls 14', 14" in their segments 22, 22', wherein the cam

stud 13 is in the reversing positions B and D respectively. The above angles preferably are α=40 degrees- 50 degrees (45 degrees in the embodiment shown) and β=70 degrees -75 degrees (72.5 degrees in the illustrated embodiment). An angle which is always smaller than 90 degrees is thereby provided between the particular tangents TB, TA, TD, and TC extending in the stroke direction, and the stroke direction 3--3. As a result, the stroke caused upon rotating the gear 11 by the cam stud 13 over the particular sidewall 14' or 14", and by the guide part 15 on the spindle 2, is less per unit time in the segments 20, 21 than in the segments 22, 22'." (column 6 l. 26- l. 47)

J "Preferably, the guide slot 14 is formed in the shape of an elongated letter S (FIGS. 1, 6), with a lack of geometric congruence, for reasons apparent from the above discussion, between arcuate zones of the guide slot and the path of the cam stud about the origin of the circle described by the gear. The sidewalls 14', 14" may be either rectilinear or, as in this preferred embodiment, arcuate along this S, averting abrupt transitions such as edges or corners. The positions B and D of the cam stud are located approximately at the center of the S, whereas the positions A and C of the cam stud are located in the end zones of the S. The longitudinal direction of the S is at an angle, preferably a right angle, to the stroke direction 3--3. This angular position of the longitudinal direction of the S to the stroke direction 3--3 and the curved shape of the side walls 14', 14" are so dimensioned that the sidewall 14' facing the spool moves away from the spool 3 as it approaches this point B, and furthermore the sidewall 14" nears the spool 3 as it moves toward point D when it is in its zone 29 in front of point D, resulting in an additional travel h' as described above. Finally, in order to achieve maximum compactness, the S is preferably arranged in mirror-inverted form, as shown in FIGS. 1 and 6." (column 6 l. 48-column 7 l. 3)

K "We claim:
1. A fishing reel which includes a spool for receiving a fishing line, means for winding the fishing line on the spool, a crank drive, a cam drive, and a spindle member connected to the spool, the spool having a longitudinal axis and being displaced to and fro parallel to the longitudinal axis between reversing positions of the spool at which a direction of displacement of the spool reverses by means of the cam drive which causes the spindle member to also move to and fro parallel to the longitudinal axis, the cam drive including a guide part having a guide slot which includes sidewalls, said guide part being connected to the spindle member, a gear rotated by said crank drive, a cam stud, and means for eccentrically mounting the cam stud on the gear to rotate in a

circular path about an axis of rotation, said stud entering the guide slot and sliding along said sidewalls of the slot to displace said guide part and therefore the spool in the direction parallel to the longitudinal axis, the improvement wherein the guide slot has an elongated S shape, said cam drive forming drive means for causing the cam stud to be approximately midway between end zones of the S when the spool is at said reversing positions of the spool and in one of the end zones of the S when the spool is at a position approximately midway between said reversing positions, wherein a line connecting said end zones of the S subtends a nonzero angle with respect to the direction of displacement of the guide part, and wherein as the spool is moved from one reversing position to a position approximately midway between said reversing positions, and from said position approximately midway between said reversing positions to a next reversing position, said drive means causes said cam stud to impart to the guide part continuously changing stroke speeds as a result of the shape of the guide slot and displacement of the cam stud, said sidewalls also forming means for causing the stroke speed to increase as the spool approaches one of the reversing positions, and for causing the stroke speed to decrease as the spool approaches the position approximately midway between the reversing positions, wherein segments of the sidewalls in which the cam stud is located before reversal of the spool displacement direction are spaced farther from a line through the slot whose direction coincides with the direction of displacement of the guide part and which is transverse to said longitudinal direction than are segments of the sidewalls in which the cam stud is located substantially at the side positions.

2. An improvement as claimed in claim 1, wherein the elongated S is in the form of a mirror-inverted letter S.

3. An improvement as claimed in claim 1, wherein the guide slot has arcuate zones and said arcuate zones of the guide slot and the circular path of the cam stud are incongruent.

4. An improvement as claimed in claim 1, wherein near the two side positions, an angle of the sidewalls relative to the direction of displacement of the guide part is approximately 40 degrees- 45 degrees, and an angle of the sidewalls near the reversing positions in the direction of displacement of the guide part is approximately 70 degrees-75 degrees, slopes of the sidewalls relative to the travel direction changing continuously, without abrupt transitions from one position to the next.

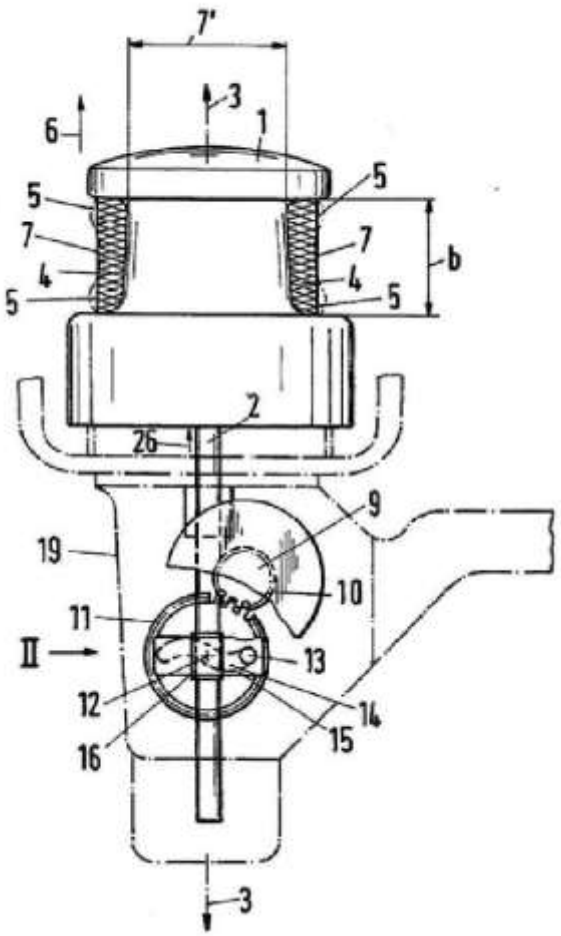
5. An improvement as claimed in claim 1, wherein said nonzero angle is an approximately 90 degree angle.

6. An improvement as claimed in claim 1, wherein a curvature of the sidewall of the guide slot is such that stroke distance of the spool is larger than a stroke distance moved

by the cam stud in the direction of spool movement." (scope of claims)

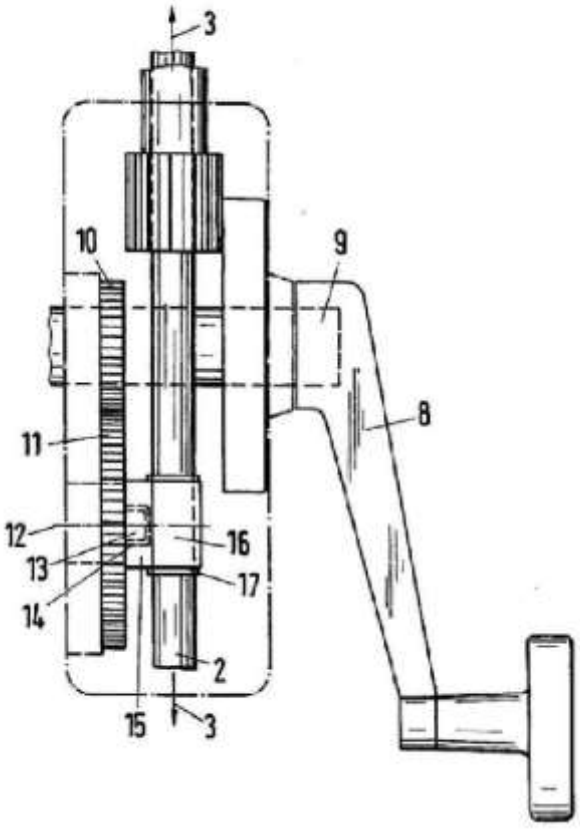
L The following drawing is described as FIG. 1.

Fig.1



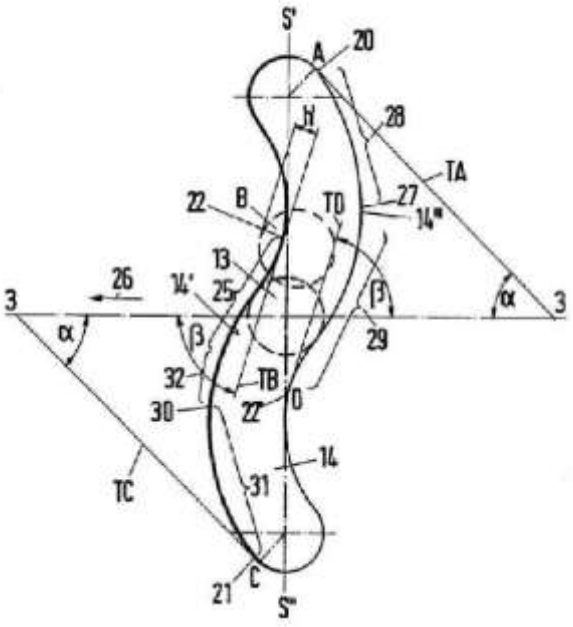
M The following drawing is described as FIG. 2.

Fig. 2



N The following drawing is described as FIG. 6.

Fig.6



O In view of FIGS. 1 and 2 based on the above C and D, it can be seen that
(A) the fishing reel is a spinning reel, in which
(B) the cam stud (13) is attached to a periphery of one side face of the gear 11, and that
(C) the guide member (15) is attached to a rear end of the spindle 2 having the spool 1 at a tip.

P In view of FIGS 1 and 6 based on the above J and K, it can be seen that the guide slot 14 is formed in an S-shape with an inclined part (area 29) placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and extension parts (areas 28, 31) extending from both ends of the inclined part, and that the line (S'-S") connecting the ends of the extension parts faces the spool shaft (3-3) at an angle of about 90 degrees.

Q According to the above A to P, it can be recognized that Evidence A No. 2-1 describes the following invention. (hereinafter referred to as the "A-2 invention".)

"A spinning reel for fishing configured so that a cam stud 13 is attached to a periphery of one side face of a gear 11, the cam stud 13 entering a guide slot 14 of a guide member 15, the guide slot 14 being formed in an S shape of an inclined part having linear sidewalls 14', 14" arranged in an intermediate part, and inclining in a longitudinal

direction of a spool shaft, and extension parts extending from both ends of the inclined part, while a line connecting the end areas of the extension parts faces at an angle of about 90 degrees with respect to the spool shaft, the guide member 15 being attached to a rear end of a spindle 2 having a spool 1 at a tip, and that the gear 11 rotates at 360 degrees when a handcrank 8 is rotated, to generate complete reciprocating motion of the spool with the spindle 2."

(3) Evidence A No. 3

Evidence A No. 3 submitted by the demandant as evidence relating to the reasons for invalidation, which is a publication distributed before the priority date of the application, describes the following matters.

A "[0001]
[Industrial field of the invention] This invention relates to a spinning reel for fishing.
...
[0006] This invention aims to provide a spinning reel for fishing configured to achieve a compact reel body, while increasing the stroke of spool to-and-fro motion.
[0007]
[Means of solving the problem] In order to solve the problem, the spinning reel for fishing is configured to arrange an eccentric projection in an interlocking gear that rotates along with a handle drive shaft, to engage the eccentric projection in an engagement long groove of a slider attached to the rear of a spool shaft having a spool at a tip, and to convert the rotation of the handle drive shaft to the to-and-fro reciprocating motion of the spool shaft. The engagement long groove is inclined at a predetermined angle with respect to the spool shaft.
[0008]
[Action] By inclining the engagement long groove of the slider engaged with the eccentric projection formed in the interlocking gear, with respect to the spool shaft, the side part of the slider is prevented from coming into contact with the handle drive shaft, to increase the stroke of spool to-and-fro motion."

B "[0009]
[Embodiment] A preferred embodiment is described in detail below. FIG. 1 shows the entire configuration of a spinning reel for fishing relating to the Invention, and is formed by cutting the configuration of a spool to-and-fro motion mechanism.
...

[0014] On a side plate 1a of a reel body 1, an interlocking gear 25 is rotatably supported via a support shaft 23 and a stopper 24, so as to be engaged with the spur gear 15. On a surface facing a spool shaft 17 of the interlocking gear 25, a projection 25a (hereinafter referred to as an eccentric projection) is arranged at a position eccentric from the support shaft 23.
[0015] A rear part of the spool shaft 17 is formed in a cross-sectional D shape where a slider 33 is fastened via a fastening screw 30. The slider 33 has an engagement long groove 33a with which the eccentric projection 25a arranged in the interlocking gear 25 is engaged. The engagement long groove 33a is inclined at a predetermined angle with respect to the spool shaft 17, and, as shown in FIG. 2, has an upper part opposite the spool and a lower part facing the spool. When the spur gear 15 integrated with a handle drive shaft 14 is rotated by operating a handle 7, the eccentric projection 25a arranged in the interlocking gear 25 moves the slider 33 forward and backward while sliding in the engagement long groove 33a. The spool shaft 17 is moved forward and backward accordingly, and the spool 5 attached to the tip is also moved forward and backward."

C According to the above A and B, it can be recognized that Evidence A No. 3 describes the following invention. (hereinafter referred to as the "A-3 invention".)

"The spinning reel for fishing formed by arranging the eccentric projection 25a in a position eccentric from the support shaft 23, on a surface facing the spool shaft 17 of the interlocking gear 25 supported so as to be engaged with the spur gear 15, forming the engagement long groove 33a so that the eccentric projection 25a arranged in the interlocking gear 25 is engaged with the slider 33 fastened to the rear part of the spool shaft 17 having the spool 5 at its tip, the engagement long groove 33a being inclined at a predetermined angle with respect to the spool shaft 17 so that an upper part thereof is opposite the spool and a lower part faces the spool, and configured so that the eccentric projection 25a arranged in the interlocking gear 25 moves the slider 33 forward and backward while sliding in the engagement long groove 33a when the spur gear 15 integrated with the handle drive shaft 14 is rotated by operating the handle 7, thereby moving the spool shaft 17 forward and backward."

(4) Evidence A No. 4

Evidence A No. 4 submitted by the demandant as evidence relating to the reasons for invalidation, which is a publication distributed before the priority date of the application, describes the following matters.

A "[0001]

[Industrial field of the invention] This device relates to an oscillating mechanism of a spinning reel configured by engaging an engagement long hole formed in a driven body of a spool reciprocating driving system with a drive pin formed in a gear of a rotating frame driving system, so as to reciprocate a spool at a fixed stroke in an axial direction as a rotating frame takes up a line.

[0002]

[Prior art]

In a conventional oscillating mechanism of a spinning reel of this type, in forming a drive pin in a gear of a rotating frame driving system, the drive pin has been formed of a base end part attached to the gear and a tip engagement part engaged with an engagement hole formed in an arm as a driven body of the spool reciprocating driving system, and the tip engagement part has been set at a smaller diameter position than a teeth part bottom diameter of the gear. (For example, Japanese Unexamined Utility Model Application Publication No. H2-974)

[0003]

[Problem to be solved by the device]

In the above configuration, since a rotation diameter of the tip engagement part is smaller than a rotation diameter of the teeth part, reciprocating stroke of the spool is short and lines are to be taken up densely in order to take up a fishing line of the same length. Contact resistance between the lines is increased when unreeling the line at surf casting, and sufficient flying distance cannot be obtained.

This device provides a reel which can reduce the contact resistance between the lines and increase flying distance.

[0004]

[Means of solving the problem]

This device includes an engagement pin formed of a base end part attached to a gear and a tip engagement part engaged with an engagement hole, the tip engagement part being set at a larger diameter position than a teeth part bottom diameter of the gear, and the working effect thereof is the following.

[0005]

[Action]

A rotation diameter of the tip engagement part is made larger, and reciprocating stroke of the spool is made larger, accordingly. Reciprocating speed of the spool with respect to the rotation speed of the rotation frame is increased, and the distance between

the lines taken up on the spool is made larger, accordingly. Thus, contact resistance of the lines unreeled can be reduced.

[0006]

[Effect of the device]

The distance between the lines can be increased without reducing the length of the lines to be taken up on the spool, thereby improving long cast performance at surf casting, and reducing design burden without changing a pitch diameter of the gear, or the like."

B "[0007]

[Embodiment]

As shown in FIG. 4, the spinning reel for surf casting is configured by arranging a rotating frame 4 and a spool 5 to be driven by a handle 1 at a front end of a reel body 3 having the take-up handle 1 and a rear drag operator 2 arranged at a rear end, and mounting the spool 5 on a spool shaft 6 so as to be integrally rotated, while relatively rotating the rotating frame 4.

[0008]

The oscillating mechanism will be described. As shown in FIGS. 1 and 2, a handle shaft 7 integrally rotating with the handle 1 is pivotally supported on the reel body 3. A driving gear 8 is fixed to the handle shaft 7, to be driven by the handle 1. A drive gear 9 which receives deceleration force by engaging with the driving gear 8 is arranged. A driven body 10 facing the drive gear 9, idle-supported by the spool shaft 6, and reciprocating in a spool shaft direction integrally with the spool shaft 6 is arranged. A drive pin 11 is arranged to protrude on a side face of the drive gear 9. An engagement long hole 10A to be engaged with the drive pin 11 is formed on the driven body 10, to transmit power from the drive gear 9 to the driven body 10. The drive pin 11 is formed of a base end part 11A attached to the drive gear 9 and a tip engagement part 11B engaged with the engagement long hole 10A. The tip engagement part 11B is located in a pitch diameter position of the drive gear 9. Thus, the tip engagement part 11B is set at a larger diameter position than a teeth part bottom diameter of the drive gear 9, to increase reciprocating stroke and moving speed of the driven body 10."

C According to FIG. 1, it can be recognized that the engagement long hole 10A is formed of a straight part orthogonal to the spool shaft 6.

D As seen in FIG. 2, in light of the above B, it can be recognized that the drive pin 11

is formed on one side face of the drive gear 9 on a periphery thereof.

E As seen in FIG. 3, in light of the above B, it can be recognized that the spool shaft 6 has the spool 5 at its tip and supports the driven body 10 at a rear end thereof.

F According to the above A to E, it can be recognized that Evidence A No. 4 describes the following matter (hereinafter referred to as the "A-4 invention").

"The spinning reel having an oscillating mechanism configured by fixing the driving gear 8 to the handle shaft 7 integrally rotated with the handle 1, arranging the drive gear 9 which is engaged with the driving gear 8 to obtain deceleration force, arranging the driven body 10 facing the drive gear 9, idle-supported at a rear end of the spool shaft 6 having the spool 5 at its tip, and reciprocating in a spool shaft direction integrally with the spool shaft 6, forming the drive pin 11 on one side face of the drive gear 9 on a periphery thereof, and forming the engagement long hole 10A engaged with the drive pin 11 on the driven body 10, the engagement long hole 10A being formed of a straight part orthogonal to the spool shaft 6, to transmit power from the drive gear 9 to the driven body 10."

(5) Evidence A No. 5

Evidence A No. 5 submitted by the demandant as evidence relating to the reasons for invalidation, which is a publication distributed before the priority date of the application, describes the following matters.

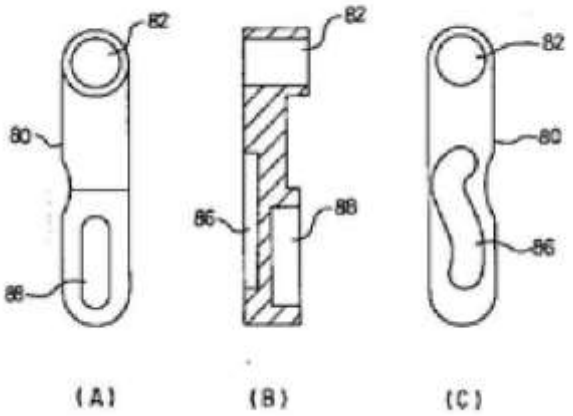
A "[0001]
[Industrial field of the invention] This invention relates to a spool reciprocating device of a rear-drag spinning reel to be used for fishing."

B "[0022] As shown in FIG. 1 and FIG. 2, the spool reciprocating device includes a driven gear 70 engaged with a spur gear 60 fixed to a handle shaft 40 together with a drive gear 50, and receives power from a cam pin 71 formed on the driven gear 70. [0023] The spool reciprocating device includes a first pivot arm 80, a second pivot arm 90, a connection member 94, and a screw 96. As shown in FIG. 2 to FIG. 4, the first pivot arm 80 includes a fixing hole 82 in which a fixing shaft 83 formed integrally inside the body 10 is inserted for supporting the first pivot arm 80 turnably. The first pivot arm 80 includes a pin groove 86 engaged with the cam pin 71 formed on the

driven gear 70, and a slot 88 formed on an opposite side face of the pin groove 86. The pin groove 86 is formed in a substantially S shape."

C The following drawing is described as FIG. 4.

【図４】



2 Regarding the Reasons for invalidation 1

(1) Regarding the Invention 1

A Comparison/Judgment

(A) The "handle (5)," "gear (10)," "spool shaft (23)," "non-linear slot (19)," and "rocking slider crank mechanism" in the A-1 invention correspond to the "handle," "idle gear," "spool shaft," "oscillation groove," and "oscillation mechanism" in Invention 1, respectively.

(B) The "rocking lever (15)" and "pad-like sliding block (17)" in the A-1 invention and the "oscillation slider" in the Invention 1 are common in "a reciprocating motion conversion member".

(C) The description that "the pin (18) is formed on a periphery of one side face of a rotatable gear (10)" "that receives motion of the handle (5)" in the A-1 invention corresponds to the description that "a protrusion is formed on the circumference of a side face of an idle gear rotating in a state interlocked with the rotation of a handle" in Invention 1, since the "motion of the handle (5)" of the spinning reel in the A-1 inbention is obviously rotation.

(D) The "pin (18)" to be "engaged with the non-linear slot (19) of the rocking lever (15)" in the A-1 invention corresponds to the "protrusion" to be "engaged with the oscillation groove of the oscillation slider" in Invention 1.

(E) The "A spinning reel for surf-casting configured to obtain linear alternate vertical motion of a spool required for winding a line uniformly on a spool by means of a rocking slider crank mechanism" in the A-1 invention is configured so that the "rocking slider crank mechanism" may "receive the motion of the handle (5)." It is obvious that the "motion of the handle (5)" is rotation. The above invention corresponds to the "spinning reel for fishing having an oscillation mechanism to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool" in Invention 1.

(F) The description in the A-1 invention, "the spool shaft (23) is connected to the rocking lever (15) by the pad-like sliding block (17) attached to the spool shaft (23) with a screw" means that the "rocking lever (15)" and the "pad-like sliding block (17)" "are attached to the spool shaft (23) with a screw." It is a matter of technical common sense that the "spool shaft (23)" includes a spool at its tip. The above invention in the A-1 invention and the "oscillation slider" "attached to the rear end of the spool shaft having a spool at its tip in the Invention 1," are common in the "reciprocating motion conversion member" "attached to the rear end of the spool shaft having a spool at its tip."

(G) The description in the A-1 invention, "the non-linear slot (19) is formed of an inclined part (20) arranged in an intermediate part and two rectilinear longitudinal extension parts (21), (22) extending in parallel from both ends of the inclined part (20)," and the descriptions in Invention 1, "the oscillation groove being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft" are common in that "the oscillation groove is formed of an inclined part placed at an intermediate part and straight parts extending in parallel from both ends of the inclined part."

(H) In light of the above, they correspond in the following points.

"The spinning reel for fishing having an oscillation mechanism configured by forming a

protrusion on one side face of an idle gear rotating in a state interlocked with the rotation of a handle, the protrusion being engaged with an oscillation groove of a reciprocating motion conversion member attached to the rear end of a spool shaft having a spool at its tip, to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool, the oscillation groove being composed of an inclined part placed at an intermediate part and straight parts extending from both ends of the inclined part."

(I) They are different in the following points.

[Different feature 1]: The "reciprocating conversion member" is an oscillation slider attached to the rear end of the spool shaft and having an oscillation groove in Invention 1, while being formed of the "rocking lever (15)" and the "pad-like sliding block (17)" in the A-1 invention. The rocking lever (15) having the "non-linear slot (19)" corresponding to the oscillation groove of the Invention 1 is not attached to the rear end of the spool shaft, but rocks around the fulcrum (16), and is connected to the spool shaft by the pad-like sliding block (17) attached to the spool shaft.

[Different feature 2]: As for the inclination direction of the "inclined part" of the "oscillation groove" and the extension direction of the "straight parts,"
in Invention 1, the inclined part is inclined in "longitudinal direction of the spool shaft" and the straight parts extend in "vertical direction nearly perpendicular to the spool shaft,"
while in the A-1 invention, since the rocking lever (15) (with the non-linear slot (19)) rocks around the fulcrum (16), the inclination direction of the inclined part (20) of the non-linear slot (19) and the extension direction of the longitudinal extension parts (21), (22) are not defined based on the longitudinal direction of the spool shaft (23) and the vertical direction nearly perpendicular to the spool shaft (23), respectively.

(J) Thus, it cannot be accepted that Invention 1 is an invention described in Evidence A No. 1-1.

B Demandant's allegation

(A) The demandant alleges that, in the rocking lever (15) disclosed in Evidence A No. 1-1, two longitudinal extension parts (21 and 22) are orthogonal to a spool shaft at the intermediate position of rocking motion of the rocking lever (15), and that it can be recognized that the rocking lever (15) is located at an angle of a predetermined range

based on a perpendicular state with respect to the spool shaft when rocking vertically from the above basic state of the members in the intermediate position, in the entire rocking motion. The demandant alleges that the configuration in Invention 1 relating to the different features (corresponding to the above A (I) Different feature 2) is described in Evidence A No. 1-1.

(B) However, the configuration of the Invention 1 relating to Different feature 2 defines a shape of the oscillation groove by a positional relationship with the spool shaft. It is natural that the configuration is based on the assumption that the positional relationship between the oscillation groove and the spool shaft is not changed relatively. The description in the Patent description is not inconsistent with this interpretation. Thus, the demandant's allegation based on the assumption that the configuration includes an invention where the positional relationship between the oscillation groove and the spool shaft relatively changes, cannot be accepted.

Evidence A No. 1-1 neither describes nor indicates the configuration of the Invention 1 relating to Different feature 1.

(2) Regarding Invention 2

Invention 2 depends on Invention 1, and includes all of the matters specifying the invention of Invention 1. As a result of comparison between Invention 2 and the invention of Evidence A No. 1-1, they are different at least in the above Different features 1 and 2. It cannot be accepted that the Invention 2 is an invention described in Evidence A No. 1-1.

3 Regarding the Reasons for invalidation 2

(1) Regarding Invention 1

A Comparison/Judgment

(A) The "handcrank 8," "spool 1," "spindle 2," and "spinning reel for fishing" in the A-2 invention correspond to the "handle," "spool," "spool shaft," and "spinning reel for fishing" in Invention 1, respectively.

(B) The "gear 11" that rotates when "the handcrank 8 is rotated" in the A-2 invention corresponds to the "idle gear rotating in a state interlocked with the rotation of a handle" in Invention 1.

(C) The description in the A-2 invention, "the cam stud 13 is attached to a periphery of

one side face of a gear 11" corresponds to the description in Invention 1, "forming a protrusion on the circumference of one side face of an idle gear."

(D) The "guide member 15" "attached to the rear end of the spindle 2 having a spool 1 at its tip" in the A-2 invention corresponds to the "oscillation slider attached to the rear end of the spool shaft having a spool at its tip."

(E) The "cam stud 13" "entering a guide slot 14 of a guide member 15" in the A-2 invention corresponds to the "protrusion being engaged with an oscillation groove of an oscillation slider" in Invention 1.

(F) The description in the A-2 invention, "the gear 11 rotates at 360 degrees when a handcrank 8 is rotated, to generate complete reciprocating motion of the spool with the spindle 2" corresponds to the description in Invention 1, "having an oscillation mechanism to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool."

(G) The "oscillation groove" "formed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft" in Invention 1, and the "guide slot 14" "having linear sidewalls 14', 14", and formed in an S shape of an inclined part arranged in an intermediate part, and inclining in a longitudinal direction of a spool shaft, and extension parts extending from both ends of the inclined part, while a line connecting the end areas of the extension parts faces at an angle of about 90 degrees with respect to the spool shaft" are common in the "oscillation groove" "formed of an inclined part arranged in an intermediate part and inclining in a longitudinal direction of a spool shaft, and extension parts extending from both ends of the inclined part."

(H) In light of the above, they correspond in the following points.

"The spinning reel for fishing having an oscillation mechanism configured by forming a protrusion on the circumference of one side face of an idle gear rotating in a state interlocked with the rotation of a handle, the protrusion being engaged with an oscillation groove of an oscillation slider attached to the rear end of a spool shaft having a spool at its tip, to convert the rotation of the handle to the reciprocating motion in the

longitudinal direction of the spool, the oscillation groove being composed of an inclined part placed at an intermediate part and inclined in a longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part."

(I) They are different in the following points.

[Different feature A]: The "extension parts" of the "oscillation groove" are,
in Invention 1, "straight parts extending in a vertical direction nearly perpendicular to the spool shaft,"
whereas in the A-2 invention, formed so that "the line connecting the end areas faces at an angle of about 90 degrees with respect to the spool shaft," and the "extension parts" are not the ones extending in a vertical direction nearly perpendicular to the spool shaft.

(J) Thus, it cannot be accepted that Invention 1 is an invention described in Evidence A No. 2-1

B Demandant's allegation
(A) The demandant alleges that the demandee interprets the "straight parts... nearly perpendicular to the spool shaft" in Invention 1 to mean that "two straight parts are arranged in parallel, not on the same straight line," so that the expression "nearly perpendicular" specifies an angle of a wide range including 90 degrees. The demandant alleges, considering that the inclined angle with respect to the axial direction (26) of the spindle representing the whole of the ends extending from both ends of the cranked central portion disclosed in the A2-1 invention is closer to 90 degrees than α, that the inclination angle of the ends with respect to the stroke direction (26) of the spool is included in "nearly perpendicular" of Invention 1.

(B) However, in light of FIGS. 1 and 6 based on the descriptions in Evidence A No. 2-1, "FIGURE 6 shows furthermore that the tangents TA and TC to the segments 20, 21 of the guide slot 14 receiving the cam stud 13 at the side positions A and C subtend an angle α with the travel direction 3-3, which is less than the angle β subtended by the tangents TB and TD of the sidewalls 14', 14" in their segments 22, 22', wherein the cam stud 13 is at the reversing positions B and D respectively. The above angles preferably are α=40-50 degrees. (45 degrees in the embodiment shown) and β=70-75 degrees (72.5 degrees in the illustrated embodiment). An angle which is always smaller than 90 degrees is thereby provided between the particular tangents TB, TA, TD, and TC

extending in the stroke direction, and the stroke direction 3-3" (see the above 1 (2) I), it is obvious that Evidence A No. 2 does not describe that the extension parts (areas 28, 31 in FIG. 6) are made perpendicular to the spindle 2. The term "nearly perpendicular" in the Invention 1 cannot be interpreted to mean the angle of a wide range including angles shown in FIGS. 1 and 6. There is no context in the Description to interpret that the term "nearly perpendicular" includes the angle of a wide range. Thus, the demandant's allegation cannot be accepted.

(2) Regarding Invention 2

Invention 2 depends from Invention 1, and includes all of the matters specifying the invention of Invention 1. As a result of comparison between Invention 2 and the A-2 invention, they are different in at least the Different feature A. Thus, it cannot be accepted that Invention 2 is an invention described in Evidence A No. 2-1.

4 Regarding the Reasons for invalidation 3

(1) Regarding Invention 1

A Comparison

As described in 2 (1), Invention 1 and the A-1 invention are different in the Different features 1 and 2.

B Judgment

(A) The configuration of Invention 1 relating to the Different feature 2 is based on the configuration of Invention 1 relating to the Different feature 1. Therefore, the Different features 1 and 2 are examined together.

(B) In order to obtain the configuration of Invention 1 relating to the Different features 1 and 2 in the A-1 invention, the rocking lever (15) in the A-1 invention configured to rock around the fulcrum (16) via the pad-like sliding block (17) attached to the spool shaft (23) (not fixed to the spool shaft (23)) is required to be fixed to the spool shaft (23) so that an extension direction of the longitudinal extension parts (21), (22) of the non-linear slot (19) is nearly perpendicular to the spool shaft (23), while removing the pad-like sliding block (17) attached to the spool shaft (23), without changing the shape of the non-linear slot (19).

(C) However, as described in the above (B), it is obvious that in the A-1 invention, oscillation behavior of the spool set in a previous state cannot be maintained after

changing the configuration of the rocking lever (15) rocking around the fulcrum (16) so as to be fixed to the spool shaft (23) without changing the shape of the non-linear slot (19). A person skilled in the art paying attention to the oscillation behavior of the spool cannot easily conceive of changing the configuration of the rocking lever (15) rocking around the fulcrum (16) so as to be fixed to the spool shaft (23) without changing the shape of the non-linear slot (19), or employing the configuration of Invention 1 relating to the Different features 1 and 2. Even if the configuration of the rocking lever (15) rocking around the fulcrum (16) can be changed so as to be fixed to the spool shaft (23), the shape of the non-linear slot (19) should inevitably be revised in accordance with the above change. Thus, a person skilled in the art could not easily conceive of employing the configuration of Invention 1 relating to the Different feature 2.

(D) Evidence A No. 1-1, Evidence A No. 2-1, Evidence A No. 3, and Evidence A No. 5 neither describe nor indicate the change in the above (B).

(E) In light of the above, even when the descriptions in Evidence A No. 1-1, Evidence A No. 2-1, Evidence A No. 3, and Evidence A No. 5 are taken into consideration, a person skilled in the art could not easily conceive of employing the configuration of Invention 1 relating to the Different features 1 and 2.

C Demandant's allegation

(A) The demandant alleges that since all oscillation grooves formed in the shape of "I," "S," and "C" have prior arts of both an oscillation mechanism using pivoting motion (hereinafter referred to as a "pivoting mechanism") and a mechanism (hereinafter referred to as a "linear mechanism") in which the slider is fixed to the spool shaft and moves forward and backward together (Evidence A No. 10), a person skilled in the art could easily conceive of replacing the pivoting mechanism described in Evidence A No. 1-1 with the linear mechanism.

(B) However, as a result of comparison between the oscillation grooves described in Evidence A No. 2-1 (an example of the linear mechanism), Evidence A No. 5 (an example of the pivoting mechanism), which are examples of an invention formed in the shape of "S" cited in Evidence A No. 10, the oscillation grooves are obviously different in shape (See the above 1 (2) M, 1 (5) C). It cannot be proved that a person skilled in the art can ordinarily change the configuration from the pivoting mechanism to the linear mechanism without changing the shape of the oscillation groove formed in the

shape of "S."

In Evidences A No. 12-2 to 4 (Evidence A No. 12-3 is a patent publication of an application relating to Evidence A No. 12-2, and Evidence A No. 12-4 is a patent publication on an application underlying the priority alleged in an application relating to Evidence A No. 12-2 to 3; these evidences include substantially the same contents), which are described as examples of the pivoting mechanism using an oscillation groove formed in the shape of "C" in Evidence A No. 10, in light of the description in Evidence A No. 12-2, "[0027] ... the oscillating drive gear 88 has a pin 94 protruding at the side, the pin moving guidingly within a blind, elongate, straight slot 96 in the pivot arm 78 and opening laterally toward the drive gear 88," and the description "[0032] As shown by an imaginary line 108 in FIG. 5, a curved slot 96 can equalize the speed of the center shaft 72 moving forward and backward. In this configuration, the curve of the slot 108 starts at two o'clock where the pin 94 continues pressing the center shaft 72 backward and terminates at three o'clock...", on the assumption that an I-shaped oscillation groove is used, there is a description that the oscillation groove has a curve that "starts at two o'clock where the pin 94 continues pressing the center shaft 72 backward and terminates at three o'clock" is included, but there is no description that the oscillation groove is formed in the shape of "C." In any event, it is obvious that the shapes of the oscillation grooves are different from the shape of the oscillation groove described in Evidence A No. 11-1 and Evidence A No. 11-24 as an example of a linear mechanism using a C-shaped oscillation groove. According to the evidences, it cannot be said that a person skilled in the art can ordinarily obtain the idea of changing the configuration from the pivoting mechanism to the linear mechanism without changing the shape of the oscillation groove formed in the shape of "C."

In addition, in [0032] of Evidence A No. 12-2, it is obvious to specify the problem that the spool shaft moves forward and backward at different speeds when an I-shaped oscillation groove is employed as a pivoting mechanism without changing the shape thereof.

(C) In light of the above (B), the demandant's allegation (A) is poorly supported and lacks validity. The shape of the non-linear slot (19) described in Evidence A No. 1-1 is not "I," "S," or "C." Thus, the demandant's allegation cannot be accepted.

D Summary

As described above, Invention 1 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in

Evidence A No. 1-1, and the technical matters described in Evidence A No. 2-1, Evidence A No. 3, and Evidence A No. 5.

(2) Regarding Invention 2

Invention 2 depends from Invention 1, and includes all of the matters specifying the invention of Invention 1. As a result of comparison between Invention 2 and the A-1 invention, they are different in at least the above Different features 1 and 2.

Due to the same reason as the examination on Invention 1 in the above (1), Invention 2 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 1-1, and the technical matters described in Evidence A No. 2-1, Evidence A No. 3, and Evidence A No. 5.

5 Regarding the Reasons for invalidation 4

(1) Regarding Invention 1

A Comparison

(A) The "handle 1," "spool 5," "spool shaft 6," "oscillating mechanism," and "spinning reel" in the A-4 invention correspond to the "handle," "spool," "spool shaft," "oscillation mechanism," and "spinning reel for fishing" in Invention 1, respectively.

(B) The "drive gear 9 which receives deceleration force by engaging with the driving gear 8 fixed to the handle shaft 7 which integrally rotates with the handle 1" in the A-4 invention corresponds to the "idle gear rotating in a state interlocked with the rotation of a handle" in Invention 1.

(C) The description in the A-4 invention, "arranging a drive pin 11 on the circumference of one side face of a drive gear 9 " corresponds to the description in Invention 1, "forming a protrusion on the circumference of a side face of an idle gear." Similarly, the description, "an engagement long hole 10A to be engaged with the drive pin 11 is formed on the driven body 10" corresponds to the "protrusion" being "engaged with an oscillation groove of an oscillation slider."

(D) The "driven body 10 idle-supported at a rear end of the spool shaft 6 having the spool at its tip 5, and reciprocating in a spool shaft direction integrally with the spool shaft 6" in the A-4 invention corresponds to the "oscillation slider attached to the rear end of the spool shaft having a spool at its tip" in Invention 1.

(E) The "oscillation mechanism configured by fixing the driving gear 8 to the handle shaft 7 integrally rotated with the handle 1, thereby obtaining deceleration power through an engagement with the driving gear 8 " and "to transmit power from the drive gear 9 to the driven body 10" in the A-4 invention corresponds to the "oscillation mechanism to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool" in Invention 1.

(F) The "oscillation groove" "being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft" in Invention 1 and the "engagement long hole 10A" "formed of a straight part orthogonal to the spool shaft 6" in the A-4 invention are common in the "oscillation groove" "having straight parts orthogonal to the spool shaft."

(G) In light of the above, they correspond in the following points.

"The spinning reel for fishing having an oscillation mechanism configured by forming a protrusion on the circumference of one side face of an idle gear rotating in a state interlocked with the rotation of a handle, the protrusion being engaged with an oscillation groove of an oscillation slider attached to the rear end of a spool shaft having a spool at the tip end, to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool, the oscillation groove having straight parts orthogonal to the spool shaft."

(H) They are different in the following points.

[Different feature A]: The "oscillation groove" "having straight parts orthogonal to the spool shaft" is,
in Invention 1, "composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft,"
whereas in A-4 invention, not specified.

B Judgment
(A) Evidence A No. 1-1 describes the A-1 invention described in the above 1 (1) F.

(B) As a result of comparison between the oscillation mechanisms in the A-4 invention and the A-1 invention, the A-4 invention is configured to move the moving body 10 fixed to the spool shaft 6 (integrally with the spool shaft 6), while the A-1 invention is configured to allow the rocking lever (15) to rock around the fulcrum (16) (without being fixed to the spool shaft (23)) via the pad-like sliding block (17) attached to the spool shaft (23). The inventions are different in the configuration of the oscillation mechanism.

(C) As examined in the above 4(1), even when an oscillation slider with an oscillation groove having the same shape is used, oscillation behavior of the spools in the inventions are different due to the difference in the configuration of the oscillation mechanism described in the above (B). It cannot be said that a person skilled in the art paying attention to the design of oscillation behavior of the spool can easily conceive of the idea of replacing the moving body 10 with the rocking lever (15) in the A-1 invention having different oscillation mechanism, or employing the configuration of Invention 1 relating to the Different feature A.

(D) Evidence A No. 2-1 and Evidence A No. 3 do not describe the configuration of Invention 1 relating to the Different feature A.

C Summary

As described above, Invention 1 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 4 and the technical matters described in Evidence A No. 1-1, Evidence A No. 2-1, and Evidence A No. 3.

(2) Regarding Invention 2

Invention 2 depends from Invention 1, and includes all of the matters specifying the invention of Invention 1. As a result of comparison between Invention 2 and the A-1 invention, they are different in the above Different feature A.

Due to the same reason as the examination on Invention 1 in the above (1), Invention 2 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 4, and the technical matters described in Evidence A No. 1-1, Evidence A No. 2-1 and Evidence A No. 3.

6 Regarding the Reasons for invalidation 5
(1) Regarding Invention 1
A Comparison
(A) The "handle 7," "spool 5," "spool shaft 17," "engagement long groove 33a," and "spinning reel for fishing" in the A-3 invention correspond to the "handle," "spool," "spool shaft," "oscillation groove," and "spinning reel for fishing" in Invention 1, respectively.

(B) The "interlocking gear 25" "supported so as to be engaged with" "the spur gear 15" "to be rotated by operating the handle 7" in the A-3 invention corresponds to the "idle gear rotating in a state interlocked with the rotation of a handle" in Invention 1.

(C) The "eccentric projection 25a" "arranged" "at a position eccentric from the support shaft 23, on a surface facing the spool shaft 17 of the interlocking gear 25" in the A-3 invention corresponds to the "protrusion" "formed on the circumference of a side face of an idle gear" in Invention 1.

(D) The "slider 33 attached to a rear part of a spool shaft 17 having a spool 5 at its tip" in the A-3 invention corresponds to the "oscillation slider attached to the rear end of a spool shaft having a spool at the tip end" in Invention 1.

(E) The description in the A-3 invention, "The slider 33 has an engagement long groove 33a with which the eccentric projection 25a arranged in the interlocking gear 25 is engaged" corresponds to the description in Invention 1, "engage" "the protrusion" "with the oscillation groove of the oscillation slider."

(F) The description in the A-3 invention, "When the spur gear 15 integrated with a handle drive shaft 14 is rotated by operating a handle 7, the eccentric projection 25a arranged in the interlocking gear 25 moves the slider 33 forward and backward the while sliding in the engagement long groove 33a. The spool shaft 17 is moved forward and backward accordingly" corresponds to the description in Invention 1, "having an oscillation mechanism to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool."

(G) The description in the A-3 invention, "The engagement long groove 33a is inclined at a predetermined angle with respect to the spool shaft 17, and has an upper part

opposite the spool and a lower part facing the spool" and the description in Invention 1, "the oscillation groove being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft" are common in the point that "the oscillation groove has an inclined part inclined in a longitudinal direction of the spool shaft."

(H) In light of the above, they correspond in the following points.

"A spinning reel for fishing having an oscillation mechanism configured by forming a protrusion on the circumference of one side face of an idle gear rotating in a state interlocked with the rotation of a handle, the protrusion being engaged with an oscillation groove of an oscillation slider attached to the rear end of a spool shaft having a spool at the tip end, to convert the rotation of the handle to the reciprocating motion in the longitudinal direction of the spool,
the oscillation groove having an inclined part inclined in a longitudinal direction of the spool shaft."

(I) They are different in the following points.

[Different feature (a)]: The "oscillation groove" "having an inclined part inclined in a longitudinal direction of the spool shaft" is,
in Invention 1, "composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft," whereas,
in the A-3 invention, "inclined at a predetermined angle with respect to the spool shaft, and having an upper part opposite the spool and a lower part facing the spool."

B Judgment
(A) Evidence A No. 1-1 describes the A-1 invention described in the above 1 (1) F.

(B) As a result of comparison between the oscillation mechanisms in the A-3 invention and the A-1 invention, the A-3 invention employs a configuration of fixing the slider 33 to the spool shaft 17 to move (integrally with the spool shaft 17), while the A-1 invention employs a configuration of allowing the rocking lever (15) to rock around the

fulcrum (16) via the pad-like sliding block (17) attached to the spool shaft (23) (without being fixed to the spool shaft (23)). They are different in the configuration of the oscillation mechanism.

(C) As examined in the above 4 (1), even when an oscillation slider with an oscillation groove having the same shape is used, oscillation behavior of the spools in the inventions are different due to the difference in the configuration of the oscillation mechanism described in the above (B). It cannot be said that a person skilled in the art paying attention to the design of oscillation behavior of the spool can easily conceive of the idea of replacing the slider 33 with the rocking lever (15) in the A-1 invention having a different oscillation mechanism, or employing the configuration of Invention 1 relating to the Different feature (a).

(D) Evidence A No. 2-1 and Evidence A No. 4 do not describe the configuration of Invention 1 relating to the Different feature (a).

C Summary

As described above, Invention 1 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 3 and the technical matters described in Evidence A No. 1-1, Evidence A No. 2-1, and Evidence A No. 4.

(2) Regarding Invention 2

Invention 2 depends from Invention 1, and includes all of the matters specifying the invention of Invention 1. As a result of comparison between Invention 2 and the A-3 invention, they are different in at least the above Different feature (a).

Due to the same reason as the examination on Invention 1 in the above (1), Invention 2 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 3, and the technical matters described in Evidence A No. 1-1, Evidence A No. 2-1, and Evidence A No. 4.

7 Regarding the Reasons for invalidation 6

(1) Regarding Invention 1

A Comparison

As described in the above 3 (1), Invention 1 and the A-2 invention are different

in the above Different feature A.

B Judgment

(A) Evidence A No. 1-1 describes the A-1 invention described in the above 1 (1) F.

(B) As a result of comparison between the oscillation mechanisms in the A-2 invention and the A-1 invention, the A-2 invention employs a configuration of fixing the guide member 15 to the spool shaft to move (integrally with the spool shaft), while the A-1 invention employs a configuration of allowing the rocking lever (15) to rock around the fulcrum (16) via the pad-like sliding block (17) attached to the spool shaft (23) (without being fixed to the spool shaft (23)). They are different in the configuration of the oscillation mechanism.

(C) As examined in the above 4 (1), even when an oscillation slider with an oscillation groove having the same shape is used, oscillation behavior of the spools in the inventions are different due to the difference in the configuration of the oscillation mechanism described in the above (B). It cannot be said that a person skilled in the art paying attention to the design of oscillation behavior of the spool can easily conceive of the idea of replacing the guide member 15 with the rocking lever (15) in the A-1 invention having a different oscillation mechanism, or employing the configuration of Invention 1 relating to the Different feature A.

(D) It is obvious, in the A-2 invention, that a person skilled in the art cannot easily conceive of the idea of replacing the guide member 15 with the rocking lever (15) in the A-1 invention, from the fact that there is an obstructive factor to consider the "extension parts" of the "oscillation groove" as the "straight parts extending in a vertical direction nearly perpendicular to the spool shaft," in light of the descriptions of the A-2 invention, that the "extension parts" form an "S shape" and that "the line connecting the end areas of the extension parts faces at an angle of about 90 degrees with respect to the spool shaft," and the description in Evidence A No. 2-1, "FIGURE 6 shows that the tangents TA and TC to the segments 20, 21 of the guide slot 14 receiving the cam stud 13 in the side positions A and C subtend an angle α with the travel direction 3-3, which is less than the angle β subtended by the tangents TB and TD of the sidewalls 14', 14" in their segments 22, 22', wherein the cam stud 13 is at the reversing positions B and D respectively. The above angles preferably are α=40-50 degrees (45 degrees in the embodiment shown) and β=70-75 degrees (72.5 degrees in the illustrated embodiment).

An angle which is always smaller than 90 degrees is thereby provided between the particular tangents TB, TA, TD, and TC extending in the stroke direction, and the stroke direction 3-3 (see the above 1 (2) I)."

(E) Evidence A No. 3 and Evidence A No. 4 do not describe the configuration of Invention 1 relating to the Different feature A.

C Summary

As described above, Invention 1 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 2-1 and the technical matters described in Evidence A No. 1-1, Evidence A No. 3, and Evidence A No. 4.

(2) Regarding Invention 2

Invention 2 depends from Invention 1, and includes all of the matters specifying the invention of Invention 1. As a result of comparison between Invention 2 and the A-2 invention, they are different in at least the above Different feature A.

Due to the same reason as the examination on Invention 1 in the above (1), Invention 2 is not an invention which could be easily invented by a person skilled in the art on the basis of the invention described in Evidence A No. 2-1, and the technical matters described in Evidence A No. 1-1, Evidence A No. 3, and Evidence A No. 4.

8 Regarding the Reasons for invalidation 7

(1) Demandant's allegation

A As for Inventions 1 to 4, the spinning reel such as U. S. Patent No. 5350131 Description (Evidence A No. 2-1) configured by forming an oscillation groove in a substantially S shape to move at a constant speed is considered to improve winding state to some extent, and to solve the problem that the amount of displacement of the oscillation slider with respect to the rotation at a predetermined angle of an idle gear is less, in switching the reciprocating motion of the spool, than that in other sections, and a larger amount of line is taken up near the both ends of the winding surface. On the other hand, the problem is solved that the speed of the oscillation slider is maximized at a position corresponding to the winding surface central position and the amount of line to be taken up in the central part of the winding surface is reduced. However, the spinning reel cannot solve the problem of the Invention according to the conditions, such as a distance in the spool-shaft direction between the two straight parts located at

both ends, a ratio between the straight parts and the inclined part, and a degree of inclination or curve of the inclined part. The above conditions are not described in Inventions 1 to 4.

Thus, Inventions 1 to 4 do not reflect the means of solving the problem of the invention described in the detail description of the invention.

B The demandee alleges that the problem to be solved by Invention 1 is only that the speed of the oscillation slider is maximized at a position corresponding to the winding surface central position and the amount of line to be taken up in the central part of the winding surface is reduced. However, this problem has been already solved by the invention described in Evidence A No. 2-1. Thus, the above problem cannot be accepted as the problem to be solved by the Invention.

(2) Judgment

A In light of the descriptions in the Description, "[0005] However, in the oscillation mechanism 1 having a projection 9 moving on a circular orbit, the amount of displacement (moving amount) of the oscillation slider 13 is reduced with respect to the rotation at a predetermined angle of the idle gear 7, in switching a reciprocating motion of the spool 17, to decelerate the spool 17, and a large amount of fishing line may be taken up at front and rear ends on a line winding surface of the spool, while the maximum speed is obtained at a substantially intermediate position of the reciprocating motion of the spool 17, thereby reducing the amount of line to be taken up at a central part of the spool 17, resulting in the shape of the winding surface denting at the center and rising at both ends.", "[0010] The oscillation slider is accelerated gradually in the sections A'-C' and G'-I', and the oscillation slider moves at the maximum speed at N' and P' which are the central positions of the winding surface 31, so that the amount of displacement of the oscillation slider is maximized at the sections C'-D' and I'-J'. As described above, the highest-speed points N' and P' in the reciprocating motion of the spool 29 are coincident with each other, so that the amount of line to be taken up at the central part of the winding surface 31 is reduced as shoen in FIG.21. ...[0012] The oscillation mechanism 39 can increase an oscillation width without enlarging the idle gear 41, and a larger amount of line can be taken up than in the prior arts. However, even in winding the line on the spool by means of the oscillation mechanism 39, the problem that the winding surface rises at front and rear ends and dents at the central part remains. No improvement is achieved in winding state.", it can be recognized that the problems to be solved by Inventions 1 to 4 include at least the problem that the amount

of line to be taken up at the central part of the winding surface is reduced due to the oscillation slider which moves at the highest speed at the central part of the winding surface during reciprocating motion of the spool.

B As for the configuration described in Inventions 1 to 4, "the oscillation groove being composed of an inclined part placed at an intermediate part and inclining in the longitudinal direction of the spool shaft and straight parts extending from both ends of the inclined part in vertical direction nearly perpendicular to the spool shaft," in light of the description in the detailed description of the invention of the Description, "[0035] As is obvious from FIG. 5 and the oscillation displacement in the embodiment indicated by a solid line in FIG. 12, the embodiment is configured so that the highest-speed points C, I of the reciprocating motion of the spool 17 in the straight parts 53, 53 do not coincide with the central part of the winding surface 31. The points are located before and after the center, and the spool 17 is accelerated at e and k when the line is taken up in the winding positions e-g and k-a, thereby increasing the amount of displacement of the spool 17," it is obvious that the highest-speed point in the reciprocating motion of the spool can be shifted in the longitudinal direction of the spool shaft by arranging the "inclined part inclining in a longitudinal direction of the spool shaft" and shifting the positions of the both ends of the "straight parts extending in a vertical direction nearly perpendicular to the spool shaft" in the longitudinal direction of the spool shaft.

C It can be said that Inventions 1 to 4 reflect the means of solving the problem described in the detailed description of the invention.

D Regardless of whether the problem that the oscillation slider moves at the maximum speed at the central part of the winding surface in reciprocating motion of the spool, and that the amount of line to be taken up is reduced at the central part of the winding surface has been solved by prior arts, as described in A, there is no doubt that the above problem is presented as the problem to be solved by Inventions 1 to 4, in the detailed description of the invention of the Description.

(3) Summary

As described above, the detailed description of the invention of the Patent complies with the requirement stipulated in Article 36-6(1) of the Patent Act.

9 Regarding the Reasons for invalidation 8

(1) Demandant's allegation

Inventions 1 to 4 provide a reel which allows for quick switching of reversal of stroke, and motion after the switching as well, thereby allowing a uniform amount of line to be taken up on the winding surface. However, Inventions 1 to 4 contain embodiments that cannot produce the specific working effect as a whole, and lack utility.

Thus, Inventions 1 to 4 are not clearly and sufficiently described to enable a person ordinarily skilled in the art to carry them out, in the detailed description of the invention of the description.

(2) Judgment

A As examined in the above 8 (2) A, the problems to be solved by Inventions 1 to 4 include the problem that the oscillation slider moves at the maximum speed at the central part of the winding surface in reciprocating motion of the spool, and that the amount of line to be taken up in the central part is reduced.

B Paragraphs [0022] to [0035] in the detailed description of the invention of the Description and FIGS. 4-12 describe concrete embodiments for the oscillation groove of the oscillation slider configured to arrange the inclined part in the longitudinal direction of the spool shaft and shifting the positions of both ends of the straight parts extending in the vertical direction nearly perpendicular to the spool shaft in the longitudinal direction of the spool shaft. It can be said that Inventions 1 to 4 are clearly and sufficiently described enough to enable a person ordinarily skilled in the art to carry them out, in the detailed description of the invention of the Description.

C The problems to be solved by Inventions 1 to 4 are not only quick switching of reversal of stroke and quick motion after the switching. Thus, the demandant's allegation cannot be accepted.

(3) Summary

As described above, the detailed description of the invention of the Patent complies with the requirement stipulated in Article 36-4(1) of the Patent Act.

10 Regarding the Reasons for invalidation 9

(1) Demandant's allegation

Regarding the matters specifying the invention, "straight parts" "nearly perpendicular to the spool shaft" in Inventions 1 to 4, the meaning and scope of the term

"nearly perpendicular" are not clear even if the detailed description of the invention of the Patent and the technical common sense are taken into consideration.

(2) Judgment

The fact that an error is caused within a tolerance in a relative positional relationship between a spool shaft and an oscillation slider at the time of production, and that the straight parts need not to be precisely perpendicular to the spool shaft in light of the working effect of shifting the highest-speed point in the spool reciprocating motion in the longitudinal direction of the spool shaft in Inventions 1 to 4, is obvious to a person skilled in the art. The term "nearly" in Inventions 1 to 4 can be recognized to indicate only such a situation. In Evidence A No. 2-1, in light of the description that the angle of the guide member (corresponding to the "oscillation slider" in the Invention) is "about 90 degrees" (See Claim 5), it is common in this field to describe an angle with a predetermined range.

Thus, the term "nearly perpendicular" can be clearly understood by a person skilled in the art, in light of the above circumstance in addition to the meaning of "perpendicular."

(3) Summary

As described above, Inventions 1 to 4 are clear, and comply with the requirement stipulated in Article 36-6(2) of the Patent Act.

No. 5 Closing

As described above, from the reasons for invalidation alleged by the demandant, patent of the Inventions 1 to 4 cannot be invalidated.

The costs in connection with the trial shall be borne by the demandant under the provisions of Article 61 of the Code of Civil Procedure which is applied mutatis mutandis in the provisions of Article 169-2 of the Patent Act.

Therefore, the trial decision shall be made as described in the conclusion.

October 17, 2016

Chief administrative judge: AKAGI, Keiji

Administrative judge: TANIGAKI, Keiji

Administrative judge: SUMIDA, Hidehiro