W. J. LARSON.

HALIBUT FISHING DEVICE.

APPLICATION FILED APR. 27, 1920.

1,380,655.

Patented June 7, 1921.

Fig 1

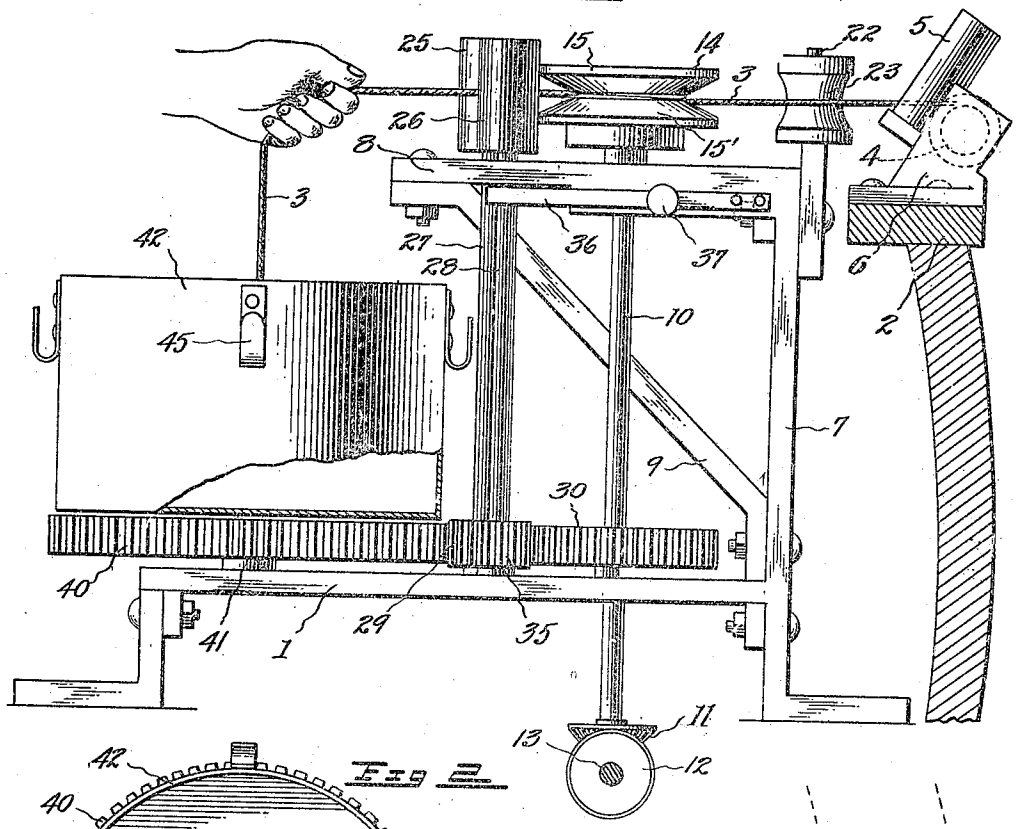


Fig 2

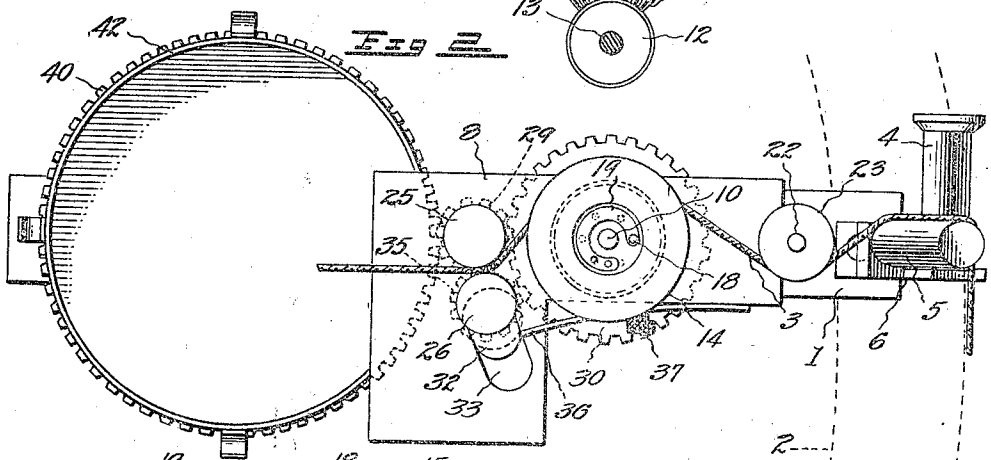
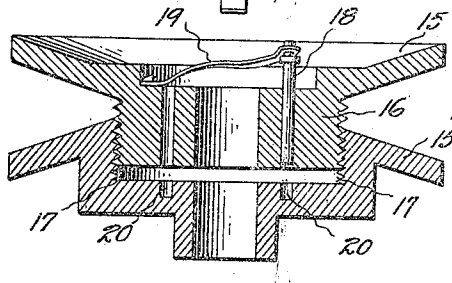


Fig 3



Inventor

WALTER J. LARSON

By HIS Attorney

Richard J. Cook

UNITED STATES PATENT OFFICE.

WALTER J. LARSON, OF WRANGELL, TERRITORY OF ALASKA.

HALIBUT-FISHING DEVICE.

1,380,655. Specification of Letters Patent. Patented June 7, 1921.

Application filed April 27, 1920. Serial No. 376,967.

To all whom it may concern:

Be it known that I, WALTER J. LARSON, a citizen of the United States, and resident of Wrangell, Territory of Alaska, have invented certain new and useful Improvements in Halibut-Fishing Devices, of which the following is a specification.

This invention relates to improvements in halibut gear winch devices, and more particularly to a power driven winch applicable to motor boats used for halibut fishing; the principal object of the invention being to provide a winch of a character that can be mounted in a small fishing boat, and which has means connected therewith whereby it may be driven from the propeller shaft of the boat to wind in the gear.

It is also an object of the invention to provide a device which may be easily operated by one man, or in a one-man boat, and wherein the line or gear is wound in by means of a winch head that is adjustable to accommodate lines of different size.

It is also an object to provide means for automatically winding in and coiling the line in a receiving hopper to prevent its tangling.

In accomplishing these and other objects of the invention, I have provided the improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Figure 1 is an elevation of a halibut winch device constructed according to the present invention.

Fig. 2 is a plan view of the same.

Fig. 3 is an enlarged, cross section of the winch, or winding head.

Referring more in detail to the several views of the drawing, wherein like reference numerals designate like parts, 1 designates the bed plate of a supporting frame work whereon the winding mechanism and hopper of the present device are mounted. This frame is provided with legs whereby it is fixed, by any suitable means, on the floor or deck of the fishing boat, preferably close to the gunwale 2 on the starboard side, so that the gear 3 or line used, may be conveniently fed to the winding head. In the present instance, guide rollers 4 and 5, revolubly mounted on a bracket 6 fixed to the gunwale of the boat at right angles to each other, form a guideway over which the line is drawn.

At one end of the plate 1, is a standard 7, provided at its upper end with a laterally directed arm 8, that extends horizontally above the base plate 1 and is supported at its outer end by a brace bar 9.

Mounted to extend vertically and revolubly through the plate 1 and arm 8, is a shaft 10, provided at its lower end with a bevel gear wheel 11, which travels in mesh with a similar gear wheel 12 that is mounted on or driven through, shiftable clutch mechanism, not shown, from the boat propeller shaft, indicated at 13. At its upper end, the shaft 10 has a pulley 14, or what may be termed a winch head, fixed thereto to be revolved to wind in the halibut gear when the latter is extended thereabout.

The head comprises two flanged face plates, 15 and 15′, the upper one of which has a concentric shank 16 thereon which threads into a socket 17 in the opposite plate; the outer plate also having a locking pin 18 thereon which is engaged at its outer end by a spring plate 19 fixed to the flange 15, to urge its inner end into one of a plurality of sockets 20 in the lower plate to lock the flanges at adjustably spaced distances apart. By this construction, by inserting the pin 18, the flanged members of the winding head may be adjusted toward or from each other and locked at any adjusted position to accommodate lines of different sizes. The flanged members are designed to form a V-shaped groove wherein the line, when drawn taut, will wedge itself to assist in preventing slipping.

Secured at the upper end of the standard 7 to revolve on a vertical axis 22 is an idler, guide roller 23 over which the line passes from the rollers 4 and 5 onto the winding head 14.

At the side of the head 14, opposite the roller 23, are two live take-up rollers 25 and 26, which are mounted to act coöperatively with each other, at the upper ends of shafts 27 and 28. The shaft 27 revolves in fixed bearings, vertically alined in the plate 1 and arm 8, and at its lower end has a small gear wheel 29 keyed thereon, which travels in

mesh with a larger driving gear 30 fixed to the shaft 10, while the shaft 28 is mounted at its lower end in a fixed bearing in the plate 1 but at its upper end revolves in a bearing block 32 that is slidably held in a slot 33 in the plate 8, so that the roller 26 may be moved inward toward or from the roller 25.

At its lower end this latter shaft has a gear wheel 35 keyed thereto, which runs in mesh only with the gear wheel 29; the two gear wheels being of the same size so that the rollers turn at the same rate but in opposite directions. A leaf spring 36 is fixed at one end, to the under side of the arm 8, with its opposite end adjustably tensioned by a set screw 37 against the shaft 28 to yieldingly urge the rollers 25 and 26 together.

Operating in mesh with the gear wheel 29, at the side opposite the gear 30, is a large gear 40 which revolves in a horizontal plane on a pin 41 mounted on the plate 1. An open top hopper 42 is mounted on the gear 40 to revolve therewith, wherein the line is automatically coiled as it is drawn in by the head 14 and delivered from between the rollers 25 and 26.

Fixed on the outer side are a plurality of upwardly opening hooks 45, wherein the binding rope may be placed while the line is being coiled in the hopper.

When the driving clutch is thrown into operation to draw in the line after a catch has been made, it is apparent that the head 14, in revolving, will draw the line in over the guide rollers and the feed rollers, 25 and 26, will yieldingly grip the line after it leaves the head, to keep it taut and take up all slack as fast as it comes in, to prevent slipping about the head.

The operator may feed the line into the hopper, baiting it as it comes in, if he desires to do so, or may allow the hopper, as it revolves, to automatically coil the line as he removes the fish from the hooks.

It is apparent that such a device operates automatically to a certain extent, and can be easily handled by one man, thus eliminating the services of one or two men required in the usual method of handling halibut gear.

It is also noted that the adjustment of the winch head or pulley, will permit the use of lines of different size, which is determined by the size of fish being caught at any particular time.

It is apparent that various changes in the construction and operation could be made without departing from the spirit of the invention.

What I claim as new, is:

1. In a device of the character described, a revolubly driven winding head, about which a halibut line may be extended to be drawn in by operation of the head, and a pair of revolubly driven coacting rollers for taking up the line as it is delivered from the head and for maintaining it taut about the head, for the purpose set forth.

2. In a device of the character described, a revolubly driven winding head, about which a halibut line may be passed to be drawn in by operation of the head, a pair of coacting revolubly driven rollers adapted to receive the line therebetween as it is delivered from the winding head to maintain it taut about the head and yieldable means urging the rollers against the line, for the purpose set forth.

3. In a device of the character described, the combination with the propeller shaft of a motor driven fishing boat, of a winding head having driving connection with said propeller shaft and about which a halibut line may be passed to be drawn in on revolving the head, a pair of revolubly driven take-up rollers mounted adjacent the head to receive the line therebetween as it is delivered from the head and to maintain it taut thereabout, and a winding device for receiving the line delivered from the rollers.

4. The combination with the propeller shaft of a motor fishing boat of a trolling device having a winding shaft adapted to be driven by said propeller shaft, a head mounted on said winding shaft having a circumferential groove wherein a line may be passed about the head to be wound in by rotation of the latter, a pair of coöperating revolubly driven rollers mounted adjacent the head to take up the line as it is delivered from the head and to maintain it taut within the groove, an open top revoluble hopper mounted adjacent the rollers to receive the line delivered therefrom, and means for revolving said rollers and hopper from the winding shaft, for the purpose set forth.

5. The combination with the propeller shaft of a motor fishing boat, of a halibut fishing device comprising a winding shaft, a winding head fixed on said shaft, having a circumferential V-shaped groove therein, wherein a line may be passed about the head to be drawn in by its revolving, a pair of shafts mounted parallel with the winding shaft having take-up rollers fixed coöperatively thereon to receive the line delivered from the head therebetween, a spring mounted to engage one of said roller shafts to urge its roller toward the opposite roller to grip the line, a revolubly mounted hopper adapted to receive the line therein as it is delivered from the rollers, means for revolving the hopper and roller shafts from the winding shaft, and means for driving the winding shaft from the propeller shaft.

6. In a device of the character described, in combination, face plates flared outwardly at their peripheries to form a V-shaped circumferential groove for receiving halibut

lines therein, said plates being adjustable toward or from each other to vary the width of the groove to accommodate lines of different size, a pair of take-up rollers mounted adjacent the head to receive the line therebetween as it is delivered from the groove, and yieldable means for urging the rollers against the line and permitting adjustment of the rollers closer or farther apart to accommodate lines of various sizes.

Signed at Wrangell, Alaska, this 10th day of April, 1920.

WALTER J. LARSON.