

W. J. J. YOUNG.

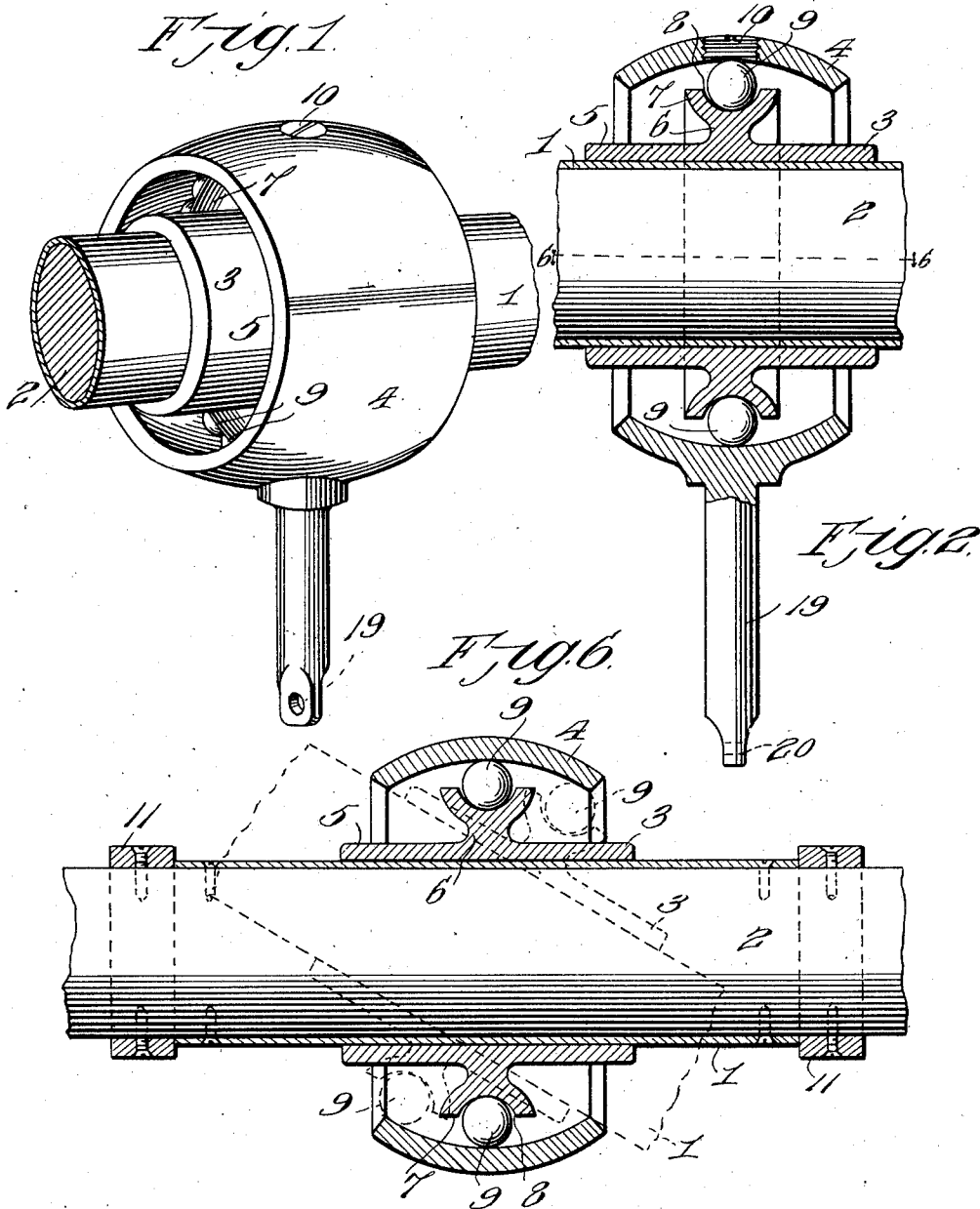
OAR LOCK.

APPLICATION FILED APR. 12, 1910.

Patented July 18, 1911.

2 SHEETS—SHEET 1.

998,562.



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By Victor J. Evans

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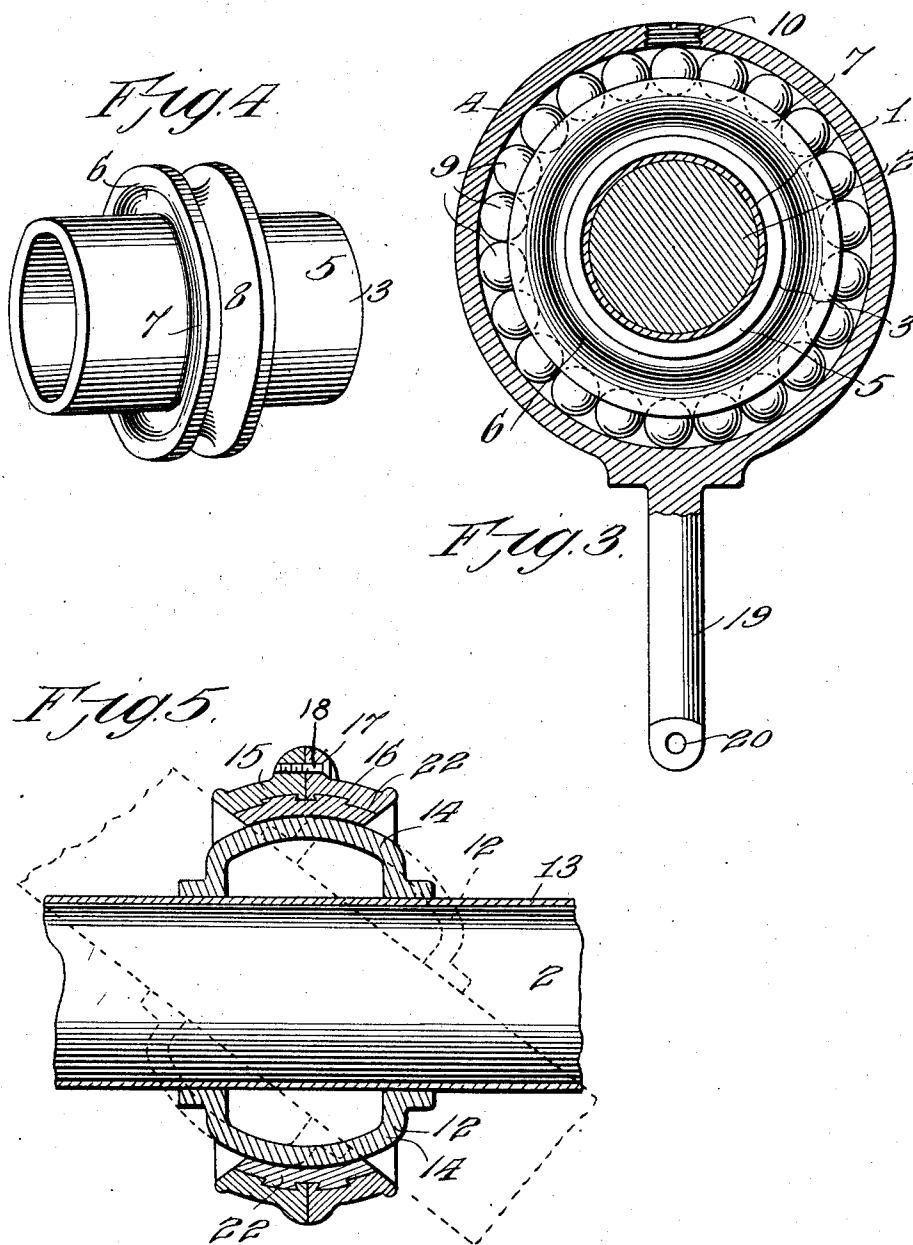
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UNITED STATES PATENT OFFICE.

WILLIAM J. J. YOUNG, OF BOSTON, MASSACHUSETTS.

OAR-LOCK.

998,562.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed April 12, 1910. Serial No. 555,065.

To all whom it may concern:

Be it known that I, WILLIAM J. J. YOUNG, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Oar-Locks, of which the following is a specification.

The invention relates to an improvement in oar locks, being more particularly directed to a structure designed to form a more or less permanent part of the oar and in which the oar is permitted that universal movement necessary in rowing.

The main object of the present invention is the provision of an oar lock in which the oar carried member is mounted for movement in a spherical segment permitting a practically universal movement of the oar, the construction of the oar member and guide member being such that they are adapted for contact at the limit of movement in any direction to prevent their separation.

The invention in its preferred details of construction will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a perspective view of the improved oar, a portion of the oar being shown in place. Fig. 2 is a vertical longitudinal section of the same, the oar being shown in elevation. Fig. 3 is a transverse vertical section of the same. Fig. 4 is a perspective view of the bearing member. Fig. 5 is a vertical sectional view illustrating a slightly modified form of the invention. Fig. 6 is a longitudinal section on line 6—6 of Fig. 2.

Referring particularly to the accompanying drawings, wherein is shown the preferred details of construction, the improved oar lock includes a sleeve member 1 designed to be more or less permanently secured to the oar 2, said sleeve member engaging that portion of the oar usually bearing upon the oar lock, and being of a length to cover that part of the oar included by its limits of longitudinal movement necessary in rowing. The sleeve member thus provided constitutes a bearing for the oar in the oar lock, and while it is desirable to provide some part for this purpose, it is not absolutely essential, as the oar surface may provide a bearing without in any way interfering with the operation of the oar lock proper, though possibly under such conditions the wear on the oar

would eventually induce an undesirable loss of motion of the oar and oar lock.

The oar lock proper comprises a bearing member 3 and a guide member 4 both preferably constructed of metal or such other material as will properly resist the wear of the parts in use. The bearing member 3 includes a sleeve-like section 5 designed to snugly and slidably fit the oar surface, or to slidably fit the sleeve member 1 in the event such sleeve member or similar part is used. The section 5 of the bearing member is centrally formed with an annular outwardly projecting rib 6 the peripheral edge of which is enlarged at 7 and formed in the outer surface to provide a ball channel 8, so that the bearing member is formed with an annular outwardly opening ball channel extending circumferentially and transversely thereof.

The guide member 4 is in effect a segment of a sphere, the interior surface being of true spherical curvature. The guide member is designed to surround the bearing member, and balls 9, which are introduced into the ball channel 8 after the assemblage of the parts through an opening 10 formed in the member, are inclined to bear at all times against the inner surface of the guide member providing a ball bearing between the parts. It is to be particularly noted that the width of the guide member as compared with the diametrical extent of the oar or of the sleeve member 1 is such that when said oar is turned in either direction transverse the guide member said sleeve will engage one or the other of the free edges of said guide member before the bearing member will have reached such a position as to permit the balls 9 to escape from between said bearing and guide members. In other words, the proportion of the parts is such that the movement of the oar in any direction will be limited to prevent escape of the balls from between the bearing and guide members.

It is preferred that the oar or the sleeve member 1 be provided with end stops 11 to limit the sliding movement of the sleeve with relation to the bearing member in both directions, the character of the stops or their particular location forming no material part of this invention, as I contemplate any and all desirable variations in this respect.

In Fig. 5, I have shown a slightly modified construction in which the ball-bearing is dispensed with and the bearing member, as 12,

which as in the preferred form is designed to slide upon the oar sleeve 13, is formed with an offset spherically disposed projection 14, in lieu of the ball-way of the preferred form. In this modified construction, the bearing member is made up of two sections 15 and 16 which together constitute a spherical segment somewhat similar to that of the preferred form, the segment in this instance being divided to permit its assembly with the bearing member. At appropriate points the sections 15 and 16 are provided with radially projecting lugs 17 to permit the application of screw bolts 18 for securing the sections together when applied. In this construction, as in the preferred form, the portions of the parts are such that the disconnection of the bearing member from the guide member is impossible owing to the engagement of the oar or oar sleeve with the guide member in the movement of the parts to either limit.

Both in the preferred and modified forms, the guide member is provided with a depending stem or bearing pin 19 designed to fit in the usual gunwale socket or in bearings secured thereto, the pin being provided with any suitable means whereby it may be temporarily secured against disconnection, as for example formed near the lower end with an opening 20 to receive the lock pin.

The improved oar lock will, it is obvious, permit all possible and necessary movement of the oar in rowing, and is in effect permanently connected to the oar thereby preventing the accidental slipping of the oar in rowing and permitting, in the event the rowing is discontinued for any reason, a mere dropping of the oars without requiring any further attention on the part of the user, and primarily and more particularly eliminates to a very considerable degree the friction incident to the use of the ordinary oar lock.

The oar lock is designed for use in any and all situations and with any and all boats or similar structures designed to be propelled by oars, and it is to be understood that I contemplate the construction of the

various parts in any and all sizes and in any and all materials, preferring, as to the latter detail, that hard metal be used in those parts having relative movement whereby to prevent undue wear and render the parts capable of standing severe strain.

If desired, the bearing surface of the guide member in the modified form may be provided with a block of Babbitt metal, as 22, and the sleeve section of the bearing member may be formed with openings to permit the application of oil between the bearing member and sleeve member when desired. The interior of the sleeve section may, if desired, be formed with a series of recesses for the reception of graphite or other lubricant, or any other desired means may be arranged for lubricating the parts. In the event of undue wear of the guide member in the preferred form, the bearing surface of the latter may be machined true and a slightly larger set of balls introduced with the same effect as originally described.

Having thus described the invention, what I claim as new, is:—

1. An oar lock including a bearing member in which the oar is slidably mounted, a guide member encircling the bearing member and comprising a spherical segment, said bearing member being formed with a ball channel, and a series of balls mounted in said channel and bearing against the inner surface of the guide member.

2. An oar lock including a bearing member in which the oar is slidably mounted, a guide member encircling the bearing member and comprising a spherical segment, said bearing member being formed with a ball channel, a series of balls mounted in said channel and bearing against the inner surface of the guide member, and a pin projecting from the guide member.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. J. YOUNG.

Witnesses:

JOSEPH V. BIRMINGHAM,
SUSAN E. BIRMINGHAM.