

M. T. BAIRD.
LOCK FOR MOTOR BOAT SHAFTS.
APPLICATION FILED DEC. 10, 1910.

1,013,835.

Patented Jan. 2, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

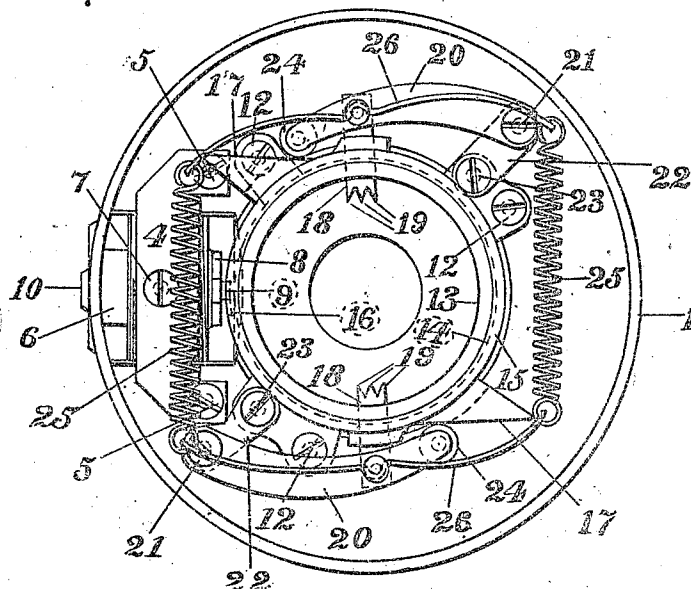
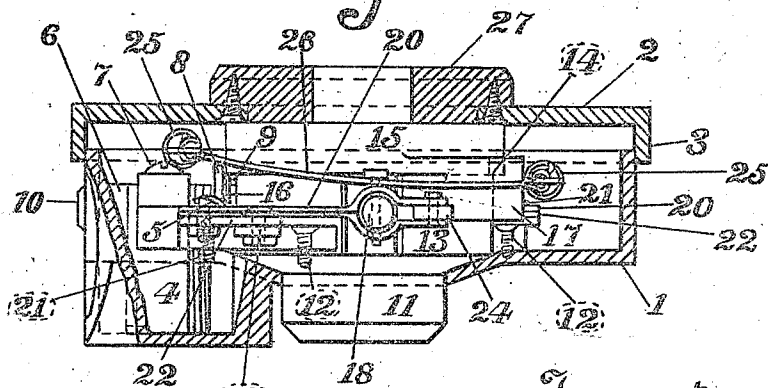


Fig. 2.



Witnesses:
William H. Brueske
Harry H. Puse

Inventor.
Myron T. Baird,
By Hugh N. Wagner
His Attorney.

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Fig. 3.

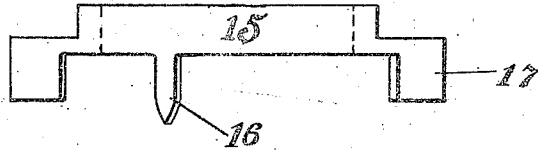
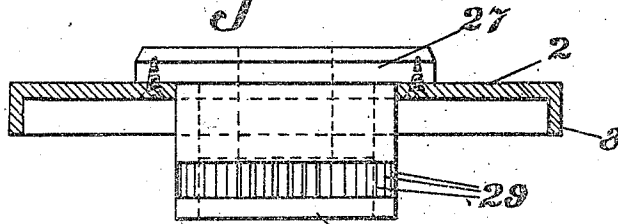
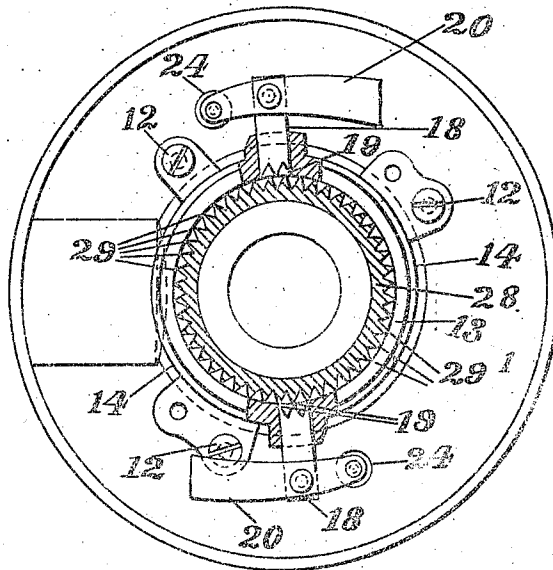


Fig. 4.



*Fig. 5.*²⁸



Witnesses:
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UNITED STATES PATENT OFFICE.

MYRON T. BAIRD, OF ST. LOUIS, MISSOURI.

LOCK FOR MOTOR-BOAT SHAFTS.

1,013,835.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Original application filed February 17, 1910, Serial No. 544,495. Divided and this application filed December 10, 1910. Serial No. 596,655.

To all whom it may concern:

Be it known that I, MYRON T. BAIRD, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have
5 invented certain new and useful Improvements in Locks for Motor-Boat Shafts, of which the following is a specification.

This application is a division and continuation of one filed by me February 17, 1910,
10 Serial No. 544,495.

This invention relates to locks and has for its object to provide a lock that is particularly adapted to be utilized in connection with the propeller shaft of a boat, aeroplanes, and the like, or with the operating
15 part or parts of other machines. When the lock is in "unlocked" position, it renders the part or parts to which the device is attached, or with which it is connected, temporarily inoperative.
20

In the accompanying drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur, Figure 1 is a top plan
25 view of the interior part of the device; Fig. 2 is a sectional view showing the operating parts within the casing; Figs. 3, 4 and 5 are detailed views of parts of the device.

The parts of the device are inclosed in a
30 casing 1 which is preferably formed of metal. The cover 2 for casing 1 is provided with a flange 3 that is arranged to overlap the edge of said casing in order to prevent access to the interior of same. A ring 4 is
35 secured in casing 1 by means of screws 5 or the like, and is screw-threaded internally to receive a screw-threaded portion of a lock 6, a set-screw 7 or other suitable means being used to fasten said lock rigidly in
40 place. Said lock protrudes through an opening in the side of casing 1, and is adapted to be operated with a key (not shown in the drawings) from the outside of said casing. An arm 8 bearing a projec-
45 tion 9 is fastened to the inner end of the revoluble member 10 of lock 6, and, when said member is rotated with the key, said arm is caused to rotate therewith.

A hub 11 is fastened by means of screws
50 12 or in any other suitable manner in casing 1. A hollow cylindrical portion 13 projects from said hub into the interior of casing 1 and is provided with a larger bore than the bore of said hub and, also, with a

shoulder 14 on the exterior surface thereof. 55

A ring 15 bearing a projection 16 is revolvably mounted on the cylindrical portion 13 and rests against shoulder 14. Said projection 16 on ring 15 is disposed in the path of
60 movement of the projection 9 on arm 8, and, when said arm 8 is rotated, as hereinabove described, from the locking position to the unlocked position, or vice versa, said arm causes ring 15 to rotate in one direction or
65 another. Means of any desired type are provided for limiting the extent of movement of ring 15. Said ring 15 bears a cam surface 17 or a plurality of such cam surfaces.

Pins 18 extend through apertures in the cylindrical portion 13 and are preferably lo-
70 cated diametrically opposite each other. Each pin 18 is provided with a tooth or teeth 19 and, also, with an arm 20 which is attached thereto by any suitable devices, one end of said arm being pivoted at 21 to the
75 member 22 pivoted at 23. A roller 24 is attached to the other end of arm 20 and is adapted to ride on one of the cam surfaces 17. Springs 25 connect the opposite ends of
80 a pair of members 26, one member 26 being attached to one arm 20 and the other member 26 being attached to the other arm 20. Both members 26 are engaged intermediate their ends with the devices that connect the
85 pins 18 to the arms 20. When the ring 15 is rotated in one direction, each cam surface 17 causes a roller 24 that rides thereon to move in a direction to cause an arm 20 to withdraw its pin 18 from the interior of
90 the cylindrical portion 13, but, when said ring 15 is rotated in the opposite direction, the cam surfaces 17 allow the springs 25 to draw the pins 18 toward the interior of the cylindrical portion 13, thereby causing said
95 pins to project into the interior of said cylindrical portion.

A hub 27 is secured to the cover 2 and projects into the interior of casing 1. A tube
100 28, which encircles the part of hub 27 that projects from the inner face of cover 2, projects into the interior of the cylindrical portion 13 of hub 11, and is secured by any suitable means either to the hub 27 or to the cover 2 or to both said hub and said cover. The periphery of tube 28 is provided with
105 an annular row of teeth or serrations 29. The teeth 29 of hub 27 are preferably an odd number and aline with the teeth 19 of

pins 18 so that, when the cam surfaces 17 are in position to allow the pins 18 to project into the interior of the cylindrical portion 13, the teeth 19 on the end of one of the pins 18 mesh or interlock with the teeth 29 of tube 28 due to the fact that said pins are located diametrically opposite each other and, also, that said tube bears an odd number of teeth 29. The cover 2 is thus locked to the casing 1 and is thereby prevented from rotating thereon. When the pins 18 are withdrawn from the interior of the cylindrical portion 13 of hub 11, as hereinabove described, the teeth 19 disengage teeth 29 so that the cover 2 can be rotated on casing 1 or, if desired, said cover can be removed therefrom.

I claim:

1. In a locking device, the combination of a hollow member, a member adapted to revolve therein, a pivoted member, a notched member borne by said pivoted member for connecting said hollow member directly to said revoluble member, means for actuating said pivoted member in one direction, a cam adapted to actuate said pivoted member in the opposite direction, and means for actuating said cam.

2. In a locking device, the combination of a hollow member, a member adapted to revolve therein, a pivoted member, a notched member borne by said pivoted member for connecting said hollow member directly to said revoluble member, means for actuating said pivoted member in one direction, a cam adapted to actuate said pivoted member in the opposite direction, and a key-operated member for actuating said cam.

3. In a locking device, the combination of a hollow member having an opening, a member adapted to revolve in said hollow member and having teeth registering with said opening, a pivoted member, a toothed pin borne by said pivoted member and adapted to reciprocate in said opening, means to cause the toothed part of said pin to interlock with a tooth of said revoluble member to connect the latter directly to said hollow member, a cam arranged to act upon said pivoted member to withdraw said pin from

the teeth of said revoluble member, and means for actuating said cam.

4. In a locking device, the combination of a hollow member, a member adapted to revolve therein and having a toothed periphery, a reciprocatory member having a toothed end adapted to interlock with a tooth of said revoluble member to connect the latter directly to said hollow member, means for yieldingly holding said reciprocatory member in interlocking engagement with said revoluble member, a sleeve encircling said hollow member and provided with a cam for withdrawing said reciprocatory member from such engagement, and means for revolving said sleeve.

5. In a locking device, the combination of a hollow member, a member adapted to revolve therein and having a toothed periphery, a reciprocatory member having a toothed end adapted to interlock with a tooth of said revoluble member to connect the latter directly to said hollow member, means for yieldingly holding said reciprocatory member in interlocking engagement with said revoluble member, a pivoted member for withdrawing said reciprocatory member from such engagement, a sleeve encircling said hollow member and provided with means for actuating said pivoted member, and means for revolving said sleeve.

6. In a locking device, the combination of a hollow member, a member adapted to revolve therein and provided with a toothed peripheral portion, a toothed member arranged for interlocking engagement with the toothed portion of said revoluble member, a pivoted member by which said member is borne, means for yieldingly holding said toothed member in such engagement, a cam arranged to move said pivoted member in one direction for disengaging said toothed member from said revoluble member, and means for actuating said cam.

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

MYRON T. BAIRD.

Witnesses:

GEORGE G. ANDERSON,
GLADYS WALTON.